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Sponsoring Party: Springfield, MO City Utilities
Case No.: EM-2000-369
Date Prepared: June 19, 2000

**Before the Public Service Commission
Of the
State of Missouri**

FILED²

JUN 21 2000

**In the Matter of the Joint Application of)
UtiliCorp United Inc. and The Empire District)
Electric Company for Authority to Merge)
The Empire District Electric Company with)
and Into UtiliCorp United Inc., and in)
Connection Therewith, Certain Other)
Related Transactions)**

Missouri Public
Service Commission

Case No. EM-2000-369

**REBUTTAL TESTIMONY OF
WHITFIELD A. RUSSELL**

**On Behalf Of
Springfield (MO) City Utilities**

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16 **WHITFIELD A. RUSSELL**

17 **On Behalf Of**
18 **Springfield (MO) City Utilities**
19

20 **INTRODUCTION**
21

22 Q. What is your name, affiliation and business address?

23 A. My name is Whitfield A. Russell. I am a public utility consultant and president of
24 Whitfield A. Russell and Associates, P.C., located at 1225 Eye Street, N.W., Suite 850,
25 Washington, D.C. 20005. The P.C. is a corporate partner of Whitfield Russell
26 Associates.

27 Q. On whose behalf are you testifying?
28

29 A. I am testifying on behalf of Springfield (MO) City Utilities ("Springfield" or "City
30 Utilities").

1 Q. Please summarize your qualifications.

2 A. I hold a Bachelor of Science degree in Electrical Engineering from the University of
3 Maine, a Master of Science degree in Electrical Engineering from the University of
4 Maryland, and a Juris Doctor degree from Georgetown University Law Center. My
5 complete resume and a description of proceedings in which I have testified are attached
6 hereto as Schedule No. (WAR-1).

7
8 Q. What is the purpose of your testimony?

9
10 A. My general purpose is to explain why the proposed merger of The Empire District
11 Electric Company ("Empire", "EMDE", or "EDE") into UtiliCorp United Inc.
12 ("UtiliCorp" or "UCU") is detrimental to the public interest. The proposed merger,
13 especially when viewed in combination with the proposed related merger of St. Joseph
14 Light and Power Company ("St. Joseph L&P" or "SJLP") into UtiliCorp, threatens the
15 public interest in ways the Applicants have failed to disclose fully to the Commission.
16 As I will discuss, the proposed merger could have adverse effects on both retail rates and
17 reliability. The merger is likely to prompt Applicants to construct transmission that is
18 penny wise (for Applicants) but pound foolish for the rest of the State of Missouri.
19 Conspicuously absent from the merger application, however, is any commitment to
20 construct transmission needed to ensure a robust and reliable grid. Nor have Applicants
21 evaluated fully the impacts of the post-merger flows on the grid, leaving this Commission
22 and intervenors in the dark on issues crucial to evaluating whether the proposed merger is
23 in the public interest.

1 As I describe below, it is clear that the merger will give Applicants new rights over use of
2 transmission that could be used to restrict availability of transmission to others and
3 undermine competition in the wholesale power markets. Nothing in the Application
4 prevents them from using these new rights anti-competitively. This suppression of
5 wholesale competition arises from the merger and can be expected to increase rates to
6 Missouri retail ratepayers, including those of Springfield. In addition, Springfield
7 is concerned that the merger could adversely affect firm deliveries of Springfield's
8 purchase of firm unit power from the Montrose generating station of Kansas City Power
9 & Light ("KCPL").
10

11 Our studies indicate that the Missouri Public Service ("MoPub" or "MPS", a division of
12 UtiliCorp) transmission system is weak and unreliable as measured by prevailing
13 engineering standards and might be even more unreliable after UtiliCorp integrates the
14 operation of its currently separate control areas in Missouri.¹ This has significant
15 consequences to the State of Missouri. Under a literal interpretation of industry
16 curtailment rules, MoPub – as a part of the merged company - could arguably call for
17 transmission loading relief ("TLR") when it experiences transmission overloads and
18 thereby halt north-to-south transfers needed by other Missouri utilities in order to lower
19 their costs. In some cases, UtiliCorp would have an incentive to call for TLRs even in
20 the absence of line outages or other contingencies.
21
22

¹ In engineering terms, our studies show that criteria violations can be expected on the UtiliCorp transmission system under conditions predicted to occur at peak (base case) in both the Summer 2000 and the Summer 2001.

1
2 **I. Why Should the Missouri PSC Take An Active Role in Transmission?**

3
4 Q. Why should the Missouri Commission involve itself in issues related to transmission?

5
6 A. Transmission is at the core of ensuring the reliable and economical electricity service that
7 is in turn at the core of the regulatory mission of this Commission. Transmission
8 construction (or lack of construction) and restrictions on transmission availability have
9 direct rate impacts upon Missouri retail customers.

10
11 Failure to construct facilities needed to support post-merger operations can result in a
12 degradation of service to all Missouri ratepayers. In the UtiliCorp and Empire District
13 merger, Applicants have set out a plan to build a 161 kV line from Nevada (UtiliCorp) to
14 Asbury (Empire) in the year 2003. That line parallels a 161 kV line from Stockton to
15 Morgan owned by Associated Electric Cooperative and known to limit north-south flows.
16 See the 1999 SPP FERC Form 715, Part 6, page 9. But Applicants have not committed to
17 build the Nevada-Asbury line.

18
19 In addition, as part of the related merger between UtiliCorp and SJLP, Applicants set out
20 a plan (but not a commitment to build) the Lake Road to Nashua 161 kV transmission
21 line, but that line does not meaningfully add to the transfer capability or stability of the
22 grid. The new line will create a contract path that will enable Applicants to avoid
23 supporting the Kansas City Power and Light transmission system, through which much of

1 the power nominally using the new line may nevertheless flow. UtiliCorp ratepayers
2 will bear the costs associated with constructing and operating the line if it is built.

3
4 Curtailments and interruptions that result from over-extending the transmission system
5 are of palpable interest to Missouri retail customers. Ensuring that adequate transmission
6 is constructed to provide reliable service to all Missouri ratepayers requires study and
7 advance planning, not the “approve the merger first, figure out how we’ll operate later”
8 approach Applicants appear to be taking.

9
10 In addition, restrictions on transmission availability as a result of the merger can
11 adversely affect the wholesale market. Obviously, adverse effects experienced in
12 wholesale markets are experienced by retail users as well.

13
14 Q: Why should the Missouri commission be concerned about competitive power markets?

15
16 A. Missouri retail customers benefit from a robust wholesale power market. A robust
17 wholesale market operates to minimize the costs that Missouri utilities pass on to their
18 retail customers through their rates. For example, wholesale purchase opportunities can
19 lessen or eliminate the need for higher-cost generation additions. Similarly, wholesale
20 sales ordinarily produce revenue credits in retail rate cases, minimizing the portion of the
21 revenue requirement that must be recovered from retail customers. And vigorous
22 wholesale competition is also a necessary predicate to the retail competition this State

1 may consider in the future. That is, retail access can be expected to produce few benefits
2 when retail customers are confronted with unduly concentrated wholesale markets.

3
4 Q. But isn't wholesale competition and transmission the job of the Federal Energy
5 Regulatory Commission ("FERC")?

6
7 A. Yes. FERC is the agency with jurisdiction over the rates, terms and conditions of
8 transmission service in interstate commerce and wholesale sales by investor-owned
9 utilities. Nevertheless, in ensuring that a proposed merger is in the public interest, the
10 Missouri Commission should insist that the merger be structured to ensure that Missouri
11 retail customers obtain the benefits of a safe and reliable transmission system and robust
12 competition at wholesale.

13
14 Open access to transmission facilities is essential to promoting that competition. Without
15 open access, vertically integrated transmission owners can use their ownership and
16 control over transmission to favor their generation sales and to keep out competitors.
17 Therefore, preserving and fostering open access to transmission is vital to the interests of
18 the States irrespective of whether FERC has jurisdiction over the rates, terms and
19 conditions of that transmission.

20
21 In addition and significantly, it is the State, and not FERC, that has the authority
22 regarding certification of transmission facilities, ensuring the adequacy of the
23 transmission system and setting retail rates to recover transmission costs. Thus, Missouri

1 has a clear interest in ensuring that utilities are not permitted to structure themselves
2 through merger to place undue burdens on the transmission system, spurring construction
3 of unnecessary and inefficient lines, or failing to commit to construction of truly needed
4 transmission.

5
6 Q. You mentioned that utilities can abuse their control over transmission in order to favor
7 their sales of generation. Is there any evidence in Applicants' filing that they are seeking
8 to exploit their control over transmission?

9
10 A. Yes. Applicants' Schedule RCK-10 (Schedule _ WAR- 5) is a study examining options
11 for physically connecting UtiliCorp to EDE, and that study evidences Applicants'
12 preference for a plan that is penny wise for Applicants and pound foolish for the
13 remainder of the region.

14
15 Q. Please explain.

16
17 A. First, it appears that, UtiliCorp has determined that its least expensive option for
18 integrating the operations of UtiliCorp and EDE, is to build transmission facilities to
19 interconnect physically these two transmission systems. The evidence seems to show
20 that although these new facilities may be the least costly integration option for UtiliCorp,
21 this approach will impose substantial costs on other users of the regional transmission
22 system. This is because transactions among the merging companies exacerbated later by
23 integration will, as a practical and physical matter, depend on the transmission facilities

1 of others, even if UtiliCorp constructs the new interconnection with EDE. Yet, UtiliCorp
2 evidently takes the position that need not bear responsibility for these adverse third-party
3 effects of its merger.

4
5 Ironically, Applicants initially sought to rely exclusively upon transmission systems of
6 their neighbors in order to integrate their systems, and seemed to have accepted
7 responsibility for such third-party effects. In pursuit of that strategy, they applied to the
8 Southwest Power Pool ("SPP") ISO for network transmission service. In a data response
9 filed in the related merger involving UtiliCorp with St. Joseph L&P, Applicants
10 seemingly committed to make any upgrades and system improvements that were found
11 necessary in the SPP System Impact Study. But, when the April 21, 2000, SPP System
12 Impact Study indicated that substantial facility upgrades and system improvements would
13 be required to accommodate Applicants' request, Applicants withdrew their application
14 for SPP network service. They substituted in its place instead a vague, non-binding
15 commitment to interconnect first and then later place their transmission facilities under
16 either the Midwest ISO or the SPP transmission tariffs. Applicants contend that if they
17 elect to build direct interconnections under their new proposal, "network service would
18 no longer be required in order to permit those systems to be joined into a single control
19 area." See Supplemental Testimony of Richard C. Kreul in FERC Docket Nos. EC00-27-
20 00 and EC00-28-00 at 4 filed May 19, 2000. Schedule__ WAR- 8.

21
22 The study provided by Applicants in Schedule RCK-10, based on the system of the
23 Southwest Power Pool in the year 2003, analyzes four options for interconnecting the

1 merging companies. Three of them are based on physically interconnecting the two
2 systems through the proposed 161 kV Nevada-Asbury line, a new 161 kV Sedalia to
3 Burns line, or through the two 69 kV interconnections. The fourth option is contractual,
4 based upon purchasing transmission capacity from either KCPL or Western Resources.
5 The recommended option - the 161 kV Nevada-Asbury line - relieves existing constraints
6 and voltage problems in the Nevada area. However, it appears from the SPP System
7 Impact Study that **none of these three physical interconnecting options is likely to**
8 alleviate all problems in the broader region affected by Applicants' plan to integrate their
9 operations.

10
11 Q. What actions can State Commissions take with respect to transmission and distribution?

12
13 A. State commissions have an important role to play in a number of areas:

- 14
15 1. I understand that in Missouri, the Commission has the authority to issue permits
16 on transmission facilities built outside certificated service areas, or to certificate
17 the construction of new transmission facilities. It appears that the Commission is
18 being asked to approve one such facility as part of this merger (at least tacitly).
19 That is, Applicants' preferred transmission alternative (Option 1, the Nevada
20 South to Asbury 161 kV line described at page 4 of Mr. Kreul's Schedule RCK-
21 10) would be a new line routed from UCU to EDE.
22 2. Transmission owners must obtain authorization from a State in a rate case in order
23 to recover the cost of new transmission facilities in that State. It is therefore

1 important – as a prelude to judging the prudence of new transmission facilities,
2 that States understand and participate in the transmission planning process.
3 Through such participation, States can better exercise their jurisdiction in order to
4 eliminate load pockets and to relieve transmission constraints that cause price
5 spikes. It appears that the Staff of the Missouri Public Service Commission
6 (“MPSC”) and the Commission itself are deeply involved in the planning
7 processes of utilities, Independent System Operators (“ISOs”) and Regional
8 Transmission Organizations (“RTOs”).

9 3. In Order No. 888, FERC delegated to the States the right to establish the dividing
10 line between transmission facilities and distribution facilities by use of the so-
11 called “seven factors test”. The manner in which States carry out this mandate
12 can greatly affect competition and access to delivery services. States should
13 implement the seven factors test in ways that foster competition.

14 4. Even when utilities restructure and offer retail access, States define what are
15 distribution facilities and specify the terms under which retail transmission
16 customers obtain access to distribution facilities. These activities can greatly
17 affect wholesale transmission rates and the effectiveness of competition.²

18 Q. In your experience, does FERC defer to State wishes with respect to transmission access?
19

² These activities are of particular importance to retail customers that have the ability to curtail load (and thereby render ancillary services) or that possess inside-the-fence self-generation, especially if those entities seek to sell ancillary services or power into wholesale markets. An overbroad definition of distribution facilities can impose “pancaked” losses and delivery charges on inside-the-fence generators and place them at a disadvantage in competing for wholesale sales. Pancaked losses and delivery charges can be major impediments to marketers and wholesale customers seeking to buy power or services from interruptible industrial users and inside-the-fence generators.

1 A. For the most part, yes. FERC has repeatedly deferred to state commissions with respect to
2 transmission planning, implementation of open access transmission tariffs (especially as
3 such tariffs are applied to bundled retail sales), formation of ISOs and separation of the
4 transmission function from the distribution function (“refunctionalization”). For
5 example, FERC has recently approved transfers of transmission facilities pursuant to
6 Wisconsin legislation that encourages utilities to transfer ownership of their transmission
7 facilities to a jointly-owned “Transco” that will be a separate zone within the Midwest
8 ISO. That legislation also encourages utilities to transfer control over their transmission
9 facilities to the Midwest ISO.

10
11 Q. How could the Missouri Commission foster competition and ensure reliable service at
12 reasonable rates in the exercise of its jurisdiction over mergers?

13
14 A. The Commission could deny a merger or impose conditions upon its approval of a
15 merger. I recommend several such conditions in later sections of my testimony.

16
17 **II. Native Load Priorities**

18
19 Q. What is Springfield’s first concern with the proposed UCU/EDE merger?

20
21 A. Springfield’s first concern is that the merged companies can invoke native load priority
22 and possibly place Springfield at a severe economic disadvantage in obtaining low-cost
23 power and in obtaining transmission service for both off-system bulk power purchases

1 and sales. Non-discriminatory access to transmission service is taking on more
2 importance to entities such as Springfield that depend on access to transmission. As I
3 noted earlier, Springfield is principally interested in protecting deliveries of its planned
4 imports of firm power but is also interested in protecting its imports of non-firm energy
5 from being excessively curtailed.

6
7 Q. What are native load priorities?

8
9 A. Native load priorities are rights that may be possessed by a vertically integrated utility
10 transmission owner under contract, State law and court precedents that protect
11 transmission service to "native load" – i.e., a utility's bundled retail customers.
12 Transmission owners can invoke native load priorities in order to favor deliveries of their
13 own purchases and sales of generation and to obtain favored access for their native loads
14 through transmission bottlenecks.

15
16 By virtue of the mergers of UtiliCorp with EDE and SJLP, Applicants will be able to
17 exercise their native load priorities and expand the coverage of those priorities to cover
18 deliveries between Applicants' native loads in what are now three separate Missouri
19 control areas, even if all of those control areas are not integrated operationally or not
20 physically interconnected by Applicants' own transmission lines. By these means,
21 Applicants will be able to import their own firm resources through constrained interfaces
22 while potentially curtailing Springfield's firm purchase of unit power from the Montrose
23 generating resource of KCPL. Similarly, Applicants may be able to assert a higher

1 priority for their imports of non-firm energy over Springfield's use of non-firm point-to-
2 point transmission service if Springfield does not take network service. Springfield
3 recognizes that UtiliCorp has offered to protect competing entities within its system from
4 its exercise of the native load priority to import non-firm energy (the so-called
5 "AES/TVA" priority). But Springfield is not within the Applicants' system and seeks
6 more specific protections, particularly against the merged company's use of native load
7 priority to free up local resources that enable it to make off-system sales through
8 displacement.

9
10 For example, Applicants might move power from one of their operating companies into
11 another operating company, asserting a native load priority and "reducing" the generation
12 in the receiving operating company. However, simultaneously, they could initiate an off-
13 system sale from generation located in the second, receiving operating company. This
14 would in effect allow the Applicants – under the guise of meeting a native load
15 requirement - to exploit their native load priority and move generation through a
16 bottleneck for a distinctly non-native load purpose: making off-system sales. Thus, the
17 various operating companies of the Applicants could be used as "staging platforms" from
18 which Applicants gain access to remote markets uninhibited by transmission constraints
19 that are imposed upon others.

20
21 **PROPOSED CONDITIONS**
22

1 Q. What conditions should be placed on the merger in order to protect Springfield against
2 Applicants' anti-competitive invocation of native load priorities?

3
4 A. In general, I recommend conditions that prevent Applicants from expanding their use of
5 existing native load priorities beyond their present geographic scope. More specifically,
6 Applicants should be required to commit that with respect to any and all generating
7 resources associated with any one of their existing control areas (including purchased
8 generating resources) serving load in any other control area of the merging companies,
9 the merging companies should waive or not assert:

10
11 a. Native load priority on scheduling non-firm network transmission service. This
12 merely confirms the Applicants' offer to waive their priorities under AES/TVA
13 without limiting the protected class to transmission dependent utilities located
14 within Applicants' service territory, which is the narrower protection offered by
15 Applicants.

16 b. The native load preference arguably accorded to bundled retail loads over
17 wholesale loads under the decision in Northern States Power Co. v. FERC, 176
18 F.3d 1090 (8th Cir. 1999) and

19 c. Use of any native load priority that will enable any one of the merging companies
20 to import power through constrained interfaces so as to free up its local generating
21 resources for off-system sales.
22
23

1 **III. Internal Dispatch.**

2
3 Q. What is Springfield's second concern?

4
5 A. Springfield is concerned that joint operation of the merged companies (internal dispatch)
6 might subject the region to unanticipated swings in power flows as the Applicants re-
7 dispatch their units. Internal dispatch will exacerbate any overloads caused by
8 Applicant's exercise of their native load priorities. These power swings might result in
9 the imposition of additional curtailments on other utilities in real-time, shifts in losses and
10 loss burdens, re-dispatch, congestion costs and other adverse impacts. Such impacts
11 would not necessarily be captured in analyses of market power or in planning studies that
12 are conducted in order to analyze the impacts of the merger upon the use of the regional
13 transmission network. Indeed, it is clear from our discussion with UtiliCorp's analysts
14 that transmission constraints presently limit their integration of their control areas and
15 that no study has addressed these potentially adverse consequences of the merger.

16
17 This concern has arisen in conjunction with other mergers. It is usually addressed by
18 simulating internal dispatch through multi-area production cost studies that determine on
19 an hourly basis the amount of power that has to flow from one of the merging control
20 areas to each other control area in order to optimize economic dispatch. Although not a
21 perfect tool, this type of analysis provides important insights with respect to the
22 magnitude, direction and duration of power flows (and transmission capacity) needed to
23 accommodate internal dispatch between isolated pockets of load and generation that are

1 newly operated under a single economic dispatch algorithm. For example, the analysis
2 might show that the peak flows between the isolated pockets resulting from
3 unconstrained economic dispatch will occur for only a few hours per year and produce
4 few economic benefits. In such a case, it would be better for the State of Missouri (and
5 perhaps for the merging company as well) for Applicants to constrain their economic
6 dispatch. They could agree to limit their internal dispatch flows to a specific ceiling
7 amount, leaving the remainder of the interconnecting transmission capacity available for
8 sale as long term firm transmission service for transactions that produce greater benefits.

9
10 A related concern is that industry rules exempt Applicants' internal dispatch from the
11 capacity posting, reservation, scheduling and monitoring requirements (Open Access
12 Same-Time Information System – "OASIS") of their Open Access Transmission Tariff
13 and from the similar requirements of any regional transmission provider. This could pose
14 a problem for Springfield to the extent that the merged company consolidates its separate
15 control areas into one. Consolidation of control areas would transform what are now (a)
16 pre-scheduled and readily curtailable resale transactions that are reported on the OASIS
17 of each affected transmission owner into (b) "internal dispatch" between affiliated utility
18 companies that is exempt from the usual rules regarding reservation, scheduling,
19 reporting, monitoring, and tagging and is therefore at least in practice less subject to
20 curtailment of transmission service. This exemption would be in effect regardless of
21 whether the transactions between affiliates of the merged company might actually flow as

1 circulating loop flow³ over the transmission systems and control areas of utilities that
2 operate in parallel. The transmission capacity needed to carry out these flows would be
3 exempt from disclosure even in those instances in which those flows commandeer what
4 would otherwise be Available Transmission Capacity ("ATC") on the relevant regional
5 interfaces. And there would be no requirement that such flows be pre-scheduled. Unless
6 special analyses are conducted beforehand and special monitoring is added, one cannot
7 easily predict the magnitude, direction and duration of internal dispatch flows and cannot
8 determine the magnitudes of internal dispatch flows in real time. As a result, a large
9 buffer or cushion of transmission capacity must be left unloaded in order to accommodate
10 these unpredictable and unknown flows. Ordinarily, transmission capacity that is not
11 being utilized must be disclosed and made available to other users when not being
12 utilized by the owners. But in the situation posed by the two UtiliCorp mergers,
13 transmission capacity that is temporarily unused by internal dispatch can be sold on a
14 non-firm basis but cannot be put to its highest and best use, moving power on a firm basis
15 for a long term. Thus, the ATC in the region might be "soaked up" with a resulting loss in
16 economic efficiency to the region.

17
18 In summary, Springfield is concerned that internal dispatch of the merged company that
19 is unpredictable as to magnitude, direction and duration will "soak up" ATC without
20 warning to other transmission users. Springfield is also concerned that internal dispatch
21 will ordinarily be exempted from the pre-scheduling requirements of the OATT and not

³ Loop flow is power that flows over transmission lines, not as a result of scheduled transactions over the lines but in response to the laws of physics (i.e. the path having the lowest impedance). Such flows reduce the available transfer capability of the lines preventing other potential users from obtaining transmission service.

1 be reported on the OASIS of the transmission owner or of any ISO or RTO in which it
2 participates, and will therefore be effectively shielded from curtailments while
3 enhancing the potential for curtailment of others. Unless internal dispatch is studied in
4 advance and monitored and constrained in real time, ATC will be needlessly reduced.
5 This needless loss of ATC will harm other Missouri utilities, power marketers and their
6 customers.

7
8 Q. What does Springfield suggest as a remedy for these concerns?

9
10 A. Springfield recommends that the Commission impose conditions on the merger such that:

- 11
12 a. Applicants not be allowed to combine any or all of their existing control areas without
13 first submitting their plans for such combinations to peer group review and approval
14 by the SPP ISO/RTO and the affected regional reliability councils.
- 15 b. The merged companies be required (i) to reserve transmission capacity on the
16 relevant OASIS for purposes of carrying out any internal dispatch between what are
17 now geographically separate control areas of the merging companies, (ii) to
18 implement real-time monitoring of intra-company flows associated with internal
19 dispatch, (iii) to report continuously the amount of such flows on its OASIS and (iv)
20 to make all reasonable efforts to limit internal dispatch to levels at or below the
21 transmission capacity reserved for purposes of carrying out such internal dispatch.
22 This will serve to maintain the status quo ante.

1 c. If the burdens on Springfield attributable to internal dispatch of Applicants turn out to
2 be substantial (i.e., a substantial increase in curtailments of Springfield's firm
3 schedules from Montrose), the merged company should be required to reimburse
4 Springfield for the incremental costs to Springfield of re-dispatching Springfield's
5 generating resources that are attributable to the post-merger integrated operations of
6 Applicants' separate systems.
7

8 Q. Have Applicants addressed the effect of internal dispatch on regional ATC?
9

10 A. Belatedly, indirectly and ineffectively, yes. At pages 4-5 of his May 19, 2000,
11 Supplemental Testimony at FERC (Schedule _ WAR-8), Mr. Kreul offers to limit
12 transfers but only "under normal operating conditions" for three years after Applicants
13 complete their integration. The limits will be 200 MW from MPS to each of Empire and
14 St. Joseph and 100 MW from each of Empire and St. Joseph back to MPS. He indicates
15 that this level of transfers will enable Applicants to achieve the "energy cost savings
16 which are one of the benefits resulting from the integration of the power supply functions
17 of the Applicants." However, he has not analyzed the associated loop flows on other
18 utility systems "resulting from the integration of the power supply functions of the
19 Applicants." Nor has he quantified any offsetting losses likely to be borne by other
20 regional utilities and their customers whose transactions must be curtailed to
21 accommodate such loop flows or whose transmission systems must be reinforced in order
22 to carry those loop flows. Dr. Frankena assumes that these transfers will be given
23 priority treatment. Supplemental Testimony of Mark W. Frankena at p.5, line 20- p. 6,

1 line 1. (Schedule __ WAR-8). Mr. Kreul does not indicate, however, whether
2 Applicants will agree to pre-schedule their internal dispatch on their OASIS, monitor that
3 internal dispatch in real time, or notify others in real time of the amount of their internal
4 dispatch. And, importantly, Mr. Kreul reserves to the Applicants the right to exceed
5 these self-imposed limits “due to redispatch or other system requirements, which would
6 be determined by the applicable regional transmission system operator”. In view of the
7 many contingencies and uncertainties preventing Applicants from “making an immediate
8 decision regarding whether to place [their] future integrated systems ... under the SPP or
9 Midwest ISO” (Kreul FERC testimony at 5-8), the “applicable regional transmission
10 system operator” will presumably be Applicants themselves.

11
12
13 **IV. SPP ISO/RTO**

14
15 Q. What is your third concern?

16
17 A. Springfield is concerned that the merged company will not operate as part of a single ISO
18 or RTO. Although Applicants seem keen to integrate the generation of their affiliated
19 companies (and garner the economic benefits of doing so), they are somewhat cavalier
20 about integrating their transmission facilities with those of non-affiliates. In gauging the
21 effect on Missouri’s public interest, the integration of transmission facilities under a
22 regional transmission organization is far more important than integration of Applicants’
23 generation because an RTO will identify and protect against potential abuses likely to

1 flow from Applicants' plan to integrate their generation. Mr. Kreul's testimony (in
2 Docket EM-2000-369 at 9, 12 and 13) is coy on this subject, indicating that Applicants
3 cannot yet decide on what ISO to join or how to integrate their open access transmission
4 tariffs. Each of these issues can be decided now and should be decided in order for the
5 Commission to assess whether the merger is in the public interest.

6 Applicants are considering membership in two different ISOs (SPP and Midwest).

7 Empire is currently in SPP. St. Joseph L&P currently operates as part of Mid Continent
8 Area Power Pool ("MAPP"). I understand that UtiliCorp currently takes service under a
9 MAPP transmission tariff and has, within the past few years, withdrawn the transmission
10 facilities of Missouri Public Service from the control of the SPP ISO/RTO.

11
12 Q. Why is RTO/ISO membership important?

13
14 A. Control over transmission and distribution facilities has all too often been exercised in
15 anti-competitive ways. One classic example of this anti-competitive behavior occurs
16 when an owner of vertically integrated transmission and generation facilities denies
17 competing generators access to its transmission and/or distribution facilities. The only
18 effective antidote to this behavior is to separate the ownership and control of transmission
19 from the ownership and control of generation through transfer to an ISO or RTO. FERC
20 has ordered a less strict separation of transmission from generation through the functional
21 unbundling required by Order No. 888.⁴ However, utilities employ many subtle

⁴ FERC has ordered partial divestiture of generation in some cases.

1 strategems (and some not so subtle) in order to frustrate the separation of functions and to
2 deny transmission access.

3
4 Although FERC's Order No. 2000 recognizes FERC's own authority to require RTO
5 participation in certain circumstances, FERC is seeking to promote voluntary RTO
6 formation (both through that order and more generally). This Commission should be
7 concerned about the manner in which Missouri utilities carve up the state into multiple
8 RTOs that may enhance individual utilities' marketing advantages, rather than supporting
9 a vigorously competitive regional market. Applicants, by being cagy as to their RTO
10 plans, leave the state vulnerable.

11
12 Q. What do you recommend as a remedy for this concern?

13
14 A. I recommend that the merged company put all of its transmission facilities in Missouri
15 and Kansas under the control of the SPP ISO/RTO in a single zone under the SPP
16 transmission tariff and that the merged company join - and maintain membership in - the
17 SPP ISO/RTO. KCPL, Springfield, and Empire are in the SPP ISO, and although
18 UtiliCorp has canceled its previously requested network service from the SPP ISO, the
19 mere fact of its application for such service demonstrates the suitability of SPP
20 participation by the merged company. Thus, while the Midwest ISO is arguably feasible,
21 it would be more logical to condition merger approval upon the Applicants' joining the
22 SPP ISO/RTO. And any additional benefits of participation in the Midwest ISO may

1 ultimately be realized through a merger of the Midwest and SPP ISOs which is still a
2 viable option.

3
4 Moreover, I recommend that the Missouri Commission order Applicants to file an
5 integrated OATT and an integrated transmission rate for their control areas in Missouri.

6
7 **V. Absence Of Necessary Studies**

8
9 Q. What is your next concern?

10
11 A. Applicants have not analyzed the impact of their combined uses of the region's
12 transmission system upon transmission customers such as Springfield. Instead,
13 Applicants conducted a series of limited studies in which they considered only what new
14 transmission projects would be needed in order to accommodate joint operation of the
15 merging systems through physical interconnection between Applicants' systems. In these
16 studies, Applicants assumed that additional transmission facilities were going to be
17 constructed, and then modeled the resulting power flows assuming that the constructed
18 facilities were in place. No transfers between Applicants' systems, such as transfers to
19 achieve the proposed energy cost savings, were incorporated in these load flow studies.

20
21 Applicants initially made it clear that they had not committed to construct any of the
22 incremental facilities they modeled. They asserted that the studies were conducted only
23 as a means of obtaining a conservative estimate of the benefits of merged operations (in

1 terms of their perception of minimizing the estimated merged system benefits).

2 Moreover, Applicants had reserved the right to forgo construction of any new facilities
3 and to rely instead upon utilization of the regional transmission system, either through
4 network transmission services or point-to-point transmission service. See the testimony
5 of Richard Kreul , at Docket No. EM-2000-369 page 11, line 4-page 12, line 23.

6
7 In summary, Applicants appear not to have conducted studies necessary to indicate the
8 likely impacts of their planned uses of the regional system upon other transmission users.
9 In response to Springfield's data requests on the scope of their studies, Applicants
10 indicated:

- 11
12 1. That such a study would be conducted by SPP,
13 2. That such a study had not then been conducted,
14 3. That the SPP study would take two to three months to complete and
15 4. That the planned SPP study resulted from Applicants' filing an application
16 seeking SPP network service.

17
18 See UtiliCorp's response to Springfield's data request No. EDSR-24. Schedule __
19 (WAR-2). UtiliCorp revised that application on January 27, 2000. Schedule __ (WAR-2).

20 As I noted earlier, SPP did conduct a System Impact Study dated April 21, 2000,
21 although I did not see that study until well after that date.

22
23 Q. Is the SPP study sufficient to protect Springfield and other transmission users?

1
2 A. Perhaps the SPP study would have been sufficient if Applicants had agreed to accept its
3 findings and to make the recommended upgrades, but that is apparently not to be the
4 case. As I noted, the SPP System Impact Study addressed the network transmission
5 service requests from UtiliCorp, EDE, and SJLP (Schedule __WAR-7). It was finalized
6 in April and released at the end of May. The study determined that the requested
7 transmission service will cause numerous thermal overloads and voltage problems and
8 that facility upgrades and system improvements are required in order to accommodate the
9 requested service. Faced with these results, Applicants withdrew their request for
10 network service from SPP. Because Applicants have not shown a willingness to pay for
11 the system upgrades identified by SPP, we have no assurance that the necessary
12 protection will be provided to other transmission system users.
13

14 Q. Please describe the SPP study results in more detail.
15

16 A. SPP evaluated the impact of rendering network transmission service to UtiliCorp, EDE,
17 and SJPL for ten years. The years selected for study were 2000, 2001, 2004, 2006, and
18 2010. The study analyzed system conditions for 2000 Fall Peak, 2001 Winter Peak, April
19 Peak, Spring Peak, Summer Peak, and Fall Peak, 2004 Winter and Summer Peak, 2006
20 Winter and Summer Peak, and 2010 Summer Peak. SPP simulated single outages and
21 selected multiple branch outages.
22

1 Regarding transfers between Applicants, SPP studied two system conditions: one based
2 on the existing system and a second based on additional transfers between UtiliCorp,
3 EDE, and SJLP. Additional transfers between Applicants' systems were limited to 100-
4 200 MW.

5
6 In the Executive Summary of the Impact Study (Schedule__WAR-7, page 3, paragraph
7 2), SPP reported that "UtiliCorp and SPP Criteria were used to determine what violations
8 exist." SPP also reported (page 4, paragraph 1) that it analyzed whether "current SPP
9 Criteria and NERC Planning Standards were fulfilled". It remains unclear whether
10 UtiliCorp criteria are in compliance with the SPP criteria. This topic is discussed later in
11 my testimony.

12
13 The Study reports a substantial number of overloaded lines and voltage problems. For
14 example, in the 2000 Fall case in which the system experiences relatively low load levels,
15 overloading on the 69 kV line Sibley to Liberty (UCU) is caused by an outage of the
16 161/69 kV transformer at Sibley. In the Winter 2000/01 case, several contingencies
17 overload the 69/34.5 kV transformer at Fairplay 217 substation in EDE. Contingency
18 analysis of the summer peak 2001 case reveals twenty-eight overloaded facilities in the
19 UtiliCorp area and one in the EDE area (Schedule__WAR-7, Page 7). Numerous voltage
20 problems are reported, with especially low voltage reported in the EDE area. See pages
21 20-63.

1 SPP reviewed all potential violations with the owners of the affected transmission
2 facilities and noted how the overloads might be alleviated. Some of the proposed
3 resolutions for the problems identified are: "provide solution", "reduce generation", "line
4 rebuilt", "acceptable", "accept risk", "reconductor", "upgrade", and "increase capacity
5 rating". However, whatever actions utilities selected to eliminate the overloads, the SPP
6 report clearly indicates that problems exist.

7
8 Faced with these results, Applicants withdrew their network service request, as noted
9 earlier. They now have indicated to FERC that they are considering the remaining
10 option: physical interconnection between UtiliCorp and EDE. The preferred option (but
11 an option to which Applicants have still not made a firm commitment) is a new 161 kV
12 line from Nevada to Asbury. According to Schedule RCK-10 (Page 4 of 11, under C),
13 this line is projected to be in service by the Summer of 2003. However, the SPP study
14 indicates that problems exist in the Fall of 2000 and that problems continue to crop up
15 through the Winter of 2000, Summer of 2001, and so on. Moreover, Applicants' studies
16 analyzing options for physical interconnections did not analyze the impact on regional
17 transmission of integrated operation of Applicants' systems in a single control area.
18 Therefore, a study is needed that simulates the combined operations of Applicants'
19 systems with the specific upgrades now under consideration, particularly for the period
20 before the Summer of 2003 when those upgrades are projected to be in place, a period in
21 which the SPP System Impact Study identified substantial problems.
22

1 Q. What do you recommend as a remedy for the lack of necessary studies upon which the
2 Applicants are willing to commit themselves to pay for the indicated system upgrades?

3
4 A. I recommend that Applicants be ordered to conduct production cost, load flow and
5 stability studies of the effects upon other utilities of combining Applicants' electric
6 systems (and of combining their control areas). Flows between Applicants' separate
7 control areas can be determined from hourly production cost simulations. These studies
8 should be done in the next month and be provided to Springfield and other affected
9 transmission customers. The studies should be provided in hard copy in summary form
10 and completely in electronic form in a format that allows all parties to replicate and run
11 the studies on their own software. Given the importance of these studies to the issues at
12 hand, I further recommend that the Commission keep the case open until such time as the
13 studies have been completed and all parties have been allowed sufficient time to review
14 and comment upon such studies. I would ask the Commission to allow a thirty-day
15 period after the completion of the studies to allow parties to file their comments. If, after
16 the comments are filed, the Commission determines that additional hearings are
17 warranted, hearings could be continued at that time.

18
19 Such studies should include – but not be limited to:

20
21 a. Production cost simulations that indicate the hourly amount of power flow that
22 can be expected to occur between each of the separate pockets of load and
23 generation in connection with the merged company's internal dispatch. This

1 should include hourly determinations of net exports and imports for each of those
2 pockets. The output of this analysis should also include hourly indications of:

- 3 (1) the amount of generating capacity probabilistically determined to be available
4 from each generating resource owned and purchased by the merged company,
5 (2) the amount of that capacity dedicated to native load,
6 (3) the amount dedicated to firm off-system sales and
7 (4) the amount available for additional off-system sales.

8 b. Load flow and stability analyses of necessary additions of equipment (and
9 employment of must-run generation) to support transmission voltages within a +/-
10 5% range of nominal voltage under base case conditions, heavy transfer
11 conditions and under all single contingency outage conditions. The starting
12 conditions should reflect alterations of internal dispatch that Applicants expect to
13 occur in the post-merger scenarios. The SPP region requires this level of voltage
14 support in order to provide reliability. Utilities whose voltage standards are not as
15 strict are deemed to impose risks and/or costs upon their neighboring systems and
16 to impair the reliability of the region. I discuss this issue further in my later
17 testimony on conflicting standards for design and operation of transmission, and
18 the need for consistent region-wide transmission system design and operation
19 standards.

20
21 c. Analyses of transmission facility additions necessary to integrate operations of
22 Applicants' control areas without impairing Springfield's ability to carry out its
23 planned purchase of a firm unit entitlement from KCPL's Montrose unit. The

1 reliability criteria should include a requirement that Applicants comply with
2 regional reliability standards. See item No. VII below.
3

4 Q. Has your firm conducted a load flow study of the pre- and post-merger system
5 conditions?
6

7 A. Yes. Before we received the SPP study results, a limited study was conducted under my
8 supervision concerning the adequacy of the Missouri transmission system, and that study
9 indicates that problems exist. My study focused on Applicants' transmission system, but
10 monitored the entire Missouri transmission system under summer peak conditions, both
11 normal conditions and conditions with heavy power transfers.
12

13 Load flow data for Summer 2000 and 2001 peak base cases were made available by
14 UtiliCorp through Data Response EDSPR-28. Despite its clear intention to alter internal
15 dispatch through integration of its separate control areas, UtiliCorp did not provide post-
16 merger load flow base cases that reflected that altered dispatch as we requested in our
17 original Data Request EDSPR-28. In answer to a follow-up data request, UtiliCorp
18 (referred to as "UCU" in the data response) responded:
19

20 *For the purposes of transmission system analysis in the SJLP and EDE*
21 *interconnection studies, UCU did not vary the post-merger dispatch from the pre-*
22 *merger dispatch. For transmission system analysis only, the expected post-*

1 *merger dispatch can be adequately represented using the pre-merger dispatch in*
2 *provided cases.*

3 (Schedule- (WAR-3), response from UCU's Mr. Gary Clemens to my partner,
4 Ms. Sedina Eric's e-mail on March 28, 2000, last paragraph)

5
6 This response confirms that Applicants failed to address one of the issues in this
7 proceeding most important to the public interest: How will Applicants' merger and
8 related operational integration affect the transmission capacity now available to other
9 entities in Missouri and surrounding regions?

10
11 Any transmission system analysis of the post-merger conditions based on the pre-merger
12 dispatch of the Applicants' generator capacity will not address, let alone answer, this
13 question. Because the required data has not been made available, my colleague
14 performed her analysis based on the pre-merger dispatch. As I noted, her analysis
15 indicates the existence of numerous overloads that violate regional design standards.

16
17 Q. Please describe the methodology of the study and reliability criteria applied.

18
19 A. Two summer base cases for the year 2000 were analyzed, both provided with Data
20 Response EDSPR-28:

- 21
22 1. A base case with normal transfers and
23 2. A base case with a heavy north-to-south power transfer through Missouri.

1
2 Cases for 2001 summer peak conditions were analyzed, as provided with that same data
3 response.

4
5 The load flow analysis simulated single contingencies on each transformer and internal
6 line in the UtiliCorp area (called "MIPU" in the load flow data), and all tie lines between
7 UtiliCorp and interconnected areas. The facilities included in the analysis operated at
8 100 kV and above.

9
10 The analysis searched for criteria violations as measured against both UtiliCorp's
11 transmission reliability criteria and the Southwest Power Pool's criteria. Both of these
12 criteria require an examination of how UtiliCorp will operate under first contingency
13 conditions, for summer peak load conditions and require that there be no loss of load,
14 overloaded lines, or abnormally low voltages on the transmission system. (See the 1999
15 Missouri Public Service FERC Form 715, part 4, and Southwest Power Pool Criteria,
16 July 1999).

17
18 Q. What are the results of your study?

19
20 A. Our study showed that criteria violations can be expected on the UtiliCorp transmission
21 system under conditions predicted to occur at peak (base case) in both the Summer 2000
22 and the Summer 2001. In the more stressed case simulating expected levels of heavy
23 north-to-south transfers, violations occurred not only under contingency simulations but

1 also under pre-contingency conditions (normal with all facilities in service). As I noted
2 earlier, this means (in layman's terms) that the MoPub transmission system is weak and
3 unreliable as measured by prevailing engineering standards and might experience even
4 more criteria violations after UtiliCorp integrates the operation of its separate control
5 areas. Under a literal interpretation of industry curtailment rules, MoPub could arguably
6 call for transmission loading relief to stop north-to-south transfers needed by other
7 utilities to lower their costs even in the absence of line outages or other contingencies on
8 the MoPub system.

9
10 Q. Did the SPP impact study confirm the same weakness of the Applicants' transmission
11 system as your study showed?

12
13 A. Yes. The comparable case, that both SPP and I analyzed, is the 2001 summer peak
14 condition with normal transfer through Missouri. The results of my analysis are fully
15 confirmed by the SPP study results. Moreover, the SPP contingency analysis of the 2001
16 summer case resulted in a larger number of criteria violations (SPP Impact Study, Page
17 7), than were identified in my analysis. In addition, the SPP study results show that
18 individual transmission lines are overloaded by percentages that are higher than those
19 reflected in my study.

20
21 For example, in my analysis the outage of the 161 kV Greenwood – Lee's Summit line
22 caused the overloading of the following two 161 kV lines:
23

1 Pleasant Hill – Lake Winnebago at 107.2% of emergency ratings

2 Lake Winnebago – Hook Road at 101.0 % of emergency ratings.

3
4 The same contingency simulated by SPP resulted in the overloading of these two lines
5 and an additional one as follows:

6
7 Longview - Hook Road at 103.6 % of emergency ratings,

8 Pleasant Hill – Lake Winnebago at 116.1% of emergency ratings,

9 Lake Winnebago – Hook Road at 109.9 % of emergency ratings.

10
11 Q. What other criteria violations occur in the SPP system as a result of contingency analysis
12 applied on the 2001 summer base case?

13
14 A. An outage of the 161 kV Pleasant Hill – Lake Winnebago line caused the overloading of
15 the 161 kV Pralee – Lee’s Summit line. My analysis resulted in the overloading of the
16 Pralee – Lee’s Summit line in the amount of 105.6% of the emergency rating. The SPP
17 study showed the overloading to be 112.1% of the emergency rating.

18
19 An outage of the 161 kV Lake Winnebago – Hook Road line resulted in the overloading
20 of the Pralee – Lee’s Summit line. In my study this line is overloaded to 101% of its
21 emergency rating and, in the SPP study, to 108.8% of its emergency rating.

22

1 These are only some examples of the violations that occurred on the same lines in both
2 the study conducted by the SPP and in my study. As I testified earlier, the SPP
3 contingency analysis for the 2001 summer case lists twenty-eight violations.
4

5 Q. Please explain the discrepancy in results between the SPP analysis and your analysis, and
6 suggest which results more accurately reflect the likely impacts upon the post-merger
7 system.
8

9 A. The load flow cases provided to us by Applicants did not reflect the combined operation
10 of the Applicants' control areas. Consequently, my study analyzes the transmission
11 system in Missouri that simulates pre-merger conditions. The SPP study simulates
12 transfers of the type associated with combined operation of the Applicants' systems.
13 Therefore, the results of the SPP study reflect the more severe conditions that can be
14 expected to occur in the post-merger period.
15

16 Q. Did you analyze the impact of the merger on the transmission system conditions in
17 Missouri using sources other than load flow cases?
18

19 A. Yes. I analyzed the SPP OASIS curtailment log that contains data on each transaction
20 curtailed in the period from August 28, 1998, to March 31, 2000, (Schedule WAR-4).
21 There are several curtailments of transactions involving Applicants that may not have
22 been imposed if Applicants had been merged. (See Schedule__(WAR-4), the SPP
23 OASIS Curtailments log showing the curtailments of transactions involving at least one

1 of the Applicants). Two schedules - both from SJLP to MIPS (MoPub) in the amount of
2 10 MW - were fully curtailed on October 10, 1999, at 17:00. A schedule from SJLP to
3 MIPS in the amount of 50 MW was curtailed by 32 MW on May 15, 1999 at 17:00.

4
5 A repeat of these transactions and conditions after Applicants have merged would almost
6 certainly impose higher costs on entities other than Applicants because the transactions
7 would be native load network service transactions between Applicants and would not be
8 reported on an OASIS and therefore, as a practical matter, would not likely be curtailed.

9
10 Q. Please comment on the curtailments of transactions within the merged company.

11
12 A. According to Applicants, they intend to decrease their power purchases and replace that
13 power with increased output from internal generation resources. This post-merger shift in
14 dispatch will result in increased power transfers between parts of the merged company.
15 However, transfers of power within the merged company that serve native load will not
16 be posted on OASIS. Consequently, this additional power transfer within the merged
17 company will be effectively be protected from curtailment. When congestion occurs, the
18 burden of curtailments will be imposed on other parties and other Missouri ratepayers.

19
20 Applicants are claiming efficiencies that can only be obtained by increased use of
21 transmission, but have not done the studies to show the impact of such uses on other
22 systems.

1 Q. Have you identified any other constraint on the transmission system inside Missouri that
2 might have an effect on some of the Missouri customers?

3
4 A. Yes. Other constraints are identified as potential limitations to power transfers in the
5 2000 SPP FERC Form 715 of Associated Electric Cooperative⁵:
6

7 Part 6: Evaluation of Transmission System Performance

8 *Associated facilities that have been identified as potential limitations to power*
9 *transfers are:*

10
11 Montrose-Clinton 161 kV Line

12
13 *The Montrose-Clinton 161 kV line, owned by Kansas City Power & Light, is*
14 *currently limited by terminal equipment in Associated's Clinton station. This line*
15 *has shown up in future year power pool transfer studies as a potential limit to*
16 *subregional power transfers across Missouri generally in a West to East*
17 *direction. Associated is currently reviewing their Clinton terminal equipment. It*
18 *is expected that upgrades will be in place by the end of 2000.*

19
20 Stockton-Morgan 161 kV Line
21

⁵ Associated Electric Cooperative is a SERC member.

1 *The Stockton-Morgan 161 kV line experiences heavy loadings during North to*
2 *South transfers across Missouri. This line can limit transfers when the parallel*
3 *Morgan-Brookline or LaCygne-Neosho 345 kV lines are outaged or when*
4 *generating units to the south are off line. The line loadings have generally been*
5 *more severe during off peak periods when generating units are off line for*
6 *maintenance. The Stockton-Morgan 161 kV line has recently been upgraded.*
7 *This facility will continue to be monitored to determine if additional uprating or*
8 *other improvements are required.*

9 (The 2000 SPP FERC Form 715, Associated Electric Cooperative Part 6, Page 8)

10
11 MPS reports that a low voltage problem exists at Clinton if the 161 kV source at Clinton
12 substation is interrupted:

13
14 *The operating and planning studies indicate that there is one area in the*
15 *transmission system that is critical when looking at power transfers. The problem*
16 *is in the Clinton, MO [area] where low voltages will result if the 161 KV source*
17 *at the Clinton 161 KV substation is interrupted. This is considered to be an event*
18 *with a very low probability of occurrence, so there is no corrective action at this*
19 *time. The magnitude of the voltage under this contingency is such that the load*
20 *must be shed. (The 2000 SPP FERC Form 715, UtiliCorp MPS Part 5).*

1 Some constrained facilities are associated with parts of a 161 kV line⁶ extending from the
2 Montrose generation plant of Kansas City Power & Light to Brookline substation – City
3 Utility of Springfield. The line is important to delivering Springfield’s entitlement in the
4 Montrose generation plant. The Stockton – Morgan section, as reported in the AECI
5 FERC Form 715, experiences heavy loadings during north to south transfers. Moreover,
6 the line can limit transfers during the outages of 345 kV lines from LaCygne to Neosho
7 and from Morgan to Brookline. An additional parallel line would relieve these
8 constraints.

9
10
11 **VI. Commitment To Carry Out Needed Upgrades.**

12
13 Q. What is your next concern?

14
15 A. As noted above, I am concerned that Applicants have conducted insufficient study of the
16 their combined operations. Moreover, Applicants withdrew their request for network
17 transmission service after the SPP impact study showed that many facility upgrades and
18 system reinforcements are required to accommodate the requested service. Under these
19 circumstances, I am very concerned that Applicants have made no specific and binding
20 commitment to construct necessary transmission facilities. Until upgrades identified in
21 the SPP studies are in place, the burden of curtailments will fall on ratepayers of other
22 Missouri utilities.

⁶ That line is composed of the sections Montrose – Clinton, Clinton to Osceola, Osceola to Stockton, Stockton to Morgan, and Morgan to Brookline.

1
2 Applicants' original limited commitment is provided both in its testimony and in
3 response to Springfield's data request EDS-32. Unfortunately, Applicants backed
4 away from their original commitment to make upgrades that SPP found to be needed and
5 have now made new and ineffective representations in their FERC testimony, as I
6 discussed earlier.

7
8 Q. Please discuss Springfield's data request EDS-32 and Applicants' response thereto.

9
10 A. That request and Applicants' response are as follows:

11
12 **REQUEST:**

13
14 *Please explain in more detail your commitment not to link the Applicants using*
15 *Network Integration Service if it would 'adversely affect transmission dependent*
16 *entities.'* (page 13 at lines 13-17 and again at page 23 lines 14-19).

17
18 a. *What is your definition of 'transmission dependent entities'? Would the*
19 *definition include retail access customers that do now, or would in the*
20 *future, obtain generation services from non-affiliates? If not, please*
21 *explain why not.*

22 b. *On what basis would 'adversely affect' be measured, and what would be*
23 *the threshold of acceptable adverse effect?*

1 c. Please indicate whether point-to-point transmission service would be
2 requested by the applicants if network integration service were not utilized
3 to perform system integration.
4

5
6
7 **RESPONSE:**

8
9 UCU has made an application to the SPP to put all the merged companies
10 native load under SPP Network Integration Service should the merger occur.
11 An Impact Study is now underway to evaluate the effect on the transmission
12 system in SPP. **If the study reveals that providing such network service will**
13 **cause a transmission constraint (adverse effect), then it will be the**
14 **responsibility of UCU to pay for the required upgrades to eliminate such**
15 **constraints.** With the elimination of such constraints, the transmission system
16 is still available for the use of others, wholesale or retail. [Emphasis added]
17

18 If SPP Network Integration Transmission Service were not available, then
19 UCU would have to either construct transmission facilities, or purchase point
20 to point transmission service.
21

22 Q. Why does this response not resolve Springfield's concerns?
23

1 A. I believe that this response and other commitments of Applicants are inadequate for
2 several reasons including, but not limited to:

3 a. Applicants initially sought approval of the merger before they or SPP completed
4 relevant studies. In the meantime, the SPP study was completed and showed that
5 substantial reinforcements are needed in order to prevent a deterioration in
6 transmission system reliability. At that point, Applicants withdrew their
7 application for network service and announced that they were reverting to a plan
8 that would physically interconnect their systems. However, they have made no
9 commitment to carry out the reinforcements that would still be necessary even
10 with the construction of the new facilities UtiliCorp now proposes to build to
11 interconnect with EDE.

12 b. Applicants must firmly commit to carry out a specific plan of action in advance of
13 merging. Agreements to conform to vaguely defined courses of action in the
14 future will not protect the public interest. UtiliCorp has an incentive to understate
15 the severity of any constraints related to the merger in any study effort and, once
16 the merger is completed, will have an incentive to carry out no upgrades or only
17 minimal upgrades.

18 c. The merging companies have not committed to joining any particular ISO or RTO
19 that may be able to address these concerns or to put all its Kansas and Missouri
20 transmission assets under the control of a single ISO or RTO. To the extent they
21 upgrade their transmission systems at all, they reserve the right to do so before
22 transferring control over those systems to an ISO or RTO. Thus, they continue to
23 evade making a commitment to abide by the directives of any such ISO or RTO

1 with respect to the upgrades that are “under serious consideration”. And they
2 reserve the right to make no upgrades, or upgrades that are ineffective. In their
3 FERC filing, they offer to accept a merger condition requiring that they join an
4 RTO but ask:

5 ...only that they not be required to disclose their intentions on that issue
6 any earlier than the date provided by Order No. 2000 for all public utilities
7 to do so – October 15, 2000. That latitude will provide the maximum
8 opportunity for the choices on that issue to become clearer in Applicants’
9 region than they are today, but nevertheless with a reasonably prompt
10 deadline for a decision on this subject of importance to the region. [See
11 Mr. Kreul’s FERC testimony at 8.]

12
13 Although Applicants request a delay in announcing their plans with respect to an
14 ISO, a delay is not warranted. Applicants, unlike other utilities, are affirmatively
15 taking steps that threaten to harm other market participants, including other
16 utilities and ratepayers of other utilities. Through the merger, they will gain rights
17 over transmission that could be used to restrict the availability of transmission to
18 others and to undermine competition. In order to protect the public interest,
19 Applicants must make timely and specific commitments to mitigate or eliminate
20 those threats before they merge.

21
22 Q. What do you recommend as a remedy for the lack of a clear and binding commitment to
23 build needed transmission facilities?

1
2 A. I recommend that Applicants be ordered to take immediate steps to permit and construct
3 the Nevada-Asbury line⁷ and also any transmission lines identified as being necessary in
4 the studies I recommend be done in connection with Item V above, all at Applicants'
5 expense.
6

7 **VII. Conflicting Standards For Design And Operation Of Transmission**
8

9 Q. What is your next concern?
10

11 A. I am concerned that the individual companies being merged do not adhere to a single,
12 consistent set of standards for designing and operating their transmission facilities.
13

14 For example, it appears that both UtiliCorp and Empire District Electric allow voltage to
15 drop 10% below nominal voltage as a part of their design and operation standards. Some
16 voltages in the Empire area are more than 10% below nominal in the 2001 SPP base case
17 load flow. By contrast, St. Joseph L&P allows voltages to range from 94% to 110% of
18 nominal.⁸ SPP standards require:
19

⁷ Applicants conducted a study analyzing the interconnection between UtiliCorp and Empire (Richard C. Kreul Testimony, Schedule RCK-10, page 11 of 11, PSC filing in the UtiliCorp/Empire proceeding). UtiliCorp recommended addition of a 161 kV line between Nevada (UtiliCorp) and Asbury generating station (Empire) that parallels the limiting facility, Stockton – Morgan. The Nevada-Asbury line provides back-up transfer capacity. If UtiliCorp constructs the line between Nevada and Asbury, it will relieve the limiting section (Stockton-Morgan) and increase the transfer capability of a part of the Missouri system that is important to transferring Montrose power to Springfield.

⁸ See the St. Joseph L&P FERC Form 715, Part 4.

1 *Sufficient reactive capacity shall be provided within the SPP electric system at*
2 *appropriate places to maintain transmission system voltages within plus or minus 5%*
3 *of nominal when more probable contingencies occur.*

4 (See the SPP Criteria, July 1999, at page 3-1)

5
6 The SPP criteria discuss problems that may arise if the standards are not enforced:

7
8 *System voltages must be maintained within the range of acceptable minimum and*
9 *maximum voltage limits. For example, minimum voltage limits can establish the*
10 *maximum amount of electric power that can be transferred without causing damage*
11 *to the electric system or customer facilities. A widespread collapse of system voltage*
12 *can result in a blackout of portions or all of the interconnected network. Acceptable*
13 *minimum and maximum voltages are network and system dependent.*

14 (See the SPP Criteria, July 1999, at page 4-2)

15
16 Q. What do you recommend as a remedy for this concern?

17
18 A. I recommend that Applicants commit to establish and implement a single standard for
19 transmission system design and operation for the entirety of the merged company and, at
20 the very least, commit to comply with the Southwest Power Pool Criteria.

1 **VIII. COMMITMENT NOT TO SET ASIDE TRANSMISSION CAPACITY FOR**
2 **CAPACITY BENEFIT MARGINS ("CBM") OR TRANSMISSION RESERVE**
3 **MARGINS ("TRM").**
4

5 Q. What is your next concern?
6

7 A. I am concerned that Applicants will attempt to set aside transmission capacity for
8 capacity benefit margins or transmission reserve margins. The set asides will soak up
9 available transmission capacity for use by others on a firm basis. If transmission capacity
10 is not a limiting factor, such set asides have few economic consequences. But, if
11 constrained interfaces are anticipated, setting aside capacity for CBM or TRM will deny
12 needed capacity to other users of the constrained facilities.
13

14 Current NERC policies allow transmission owners to set aside transmission capacity for
15 CBM and TRM. While these policies are being evaluated and changes in these policies
16 may occur as a result, the Commission should condition any approval of the mergers
17 upon Applicants' agreeing to limit claims for CBM or TRM.
18

19 I therefore recommend that UtiliCorp be required as a condition of the approval of the
20 merger to agree (a) not to set aside transmission capacity for CBM and TRM and (b) to
21 waive any future claims for CBM and TRM.
22

1 **IX. Commitment Not To Refunctionalize Transmission Lines Operating At Or Above**
2 **69 kV.**
3

4 Q. What is your next concern?
5

6 A. I am concerned that Applicants will refunctionalize their transmission facilities in ways
7 that will be anti-competitive. FERC Order No. 888 permits utilities to refunctionalize
8 their transmission facilities to distribution or generation under the so-called seven-factors
9 test set forth in Order No. 888. A number of utilities have refunctionalized in a manner
10 that creates anti-competitive impacts. Although it is not necessary in this testimony to
11 detail all of the potential problems which may arise, I would point out that unwarranted
12 shifts in costs may impose costs upon customers which are not appropriate and be used to
13 protect a utility's customers from competition from alternative sources of supply. There
14 may also be competitive issues raised regarding more favorable treatment of the utility's
15 own generation resources, discouragement of on-site cogeneration or distributed
16 generation projects and denial of appropriate jurisdictional protection.
17

18 I therefore recommend that UtiliCorp commit not to seek refunctionalization of any
19 currently categorized transmission lines of the merging companies that operate at or
20 above 69 kV.
21
22

1 **X. MARKET POWER**

2
3 Q. Have Applicants conducted any analysis of the effect of their merger upon market
4 power?

5
6 A. Yes. On November 23, 1999, Applicants filed testimony at the FERC for consideration
7 of the two simultaneous but separate mergers of the three companies. Dr. Mark W.
8 Frankena, an economist, filed testimony in support of the merger indicating little, or no,
9 concern for market power implications. In his testimony, however, he assumed the
10 validity of supporting testimony filed by certain other company witnesses, including Mr.
11 Richard C. Kreul. As already indicated, I take exception to some of the assumptions or
12 tentative mitigations which Mr. Kreul advances in his testimony, and my exceptions were
13 confirmed in the SPP System Impact Study.

14
15 Q. What is your response to Dr. Frankena's findings?

16
17 A. As an engineer, the issue for me is not whether Applicants possess market power in
18 relevant markets as measured by the Herfindahl-Hirschman Index or can benefit from
19 exercising that market power. Instead, the issue is whether Applicants will be able to
20 usurp valuable, limited transmission capacity necessary for other Missouri utilities to
21 maintain deliveries under their purchased power contracts. That is, the question is
22 whether the merger gives the Applicants the opportunity, ability and incentive to utilize

1 scarce transmission resources for their own use leaving other utilities with no economic
2 alternatives for the delivery of their needed power supplies.

3
4 For energy consumers in Missouri, this is an important consideration. If transmission
5 serving the State becomes constrained, it will not be possible to dispatch the most cost-
6 effective combination of generating resources. Re-dispatch will be required, and energy
7 costs necessarily will rise. Constrained interfaces can lead to severe price spikes. In more
8 severe cases, transmission constraints can suppress voltage to unacceptable and
9 unreliable levels and cause customers to be cut off or, worse yet, cause cascading
10 failures. The Commission should therefore impose a condition on its approval of the
11 mergers to require Applicants to make upgrades in the transmission infrastructure (much
12 of which is not owned by the Applicants) so as to preserve existing benefits. Although
13 benefits are likely to be achievable through the merger, they should be achieved through
14 synergies associated with the merger and not be the result of diverting benefits to
15 Applicants at the expense of other energy providers and consumers in Missouri.

16
17 Q. What specific findings do you question?

18
19 A. Dr. Frankena appears to dismiss transmission market power concerns entirely on page 13
20 of his testimony by arguing that the presence of regional tariffs (MAPP and/or SPP) will
21 make it "unlikely" for the Applicants to increase transmission market power.⁹ I
22 understand that the MAPP ISO negotiations have fallen apart and that the MAPP regional

⁹ This point is reiterated at page 35, lines 16-18 where Dr. Frankena states: "I rely primarily on facts presented in the testimony of Mr. Kreul to conclude that the proposed mergers do not raise concerns about transmission market power."

1 transmission tariff does not satisfy many of the minimum requirements of an ISO or
2 RTO.

3
4 The evidence suggests Dr. Frankena's reliance upon regional transmission tariffs to
5 prevent damage to competition is too conclusory. The trade press reports almost daily
6 that even when they are under the control of regional transmission organizations or ISOs,
7 market participants can game the system. Thus, the mere existence of regional
8 transmission tariffs does not in itself insure that a merger will not afford Applicants
9 increased ability and incentive to exercise forms of market power that are too subtle to be
10 captured by traditional analyses of market power.

11
12 Q. Please continue.

13
14 A. A key element to be analyzed in assessing impacts of electric utility mergers is the
15 regional transmission system. Increased attention is being paid to this sector of the
16 electric system in recent years, and it is no exaggeration to say that this has become the
17 central point of concern for parties seeking to compete in electric power markets. For
18 companies seeking to merge and utilize the intervening transmission system in order to
19 achieve merger benefits, the impacts upon the use of the transmission system by third
20 parties is a complex and contentious concern. In these mergers, this consideration has
21 been exacerbated by the lack of study devoted to this issue by Applicants.

1 Dr. Frankena has gone to considerable lengths to try to dismiss concerns regarding
2 competitive impacts. He argues, correctly, that if the relative size of Applicants' current
3 systems is considered, the concern regarding market power appears slight. However,
4 while correct in a global context, such an approach may mask serious concerns of a more
5 local nature. These impacts may not translate directly into increased economic benefits
6 via the exercise of market power, the traditional concern examined by DOJ/DOE market
7 power screening tools. However, they may present obstacles to other market participants
8 who rely upon the, at times, fragile transmission infrastructure in the region.

9
10 Applicants themselves appear to be cognizant of such impacts. In their original
11 applications, they provide facility reinforcement schemes designed to address just such
12 concerns. However, they do not pledge to develop such projects as a pre-requisite to
13 merging. Rather, they utilize these plans as a proxy to indicate that, even if such projects
14 were constructed, the benefits to Applicants would outweigh the estimated construction
15 costs. The transmission facility upgrades thus become fictional characters in a
16 cost/benefit analysis, useful for justifying the merger before regulatory bodies, but
17 providing no substantive assurance to third parties that such transmission upgrades will
18 ever materialize, or if so, at whose expense.

19
20 An April 17, 2000, letter to Applicants (Schedule _ WAR-8) from FERC's Director of
21 the Division of Applications raises concerns about the failure of Applicants' to evaluate
22 the impact of their integrated operations upon access to power markets. FERC Staff
23 letter stated:

1
2 ... changes in Applicants' integration plans and transactions announced
3 subsequent to the filing of your [Applicants'] merger application constitute
4 significant changes in your merger proposal requiring revisions to your
5 competitive analysis....

6
7 See Schedule __ (WAR-6).

8
9 The Applicants were considering a least cost option which would allow them to utilize
10 existing regional transmission facilities as the preferred mechanism upon which to
11 integrate the combined operation of the merged companies. However, as I noted earlier,
12 when confronted with the SPP System Impact Study, Applicants determined that "it does
13 not appear fruitful for UtiliCorp to continue to pursue the application for network service
14 with the SPP, and to incur the related costs of that process, at the present time." See Mr.
15 Kreul's FERC testimony at 4. They withdrew their request for service under the SPP
16 tariff and now offer instead to give "serious consideration" to two plans for direct
17 interconnection of their Missouri control areas.

18
19 Q. Did Applicants respond to the FERC letter?

20
21 A. Yes. The response of Utilicorp to the FERC staff April 17, 2000, letter is inconsistent
22 with its prior commitments and is counterproductive. Although the reliability of electric
23 power in the United States depends upon effectively implementing regional solutions to

1 transmission problems, Utilicorp, a purported advocate of the new competitive regime,
2 now positions itself squarely against the prevailing regional solution. Having requested
3 the most relevant transmission authority, the Southwest Power Pool, to determine the
4 appropriate infrastructure necessary and having offered to place itself under SPP's
5 regional tariff, UtiliCorp has turned its back on the process it invoked. Seeking to avoid
6 the full costs of mitigating the adverse impacts upon other users of the transmission
7 system, Utilicorp has apparently elected to "go it alone," reverting to the standards which
8 prevailed prior to the move towards regional solutions. It reserves the right to determine
9 unilaterally what transmission facilities are required and seeks to defer until October
10 2000 announcing any commitment to submit any specific portions of the merged
11 company's transmission facilities to the control of any specific regional body
12 administering a regional transmission tariff.

13
14 SPP should be commended for conducting an analysis which revealed the Emperor's
15 clothes to be an illusion – that Applicants' intended mode of joint operation would
16 impose costs upon the system greater than the Applicants had originally estimated, and
17 greater than they are apparently willing to pay. By forcing these costs to be paid by
18 others and by refusing to submit to a regional tariff for network service, Applicants seek
19 to enhance their own profits at the expense of other users of the transmission system.

20
21 In contrast to Applicants' current declaration that they have always stated that their
22 merged systems would be operated as a single control area, Mr. Kreul stated on page 9
23 line 14-15 of his direct testimony: "The two systems **may be** operated as a single regional

1 control area after the two companies are merged.” [Emphasis added] His direct
2 testimony conditions his answers upon the possibility, not the assurance, that such
3 integrated operation would be implemented. This is evidenced by his repeated use of the
4 preposition “if.”

5
6 Applicants now term the initially proposed transmission facilities as “contemplated
7 originally as the **likely integration option**.” (see Response of Applicants to Letter Order
8 Dated April 17, 2000 page 3). Once again this is not the testimony of Mr. Kreul. On
9 pages 11 and 12 of his direct testimony, Mr. Kreul speaks of the transmission-build
10 option as being only an option that may or may not be “warranted.” At no time does he
11 define his terminology. On page 12, he speaks of an RTO solution but importantly
12 reserves to the Applicants, and not the regional authority, the right to determine whether
13 “additional transmission construction is not necessary.” He asserts that:

14
15 UtiliCorp and Empire will not effectuate any interconnection plan that would result in
16 reducing Available Transfer Capabilities (“ATC”) into or out of UtiliCorp's and
17 Empire's systems below the level needed for a transmission dependent entity to
18 import energy to serve its load or to export energy from existing generation. (page 12,
19 lines 1-4)

20
21 It is now unclear whether Applicants are committed to do anything. Moreover, it is even
22 less clear as to whom (if anyone) the Applicants are willing to defer in judging whether
23 their commitments have been honored.

1
2 More questions are raised by Mr. Krue's supplemental testimony in FERC Docket (EC
3 00-27-000 and EC 00-28-000) than answered. On pages 3-4, he states:

4
5 *It appears that on further study that the comparative benefits to the merged*
6 *companies' operations of integrating through the use of network service under the*
7 *SPP tariff will be inferior to those which can be obtained through the*
8 *construction of the above-described new lines joining the merged companies'*
9 *systems.*

10
11 He does not provide the study or any support for it nor does he indicate to whom the
12 purported "benefit" will accrue (although it is safe to assume that it is to the Applicants).
13 Nor does he mention whether the construction option will insure no adverse impact upon
14 other transmission users. He does not indicate in what manner the SPP tariff will provide
15 service that is inferior or what detriments to other users will result under the construction
16 option. Clearly, costs to other parties must be weighed in determining the public interest.
17 In addition, Dr. Frankena conducted a new market power study and prepared
18 Supplemental Testimony for the FERC (Schedule__WAR-8).

19
20 Q. Does Dr. Frankena's new market power study satisfy your concerns?

21
22 A. No. On the contrary, his new study raises even more concerns. Dr. Frankena's
23 Supplemental Testimony filed at FERC maintains his same conclusions, that he does not

1 believe that there are market power concerns that need to be mitigated. However, he
2 abandoned the absolute statements made in his direct testimony. Previously, he could
3 affirm that "There is not a single one among 3,960 cases in which the proposed mergers
4 yield HHI results above the Commission's competitive screening thresholds." (Direct at
5 page 10, line 14-16). He is now reduced to pleading that "the supplemental HHI results
6 are not significantly above the Commission's safe harbor levels." (Supplemental at page
7 5 lines 12-13). This is odd given that Applicants assert that their current options are and
8 always have been the "likely" integration plan that the Applicants envisioned.

9
10 Dr. Frankena indicates that he has updated data, among which are data indicating that
11 there will be additional generating capacity that is not owned by Applicants. However,
12 contrary to what one would expect, this additional competition in generation causes
13 screen violations that previously did not exist. Dr. Frankena does not offer any
14 explanation for this.

15
16 Q. What do you conclude from these actions on the part of the Applicants?

17
18 A. UtiliCorp's history of reversing its commitment to make upgrades identified as needed in
19 the SPP System Impact Study and of seeking short-term, self-serving economic benefit
20 from exploiting "seams" between regional transmission systems and its reversals of
21 position require that it now give more than vague assurances. Until uniform regional
22 transmission structures and consistent planning and operating standards can be
23 developed, the Commission should closely monitor (and impose needed remedial

1 conditions upon) mergers that allow Applicants to straddle limited transmission interfaces
2 and commandeer limited transfer capability.

3
4 If the Applicants are not willing to commit themselves to identify and resolve problems
5 prior to merging and to participate fully in an established regional solution, the only
6 alternatives are:

- 7 1. To deny the merger or
8 2. To impose strict conditions upon the merging parties as set forth in this testimony.

9
10 Q. Does this conclude your testimony?

11
12 A. Yes, at this time.

WHITFIELD A. RUSSELL

Whitfield A. Russell is an Electrical Engineer and President of Whitfield A. Russell and Associates, P.C., a corporate Partner of Whitfield Russell Associates. He holds a Bachelor of Science degree in Electrical Engineering from the University of Maine at Orono, a Master of Science in Electrical Engineering from the University of Maryland, and a Juris Doctor degree from Georgetown University Law Center.

Mr. Russell is experienced in electric utility system planning, power pooling, ratemaking and bulk power contract negotiation. Mr. Russell has been qualified as an expert witness in 27 states (as well as in the Province of Alberta and the District of Columbia) and has testified in more than 100 proceedings before state and federal Courts, arbitration panels, public service commissions, the Federal Energy Regulatory Commission and other administrative agencies. Mr. Russell has written and spoken extensively on matters relating to regulated electric utilities.

From 1972 to 1976, Mr. Russell served as Engineer and subsequently as Chief Engineer, at the Division of Corporate Regulation of the Securities and Exchange Commission. The Division administers the Public Utility Holding Company Act of 1935.

From 1971 to 1972, Mr. Russell was on the staff of the Federal Power Commission. He served as a consultant to staff attorneys in

proceedings, and as an expert witness in an administrative proceeding before the Atomic Energy Commission.

From 1969 to 1971, Mr. Russell served as an Associate Engineer in the System Planning Division of the Potomac Electric Power Company. At PEPCO, he conducted system studies of load flows and stability. He was also a member of numerous study groups concerned with planning and operation of the Pennsylvania-New Jersey-Maryland Interconnection.

**PROCEEDINGS IN WHICH
WHITFIELD A. RUSSELL
HAS TESTIFIED**

1. Anaheim v. Kleppe, U.S. District Court, Arizona (Civil No. 74-542 PHX-WEC), concerning the availability of transmission capacity in the Pacific Southwest.
2. In re: Potomac Electric Power Company, before the Maryland Public Service Commission, Case No. 7004, concerning the need for proposed 500 kV transmission lines in the Washington, D.C. area.
3. In re: Baltimore Gas and Electric Company, and Potomac Electric Power Company, before the Maryland Public Service Commission, Case No. 6984, involving the same transmission lines mentioned in the preceding case.
4. Perry v. The City of Monroe, Louisiana (State of Louisiana, Parish of Ouachita, Fourth District Court; Nos. 111145, 111146, 111147 filed August 16, 1977) regarding the necessity of Monroe's disposing of its municipal utility system.
5. In re: Potomac Electric Power Company, before the District of Columbia Public Service Commission, in Case No. 685, concerning the system planning of the Potomac Electric Power Company and the PJM Pool.
6. In re: Generic Hearings on Rate Structure, before the Colorado Public Utilities Commission, Case No. 5693, regarding the engineering aspects of marginal cost pricing and power pooling in Colorado.
7. In re: Pacific Gas and Electric Company, FERC Docket No. ER76-532, regarding the proper level of rates to be charged by PGandE to the Central Valley Project for transmission service.
8. In re: Pacific Power and Light Company, FERC Docket No. E-7796, regarding the Seven Party Agreement and related matters.
9. In re: Pacific Gas and Electric Company, FERC Docket No. E-7777 (II), concerning the provisions of numerous bulk power arrangements governing electric utilities in California.

10. In re: Potomac Edison Company, before the Maryland Public Service Commission, Case No. 7055, concerning the need for a 230 Kv transmission line in Montgomery County, Maryland.
11. In re: Delmarva Power and Light Company, before the Maryland Public Service Commission, Case Nos. 7239F, 7239G, 7239H, 7239I, 7239J, 7239K, 7239L, 7239M and 7239N concerning fuel rate adjustments.
12. In re: Baltimore Gas and Electric Company, before the Maryland Public Service Commission, Case Nos. 7238G, 7238H, 7238I, 7238J, 7238L and combined dockets 7238P, Q, R and S, concerning fuel rates.
13. In re: Potomac Electric Power Company, before the Maryland Public Service Commission, Case Nos. 7240A, 7240B, 7240C, 7240D, 7240E, 7240F and 7240G, concerning fuel rate adjustments.
14. In re: Florida Power & Light Company, FERC Docket No. E-9574, concerning system planning for the City of Vero Beach, Florida. FP&L withdrew its application to acquire the Vero Beach system.
15. In re: Oklahoma Gas and Electric Company, FERC Docket No. ER77-465, concerning rates for energy banking and transmission services rendered to the Western Farmers Electric Cooperative.
16. In re: Idaho Power Company, before the Idaho Public Utility Commission, Case No. U-1006-158, concerning the value of interruptible industrial loads and Idaho Power Companies entitlement to Federal secondary energy,
17. In re: Potomac Electric Power Company, before the District of Columbia Public Service Commission, Case No. 737, concerning the Company's construction program.
18. In re: Virginia Electric and Power Company, before the Virginia State Corporation Commission, Case No. PUE 800006, concerning construction of transmission lines in the Charlottesville, Virginia area.
19. In re: Pacific Gas and Electric Company, FERC Project Nos. 2735 and 1988, concerning the Helms Project, a pumped storage generating unit.

20. Southeastern Power Administration v. Kentucky Utilities Company, FERC Docket No. EL 80-7, concerning SEPA's attempt to obtain a FERC wheeling order under the Public Utility Regulatory Policies Act of 1978.
21. In re: Sierra Pacific Power Company, before the Public Service Commission of Nevada, Docket No. 81-105, concerning construction and transmission planning.
22. In re: Virginia Electric and Power Company, before the North Carolina Utilities Commission, Docket No. E-22, Sub 257, concerning production cost simulation and normalized fuel adjustment clause formula.
23. In re: the Investigation of the Capital Expansion For Electric Generation, before the New Mexico Public Service Commission, Case No. 1577, concerning construction programs of the Public Service Company of New Mexico and El Paso Electric Company.
24. In re: Potomac Edison Company, before the Maryland Public Service Commission, Case Nos. 7241A, 7241B, 7241C and 7241D, concerning fuel rate adjustments and productivity of generating units.
25. In re: Potomac Edison Company, before the Maryland Public Service Commission, Case No. 7528, concerning the method of calculating Potomac Edison's fuel rate.
26. In re: Delmarva Power & Light Company, before the Maryland Public Service Commission, Docket No. 7570, concerning transmission loss allocation methodology.
27. In re: Nebraska Public Power District, before the South Dakota Public Utilities Commission, Docket No. F-3371, concerning proposed construction and operation of the 500 Kv MANDAN Transmission Facility.
28. In re: Sierra Pacific Power Company, before the Public Service Commission of Nevada, Docket No. 81-660, concerning construction and transmission planning.

29. In re: Kentucky Utilities Company, FERC Docket Nos. ER-81-341-000 and ER81-267-000, concerning construction planning and the market for short term power.
30. In re: Kentucky Power Company et al., before the Kentucky Public Service Commission, Case No. 8566, concerning cogeneration and avoided costs.
31. In re: Appalachian Power Company, before the West Virginia Public Service Commission, Case No. 82-162-42T, concerning the wholesale market and short-term power sales.
32. In re: Central Maine Power Company, before the Maine Public Utility Commission, Docket No. 82-137, concerning the application of Central Maine Power Company to reorganize in the form of a holding company.
33. In re: Houston Lighting & Power Company, before the Public Utility Commission of Texas, Docket No. 4712, concerning rates to be paid to cogenerators and small power producers.
34. In re: Dow Chemical Company, before the Public Utility Commission of Texas, Docket Nos. 4802, 5050 and 5062, concerning rates for interruptible service.
35. In re: Nevada Power Company, before the Nevada Public Service Commission, Docket No. 83-707, concerning the Reid Gardner No. 4 Participation Agreement.
36. Dow Chemical Company vs. Houston Lighting & Power Company, before the District Court of Brazoria County, Texas, 149th Judicial District, No. 79-F-2620, regarding the custom and usage of contract terms in the electric utility industry. Live direct testimony in a jury trial. No transcript available.
37. In re: The Montana Power Company and the Confederated Salish and Kootenai Tribes of the Flathead Reservation, Project Nos. 5-004 and 2776-000, concerning the Tribes' intention and ability to sell its output to one or more entities in the Western states, if obtaining the license to the Kerr Project.

38. In re: the Dow Chemical Company vs. Gulf States Utilities Company, before the Louisiana Public Service Commission, Docket No. U-16038, concerning cogeneration and small power production.
39. In re: Petition of the Dow Chemical Company, before the Public Utility Commission of Texas, Docket No. 5651, for an order compelling Houston Lighting & Power Company to comply with the Commission Order concerning cogeneration and small power production.
40. In re: Oklahoma Gas and Electric Company, before the Oklahoma Corporation Commission, Cause No. 29017, concerning priority for recognition of capacity costs to Qualifying Facilities.
41. In re: Kansas City Power & Light Company of Kansas City, Missouri, before the Missouri Public Service Commission, Case Nos. ER-85-128 and EO-85-185, regarding rate design and allocation of production-related costs for the Company's Wolf Creek Generating Station on behalf of the United States Department of Energy.
42. In re: Kansas City Power and Light Company, before the State Corporation Commission of the state of Kansas, Docket Nos. 142,099-U and 120,924-U, concerning operating problems caused by excess capacity, mitigation measures and regulatory requirements, on behalf of Johnson County Joint Intervenors.
43. In re: Duke Power Company, before the North Carolina Utilities Commission, Docket No. E-7, Sub 391, concerning the Company's use of an Extended Cold Shutdown program to mitigate its excess capacity situation resulting from the Catawba Units, on behalf of the Department of Justice for the State of North Carolina.
44. Sierra Pacific Power Company, before the Public Service Commission of the State of Nevada, Docket No. 85-430, on behalf of the State of Nevada Attorney General's Office of Advocate for Customers of Public Utilities, concerning the effects upon retail rates of placing Valmy Unit No. 2 in service.
45. United States of America Department of Energy, before the Bonneville Power Administration, on behalf of the City of Vernon, California, concerning the 1985 Proposed Firm Displacement Power Rate.

46. In re: City of Anaheim, et al., v. Southern California Edison, Docket No. 78-0810, on behalf of five partial requirements wholesale customers of Southern California Edison Company, making claims under Federal antitrust laws for access to the Pacific Northwest-Pacific Southwest Intertie.
47. In the Matter of the Application of Sierra Pacific Power Company for Approval of its 1986-2006 Electric Resource Plan, Docket No. 86-701, on behalf of the State of Nevada Attorney General's Office of Advocate for Customers of Public Utilities, concerning efforts of Sierra Pacific Power Company to develop a new interconnection (the SMUD Tie) with the Sacramento Municipal Utility District.
48. The Federal Executive Agencies, Complainant v. Public Service Company of Colorado, before the Public Utilities Commission of the State of Colorado, Case No. 6551, on behalf of the Federal Executive Agencies concerning the feasibility of wheeling federal preference power to the Government's facilities at Rocky Flats, the Lowry Air Force Base, the Rocky Flats Technical Center and the Denver Federal Center.
49. Commonwealth Edison Company, before the State of Illinois, Illinois Commerce Commission, Docket Nos. 87-0043, 87-0044 and 87-0057 Consolidated, on behalf of Intervenor, Citizen's Utility Board of Illinois, concerning Edison's proposal to form a generating subsidiary.
50. Nevada Power Company, before the Nevada Public Service Commission, Docket No. 87-750, concerning a 345 KV transmission line proposed to connect Nevada Power Company to Utah Power and Light Company.
51. Utah Power & Light Company, PacifiCorp, PC/UP&L Merging Corporation, FERC Docket No. EC88-2-000, establishing conditions for the proposed merger; also challenging PP&L's/UP&L's assertion that the claimed coordination benefits would not be attainable through power pooling or by contract.
52. Rosemount Cogeneration Joint Venture, Biosyn Chemical Corporation and Oxbow Power Corporation vs. Northern States Power Company, before the Minnesota Public Utilities Commission, Docket No. E-002/GG-88-491, on behalf of Petitioners, Rosemount

Cogeneration Joint Venture, Biosyn Chemical Corporation and Oxbow Power Corporation, concerning a contract between Northern States Power and Biosyn Chemical Corporation covering the 50 MW output of a yet-to-be-constructed power plant based on the forecast costs of Sherburne County Unit #3 ("Sherco Unit 3").

53. In re: Potomac Electric Power Company, before the District of Columbia Public Service Commission, Case No. 869, on behalf of the District of Columbia Office of the People's Counsel, concerning the prudence of off-system purchases.
54. In re: Wisconsin Public Power Inc. System, Advance Plan 5, before the Public Service Commission of the state of Wisconsin, on behalf of the Wisconsin Public Power System, Inc., concerning transmission planning in the state of Wisconsin.
55. In re: Nevada Power Company, before the Public Service Commission of Nevada, Docket No. 88-701, on behalf of the Attorney General's Office of Advocate for Customers of Public Utilities, concerning NPC's 1988 Resource Plan.
56. In re: Commonwealth Edison Company, before the Illinois Commerce Commission, Docket Nos. 87-0427, 87-0169, 88-0189 and 88-0219, on behalf of the Citizens Utility Board, concerning rejection of an unfair, Staff-proposed rate order.
57. In re: Dow Chemical Company vs. Houston Lighting & Power Company, before the Texas Public Utilities Commission, Docket No. 8425, 8431, on behalf of The Dow Chemical Company, concerning application of Houston Lighting & Power Company for authority to change rates; Fuel Reconciliation, Revenue Requirements and Rate Design.
58. Dow Chemical Company vs. Houston Lighting & Power Company, before the Texas Public Utilities Commission, Docket No. 8555, on behalf of The Dow Chemical Company, concerning rate discrimination, cost to serve and class load characteristics.
59. In re: Sierra Pacific Power Company, before the Public Service Commission of Nevada, Docket No. 89-676, on behalf of the Attorney General's Office of Advocate for Customers of Public Utilities, concerning Sierra's system planning.

60. In re: Northern California Power Agency vs. Pacific Gas and Electric Company, before the Federal Energy Regulatory Commission, Docket No. EL89-4-000, on behalf of the Northern California Power Agency ("NCPA"), concerning the Interconnection Agreement between Pacific Gas & Electric Company and NCPA.
61. In re: M-S-R Public Power Agency vs. Tucson Electric Power Company, before the United States District Court of Arizona, No. CIV-86-521-TUC-ACM, on behalf of M-S-R, concerning TEP's breach of contract.
62. In re: Southern California Edison Company and San Diego Gas & Electric Company, before the Federal Energy Regulatory Commission, Docket No. EC89-5-000, on behalf of the City of Vernon, California concerning expected effects of the proposed merger on competition, system operation and transmission access.
63. In re: Farmers Electrical Cooperative Corporation and City Water & Light Plant of the City of Jonesboro, Arkansas, v. Arkansas Power & Light Company, No. LR-C-86-118. Presented deposition testimony on AP&L's liability and assisted in settlement negotiations of treble damage claims for transmission line foreclosure made by plaintiffs, City Water and Light Department of Jonesboro, Arkansas and the Farmers Electric Cooperative.
64. In re: Southern California Edison Company and San Diego Gas & Electric Company, before the California Public Utilities Commission, Docket No. 88-12-035, on behalf of the City of Vernon, California concerning expected effects of the proposed merger on competition, system operation and transmission access.
65. In re: Northeast Utilities Service Company and Public Service Company of New Hampshire, before the Federal Energy Regulatory Commission, Docket Nos. EC90-10-000, ER90-143-000, ER90-144-000, ER90-145-000 and EL90-9-000, on behalf of Massachusetts Municipal Wholesale Electric Company, concerning the effect of a proposed merger on competition and transmission access.
66. Report to the Public Utilities Board of Manitoba concerning 1990 Manitoba Hydro Capital Projects Review: Generation and Transmission Requirements. Whitfield Russell Associates was

appointed to report to The Public Utilities Board on matters regarding the economic consequences to the domestic customers of the Manitoba Hydro capital program.

67. In re: Northeast Utilities Service Company, before the Federal Energy Regulatory Commission, Docket Nos. ER90-373-000, et al., on behalf of the Massachusetts Municipal Wholesale Electric Company, evaluating the Preferred Transmission Service Agreement between MMWEC and Northeast Utilities Service Company, for the transmission of MMWEC's power purchase from the New York Power Authority.
68. In re: New Hampshire Electric Cooperative Rate Plan Proposal, before the New Hampshire Public Utilities Commission, Docket No. DR90-078, on behalf of the New Hampshire Electric Cooperative, concerning contract valuation.
69. Tampa Electric Company v. Zeigler Coal Company. This was an arbitration held in August 1991, concerning provisions of a coal contract in which Mr. Russell offered testimony for Zeigler to the effect that Tampa Electric was not suffering a hardship by measures commonly used in the electric utility industry.
70. In re: The Long Range Forecast of Ohio Power Company, before the Ohio Public Utilities Commission, Docket No. 90-660-EL-FOR (Phase II). Mr. Russell presented and defended testimony on behalf of Ormet Aluminum Corporation concerning Ormet's right to allowances to emit sulfur dioxide from the Kammer Power Plant of Ohio Power Company under the Clean Air Act Amendments of 1990 and the propriety of Ohio Power's Compliance Plan.
71. In re: Application of Tex-La Electric Cooperative to Increase Rates. Mr. Russell presented testimony in 1991, demonstrating that Tex-La was prudent in selling its entitlement in a nuclear plant and in settling its 1988 claims against Texas Utilities concerning Texas Utilities' fraud and imprudence in the construction of the Comanche Peak Nuclear Plant.
72. In re: Southern California Edison Company, before the Federal Energy Regulatory Commission, Docket No. ER88-83, on behalf of the City of Vernon, California concerning expected effects of Edison's administration of its transmission network on competition, system operation and transmission access.

73. In the Matter of the Application of the Public Service Company of New Mexico for Approval to Construct, Own, Operate and Maintain the Ojo Line Extension and for Related Approvals before the New Mexico Public Service Commission, Case No. 2382, on behalf of the United States Department of Energy, concerning transmission line construction programs of the Public Service Company of New Mexico.
74. In re: Wisconsin Public Power Inc. System et al., Advance Plan 6, before the Public Service Commission of the state of Wisconsin, Docket No. 05-EP-6, concerning Eastern Wisconsin Utility Joint Transmission System and Interface Study.
75. In re: MidAtlantic Energy v. Monongahela Power Company and the Potomac Edison Company, before the Public Service Commission of West Virginia, Case No. 89-783-E-C, on behalf of MidAtlantic Energy, concerning need for capacity and the appropriate avoided cost.
76. In re: Northeast Utilities Service Company, before the Federal Energy Regulatory Commission, Docket No. EL91-36-000, on behalf of the Massachusetts Municipal Wholesale Electric Company evaluating the tie-line adjustment charge borne by MMWEC that arose under a Transmission Service Agreement between New England Power Company and Northeast Utilities.
77. In re: Application of Houston Lighting & Power Company for a Certificate of Convenience and Necessity for the DuPont Project, before the Public Utility Commission of Texas, Docket No. 11000, on behalf of Destec Energy, Inc.
78. In re: Investigation on the Commission's Own Motion into Barriers to Contracts Between Electric Utilities and Nonutility Cogenerators and Certain Related Policy Issues, before the Public Service Commission of the state of Wisconsin, Docket No. 05-EI-112, on behalf of JOINT PARTIES: DESTEC Energy, Inc., EnerTran Technology Company, LS Power Corporation, The AES Corporation, LG&E Development Corporation, National Independent Energy Producers, and Citizens' Utility Board, concerning appropriate QF contract provision.

79. In re: Application of Cap Rock Electric Cooperative, Inc. for a Certificate of Convenience and Necessity, before the Public Utility Commission of Texas, Docket No. 11248, on behalf of Cap Rock Electric Cooperative, Inc., concerning its proposed transmission system improvements.
80. In re: Application of Texas Utilities for Authority to Change Rates, before the Public Utility Commission of Texas, Docket No. 11735, on behalf of Cap Rock Electric Cooperative, Inc., concerning standby rates, wholesale rate contracts and terms and conditions of the Power Sales Agreement.
81. In re: Determination of Houston Lighting & Power Company's Standard Avoided Cost Calculation for the Purchase of Firm Energy and Capacity from Qualifying Facilities Pursuant to P.U.C. Subst. R. 23.66(H)(3), before the Public Utility Commission of Texas, Docket No. 10832, on behalf of Destec Energy, Inc.
82. In re: Complaint of Phibro Refining, Inc. v. HL&P, Docket No. 11989, before the Public Utility Commission of Texas, on behalf of Phibro Energy, USA, Inc., concerning electric service contracts and terms and conditions of HL&P's industrial rate schedule.
83. In re: Application of Texas Utilities Electric Company for Authority to Implement Economic Development Service, General Service Competitive Pricing, Wholesale Power Competitive Pricing, and Environmental Technology Service, Docket No. 13100, before the Public Utility Commission of Texas, on behalf of Rayburn County Electric Cooperative, Inc., concerning TU Electric's so-called "competitive rates."
84. In re: Complaint of Kenneth D. Williams v. HL&P, Docket No. 12065, on behalf of Destec before the Public Utility Commission of Texas.
85. In re: Rebuttal testimony in a Complaint of Tex-La v. TUEC, Docket No. 12362, on behalf of Rayburn County Electric Coop. before the Public Utilities Commission of Texas.
86. In re: Application for Authorization and Approval of Merger Between Wisconsin Electric Power Company, Northern States Power Company (Minnesota), Northern States Power Company (Wisconsin), and Cenergy, Inc., in Docket No. EC-95-16-000, before

the Federal Energy Regulatory Commission (on behalf of Certain Intervenor, including Madison Gas & Electric Company, Wisconsin Public Service Corporation, Minnesota Power & Light Company, Otter Tail Power Company and the Lincoln Electric System), in Docket Nos. 6630-UM-100 and 4220-UM-101, before the Wisconsin Public Service Commission and Docket No. 6-2500-10601-2 before the Minnesota Office of Administrative Hearings for the Minnesota Public Utilities Commission (both on behalf of Madison Gas & Electric, Wisconsin Industrial Energy Group, Wisconsin Federation of Cooperatives and the Citizen's Utility Board), concerning the effect upon transmission access of the merger of NSP and WEPCO into Primergy.

87. In re: Merger of The Washington Water Power Company and Sierra Pacific Power Company, Docket Nos. EC94-23-000 and ER95-808-000, before the Federal Energy Regulatory Commission, on behalf of Truckee Donner Public Utility District, concerning ancillary services and single system transmission rates.
88. In re: Alberta Electric Utilities 1996 Tariff Application before the Alberta Energy And Utilities Board, on behalf of the Industrial Power Consumers Association of Alberta concerning calculation of charges for ancillary services.
89. In re: Surrebuttal Testimony in Docket Nos. EC95-16-000, ER95-1357-000 and ER95-1358-000, on behalf of Madison Gas & Electric Company, Citizens Utility Board and Wisconsin Electric Cooperative Association.
90. In re: City Public Service Board of San Antonio Filing in Compliance with Subst. Rule 23.67, Docket No. 15613, before the Public Utility Commission of Texas, on behalf of Certain Power Marketers and Independent Power Producers, Destec Power Services and Enron Power Marketing, concerning Ancillary Services under the state-wide rate in Texas.
91. In re: City of Austin Filing in Compliance with Subst. Rule 23.67, Docket No. 15645, before the Public Utility Commission of Texas, on behalf of Certain Power Marketers and Independent Power Producers, Destec Power Services and Enron Power Marketing, concerning Ancillary Services under the state-wide rate in Texas.

92. In re: Central Power and Light and West Texas Utilities Filing in Compliance with Subst. Rule 23.67, Docket No. 15643, before the Public Utility Commission of Texas, on behalf of Certain Power Marketers and Independent Power Producers, Destec Power Services and Enron Power Marketing, concerning Ancillary Services under the state-wide rate in Texas.
93. In re: Texas Utilities Electric Company, Filing in Compliance with Subst. Rule 23.67, Docket No. 15638, before the Public Utility Commission of Texas, on behalf of Certain Power Marketers and Independent Power Producers, Destec Power Services and Enron Power Marketing, concerning Ancillary Services under the state-wide rate in Texas.
94. In re: Docket No. 15840, Regional Transmission Proceeding to Establish Postage Stamp Rate and Statewide Load Flow Pursuant to P.U.C. Subst. Rule. 23.67 on behalf of Certain Power Marketers and Independent Power Producers, Destec Power Services and Enron Power Marketing, concerning Ancillary Services under the state-wide rate in Texas.
95. In re: Rebuttal Testimony on behalf of MG&E, WIEG, WFC, CUB in Docket Nos. 6630-UM-100 and 4220-UM-101 before the Public Services Commission of Wisconsin.
96. In re: Houston Lighting & Power Company Filing in Compliance with Subst. Rule 23.67, Docket No. 15639, before the Public Utility Commission of Texas, on behalf of Certain Power Marketers and Independent Power Producers, Destec Power Services and Enron Power Marketing, concerning Ancillary Services under the state-wide rate in Texas.
97. In re: IES Utilities, Inc., Interstate Power Company, Wisconsin Power & Light Company, South Beloit Water, Gas & Electric Company, Heartland Energy Services, and Industrial Energy Applications, Inc., Docket Nos. EC96-13-000, ER96-1236-000, and ER96-2560-000, before the Federal Energy Regulatory Commission, on behalf of Wisconsin Intervenors ("WI"). Mr. Russell simultaneously filed 2 sets of testimony; the first, sponsored by the intervenors listed above as well as by Wisconsin Public Service Corporation ("Pub Service"), and Dairyland Power Cooperative. ("Dairyland") analyzed engineering and operating problems created by the merger of WP&L, IPW and IES. The second set of testimony discusses how

the IEC Independent System Operator ("ISO") fails in general to meet the rigorous and comprehensive ISO standards promulgated by the Wisconsin Public Service Commission (WPSC). Both sets of testimony (Engineering and ISO) were filed before the Federal Energy Commission.

98. In re: Joint Application of WPL Holdings, Inc. and Wisconsin Power & Light Company for all Requisite Approvals in Connection with a Series of Related Transactions by which Interstate Power Company Becomes a Subsidiary of WPL Holdings, Inc., IES Industries, Inc. is Merged into WPL Holdings, Inc. and is Renamed Interstate Power Corporation and for Certain Related Transactions and Matters, in Docket No. 6680-UM-100, before the Public Service Commission of Wisconsin.
99. In re: City of College Station, FERC Docket No. TX 96-2-000, concerning transmission rates.
100. In re: Application for Approval of Restructuring Plan Under Section 2806 of the Public Utility Code, in Docket No. R-00973981 on behalf of Mid-Atlantic Power Supply Association, before the Pennsylvania Public Utility Commission.
101. In re: Application for Approval of Restructuring Plan Under Section 2806 of the Public Utility Code, in Docket No. R-00974104 on behalf of Mid-Atlantic Power Supply Association, before the Pennsylvania Public Utility Commission.
102. In re: New England Power Company, FERC Docket No. OA96-74-000, concerning proposed formula rates for Tariffs No. 9 and 4, on behalf of the Massachusetts Municipals.
103. In re: Sierra Pacific Power Company before the Federal Energy Regulatory Commission in Docket Nos. ER97-3593-000, ER97-3779-000, ER97-4462-000 on behalf of Truckee Donner Public Utility District, addressing lack of comparable access to transmission systems.
104. In re: Application for Approval of Restructuring Plan Under Section 2806 of the Public Utility Code, on behalf of Newmont Gold Company and Barrick Goldstrike Mines, in Docket Nos. 97-11018 and 97-11028, before the Public Service Commission of Nevada.

105. In re: Southern California Edison Company before the Federal Energy Regulatory Commission in Docket No. ER97-2355-000 on behalf of Department of Water Resources of the State of California, regarding lower pricing for off-peak transmission services.
106. In re: Response to Procedural Order Number Three Load Pockets, on behalf of Newmont Gold Company and Barrick Goldstrike Mines, Docket Number 97-8001, before the Public Utilities Commission of Nevada.
107. In re: Supplemental Testimony in an Application for Approval of Restructuring Plan Under Section 2806 of the Public Utility Code, on behalf of Newmont Gold Company and Barrick Goldstrike Mines, Docket Numbers 97-11018 and 97-11028, before the Public Utilities Commission of Nevada.
108. In re: Southern California Edison Company, on behalf of The Department of Water Resources of The State of California, Docket No. ER97-2355, before FERC in reference to Transmission Revenue Balancing Account Adjustment ("TRBAA").
109. In re: Ormet Primary Aluminum Corporation, on behalf of Ormet Primary Aluminum Corporation, Arbitration Number 55-199-0051-94, before the American Arbitration Association, concerning the relationship between AEP and other power systems within NERC and ECAR.
110. In re: Rebuttal Testimony in response to Mr. Walter R. Kelley and Mr. Thomas Kennedy, on behalf of Ormet Primary Aluminum Corporation, Arbitration Number 55-199-0051-94, before the American Arbitration Association.
111. In re: Application No. RE95081 – TransAlta Utilities Corp., on behalf of Albchem Industries Ltd., CXY Chemicals and Dow Chemicals Canada Ltd., before the Alberta Energy & Utilities Board addressing ACD's interest in providing interruptible service.
112. In re: Tri-State Generation and Transmission Assoc., Inc., in Arbitration No. 77 Y 181 0023097 before the American Arbitration Association.

113. In re: Joint Application for Approval of Merger, Docket No. 98-7023 on behalf of The Staff of the Public Utilities Commission, before the Public Utilities Commission of Nevada.
114. In re: Independent System Administrator, Docket No. 97-8001 on behalf of The Staff of the Public Utilities Commission, before the Public Utilities Commission of Nevada.
115. In re: Petition for Order Concerning Delineation of Transmission and Local Distribution Facilities, Docket No. 98-0894 on behalf of The City of Chicago, before the Illinois Commission in reference to re-functionalization.
116. In re: Consolidated Edison Company, Docket No. EL99-58-000 on behalf of The Village of Freeport, New York, before FERC in reference to remedies for the breach of contract to provide firm service on a non-discriminatory basis.
117. In re: Wisconsin Public Power, Inc. Docket No. 05-EI-119 on behalf of Wisconsin Transmission Customer Group (WTCG"), before the Public Service Commission of Wisconsin to address the concerns of municipally-owned utilities within Wisconsin.

UTILICORP UNITED
DOCKET NO. EM-2000-369
DATA REQUEST NO. EDSR-24

DATE OF REQUEST: January 20, 2000

DATE RECEIVED: January 20, 2000

DATE DUE: February 8, 2000

REQUESTOR: Jeff Keevil

QUESTION:

Please indicate the extent to which the merger(s) will require Applicants to reserve firm transmission capacity on the transmission systems owned by Applicants or others in order to conduct integrated operations. Please provide all documents related to, arising from or used in connection with Applicants' consideration of the type (network or point-to-point) of transmission service they will need to integrate their operations and the characteristics of the transmission capacity for which reservations have already been obtained or applied for.

RESPONSE: The Study by SPP has been requested. Expect results in 2 to 3 months

ATTACHMENTS: None

ANSWERED BY: John McKinney

UTILICORP UNITED
DOCKET NO. EM-2000-369
DATA REQUEST NO. EDSPP-24

DATE OF REQUEST: January 20, 2000
DATE RECEIVED: January 20, 2000
DATE DUE: February 8, 2000
REQUESTOR: Jeff Keevil

Supplemental 24

QUESTION:

Please indicate the extent to which the merger(s) will require Applicants to reserve firm transmission capacity on the transmission systems owned by Applicants or others in order to conduct integrated operations. Please provide all documents related to, arising from or used in connection with Applicants' consideration of the type (network or point-to-point) of transmission service they will need to integrate their operations and the characteristics of the transmission capacity for which reservations have already been obtained or applied for.

RESPONSE:

Application for SPP Network Integration Transmission Service is attached

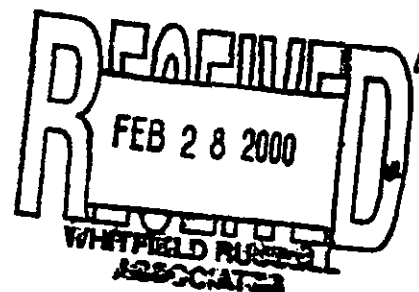
ATTACHMENTS:

Application for SPP Network Integration Transmission Service

ANSWERED BY:

David Macey

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APPLICATION FOR SPP NETWORK SERVICE

Applicant: UtiliCorp United Inc.
10700 E. 350 Hwy
Kansas City, MO 64138

Contact: David A. Macey
Phone: 816-737-7519
FAX: 816-737-7630
E-Mail: dmacey@utilicorp.com

UtiliCorp United Inc. (UCU) is hereby submitting an application for Network Transmission Service from the Southwest Power Pool (SPP). In accordance with Section 29.2 of the SPP Open Access Transmission Tariff (Tariff) UCU hereby states that it is an Eligible Customer in accordance with Section 1.11 of the Tariff.

Delivery Points:

UCU is requesting SPP Network Transmission Service for the native load in the following existing control areas:

- Missouri Public Service (MPS)
- WestPlains Energy-Kansas (WPEK)
- Empire District Electric (EDE)
- St. Joseph Light and Power (SJLP)

The delivery points for each of the control areas are shown on the attached Table 5 through Table 8.

Interruptible Loads:

To be provided.

Network Resources:

Tables 1 through Table 4 show the network resources and loads for the next 10 years for each of the existing control areas.

Description of Transmission System:

Transmission planning models are prepared annually by the SPP Model Development Working Group. All real and reactive components of the loads, lines, transformers, and

generation for the four control areas listed above are represented in these models. Also represented are the normal and emergency ratings of all lines, equipment, and interconnections. Models are prepared for a number of years and seasons over a 10 year planning horizon. Proposed transmission expansions and upgrades are shown in these various models.

Various operating guides are on file with the SPP.

For reliability reasons, both the Cimarron River Station and the Judson Large Station in the WPE control area are required to run during summer peak load conditions.

Service Commencement:

UCU is requesting that Network Transmission Service should begin on October 1, 2000 and extend to September 30, 2010.

Revised 1/27/00

Table 1

MPS

Loads and Resources Forecast

A. System Generation Capacity		1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Existing Generation Capacity													
MPS Sibley 1	Coal	53	53	53	53	53	53	53	53	53	53	53	53
MPS Sibley 2	Coal	53	53	53	53	53	53	53	53	53	53	53	53
MPS Sibley 3	Coal	395	395	395	410	410	410	410	410	410	410	410	410
MPS Jeffrey EC 1	Coal	59	59	59	59	59	59	59	59	59	59	59	59
MPS Jeffrey EC 2	Coal	59	59	59	59	59	59	59	59	59	59	59	59
MPS Jeffrey EC 3	Coal	58	58	58	58	58	58	58	58	58	58	58	58
Total Base Capacity		677	677	677	692	692	692	692	692	692	692	692	692
MPS Ralph Green 3		74	74	74	74	74	74	74	74	74	74	74	74
MPS Greenwood 1	Gas	62	62	67	67	67	67	67	67	67	67	67	67
MPS Greenwood 2	Gas	62	62	67	67	67	67	67	67	67	67	67	67
MPS Greenwood 3	Gas	62	62	67	67	67	67	67	67	67	67	67	67
MPS Greenwood 4	Gas	61	63	66	66	66	66	66	66	66	66	66	66
MPS Nevada	Oil	20	20	20	20	20	20	20	20	20	20	20	20
MPS TWA 1	Oil	15	15	18	18	18	18	18	18	18	18	18	18
MPS TWA 2	Oil	16	16	18	18	18	18	18	18	18	18	18	18
Total Int/Peak Capacity		374	376	397	397	397	397	397	397	397	397	397	397
Grand Total		1051	1053	1074	1089	1089	1089	1089	1089	1089	1089	1089	1089
Changes In Existing Capacity		2	18	15	0	0	0	0	0	0	0	0	0
New Generation Capacity		0	0	0	0	0	0	0	0	0	0	0	0
Total Generation Capacity		1053	1071	1089	1089	1089	1089	1089	1089	1089	1089	1089	1089
B. Capacity Transactions		1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Purchases													
MPS Associated Electric Coop		190	0	0	0	0	0	0	0	0	0	0	0
MPS Kansas City Power & Light		90	0	0	0	0	0	0	0	0	0	0	0
MPS WPEKS		50	115	55	0	0	0	0	0	0	0	0	0
MPS PGET		50											
MPS Aquila Power		135											
MPS KC BPU		0	92										
MPS AMEP		0	0	320	500	500	500	0	0	0	0	0	0
MPS CT Purchase #4									160	160	160	160	160
MPS CT Purchase #7													
MPS CC Purchase #1								250	250	250	250	250	250
MPS CC Purchase #1A								250	250	250	250	250	250
MPS Short Term Purch #1							10	60	5	5	60	10	10
Total Purchases		380	342	375	500	500	510	560	660	665	720	820	830
Sales													
MPS Tenaska		50											
MPS Colby		4											
Total Sales													

Table 1
MPS
Loads and Resources Forecast

Net Transactions	326	342	375	500	500	510	560	665	720	820	830	
Total System Capacity (A+B)	1379	1413	1484	1589	1589	1599	1649	1749	1754	1809	1919	
C. System Peaks & Reserves	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Peak Demands												
Actual Peak												
Forecasted Peak	1213	1247	1286	1325	1366	1409	1453	1498	1545	1593	1643	1694
DSM	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)
Peak Forecast with DSM	1208	1242	1281	1320	1361	1404	1448	1493	1540	1588	1638	1689
Capacity Reserves (A+B-C)	171	171	183	269	228	195	201	256	214	221	271	230
D. Capacity Needs	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Capacity Reserves												
MPS Capacity Margin	12%	12%	12%	12%	12%	12%	12%	12%	12%	12%	12%	12%
Required Capacity	1373	1411	1456	1500	1547	1595	1645	1697	1750	1806	1861	1919
Capacity Balance (A+B-D)	6	2	8	89	42	4	4	52	4	4	48	(0)

Table 2

WestPlains Energy - Kansas
Loads and Resources Forecast

A. System Generation Capacity		1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Existing Generation Capacity													
Jeffrey EC 1	Coal	59	59	59	59	59	59	59	59	59	59	59	59
Jeffrey EC 2	Coal	59	59	59	59	59	59	59	59	59	59	59	59
Jeffrey EC 3	Coal	58	58	58	58	58	58	58	58	58	58	58	58
Total Base Capacity		176	176	176	176	176	176	176	176	176	176	176	176
JLS		143	143	143	143	143	143	143	143	143	143	143	143
AMS	Gas	90	90	90	90	90	90	90	90	90	90	90	90
CRS #1	Gas	58	58	58	58	58	58	58	58	58	58	58	58
CRS #2	Gas	14	14	14	14	14	14	14	14	14	14	14	14
Clifton #1	Gas	71	71	71	71	71	71	71	71	71	71	71	71
Clifton #2	Oil	2	2	2	2	2	2	2	2	2	2	2	2
Total Int/Peaking Capacity		378	378	378	378	378	378	378	378	378	378	378	378
Grand Total		554	554	554	554	554	554	554	554	554	554	554	554
Changes in Existing Capacity		0	0	0	0	0	0	0	0	0	0	0	0
New Generation Capacity		0	0	0	0	0	0	0	0	0	0	0	0
Total Generation Capacity		554	554	554	554	554	554	554	554	554	554	554	554
B. Capacity Transactions		1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Purchases													
Sunflower #1		100	160	150	140	130	120	0	0	0	0	1	2
Sunflower #2		25											
Municipals		79											
Total Purchases		204	239	150	140	130	120	0	0	0	0	1	2
Sales													
Russell & Beloit		7	6	6	3	3	3						
KEPCO		3	3	3	3	3	3	3	3	3	3	3	3
MPS		50	85	50			15						
Colby													
Total Sales		60	94	59	6	6	21	3	3	3	3	3	3
Net Transactions		144	145	91	134	124	99	(3)	(3)	(3)	(3)	0	0
Total System Capacity (A+B)		698	699	645	688	678	653	551	551	551	551	554	554
C. System Peaks & Reserves		1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Peak Demands													
Actual Peak													

Table 2
WestPlains Energy - Kansas
Loads and Resources Forecast

Forecasted Retail & AQM Peak	478	495	504	513	523	532	541	551	561	571	581	591
WPECO Firm Sale	20	20	20	20	20	20	20	20	20	20	20	20
Municipal Firm Sale	58	59										
KEPCO Firm Sale	40	41	44	47	50	53	57	60	63	66	69	72
KMEA/Osawatimie, KS	1											
DSM	0	0	0	0	0	0	0	0	0	0	0	0
Peak Forecast with DSM	597	615	568	580	593	605	618	631	644	657	670	683
Capacity Reserves (A+B-C)	101	83	77	108	85	48	(67)	(80)	(93)	(106)	(116)	(129)
D. Capacity Needs	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Capacity Reserves	12%	12%	12%	12%	12%	12%	12%	12%	12%	12%	12%	12%
Capacity Margin	578	599	645	659	674	688	702	717	732	747	761	776
Required Capacity	18	(0)	(0)	29	4	(36)	(151)	(166)	(181)	(196)	(207)	(222)

Table 3
SLP

Loads and Resources Forecast

A. System Generation Capacity												
Existing Generation Capacity												
SLP	Iatan Share	Coal	121	121	121	121	121	121	121	121	121	121
SLP	Lake Rd #4	Coal	97	97	97	97	97	97	97	97	97	97
Total Base Capacity			218	218	218	218	218	218	218	218	218	218
SLP	Lake Rd #1	Gas	22	22	22	22	22	22	22	22	22	22
SLP	Lake Rd #2	Coal	27	27	27	27	27	27	27	27	27	27
SLP	Lake Rd #3	Gas	11	11	11	11	11	11	11	11	11	11
SLP	Lake Rd CT	Gas	63	63	63	63	63	63	63	63	63	63
SLP	Lake Rd JE	Oil	42	42	42	42	42	42	42	42	42	42
Total In/Peaking Capacity			165	165	165	165	165	165	165	165	165	165
Grand Total			383	383	383	383	383	383	383	383	383	383
Changes in Existing Capacity												
New Generation Capacity			0	0	0	0	0	0	0	0	0	0
Total Generation Capacity			383	383	383	383	383	383	383	383	383	383
B. Capacity Transactions												
Purchases												
SLP	NPPD		25	60	70	80	90	100	100	100	100	100
SLP	KCPL		35									
SLP	MEC		5									
SLP	Short Term Purch #3			10	10	10	10	10	10	10	10	10
Total Purchases			65	70	80	90	100	110	120	130	145	155
Sales												
SLP	Steam Capacity		5	5	5	5	5	5	5	5	5	5
Total Sales			5	5	5	5	5	5	5	5	5	5
Net Transactions			60	65	75	85	95	105	115	125	140	160
Total System Capacity (A+B)			443	448	458	469	478	498	498	508	523	543
C. System Peaks & Reserves												
Peak Demands												
Actual Peak												
Forecasted Peak			379	388	397	403	413	422	432	442	452	461
DSM			0	0	0	0	0	0	0	0	0	0
Peak Forecast with DSM			379	388	397	403	413	422	432	442	452	461
Capacity Reserves (A+B-C)			64	60	61	65	65	66	66	66	71	72
D. Capacity Needs												
1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2010

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**Capacity Reserves
Capacity Margin
Required Capacity**

Table 4
EDE
Loads and Resources Forecast

	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>
C. System Peaks & Reserves												
Peak Demands												
Actual Peak												
Forecasted Peak	956	975	993	1010	1028	1044	1061	1077	1094	1110	1124	1139
DSM	14	14	14	14	14	14	14	14	14	14	14	14
Peak Forecast with DSM	942	961	979	996	1014	1030	1047	1063	1080	1096	1110	1125
Capacity Reserves (A+B-C)	141	154	209	192	174	158	146	145	148	152	153	201
D. Capacity Needs												
Capacity Reserves	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2008	2010
Capacity Margin	12%	12%	12%	12%	12%	12%	12%	12%	12%	12%	12%	12%
Required Capacity	1070	1092	1113	1132	1152	1170	1190	1208	1227	1245	1261	1278
Capacity Balance (A+B-D)	13	23	76	58	36	18	3	0	1	3	2	48

Table 5
Missouri Public Service SPP PODs

FROM SPP			TO MPS POD			Normal Rating	Emergency Rating	SPP Trans. Prov.
Bus No.	Name	Voltage	Bus No.	Name	Voltage			
7668	STILWEL7	345	7500	PHILL 7	345	721	721	KCPL
7672	HAWTH 7	345	7501	SIBLEY 7	345	721	721	KCPL
7728	NASHUA 5	161	7503	NASHUA 5	161	335	335	KCPL
7669	STILWEL5	161	7507	ARCHIE 5	161	224	224	KCPL
7695	MONTROS5	161	7507	ARCHIE 5	161	224	224	KCPL
7693	STHTOWN5	161	7510	MARTCTY5	161	224	224	KCPL
7702	MARTCTY5	161	7510	MARTCTY5	161	293	335	KCPL
7719	BARRY 5	161	7530	RNRIDGE5	161	293	335	KCPL
7726	TIFFANY5	161	7530	RNRIDGE5	161	293	335	KCPL
7728	NASHUA 5	161	7530	RNRIDGE5	161	293	335	KCPL
6608	STRANGR7	345	7531	STRANGR5	161	400	440	WR
7781	GLENARE2	69	7562	LIBERTY2	69	66	66	KCPL
7796	MAYVWTP2	69	7565	LEXNTON2	69	100	107	KCPL
7796	MAYVWTP2	69	7566	13&40 2	69	100	107	KCPL

Table 6
WestPlains Energy SPP PODs

FROM SPP			TO WPEK POD			Normal Rating	Emergency Rating	SPP Trans. Owner
Bus No.	Name	Voltage	Bus No.	Name	Voltage			
6637	CIRCLE 6	230	7379	MULGREN6	230	319	319	WR
6638	EMANHAT6	230	7358	CONCORD6	230	319	319	WR
6713	GILL 4	138	7375	MILANTP4	138	101	108	WR
6849	KNOB HL3	115	7365	GRNLEAF3	115	84	90	WR
6912	ST JOHN3	115	7396	ST-JOHN3	115	84	90	WR
6301	HEIZER 3	115	7739	MULGREN8	230	142	142	MIDW

Table 7
St. Joseph Light & Power SPP PODs

FROM SPP			TO SJLP POD					SPP	
Bus No.	Name	Voltage	Bus No.	Name	Voltage	Normal Rating	Emergency Rating	Trans.	Prov.
7672	HAWTH 7	345	69702	ST JOE 3	345	956	956	KCPL	
7682	IATAN 7	345	69702	ST JOE 3	345	956	956	KCPL	
7728	NASHUA 5	161	69705	LAKE RD5	161	153	172	KCPL	

Table 8
Empire District Electric SPP PODs

Bus No.	FROM SPP		TO EDE POD			Normal Rating	Emergency Rating	SPP Trans. Prov.
	Name	Voltage	Bus No.	Name	Voltage			
8620	BRKLINE 7	345	8207	MON383 7	345	951	1195	SPFLD
2948	TABLE R5	161	8223	RVS438 5	161	218	268	SWPA
2962	NEO SPA5	161	8197	NEO184 5	161	130	157	SWPA
2962	NEO SPA5	161	8198	TIP292 5	161	130	157	SWPA
2964	CARTHAG5	161	8192	ATL109 5	161	175	214	SWPA
2964	CARTHAG5	161	8205	LAR382 5	161	189	189	SWPA
2964	CARTHAG5	161	8211	CAR395 5	161	218	268	SWPA
2968	SPRGFLD5	161	8205	LAR382 5	161	167	167	SWPA
3139	FLINTCR5	161	8210	DEC392 5	161	218	268	CSW
3140	FLINTCR7	345	8207	MON383 7	345	1056	1186	CSW
3960	GROVE 5	161	8222	NOL435 5	161	218	268	CSW
3966	VINTAJC4	138	8212	HOC404 4	138	191	210	CSW
4431	MIAMI 5	161	8213	HOC404 5	161	225	267	GRDA
4508	FAIRTAP2	69	8309	FRL383 2	69	64	80	GRDA
6654	LITCH 5	161	8202	ASB349 5	161	211	211	WR
6658	NEOSHO 5	161	8191	COL 94 5	161	255	281	WR

ST. JOSEPH LIGHT & POWER COMPANY/UTILICORP INC.

EM-2000-292

Data Request

of

Ag Processing Inc

to

Joint Applicants

December 20, 1999

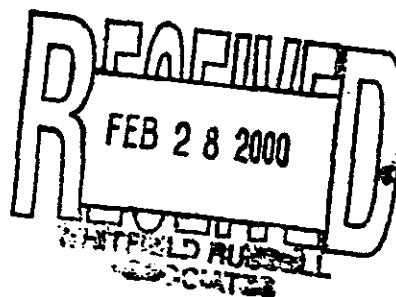
Item No.

Description

54.

Please provide all workpapers and supporting documentation, including models employed, supporting the testimony and exhibits of Robert Holzwarth.

See Attached



The attached or above information provided to the requesting party or parties in response to this data or information request is accurate and complete and contains no material misrepresentations or omissions, based upon present facts to the best of the knowledge, information or belief of the undersigned. The undersigned agrees to immediately inform the requesting party or parties if during the pendency of this case any matters are discovered which would materially affect the accuracy or completeness of the attached information and agree to regard this as a continuing data request.

As used in this request the term "document" includes publications in any format, work papers, letters, memoranda, notes, reports, analyses, computer analyses, test results, studies or data recordings, transcriptions and printer, typed or written materials of every kind in your possession, custody or control or within your knowledge. The pronoun "you" or "your" refers to the party to whom this request is tendered and named above and includes its employees, contractors, agents or others employed by or acting in its behalf.

Signed:

Date:

1-10-00

Schedule No. 2

Page 17 of 17

Sedina Eric

From: Sedina Eric <SEric@wrassoc.com>
To: Gary Clemens <gclemens@utilicorp.com>
Cc: Steve Flanagan <SFlanagan@WRAssoc.com>; Whitfield Russell <WRussell@WRAssoc.com>; Jeff Keevil <PER594@aol.com>
Sent: Thursday, March 16, 2000 3:01 PM
Subject: Additional Information-Docket No. EM-2000-369

Docket No. EM-2000-369

Dear Mr. Clemens,

Would you please provide the following additional information we need:

1. With respect to the Data Request No. EDSPR-28 you provided the files in GE format as described in your filekey.txt files. Please provide this files in PTI PSS/E format if possible. If not, please provide the input-raw files that match the saved files you have already provided in GE format.
2. Please provide data on dispatch of the generating units in UtilCorp United, Inc. Missouri Public Service, WestPlains Energy-Kansas, WestPlains Energy-Colorado, St. Joseph Light and Power Co., and Empire District Electric Co. as it is planned for the post merger cases for 2000 and 2001 summer peak, normal and north to south heavy transfer conditions.
3. Please provide the information (MW, source and sink) on all purchases and sales of power to and from merged companies in the post-merger case, that will result in a re-dispatch of generation in systems outside the merged companies. This should match the cases 2000 and 2001 summer peak, normal and north to south heavy transfer conditions.
4. With respect to Data Request EDSPR-34 please identify the heavy north to south transfer: source and sink, and the additional amount of power transferred compared to the 2000 and 2001 summer peak normal base case.

Thank you for the switching maps you mailed to us. If you have any question, please call me at 202 371-8200.

Sincerely,

Sedina Eric

Whitfield Russell Associates
Phone: 202 371-8200
SEric@WRAssoc.com

UtilCorp sent on 3/28/00

Dear Mr. Clemens,

Exhibit WAR - 01

Would you please provide the following additional information we need:

1. With respect to the Data Request No. EDSR-28 you provided the files in GE format as described in your filekey.txt files. Please provide this files in PTI PSS/E format if possible. If not, please provide the input-raw files that match the saved files you have already provided in GE format.

Requested files are included in PTI format on the enclosed CD. Files are arranged and named as previously supplied in GE format. These PTI files were created using the GE program and saving the files in PTI format. Because UCU does not use the PTI/PSSE program, the integrity of the files supplied in PTI format cannot be verified.

2. Please provide data on dispatch of the generating units in UtilCorp United, Inc. Missouri Public Service, WestPlains Energy-Kansas, WestPlains Energy-Colorado, St. Joseph Light and Power Co., and Empire District Electric Co. as it is planned for the post merger cases for 2000 and 2001 summer peak, normal and north to south heavy transfer conditions. `<?xml:namespace prefix = o ns = "urn:schemas-microsoft-com:office:office" />`

For summer peak conditions, the expected post-merger dispatch will not change significantly compared to the pre-merger dispatch in the provided cases.

3. Please provide the information (MW, source and sink) on all purchases and sales of power to and from merged companies in the post-merger case, that will result in a re-dispatch of generation in systems outside the merged companies. This should match the cases 2000 and 2001 summer peak, normal and north to south heavy transfer conditions.

Neglecting changes in power purchases and transmission losses, there are no known purchases or sales within the post-merger company that would result in a redispatch of generation in systems outside the merged companies. Purchases by the merged company to serve native load will generally decrease due to more efficient use of the merged company's generation resources. The reduction in purchases could reduce the generation levels as well as transmission losses in the selling systems if those systems are not able to find other markets for their energy.

4. With respect to Data Request EDSR-34 please identify the heavy north to south transfer: source and sink, and the additional amount of power transferred compared to the 2000 and 2001 summer peak normal base case.

** Start of Response to Item 4**

St. Joseph LLP (2000 Summer Peak Heavy Transfer)

The Heavy North - South scenario was modeled after the MINT ATC study performed by SJLP. Generation in the North was increased by 2,316 MW. Generation in the South was decreased by 1,979 MW. The difference is due to losses on the system. Except where noted, generation was scaled by the same percentage on all generators (that were on in the model) within the area.

The following areas were increased in the North (using the increment scale command in PSLF) with their MW increase shown in parenthesis.

NPPD (311 MW) area 602
OPPD (88 MW) area 603
LES (153 MW) area 604

WAPA (406 MW) area 606
OTP (151 MW) area 614
SMMPA (92 MW) area 619
MP (229 MW) area 621
UPA (107 MW) area 622
NSP (604 MW) area 623
IPW - Fox Lake Station (38 MW) area 625 busses 67455-67457
MEC area 630
Sycamore (79 MW) bus 62426
River Hill (58 MW) buses 62452-62453

The following areas were decreased in the South (using the increment scale command in PSLF) with their MW decrease shown in parenthesis.

UE area 356
Labadie (250 MW) bus 30894
Sioux (104 MW) bus 31756
Rush Island (80 MW) bus 31670
Meramec (38 MW) bus 31132
WERE (472 MW) area 36
MPS (133 MW) area 40
EDE (105 MW) area 44
AEC (403 MW) area 130
SPR (94 MW) area 46
KCPL (except Hawthorn) (273 MW) area 41
SJLP (27 MW) area 679

Then Pnet Schedule for each area was adjusted in the edit area table by the above amounts for each area. Then the Pnet Schedule was adjusted again for each area to account for the losses. Every area (both those with increases and decreases) had Pnet Schedule adjusted to account for losses. This was accomplished by adjusting each according to its percentage divided by 2 (2 sets that added to 100%).

The Sidney - Keystone line reactor was turned off. The DC converters at bus 61503 were adjusted to a schedule of 525 MW to get the case to solve.

**** End of Response to Item 4 ****

Dennis,

With respect to our phone call of March 21, 2000 please provide the data we requested on our original data request No EDSR-28:

EDSR-28 Please provide power system databases for the years 1999, and 2001, peak and off-peak, in PSS/E electronic format of the SPP transmission system, with more detailed modeling of the UtiliCorp United, Inc. Missouri Public Service, St. Joseph Light & Power Co. and Empire District Electric Co. transmission systems. In addition please provide all power flow databases used by the Applicants in any modeling conducted to simulate power flows resulting from the combined operation of the Applicants' systems. [If this data is not available in the specified format, please provide it in whichever format is available and specify the format provided.]

You previously provided a CD containing the load flow files organized in a three subdirectories: SJLP, EDE, and SPP-PSSE.

The first two subdirectories SJLP and EDE, contain key files describing each file base case. These base cases simulate the interconnection options, but none of them simulate the combined operation of all the Applicants.

The 1999 cases under the SPP-PSSE subdirectory contained the files identical to the SPP files filed with the SPP FERC Form 715 in April of 1999.

Please clarify if the 2001 base case files under the SPP-PSSE subdirectory simulate post merger conditions. If not, we are reiterating our original request that you provide the load flow base cases that simulate post-merger conditions for 2001. Please provide these cases in the PSS/E raw format. This data should reflect the re-dispatch of the combined system to serve native loads and any off-system sales and purchases that reflect the estimated combined system operation benefits that the Applicants claimed in their merger filings.

For the purposes of transmission system analysis in the SJLP and EDE interconnection studies, UCU did not vary the post-merger dispatch from the pre-merger dispatch. For transmission system analysis only, the expected post-merger dispatch can be adequately represented using the pre-merger dispatch in the provided cases.

Thanks

Sedina Eric
Whitfield Russell Associates

TLR Curtailments

Requester: MAPP

Flowgate: FtCal_S Figt# 6014

Date: 03/04/00 0738

END TIME: 1218

Curtailments: The following curtailments were made of SPP schedules:

From	To	Priority	Original Amount	Amount Curtailed	Implementation Time	NERC Tag ID	End Time
MEC	MPS	1-NS	50	50	800	MEC_RESEE0003935_MPS	
WAUE	MPS	2-NH	75	25	0800	WAUE_UCUMO0004094_MPS	

TLR Curtailments

Requester: SPP

Flowgate:Albany 161/138 transformer

Date: 01/28/2000 0600cst

END TIME:

Curtailments: The following curtailments were made of SPP schedules:

FROM	To	Priority	Original Amount	Amount Curtailed	Implementation Time	NERC Tag ID	End Time
MPW	MPS	ND-3	50	50	600	MPW_EPMIEA003220_MPS	

TLR Curtailments

Requester: SPP

Flowgate:EAU CLAIRE-ARPIN 345

Date: 11/17/99 AT 0600

END TIME:

Curtailments: The following curtailments were made of SPP schedules:

FROM	To	Priority	Original Amount	Amount Curtailed	Implementation Time	NERC Tag ID	End Time
WAUE	MPS	2-NH	46	8	600	WAUE_UCUMO0001278_MPS	

TLR Curtailments

Requester: SPP

Flowgate: COOPER-S

Date: 10/31/99 AT 0741

END TIME: 1633

Curtailments: The following curtailments were made of SPP schedules:

FROM	To	Priority	Original Amount	Amount Curtailed	Implementation Time	NERC Tag ID	End Time
EES	EDE	1-NS	50	1	800	EES_EPMCO010001325_EDE	900
EES	EDE	1-NS	49	16	900	EES_EPMCO010001356_EDE	1800

TLR Curtailments

Requester: SPP

Flowgate: FAIRPORT-LATHROP/ATAN STRANGER FLGT.1001

Date: 10/22/99 AT 1430

END TIME:

Curtailments: The following curtailments were made of SPP schedules:

FROM	To	Priority	Original Amount	Amount Curtailed	Implementation Time	NERC Tag ID	End Time
WAUE	MPS	4-NW	100	100	1500	WAUE_UCUMO0000714_MPS	
WAUE	MPS	5-NM	100	14	1500	WAUE_UCUMO0000713_MPS	

TLR Curtailments

Requester: SPP

Flowgate: FAIRPORT-LATHROP/ATAN STRANGER FLGT.1001

Date: 10/21/99 AT 1906

END TIME:

Curtailments: The following curtailments were made of SPP schedules:

FROM	To	Priority	Original Amount	Amount Curtailed	Implementation Time	NERC Tag ID	End Time
WAUE	MPS	5-NM	87	55	1930	WAUE_UCUMO0000704_MPS	

TLR Curtailments

Requester: SPP

Flowgate: FAIRPORT-LATHROP/ATAN STRANGER FLGT.1001

Date: 10/21/99 AT 1641

END TIME:

Curtailments: The following curtailments were made of SPP schedules:

FROM	To	Priority	Original Amount	Amount Curtailed	Implementation Time	NERC Tag ID	End Time
WAUE	MPS	4-NW	3	3	1700	WAUE_UCUM0000705_MPS	
WAUE	MPS	S-NM	100	12	1700	WAUE_UCUM0000704_MPS	

TLR Curtailments

Requester: SPP

Flowgate: FAIRPORT-LATHROP/ATAN STRANGER FLGT.1001

Date: 10/21/99 AT 1535

END TIME:

Curtailments: The following curtailments were made of SPP schedules:

FROM	To	Priority	Original Amount	Amount Curtailed	Implementation Time	NERC Tag ID	End Time
WAUE	MPS	4-NW	83	79	1600	WAUE_UCUM0000705_MPS	

TLR Curtailments

Requester: SPP

Flowgate: FAIRPORT-LATHROP/ATAN STRANGER FLGT.1001

Date: 10/21/99 AT 1445

END TIME:

Curtailments: The following curtailments were made of SPP schedules:

FROM	To	Priority	Original Amount	Amount Curtailed	Implementation Time	NERC Tag ID	End Time
WAUE	MPS	4-NW	100	16	1500	WAUE_UCUM0000705_MPS	

TLR Curtailments

Requester: SPP

Flowgate: FAIRPORT-LATHROP/ATAN STRANGER FLGT.1001

Date: 10/21/99 AT 1142

END TIME:

Curtailments: The following curtailments were made of SPP schedules:

FROM	To	Priority	Original Amount	Amount Curtailed	Implementation Time	NERC Tag ID	End Time
WAUE	MPS	4-NW	100	36	1200	WAUE_UCUMO0000705_MPS	

TLR Curtailments

Requester: SPP

Flowgate: FAIRPORT-LATHROP/ATAN STRANGER FLGT.1001

Date: 10/20/99 AT 1640

END TIME:

Curtailments: The following curtailments were made of SPP schedules:

From	To	Priority	Original Amount	Amount Curtailed	Implementation Time	NERC Tag ID	End Time
SJLP	MPS	2-NH	10	10	1700	SJLP_UCUMO0000694_MPS	
SJLP	MPS	2-NH	10	10	1700	SJLP_UCUMO0000706_MPS	
WAUE	MPS	4-NW	100	76	1700	WAUE_UCUKO0000687_MPS	

TLR Curtailments

Requester: SPP

Flowgate: FAIRPORT-LATHROP/ATAN STRANGER FLGT.1001

Date: 10/19/99 AT 0520

END TIME:

Curtailments: The following curtailments were made of SPP schedules:

FROM	To	Priority	Original Amount	Amount Curtailed	Implementation Time	NERC Tag ID	End Time
WAUE	MPS	3-ND	90	90	600	WAUE_UCUMO0000671_MPS	
WAUE	MPS	3-ND	100	100	600	WAUE_UCUMO0000620_MPS	
WAUE	MPS	4-NW	97	97	600	WAUE_UCUMO0000608_MPS	

TLR Curtailments

Requester: SPP

Flowgate: FAIRPORT-LATHROP/ATAN STRANGER FLGT.1001

Date: 10/19/99 AT 0115

END TIME:

Curtailments: The following curtailments were made of SPP schedules:

From	To	Priority	Original Amount	Amount Curtailed	Implementation Time	NERC Tag ID	End Time
DPC	MPS	2-NH	75	75	0200	DPC_UCUMOO0000669_MPS	
WAUE	MPS	3-ND	90	90	0200	WAUE_UCUMOO0000683_MPS	

TLR Curtailments

Requester: SPP

Flowgate: NesOneNesTul #5063

Date: 9/27/99

END TIME:2200

Curtailments: The following curtailments were made of SPP schedules:

From	To	Priority	Original Amount	Amount Curtailed	Implementation Time	NERC Tag ID	End Time
MPS	OKGE	NH-2	100	100	1515	MPS_OER1240000001000_OKGE	2200
MPS	OKGE	NH-2	100	100	1515	MPS_OER1240000002000_OKGE	2200
MPS	OKGE	NH-2	100	100	1515	MPS_OER1240000003000_OKGE	2200

TLR Curtailments

Requester: MAPP

Flowgate: COOPER_SOUTH

Date: 8/18/99

END TIME:2219

Curtailments: The following curtailments were made of SPP schedules:

From	To	Priority	Original Amount	Amount Curtailed	Implementation Time	NERC Tag ID	END TIME
2219							
GRE	MPS	NW- 4	50	50	1000	GRE_UCUMO705D000_MPS	2219
WAUE	MPS	NM - 5	45	19	1000	WAUE_UCUMO642D003_MPS	2219
GRE	MPS	NM - 5	48	27	1000	GRE_UCUMO704D002_MPS	2219

TLR Curtailments

Requester: SPP

Flowgate: EAU CLAIRE-ARPIN

Date: 7/16/99

END TIME:

Curtailments: The following curtailments were made of SPP schedules:

From	To	Priority	Original Amount	Amount Curtailed	Implementation Time	NERC Tag ID	End Time
SPC	MPS	NH-2	25	25	1800	SPC_TEMUES002T001_MPS	1908

TLR Curtailments

Requester: SPP

Flowgate: HAWXFRGAWXFR

Date: 7/08/99

END TIME:

Curtailments: The following curtailments were made of SPP schedules:

From	To	Priority	Original Amount	Amount Curtailed	Implementation Time	NERC Tag ID	End Time
WAUE	MPS	NH-2	50	9	1715	WAUE_RESEE107B000_MPS	2010
WAUE	MPS	NH-2	50	9	1715	WAUE_RESEE118B000_MPS	2010

TLR Curtailments

Requester: SPP

Flowgate: LACYGNE-STILLWELL

Date: 7/8/99

END TIME:

Curtailments: The following curtailments were made of SPP schedules:

From	To	Priority	Original Amount	Amount Curtailed	Implementation Time	NERC Tag ID	End Time
WAUE	MPS	NH-2	50	11	1545	WAUE_RESEE107B000_MPS	2130
WAUE	MPS	NH-2	50	11	1545	WAUE_RESEE118B000_MPS	2130
OKGE	SJLP	NH-2	50	32	1545	OKGE_OER124727X000_SJLP	2130

TLR Curtailments

Requester: SPP

Flowgate: EAU CLAIRE-ARPIN 345KV

Date: 6/28/99

END TIME:

Curtailments: The following curtailments were made of SPP schedules:

From	To	Priority	Original Amount	Amount Curtailed	Implementation Time	NERC Tag ID	End Time
GRE	MPS	NH-2	45	45	1000	GRE_UCUMO228C000_MPS	1831
WAUE	MPS	ND-3	50	50	1000	WAUE_UCUMO806B001_MPS	1831
GRE	MPS	NW-4	100	100	1000	GRE_UCUMO101B000_MPS	1831

TLR Curtailments

Requester: MAPP

Flowgate: EAU CLAIRE-ARPIN 345 KV

Date: 6/12/99

END TIME:

Curtailments: The following curtailments were made of SPP schedules:

From	To	Priority	Original Amount	Amount Curtailed	Implementation Time	NERC Tag ID	END TIME
WAUE	MPS	ND-3	50	25	930	UNKNOWN	

TLR Curtailments

Requester: MAPP

Flowgate: EAU CLAIRE-ARPIN 345 KV

Date: 6/12/99

END TIME:

Curtailments: The following curtailments were made of SPP schedules:

From	To	Priority	Original Amount	Amount Curtailed	Implementation Time	NERC Tag ID	END TIME
LES	MPS	NH-2	25	25	700	LES_UCUMO064A000_MPS	

TLR Curtailments

Requester: MAIN

Flowgate: EAU CLAIRE to ARPIN

Date: 06/10/99

END TIME:

Curtailments: The following curtailments were made of SPP schedules:

From	To	Priority	Original Amount	Amount Curtailed	Implementation Time	NERC Tag ID	END TIME
SPC	MPS	ND-3	25	15	700	SPC_CRGLTA102A000_MPS	2200
SPC	MPS	ND-3	10	10	1100	SPC_UCUMO102A000_MPS	2200
SPC	MPS	ND-3	8	8	1100	SPC_CRGLTA102A002_MPS	2200
GRE	MPS	NW-4	50	50	1100	GRE_UCUMO504C000_MPS	2200
WAUE	MPS	NW-4	41	41	1100	WAUE_UCUMO502C001_MPS	2200
WAW	MPS	NW-4	9	9	1100	WAUE_UCUMO501C000_MPS	2200

TLR Curtail

Requester: MAIN

Flowgate: EAU CLAIRE-ARPIN 345 KV

Date: 6/7/99

END TIME:

Curtailments: The following curtailments were made of SPP schedules:

From	To	Priority	Original Amount	Amount Curtailed	Implementation Time	NERC Tag ID	END TIME
SPC	MPS	NH-2	100	72	700	SPC_CRGLTA069A000_MPS	2100

TLR Curtailments

Requester: EES

Flowgate: NEW MADRID-OKGE

Date: 6/3/99

END TIME: The schedules with end times were inadvertently cut due to bad information from the IIDC.

Curtailments: The following curtailments were made of SPP schedules:

From	To	Priority	Original Amount	Amount Curtailed	Implementation Time	NERC Tag ID	END TIME
AMRN	MPS	NS-1	50	50	900	AMRN_UCUM0397C000_MPS	1100
MPS	OKGE	NH-2	200	179	900	MPS_OERI24628X000_OKGE	
MPS	OKGE	NH-2	21	21	1100	MPS_OERI24628X001_OKGE	

END TIME: Curtailments: The following curtailments were made of SPP schedules: TLR Curtailments
Requester: ALTE

Flowgate: EAU CLAIRE to ARPIN ID 3006

Date: 6/2/99

END TIME: At 0925 MAIN went to level 2b, all schedules that were curtailed may return to pre contingent levels unless covered by MAPP LLR.

Curtailments: The following curtailments were made of SPP schedules:

From	To	Priority	Original Amount	Amount Curtailed	Implementation Time	NERC Tag ID
WAUE	MPS	NH-2	100	9	800	WAUE_UCUMO369C000_MPS
GRE	MPS	NH-2	30	4	800	GRE_UCUMO385C000_MPS
GRE	MPS	NH-2	20	2	800	GRE_UCUMO386C000_MPS

TLR Curtailments

Requester: ALTE

Flowgate: Eau Claire -Arpin 345 kv

Date: 5/17/99

Curtailments: The following curtailments were made of SPP schedules:

From	To	Priority	Original Amount	Amount Curtailed	Implementation Time	NERC Tag ID
WAUE	MPS	NH_2	5	3	1000	WAUE_UCUMO013C001_MPS

TLR Curtailments

Requester: KCPL

Flowgate: StjLaklatStr ID.

Date: 5/15/99

Curtailments: The following curtailments were made of SPP schedules:

From	To	Priority	Original Amount	Amount Curtailed	Implementation Time	NERC Tag ID
SJLP	MPS	NH-2	50	32	1700	SJLP_UCUMO029C000_MPS
MEC	MPS	NH-2	50	33	1700	MEC_UCUMO030C000_MPS

TLR Curtailments

Requester: EES

Flowgate: New Madrid-Dell

Date: 10/1/98

Curtailments: The following curtailments were made of SPP schedules:

From	To	Priority	Original Amount	Amount Curtailed	Implementation Time	NERC Tag ID
MPS	CSWS	NH-2	50	27	1145	MPS_MPSPM339C001_CSWS

TLR Curtailments

Requester: CSWS

Flowgate: CraAshValLyd (Craig Jct-Ashdown 138 kV for the outage of Valliant-Lydia 345 kV)

Date: 9/22/98

Curtailments: The following curtailments were made of SPP schedules:

From	To	Priority	Original Amount	Amount Curtailed	Implementation Time	NERC Tag ID
MPS	CLEC	NH-2	100	15	1715	MPS_OER1941A000_CLEC
MPS	CLEC	NH-2	50	8	1715	MPS_OER1938A000_CLEC

TLR Curtailments

Requester: EES

Flowgate: WilLivWebRic (Wilburt-Livonia 138 kV for the outage of Webre-Richard 500 kV)

Date: 9/2/98

Curtailments: The following curtailments were made of SPP schedules:

From	To	Priority	Original Amount	Amount Curtailed	Implementation Time	NERC Tag ID
MPS	CSWS	NW-4	50	50	1400	MPS_SPM131H001_CSWS

I. INTRODUCTION

The purpose of this study was to determine the preferred option for connecting (either physically or contractually) the UtiliCorp United (UCU) electrical transmission system with the Empire District (EDE) electrical transmission system. Four options for achieving this objective are discussed in this report.

Two categories of options were considered. The first category of options were options that were actual physical interconnections between the two systems. The second category of options were options that involved a contractual interconnection or a combination of physical/contractual interconnections.

Each option is discussed separately in the body of this report with regards to contingency analysis, estimated costs, and MW losses.

II. CONTINGENCY ANALYSIS

Loadflow models were created to simulate the existing transmission system. Initial loadflows were based on the year 2003 Southwest Power Pool summer peak models. Contingency analysis was performed for the existing system and each option to examine the transmission system's ability to perform adequately during a single-contingency situation.

The following contingencies were analyzed:

- All facilities in the MPS system
- All facilities in the EDE system
- All facilities in the KCPL system
- All facilities 115kV and above in the WR system
- Relevant facilities in the AEC system
- All facilities 115kV and above in the MEC system
- All other facilities that are normally included in EDE contingency analysis studies

In total, 1406 contingencies were analyzed.

Percentage overloads as discussed in this report refer to the line's emergency rating.

III. EXISTING SYSTEM

A. System Configuration

The existing EDE transmission system (shown on the following page) has two 161kV lines and two 69kV lines that extend north towards the UCU system and provide possible interconnection points.

One possible interconnection location into the EDE system is at the Asbury Generation Station near Asbury, Missouri. There are three 161kV lines exiting this generating station. One line travels southwest to Carthage. Another line travels southwest to Joplin. The other 161kV line travels north to interconnect with the Western Resources system.

A second possible interconnection is location at the end of a 161kV line near Burns, Missouri. This substation is a 161/69kV substation fed from a radial 161kV line (795 ACSR) coming from Aurora. However, there are four 69kV lines exiting this substation that interconnect within the EDE system.

The last two possible interconnection points are normally open 69kV connections with MPS near Lamar (4/0 ACSR) and Warsaw (1/0 Cu). These interconnections are normally open because the Empire 69kV and the MPS are electrically out-of-phase by 30 degrees.

B. Loadflow and Contingency Analysis

The base case loadflow for the existing system (normal transfer scenario) is shown on page **Error! Bookmark not defined.** The base case was based on a year 2003 Southwest Power Pool case with changes made to account for the addition of the Pleasant Hill plant and recommended transmission system changes due to the St. Joseph Light & Power merger. Nevada generation was off in the base case. Asbury generation was on in the base case and contributing 186 MW of generation.

The two most noticeable areas of concern regarding portions of the system that are impacted by this study are the Nevada area in the UCU system and the Burns area in the EDE system. Voltages in the Nevada area dropped as low as 87.7% (at Adrian) for outages on the 161kV line between Archie and Nevada. Voltages in the Burns area dropped as low as 87.7% an outage of the 161kV line to Burns.

C. Losses

Summer peak losses for the base case totaled 64.8 MW for the UCU and EDE systems.

IV. OPTION 1 - Nevada to Asbury 161kV Line

A. System Configuration

The first option considered for connecting the UCU and EDE electrical systems involved the construction of a 161kV line from near UCU's Nevada Substation to EDE's Asbury Generating Station (see diagram on the following page). This line was estimated to be 35 miles long and was modeled using 1192 ACSR conductor (312 MVA capability).

B. Estimated Cost

The estimated cost for this option is \$14.84 million. The costs for this option are broken down as follows:

Construct a new 161kV Substation south of the existing Nevada Substation - \$2.5 million

Add a 161kV breaker position at the existing Asbury Substation - \$1.5 million

Construct a 161kV line (1192 ACSR) from the new Nevada Substation to Asbury - \$10.84 million

Utilizing a levelized annual carrying charge of 15.4%, the cost of this option is \$2.28 million annually and \$7,300 / MW-year (for 312 MW of capacity).

C. Loadflow and Contingency Analysis

The 2003 summer peak model showed 35.6 MW flowing from the Asbury Station to the Nevada Substation (see page **Error! Bookmark not defined.**). Flow from Archie Junction to the Nevada Substation was reduced by 14 MW. Voltages at the Nevada Substation improved from 97.3% to 99.2%.

The primary result of the addition of this line was the elimination of first contingency voltage problems in the Nevada area. In the base case, an outage of any section of the 49 mile line from Archie to Nevada at peak caused low voltages (as low as 87.7%) in the Nevada area. The addition of the line from Nevada to Asbury completely eliminated these single contingency voltage problems.

D. Losses

Losses for this option totaled 63.5 MW for the UCU and EDE systems. This is a peak reduction of 1.3 MW from the base case losses.

ON

Add Breaker
at Nevada

Construct 161kV line from
Nevada to Asbury

BOURBON

CRAWFORD

Add Breaker
at Asbury

BASE THE
SIDE OF L&C

USE ON THE
SIDE OF L&C

CHEROKEE

VERNON

BARTON

JASPER

V. OPTION 2 - Sedalia to Burns 161kV Line

A. System Configuration

The second option considered for connecting the UCU and EDE electrical systems involved the construction of a 161kV line from UCU's Sedalia West Substation to EDE's Bolivar-Burns Substation (see diagram on the following page). This line was estimated to be 90 miles long and was modeled using 1192 ACSR conductor (312 MVA capability).

B. Estimated Cost

The estimated cost for this option is \$30.87 million. The costs for this option are broken down as follows:

Upgrade to 161kV Substation at Bolivar-Burns Substation - \$1.5 million

Add a 161kV breaker position at Sedalia West Substation - \$1.5 million

Construct a 161kV line from Sedalia West to Bolivar-Burns Substation - \$27.87 million

Utilizing a levelized annual carrying charge of 15.4%, the cost of this option is \$4.75 million annually and \$15,200 / MW-year (for 312 MW of capacity).

C. Loadflow and Contingency Analysis

The 2003 summer peak model showed 31.6 MW flowing from Sedalia West Substation to the Bolivar-Burns Substation (see page Error! Bookmark not defined.). The voltage in the Burns area improved from 97.7% to 99.1%.

The primary result of the addition of this line was the elimination of first contingency voltage problems in the Bolivar-Burns area. In the base case, an outage of any section of the 30 mile line Dadeville East Substation to the Bolivar-Burns Substation caused low voltages (as low as 87.7% at Bolivar South Substation). The addition of the line from Sedalia West to the Bolivar-Burns Substation completely eliminated these single contingency voltage problems.

D. Losses

Losses for this option totaled 65 MW for the UCU and EDE systems. This is an increase of 0.2 MW over the base case losses.



Add Breaker at Bolivar-Burns

VI. OPTION 3 - Two 69kV Interconnections

A. System Configuration

The third option considered for connecting the UCU and EDE electrical systems involved the addition of two 69kV substations at existing 69kV interconnection points between the UCU and EDE transmission systems. Currently these 69kV interconnections are open because the UCU and EDE systems are 30 degrees out of phase. The new 69kV substations would include 69/69kV phase shifting transformers to bring the two systems into phase. One substation would be built at the 69kV interconnection near Warsaw and EDE's Hermitage Substation and one substation would be built at the 69kV interconnection near Lamar and EDE's Boston Substation (see diagram on the following page). The addition of both of these substations would add approximately 63 MW of interconnection capability at 69kV.

B. Estimated Cost

The estimated cost for this option is \$3.5 million (\$1.75 million for each substation).

Utilizing a levelized annual carrying charge of 15.4%, the cost of this option is \$0.54 million annually and \$8,600 / MW-year (for 63 MW of capacity).

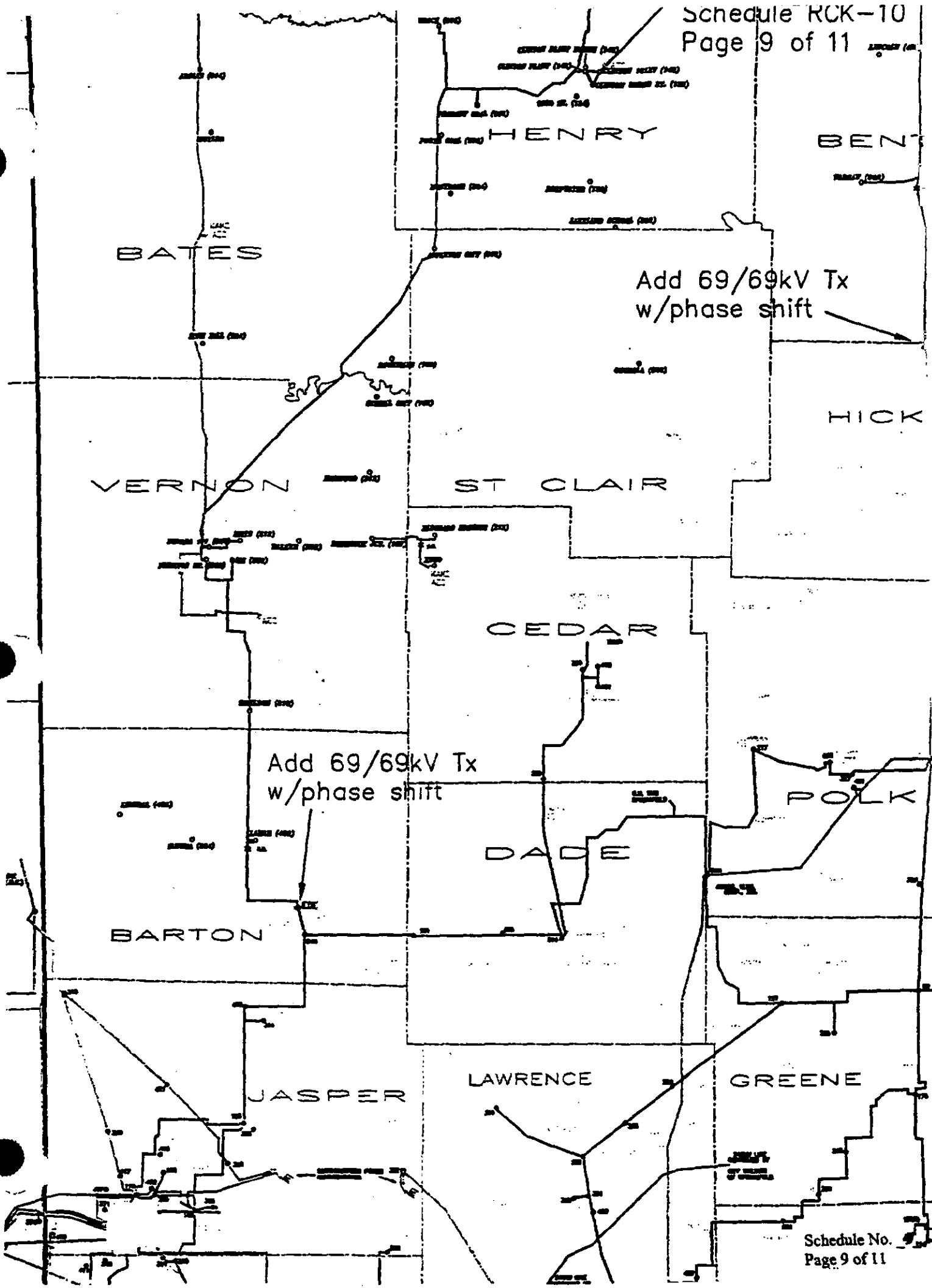
C. Loadflow and Contingency Analysis

The flow on the transformer near Lamar was 3.9 MW from Boston Substation (see page **Error! Bookmark not defined.**). The flow on the transformer near Warsaw was 0.3 MW from Hermitage Substation. Voltage at Warsaw improved from 94.7% to 97%. Voltage at Lamar increased from 97.9% to 99.2%. Voltages in the EDE system decreased slightly.

This option provided backup to the Lamar area for outages on the 69kV line from Nevada to Lamar. It also provided off-peak backup to the Warsaw and Hermitage areas for outages of the 69kV radial lines serving those areas. Currently these areas have no second feed and are served radially.

D. Losses

Losses for this option totaled 64.7 MW, a decrease of 0.1 MW from the base case.



VII. OPTION 4 - Purchasing Firm Transmission

A. System Configuration

This option involves no changes to the existing transmission system. Necessary transmission capacity would be purchased (from either KCPL or Western Resources).

B. Estimated Cost

It is estimated that 300 MW of transmission capacity is necessary to operate the two systems as one control area and to be able to perform economic dispatch between both systems.

KCPL's current annual revenue requirement for network service is \$42,101,320 (includes the Scheduling & Dispatching charge) plus payment for energy losses. If the KCPL system load is estimated at 3,402 MW (2003 summer load), then the load ratio share of 300 MW of transmission capacity is

$$300 / 3,402 \times \$42,101,320 = \$3.7 \text{ million annually (plus energy losses).}$$

The calculation for Western Resources is

$$300 / 5,400 \text{ (estimated 2003 summer peak)} \times \$66,491,775 \text{ (annual revenue requirement)} \\ = \$3.7 \text{ million annually.}$$

The cost for this option is roughly \$3.7 million annually or \$12,300 / MW-year (300 MW capacity).

C. Loadflow and Contingency Analysis

Because this option does not require any changes to the existing system, the transmission system is unaffected compared to the base case.

D. Losses

Because this option does not require any changes to the existing system, losses for this option are equivalent to the base case.

VIII. SUMMARY

A. Comparing the Options

Determining the preferred method of connecting the UCU and EDE transmission systems from the four options considered in this report is a simple matter given the estimated costs and benefits of each option. Of the four options, Option 1 (Nevada - Asbury) has the lowest costs (see summary of costs on page 13) and provides a benefit to the transmission system. Option 2 (Sedalia - Burns) also provides roughly equivalent benefits to the transmission system, but has substantially higher costs. Option 3 does provide some benefits to the transmission system, but does not provide the necessary 300 MW of interconnection capability that is considered necessary between the two systems. It also has a higher cost on a \$ per MW-Year basis than Option 1. Option 4 (buying transmission capacity) provides no benefits to the transmission system and has substantially higher costs than Option 1.

B. Recommendation

The recommended course of action is to construct a 161kV line from a location south of the existing UCU Nevada Substation to the EDE Asbury generating station (see diagram on page 5).

C. Additional Considerations of the Preferred Option

There are least two modifications that can be made to the preferred option that need to be considered.

1. Increasing the Capacity of the Conductor - Replacing the proposed 1192 ACSR conductor with 795 bundled ACSR conductor will increase the capacity of the line from 312 MVA to 510 MVA. If at some point in the future a greater amount of capacity between the two systems is required, it will be more expensive on a \$/MW-Year basis to increase the capacity beyond the 312 MVA given by the 1192 ACSR. Additional capacity could be added in the future by completing the 69kV interconnections as described in Option 3 (63 MW) or by purchasing firm capacity as described in Option 4. The difference in costs between these two conductor types is still being evaluated.

Flow on the Nevada - Asbury line increases by approximately 14% at peak when 795 bundled ACSR conductor is used (as opposed to the 1192 ACSR conductor).

2. Terminating the Connection at Nevada Substation Instead of Further South - Another possibility for this line would have the line terminating at Nevada Substation (see diagram on page 12), instead of further south (as shown on page 5). Originally, the Nevada - Asbury line was considered from the southern location, because it is approximately 7 miles closer to Asbury. Terminating this line at the existing Nevada Substation would add 7 miles of 161kV construction to the cost. However, costs would also be reduced by not requiring the construction of a new 161kV substation. An additional breaker position would be needed at the existing Nevada Substation, if it is decided to terminate the line there. The difference in costs between these two options is still being evaluated.

If the line is terminated at the existing Nevada Substation, the reliability to Nevada increases slightly. The existing substation would then have three 161kV lines exiting the station and would eliminate the possibility of a radial feed to the substation due to a single 161kV line outage.

FEDERAL ENERGY REGULATORY COMMISSION

WASHINGTON, D.C. 20426

In Reply Refer To:
Docket Nos. EC00-27-000
and EC00-28-000

April 17, 2000

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Dear Gentlemen:

The purpose of this letter is to request additional information and an amended competitive analysis that will allow the Commission to expedite further consideration of your application pursuant to section 203 of the Federal Power Act.

Your application, filed November 11, 1999, included testimony that described Applicants' possible plans to either physically interconnect the post-merger operating companies or to integrate operations by taking network transmission service under a Regional Transmission Organization's tariff. (Direct Testimony of Richard C. Kreul at 11 - 13.) However testimony filed in support of your Appendix A analysis concluded "it would be too speculative to try to analyze future interconnections that might or might not result from the proposed mergers." (Direct Testimony of Mark W. Frankena at 48.) On February 11, 2000, the Applicants informed the Commission for the first time that the Applicants had applied on December 6, 1999 to the Southwest Power Pool (SPP) for network service. (Consolidated Response to Motions to Intervene, Motions for Clarification, Requests for Hearing, and Protests at 7.) On March 10, 2000, the Applicants stated for the first time that integration would definitely occur. "If UtiliCorp cannot come to

terms with the SPP to participate for all purposes under the SPP tariff, the merged company will have to proceed with integration by making its own independent investments in new transmission facilities." (March 10, 2000, Request of Applicants for Leave to Clarify the Record at 5-6.)

In light of the above, it now appears certain that Applicants will integrate their systems but are still contemplating different ways in which to accomplish such integration. The integration of the merging systems could materially change the results of the initial competitive analysis filed by the Applicants as part of their application. The Commission cannot evaluate the competitive effects of the proposed merger without incorporating the effects of such integration and the application does not contain the information necessary to do so. Therefore, please amend your competitive analysis to reflect the integration of the Applicants' systems by: (1) using the SPP tariff, (2) making independent investments in new transmission facilities, and (3) any other mechanism under consideration.

In addition, transactions which may be relevant to the proposed merger's competitive effect have been announced or have taken place since your application was filed. For example, according to UtiliCorp's December 8, 1999 "News Release," UtiliCorp's wholly-owned subsidiary Aquila Energy Corporation (Aquila) signed a 12 year contract to supply natural gas to the American Public Energy Agency. On March 14, 2000, it was announced that Aquila had acquired the marketing assets of U.S. Gas Transportation, Inc. On March 14, 2000, it was announced that Aquila had acquired the real estate and obtained the right to proceed with constructing a gas storage facility in west Texas. Please explain in detail these and any other recent transactions that are relevant to the merger's competitive effect and revise your competitive analysis to reflect such transactions. If the transactions are not relevant to the competitive effect of the merger, than please explain why not.

The changes in Applicant's integration plans and transactions announced subsequent to the filing of your merger application constitute significant changes in your merger proposal requiring revisions to your competitive analysis, as described above. Consistent with the Merger Policy Statement, such changes will start the Commission's merger review process over and will require that a new notice be issued. Your response to this order must be filed within twenty one (21) days of the date of this order. In addition, please provide a copy of your response to all parties that have requested intervention in this proceeding. Those parties will have twenty one (21) days from the date your response is received by the Commission to file comments on the submission.

This order is issued pursuant to 18 CFR 375.307 and is interlocutory. This order is not subject to rehearing pursuant

to 18 CFR 385.713. Please submit seven copies of your response to this order. Six copies of your response should be sent to:

Federal Energy Regulatory Commission
Office of the Secretary
888 First Street, N.E.
Washington, DC 20426

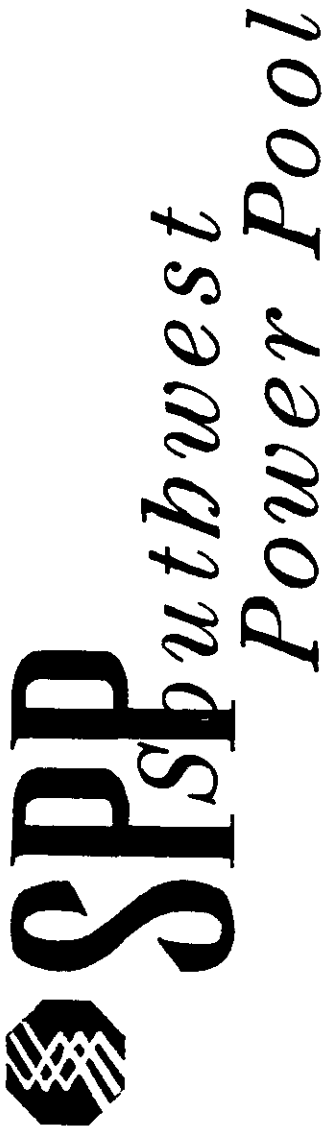
One copy should be sent to:

Federal Energy Regulatory Commission
ATTN: Michael C. McLaughlin, Director
Division of Corporate Applications
Office of Markets, Tariffs and Rates
888 First Street, NE
Washington, DC 20426

Sincerely,

Michael C. McLaughlin, Director
Division of Corporate

Applications



System Impact Study for
Transmission Service Requests
from

UTILICORP UNITED

Missouri Public Service
Empire District Electric Co.
St. Joseph Light and Power Co.

SPP Transmission Planning
April 21, 2000

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I. Executive Summary

Southwest Power Pool evaluated the impacts of the 10-year network service requests for UtiliCorp (OASIS #163522-MPS, #163526-EDE, #163530-SJLP). Multiple power flow model cases were developed and reviewed during the analysis portion of the study. The engineering results of the study show that facility upgrades and system improvements are required to accommodate the requested transmission service from the designated resources to the designated load.

The study was performed in two parts. The first part studied the existing system representation in the power flow model to determine what thermal overloads and voltage violations are present. All potential violations were reviewed with the transmission owner and a summary of these results is provided in Sections V and VI. UtiliCorp and SPP Criteria were used to determine what violations exist.

The second part studied the transfer of power between the three existing control areas. This determines the capability of the SPP transmission system to handle the new dispatch alternatives posed when the three control areas are combined. Selecting two exporting control areas and transferring power to the remaining control area was the technique used. Generator sensitivity analysis was then performed on the exporting and importing areas separately creating 2 runs for each of the 3 control areas in every power flow model. This provides a comprehensive review of possible generation dispatch for the power flow model represented. An attached Excel spreadsheet shows the summary results of the study. UtiliCorp removed its facilities from the list because of redispatch solutions available to alleviate overloads. The analysis shows that some facilities are required to allow for 200 MW transfers between the existing control areas.

II. Introduction

UTILICORP UNITED has requested multi-year Network transmission service on the SPP OASIS (163522-MPS, 163526-EDE, 163530-SJLP). There are three operating companies in Missouri: MIPU, SJPL, EMDE. The three companies currently operate independently but for the purposes of this study are to be considered one control area. Therefore, the three System Impact Study requests (SPP-2000-006, SPP-2000-008, SPP-2000-009) were combined into one study. The period of the request is from 10/01/00 to 10/01/10. This system impact study was required in order to determine the capability of the transmission system for the requested period.

The principal objective of this study is to determine if the SPP transmission system is capable of supplying network service to the UtiliCorp companies in Missouri operating as a single control area.

III. Study Methodology

The analysis was done to ensure current SPP Criteria and NERC Planning Standards requirements are fulfilled. The Southwest Power Pool (SPP) meets the NERC Planning Standards, Table No. 1, which provides the requirements related to thermal overloads with a contingency. It requires that all facilities be within emergency ratings after a contingency.

1. Description

This study was done in two different parts. The first part was to study the 12 base cases to determine existing thermal overload and voltage problems. The SPP base case models were modified to reflect the most current modeling information. One branch or selected multiple branches were removed to study the affect on the system. Thermal overloads along with high and low voltages were recorded during the contingency analysis using AC solution and reported in Section V and VI.

The second part was done using PTI MUST to see what problems showed up for transfers up to 200 MW between the three existing Missouri companies. The MUST program performs a DC linear analysis of transfers. A generation sensitivity analysis (GSA) feature in MUST was used for determining what levels of transfers can be achieved between the existing three control areas. The GSA uses all available generation in the exporting control area as a base case transfer. Then each unit or groups of units are tested to determine the minimum level of transfer that can be obtained without any thermal overloads. This provides a complete review of all possible dispatch situations for transfers between the control areas. Overloads in the base case were ignored in the MUST runs since they are covered in the ACCC analysis portion in part one. The attached Excel spreadsheet summarizes the results of the study.

2. Model Updates

Cases for year 2000 Fall Peak, 2000/01 Winter Peak, 2001 April, 2001 Spring Peak, 2001 Summer Peak, 2001 Fall Peak, and 2001/02 Winter Peak, 2004 Summer Peak, 2004/05 Winter Peak, 2006 Summer Peak, 2006/07 Winter Peak, and 2010 Summer Peak were included. These cases were modified to reflect future firm transfers not already included in the January 2000 base case series.

3. Study Analysis

Using the created models and the ACCC function of PSS/E, single and select double contingency outages were analyzed. This function uses a full AC solution technique.

PSS/E CHOICES IN RUNNING LOAD FLOW PROGRAM AND ACCC

BASE CASES:

Solutions - Fixed slope decoupled Newton-Raphson solution (FDNS)

A. Tap adjustment - Stepping

B. Area interchange control - Tie lines only

C. Var limits - Apply immediately

D. Solution options - X Phase shift adjustment
 - Flat start

- Lock DC taps
- Lock switched shunts

ACCC CASES:

Solutions - AC contingency checking (ACCC)

- A. MW mismatch tolerance -1.0
- B. Contingency case rating - Rate B
- C. Percent of rating - 100
- D. Output code - Summary
- E. Min flow change in overload report - 1mw
- F. Excl'd cases w/ no overloads form report - YES
- G. Exclude interfaces from report - NO
- H. Perform voltage limit check - YES
- I. Elements in available capacity table - 60000
- J. Cutoff threshold for available capacity table - 99999.0
- K. Min. contng. case Vltg chng for report - 0.02
- L. Sorted output - None

Newton Solution:

- Tap adjustment - Stepping
- Area interchange control - Tie lines only
- Var limits - Apply automatically
- Solution options - X Phase shift adjustment
 - Flat start
 - Lock DC taps
 - Lock switched shunts

IV. BRANCH OVERLOADS

BRANCH OVERLOAD TABLE

2000 FALL PEAK, MISSOURI PUBLIC SERVICE - AREA 540

X-----	MULTI-SECTION LINE GROUPINGS	----X	FROM	NAME	TO	NAME	CKT	PRE-CNT	POST-CNT	RATING	PERCENT
59202	(SIBLEY 5161.00) TO 59263 (SIBLEY 269.000) CKT 1 59262 LIBERTY269.0 59263*SIBLEY 269.0 1						37.2	83.3	78.0	103.1	reduce generation

2000 FALL PEAK, EMPIRE DISTRICT ELECTRIC - AREA 544

NONE

2000 FALL PEAK, ST. JOSEPH LIGHT AND POWER - AREA 679

NONE

2000 WINTER PEAK, MISSOURI PUBLIC SERVICE - AREA 540

NONE

2000 WINTER PEAK, EMPIRE DISTRICT ELECTRIC - AREA 544

X-----	MULTI-SECTION LINE GROUPINGS	----X	FROM	NAME	TO	NAME	CKT	PRE-CNT	POST-CNT	RATING	PERCENT
59568	(STK324 269.000) TO 59616 (STK631J269.000) CKT 1 59545*FRP217 269.0 59635 FRP217 134.5 1						3.2	7.3	5.0	145.6	provide solutions
59568	(STK324 269.000) TO 59638 (STK324 134.500) CKT 1 59545*FRP217 269.0 59635 FRP217 134.5 1						3.2	7.2	5.0	145.0	provide solutions
59605	(STK418 269.000) TO 59614 (SK631C3269.000) CKT 1 59545*FRP217 269.0 59635 FRP217 134.5 1						3.2	5.2	5.0	103.5	provide solutions
59637	(HUM308 134.500) TO 59641 (CAP304 134.500) CKT 1 59545*FRP217 269.0 59635 FRP217 134.5 1						3.2	7.0	5.0	140.7	provide solutions
59638	(STK324 134.500) TO 59641 (CAP304 134.500) CKT 1 59545*FRP217 269.0 59635 FRP217 134.5 1						3.2	7.3	5.0	145.1	provide solutions
59605	(STK418 269.000) TO 96118 (5STKAE 161.00) CKT 1 59545*FRP217 269.0 59635 FRP217 134.5 1						3.2	5.2	5.0	103.4	provide solutions

2000 WINTER PEAK, ST. JOSEPH LIGHT AND POWER - AREA 679

NONE

2001 APRIL MINIMUM, MISSOURI PUBLIC SERVICE - AREA 540

NONE

2001 APRIL MINIMUM, EMPIRE DISTRICT ELECTRIC - AREA 544

NONE

2001 APRIL MINIMUM, ST. JOSEPH LIGHT AND POWER - AREA 679

NONE

BRANCH OVERLOAD TABLE

2001 FALL PEAK, MISSOURI PUBLIC SERVICE - AREA 540

2001 FALL PEAK, EMPIRE DISTRICT ELECTRIC - AREA 544

2001 FALL PEAK, ST. JOSEPH LIGHT AND POWER - AREA 679

2001 SUMMER PEAK, MISSOURI PUBLIC SERVICE - AREA 540

X-----	MULTI-SECTION	LINE GROUPINGS	----X	FROM	NAME	TO	NAME	CKT	PRE-CNT	POST-CNT	RATING	PERCENT
59202	[SIBLEY 5161.00]	TO 59263	[SIBLEY 269.000]	CKT 1	59262	LIBERTY269.0	59263*SIBLEY	269.0 1	46.7	88.5	78.0	110.1 Reduce Generation
59206	[PRALEE 5161.00]	TO 59233	[LEESUM 5161.00]	CKT 1	59225	PHILL 5 161	59243*LKINGB5	161 1	231.0	323.0	294.0	109.1 Line Rebuild
							59243*LKINGB5	161 1	212.8	304.7	294.0	102.9 Line Rebuild
59208	[NEVADA 5161.00]	TO 59308	[NEVADA 269.000]	CKT 1	59208	NEVADA 5 161	59308 NEVADA	269.0 2	28.0	54.9	50.0	109.8 Generation
59208	[NEVADA 5161.00]	TO 59308	[NEVADA 269.000]	CKT 2	59208	NEVADA 5 161	59308 NEVADA	269.0 1	31.8	55.9	50.0	111.7 Generation
59209	[SEDALIAS 5161.00]	TO 59272	[SEDS 269.000]	CKT 1	59209	SEDALIAS 161	59271 SEDN	269.0 1	32.4	50.3	50.0	100.7 Shift Load to 161
59218	[GKNWD 5161.00]	TO 59233	[LEESUM 5161.00]	CKT 1	59224	INGVW 5 161	59249*HOOKRD	5 161 1	193.7	305.0	294.0	103.6 Line Rebuild
							59225 PHILL	5 161	231.0	343.4	294.0	116.1 Line Rebuild
							59243 LKINGB5	161 1	212.8	323.6	294.0	109.9 Line Rebuild
59224	[INGVW 5161.00]	TO 59249	[HOOKRD 5161.00]	CKT 1	59206	PRALEE 5 161	59233*LEESUM	5 161 1	172.1	259.5	245.0	105.3 Line Rebuild
59224	[INGVW 5161.00]	TO 59282	[INGVW 269.000]	CKT 1	59210	MARTCTYS 161	59287 MARTCTY	269.0 1	32.4	50.4	50.0	100.8 Acceptable
59225	[PHILL 5161.00]	TO 59243	[LKINGB5 5161.00]	CKT 1	59206	PRALEE 5 161	59233 LEESUM	5 161 1	172.1	274.5	245.0	112.1 Line Rebuild
59225	[PHILL 5161.00]	TO 59280	[PHILL 269.000]	CKT 1	59228	WBURGE 5 161	59269 WBURGE	269.0 1	41.0	50.7	50.0	101.5 Generation
							59239*HSNVL	5 161	43.5	72.4	50.0	144.9 Generation
							59284 GRDVWTP	269.0 1	31.3	61.2	53.0	123.2 Generation
							59288 RGAFB	269.0 1	26.8	56.2	53.0	114.0 Generation
							59289 BELTON	269.0 1	22.1	51.0	53.0	104.7 Generation
59239	[HSNVL 5161.00]	TO 59295	[HSNVL 269.000]	CKT 1	59225	PHILL 5 161	59280 PHILL	269.0 1	78.0	102.1	100.0	102.1 Generation
59242	[CLINTON5 5161.00]	TO 59303	[CLINTON269.000]	CKT 1	59242	CLINTONS 161	59303 CLINTON	269.0 2	33.5	52.6	50.0	105.2 Acceptable
59242	[CLINTON5 5161.00]	TO 59303	[CLINTON269.000]	CKT 2	59242	CLINTONS 161	59303 CLINTON	269.0 1	33.4	52.9	50.0	105.8 Acceptable
59243	[LKINGB5 5161.00]	TO 59249	[HOOKRD 5161.00]	CKT 1	59206	PRALEE 5 161	59233*LEESUM	5 161 1	172.1	267.8	245.0	108.8 Line Rebuild
59279	[RGREEN 269.000]	TO 59280	[PHILL 269.000]	CKT 1	59239	HSNVL 5 161	59295 HSNVL	269.0 1	43.5	60.4	50.0	120.8 Generation
							59296 HSNVLSW	269.0 1	16.7	44.2	41.0	111.1 Generation
59284	[GRDVWTP 269.000]	TO 59288	[RGAFB 269.000]	CKT 1	59239	HSNVL 5 161	59295 HSNVL	269.0 1	43.5	55.5	50.0	111.1 Generation
59288	[RGAFB 269.000]	TO 59289	[BELTON 269.000]	CKT 1	59239	HSNVL 5 161	59295 HSNVL	269.0 1	43.5	53.5	50.0	107.0 Acceptable
59289	[BELTON 269.000]	TO 59290	[BELTONS 269.000]	CKT 1	59239	HSNVL 5 161	59295 HSNVL	269.0 1	43.5	51.7	50.0	103.3 Acceptable
59242	[CLINTON5 5161.00]	TO 96071	[SCLINTN 161.00]	CKT 1	59228	WBURGE 5 161	59269 WBURGE	269.0 1	41.0	65.8	50.0	131.6 Accept Risk
							59268 WBURGP	269.0 1	7.7	43.7	46.0	105.1 Accept Risk

2001 SUMMER PEAK, EMPIRE DISTRICT ELECTRIC - AREA 544

X-----	MULTI-SECTION	LINE GROUPINGS	----X	FROM	NAME	TO	NAME	CKT	PRE-CNT	POST-CNT	RATING	PERCENT
59480	[MON383 5161.00]	TO 59591	[MON183 269.000]	CKT 1	59468	AUR124 5 161	59480*MON383	5 161 1	120.2	168.3	157.0	109.5 reconductor

2001 SUMMER PEAK, ST. JOSEPH LIGHT AND POWER - AREA 679

2001 SPRING PEAK, MISSOURI PUBLIC SERVICE - AREA 540

X-----	MULTI-SECTION	LINE GROUPINGS	----X	FROM	NAME	TO	NAME	CKT	PRE-CNT	POST-CNT	RATING	PERCENT
59202	[SIBLEY 5161.00]	TO 59263	[SIBLEY 269.000]	CKT 1	59262	LIBERTY269.0	59263*SIBLEY	269.0 1	41.7	92.4	78.0	114.7 Reduce Generation

BRANCH OVERLOAD TABLE

2001 SPRING PEAK, EMPIRE DISTRICT ELECTRIC - AREA 544
 2001 SPRING PEAK, ST. JOSEPH LIGHT AND POWER - AREA 679

NONE
 NONE

2001 WINTER PEAK, MISSOURI PUBLIC SERVICE - AREA 540

NONE

2001 WINTER PEAK, EMPIRE DISTRICT ELECTRIC - AREA 544

X-----	MULTI-SECTION LINE GROUPINGS	FROM	NAME	TO	NAME	CKT	PRB-CNT	POST-CNT	RATING	PERCENT
59568	[STK324 269.000]	TO 59616	[STK631J269.000]	CKT 1	59455*FRP217	134.5	1	3.4	7.3	5.0
59568	[STK324 269.000]	TO 59638	[STK324 134.500]	CKT 1	59545*FRP217	134.5	1	3.4	7.3	5.0
59605	[STK418 269.000]	TO 59614	[SKG31CJ269.000]	CKT 1	59545*FRP217	134.5	1	3.4	5.0	5.0
59637	[HUN308 134.500]	TO 59641	[CAP304 134.500]	CKT 1	59545*FRP217	134.5	1	3.4	7.1	5.0
59638	[STK324 134.500]	TO 59641	[CAP304 134.500]	CKT 1	59545*FRP217	134.5	1	3.4	7.3	5.0
59605	[STK418 269.000]	TO 59618	[SSKAEK 161.000]	CKT 1	59545*FRP217	134.5	1	3.4	5.0	5.0

2001 WINTER PEAK, ST. JOSEPH LIGHT AND POWER - AREA 679

NONE

2004 SUMMER PEAK, MISSOURI PUBLIC SERVICE - AREA 540

X-----	MULTI-SECTION LINE GROUPINGS	FROM	NAME	TO	NAME	CKT	PRE-CNT	POST-CNT	RATING	PERCENT
59202	[SIBLEY 5161.00]	TO 59263	[SIBLEY 269.000]	CKT 1	59263*LIBERTY	269.0	1	44.9	87.5	78.0
59208	[NEVADA 5161.00]	TO 59308	[NEVADA 269.000]	CKT 1	59208*NEVADA	269.0	2	29.4	57.1	50.0
59208	[NEVADA 5161.00]	TO 59308	[NEVADA 269.000]	CKT 2	59208*NEVADA	269.0	1	33.4	58.1	50.0
59209	[SEDALIA5161.00]	TO 59271	[SEDN 269.000]	CKT 1	59228*WBURGE	269.0	1	46.5	54.2	50.0
59209	[SEDALIA5161.00]	TO 59272	[SEDS 269.000]	CKT 1	59209*SEDALIA5	161	59271	33.5	52.8	50.0
59225	[PHILL 5161.00]	TO 59280	[PHILL 269.000]	CKT 1	59228*WBURGE	269.0	1	46.5	52.5	50.0
59225	[PHILL 5161.00]	TO 59280	[PHILL 269.000]	CKT 1	59228*WBURGE	269.0	1	46.5	52.7	50.0
59228	[ODESSA 5161.00]	TO 59267	[ODESSA 269.000]	CKT 1	59228*WBURGE	269.0	1	37.5	54.2	50.0
59232	[LEX161 5161.00]	TO 59264	[LEX69 269.000]	CKT 1	59228*WBURGE	269.0	1	46.5	50.7	50.0
59242	[CLINTON5161.00]	TO 59303	[CLINTON269.000]	CKT 1	59228*WBURGE	269.0	1	46.5	50.9	50.0
59242	[CLINTON5161.00]	TO 59303	[CLINTON269.000]	CKT 2	59228*WBURGE	269.0	2	35.7	51.7	50.0
59264	[LEX69 269.000]	TO 59265	[LEXNTON269.000]	CKT 1	59228*WBURGE	269.0	1	46.5	56.0	50.0
59268	[WBURGP 269.000]	TO 59278	[HOLDEN 269.000]	CKT 1	59228*WBURGE	269.0	1	36.1	51.6	50.0
59278	[HOLDEN 269.000]	TO 59279	[RGREEN 269.000]	CKT 1	59228*WBURGE	269.0	1	46.5	56.7	50.0
59280	[PHILL 269.000]	TO 59290	[BELTONS269.000]	CKT 1	59284	GRDVTPT269.0	59288*RGAFB	269.0	50.9	53.0
59300	[POSTOAK269.000]	TO 59301	[CLINTPLT269.000]	CKT 1	59292*ANCONDA269.0	59293	HSNVLM	269.0	33.3	32.0
59242	[CLINTON5161.00]	TO 96071	[5CLINTN 161.00]	CKT 1	59228*WBURGE	269.0	1	46.5	50.4	50.0
					59268	WBURGP	269.0	4.4	73.0	50.0
					59300	POSTOAK	269.0	9.3	46.0	121.8
									39.1	101.3

BRANCH OVERLOAD TABLE

2004 SUMMER PEAK, EMPIRE DISTRICT ELECTRIC - AREA 544

X-----	MULTI-SECTION LINE GROUPINGS	FROM	NAME	TO	NAME	CKT	PRE-CNT	POST-CNT	RATING	PERCENT
59472	[TIP292 5161.00]	TO 59483	[JOP389 5161.00]	CKT 1	59483*JOP389	5 161 59592 JOP389	269.0 1	57.8	75.4	100.6 increase capacity
59480	[MON383 5161.00]	TO 59483	[MON383 269.000]	CKT 1	59468 AUR124	5 161 59480*MON383	5 161 1	119.3	173.5	113.1 reconductor
59483	[JOP389 5161.00]	TO 59591	[JOP422 5161.00]	CKT 1	59483*JOP389	5 161 59592 JOP389	269.0 1	57.8	77.0	102.7 increase capacity
59568	[STK324 269.000]	TO 59616	[STK633J269.000]	CKT 1	59545*FRP217	269.0 59635 FRP217	134.5 1	3.0	6.5	6.0 107.9 provide solutions
59568	[STK324 269.000]	TO 59638	[STK324 134.500]	CKT 1	59545*FRP217	269.0 59635 FRP217	134.5 1	3.0	6.3	6.0 104.8 provide solutions
59637	[HUM308 134.500]	TO 59641	[CAP304 134.500]	CKT 1	59545*FRP217	269.0 59635 FRP217	134.5 1	3.0	6.1	6.0 101.3 provide solutions
59638	[STK324 134.500]	TO 59641	[CAP304 134.500]	CKT 1	59545*FRP217	269.0 59635 FRP217	134.5 1	3.0	6.3	6.0 104.9 provide solutions

2004 SUMMER PEAK, ST. JOSEPH LIGHT AND POWER - AREA 679

NONE

2004 WINTER PEAK, MISSOURI PUBLIC SERVICE - AREA 540

X-----	MULTI-SECTION LINE GROUPINGS	FROM	NAME	TO	NAME	CKT	PRE-CNT	POST-CNT	RATING	PERCENT
59242	[CLINTON5161.00]	TO 96071	[5CLINTN 161.00]	CKT 1	59228*WBURGE	5 161 59269 WBURGE	269.0 1	34.6	50.3	50.0 100.6 Acceptable

2004 WINTER PEAK, EMPIRE DISTRICT ELECTRIC - AREA 544

X-----	MULTI-SECTION LINE GROUPINGS	FROM	NAME	TO	NAME	CKT	PRE-CNT	POST-CNT	RATING	PERCENT
59568	[STK324 269.000]	TO 59616	[STK633J269.000]	CKT 1	59545*FRP217	269.0 59635 FRP217	134.5 1	3.6	7.7	5.0 153.4 provide solutions
59568	[STK324 269.000]	TO 59638	[STK324 134.500]	CKT 1	59545*FRP217	269.0 59635 FRP217	134.5 1	3.6	7.6	5.0 152.7 provide solutions
59605	[STK418 269.000]	TO 59614	[SK633CJ269.000]	CKT 1	59545*FRP217	269.0 59635 FRP217	134.5 1	3.6	5.6	5.0 112.2 provide solutions
59637	[HUM308 134.500]	TO 59641	[CAP304 134.500]	CKT 1	59545*FRP217	269.0 59635 FRP217	134.5 1	3.6	7.6	5.0 152.9 provide solutions
59638	[STK324 134.500]	TO 59641	[CAP304 134.500]	CKT 1	59545*FRP217	269.0 59635 FRP217	134.5 1	3.6	7.9	5.0 157.6 provide solutions
59605	[STK418 269.000]	TO 96118	[5STKABC 161.00]	CKT 1	59545*FRP217	269.0 59635 FRP217	134.5 1	3.6	5.6	5.0 112.1 provide solutions

2004 WINTER PEAK, ST. JOSEPH LIGHT AND POWER - AREA 679

NONE

2006 SUMMER PEAK, MISSOURI PUBLIC SERVICE - AREA 540

X-----	MULTI-SECTION LINE GROUPINGS	FROM	NAME	TO	NAME	CKT	PRE-CNT	POST-CNT	RATING	PERCENT
BASE CASE-----										
59162	[PHILL#1 22.000]	TO 59225	[PHILL 5161.00]	CKT 1	59151*STBLEY#322.0	59202 SIBLEY	269.0 1	51.0	50.0	102.1 Planned Upgrades
					59200*PHILL	7 345 59225 PHILL	5 161 1	399.7	405.8	400.0 101.4 Rating
					59239*HSNVL	5 161 59295 HSNVL	269.0 1	210.2	416.5	400.0 104.1 Acceptable
59163	[PHILL#2 22.000]	TO 59200	[PHILL 7345.00]	CKT 1	59151*STBLEY#322.0	59202 SIBLEY	5 161 1	51.0	52.5	50.0 105.1 Planned Upgrades
59200	[PHILL 7345.00]	TO 59201	[SIBLEY 7345.00]	CKT 1	59151*STBLEY#322.0	59202 SIBLEY	5 161 1	399.7	403.6	400.0 100.9 Rating
59200	[PHILL 7345.00]	TO 59225	[PHILL 5161.00]	CKT 1	59239*HSNVL	5 161 59295 HSNVL	269.0 1	399.7	403.3	400.0 100.8 Rating
59202	[SIBLEY 5161.00]	TO 59263	[SIBLEY 269.000]	CKT 1	59151*STBLEY#322.0	59202 SIBLEY	5 161 1	51.0	52.1	50.0 104.1 Planned Upgrades
					59262 LIBERTY#269.0	59263*STBLEY	269.0 1	399.7	400.7	400.0 100.2 Rating
59205	[BLSP 5161.00]	TO 59211	[BLSPS 5161.00]	CKT 1	59151*STBLEY#322.0	59202 SIBLEY	5 161 1	45.1	82.7	78.0 102.9 Generation
59206	[PRALBE 5161.00]	TO 59211	[BLSPS 5161.00]	CKT 1	59151*STBLEY#322.0	59202 SIBLEY	5 161 1	399.7	400.8	400.0 100.2 Rating
59206	[PRALBE 5161.00]	TO 59233	[LEESUM 5161.00]	CKT 1	59151*STBLEY#322.0	59202 SIBLEY	5 161 1	399.7	401.4	400.0 100.4 Rating
59207	[ARCHIE 5161.00]	TO 59239	[HSNVL 5161.00]	CKT 1	59151*STBLEY#322.0	59202 SIBLEY	5 161 1	399.7	401.3	400.0 100.3 Rating
59207	[ARCHIE 5161.00]	TO 59240	[ADRIAN 5161.00]	CKT 1	59239*HSNVL	5 161 59295 HSNVL	269.0 1	51.0	52.3	50.0 104.6 Planned Upgrades
59208	[NEVADA 5161.00]	TO 59216	[BUTLER 5161.00]	CKT 1	59239*HSNVL	5 161 59295 HSNVL	269.0 1	51.0	55.2	50.0 110.3 Planned Upgrades
59208	[NEVADA 5161.00]	TO 59308	[NEVADA 269.000]	CKT 1	59208*NEVADA	5 161 59308 NEVADA	269.0 2	31.5	53.2	50.0 106.4 Planned Upgrades
59208	[NEVADA 5161.00]	TO 59308	[NEVADA 269.000]	CKT 2	59208*NEVADA	5 161 59308 NEVADA	269.0 1	35.8	61.3	50.0 122.5 Acceptable
59209	[SEDALIA5161.00]	TO 59271	[SEDN 269.000]	CKT 1	59209*SEDALIA5	161 59272 SEDS	269.0 1	31.0	62.4	50.0 124.8 Acceptable
59209	[SEDALIA5161.00]	TO 59272	[SEDS 269.000]	CKT 1	59209*SEDALIA5	161 59271 SEDN	269.0 1	34.4	53.9	50.0 107.7 Acceptable
59210	[MARTCTY5161.00]	TO 59287	[MARTCTY269.000]	CKT 1	59225*PHILL	5 161 59280 PHILL	269.0 1	90.8	55.8	50.0 111.6 Acceptable
					59239*HSNVL	5 161 59295 HSNVL	269.0 1	101.3	100.0	101.3 Acceptable
								57.6	50.0	115.2 Planned Upgrades

BRANCH OVERLOAD TABLE

X-----	MULTI-SECTION	LINE GROUPINGS	-----X	FROM	NAME	TO	NAME	CKT	PRE-CNT	POST-CNT	RATING	PERCENT
59216	[BUTLER 5161.00]	TO 59240 [ADRIAN 5161.00]	CKT 1	59239*HSNVL	5 161	59295	HSNVL	269.0 1	51.0	54.8	50.0	109.6 Planned Upgrades
59218	[GRNWD 5161.00]	TO 59225 [PHILL 5161.00]	CKT 1	59151*STBLEY#322.0	59202	STBLEY	5 161 1	399.7	401.1	400.0	100.3 Rating	
59218	[GRNWD 5161.00]	TO 59233 [LEESUM 5161.00]	CKT 1	59151*STBLEY#322.0	59202	STBLEY	5 161 1	399.7	402.3	400.0	100.6 Rating	
59219	[RAYTOWN 5161.00]	TO 59220 [FROSTRD 5161.00]	CKT 1	59151*STBLEY#322.0	59202	STBLEY	5 161 1	399.7	401.3	400.0	100.3 Rating	
59220	[FROSTRD 5161.00]	TO 59245 [KCSOUTH 5161.00]	CKT 1	59151*STBLEY#322.0	59202	STBLEY	5 161 1	399.7	400.7	400.0	100.2 Rating	
59224	[LNGVW 5161.00]	TO 59245 [KCSOUTH 5161.00]	CKT 1	59151*STBLEY#322.0	59202	STBLEY	5 161 1	399.7	401.2	400.0	100.3 Rating	
59224	[LNGVW 5161.00]	TO 59249 [HOOKRD 5161.00]	CKT 1	59151*STBLEY#322.0	59202	STBLEY	5 161 1	399.7	401.2	400.0	100.3 Rating	
59224	[LNGVW 5161.00]	TO 59282 [LNGVW 269.000]	CKT 1	59225*PHILL	5 161	59280	PHILL	269.0 1	90.8	101.4	100.0	101.4 Acceptable
59224	[LNGVW 5161.00]	TO 59282 [LNGVW 269.000]	CKT 1	59239*HSNVL	5 161	59295	HSNVL	269.0 1	51.0	53.3	50.0	106.5 Planned Upgrades
59225	[PHILL 5161.00]	TO 59282 [LNGVW 269.000]	CKT 1	59210*MARTCTY5	161	59287	MARTCTY269.0 1	37.8	58.8	50.0	117.5 Acceptable	
59225	[PHILL 5161.00]	TO 59243 [LKWINGB 5161.00]	CKT 1	59225*PHILL	5 161	59280	PHILL	269.0 1	90.8	103.9	100.0	103.9 Acceptable
59225	[PHILL 5161.00]	TO 59243 [LKWINGB 5161.00]	CKT 1	59151*STBLEY#322.0	59202	STBLEY	5 161 1	399.7	401.9	400.0	116.1 Planned Upgrades	
59225	[PHILL 5161.00]	TO 59243 [LKWINGB 5161.00]	CKT 1	59225*PHILL	5 161	59280	PHILL	269.0 1	90.8	103.3	100.0	100.5 Rating
59225	[PHILL 5161.00]	TO 59280 [PHILL 269.000]	CKT 1	59239*HSNVL	5 161	59295	HSNVL	269.0 1	51.0	53.7	50.0	103.3 Acceptable
59225	[PHILL 5161.00]	TO 59280 [PHILL 269.000]	CKT 1	59210*MARTCTY5	161	59287	MARTCTY269.0 1	37.8	56.7	50.0	107.4 Planned Upgrades	
59225	[PHILL 5161.00]	TO 59280 [PHILL 269.000]	CKT 1	59239*HSNVL	5 161	59295	HSNVL	269.0 1	51.0	85.0	50.0	113.4 Acceptable
59225	[PHILL 5161.00]	TO 59280 [PHILL 269.000]	CKT 1	59284 GRDVTTP269.0	59288*RGAFB	269.0 1	35.8	70.1	53.0	170.0 Planned Upgrades		
59225	[PHILL 5161.00]	TO 59280 [PHILL 269.000]	CKT 1	59288 RGAFB	269.0	59289*BELTON	269.0 1	30.5	64.2	53.0	144.8 Upgrade	
59225	[PHILL 5161.00]	TO 59280 [PHILL 269.000]	CKT 1	59289 BELTON	269.0	59290*BELTONS	269.0 1	25.1	58.0	53.0	133.7 Upgrade	
59225	[PHILL 5161.00]	TO 59280 [PHILL 269.000]	CKT 1	59296 HSNVLSW269.0	59297*HSNVLN	269.0 1	17.7	41.7	41.0	122.5 Upgrade		
59225	[PHILL 5161.00]	TO 59295 [HSNVL 269.000]	CKT 1	59225*PHILL	5 161	59280	PHILL	269.0 1	90.8	109.5 Upgrade		
59225	[PHILL 5161.00]	TO 59295 [HSNVL 269.000]	CKT 1	59284 GRDVTTP269.0	59288*RGAFB	269.0 1	35.8	119.4	100.0	119.4 Acceptable		
59242	[CLINTON 5161.00]	TO 59303 [CLINTON 269.000]	CKT 1	59242*CLINTONS	161	59303	CLINTON 269.0 2	38.4	53.0	53.0	106.3 Upgrade	
59242	[CLINTON 5161.00]	TO 59303 [CLINTON 269.000]	CKT 2	59242*CLINTONS	161	59303	CLINTON 269.0 1	38.9	60.1	50.0	120.1 Acceptable	
59243	[LKWINGB 5161.00]	TO 59249 [HOOKRD 5161.00]	CKT 1	59151*STBLEY#322.0	59202	STBLEY	5 161 1	399.7	60.8	50.0	121.6 Acceptable	
59243	[LKWINGB 5161.00]	TO 59249 [HOOKRD 5161.00]	CKT 1	59151*STBLEY#322.0	59202	STBLEY	5 161 1	399.7	401.5	400.0	100.4 Rating	
59243	[LKWINGB 5161.00]	TO 59249 [HOOKRD 5161.00]	CKT 1	59225*PHILL	5 161	59280	PHILL	269.0 1	90.8	102.4	100.0	102.4 Acceptable
59268	[WBURGP 269.000]	TO 59269 [WBURGP 269.000]	CKT 1	59239*HSNVL	5 161	59295	HSNVL	269.0 1	51.0	53.5	50.0	107.0 Planned Upgrades
59268	[WBURGP 269.000]	TO 59278 [HOLDEN 269.000]	CKT 1	59239*HSNVL	5 161	59295	HSNVL	269.0 1	51.0	52.3	50.0	104.6 Planned Upgrades
59279	[RGREEN 269.000]	TO 59280 [PHILL 269.000]	CKT 1	59239*HSNVL	5 161	59295	HSNVL	269.0 1	51.0	52.1	50.0	104.2 Planned Upgrades
59279	[RGREEN 269.000]	TO 59280 [PHILL 269.000]	CKT 1	59239*HSNVL	5 161	59295	HSNVL	269.0 1	51.0	69.3	50.0	138.5 Generation
59279	[RGREEN 269.000]	TO 59280 [PHILL 269.000]	CKT 1	59295 HSNVL	269.0	59296*HSNVL	269.0 1	21.3	53.0	53.0	102.6 Generation	
59279	[RGREEN 269.000]	TO 59297 [HSNVLN 269.000]	CKT 1	59296 HSNVLSW269.0	59297*HSNVLN	269.0 1	17.7	48.7	41.0	123.6 Generation		
59279	[RGREEN 269.000]	TO 59297 [HSNVLN 269.000]	CKT 1	59239*HSNVL	5 161	59295	HSNVL	269.0 1	51.0	55.3	50.0	110.6 Planned Upgrades
59280	[PHILL 269.000]	TO 59290 [BELTONS 269.000]	CKT 1	59239*HSNVL	5 161	59295	HSNVL	269.0 1	51.0	52.8	50.0	105.6 Planned Upgrades
59280	[PHILL 269.000]	TO 59290 [BELTONS 269.000]	CKT 1	59284 GRDVTTP269.0	59288*RGAFB	269.0 1	35.8	55.6	53.0	112.7 Upgrade		
59280	[PHILL 269.000]	TO 59290 [BELTONS 269.000]	CKT 1	59288 RGAFB	269.0	59289*BELTON	269.0 1	30.5	50.0	53.0	102.1 Upgrade	
59280	[PHILL 269.000]	TO 59284 [GRDVTTP 269.000]	CKT 1	59292*ANCONDA 269.0	59293	HSNVLW	269.0 1	17.9	33.1	32.0	104.8 Upgrade	
59282	[LNGVW 269.000]	TO 59284 [GRDVTTP 269.000]	CKT 1	59210*MARTCTY5	161	59287	MARTCTY269.0 1	37.8	54.4	50.0	108.7 Acceptable	
59282	[LNGVW 269.000]	TO 59284 [GRDVTTP 269.000]	CKT 1	59225*PHILL	5 161	59280	PHILL	269.0 1	90.8	101.1	100.0	101.1 Acceptable
59284	[GRDVTTP 269.000]	TO 59285 [GRDVTTP 269.000]	CKT 1	59239*HSNVL	5 161	59295	HSNVL	269.0 1	51.0	56.4	50.0	112.8 Planned Upgrades
59284	[GRDVTTP 269.000]	TO 59285 [GRDVTTP 269.000]	CKT 1	59239*HSNVL	5 161	59295	HSNVL	269.0 1	51.0	52.2	50.0	104.4 Planned Upgrades
59284	[GRDVTTP 269.000]	TO 59288 [RGAFB 269.000]	CKT 1	59225*PHILL	5 161	59280	PHILL	269.0 1	90.8	115.5	100.0	115.5 Acceptable
59285	[GRDVTTP 269.000]	TO 59286 [GRDWT 269.000]	CKT 1	59239*HSNVL	5 161	59295	HSNVL	269.0 1	51.0	65.3	50.0	130.7 Planned Upgrades
59285	[GRDVTTP 269.000]	TO 59286 [GRDWT 269.000]	CKT 1	59239*HSNVL	5 161	59295	HSNVL	269.0 1	51.0	54.2	50.0	108.4 Planned Upgrades
59286	[GRDWT 269.000]	TO 59287 [MARTCTY 269.000]	CKT 1	59225*PHILL	5 161	59280	PHILL	269.0 1	90.8	101.2	100.0	101.2 Acceptable
59286	[GRDWT 269.000]	TO 59287 [MARTCTY 269.000]	CKT 1	59239*HSNVL	5 161	59295	HSNVL	269.0 1	51.0	57.6	50.0	115.1 Planned Upgrades
59288	[RGAFB 269.000]	TO 59289 [BELTON 269.000]	CKT 1	59225*PHILL	5 161	59280	PHILL	269.0 1	90.8	111.6	100.0	111.6 Acceptable
59288	[RGAFB 269.000]	TO 59289 [BELTON 269.000]	CKT 1	59239*HSNVL	5 161	59295	HSNVL	269.0 1	51.0	63.0	50.0	126.0 Planned Upgrades
59288	[RGAFB 269.000]	TO 59289 [BELTON 269.000]	CKT 1	59225*PHILL	5 161	59280	PHILL	269.0 1	90.8	107.6	100.0	107.6 Acceptable
59289	[BELTON 269.000]	TO 59290 [BELTONS 269.000]	CKT 1	59239*HSNVL	5 161	59295	HSNVL	269.0 1	51.0	60.7	50.0	121.3 Planned Upgrades
59289	[BELTON 269.000]	TO 59290 [BELTONS 269.000]	CKT 1	59225*PHILL	5 161	59280	PHILL	269.0 1	90.8	100.7	100.0	100.7 Acceptable
59296	[HSNVL 269.000]	TO 59296 [HSNVL 269.000]	CKT 1	59225*PHILL	5 161	59280	PHILL	269.0 1	90.8	402.7	400.0	100.7 Rating
59296	[HSNVL 269.000]	TO 59296 [HSNVL 269.000]	CKT 1	59151*STBLEY#322.0	59202	STBLEY	5 161 1	399.7	52.8	50.0	105.6 Planned Upgrades	

BRANCH OVERLOAD TABLE

X-----	MULTI-SECTION LINE GROUPINGS	-----X	FROM	NAME	TO	NAME	CKT	PRE-CNT	POST-CNT	RATING	PERCENT
59217	[WINDSR 5161.00]	TO 96071 [5CLINTN 161.00]	CKT 1	59239*HSNVL	5	161	59295 HSNVL	269.0	1	51.0	104.1 Planned Upgrades
59242	[CLINTON5161.00]	TO 96071 [5CLINTN 161.00]	CKT 1	59151*SIBLEY#322.0	5	161	59202 SIBLEY	5	161	399.7	100.3 Accept Risk
				59208*NEVADA	5	161	59308 NEVADA	269.0	1	35.8	100.6 Accept Risk
				59239*HSNVL	5	161	59295 HSNVL	269.0	1	51.0	107.3 Accept Risk
				59268 WBURGP	269.0	5	59300*POSTOAK	269.0	1	1.5	135.1 Accept Risk
				59300 POSTOAK	269.0	5	59301*CLINTPLT	269.0	1	9.3	112.1 Accept Risk
SPP-12											
59207	[ARCHIE 5161.00]	TO 59240 [ADRIAN 5161.00]	CKT 1	59239*HSNVL	5	161	59295 HSNVL	269.0	1	51.0	110.3 Planned Upgrades
59216	[BUTLER 5161.00]	TO 59240 [ADRIAN 5161.00]	CKT 1								
59208	[NEVADA 5161.00]	TO 59216 [BUTLER 5161.00]	CKT 1								
CONTINGENCY SPP-CIRCGDI											
56752	[HOYT 7345.00]	TO 56758 [STRANGR7345.00]	CKT 1	59151*SIBLEY#322.0	5	161	59202 SIBLEY	5	161	399.7	100.2 Rating
57043	[CIRCLE 3115.00]	TO 57058 [MOUNDRG3115.00]	CKT 1								
57033	[SPRGCRK3115.00]	TO 57058 [MOUNDRG3115.00]	CKT 1								

2006 SUMMER PEAK, EMPIRE DISTRICT ELECTRIC - AREA 544

X-----	MULTI-SECTION LINE GROUPINGS	-----X	FROM	NAME	TO	NAME	CKT	PRE-CNT	POST-CNT	RATING	PERCENT
BASE CASE-----											
59400	[MON376J269.000]	TO 59402 [MON416J269.000]	CKT 1	59468 AUR124	5	161	59480*MON383	5	161	154.2	100.7 reconductor
59400	[MON376J269.000]	TO 59402 [MON416J269.000]	CKT 1	59468 AUR124	5	161	59480*MON383	5	161	154.2	101.3 reconductor
59400	[MON352J269.000]	TO 59402 [MON383 269.000]	CKT 1	59468 AUR124	5	161	59480*MON383	5	161	154.2	101.7 reconductor
59400	[MON352J269.000]	TO 59402 [MON383 269.000]	CKT 1	59468 AUR124	5	161	59480*MON383	5	161	154.2	101.3 reconductor
59468	[AUR124 5161.00]	TO 59480 [MON383 5161.00]	CKT 1	59468 AUR124	5	161	59480*MON383	5	161	122.3	104.3 increase capacity
59469	[RIV167 5161.00]	TO 59487 [HOC404 5161.00]	CKT 1	59468 AUR124	5	161	59480*MON383	5	161	154.2	101.4 reconductor
59469	[RIV167 5161.00]	TO 59498 [STL439 5161.00]	CKT 1	59468 AUR124	5	161	59480*MON383	5	161	154.2	101.9 reconductor
59470	[JOP145 5161.00]	TO 59439 [JOP145 269.000]	CKT 1	59483*JOP389	5	161	59592 JOP389	269.0	1	59.5	101.0 increase capacity
59472	[TIP292 5161.00]	TO 59483 [JOP389 5161.00]	CKT 1	59483*JOP389	5	161	59592 JOP389	269.0	1	59.5	102.1 increase capacity
59474	[OZD312 5161.00]	TO 59482 [HOL387 5161.00]	CKT 1	59468 AUR124	5	161	59480*MON383	5	161	154.2	101.4 reconductor
59480	[MON383 5161.00]	TO 59591 [MON383 269.000]	CKT 1	59468*AUR124	5	161	59480 MON383	5	161	154.2	134.8 reconductor
				59468*AUR124	5	161	59537 AUR124	269.0	3	23.7	109.4 increase capacity
59482	[HOL387 5161.00]	TO 59497 [RVS438 5161.00]	CKT 1	59468 AUR124	5	161	59480*MON383	5	161	154.2	101.6 reconductor
59483	[JOP389 5161.00]	TO 59498 [STL439 5161.00]	CKT 2	59468 AUR124	5	161	59480*MON383	5	161	154.2	100.1 reconductor
59483	[JOP389 5161.00]	TO 59607 [GRT433 5161.00]	CKT 1	59483*JOP389	5	161	59592 JOP389	269.0	1	59.5	105.7 increase capacity
59488	[BRN412 5161.00]	TO 59495 [GRT433 5161.00]	CKT 1	59468 AUR124	5	161	59480*MON383	5	161	154.2	102.5 reconductor
59489	[BRN413 5161.00]	TO 59495 [GRT433 5161.00]	CKT 1	59468 AUR124	5	161	59480*MON383	5	161	154.2	103.6 reconductor
59489	[BRN413 5161.00]	TO 59497 [RVS438 5161.00]	CKT 1	59468 AUR124	5	161	59480*MON383	5	161	154.2	105.5 reconductor
59532	[CAR108 269.000]	TO 59600 [JAS403T269.000]	CKT 1	59468 AUR124	5	161	59480*MON383	5	161	154.2	102.2 reconductor
59537	[AUR124 269.000]	TO 59540 [MON152 269.000]	CKT 1	59468 AUR124	5	161	59480*MON383	5	161	154.2	102.8 reconductor
59540	[MON152 269.000]	TO 59591 [MON383 269.000]	CKT 1	59468 AUR124	5	161	59480*MON383	5	161	154.2	107.4 reconductor
59546	[BIL221 269.000]	TO 59580 [REP359 269.000]	CKT 1	59468 AUR124	5	161	59480*MON383	5	161	154.2	100.1 reconductor
59548	[BOS249 269.000]	TO 59560 [GLD251 269.000]	CKT 1	59468 AUR124	5	161	59480*MON383	5	161	154.2	101.8 reconductor
59548	[BOS249 269.000]	TO 59560 [GLD251 269.000]	CKT 1	59468 AUR124	5	161	59480*MON383	5	161	154.2	101.8 reconductor
59550	[GLD251 269.000]	TO 59598 [LKW400 269.000]	CKT 1	59468 AUR124	5	161	59480*MON383	5	161	154.2	101.5 reconductor
59568	[STK324 269.000]	TO 59616 [STK631J269.000]	CKT 1	59545*FRP217	269.0	5	59635 FRP217	134.5	1	3.0	112.7 provide solutions
59568	[STK324 269.000]	TO 59638 [STK324 269.000]	CKT 1	59545*FRP217	269.0	5	59635 FRP217	134.5	1	3.0	109.4 provide solutions
59593	[JOP391 5161.00]	TO 59607 [JOP422 5161.00]	CKT 1	59483*JOP389	5	161	59592 JOP389	269.0	1	59.5	101.0 provide capacity
59637	[JOP391 5161.00]	TO 59641 [CAP304 134.500]	CKT 1	59545*FRP217	269.0	5	59635 FRP217	134.5	1	3.0	105.9 provide solutions
59638	[STK324 134.500]	TO 59641 [CAP304 134.500]	CKT 1	59545*FRP217	269.0	5	59635 FRP217	134.5	1	3.0	109.6 provide solutions
59471	[NEO184 5161.00]	TO 52686 [NEO SPAS5161.00]	CKT 1	59468 AUR124	5	161	59480*MON383	5	161	154.2	101.8 reconductor
59472	[TIP292 5161.00]	TO 52686 [NEO SPAS5161.00]	CKT 1	59468 AUR124	5	161	59480*MON383	5	161	154.2	104.2 reconductor
59478	[DAD368 5161.00]	TO 96101 [SMORGAN 161.00]	CKT 1	59468 AUR124	5	161	59480*MON383	5	161	154.2	123.3 reconductor
59479	[LAR382 5161.00]	TO 52688 [CARTHAGS5161.00]	CKT 1	59468 AUR124	5	161	59480*MON383	5	161	154.2	104.3 reconductor
59479	[LAR382 5161.00]	TO 52692 [SPRGFLD5161.00]	CKT 1	59468 AUR124	5	161	59480*MON383	5	161	154.2	110.8 reconductor

BRANCH OVERLOAD TABLE

X-----	MULTI-SECTION	LINE GROUPINGS	-----X	FROM	NAME	TO	NAME	CKT	PRE-CNT	POST-CNT	RATING	PERCENT
59481	[MON383 7345.00]	TO 59384 [BRKLINE 7345.00]	CKT 1	59468	AUR124	5	161	59480*MON383	5	161	1	116.2 reconnector
59497	[RVS438 5161.00]	TO 52672 [TABLE R5161.00]	CKT 1	59468	AUR124	5	161	59480*MON383	5	161	1	119.2 reconnector
CONTINGENCY SPP-12												
59207	[ARCHIE 5161.00]	TO 59240 [ADRIAN 5161.00]	CKT 1	59468	AUR124	5	161	59480*MON383	5	161	1	106.2 reconnector
59216	[BUTLER 5161.00]	TO 59240 [ADRIAN 5161.00]	CKT 1									
59208	[NEVADA 5161.00]	TO 59216 [BUTLER 5161.00]	CKT 1									
CONTINGENCY SPP-CIRCGDI												
56752	[HOYT 7345.00]	TO 56758 [STRANGET 7345.00]	CKT 1	59468	AUR124	5	161	59480*MON383	5	161	1	101.5 reconnector
57043	[CIRCLE 3115.00]	TO 57058 [MOUNDRG3115.00]	CKT 1									
57033	[SPRGCRK3115.00]	TO 57058 [MOUNDRG3115.00]	CKT 1									

2006 SUMMER PEAK, ST. JOSEPH LIGHT AND POWER - AREA 679

2006 WINTER PEAK, MISSOURI PUBLIC SERVICE - AREA 540

X-----	MULTI-SECTION	LINE GROUPINGS	-----X	FROM	NAME	TO	NAME	CKT	PRE-CNT	POST-CNT	RATING	PERCENT
59225	[PHILL 5161.00]	TO 59280 [PHILL 269.000]	CKT 1	59239	HSNVL	5	161	59295 HSNVL	269.0	1	30.6	104.4 Acceptable

2006 WINTER PEAK, EMPIRE DISTRICT ELECTRIC - AREA 544

X-----	MULTI-SECTION	LINE GROUPINGS	-----X	FROM	NAME	TO	NAME	CKT	PRE-CNT	POST-CNT	RATING	PERCENT
59545	[FRP217 269.000]	TO 59635 [FRP217 134.500]	CKT 1	59568	STK324	269.0	59638	STK324	134.5	1	9.4	104.2 provide solutions
59568	[STK324 269.000]	TO 59616 [STK631J269.000]	CKT 1	59545	FRP217	269.0	59635	FRP217	134.5	1	8.2	164.1 provide solutions
59568	[STK324 269.000]	TO 59634 [STK324 134.500]	CKT 1	59545	FRP217	269.0	59635	FRP217	134.5	1	8.2	163.3 provide solutions
59605	[STK418 269.000]	TO 59614 [SK631CJ269.000]	CKT 1	59545	FRP217	269.0	59635	FRP217	134.5	1	6.1	121.5 provide solutions
59635	[FRP217 134.500]	TO 59639 [DUN283 134.500]	CKT 1	59568	STK324	269.0	59638	STK324	134.5	1	9.4	104.7 provide solutions
59637	[HUM308 134.500]	TO 59641 [CAP304 134.500]	CKT 1	59545	FRP217	269.0	59635	FRP217	134.5	1	7.9	158.9 provide solutions
59638	[STK324 134.500]	TO 59641 [CAP304 134.500]	CKT 1	59545	FRP217	269.0	59635	FRP217	134.5	1	8.2	163.5 provide solutions
59605	[STK418 269.000]	TO 96118 [SSTKAC 161.00]	CKT 1	59545	FRP217	269.0	59635	FRP217	134.5	1	6.1	122.8 provide solutions

2006 WINTER PEAK, ST. JOSEPH LIGHT AND POWER - AREA 679

2010 SUMMER PEAK, MISSOURI PUBLIC SERVICE - AREA 540

X-----	MULTI-SECTION	LINE GROUPINGS	-----X	FROM	NAME	TO	NAME	CKT	PRE-CNT	POST-CNT	RATING	PERCENT
59202	[SIBLEY 5161.00]	TO 59263 [SIBLEY 269.000]	CKT 1	59262	LIBERTY269.0	59263	SIBLEY	269.0	1	45.7	85.0	105.7 Generation
59207	[ARCHIE 5161.00]	TO 59239 [HSNVL 5161.00]	CKT 1	59239	HSNVL	5	161	59295 HSNVL	269.0	1	47.2	100.9 Acceptable
59207	[ARCHIE 5161.00]	TO 59240 [ADRIAN 5161.00]	CKT 1	59239	HSNVL	5	161	59295 HSNVL	269.0	1	47.2	103.9 Acceptable
59208	[NEVADA 5161.00]	TO 59216 [BUTLER 5161.00]	CKT 1	59216	BUTLER	5	161	96689 2BUTLER	69.0	1	38.3	106.0 Not Valid
59208	[NEVADA 5161.00]	TO 59308 [NEVADA 269.000]	CKT 1	59208	NEVADA	5	161	59308 NEVADA	269.0	2	36.0	145.6 Generation
59208	[NEVADA 5161.00]	TO 59308 [NEVADA 269.000]	CKT 2	59208	NEVADA	5	161	59308 NEVADA	269.0	1	41.0	146.2 Generation
59209	[SEDALIA5161.00]	TO 59271 [SEDN 269.000]	CKT 1	59209	SEDALIA5	161	59272	SEDS	269.0	1	34.9	119.6 Shift Load-161
				59269	WBURGE	269.0	59270	*KNOSTER269.0	1	20.9	35.9	105.0 Shift Load-161
59209	[SEDALIA5161.00]	TO 59272 [SEDS 269.000]	CKT 1	59209	SEDALIA5	161	59271	SEDN	269.0	1	37.1	122.0 Shift Load-161
				59269	WBURGE	269.0	59270	*KNOSTER269.0	1	20.9	34.4	100.6 Shift Load-161
59210	[MARTCTY5161.00]	TO 59287 [MARTCTY269.000]	CKT 1	59239	HSNVL	5	161	59295 HSNVL	269.0	1	47.2	105.6 Acceptable
59216	[BUTLER 5161.00]	TO 59240 [ADRIAN 5161.00]	CKT 1	59239	HSNVL	5	161	59295 HSNVL	269.0	1	47.2	103.1 Not Valid
59234	[LNGVW 5161.00]	TO 59282 [LNGVW 269.000]	CKT 1	59210	*MARTCTY5	161	59287	MARTCTY269.0	1	38.3	59.7	119.5 Acceptable
				59239	HSNVL	5	161	59295 HSNVL	269.0	1	47.2	108.0 Acceptable
59225	[PHILL 5161.00]	TO 59243 [LKWINGB5161.00]	CKT 1	59239	HSNVL	5	161	59295 HSNVL	269.0	1	47.2	100.2 Acceptable

BRANCH OVERLOAD TABLE

X-----	MULTI-SECTION LINE GROUPINGS	-----X	FROM	NAME	TO	NAME	CKT	PRE-CNT	POST-CNT	RATING	PERCENT		
59225	[PHILL 5161.00] TO 59280 [PHILL 269.000]	CKT 1	59210*	MARTCTYS	161	59287	MARTCTY269.0	1	38.3	50.2	50.0	100.4 Acceptable	
			59239*	HSNVL	5	161	59295	HSNVL	269.0	1	47.2	70.5	140.9 Planned Upgrades
			59284	GRDVTPT269.0	59288*	RGAFB	269.0	1	32.8	58.5	53.0	115.0 Upgrade	
			59288	RGAFB	269.0	59289*	BELTON	269.0	1	26.8	52.4	103.5 Upgrade	
59228	[WBURGE 5161.00] TO 59269 [WBURGE 269.000]	CKT 1	59228*	WBURGE	5	161	59269	WBURGE	269.0	2	34.2	54.5	109.0 Acceptable
59228	[WBURGE 5161.00] TO 59269 [WBURGE 269.000]	CKT 2	59228*	WBURGE	5	161	59269	WBURGE	269.0	1	34.2	54.5	109.0 Acceptable
59239	[HSNVL 5161.00] TO 59295 [HSNVL 269.000]	CKT 1	59279	KGREEN	269.0	59297*	HSNVLN	269.0	1	19.1	43.2	113.8 Acceptable	
59242	[CLINTONS5161.00] TO 59303 [CLINTON269.000]	CKT 1	59242*	CLINTONS	161	59303	CLINTON269.0	2	42.7	66.9	50.0	133.8 Upgrade	
59242	[CLINTONS5161.00] TO 59303 [CLINTON269.000]	CKT 2	59242*	CLINTONS	161	59303	CLINTON269.0	1	43.2	67.6	50.0	135.2 Upgrade	
59279	[RGREEN 269.000] TO 59280 [PHILL 269.000]	CKT 1	59239*	HSNVL	5	161	59295	HSNVL	269.0	1	47.2	53.7	107.4 Acceptable
59279	[RGREEN 269.000] TO 59297 [HSNVLN 269.000]	CKT 1	59239*	HSNVL	5	161	59295	HSNVL	269.0	1	47.2	57.8	115.5 Acceptable
59280	[PHILL 269.000] TO 59290 [BELTIONS269.000]	CKT 1	59210*	MARTCTYS	161	59287	MARTCTY269.0	1	38.3	55.1	50.0	110.1 Upgrade	
			59239*	HSNVL	5	161	59295	HSNVL	269.0	1	47.2	52.0	104.0 Upgrade
			59284	GRDVTPT269.0	59288*	RGAFB	269.0	1	32.8	62.2	53.0	127.9 Upgrade	
			59288	RGAFB	269.0	59289*	BELTON	269.0	1	26.8	55.7	115.7 Upgrade	
			59289	BELTON	269.0	59290*	BELTONS269.0	1	20.7	49.0	53.0	103.1 Upgrade	
			59292*	ANCONDA269.0	59293	HSNVLN	269.0	1	19.3	39.2	32.0	125.9 Upgrade	
59282	[LINGVW 269.000] TO 59284 [GRDVTPT269.000]	CKT 1	59210*	MARTCTYS	161	59287	MARTCTY269.0	1	38.3	55.2	50.0	110.4 Acceptable	
			59239*	HSNVL	5	161	59295	HSNVL	269.0	1	47.2	52.5	105.1 Acceptable
59284	[GRDVTPT269.000] TO 59288 [RGAFB 269.000]	CKT 1	59239*	HSNVL	5	161	59295	HSNVL	269.0	1	47.2	59.5	119.0 Acceptable
59286	[GRDWT 269.000] TO 59287 [MARTCTY269.000]	CKT 1	59239*	HSNVL	5	161	59295	HSNVL	269.0	1	47.2	52.8	105.6 Acceptable
59288	[RGAFB 269.000] TO 59289 [BELTON 269.000]	CKT 1	59239*	HSNVL	5	161	59295	HSNVL	269.0	1	47.2	56.8	113.7 Acceptable
59289	[BELTON 269.000] TO 59290 [BELTIONS269.000]	CKT 1	59239*	HSNVL	5	161	59295	HSNVL	269.0	1	47.2	54.1	108.3 Acceptable
59301	[CLINTPLT269.000] TO 59304 [URICHTPT269.000]	CKT 1	59208*	NEVADA	5	161	59308	NEVADA	269.0	1	41.0	52.8	105.5 Acceptable
59302	[CLINTGRN269.000] TO 59303 [CLINTON269.000]	CKT 1	59301*	CLINTPLT269.0	59303	CLINTON269.0	1	51.7	80.7	78.0	102.4 Upgrade		
59304	[URICHTPT269.000] TO 59306 [APCITY 269.000]	CKT 1	59208*	NEVADA	5	161	59308	NEVADA	269.0	1	41.0	50.5	101.1 Acceptable
59307	[NEVPLT 269.000] TO 59308 [NEVADA 269.000]	CKT 1	59242*	CLINTONS	161	59303	CLINTON269.0	1	43.2	56.0	50.0	112.0 Switch	
			59242*	CLINTONS	161	59303	CLINTON269.0	2	42.7	54.8	50.0	109.7 Switch	
			59242*	CLINTONS	161	96071	5CLINTN	161	1	85.7	110.8	100.0	110.4 Switch
59242	[CLINTONS5161.00] TO 96071 [5CLINTN 161.00]	CKT 1	59208*	NEVADA	5	161	59308	NEVADA	269.0	1	41.0	59.4	118.8 Accept Risk
			59208*	NEVADA	5	161	59308	NEVADA	269.0	2	36.0	52.2	104.4 Accept Risk
			59228*	WBURGE	5	161	59269	WBURGE	269.0	1	34.2	54.4	108.8 Accept Risk
			59228	WBURGE	5	161	59269	WBURGE	269.0	2	34.2	54.4	108.8 Accept Risk
			59268	WBURGP	269.0	59300*	POSTOAK269.0	1	3.1	64.1	46.0	168.6 Accept Risk	
			59300	POSTOAK269.0	59301*	CLINTPLT269.0	1	7.2	48.7	46.0	141.6 Accept Risk		
CONTINGENCY SPP-12													
59240	[ARCHIE 5161.00] TO 59240 [ADRIAN 5161.00]	CKT 1	59239*	HSNVL	5	161	59295	HSNVL	269.0	1	47.2	51.9	103.9 Generation

CONTINGENCY SPP-12

59207	[ARCHIE 5161.00] TO 59240 [ADRIAN 5161.00]	CKT 1	59239*	HSNVL	5	161	59295	HSNVL	269.0	1	47.2	103.9 Generation
59216	[BUTLER_5161.00] TO 59240 [ADRIAN 5161.00]	CKT 1										
59208	[NEVADA 5161.00] TO 59216 [BUTLER_5161.00]	CKT 1										

2010 SUMMER PEAK, EMPIRE DISTRICT ELECTRIC - AREA 544

X-----	MULTI-SECTION LINE GROUPINGS	-----X	FROM	NAME	TO	NAME	CKT	PRE-CNT	POST-CNT	RATING	PERCENT	
BASE CASE			59468	AUR124	5	161	59480*MON383	5	161	1	109.4 reconductor	
			59554*BAX271	269.0	59636	BAX271	134.5	1	9.4	9.0	104.0 increase capacity	
59400	[MON376J269.000]	TO 59402 [MON416J269.000]	CKT 1	59468	AUR124	5	161	59480*MON383	5	161	1	110.3 reconductor
59400	[MON376J269.000]	TO 59591 [MON383 269.000]	CKT 1	59468	AUR124	5	161	59480*MON383	5	161	1	110.3 reconductor
59405	[MON352J269.000]	TO 59591 [MON383 269.000]	CKT 1	59468	AUR124	5	161	59480*MON383	5	161	1	110.0 reconductor
59425	[HER209 269.000]	TO 59528 [BOL 73 269.000]	CKT 1	59468	AUR124	5	161	59480*MON383	5	161	1	108.6 reconductor
59431	[WEB105 269.000]	TO 59556 [OAK280 269.000]	CKT 1	59468	AUR124	5	161	59480*MON383	5	161	1	110.1 reconductor
59464	[BOL 73 5161.00]	TO 59493 [BOL431 5161.00]	CKT 1	59468	AUR124	5	161	59480 MON383	5	161	1	109.5 reconductor
59465	[COL 94 5161.00]	TO 59469 [RIV167 5161.00]	CKT 1	59468	AUR124	5	161	59480*MON383	5	161	1	108.1 reconductor
59468	[AUR124 5161.00]	TO 59480 [MON383 5161.00]	CKT 1	59480*MON383	5	161	59591 MON383	269.0	1	136.7	116.6 increase capacity	
59468	[AUR124 5161.00]	TO 59537 [AUR124 269.000]	CKT 1	59468	AUR124	5	161	59480*MON383	5	161	1	107.5 reconductor

BRANCH OVERLOAD TABLE

X	-----	MULTI-SECTION	LINE GROUPINGS	-----X	FROM	NAME	TO	NAME	CKT	PRE-CNT	POST-CNT	RATING	PERCENT
59468	[AUR124 5161.00]	TO 59537	[AUR124 269.000]	CKT 2	59468	AUR124	5	161	59480*MON383	5	161	1	165.8
59468	[AUR124 5161.00]	TO 59537	[AUR124 269.000]	CKT 3	59468	AUR124	5	161	59480*MON383	5	161	1	165.8
59469	[RIV167 5161.00]	TO 59487	[HOC404 5161.00]	CKT 1	59468	AUR124	5	161	59480*MON383	5	161	1	165.8
59469	[RIV167 5161.00]	TO 59498	[STL439 5161.00]	CKT 1	59468	AUR124	5	161	59480*MON383	5	161	1	165.8
59470	[JOP145 5161.00]	TO 59498	[STL439 5161.00]	CKT 1	59483*JOP389	5	161	59592 JOP389	269.0	1	66.1	80.3	75.0
59470	[JOP145 5161.00]	TO 59539	[JOP145 269.000]	CKT 1	59467	OROL110	5	161	59534*OROL110	269.0	1	55.9	78.8
					59483*JOP389	5	161	59592 JOP389	269.0	1	66.1	84.5	75.0
59472	[TIP292 5161.00]	TO 59480	[MON383 5161.00]	CKT 1	59468	AUR124	5	161	59480*MON383	5	161	1	165.8
59472	[TIP292 5161.00]	TO 59483	[JOP389 5161.00]	CKT 1	59468	AUR124	5	161	59480*MON383	5	161	1	165.8
					59483*JOP389	5	161	59592 JOP389	269.0	1	66.1	83.3	75.0
					59500 RNM393	5	161	59595*RN393	269.0	1	57.9	76.6	75.0
59475	[BRN331 5161.00]	TO 59488	[BRN412 5161.00]	CKT 1	59468	AUR124	5	161	59480*MON383	5	161	1	165.8
59476	[ASH349 5161.00]	TO 59491	[PUR421 5161.00]	CKT 1	59468	AUR124	5	161	59480*MON383	5	161	1	165.8
59478	[DAD368 5161.00]	TO 59493	[BOL431 5161.00]	CKT 1	59545	FRP217	269.0	59585*DAD368	269.0	1	16.2	45.4	39.0
					59545*FRP217	269.0	59612 BOL602	269.0	1	12.2	42.2	39.0	110.9
					59468	AUR124	5	161	59480*MON383	5	161	1	165.8
59478	[DAD368 5161.00]	TO 59499	[CPK446 5161.00]	CKT 1	59468	AUR124	5	161	59480*MON383	5	161	1	165.8
59480	[MON383 5161.00]	TO 59481	[MON383 7345.00]	CKT 1	59468	AUR124	5	161	59480*MON383	5	161	1	165.8
59480	[MON383 5161.00]	TO 59591	[MON383 269.000]	CKT 1	59468	AUR124	5	161	59480*MON383	5	161	1	165.8
					59468	AUR124	5	161	59480*MON383	5	161	1	165.8
					59468	AUR124	5	161	59480*MON383	5	161	1	165.8
					59537	AUR124	269.0	59540*MON152	269.0	1	6.1	60.2	65.0
59482	[HOL387 5161.00]	TO 59497	[RVS438 5161.00]	CKT 1	59468	AUR124	5	161	59480*MON383	5	161	1	165.8
59483	[JOP389 5161.00]	TO 59498	[STL439 5161.00]	CKT 2	59468	AUR124	5	161	59480*MON383	5	161	1	165.8
59483	[JOP389 5161.00]	TO 59498	[STL439 5161.00]	CKT 1	59468	AUR124	5	161	59480*MON383	5	161	1	165.8
59483	[JOP389 5161.00]	TO 59607	[PUR422 5161.00]	CKT 1	59483*JOP389	5	161	59592 JOP389	269.0	1	66.1	87.2	75.0
59485	[CAR395 5161.00]	TO 59491	[PUR421 5161.00]	CKT 1	59468	AUR124	5	161	59480*MON383	5	161	1	165.8
59488	[BRN412 5161.00]	TO 59495	[GRT433 5161.00]	CKT 1	59468	AUR124	5	161	59480*MON383	5	161	1	165.8
59489	[BRN413 5161.00]	TO 59495	[GRT433 5161.00]	CKT 1	59468	AUR124	5	161	59480*MON383	5	161	1	165.8
59489	[BRN413 5161.00]	TO 59497	[RVS438 5161.00]	CKT 1	59468	AUR124	5	161	59480*MON383	5	161	1	165.8
59499	[CPK446 5161.00]	TO 59618	[CPK446 269.000]	CKT 1	59468	AUR124	5	161	59480*MON383	5	161	1	165.8
59500	[RNM393 5161.00]	TO 59593	[JOP391 5161.00]	CKT 1	59483*JOP389	5	161	59592 JOP389	269.0	1	66.1	77.1	75.0
59500	[RNM393 5161.00]	TO 59595	[RNM393 269.000]	CKT 1	59483*JOP389	5	161	59592 JOP389	269.0	1	66.1	77.0	75.0
59532	[CAR308 269.000]	TO 59600	[JAS403T269.000]	CKT 1	59468	AUR124	5	161	59480*MON383	5	161	1	165.8
59537	[AUR124 269.000]	TO 59540	[MON152 269.000]	CKT 1	59468	AUR124	5	161	59480*MON383	5	161	1	165.8
59537	[AUR124 269.000]	TO 59578	[AUR355 269.000]	CKT 1	59468	AUR124	5	161	59480*MON383	5	161	1	165.8
					59618	CPK446	269.0	96677*2MTVRN	69.0	1	18.1	35.7	36.0
59537	[AUR124 269.000]	TO 59611	[MAR437 269.000]	CKT 1	59468	AUR124	5	161	59480*MON383	5	161	1	165.8
59538	[DIA331 269.000]	TO 59595	[RNM393 269.000]	CKT 1	59480*MON383	5	161	59591 MON383	269.0	1	136.7	154.1	150.0
59540	[MON152 269.000]	TO 59591	[MON383 269.000]	CKT 1	59468	AUR124	5	161	59480 MON383	5	161	1	165.8
59546	[BIL221 269.000]	TO 59580	[REP359 269.000]	CKT 1	59468	AUR124	5	161	59480*MON383	5	161	1	165.8
59546	[BIL221 269.000]	TO 59611	[GLD251 269.000]	CKT 1	59468	AUR124	5	161	59480*MON383	5	161	1	165.8
59548	[BOS249 269.000]	TO 59550	[GLD251 269.000]	CKT 1	59468	AUR124	5	161	59480*MON383	5	161	1	165.8
59548	[BOS249 269.000]	TO 59600	[JAS403T269.000]	CKT 1	59468	AUR124	5	161	59480*MON383	5	161	1	165.8
59568	[STK324 269.000]	TO 59616	[STK631J269.000]	CKT 1	59545*FRP217	269.0	59635 FRP217	134.5	1	3.2	7.1	6.0	117.9
59568	[STK324 269.000]	TO 59638	[STK324 134.500]	CKT 1	59545*FRP217	269.0	59635 FRP217	134.5	1	3.2	7.3	6.0	121.7
59570	[OZK330 269.000]	TO 59604	[BHL415 269.000]	CKT 1	59468	AUR124	5	161	59480*MON383	5	161	1	165.8
					59562	OZD312	5	161	59562 OZD312	269.0	1	20.9	46.4
					59562	OZD312	269.0	59603*FOR430	269.0	1	20.7	44.4	45.0
59577	[MTV351 269.000]	TO 59606	[MTV420 269.000]	CKT 1	59468	AUR124	5	161	59480*MON383	5	161	1	165.8
59578	[AUR355 269.000]	TO 59606	[MTV420 269.000]	CKT 1	59468	AUR124	5	161	59480*MON383	5	161	1	165.8
59586	[WIL445 269.000]	TO 59691	[WIL369 269.000]	CKT 1	59468	AUR124	5	161	59480*MON383	5	161	1	165.8
59593	[JOP391 5161.00]	TO 59607	[JOP422 5161.00]	CKT 1	59483*JOP389	5	161	59592 JOP389	269.0	1	66.1	83.3	75.0

BRANCH OVERLOAD TABLE

X-----	MULTI-SECTION	LINE GROUPINGS	---X	FROM	NAME	TO	NAME	CKT	PRE-CNT	POST-CNT	RATING	PERCENT
59637	[HUM308 134.500]	TO 59641 [CAP304 134.500]	CKT 1	59545*FRP217	269.0	59635	FRP217	134.5	1	3.2	6.8	113.8 provide solution
59638	[STK324 134.500]	TO 59641 [CAP304 134.500]	CKT 1	59545*FRP217	269.0	59635	FRP217	134.5	1	3.2	7.0	117.4 provide solution
59471	[NEO184 5161.00]	TO 52686 [NEO SPA5161.00]	CKT 1	59468	AUR124	5	161	59480*MON383	5	161	168.5	111.3 reconductor
				59483	JOP389	5	161	59592	JOP389	269.0	75.9	101.2 increase capacity
59472	[T1P292 5161.00]	TO 52686 [NEO SPA5161.00]	CKT 1	59468	AUR124	5	161	59480*MON383	5	161	165.8	113.6 reconductor
				59483	JOP389	5	161	59592	JOP389	269.0	76.7	102.3 increase capacity
59474	[OZD312 5161.00]	TO 17879 [SOWAHA *161.00]	CKT 1	59468	AUR124	5	161	59480*MON383	5	161	164.4	108.4 reconductor
59478	[DAD368 5161.00]	TO 96101 [SMORGAN 161.00]	CKT 1	59468	AUR124	5	161	59480*MON383	5	161	206.8	137.0 reconductor
59479	[LAR382 5161.00]	TO 52688 [CARTHAGS161.00]	CKT 1	59468	AUR124	5	161	59480*MON383	5	161	184.7	122.3 reconductor
				59479	LAR382	5	161	59480	MON383	5	221.1	127.6 operating guide
59479	[LAR382 5161.00]	TO 52692 [SPRGFLD5161.00]	CKT 1	59468	AUR124	5	161	59480*MON383	5	161	165.8	122.4 reconductor
				59479	LAR382	5	161	59480*MON383	5	161	221.1	108.6 operating guide
59481	[MON383 7345.00]	TO 53140 [FLINTCR7345.00]	CKT 1	59468	AUR124	5	161	59480*MON383	5	161	165.8	106.3 reconductor
59481	[MON383 7345.00]	TO 59984 [BRKLINE 7345.00]	CKT 1	59468	AUR124	5	161	59480*MON383	5	161	165.8	115.1 reconductor
59484	[DEC392 5161.00]	TO 53139 [FLINTCR5161.00]	CKT 1	59468	AUR124	5	161	59480*MON383	5	161	163.4	108.0 reconductor
				59471	NEO184	5	161	52686	NEO SPA5	161	109.1	109.0 reconductor
59487	[HOC404 5161.00]	TO 54431 [MIAMI 5161.00]	CKT 1	59468	AUR124	5	161	59480*MON383	5	161	165.8	110.1 reconductor
59497	[RVS438 5161.00]	TO 52672 [TABLE R5161.00]	CKT 1	59468	AUR124	5	161	59480	MON383	5	165.8	129.2 reconductor
CONTINGENCY SPP-07												
53277	[LYDIA 7345.00]	TO 54037 [VALIAN7345.00]	CKT 1	59468	AUR124	5	161	59480*MON383	5	161	158.4	104.5 reconductor
53277	[LYDIA 7345.00]	TO 53301 [NWTXARK7345.00]	CKT 1									
53277	[LYDIA 7345.00]	TO 53615 [WELSH 7345.00]	CKT 1									
CONTINGENCY SPP-12												
59207	[ARCHIE 5161.00]	TO 59240 [ADRIAN 5161.00]	CKT 1	59468	AUR124	5	161	59480	MON383	5	165.8	116.1 reconductor
59216	[BUTLER 5161.00]	TO 59240 [ADRIAN 5161.00]	CKT 1									
59208	[NEVADA 5161.00]	TO 59216 [BUTLER_5161.00]	CKT 1									
CONTINGENCY SPP-28												
51534	[TUCO 7345.00]	TO 54119 [O.K.U.-7345.00]	CKT 1	59468	AUR124	5	161	59480*MON383	5	161	165.8	107.0 reconductor
51533	[TUCO 6230.00]	TO 51534 [TUCO 7345.00]	CKT 1									
54119	[O.K.U.-7345.00]	TO 54131 [L.E.S.-7345.00]	CKT 1									
54119	[O.K.U.-7345.00]	TO 59991 [OKLAUN 7345.00]	CKT 1									
CONTINGENCY SPP-CIRCGD1												
56752	[HOYT 7345.00]	TO 56758 [STRANGR7345.00]	CKT 1	59468	AUR124	5	161	59480*MON383	5	161	167.1	110.3 reconductor
57043	[CIRCLE 3115.00]	TO 57058 [MOUNDRG3115.00]	CKT 1									
57033	[SPRGCRK3115.00]	TO 57058 [MOUNDRG3115.00]	CKT 1									
CONTINGENCY SPP-CIRCGD3												
56754	[LANG 7345.00]	TO 56761 [WICHITA7345.00]	CKT 1	59468	AUR124	5	161	59480*MON383	5	161	164.3	108.4 reconductor
57043	[CIRCLE 3115.00]	TO 57058 [MOUNDRG3115.00]	CKT 1									
57033	[SPRGCRK3115.00]	TO 57058 [MOUNDRG3115.00]	CKT 1									

NONE

2010 SUMMER PEAK, ST. JOSEPH LIGHT AND POWER - AREA 679

V. VOLTAGE REPORTS

VOLTAGE REPORT TABLE

2000 FALL PEAK, MISSOURI PUBLIC SERVICE - AREA 540

(	OUTAGED BRANCH	) (	VOLTAGE RANGE	(X---- BUS ----X)	V-CONT	V-INIT
59286	[GRDMST 269.000] TO BUS 59287 [MARTCTY269.000] CKT 1	VOLTAGE GREATER THAN 1.0500:	59287 MARTCTY269.0	1.0543	1.0260	LTC
59307	[NEVPLT 269.000] TO BUS 59308 [NEVADA 269.000] CKT 1	VOLTAGE LESS THAN 0.9500:	59306 APCITY 269.0	0.9269	1.0113	SWITCH
			59307 NEVPLT 269.0	0.8808	1.0264	SWITCH
			59311 NEVJCT 269.0	0.8798	1.0256	SWITCH
			59312 LAMAR 269.0	0.8619	1.0107	SWITCH
59308	[NEVADA 269.000] TO BUS 59309 [METZ 269.000] CKT 1	VOLTAGE GREATER THAN 1.0500:	59159 NEVADA#113.2	1.0570	1.0287	LTC
			59307 NEVPLT 269.0	1.0543	1.0264	LTC
			59308 NEVADA 269.0	1.0570	1.0287	LTC
			59311 NEVJCT 269.0	1.0536	1.0256	LTC
59309	[METZ 269.000] TO BUS 59310 [3M 269.000] CKT 1	VOLTAGE GREATER THAN 1.0500:	59159 NEVADA#113.2	1.0503	1.0287	LTC
			59308 NEVADA 269.0	1.0503	1.0287	LTC
59242	[CLINTON5161.00] TO BUS 96071 [5CLINTN 161.00] CKT 1	VOLTAGE LESS THAN 0.9500:	59302 CLNTGRN269.0	0.9495	1.0205	ACCEPTABLE
59207	[ARCHIE 5161.00] TO BUS 59240 [ADRIAN 5161.00] CKT 1	VOLTAGE LESS THAN 0.9500:	59216 BUTLER 5 161	0.8927	1.0129	ACCEPTABLE

2000 FALL PEAK, EMPIRE DISTRICT ELECTRIC - AREA 544

(	OUTAGED BRANCH	) (	VOLTAGE RANGE	(X---- BUS ----X)	V-CONT	V-INIT
59464	[BOL 73 5161.00] TO BUS 59528 [BOL 73 269.000] CKT 1	VOLTAGE LESS THAN 0.9500:	59425 HER209 269.0	0.9261	0.9812 above .90	
			59432 BUF243J269.0	0.9333	0.9677 above .90	
			59434 BUF409 269.0	0.9213	0.9619 above .90	
			59528 BOL 73 269.0	0.9410	0.9951 above .90	
			59547 BUF243 269.0	0.9331	0.9676 above .90	
			59572 FGC333 269.0	0.9349	0.9679 above .90	
			59575 BUF342 269.0	0.9278	0.9681 above .90	
			59584 BOL367 269.0	0.9429	0.9882 above .90	
			59587 STR370 269.0	0.9494	0.9743 above .90	
			59596 FRG397 269.0	0.9477	0.9738 above .90	
			59612 BOL602 269.0	0.9456	0.9883 above .90	
59478	[DAD368 5161.00] TO BUS 59493 [BOL431 5161.00] CKT 1	VOLTAGE LESS THAN 0.9500:	59425 HER209 269.0	0.9449	0.9812 above .90	
			59434 BUF409 269.0	0.9386	0.9619 above .90	
			59575 BUF342 269.0	0.9450	0.9681 above .90	
59480	[MON383 5161.00] TO BUS 59591 [MON383 269.000] CKT 1	VOLTAGE LESS THAN 0.9500:	59400 MON376J269.0	0.9466	0.9788 above .90	
			59401 MON376 269.0	0.9455	0.9777 above .90	
			59403 MON416 269.0	0.9417	0.9740 above .90	
			59402 MON416J269.0	0.9419	0.9743 above .90	
			59404 PUR390 269.0	0.9246	0.9578 above .90	
59528	[BOL 73 269.000] TO BUS 59575 [BUF342 269.000] CKT 1	VOLTAGE LESS THAN 0.9500:	59432 BUF243J269.0	0.9294	0.9677 above .90	
			59434 BUF409 269.0	0.9119	0.9619 above .90	
			59547 BUF243 269.0	0.9292	0.9676 above .90	
			59572 FGC333 269.0	0.9324	0.9679 above .90	
			59575 BUF342 269.0	0.9184	0.9681 above .90	
59535	[NIX114 269.000] TO BUS 59604 [BHXJ415 269.000] CKT 1	VOLTAGE LESS THAN 0.9500:	59535 NIX114 269.0	0.9383	1.0042 above .90	
			59542 NIC170 269.0	0.9490	0.9845 above .90	
			59546 BIL221 269.0	0.9442	0.9646 above .90	
			59576 REP345 269.0	0.9398	0.9684 above .90	
			59580 REP359 269.0	0.9349	0.9599 above .90	

VOLTAGE REPORT TABLE

(OUTAGED BRANCH) (VOLTAGE RANGE) (X---- BUS ----X)			V-CONT	V-INIT
59537 [AUR124 269.000] TO BUS 59578 [AUR355 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:			0.8971	0.9793 capacitor 69kv
			0.9254	0.9850 above .90
			0.8995	0.9815 capacitor 69kv
			0.9099	0.9829 above .90
			0.8906	0.9824 capacitor 69kv
			0.8811	0.9910 capacitor 69kv
			0.8896	0.9830 capacitor 69kv
			0.8917	0.9646 capacitor 69kv
59537 [AUR124 269.000] TO BUS 59611 [MAR437 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:			0.9200	0.9684 above .90
			0.8997	0.9599 capacitor 69kv
			0.8822	0.9786 capacitor 69kv
59542 [NIC170 269.000] TO BUS 59576 [REP345 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:			0.9195	0.9646 above .90
			0.9036	0.9684 above .90
			0.9037	0.9599 above .90
			0.9159	1.0258 above .90
59545 [FRP217 269.000] TO BUS 59635 [FRP217 134.500] CKT 1 VOLTAGE LESS THAN 0.9500:			0.9178	0.9949 above .90
			0.9162	1.0098 above .90
			0.9037	0.9818 above .90
59546 [BIL221 269.000] TO BUS 59580 [REP359 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:			0.9384	0.9599 above .90
59546 [BIL221 269.000] TO BUS 59611 [MAR437 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:			0.9227	0.9646 above .90
			0.9407	0.9684 above .90
			0.9254	0.9599 above .90
59568 [STK324 269.000] TO BUS 59616 [STK631J269.000] CKT 1 VOLTAGE LESS THAN 0.9500:			0.9474	1.0043 above .90
59570 [OZK330 269.000] TO BUS 59604 [BIL415 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:			0.9202	1.0091 above .90
			0.9231	1.0054 above .90
59576 [REP345 269.000] TO BUS 59580 [REP359 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:			0.9198	0.9646 above .90
			0.9041	0.9599 above .90
59578 [AUR355 269.000] TO BUS 59606 [MTV420 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:			0.9416	0.9793 above .90
			0.9439	0.9815 above .90
			0.9496	0.9829 above .90
			0.9401	0.9824 above .90
			0.9399	0.9830 above .90
59590 [QUA377 269.000] TO BUS 59601 [HOC404 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:			0.9491	1.0049 above .90
59635 [FRP217 134.500] TO BUS 59639 [DUN283 134.500] CKT 1 VOLTAGE GREATER THAN 1.0500:			1.0528	1.0258 above .90
			0.9168	0.9949 above .90
			0.9151	1.0098 above .90
			0.9027	0.9818 above .90
59637 [HUM308 134.500] TO BUS 59639 [DUN283 134.500] CKT 1 VOLTAGE GREATER THAN 1.0500:			1.0530	1.0258 above .90
			1.0514	1.0098 above .90
			0.9218	0.9949 above .90
			0.9077	0.9818 above .90

NONE

2000 FALL PEAK ST. JOSEPH LIGHT AND POWER - AREA 679

VOLTAGE REPORT TABLE

2000 WINTER PEAK, MISSOURI PUBLIC SERVICE - AREA 540

(	OUTAGED BRANCH	) (	VOLTAGE RANGE	)	(X----	BUS	----	X)	V-CONT	V-INIT
59285	[GRDMCTY269.000] TO BUS 59286 [GRDMST 269.000] CKT 1	VOLTAGE GREATER THAN 1.0500:		59287	MARTCTY269.0			1.0501	1.0218	LTC
59286	[GRDMCTY269.000] TO BUS 59287 [MARTCTY269.000] CKT 1	VOLTAGE GREATER THAN 1.0500:		59306	APCITY 269.0			1.0615	1.0218	LTC
59307	[NEVPLT 269.000] TO BUS 59308 [NEVADA 269.000] CKT 1	VOLTAGE LESS THAN 0.9500:		59307	NEVPLT 269.0			0.9148	1.0047	Switch
				59311	NEVJCT 269.0			0.8629	1.0158	Switch
				59312	LAMAR 269.0			0.8617	1.0150	Switch
59242	[CLINTON5161.00] TO BUS 96071 [5CLINTN 161.00] CKT 1	VOLTAGE LESS THAN 0.9500:		59242	CLINTONS 161			0.8418	0.9986	Switch
				59301	CLNTPLT269.0			0.9435	1.0335	Acceptable
				59302	CLNTGRN269.0			0.9378	1.0188	Acceptable
				59303	CLINTON269.0			0.9370	1.0186	Acceptable
				59305	URICH 269.0			0.9375	1.0208	Acceptable
				59216	BUTLER_5 161			0.9495	1.0085	Acceptable

CONTINGENCY APP-12

59207	[ARCHIE 5161.00] TO BUS 59240 [ADRIAN 5161.00] CKT 1	VOLTAGE LESS THAN 0.9500:
59216	[BUTLER_5161.00] TO BUS 59240 [ADRIAN 5161.00] CKT 1	
59208	[NEVADA 5161.00] TO BUS 59216 [BUTLER_5161.00] CKT 1	

2000 WINTER PEAK, EMPIRE DISTRICT ELECTRIC - AREA 544

(	OUTAGED BRANCH	) (	VOLTAGE RANGE	)	(X----	BUS	----	X)	V-CONT	V-INIT
59464	[BOL 73 5161.00] TO BUS 59528 [BOL 73 269.000] CKT 1	VOLTAGE LESS THAN 0.9500:		59425	HER209 269.0			0.8877	0.9848	capacitor 69kv
				59432	BUF243J269.0			0.9019	0.9670	above .90
				59433	STRKAMO269.0			0.9361	0.9784	above .90
				59434	BUF409 269.0			0.8837	0.9589	capacitor 69kv
				59528	BOL 73 269.0			0.9087	1.0034	above .90
				59529	SED 80 269.0			0.9444	0.9872	above .90
				59545	FRP217 269.0			0.9445	0.9963	above .90
				59547	BUF243 269.0			0.9017	0.9668	above .90
				59567	BRT323 269.0			0.9258	0.9925	above .90
				59572	FQC333 269.0			0.9044	0.9673	above .90
				59575	BUF342 269.0			0.8929	0.9673	capacitor 69kv
				59576	REP345 269.0			0.9496	0.9730	above .90
				59580	REP359 269.0			0.9442	0.9650	above .90
				59584	BOL367 269.0			0.9094	0.9900	above .90
				59587	STR370 269.0			0.9257	0.9741	above .90
				59596	FRG397 269.0			0.9233	0.9740	above .90
				59612	BOL602 269.0			0.9132	0.9893	above .90
				59637	HUM308 134.5			0.9346	0.9707	above .90
				59640	COL318 134.5			0.9182	0.9549	above .90

VOLTAGE REPORT TABLE

(	OUTAGED BRANCH	) (	VOLTAGE RANGE	)	(X----	BUS	----	X)	V-CONT	V-INIT
59478	[DAD368 5161.00] TO BUS 59585 [DAD368 269.000] CKT 1	VOLTAGE LESS THAN 0.9500:		59637	HUM308 134.5			0.9425	0.9707	above .90
				59640	COL318 134.5			0.9263	0.9549	above .90
59479	[LAR382 5161.00] TO BUS 59480 [MON383 5161.00] CKT 1	VOLTAGE LESS THAN 0.9500:		59404	PUR390 269.0			0.9498	0.9711	above .90
59480	[MON383 5161.00] TO BUS 59591 [MON383 269.000] CKT 1	VOLTAGE LESS THAN 0.9500:		59400	MON376J269.0			0.9341	0.9919	above .90
				59401	MON376 269.0			0.9331	0.9909	above .90
				59402	MON416J269.0			0.9295	0.9876	above .90
				59403	MON416 269.0			0.9293	0.9873	above .90
				59404	PUR390 269.0			0.9120	0.9711	above .90
				59422	GNB347 269.0			0.9459	0.9701	above .90
				59430	SAR362 269.0			0.9438	0.9809	above .90
				59544	WEN205 269.0			0.9498	0.9908	above .90

59487 [HOC404 5161.00] TO BUS 59601 [HOC404 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	59420 WEL186 134.5	0.9388	0.9656 above .90
59528 [BOL 73 269.000] TO BUS 59575 [BUF342 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	59432 BUF243J269.0	0.9099	0.9670 above .90
	59434 BUF409 269.0	0.8853	0.9589 capacitor 69kv
	59547 BUF243 269.0	0.9097	0.9668 above .90
	59572 FGC333 269.0	0.9138	0.9673 above .90
	59575 BUF342 269.0	0.8945	0.9673 capacitor 69kv
	59587 STR370 269.0	0.9425	0.9741 above .90
	59596 FRG397 269.0	0.9407	0.9740 above .90
59528 [BOL 73 269.000] TO BUS 59584 [BOL367 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	59584 BOL367 269.0	0.9202	0.9900 above .90
	59612 BOL602 269.0	0.9237	0.9893 above .90
	59637 HUM308 134.5	0.9421	0.9707 above .90
	59640 COL318 134.5	0.9259	0.9549 above .90
59529 [SED 80 269.000] TO BUS 59596 [FRG397 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	59432 BUF243J269.0	0.9457	0.9740 above .90
	59547 BUF243 269.0	0.9456	0.9668 above .90
	59572 FGC333 269.0	0.9449	0.9673 above .90
	59587 STR370 269.0	0.9474	0.9741 above .90
	59596 FRG397 269.0	0.9457	0.9740 above .90
	59424 RRS364 269.0	0.9142	0.9833 above .90
59537 [AUR124 269.000] TO BUS 59578 [AUR355 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	59552 LAW260 269.0	0.9371	0.9877 above .90
	59553 ALB262 269.0	0.9154	0.9845 above .90
	59573 HTC338 269.0	0.9242	0.9858 above .90
	59577 MTW351 269.0	0.9080	0.9852 above .90
	59578 AUR355 269.0	0.9007	0.9934 above .90
	59606 MTW420 269.0	0.9072	0.9858 above .90
59537 [AUR124 269.000] TO BUS 59611 [MAR437 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	59546 BIL221 269.0	0.8927	0.9679 capacitor 69kv
	59576 REP345 269.0	0.9231	0.9730 above .90
	59580 REP359 269.0	0.9030	0.9650 above .90
	59611 MAR437 269.0	0.8802	0.9799 capacitor 69kv
59538 [DIA131 269.000] TO BUS 59595 [RNM393 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	59422 GNB347 269.0	0.9457	0.9701 above .90
59542 [NIC170 269.000] TO BUS 59576 [REP345 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	59546 BIL221 269.0	0.9261	0.9679 above .90
	59576 REP345 269.0	0.9126	0.9730 above .90
	59580 REP359 269.0	0.9129	0.9650 above .90
59543 [NEO184 269.000] TO BUS 59563 [LIN314 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	59524 NEO 56 269.0	0.9422	0.9932 above .90
	59563 LIN314 269.0	0.9406	0.9951 above .90
59544 [WEN205 269.000] TO BUS 59582 [SAR362T269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	59422 GNB347 269.0	0.9493	0.9701 above .90
	59430 SAR362 269.0	0.9487	0.9809 above .90
59544 [WEN205 269.000] TO BUS 59591 [MON383 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	59422 GNB347 269.0	0.9436	0.9701 above .90
	59430 SAR362 269.0	0.9398	0.9809 above .90
	59544 WEN205 269.0	0.9450	0.9908 above .90
	59582 SAR362T269.0	0.9462	0.9870 above .90
59545 [PRP217 269.000] TO BUS 59585 [DAD368 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	59637 HUM308 134.5	0.9461	0.9707 above .90
	59640 COL318 134.5	0.9300	0.9549 above .90

	(	OUTAGED BRANCH	)	(	VOLTAGE RANGE	)	(X---- BUS ----X)	V-CONT	V-INIT
59545	[FRP217 269.000]	TO BUS 59635 [FRP217 134.500]	CKT 1	VOLTAGE LESS THAN 0.9500:			59635 FRP217 134.5	0.8412	1.0195 provide solut.
							59637 HUM308 134.5	0.8435	0.9707 provide solut.
							59639 DUN283 134.5	0.8413	0.9942 provide solut.
							59640 COL318 134.5	0.8252	0.9549 provide solut.
59546	[BIL221 269.000]	TO BUS 59611 [MAR437 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:			59641 CAP304 134.5	0.9445	1.0110 above .90
							59546 BIL221 269.0	0.9337	0.9679 above .90
							59580 REP359 269.0	0.9370	0.9650 above .90
59568	[STK324 269.000]	TO BUS 59616 [STK631J269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:			59568 STK324 269.0	0.8998	1.0007 capacitor 69kv
							59637 HUM308 134.5	0.9247	0.9707 above .90
							59638 STK324 134.5	0.9240	1.0332 above .90
							59640 COL318 134.5	0.9087	0.9549 above .90
59568	[STK324 269.000]	TO BUS 59638 [STK324 134.500]	CKT 1	VOLTAGE LESS THAN 0.9500:			59641 CAP304 134.5	0.9239	1.0110 above .90
							59637 HUM308 134.5	0.9254	0.9707 above .90
							59638 STK324 134.5	0.9248	1.0332 above .90
							59640 COL318 134.5	0.9094	0.9549 above .90
59570	[OZK330 269.000]	TO BUS 59604 [BHJ415 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:			59641 CAP304 134.5	0.9247	1.0110 above .90
							59570 OZK330 269.0	0.9107	1.0094 above .90
							59609 OZK434 269.0	0.9141	1.0055 above .90
59572	[FGC333 269.000]	TO BUS 59596 [PRG397 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:			59432 BUF243J269.0	0.9458	0.9670 above .90
							59547 BUF243 269.0	0.9457	0.9668 above .90
							59572 FGC333 269.0	0.9455	0.9673 above .90
59576	[REP345 269.000]	TO BUS 59580 [REP359 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:			59546 BIL221 269.0	0.9263	0.9679 above .90
							59580 REP359 269.0	0.9132	0.9650 above .90
59578	[AUR355 269.000]	TO BUS 59606 [MTV420 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:			59424 RES364 269.0	0.9478	0.9833 above .90
							59553 ALB262 269.0	0.9491	0.9845 above .90
							59577 MTV351 269.0	0.9454	0.9852 above .90
							59606 MTV420 269.0	0.9452	0.9858 above .90
59590	[QUA377 269.000]	TO BUS 59601 [HOC404 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:			59427 COM381 269.0	0.9407	1.0032 above .90
							59579 COM381T269.0	0.9456	1.0078 above .90
							59590 QUA377 269.0	0.9441	1.0090 above .90
59605	[STK418 269.000]	TO BUS 59614 [SK631CJ269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:			59568 STK324 269.0	0.9468	1.0007 above .90
							59614 SK631CJ269.0	0.9465	1.0013 above .90
							59616 STK631J269.0	0.9469	1.0009 above .90
							59637 HUM308 134.5	0.9469	0.9707 above .90
							59640 COL318 134.5	0.8241	0.9549 above .90
59635	[FRP217 134.500]	TO BUS 59639 [DUN283 134.500]	CKT 1	VOLTAGE GREATER THAN 1.0500: VOLTAGE LESS THAN 0.9500:			59635 FRP217 134.5	1.0558	0.9707 provide solut.
							59637 HUM308 134.5	0.8425	0.9942 provide solut.
							59639 DUN283 134.5	0.8401	0.9549 provide solut.
							59640 COL318 134.5	0.8241	0.9549 provide solut.
59637	[HUM308 134.500]	TO BUS 59639 [DUN283 134.500]	CKT 1	VOLTAGE GREATER THAN 1.0500:			59641 CAP304 134.5	0.9439	1.0110 above .90
							59635 FRP217 134.5	1.0557	0.9707 provide solut.
							59639 DUN283 134.5	1.0541	0.9942 above .90
							59637 HUM308 134.5	0.8528	0.9707 provide solut.
							59640 COL318 134.5	0.8346	0.9549 provide solut
							59641 CAP304 134.5	0.9489	1.0110 above .90
59637	[HUM308 134.500]	TO BUS 59641 [CAP304 134.500]	CKT 1	VOLTAGE LESS THAN 0.9500:			59637 HUM308 134.5	0.9256	0.9707 above .90
							59640 COL318 134.5	0.9096	0.9549 above .90
59638	[STK324 134.500]	TO BUS 59641 [CAP304 134.500]	CKT 1	VOLTAGE LESS THAN 0.9500:			59637 HUM308 134.5	0.9238	0.9707 above .90
							59640 COL318 134.5	0.9079	0.9549 above .90
							59641 CAP304 134.5	0.9224	1.0110 above .90

VOLTAGE REPORT TABLE

(	OUTAGED BRANCH	(	VOLTAGE RANGE	)	(	VOLTAGE LESS THAN 0.9500:	(X----- BUS -----X)	V-CONT	V-INIT
59497	[RVS438 5161.00] TO BUS 52672 [TABLE R5161.00] CKT 1						59474 OZD312 5 161	0.9464	0.9880 above .90
							59475 BRN331 5 161	0.9439	0.9856 above .90
							59482 HOL387 5 161	0.9443	0.9894 above .90
							59488 BRN412 5 161	0.9439	0.9855 above .90
							59489 BRN413 5 161	0.9425	0.9885 above .90
							59492 RDS424 5 161	0.9478	0.9805 above .90
							59495 GRT433 5 161	0.9430	0.9868 above .90
							59497 RVS438 5 161	0.9428	0.9812 above .90
59605	[STK418 269.000] TO BUS 96118 [SSTKAEC 161.00] CKT 1		VOLTAGE LESS THAN 0.9500:				59568 STK324 269.0	0.9470	1.0007 above .90
							59605 STK418 269.0	0.9466	1.0022 above .90
							59614 SK631CJ269.0	0.9471	1.0009 above .90
							59616 STK631J269.0	0.9470	0.9707 above .90
							59637 HUM308 134.5	0.9311	0.9549 above .90
							59640 COL318 134.5		

2000 WINTER PEAK, ST. JOSEPH LIGHT AND POWER - AREA 679

2001 APRIL MINIMUM, 540

(	BASE CASE	(	VOLTAGE RANGE	)	(	VOLTAGE GREATER THAN 1.0500:	(X----- BUS -----X)	V-CONT	V-INIT
							59207 ARCHIE 5 161	1.0556	1.0556 Acceptable
							59208 NEVADA 5 161	1.0522	1.0522 Acceptable
							59209 SEDALIAS 161	1.0575	1.0575 Acceptable
							59210 MARTCTYS 161	1.0501	1.0501 Acceptable
							59216 BUTLER_5 161	1.0548	1.0548 Acceptable
							59217 WINDSR 5 161	1.0652	1.0652 Acceptable
							59234 WAFB 5 161	1.0515	1.0515 Acceptable
							59239 HSNVL 5 161	1.0520	1.0520 Acceptable
							59240 ADRIAN 5 161	1.0552	1.0552 Acceptable
							59241 SEDEASTS 161	1.0602	1.0602 Acceptable
							59242 CLINTONS 161	1.0710	1.0710 Acceptable

2001 APRIL MINIMUM, 544

(	OUTAGED BRANCH	(	VOLTAGE RANGE	)	(	VOLTAGE GREATER THAN 1.0500:	(X----- BUS -----X)	V-CONT	V-INIT
59481	[MON383 7345.00] TO BUS 53140 [PLINTCR7345.00] CKT 1						59481 MON383 7 345	1.0658	1.0418 above .90

2001 APRIL MINIMUM, 679

2001 FALL PEAK, 540

(	OUTAGED BRANCH	(	VOLTAGE RANGE	)	(	VOLTAGE LESS THAN 0.9500:	(X----- BUS -----X)	V-CONT	V-INIT
59307	[NEVPLT 269.000] TO BUS 59308 [NEVADA 269.000] CKT 1						59306 APCITY 269.0	0.9201	1.0093 Switch
							59307 NEVPLT 269.0	0.8717	1.0214 Switch
							59311 NEVJCT 269.0	0.8707	1.0306 Switch
							59312 LAMAR 269.0	0.8520	1.0051 Switch
59308	[NEVADA 269.000] TO BUS 59309 [METZ 269.000] CKT 1		VOLTAGE GREATER THAN 1.0500:				59159 NEVADA#113.2	1.0536	1.0236 LTC
							59307 NEVPLT 269.0	1.0509	1.0214 LTC
							59308 NEVADA 269.0	1.0536	1.0236 LTC
							59311 NEVJCT 269.0	1.0502	1.0206 LTC
59242	[CLINTON5161.00] TO BUS 96071 [5CLINTN 161.00] CKT 1		VOLTAGE LESS THAN 0.9500:				59301 CLNTPLT269.0	0.9459	1.0177 Acceptable
							59302 CLNTGRN269.0	0.9451	1.0176 Acceptable
							59303 CLINTON269.0	0.9456	1.0195 Acceptable

VOLTAGE REPORT TABLE

(OUTAGED BRANCH CONTINGENCY SPP-12	) (	VOLTAGE RANGE	) (X----- BUS ----X)	V-CONT	V-INIT
59207 [ARCHIE 5161.00] TO BUS 59240 [ADRIAN 5161.00] CKT 1	1	VOLTAGE LESS THAN 0.9500:	59216 BUTLER_5 161	0.9416	1.0170 Acceptable
59216 [BUTLER_5161.00] TO BUS 59240 [ADRIAN 5161.00] CKT 1	1				
59208 [NEVADA 5161.00] TO BUS 59216 [BUTLER_5161.00] CKT 1	1				
2001 FALL PEAK, EMPIRE DISTRICT ELECTRIC - AREA 544					
(OUTAGED BRANCH	) (	VOLTAGE RANGE	) (X----- BUS ----X)	V-CONT	V-INIT
59464 [BOL 73 5161.00] TO BUS 59528 [BOL 73 269.000] CKT 1	1	VOLTAGE LESS THAN 0.9500:	59425 HER209 269.0	0.9336	0.9839 above .90
			59432 BUF433J269.0	0.9414	0.9731 above .90
			59434 BUF409 269.0	0.9292	0.9665 above .90
			59528 BOL 73 269.0	0.9480	0.9974 above .90
			59547 BUF243 269.0	0.9412	0.9729 above .90
			59572 FGC333 269.0	0.9431	0.9735 above .90
			59575 BUF342 269.0	0.9356	0.9727 above .90
			59584 BOL367 269.0	0.9487	0.9901 above .90
			59434 BUF409 269.0	0.9451	0.9665 above .90
59480 [MON383 5161.00] TO BUS 59591 [MON383 269.000] CKT 1	1	VOLTAGE LESS THAN 0.9500:	59400 MON376J269.0	0.9297	0.9835 above .90
			59401 MON376 269.0	0.9286	0.9825 above .90
			59402 MON416J269.0	0.9250	0.9791 above .90
			59403 MON416 269.0	0.9247	0.9788 above .90
			59404 PUR390 269.0	0.9076	0.9627 above .90
			59405 MON352J269.0	0.9497	1.0022 above .90
			59406 MON352 269.0	0.9496	1.0022 above .90
			59407 MON311J269.0	0.9491	1.0017 above .90
			59408 MON311 269.0	0.9490	1.0016 above .90
59528 [BOL 73 269.000] TO BUS 59575 [BUF342 269.000] CKT 1	1	VOLTAGE LESS THAN 0.9500:	59432 BUF433J269.0	0.9371	0.9731 above .90
			59434 BUF409 269.0	0.9198	0.9665 above .90
			59547 BUF243 269.0	0.9370	0.9729 above .90
			59572 FGC333 269.0	0.9401	0.9735 above .90
			59575 BUF342 269.0	0.9262	0.9727 above .90
			59635 FRP217 134.5	0.9080	1.0295 above .90
59545 [FRP217 269.000] TO BUS 59635 [FRP217 134.500] CKT 1	1	VOLTAGE LESS THAN 0.9500:	59637 HUM308 134.5	0.9105	0.9949 above .90
			59639 DUN283 134.5	0.9083	1.0113 above .90
			59640 COL318 134.5	0.8964	0.9818 provide solut.
59546 [BIL221 269.000] TO BUS 59580 [REP359 269.000] CKT 1	1	VOLTAGE LESS THAN 0.9500:	59580 REP359 269.0	0.9369	0.9856 above .90
59568 [STK324 269.000] TO BUS 59616 [STK631J269.000] CKT 1	1	VOLTAGE LESS THAN 0.9500:	59568 STK324 269.0	0.9481	1.0002 above .90
59570 [OKK330 269.000] TO BUS 59604 [BHJ415 269.000] CKT 1	1	VOLTAGE LESS THAN 0.9500:	59570 OKK330 269.0	0.9181	1.0111 above .90
			59609 OKK434 269.0	0.9211	1.0071 above .90
59590 [QUA377 269.000] TO BUS 59601 [HOC404 269.000] CKT 1	1	VOLTAGE LESS THAN 0.9500:	59427 COM381 269.0	0.9475	1.0048 above .90
59635 [FRP217 134.500] TO BUS 59639 [DUN283 134.500] CKT 1	1	VOLTAGE GREATER THAN 1.0500: VOLTAGE LESS THAN 0.9500:	59635 FRP217 134.5	1.0548	1.0295 above .90
			59637 HUM308 134.5	0.9095	0.9949 above .90
			59639 DUN283 134.5	0.9072	1.0113 above .90
			59640 COL318 134.5	0.8954	0.9818 above .90
59637 [HUM308 134.500] TO BUS 59639 [DUN283 134.500] CKT 1	1	VOLTAGE GREATER THAN 1.0500:	59635 FRP217 134.5	1.0548	1.0295 above .90
			59639 DUN283 134.5	1.0526	1.0113 above .90
			59637 HUM308 134.5	0.9175	0.9949 above .90
			59640 COL318 134.5	0.9034	0.9818 above .90

VOLTAGE REPORT TABLE

((OUTAGED BRANCH 59478 [DAD368 5161.00] TO BUS 96101 [5MORGAN 161.00] CKT 1 VOLTAGE LESS THAN 0.9500:	((VOLTAGE RANGE CKT 1 VOLTAGE LESS THAN 0.9500:	(X---- BUS ----X) 59434 BUF409 269.0 59575 BUF342 269.0 NONE	V-CONT 0.9417 0.9481	V-INIT 0.9665 above .90 0.9727 above .90
2001 FALL PEAK, ST. JOSEPH LIGHT AND POWER - AREA 679				
2001 SUMMER PEAK, MISSOURI PUBLIC SERVICE - AREA 540				
((OUTAGED BRANCH 59207 [ARCHIE 5161.00] TO BUS 59240 [ADRIAN 5161.00] CKT 1 VOLTAGE LESS THAN 0.9500:	((VOLTAGE RANGE CKT 1 VOLTAGE LESS THAN 0.9500:	(X---- BUS ----X) 59159 NEVADA#113.2 59208 NEVADA 5 161 59216 BUTLER_5 161 59240 ADRIAN_5 161 59306 APCITY 269.0 59307 NEVPLT 269.0 59308 NEVADA 269.0 59309 METZ 269.0 59310 3M 269.0 59311 NEVJCT 269.0 59312 LAMAR 269.0 59208 NEVADA 5 161 59309 METZ 269.0 59310 3M 269.0 59312 LAMAR 269.0 59310 3M 269.0 59312 LAMAR 269.0 59310 3M 269.0 59312 LAMAR 269.0 59276 COLECHP269.0 59277 WARSAW 269.0 59277 WARSAW 269.0 59208 NEVADA 5 161 59216 BUTLER_5 161 59309 METZ 269.0 59310 3M 269.0 59311 NEVJCT 269.0 59312 LAMAR 269.0 59154 KOREN#313.2 59279 RGREEN 269.0 59280 PHILL 269.0 59288 RQAFB 269.0 59289 BELTON 269.0 59290 BELTON#269.0 59291 FREEMAN#269.0 59290 BELTON#269.0 59291 FREEMAN#269.0 59292 ANCONDA#269.0 59293 HSNVLW 269.0 59294 HSNVLS 269.0 59295 HSNVLSW 269.0 59297 HSNVLN 269.0 59298 GRDNCTY#269.0 59299 SNCLRP#269.0	V-CONT 0.9442 0.9215 0.9172 0.9159 0.9443 0.9408 0.9442 0.9214 0.9147 0.9390 0.9093 0.9388 0.9418 0.9353 0.9299 0.9461 0.9406 0.9366 0.9223 0.9471 0.9308 0.9294 0.9322 0.9256 0.9495 0.9202 0.9252 0.9246 0.9367 0.9300 0.9195 0.9342 0.9487 0.9298 0.9266 0.9265 0.9266 0.9276 0.9286 0.9313 0.9259 0.9259	V-INIT 1.0118 Acceptable 0.9800 Acceptable 0.9969 Acceptable 1.0049 Acceptable 0.9932 Acceptable 1.0080 Acceptable 1.0118 Acceptable 0.9907 Acceptable 0.9845 Acceptable 1.0064 Acceptable 0.9790 Acceptable 0.9800 Acceptable 0.9907 Acceptable 0.9845 Acceptable 0.9790 Acceptable 0.9845 Generation 0.9790 Generation 0.9881 Acceptable 0.9745 Acceptable 0.9745 Shift Load-161 0.9800 Acceptable 0.9969 Acceptable 0.9907 Acceptable 0.9845 Acceptable 1.0064 Acceptable 0.9790 Acceptable 1.0090 Generation 1.0090 Generation 1.0111 Generation 0.9868 Generation 0.9836 Generation 0.9792 Generation 0.9871 Generation 0.9792 Generation 0.9871 Generation 1.0089 Generation 1.0098 Generation 1.0122 Generation 1.0162 Generation 1.0120 Generation 1.0063 Generation 1.0095 Generation 1.0095 Generation
59208 [NEVADA 5161.00] TO BUS 59216 [BUTLER_5161.00] CKT 1 VOLTAGE LESS THAN 0.9500:	CKT 1 VOLTAGE LESS THAN 0.9500:			
59208 [NEVADA 5161.00] TO BUS 59308 [NEVADA 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	CKT 1 VOLTAGE LESS THAN 0.9500:			
59209 [SEDALIA#5161.00] TO BUS 59271 [SEDN 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	CKT 1 VOLTAGE LESS THAN 0.9500:			
59209 [SEDALIA#5161.00] TO BUS 59272 [SEDS 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	CKT 1 VOLTAGE LESS THAN 0.9500:			
59216 [BUTLER_5161.00] TO BUS 59240 [ADRIAN 5161.00] CKT 1 VOLTAGE LESS THAN 0.9500:	CKT 1 VOLTAGE LESS THAN 0.9500:			
59225 [PHILL 5161.00] TO BUS 59280 [PHILL 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	CKT 1 VOLTAGE LESS THAN 0.9500:			
59239 [HSNVL 5161.00] TO BUS 59295 [HSNVL 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	CKT 1 VOLTAGE LESS THAN 0.9500:			

VOLTAGE REPORT TABLE

(	OUTAGED BRANCH	) (	VOLTAGE RANGE	) (X----- BUS ----X)	V-CONT	V-INT
59260	[RNRDGE 269.000] TO BUS 59261 [STALEY 269.000]	CKT 1	VOLTAGE GREATER THAN 1.0500:	59260 RNRDGE 269.0	1.0516	1.0125 LTC
59279	[RGREEN 269.000] TO BUS 59280 [PHILL 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:	59154 RGREEN#313.2	0.9412	1.0090 Generation
59280	[PHILL 269.000] TO BUS 59290 [BELTONS269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:	59279 RGREEN 269.0	0.9412	1.0090 Generation
59284	[GRDVWTP269.000] TO BUS 59288 [RGAFB 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:	59288 RGAFB 269.0	0.9455	0.9868 Acceptable
59285	[GRDWCY269.000] TO BUS 59286 [GRDWST 269.000]	CKT 1	VOLTAGE GREATER THAN 1.0500:	59289 BELTON 269.0	0.9391	0.9836 Acceptable
59286	[GRDWST 269.000] TO BUS 59287 [MARTCTY269.000]	CKT 1	VOLTAGE GREATER THAN 1.0500:	59290 BELTONS269.0	0.9297	0.9792 Acceptable
59288	[RGAFB 269.000] TO BUS 59289 [BELTON 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:	59288 RGAFB 269.0	0.9228	0.9868 Generation
59289	[BELTON 269.000] TO BUS 59290 [BELTONS269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:	59289 BELTON 269.0	0.9234	0.9836 Generation
59293	[HSNVLM 269.000] TO BUS 59294 [HSNVLS 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:	59290 BELTONS269.0	0.9255	0.9792 Generation
59294	[HSNVLS 269.000] TO BUS 59295 [HSNVL 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:	59291 FREEMAN269.0	0.9468	0.9871 Generation
59307	[NEVPLT 269.000] TO BUS 59308 [NEVADA 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:	59286 GRDWST 269.0	1.0531	1.0088 LTC
59308	[NEVADA 269.000] TO BUS 59309 [METZ 269.000]	CKT 1	VOLTAGE GREATER THAN 1.0500:	59287 MARTCTY269.0	1.0560	1.0160 LTC
59309	[METZ 269.000] TO BUS 59310 [3M 269.000]	CKT 1	VOLTAGE GREATER THAN 1.0500:	59287 MARTCTY269.0	1.0755	1.0160 LTC
59311	[NEVJCT 269.000] TO BUS 59312 [LAMAR 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:	59289 BELTON 269.0	0.9340	0.9836 Acceptable
59312	[LAMAR 269.000] TO BUS 59313 [NEVADA#113.2 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:	59290 BELTONS269.0	0.9351	0.9792 Acceptable
59313	[NEVADA#113.2 269.000] TO BUS 59314 [URICH 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:	59291 FREEMAN269.0	0.9438	0.9792 Acceptable
59314	[URICH 269.000] TO BUS 59315 [NEVADA#113.2 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:	59292 ANCONDA269.0	0.9460	0.9871 Acceptable
59315	[NEVADA#113.2 269.000] TO BUS 59316 [URICH 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:	59293 HSNVLM 269.0	0.9413	1.0089 Acceptable
59316	[URICH 269.000] TO BUS 59317 [FREEMAN269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:	59293 HSNVLM 269.0	0.9411	1.0098 Acceptable
59317	[FREEMAN269.000] TO BUS 59318 [ANCONDA269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:	59292 ANCONDA269.0	0.9317	0.9871 Acceptable
59318	[ANCONDA269.000] TO BUS 59319 [HSNVLM 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:	59293 HSNVLM 269.0	0.9182	1.0098 Acceptable
59319	[HSNVLM 269.000] TO BUS 59320 [NEVPLT 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:	59294 HSNVLS 269.0	0.9174	1.0122 Acceptable
59320	[NEVPLT 269.000] TO BUS 59321 [NEVJCT 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:	59304 URICHTP269.0	0.8716	1.0018 Switches
59321	[NEVJCT 269.000] TO BUS 59322 [APCITY 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:	59305 URICH 269.0	0.8686	0.9932 Switches
59322	[APCITY 269.000] TO BUS 59323 [NEVADA 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:	59306 APCITY 269.0	0.7779	0.9932 Switches
59323	[NEVADA 269.000] TO BUS 59324 [NEVJCT 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:	59307 NEVPLT 269.0	0.6570	1.0080 Switches
59324	[NEVJCT 269.000] TO BUS 59325 [LAMAR 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:	59311 NEVJCT 269.0	0.6543	1.0064 Switches
59325	[LAMAR 269.000] TO BUS 59326 [NEVADA#113.2 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:	59312 LAMAR 269.0	0.6113	0.9790 Switches
59326	[NEVADA#113.2 269.000] TO BUS 59327 [NEVPLT 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:	59159 NEVADA#113.2	1.0745	1.0118 LTC
59327	[NEVPLT 269.000] TO BUS 59328 [NEVADA 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:	59307 NEVPLT 269.0	1.0699	1.0080 LTC
59328	[NEVADA 269.000] TO BUS 59329 [NEVJCT 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:	59308 NEVADA 269.0	1.0745	1.0118 LTC
59329	[NEVJCT 269.000] TO BUS 59330 [POSTOAK269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:	59311 NEVJCT 269.0	1.0685	1.0064 LTC
59330	[POSTOAK269.000] TO BUS 59331 [CLINTON5 161 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:	59159 NEVADA#113.2	1.0604	1.0118 LTC
59331	[CLINTON5 161 269.000] TO BUS 59332 [CLNTPLT269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:	59307 NEVPLT 269.0	1.0560	1.0080 LTC
59332	[CLNTPLT269.000] TO BUS 59333 [CLNTGRN269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:	59308 NEVADA 269.0	1.0604	1.0118 LTC
59333	[CLNTGRN269.000] TO BUS 59334 [CLINTON269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:	59309 METZ 269.0	1.0552	0.9907 LTC
59334	[CLINTON269.000] TO BUS 59335 [URICHTP269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:	59311 NEVJCT 269.0	1.0546	1.0064 LTC
59335	[URICHTP269.000] TO BUS 59336 [URICH 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:	59342 CLINTON5 161	0.8363	1.0221 Accept Risk
59336	[URICH 269.000] TO BUS 59337 [APCITY 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:	59300 POSTOAK269.0	0.9033	1.0102 Accept Risk
59337	[APCITY 269.000] TO BUS 59338 [LAMAR 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:	59301 CLNTPLT269.0	0.8524	1.0165 Accept Risk
59338	[LAMAR 269.000] TO BUS 59339 [NEVADA#113.2 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:	59302 CLNTGRN269.0	0.8509	1.0164 Accept Risk
59339	[NEVADA#113.2 269.000] TO BUS 59340 [NEVPLT 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:	59303 CLINTON269.0	0.8519	1.0201 Accept Risk
59340	[NEVPLT 269.000] TO BUS 59341 [NEVJCT 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:	59304 URICHTP269.0	0.8755	1.0018 Accept Risk
59341	[NEVJCT 269.000] TO BUS 59342 [APCITY 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:	59305 URICH 269.0	0.8726	0.9992 Accept Risk
59342	[APCITY 269.000] TO BUS 59343 [LAMAR 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:	59306 APCITY 269.0	0.9042	0.9932 Accept Risk
59343	[LAMAR 269.000] TO BUS 59344 [NEVADA 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:	59312 LAMAR 269.0	0.9461	0.9790 Accept Risk

VOLTAGE REPORT TABLE

(OUTAGED BRANCH CONTINGENCY SPP-12	) (VOLTAGE RANGE) (X----- BUS ----X)	V-CONT	V-INIT
59207 [ARCHIE 5161.00] TO BUS 59240 [ADRIAN 5161.00] CKT 1 VOLTAGE LESS THAN 0.9500:	59208 NEVADA 5 161	0.9292	0.9800 Acceptable
59216 [BUTLER_5161.00] TO BUS 59240 [ADRIAN 5161.00] CKT 1	59216 BUTLER_5 161	0.9106	0.9969 Acceptable
59208 [NEVADA 5161.00] TO BUS 59216 [BUTLER_5161.00] CKT 1	59307 NEVPLT_269.0	0.9496	1.0080 Acceptable
	59309 METZ 269.0	0.9305	0.9907 Acceptable
	59310 3M 269.0	0.9239	0.9845 Acceptable
	59311 NEVJCT 269.0	0.9479	1.0064 Acceptable
	59312 LAMAR 269.0	0.9184	0.9790 Acceptable

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(BASE CASE OUTAGED BRANCH	) (VOLTAGE RANGE) (X----- BUS ----X)	V-CONT	V-INIT
59433 [STRAMO269.000] TO BUS 59604 [BHJ415 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	59416 CHE299T134.5	0.9412	0.9412 above .90
59436 [CUPTAP 269.000] TO BUS 59585 [DAD368 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	59417 CHE299 134.5	0.9382	0.9382 above .90
	59418 CHE300 134.5	0.9407	0.9407 above .90
	59419 TWN388 134.5	0.9399	0.9399 above .90
	59420 WEL186 134.5	0.9182	0.9182 above .90
	59433 STRAMO269.0	0.9462	0.9685 above .90
	59436 CUPTAP 269.0	0.9464	0.9667 above .90
	59437 CUPSUB 269.0	0.9458	0.9961 above .90
59464 [BOL 73 5161.00] TO BUS 59528 [BOL 73 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	59425 HER209 269.0	0.8959	0.9720 capacitor 69kv
	59432 BUF243J269.0	0.9109	0.9602 above .90
	59433 STRAMO269.0	0.9372	0.9685 above .90
	59434 BUF409 269.0	0.8961	0.9335 capacitor 69kv
	59528 BOL 73 269.0	0.9170	0.9913 above .90
	59529 SED 80 269.0	0.9449	0.9762 above .90
	59545 FRP217 269.0	0.9461	0.9855 above .90
	59547 BUF243 269.0	0.9107	0.9600 above .90
	59567 BRT323 269.0	0.9301	0.9811 above .90
	59572 FGC333 269.0	0.9130	0.9605 above .90
	59575 BUF342 269.0	0.9037	0.9606 above .90
	59584 BOL367 269.0	0.9189	0.9814 above .90
	59587 STR370 269.0	0.9289	0.9648 above .90
	59596 FRG397 269.0	0.9273	0.9649 above .90
	59612 BOL602 269.0	0.9217	0.9806 above .90
	59637 HUM308 134.5	0.9432	0.9699 above .90
	59640 COL318 134.5	0.9255	0.9526 above .90
	59691 WIL369 269.0	0.9483	0.9722 above .90
59478 [DAD368 5161.00] TO BUS 59585 [DAD368 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	59436 CUPTAP 269.0	0.9500	0.9967 above .90
	59437 CUPSUB 269.0	0.9494	0.9961 above .90
	59640 COL318 134.5	0.9292	0.9526 above .90
	59691 WIL369 269.0	0.9498	0.9722 above .90
59479 [LAR382 5161.00] TO BUS 59480 [MON383 5161.00] CKT 1 VOLTAGE LESS THAN 0.9500:	59404 PUR390 269.0	0.9351	0.9645 above .90
	59468 AUR124 5 161	0.9480	0.9652 above .90
	59480 MON383 5 161	0.9351	0.9644 above .90
59480 [MON383 5161.00] TO BUS 59591 [MON383 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	59400 MON376J269.0	0.9388	0.9916 above .90
	59401 MON376 269.0	0.9376	0.9905 above .90
	59402 MON416J269.0	0.9331	0.9863 above .90
	59403 MON416 269.0	0.9328	0.9860 above .90
	59404 PUR390 269.0	0.9097	0.9645 above .90

VOLTAGE REPORT TABLE

(OUTAGED BRANCH HOC404 5161.00] TO BUS 59601 [HOC404 269.000] CKT 1	(VOLTAGE RANGE VOLTAGE LESS THAN 0.9500:	(X---- BUS ----X) 59416 CHE299T134.5 59417 CHE299 134.5 59418 CHE300 134.5 59419 TWN388 134.5 59420 WEL186 134.5 59432 BUF243J269.0 59433 STRKAWO269.0 59434 BUF409 269.0 59547 BUF243 269.0 59572 FGC333 269.0 59575 BUF342 269.0 59587 STR370 269.0 59596 FRG397 269.0 59584 BOL367 269.0 59612 BOL602 269.0 59637 HUM308 134.5 59640 COL318 134.5 59587 STR370 269.0 59596 FRG397 269.0 59577 MTV351 269.0 59578 AUR355 269.0 59606 MTV420 269.0 59422 QNB347 269.0 59420 WEL186 134.5 59524 NEO 56 269.0 59563 LIN314 269.0 59635 FRP217 134.5 59637 HUM308 134.5 59639 DUN283 134.5 59640 COL318 134.5 59641 CAP304 134.5 59576 REP345 269.0 59580 REP359 269.0 59568 STK324 269.0 59637 HUM308 134.5 59638 STK324 134.5 59640 COL318 134.5 59641 CAP304 134.5 59570 OZK330 269.0 59427 COM381 269.0 59579 COM381T269.0 59590 QUA377 269.0	V-CONT 0.9072 0.9042 0.9067 0.9059 0.8837 0.9142 0.9471 0.8939 0.9140 0.9176 0.9015 0.9398 0.9386 0.9315 0.9337 0.9497 0.9425 0.9413 0.9440 0.9429 0.9451 0.8979 0.9326 0.9308 0.8579 0.8605 0.8419 0.9413 0.9260 0.9097 0.9141 0.9395 0.9386 0.9221 0.9385 0.9400 0.9392 0.9226 0.9390 0.8844 0.8893 0.9111 0.9193 0.9173	V-INIT 0.9412 above .90 0.9382 above .90 0.9407 above .90 0.9399 above .90 0.9182 provide solut. 0.9602 above .90 0.9685 above .90 0.9535 capacitor 69kv 0.9600 above .90 0.9605 above .90 0.9606 above .90 0.9648 above .90 0.9649 above .90 0.9814 above .90 0.9806 above .90 0.9699 above .90 0.9526 above .90 0.9648 above .90 0.9649 above .90 0.9792 above .90 0.9906 above .90 0.9800 above .90 0.9807 above .90 0.9182 provide solut. 0.9835 above .90 0.9852 above .90 1.0129 provide solut. 0.9699 provide solut. 0.9908 provide solut. 0.9526 provide solut. 0.9998 above .90 0.9724 above .90 0.9681 above .90 0.9837 above .90 0.9699 above .90 1.0162 above .90 0.9526 above .90 0.9998 above .90 0.9699 above .90 1.0162 above .90 0.9526 above .90 0.9998 above .90 0.9978 provide solut. 0.9946 provide solut. 0.9919 above .90 0.9993 above .90 1.0009 above .90
59487 [HOC404 5161.00] TO BUS 59601 [HOC404 269.000] CKT 1	VOLTAGE LESS THAN 0.9500:	59416 CHE299T134.5	0.9072	0.9412 above .90
		59417 CHE299 134.5	0.9042	0.9382 above .90
		59418 CHE300 134.5	0.9067	0.9407 above .90
		59419 TWN388 134.5	0.9059	0.9399 above .90
		59420 WEL186 134.5	0.8837	0.9182 provide solut.
59528 [BOL 73 269.000] TO BUS 59575 [BUF342 269.000] CKT 1	VOLTAGE LESS THAN 0.9500:	59432 BUF243J269.0	0.9142	0.9602 above .90
		59433 STRKAWO269.0	0.9471	0.9685 above .90
		59434 BUF409 269.0	0.8939	0.9535 capacitor 69kv
		59547 BUF243 269.0	0.9140	0.9600 above .90
		59572 FGC333 269.0	0.9176	0.9605 above .90
		59575 BUF342 269.0	0.9015	0.9606 above .90
		59587 STR370 269.0	0.9398	0.9648 above .90
		59596 FRG397 269.0	0.9386	0.9649 above .90
59528 [BOL 73 269.000] TO BUS 59584 [BOL367 269.000] CKT 1	VOLTAGE LESS THAN 0.9500:	59584 BOL367 269.0	0.9315	0.9814 above .90
		59612 BOL602 269.0	0.9337	0.9806 above .90
		59637 HUM308 134.5	0.9497	0.9699 above .90
		59640 COL318 134.5	0.9425	0.9526 above .90
59529 [SED 80 269.000] TO BUS 59596 [FRG397 269.000] CKT 1	VOLTAGE LESS THAN 0.9500:	59587 STR370 269.0	0.9425	0.9648 above .90
		59596 FRG397 269.0	0.9413	0.9649 above .90
59537 [AUR124 269.000] TO BUS 59578 [AUR355 269.000] CKT 1	VOLTAGE LESS THAN 0.9500:	59577 MTV351 269.0	0.9440	0.9792 above .90
		59578 AUR355 269.0	0.9429	0.9906 above .90
59538 [DIA131 269.000] TO BUS 59595 [RNM393 269.000] CKT 1	VOLTAGE LESS THAN 0.9500:	59606 MTV420 269.0	0.9429	0.9800 above .90
59541 [RIV167 269.000] TO BUS 59602 [RIV406 269.000] CKT 1	VOLTAGE LESS THAN 0.9500:	59422 QNB347 269.0	0.9451	0.9807 above .90
59543 [NEO184 269.000] TO BUS 59563 [LIN314 269.000] CKT 1	VOLTAGE LESS THAN 0.9500:	59420 WEL186 134.5	0.8979	0.9182 provide solut.
59545 [FRP217 269.000] TO BUS 59635 [FRP217 134.500] CKT 1	VOLTAGE LESS THAN 0.9500:	59524 NEO 56 269.0	0.9326	0.9835 above .90
		59563 LIN314 269.0	0.9308	0.9852 above .90
		59635 FRP217 134.5	0.8579	1.0129 provide solut.
		59637 HUM308 134.5	0.8605	0.9699 provide solut.
		59639 DUN283 134.5	0.8585	0.9908 provide solut.
		59640 COL318 134.5	0.8419	0.9526 provide solut.
59546 [BIL221 269.000] TO BUS 59580 [REP359 269.000] CKT 1	VOLTAGE LESS THAN 0.9500:	59641 CAP304 134.5	0.9413	0.9998 above .90
59568 [STK324 269.000] TO BUS 59616 [STK631J269.000] CKT 1	VOLTAGE LESS THAN 0.9500:	59576 REP345 269.0	0.9260	0.9724 above .90
		59580 REP359 269.0	0.9097	0.9681 above .90
		59568 STK324 269.0	0.9141	0.9837 above .90
		59637 HUM308 134.5	0.9395	0.9699 above .90
		59638 STK324 134.5	0.9386	1.0162 above .90
59568 [STK324 269.000] TO BUS 59638 [STK324 134.500] CKT 1	VOLTAGE LESS THAN 0.9500:	59640 COL318 134.5	0.9221	0.9526 above .90
		59641 CAP304 134.5	0.9385	0.9998 above .90
		59637 HUM308 134.5	0.9400	0.9699 above .90
		59638 STK324 134.5	0.9392	1.0162 above .90
		59640 COL318 134.5	0.9226	0.9526 above .90
		59641 CAP304 134.5	0.9390	0.9998 above .90
59570 [OZK330 269.000] TO BUS 59604 [BHJ415 269.000] CKT 1	VOLTAGE LESS THAN 0.9500:	59570 OZK330 269.0	0.8844	0.9978 provide solut.
59590 [QUA377 269.000] TO BUS 59601 [HOC404 269.000] CKT 1	VOLTAGE LESS THAN 0.9500:	59427 COM381 269.0	0.8893	0.9946 provide solut.
		59579 COM381T269.0	0.9111	0.9919 above .90
		59590 QUA377 269.0	0.9193	0.9993 above .90
			0.9173	1.0009 above .90

VOLTAGE REPORT TABLE

(59605 [STK418 269.000] TO BUS 59614 [SK631CJ269.000] CKT 1 VOLTAGE LESS THAN 0.9500: (OUTAGED BRANCH (X----- BUS -----X) V-CONT V-INIT	(VOLTAGE RANGE VOLTAGE LESS THAN 0.9500: (VOLTAGE RANGE VOLTAGE LESS THAN 0.9500: (X----- BUS -----X) V-CONT V-INIT
59605 [STK418 269.000] TO BUS 59614 [SK631CJ269.000] CKT 1 VOLTAGE LESS THAN 0.9500: (OUTAGED BRANCH (X----- BUS -----X) V-CONT V-INIT	59605 [STK418 269.000] TO BUS 59614 [SK631CJ269.000] CKT 1 VOLTAGE LESS THAN 0.9500: (OUTAGED BRANCH (X----- BUS -----X) V-CONT V-INIT
59635 [FRP217 134.500] TO BUS 59639 [DUN283 134.500] CKT 1 VOLTAGE LESS THAN 0.9500: (OUTAGED BRANCH (X----- BUS -----X) V-CONT V-INIT	59635 [FRP217 134.500] TO BUS 59639 [DUN283 134.500] CKT 1 VOLTAGE LESS THAN 0.9500: (OUTAGED BRANCH (X----- BUS -----X) V-CONT V-INIT
59637 [HUM308 134.500] TO BUS 59639 [DUN283 134.500] CKT 1 VOLTAGE LESS THAN 0.9500: (OUTAGED BRANCH (X----- BUS -----X) V-CONT V-INIT	59637 [HUM308 134.500] TO BUS 59639 [DUN283 134.500] CKT 1 VOLTAGE LESS THAN 0.9500: (OUTAGED BRANCH (X----- BUS -----X) V-CONT V-INIT
59637 [HUM308 134.500] TO BUS 59641 [CAP304 134.500] CKT 1 VOLTAGE LESS THAN 0.9500: (OUTAGED BRANCH (X----- BUS -----X) V-CONT V-INIT	59637 [HUM308 134.500] TO BUS 59641 [CAP304 134.500] CKT 1 VOLTAGE LESS THAN 0.9500: (OUTAGED BRANCH (X----- BUS -----X) V-CONT V-INIT
59638 [STK324 134.500] TO BUS 59641 [CAP304 134.500] CKT 1 VOLTAGE LESS THAN 0.9500: (OUTAGED BRANCH (X----- BUS -----X) V-CONT V-INIT	59638 [STK324 134.500] TO BUS 59641 [CAP304 134.500] CKT 1 VOLTAGE LESS THAN 0.9500: (OUTAGED BRANCH (X----- BUS -----X) V-CONT V-INIT
59478 [DAD368 5161.00] TO BUS 96101 [SMORGAN 161.00] CKT 1 VOLTAGE LESS THAN 0.9500: (OUTAGED BRANCH (X----- BUS -----X) V-CONT V-INIT	59478 [DAD368 5161.00] TO BUS 96101 [SMORGAN 161.00] CKT 1 VOLTAGE LESS THAN 0.9500: (OUTAGED BRANCH (X----- BUS -----X) V-CONT V-INIT
59497 [RVS438 5161.00] TO BUS 52672 [TABLE R5161.00] CKT 1 VOLTAGE LESS THAN 0.9500: (OUTAGED BRANCH (X----- BUS -----X) V-CONT V-INIT	59497 [RVS438 5161.00] TO BUS 52672 [TABLE R5161.00] CKT 1 VOLTAGE LESS THAN 0.9500: (OUTAGED BRANCH (X----- BUS -----X) V-CONT V-INIT
59605 [STK418 269.000] TO BUS 96118 [58TKAEC 161.00] CKT 1 VOLTAGE LESS THAN 0.9500: (OUTAGED BRANCH (X----- BUS -----X) V-CONT V-INIT	59605 [STK418 269.000] TO BUS 96118 [58TKAEC 161.00] CKT 1 VOLTAGE LESS THAN 0.9500: (OUTAGED BRANCH (X----- BUS -----X) V-CONT V-INIT

2001 SUMMER PEAK, ST. JOSEPH LIGHT AND POWER - AREA 679

2001 SPRING PEAK, MISSOURI PUBLIC SERVICE - AREA 540

VOLTAGE REPORT TABLE

(	OUTAGED BRANCH	) (	VOLTAGE RANGE	) (	VOLTAGE LESS THAN 0.9500:	(X----- BUS ----X)	V-CONT	V-INIT
59242	[CLINTON5161.00] TO BUS 96071 [5CLINTN 161.00]	CKT 1	VOLTAGE LESS THAN 0.9500:			59242 CLINTON5 161	0.9386	1.0336 Acceptable
						59301 CLNTPLT269.0	0.9329	1.0182 Acceptable
						59302 CLNTGRN269.0	0.9320	1.0180 Acceptable
						59303 CLINTON269.0	0.9326	1.0203 Acceptable
						59304 URICHTP269.0	0.9458	1.0081 Acceptable
						59305 URICH 269.0	0.9441	1.0065 Acceptable
CONTINGENCY SPP-12								
59207	[ARCHIE 5161.00] TO BUS 59240 [ADRIAN 5161.00]	CKT 1	VOLTAGE LESS THAN 0.9500:			59216 BUTLER_5 161	0.9279	1.0082 Acceptable
59216	[BUTLER_5161.00] TO BUS 59240 [ADRIAN 5161.00]	CKT 1						
59208	[NEVADA 5161.00] TO BUS 59216 [BUTLER_5161.00]	CKT 1						

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(	OUTAGED BRANCH	) (	VOLTAGE RANGE	) (	VOLTAGE LESS THAN 0.9500:	(X----- BUS ----X)	V-CONT	V-INIT
59464	[BOL 73 5161.00] TO BUS 59528 [BOL 73 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:			59425 HER209 269.0	0.9399	0.9877 above .90
						59432 BUF243J269.0	0.9473	0.9769 above .90
						59434 BUF409 269.0	0.9384	0.9733 above .90
						59547 BUF243 269.0	0.9471	0.9768 above .90
						59572 FGC333 269.0	0.9487	0.9770 above .90
						59575 BUF342 269.0	0.9429	0.9777 above .90
59480	[MON383 5161.00] TO BUS 59591 [MON383 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:			59400 MON376J269.0	0.9486	0.9830 above .90
						59401 MON376 269.0	0.9476	0.9821 above .90
						59402 MON416J269.0	0.9442	0.9788 above .90
						59403 MON416 269.0	0.9439	0.9785 above .90
						59404 PUR390 269.0	0.9262	0.9617 above .90
59528	[BOL 73 269.000] TO BUS 59575 [BUF342 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:			59432 BUF243J269.0	0.9460	0.9769 above .90
						59434 BUF409 269.0	0.9328	0.9733 above .90
						59547 BUF243 269.0	0.9459	0.9768 above .90
						59572 FGC333 269.0	0.9485	0.9770 above .90
						59575 BUF342 269.0	0.9374	0.9777 above .90
59535	[NIX114 269.000] TO BUS 59604 [BHJ415 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:			59580 REP359 269.0	0.9446	0.9647 above .90
59537	[AUR124 269.000] TO BUS 59578 [AUR355 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:			59424 RES364 269.0	0.8976	0.9787 capacitor 69kv
						59552 LAW260 269.0	0.9259	0.9845 above .90
						59553 ALB262 269.0	0.9006	0.9814 above .90
						59573 HTC338 269.0	0.9109	0.9827 above .90
						59577 MTV351 269.0	0.8918	0.9823 capacitor 69kv
						59578 AUR355 269.0	0.8830	0.9816 capacitor 69kv
						59606 MTV420 269.0	0.8907	0.9829 capacitor 69kv
59537	[AUR124 269.000] TO BUS 59611 [MAR437 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:			59546 BIL221 269.0	0.8999	0.9682 capacitor 69kv
						59576 REP345 269.0	0.9277	0.9731 above .90
						59580 REP359 269.0	0.9083	0.9647 above .90
						59611 MAR437 269.0	0.8894	0.9800 capacitor 69kv
59538	[DIA131 269.000] TO BUS 59595 [RNM393 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:			59422 GNB347 269.0	0.9493	0.9731 above .90
59542	[NIC170 269.000] TO BUS 59576 [REP345 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:			59546 BIL221 269.0	0.9245	0.9682 above .90
						59576 REP345 269.0	0.9100	0.9731 above .90
						59580 REP359 269.0	0.9102	0.9647 above .90
59543	[NEO184 269.000] TO BUS 59563 [LIN314 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:			59524 NEO 56 269.0	0.9442	0.9941 above .90
						59563 LIN314 269.0	0.9427	0.9959 above .90
59545	[PRP217 269.000] TO BUS 59635 [PRP217 134.500]	CKT 1	VOLTAGE LESS THAN 0.9500:			59640 COL318 134.5	0.9434	1.0003 above .90
59546	[BIL221 269.000] TO BUS 59611 [MAR437 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:			59546 BIL221 269.0	0.9333	0.9682 above .90
						59580 REP359 269.0	0.9361	0.9647 above .90
59570	[OZK330 269.000] TO BUS 59604 [BHJ415 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:			59570 OZK330 269.0	0.9151	1.0129 above .90
						59609 OZK434 269.0	0.9186	1.0089 above .90

VOLTAGE REPORT TABLE

(OUTAGED BRANCH) (VOLTAGE RANGE) (X---- BUS ----X)				V-CONT	V-INIT
59576 [REP345 269.000] TO BUS 59580 [REP359 269.000] CKT 1	VOLTAGE LESS THAN 0.9500:	59546 BIL221 269.0	0.9247	0.9682	above .90
59577 [MTV351 269.000] TO BUS 59606 [MTV420 269.000] CKT 1	VOLTAGE LESS THAN 0.9500:	59580 REP359 269.0	0.9105	0.9647	above .90
59578 [AUR355 269.000] TO BUS 59606 [MTV420 269.000] CKT 1	VOLTAGE LESS THAN 0.9500:	59424 RES364 269.0	0.9493	0.9787	above .90
		59577 MTV351 269.0	0.9492	0.9823	above .90
		59424 RES364 269.0	0.9386	0.9787	above .90
		59553 ALB262 269.0	0.9414	0.9814	above .90
		59573 HTC338 269.0	0.9473	0.9827	above .90
		59577 MTV351 269.0	0.9373	0.9823	above .90
		59606 MTV420 269.0	0.9371	0.9829	above .90
59590 [QUA377 269.000] TO BUS 59601 [HOC404 269.000] CKT 1	VOLTAGE LESS THAN 0.9500:	59427 COM381 269.0	0.9475	1.0017	above .90
59635 [FRP217 134.500] TO BUS 59639 [DUN283 134.500] CKT 1	VOLTAGE GREATER THAN 1.0500:	59635 FRP217 134.5	1.0545	1.0329	above .90
		VOLTAGE LESS THAN 0.9500:	0.9424	1.0003	above .90
59637 [HUM308 134.500] TO BUS 59639 [DUN283 134.500] CKT 1	VOLTAGE GREATER THAN 1.0500:	59635 FRP217 134.5	1.0548	1.0329	above .90
		VOLTAGE LESS THAN 0.9500:	1.0532	1.0205	above .90
59478 [DAD368 5161.00] TO BUS 96101 [SMORGAN 161.00] CKT 1	VOLTAGE LESS THAN 0.9500:	59639 DUN283 134.5	0.9467	1.0003	above .90
		VOLTAGE GREATER THAN 0.9500:	0.9492	0.9733	above .90

2001 SPRING PEAK, ST. JOSEPH LIGHT AND POWER - AREA 679

NONE

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(OUTAGED BRANCH) (VOLTAGE RANGE) (X---- BUS ----X)				V-CONT	V-INIT
59286 [ORDWST 269.000] TO BUS 59287 [MARTCTY269.000] CKT 1	VOLTAGE GREATER THAN 1.0500:	59287 MARTCTY269.0	1.0542	1.0214	LTC
59307 [NEVPLT 269.000] TO BUS 59308 [NEVADA 269.000] CKT 1	VOLTAGE LESS THAN 0.9500:	59306 APCITY 269.0	0.9119	1.0074	Switch
		59307 NEVPLT 269.0	0.8578	1.0160	Switch
		59311 NEVJCT 269.0	0.8567	1.0151	Switch
59308 [NEVADA 269.000] TO BUS 59309 [METZ 269.000] CKT 1	VOLTAGE GREATER THAN 1.0500:	59312 LAMAR 269.0	0.8359	0.9981	Switch
		59159 NEVADA#113.2	1.0501	1.0183	LTC
59242 [CLINTON5161.00] TO BUS 96071 [SCLINTN 161.00] CKT 1	VOLTAGE LESS THAN 0.9500:	59308 NEVADA 269.0	1.0501	1.0183	LTC
		59242 CLINTON5 161	0.9270	1.0298	Acceptable
		59301 CLNTPLT269.0	0.9300	1.0199	Acceptable
		59302 CLNTGRN269.0	0.9292	1.0198	Acceptable
		59303 CLINTON269.0	0.9297	1.0221	Acceptable
		59304 URICHTP269.0	0.9445	1.0120	Acceptable
		59305 URICH 269.0	0.9427	1.0104	Acceptable
CONTINGENCY SPP-12		59216 BUTLER_5 161	0.9340	1.0170	Acceptable

VOLTAGE REPORT TABLE

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(OUTAGED BRANCH) (VOLTAGE RANGE) (X---- BUS ----X)			V-CONT	V-INIT
59464 [BOL 73 5161.00] TO BUS 59528 [BOL 73 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:			59425 HER209 269.0	0.9804 capacitor 69kv
			59432 BUF243J269.0	0.9650 above .90
			59433 STRKAMO269.0	0.9761 above .90
			59434 BUF409 269.0	0.9562 capacitor 69kv
			59528 BOL 73 269.0	0.9992 above .90
			59529 SED 80 269.0	0.9871 above .90
			59545 FRP217 269.0	0.9918 above .90
			59547 BUF243 269.0	0.9648 above .90
			59567 BRT323 269.0	0.9905 above .90
			59572 FGC333 269.0	0.9656 above .90
			59575 BUF342 269.0	0.9647 capacitor 69kv
			59584 BOL367 269.0	0.9851 above .90
			59587 STR370 269.0	0.9723 above .90
			59596 FRG397 269.0	0.9724 above .90
			59612 BOL602 269.0	0.9844 above .90
			59637 HUM308 134.5	0.9667 above .90
			59640 COL318 134.5	0.9509 above .90
			59637 HUM308 134.5	0.9667 above .90
			59640 COL318 134.5	0.9509 above .90
			59404 PUR390 269.0	0.9676 above .90
			59400 MON376J269.0	0.9887 above .90
			59401 MON376 269.0	0.9877 above .90
			59402 MON416J269.0	0.9843 above .90
			59403 MON416 269.0	0.9841 above .90
			59404 PUR390 269.0	0.9676 above .90
			59420 WEL186 134.5	0.9640 above .90
			59432 BUF243J269.0	0.9650 above .90
			59434 BUF409 269.0	0.9562 capacitor 69kv
			59547 BUF243 269.0	0.9648 above .90
			59572 FGC333 269.0	0.9656 above .90
			59575 BUF342 269.0	0.9647 capacitor 69kv
			59587 STR370 269.0	0.9723 above .90
			59596 FRG397 269.0	0.9724 above .90
			59545 FRP217 269.0	0.9918 above .90
			59584 BOL367 269.0	0.9851 above .90
			59612 BOL602 269.0	0.9844 above .90
			59637 HUM308 134.5	0.9667 above .90
			59640 COL318 134.5	0.9509 above .90
			59432 BUF243J269.0	0.9650 above .90
			59547 BUF243 269.0	0.9648 above .90
			59572 FGC333 269.0	0.9656 above .90
			59587 STR370 269.0	0.9723 above .90
			59596 FRG397 269.0	0.9724 above .90
			59421 GNB347J269.0	0.9924 above .90
			59422 GNB347 269.0	0.9841 above .90
			59423 DIA242 269.0	0.9918 above .90
			59524 NEO 56 269.0	0.9923 above .90
			59563 LIN314 269.0	0.9941 above .90
			59637 HUM308 134.5	0.9667 above .90
			59640 COL318 134.5	0.9509 above .90

VOLTAGE REPORT TABLE

(OUTAGED BRANCH)	(VOLTAGE RANGE)	(X---- BUS ----X)	V-CONT	V-INIT
59545 [FRP217 269.000] TO BUS 59635 [FRP217 134.500] CKT 1 VOLTAGE LESS THAN 0.9500:		59635 FRP217 134.5 59637 HUM308 134.5 59639 DUN283 134.5 59640 COL318 134.5 59641 CAP304 134.5 59580 REP359 269.0 59568 STK324 269.0 59637 HUM308 134.5 59638 STK324 134.5 59640 COL318 134.5 59641 CAP304 134.5 59637 HUM308 134.5 59638 STK324 134.5 59641 CAP304 134.5 59570 OZK330 269.0 59572 FGC333 269.0 59590 QUA377 269.0 59549 ARC250 269.0 59568 STK324 269.0 59613 GRN614 269.0 59614 SK631CJ269.0 59616 STK631J269.0 59637 HUM308 134.5 59640 COL318 134.5 59635 FRP217 134.5 59637 HUM308 134.5 59639 DUN283 134.5 59640 COL318 134.5 59641 CAP304 134.5 59635 FRP217 134.5 59637 HUM308 134.5 59640 COL318 134.5 59641 CAP304 134.5 59637 HUM308 134.5 59640 COL318 134.5 59637 HUM308 134.5 59640 COL318 134.5 59641 CAP304 134.5 59473 RDS295 5 161 59474 OZD312 5 161 59475 BRN331 5 161 59482 HOL387 5 161 59488 BRN412 5 161 59489 BRN413 5 161 59492 RDS424 5 161 59495 GRT433 5 161 59497 RVS438 5 161	0.8330 0.8353 0.8331 0.8169 0.9370 0.9463 0.8933 0.9181 0.9173 0.9020 0.9171 0.9187 0.9181 0.9026 0.9179 0.9026 0.9061 0.9410 0.9409 0.9407 0.9358 0.9408 0.9392 0.9424 0.9352 0.9497 0.9348 0.9353 0.9358 0.9195 1.0504 0.8343 0.8159 0.8319 0.9364 1.0504 0.8448 0.8265 0.9415 0.9191 0.9031 0.9172 0.9011 0.9157 0.9477 0.9444 0.9417 0.9423 0.9416 0.9403 0.9453 0.9407 0.9406	1.0176 provide solut. 0.9667 provide solut. 0.9913 provide solut. 0.9509 provide solut. 1.0049 above .90 0.9809 above .90 0.9952 capacitor 69kv 0.9667 above .90 1.0259 above .90 0.9509 above .90 1.0049 above .90 0.9667 above .90 1.0259 above .90 0.9509 above .90 1.0049 above .90 1.0046 above .90 1.0008 above .90 0.9650 above .90 0.9648 above .90 0.9656 above .90 1.0024 above .90 1.0069 above .90 1.0083 above .90 0.9907 above .90 0.9952 above .90 0.9853 above .90 0.9959 above .90 0.9954 above .90 0.9667 above .90 0.9509 above .90 1.0176 above .90 0.9667 provide solut. 0.9913 provide solut. 0.9509 provide solut. 1.0049 above .90 1.0176 above .90 0.9667 provide solut. 0.9509 provide solut. 1.0049 above .90 0.9667 above .90 0.9509 above .90 0.9667 above .90 1.0049 above .90 0.9771 above .90 0.9846 above .90 0.9819 above .90 0.9860 above .90 0.9818 above .90 0.9849 above .90 0.9767 above .90 0.9831 above .90 0.9877 above .90
59546 [BIL221 269.000] TO BUS 59580 [REP359 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:				
59568 [STK324 269.000] TO BUS 59616 [STK631J269.000] CKT 1 VOLTAGE LESS THAN 0.9500:				
59568 [STK324 269.000] TO BUS 59638 [STK324 134.500] CKT 1 VOLTAGE LESS THAN 0.9500:				
59570 [OZK330 269.000] TO BUS 59604 [BHJ415 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:				
59572 [FGC333 269.000] TO BUS 59596 [PRG397 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:				
59590 [QUA377 269.000] TO BUS 59601 [HOC404 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:				
59605 [STK418 269.000] TO BUS 59614 [SK631CJ269.000] CKT 1 VOLTAGE LESS THAN 0.9500:				
59635 [FRP217 134.500] TO BUS 59639 [DUN283 134.500] CKT 1 VOLTAGE GREATER THAN 1.0500: VOLTAGE LESS THAN 0.9500:				
59637 [HUM308 134.500] TO BUS 59639 [DUN283 134.500] CKT 1 VOLTAGE GREATER THAN 1.0500: VOLTAGE LESS THAN 0.9500:				
59637 [HUM308 134.500] TO BUS 59641 [CAP304 134.500] CKT 1 VOLTAGE LESS THAN 0.9500:				
59638 [STK324 134.500] TO BUS 59641 [CAP304 134.500] CKT 1 VOLTAGE LESS THAN 0.9500:				
59497 [RVS438 5161.00] TO BUS 52672 [TABLE R5161.00] CKT 1 VOLTAGE LESS THAN 0.9500:				

VOLTAGE REPORT TABLE

(	OUTAGED BRANCH	) (	VOLTAGE RANGE	) (X----- BUS ----X)	V-CONT	V-INTT
59605	[STK418 269.000] TO BUS 96118 [SSTKAEC 161.00] CKT 1 VOLTAGE LESS THAN 0.9500:			59549 ARC250 269.0	0.9425	0.9907 above .90
				59568 STK324 269.0	0.9354	0.9952 above .90
				59605 STK418 269.0	0.9350	0.9970 above .90
				59613 GRN614 269.0	0.9498	0.9853 above .90
				59614 SK631CJ269.0	0.9350	0.9959 above .90
				59616 STK631J269.0	0.9355	0.9954 above .90
				59637 HUM308 134.5	0.9360	0.9667 above .90
				59640 COL318 134.5	0.9196	0.9509 above .90

2001 WINTER PEAK, ST. JOSEPH LIGHT AND POWER - AREA 679

2004 SUMMER PEAK, MISSOURI PUBLIC SERVICE - AREA 540

(	OUTAGED BRANCH	) (	VOLTAGE RANGE	) (X----- BUS ----X)	V-CONT	V-INTT
59207	[ARCHIE 5161.00] TO BUS 59240 [ADRIAN 5161.00] CKT 1 VOLTAGE LESS THAN 0.9500:			59159 NEVADA#113.2	0.9346	1.0152 Generation
				59208 NEVADA 5 161	0.8984	0.9695 Generation
				59216 BUTLER_5 161	0.8921	0.9887 Generation
				59240 ADRIAN_5 161	0.8905	0.9987 Generation
				59256 KAMOTP 269.0	0.8812	0.9664 Generation
				59257 ELDRDO 269.0	0.8792	0.9646 Generation
				59258 WALKER 269.0	0.8998	0.9834 Generation
				59259 DEDRCK 269.0	0.8887	0.9733 Generation
				59307 NEVPIT 269.0	0.9320	1.0115 Generation
				59308 NEVADA 269.0	0.9346	1.0152 Generation
				59309 METZ 269.0	0.9091	0.9919 Generation
				59310 3M 269.0	0.9017	0.9851 Generation
				59311 NEVJCT 269.0	0.9300	1.0098 Generation
				59312 LAMAR 269.0	0.8970	0.9796 Generation
59208	[NEVADA 5161.00] TO BUS 59216 [BUTLER_5161.00] CKT 1 VOLTAGE LESS THAN 0.9500:			59208 NEVADA 5 161	0.9203	0.9695 Acceptable
				59256 KAMOTP 269.0	0.9068	0.9664 Acceptable
				59257 ELDRDO 269.0	0.9049	0.9646 Acceptable
				59258 WALKER 269.0	0.9250	0.9834 Acceptable
				59259 DEDRCK 269.0	0.9142	0.9733 Acceptable
				59309 METZ 269.0	0.9341	0.9919 Acceptable
				59310 3M 269.0	0.9269	0.9851 Acceptable
				59312 LAMAR 269.0	0.9220	0.9796 Acceptable
				59256 KAMOTP 269.0	0.9243	0.9664 Acceptable
				59257 ELDRDO 269.0	0.9224	0.9646 Acceptable
				59258 WALKER 269.0	0.9421	0.9834 Acceptable
				59259 DEDRCK 269.0	0.9315	0.9733 Acceptable
				59310 3M 269.0	0.9439	0.9851 Acceptable
				59312 LAMAR 269.0	0.9389	0.9796 Acceptable
59208	[NEVADA 5161.00] TO BUS 59308 [NEVADA 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:			59256 KAMOTP 269.0	0.9349	0.9664 Acceptable
				59257 ELDRDO 269.0	0.9330	0.9646 Acceptable
				59259 DEDRCK 269.0	0.9420	0.9733 Acceptable
59209	[SEDALIA5161.00] TO BUS 59271 [SEDN 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:			59312 LAMAR 269.0	0.9492	0.9796 Acceptable
				59277 WARSAW 269.0	0.9359	0.9875 Acceptable

NONE

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( ( OUTAGED BRANCH ) ( VOLTAGE RANGE
59216 [BUTLER 5161.00] TO BUS 59240 [ADRIAN 5161.00] CKT 1 VOLTAGE LESS THAN 0.9500:

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(
59216 {BUTLER_5161.00} TO BUS 59240 {ADRIAN 5161.00} CKT 1 VOLTAGE LESS THAN 0.9500:
) (
OUTAGED BRANCH
) (
VOLTAGE RANGE
)
59216 {BUTLER_5161.00} TO BUS 59240 {ADRIAN 5161.00} CKT 1 VOLTAGE LESS THAN 0.9500:
)
59239 {HSNVL 5161.00} TO BUS 59295 {HSNVL 269.000} CKT 1 VOLTAGE LESS THAN 0.9500:
)
59280 {PHILL 269.000} TO BUS 59290 {BELTONS269.000} CKT 1 VOLTAGE LESS THAN 0.9500:
)
59284 {GRDVWTP269.000} TO BUS 59288 {RGAFB 269.000} CKT 1 VOLTAGE LESS THAN 0.9500:
)
59285 {GRDWCITY269.000} TO BUS 59286 {GRDMST 269.000} CKT 1 VOLTAGE GREATER THAN 1.0500:
)
59286 {GRDMST 269.000} TO BUS 59287 {MARTCTY269.000} CKT 1 VOLTAGE GREATER THAN 1.0500:
)
59288 {RGAFB 269.000} TO BUS 59289 {BELTON 269.000} CKT 1 VOLTAGE LESS THAN 0.9500:
)
59292 {ANCONDA269.000} TO BUS 59293 {HSNVLM 269.000} CKT 1 VOLTAGE LESS THAN 0.9500:
)
59293 {HSNVLM 269.000} TO BUS 59294 {HSNVLS 269.000} CKT 1 VOLTAGE LESS THAN 0.9500:
)
59294 {HSNVLS 269.000} TO BUS 59295 {HSNVL 269.000} CKT 1 VOLTAGE LESS THAN 0.9500:
)
59307 {NEVPLT 269.000} TO BUS 59308 {NEVADA 269.000} CKT 1 VOLTAGE GREATER THAN 1.0500:
)
VOLTAGE LESS THAN 0.9500:
)
59308 {NEVADA 269.000} TO BUS 59309 {METZ 269.000} CKT 1 VOLTAGE GREATER THAN 1.0500:
)

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VOLTAGE REPORT TABLE

(59309 [METZ 269.000] TO BUS 59310 [3M 59258 WALKER 269.0 59307 NEVPLT 269.0 59308 NEVADA 269.0 59309 METZ 269.0 59311 NEVJCT 269.0 59242 [CLINTON5161.00] TO BUS 96071 [SCLINTN 161.00] CKT 1 VOLTAGE LESS THAN 0.9500:	(VOLTAGE RANGE CKT 1 VOLTAGE GREATER THAN 1.0500: 59159 NEVADA#113.2 59258 WALKER 269.0 59307 NEVPLT 269.0 59308 NEVADA 269.0 59309 METZ 269.0 59311 NEVJCT 269.0 59242 CLINTON5 161 59256 KAMOTP 269.0 59257 ELDRDO 269.0 59258 WALKER 269.0 59259 DEDRCK 269.0 59300 POSTOAK269.0 59301 CLNTPLT269.0 59302 CLNTGRN269.0 59303 CLINTON269.0 59304 URICHTP269.0 59305 URICH 269.0 59306 APCITY 269.0 59309 METZ 269.0 59310 3M 269.0 59312 LAMAR 269.0	) (X---- BUS ----X) V-CONT 1.0682 1.0548 1.0636 1.0682 1.0626 1.0619 0.8158 0.9163 0.9144 0.9343 0.9236 0.8950 0.8392 0.8375 0.8386 0.8591 0.8559 0.8821 0.9433 0.9362 0.9263	V-INIT 1.0152 LTC 0.9834 LTC 1.0115 LTC 1.0152 LTC 0.9919 LTC 1.0098 LTC 1.0197 Accept Risk 0.9664 Accept Risk 0.9646 Accept Risk 0.9834 Accept Risk 0.9733 Accept Risk 1.0125 Accept Risk 1.0167 Accept Risk 1.0167 Accept Risk 1.0208 Accept Risk 1.0087 Accept Risk 1.0059 Accept Risk 1.0044 Accept Risk 0.9919 Accept Risk 0.9851 Accept Risk 0.9796 Accept Risk

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(59207 [ARCHIE 5161.00] TO BUS 59240 [ADRIAN 5161.00] CKT 1 VOLTAGE LESS THAN 0.9500: 59216 [BUTLER_5161.00] TO BUS 59240 [ADRIAN 5161.00] CKT 1 59208 [NEVADA 5161.00] TO BUS 59216 [BUTLER_5161.00] CKT 1	(VOLTAGE RANGE CKT 1 VOLTAGE LESS THAN 0.9500: 59159 NEVADA#113.2 59208 NEVADA 5 161 59216 BUTLER_5 161 59256 KAMOTP 269.0 59257 ELDRDO 269.0 59258 WALKER 269.0 59259 DEDRCK 269.0 59307 NEVPLT 269.0 59308 NEVADA 269.0 59309 METZ 269.0 59310 3M 269.0 59311 NEVJCT 269.0 59312 LAMAR 269.0	) (X---- BUS ----X) V-CONT 0.9460 0.9091 0.8829 0.8931 0.8911 0.9115 0.9005 0.9432 0.9460 0.9208 0.9134 0.9413 0.9086	V-INIT 1.0152 Generation 0.9895 Generation 0.9887 Generation 0.9664 Generation 0.9646 Generation 0.9834 Generation 0.9733 Generation 1.0115 Generation 1.0152 Generation 0.9919 Generation 0.9851 Generation 1.0098 Generation 0.9796 Generation

2004 SUMMER PEAK EMPIRE DISTRICT ELECTRIC - AREA 544

(BASE CASE OUTAGED BRANCH 59433 [STRKAMO269.000] TO BUS 59604 [BHX415 269.000] CKT 1 VOLTAGE LESS THAN 0.9500: 59436 [CUPTAP 269.000] TO BUS 59585 [DAD368 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	(VOLTAGE RANGE CKT 1 VOLTAGE LESS THAN 0.9500: 59404 PUR390 269.0 59416 CHE299T134.5 59417 CHE299 134.5 59418 CHE300 134.5 59419 TWN388 134.5 59420 WEL186 134.5 59640 COL318 134.5 59433 STRKAMO269.0 59436 CUPTAP 269.0 59437 CUPSUB 269.0 59598 LKW400 269.0 59613 GRN614 269.0	) (X---- BUS ----X) V-CONT 0.9497 0.9192 0.9156 0.9186 0.9176 0.8936 0.9496 0.9462 0.9442 0.9436 0.9482 0.9490	V-INIT 0.9497 above .90 0.9192 above .90 0.9156 above .90 0.9186 above .90 0.9176 above .90 0.8936 provide solut. 0.9496 above .90 0.9679 above .90 0.9997 above .90 0.9992 above .90 0.9727 above .90 0.9765 above .90

VOLTAGE REPORT TABLE

(OUTAGED BRANCH) (VOLTAGE RANGE) (X---- BUS ----X)			V-CONT	V-INIT
59164 [BOL 73 5161.00] TO BUS 59528 [BOL 73 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	59425 HER209 269.0		0.8790	0.9808 capacitor 69kv
	59432 BUF243J269.0		0.8968	0.9639 capacitor 69kv
	59433 STRKAMO269.0		0.9248	0.9679 above .90
	59434 BUF409 269.0		0.8804	0.9581 capacitor 69kv
	59528 BOL 73 269.0		0.9035	1.0023 above .90
	59529 SED 80 269.0		0.9347	0.9775 above .90
	59545 FRP217 269.0		0.9377	0.9910 above .90
	59547 BUF243 269.0		0.8966	0.9637 capacitor 69kv
	59567 BRT323 269.0		0.9180	0.9867 above .90
	59572 FGC333 269.0		0.8991	0.9640 capacitor 69kv
	59575 BUF342 269.0		0.8887	0.9657 capacitor 69kv
	59584 BOL367 269.0		0.9059	0.9895 above .90
	59586 WIL445 269.0		0.9416	0.9743 above .90
	59587 STR370 269.0		0.9160	0.9654 above .90
	59596 FRG397 269.0		0.9146	0.9663 above .90
	59612 BOL602 269.0		0.9089	0.9878 above .90
	59637 HUM308 134.5		0.9325	0.9684 above .90
	59639 DUN283 134.5		0.9473	0.9910 above .90
	59640 COL318 134.5		0.9129	0.9496 above .90
59178 [DAD368 5161.00] TO BUS 59585 [DAD368 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	59691 WIL369 269.0		0.9393	0.9721 above .90
	59436 CUPTAP 269.0		0.9492	0.9997 above .90
	59437 CUP8UB 269.0		0.9487	0.9992 above .90
	59536 ASH121 269.0		0.9491	0.9792 above .90
	59637 HUM308 134.5		0.9427	0.9684 above .90
	59640 COL318 134.5		0.9236	0.9496 above .90
	59691 WIL369 269.0		0.9478	0.9721 above .90
	59400 MON376J269.0		0.9460	0.9794 above .90
	59401 MON376 269.0		0.9447	0.9781 above .90
	59402 MON416J269.0		0.9400	0.9736 above .90
	59403 MON416 269.0		0.9397	0.9733 above .90
	59404 PUR390 269.0		0.9153	0.9497 above .90
	59468 AUR124 5 161		0.9427	0.9673 above .90
	59480 MON383 5 161		0.9311	0.9646 above .90
	59400 MON376J269.0		0.9182	0.9794 above .90
	59401 MON376 269.0		0.9169	0.9781 above .90
	59402 MON416J269.0		0.9120	0.9736 above .90
	59403 MON416 269.0		0.9116	0.9733 above .90
	59404 PUR390 269.0		0.8864	0.9497 capacitor 69kv
59179 [LAR382 5161.00] TO BUS 59480 [MON383 5161.00] CKT 1 VOLTAGE LESS THAN 0.9500:	59405 MON352J269.0		0.9415	1.0009 above .90
	59406 MON352 269.0		0.9413	1.0008 above .90
	59407 MON311J269.0		0.9401	0.9997 above .90
	59408 MON311 269.0		0.9400	0.9996 above .90
	59430 SAR362 269.0		0.9462	0.9810 above .90
	59540 MON152 269.0		0.9465	1.0013 above .90
	59544 WEN205 269.0		0.9497	0.9899 above .90
	59591 MON383 269.0		0.9458	1.0051 above .90
59180 [MON383 5161.00] TO BUS 59591 [MON383 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:				

VOLTAGE REPORT TABLE

(	OUTAGED BRANCH	) (	VOLTAGE RANGE	) (	VOLTAGE RANGE	V-CONT	V-INIT
59543	[NEO184 269.000] TO BUS 59563 [LIN314 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:					0.9385	0.9699 above .90
						0.9161	0.9790 above .90
59545	[FRP217 269.000] TO BUS 59635 [FRP217 134.500] CKT 1 VOLTAGE LESS THAN 0.9500:					0.9142	0.9815 above .90
						0.8511	1.0148 capacitor 69kv
						0.8524	0.9684 capacitor 69kv
						0.8511	0.9910 capacitor 69kv
						0.8307	0.9496 capacitor 69kv
59546	[BIL221 269.000] TO BUS 59580 [REP359 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:					0.9396	1.0010 above .90
						0.9180	0.9684 above .90
59554	[BAX271 269.000] TO BUS 59601 [HOC404 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:					0.8996	0.9628 capacitor 69kv
						0.8863	0.9192 capacitor 69kv
						0.8827	0.9156 capacitor 69kv
						0.8857	0.9186 capacitor 69kv
						0.8848	0.9176 capacitor 69kv
59568	[STK324 269.000] TO BUS 59616 [STK631J269.000] CKT 1 VOLTAGE LESS THAN 0.9500:					0.8599	0.8936 capacitor 69kv
						0.9076	0.9848 above .90
						0.9336	0.9684 above .90
						0.9320	1.0189 above .90
						0.9144	0.9496 above .90
						0.9318	1.0010 above .90
59568	[STK324 269.000] TO BUS 59638 [STK324 134.500] CKT 1 VOLTAGE LESS THAN 0.9500:					0.9386	0.9684 above .90
						0.9380	1.0189 above .90
						0.9197	0.9496 above .90
						0.9379	1.0010 above .90
59570	[OZK330 269.000] TO BUS 59604 [BHJ415 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:					0.8825	0.9955 capacitor 69kv
						0.8875	0.9925 capacitor 69kv
59589	[RAC375 269.000] TO BUS 59592 [JOP389 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:					0.9448	0.9699 above .90
59590	[QUA377 269.000] TO BUS 59601 [HOC404 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:					0.9055	0.9870 above .90
						0.9141	0.9949 above .90
						0.9118	0.9963 above .90
59598	[LKW400 269.000] TO BUS 59613 [GRN614 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:					0.9456	0.9708 above .90
						0.9410	0.9727 above .90
59605	[STK418 269.000] TO BUS 59614 [SK631CJ269.000] CKT 1 VOLTAGE LESS THAN 0.9500:					0.9489	0.9719 above .90
						0.9275	0.9809 above .90
						0.9406	0.9708 above .90
						0.9197	0.9848 above .90
						0.9358	0.9727 above .90
						0.9357	0.9765 above .90
						0.9191	0.9853 above .90
						0.9198	0.9849 above .90
						0.9372	0.9684 above .90
						0.9177	0.9496 above .90
						0.9462	1.0010 above .90
59635	[FRP217 134.500] TO BUS 59639 [DUN283 134.500] CKT 1 VOLTAGE LESS THAN 0.9500:					0.8512	0.9684 capacitor 69kv
						0.8496	0.9910 capacitor 69kv
						0.8295	0.9496 capacitor 69kv
						0.9391	1.0010 above .90
59637	[HUM308 134.500] TO BUS 59639 [DUN283 134.500] CKT 1 VOLTAGE LESS THAN 0.9500:					0.8574	0.9684 capacitor 69kv
						0.8357	0.9496 capacitor 69kv
						0.9420	1.0010 above .90
59637	[HUM308 134.500] TO BUS 59641 [CAP304 134.500] CKT 1 VOLTAGE LESS THAN 0.9500:					0.9385	0.9684 above .90
59638	[STK324 134.500] TO BUS 59641 [CAP304 134.500] CKT 1 VOLTAGE LESS THAN 0.9500:					0.9196	0.9496 above .90
						0.9370	0.9684 above .90
						0.9181	0.9496 above .90

VOLTAGE REPORT TABLE

(	OUTAGED BRANCH	) (	VOLTAGE RANGE	) (X----- BUS -----X)	V-CONT	V-INIT
59484	[DEC392 5161.00] TO BUS 53139 [FLINTCR5161.00] CKT 1 VOLTAGE LESS THAN 0.9500:			59428 SMC414 269.0 59569 DEC326 269.0 59594 DEC392 269.0 59617 GRA700 269.0 59473 RDS295 5 161 59474 OZD312 5 161 59475 BRN331 5 161 59482 HOL387 5 161 59488 BRN412 5 161 59489 BRN413 5 161 59492 RDS424 5 161 59495 GRT433 5 161 59497 RVS438 5 161 59648 OZD312 14.60 59641 CAP304 134.5 59548 BOS249 269.0 59549 ARC250 269.0 59550 GLD251 269.0 59568 STK324 269.0 59598 LKW400 269.0 59605 STK418 269.0 59613 GRN614 269.0 59614 SK631CJ269.0 59616 STK631J269.0 59637 HUM308 134.5 59640 COL318 134.5 59641 CAP304 134.5	0.9483 0.9484 0.9498 0.9477 0.9267 0.9226 0.9203 0.9207 0.9202 0.9190 0.9237 0.9194 0.9193 0.9462 0.9356 0.9490 0.9286 0.9409 0.9211 0.9364 0.9205 0.9365 0.9205 0.9211 0.9388 0.9198 0.9482	0.9843 above .90 1.0015 above .90 1.0041 above .90 0.9963 above .90 0.9602 above .90 0.9687 above .90 0.9664 above .90 0.9710 above .90 0.9663 above .90 0.9704 above .90 0.9596 above .90 0.9681 above .90 0.9716 above .90 0.9915 above .90 1.0010 above .90 0.9719 above .90 0.9809 above .90 0.9708 above .90 0.9848 above .90 0.9727 above .90 0.9864 above .90 0.9765 above .90 0.9853 above .90 0.9849 above .90 0.9684 above .90 0.9496 above .90 1.0010 above .90
59497	[RVS438 5161.00] TO BUS 52672 [TABLE R5161.00] CKT 1 VOLTAGE LESS THAN 0.9500:			59256 KAMOTP 269.0 59257 ELORDO 269.0 59213 FRLVW 5 161 59212 KCI 5 161 59213 FRLVW 5 161 59287 MARTCTY269.0 59306 APCITY 269.0 59307 NEVPILT 269.0 59311 NEVJCT 269.0 59312 LAMAR 269.0 59159 NEVADA#113.2 59307 NEVPILT 269.0 59308 NEVADA 269.0 59311 NEVJCT 269.0	0.9499 0.9487 1.0654 1.0624 1.0629 1.0621 0.9477 0.8999 0.8987 0.8770 1.0574 1.0574 1.0574 1.0533	0.9943 Acceptable 0.9931 Acceptable 1.0365 Cap Bank Off 1.0329 Cap Bank Off 1.0365 Cap Bank Off 1.0194 LTC 1.0142 Switch 1.0222 Switch 1.0212 Switch 1.0025 Switch 1.0246 LTC 1.0222 LTC 1.0246 LTC 1.0212 LTC
59605	[STK418 269.000] TO BUS 96118 [SSTKAEC 161.00] CKT 1 VOLTAGE LESS THAN 0.9500:			69704 EAST 5 161 69708 WOODBINS 161	0.9494 0.9492	0.9989 Acceptable 1.0029 Acceptable
CONTINGENCY SPP-12						
59207	[ARCHIE 5161.00] TO BUS 59240 [ADRIAN 5161.00] CKT 1 VOLTAGE LESS THAN 0.9500:					
59216	[BUTLER_5161.00] TO BUS 59240 [ADRIAN 5161.00] CKT 1					
59208	[NEVADA 5161.00] TO BUS 59216 [BUTLER_5161.00] CKT 1					
2004 SUMMER PEAK - ST. JOSEPH LIGHT AND POWER - AREA 679						
69703	[ST JOE 5161.00] TO BUS 69708 [WOODBINS161.00] CKT 1 VOLTAGE LESS THAN 0.9500:					
2004 WINTER PEAK - MISSOURI PUBLIC SERVICE - AREA 540						
59207	[ARCHIE 5161.00] TO BUS 59240 [ADRIAN 5161.00] CKT 1 VOLTAGE LESS THAN 0.9500:					
59212	[KCI 5161.00] TO BUS 59213 [FRLVW 5161.00] CKT 1 VOLTAGE GREATER THAN 1.0500:					
59212	[KCI 5161.00] TO BUS 59221 [PLTCTY 5161.00] CKT 1 VOLTAGE GREATER THAN 1.0500:					
59286	[GRDWST 269.000] TO BUS 59287 [MARTCTY269.000] CKT 1 VOLTAGE GREATER THAN 1.0500:					
59307	[NEVPILT 269.000] TO BUS 59308 [NEVADA 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:					
59308	[NEVADA 269.000] TO BUS 59309 [NETZ 269.000] CKT 1 VOLTAGE GREATER THAN 1.0500:					

VOLTAGE REPORT TABLE

((OUTAGED BRANCH 269.000] TO BUS 59310 [3M 269.000] CKT 1 VOLTAGE GREATER THAN 1.0500:) (VOLTAGE RANGE) (X---- BUS ----X)	V-CONT	V-INIT
59109 [METZ 269.000] TO BUS 59310 [3M 269.000] CKT 1 VOLTAGE GREATER THAN 1.0500:	1.0502	1.0246 LTC
59242 [CLINTON5161.00] TO BUS 96071 [5CLINTN 161.00] CKT 1 VOLTAGE LESS THAN 0.9500:	1.0502	1.0246 LTC
	0.9238	1.0287 Acceptable
	0.9268	1.0170 Acceptable
	0.9258	1.0169 Acceptable
	0.9265	1.0194 Acceptable
	0.9401	1.0147 Acceptable
	0.9382	1.0130 Acceptable
CONTINGENCY SPP-12		
59207 [ARCHIE 5161.00] TO BUS 59240 [ADRIAN 5161.00] CKT 1 VOLTAGE LESS THAN 0.9500:	0.9239	1.0122 Acceptable
59216 [BUTLER 5161.00] TO BUS 59240 [ADRIAN 5161.00] CKT 1		
59208 [NEVADA 5161.00] TO BUS 59216 [BUTLER_5161.00] CKT 1		

2004 WINTER PEAK -EMPIRE DISTRICT ELECTRIC - AREA 544

((OUTAGED BRANCH BASE CASE) (VOLTAGE RANGE) (X---- BUS ----X)	V-CONT	V-INIT
59464 [BOL 73 5161.00] TO BUS 59528 [BOL 73 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	0.9458	0.9458 above .90
	0.9498	0.9498 above .90
	0.8771	0.9958 capacitor 69kv
	0.8952	0.9755 capacitor 69kv
	0.9308	0.9826 above .90
	0.8758	0.9683 capacitor 69kv
	0.8988	1.0145 capacitor 69kv
	0.9423	0.9936 above .90
	0.9346	0.9980 above .90
	0.8950	0.9754 capacitor 69kv
	0.9195	1.0007 above .90
	0.8979	0.9760 capacitor 69kv
	0.8851	0.9767 capacitor 69kv
	0.8971	0.9957 capacitor 69kv
	0.9205	0.9798 above .90
	0.9181	0.9803 above .90
	0.9008	0.9940 above .90
	0.9235	0.9663 above .90
	0.9413	0.9928 above .90
	0.9061	0.9498 above .90
	0.9426	0.9663 above .90
	0.9256	0.9498 above .90
	0.9434	0.9688 above .90
	0.9300	0.9907 above .90
	0.9288	0.9896 above .90
	0.9251	0.9861 above .90
	0.9248	0.9859 above .90
	0.9065	0.9688 above .90
	0.9494	1.0087 above .90
	0.9493	1.0086 above .90
	0.9378	0.9628 above .90
	0.9355	0.9605 above .90
	0.9375	0.9625 above .90
	0.9369	0.9619 above .90
	0.9205	0.9458 above .90
59478 [DAD368 5161.00] TO BUS 59585 [DAD368 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:		
59479 [LAR382 5161.00] TO BUS 59480 [MON383 5161.00] CKT 1 VOLTAGE LESS THAN 0.9500:		
59480 [MON383 5161.00] TO BUS 59591 [MON383 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:		
59487 [HOC404 5161.00] TO BUS 59601 [HOC404 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:		

OUTAGED BRANCH

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( OUTAGED BRANCH
59528 [BOL 73 269.000] TO BUS 59575 [BUP342 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:
) ( VOLTAGE RANGE
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(X--- BUS ---X)

V - CONT

V-INIT

59528	[BOL 73 269.000]	TO BUS 59575	[BUP342 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:
59528	[BOL 73 269.000]	TO BUS 59584	[BOL367 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:
59538	[DIA131 269.000]	TO BUS 59595	[RNM393 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:
59543	[NEO184 269.000]	TO BUS 59563	[LIN314 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:
59545	[FRP217 269.000]	TO BUS 59585	[DAD368 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:
59545	[FRP217 269.000]	TO BUS 59635	[FRP217 134.500]	CKT 1	VOLTAGE LESS THAN 0.9500:
59546	[BIL221 269.000]	TO BUS 59580	[REP359 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:
59568	[STK324 269.000]	TO BUS 59616	[STK631J269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:
59568	[STK324 269.000]	TO BUS 59638	[STK324 134.500]	CKT 1	VOLTAGE LESS THAN 0.9500:
59570	[OZK330 269.000]	TO BUS 59604	[BHIJ415 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:
59590	[QUA377 269.000]	TO BUS 59601	[HOC404 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:
59605	[STK418 269.000]	TO BUS 59614	[SK631CJ269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:

(X--- BUS ---X)

W - CONT

V-INIT

VOLTAGE REPORT TABLE

(OUTAGED BRANCH)		(VOLTAGE RANGE)		(X----- BUS -----X)		V-CONT		V-INIT	
59293	[HSNVLM 269.000] TO BUS 59294 [HSNVLS 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:	59291 FREEMAN269.0	0.9393	0.9870	Acceptable	1.0041	Acceptable
				59292 ANCONDA269.0	0.9261	1.0041	Acceptable	1.0053	Acceptable
59294	[HSNVLS 269.000] TO BUS 59295 [HSNVLM 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:	59293 HSNVLM 269.0	0.9359	0.9724	Acceptable	0.9870	Acceptable
				59290 BELTONS269.0	0.9460				
				59291 FREEMAN269.0	0.9120				
59295	[HSNVLM 269.000] TO BUS 59296 [HSNVLSW269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:	59292 ANCONDA269.0	0.9033				
				59293 HSNVLM 269.0	0.9027				
				59294 HSNVLS 269.0	0.9018				
				59296 HSNVLSW269.0	0.9454				
				59297 HSNVLM 269.0	0.9466				
				59298 GRDNCTY269.0	0.9423				
				59299 SNCLRPS269.0	0.9423				
59307	[NEVPLT 269.000] TO BUS 59308 [NEVADA 269.000]	CKT 1	VOLTAGE GREATER THAN 1.0500: VOLTAGE LESS THAN 0.9500:	59159 NEVADA#113.2	1.0640	1.0176	Switch	1.0063	Acceptable
				59308 NEVADA 269.0	1.0640	1.0176	Switch	1.0176	Switch
				59304 URICHTP269.0	0.9068	1.0078	Switch	1.0049	Switch
				59305 URICH 269.0	0.9036	1.0039	Switch	1.0136	Switch
				59306 APCITY 269.0	0.8482	1.0117	Switch	0.9795	Switch
				59307 NEVPLT 269.0	0.7393	1.0176	LTC	1.0136	LTC
				59311 NEVJCT 269.0	0.7364	1.0117	LTC	0.9795	LTC
59308	[NEVADA 269.000] TO BUS 59309 [METZ 269.000]	CKT 1	VOLTAGE GREATER THAN 1.0500:	59312 LAMAR 269.0	0.6902	1.0176	LTC	1.0136	LTC
				59159 NEVADA#113.2	1.0933	1.0176	LTC	1.0136	LTC
				59307 NEVPLT 269.0	1.0879	1.0176	LTC	1.0117	LTC
				59308 NEVADA 269.0	1.0933	1.0176	LTC	0.9795	LTC
				59311 NEVJCT 269.0	1.0862	1.0176	LTC	1.0136	LTC
				59312 LAMAR 269.0	1.0566	1.0176	LTC	0.9837	LTC
59309	[METZ 269.000] TO BUS 59310 [3M 269.000]	CKT 1	VOLTAGE GREATER THAN 1.0500:	59159 NEVADA#113.2	1.0772	1.0176	LTC	0.9837	LTC
				59258 WALKER 269.0	1.0630	0.9729	LTC	1.0136	LTC
				59259 DEDRCK 269.0	1.0530	1.0176	LTC	0.9928	LTC
				59307 NEVPLT 269.0	1.0721	1.0176	LTC	0.9928	LTC
				59308 NEVADA 269.0	1.0772	1.0176	LTC	0.9928	LTC
				59309 METZ 269.0	1.0712	1.0117	LTC	0.9604	Accept Risk
59242	[CLINTON5161.00] TO BUS 96071 [5CLINTN 161.00]	CKT 1	VOLTAGE LESS THAN 0.9500:	59311 NEVJCT 269.0	1.0704	1.0147	Accept Risk	0.9636	Accept Risk
				59208 NEVADA S 161	0.9368	0.9636	Accept Risk	0.9636	Accept Risk
				59242 CLINTON5 161	0.7785	0.9636	Accept Risk	0.9636	Accept Risk
				59256 KAMOTP 269.0	0.9040	0.9636	Accept Risk	0.9636	Accept Risk
				59257 ELDRDO 269.0	0.9019	0.9636	Accept Risk	0.9636	Accept Risk
				59258 WALKER 269.0	0.9234	0.9636	Accept Risk	0.9636	Accept Risk
				59259 DEDRCK 269.0	0.9118	0.9636	Accept Risk	0.9636	Accept Risk
				59300 POSTOAK269.0	0.8714	1.0061	Accept Risk	1.0061	Accept Risk
				59301 CLANTPLT269.0	0.8107	1.0159	Accept Risk	1.0159	Accept Risk
				59302 CLANTGRN269.0	0.8089	1.0160	Accept Risk	1.0160	Accept Risk
				59303 CLINTON269.0	0.8100	1.0205	Accept Risk	1.0205	Accept Risk
				59304 URICHTP269.0	0.8342	1.0078	Accept Risk	1.0078	Accept Risk
				59305 URICH 269.0	0.8307	1.0049	Accept Risk	1.0049	Accept Risk
				59306 APCITY 269.0	0.8611	1.0039	Accept Risk	1.0039	Accept Risk
				59309 METZ 269.0	0.9331	0.9928	Accept Risk	0.9928	Accept Risk
				59310 3M 269.0	0.9254	0.9856	Accept Risk	0.9856	Accept Risk
				59311 NEVJCT 269.0	0.9489	1.0117	Accept Risk	1.0117	Accept Risk
				59312 LAMAR 269.0	0.9143	0.9795	Accept Risk	0.9795	Accept Risk

VOLTAGE REPORT TABLE

(SPP-12)	OUTAGED BRANCH	() ()	VOLTAGE RANGE	(X---- BUS ----X)	V-CONT	V-INIT
59207	[ARCHIE 5161.00] TO BUS 59240 [ADRIAN 5161.00] CKT 1		VOLTAGE LESS THAN 0.9500:	59159 NEVADA#113.2	0.9436	1.0176 Generation
59216	[BUTLER_5161.00] TO BUS 59240 [ADRIAN 5161.00] CKT 1			59208 NEVADA 5 161	0.8972	0.9604 Generation
59208	[NEVADA 5161.00] TO BUS 59216 [BUTLER_5161.00] CKT 1			59216 BUTLER_5 161	0.8560	0.9796 Generation
				59256 KAMOTP 269.0	0.8871	0.9656 Generation
				59257 ELDRDO 269.0	0.8849	0.9636 Generation
				59258 WALKER 269.0	0.9068	0.9837 Generation
				59259 DEDRCK 269.0	0.8950	0.9729 Generation
				59307 NEVPLT 269.0	0.9405	1.0136 Generation
				59308 NEVADA 269.0	0.9436	1.0176 Generation
				59309 METZ 269.0	0.9166	0.9928 Generation
				59310 3M 269.0	0.9088	0.9856 Generation
				59311 NEVJCT 269.0	0.9384	1.0117 Generation
				59312 LAMAR 269.0	0.9034	0.9795 Generation
2006 SUMMER PEAK, EMPIRE DISTRICT ELECTRIC - AREA 544						
			VOLTAGE LESS THAN 0.9500:	59404 PUR390 269.0	0.9476	0.9476 above .90
				59416 CHE299T134.5	0.9088	0.9088 above .90
				59417 CHE299 134.5	0.9049	0.9049 above .90
				59418 CHE300 134.5	0.9082	0.9082 above .90
				59419 TWN388 134.5	0.9073	0.9073 above .90
				59420 WEL186 134.5	0.8820	0.8820 provide solut.
				59640 COL318 134.5	0.9469	0.9469 above .90
				59433 STRKAMO269.0	0.9422	0.9634 above .90
59433	[STRKAMO269.00] TO BUS 59604 [BHJ415 269.000] CKT 1		VOLTAGE LESS THAN 0.9500:	59436 CUPTAP 269.0	0.9464	0.9983 above .90
59436	[CUPTAP 269.000] TO BUS 59585 [DAD368 269.000] CKT 1		VOLTAGE LESS THAN 0.9500:	59437 CUPSUB 269.0	0.9459	0.9977 above .90
				59598 LKW400 269.0	0.9497	0.9728 above .90
59464	[BOL 73 5161.00] TO BUS 59528 [BOL 73 269.000] CKT 1		VOLTAGE LESS THAN 0.9500:	59425 HER209 269.0	0.8662	0.9801 capacitor 69kv
				59432 BUF243J269.0	0.8859	0.9614 capacitor 69kv
				59433 STRKAMO269.0	0.9147	0.9634 above .90
				59434 BUF409 269.0	0.8682	0.9555 capacitor 69kv
				59528 BOL 73 269.0	0.8929	1.0033 capacitor 69kv
				59529 SED 80 269.0	0.9272	0.9754 above .90
				59542 NIC170 269.0	0.9463	0.9759 above .90
				59545 FRP217 269.0	0.9299	0.9897 above .90
				59547 BUF243 269.0	0.8857	0.9613 capacitor 69kv
				59567 BRT323 269.0	0.9088	0.9857 above .90
				59572 FGC333 269.0	0.8883	0.9615 capacitor 69kv
				59575 BUF342 269.0	0.8771	0.9637 capacitor 69kv
				59576 REP345 269.0	0.9459	0.9663 above .90
				59584 BOL367 269.0	0.8955	0.9891 capacitor 69kv
				59586 WILA45 269.0	0.9354	0.9724 above .90
				59587 STR370 269.0	0.9059	0.9617 above .90
				59596 FRQ397 269.0	0.9047	0.9631 above .90
				59612 BOL602 269.0	0.8986	0.9870 capacitor 69kv
				59637 HUM308 134.5	0.9267	0.9671 above .90
				59639 DUN283 134.5	0.9408	0.9897 above .90
				59640 COL318 134.5	0.9056	0.9469 above .90
				59691 WIL369 269.0	0.9329	0.9701 above .90

2006 SUMMER PEAK, EMPIRE DISTRICT ELECTRIC - AREA 544

BASE CASE

VOLTAGE REPORT TABLE

(OUTAGED BRANCH) (VOLTAGE RANGE) (X---- BUS ----X)				V-CONT	V-INIT
59469 [RIV167 5161.00] TO BUS 59487 [HOC404 5161.00] CKT 1 VOLTAGE LESS THAN 0.9500:				0.8879	0.9088 provide solut.
				0.8838	0.9049 provide solut.
				0.8872	0.9082 provide solut.
				0.8862	0.9073 provide solut.
				0.8604	0.8820 provide solut.
59474 [OZD312 5161.00] TO BUS 59562 [OZD312 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:				0.9484	0.9812 above .90
				0.9430	1.0066 above .90
				0.9430	1.0051 above .90
				0.9306	0.9801 above .90
				0.9330	0.9614 above .90
59478 [DAD368 5161.00] TO BUS 59493 [BOL431 5161.00] CKT 1 VOLTAGE LESS THAN 0.9500:				0.9208	0.9555 above .90
				0.9329	0.9613 above .90
				0.9354	0.9615 above .90
				0.9292	0.9637 above .90
				0.9465	0.9891 above .90
59478 [DAD368 5161.00] TO BUS 59585 [DAD368 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:				0.9405	0.9617 above .90
				0.9410	0.9631 above .90
				0.9463	0.9870 above .90
				0.9406	0.9671 above .90
				0.9497	0.9983 above .90
59480 [MON383 5161.00] TO BUS 59591 [MON383 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:				0.9492	0.9977 above .90
				0.9491	0.9780 above .90
				0.9491	0.9724 above .90
				0.9422	0.9671 above .90
				0.9217	0.9469 above .90
				0.9467	0.9701 above .90
				0.9067	0.9788 above .90
				0.9053	0.9775 above .90
				0.9001	0.9727 above .90
				0.8998	0.9724 capacitor 69kv
				0.8727	0.9476 capacitor 69kv
				0.9313	1.0012 above .90
				0.9311	1.0011 above .90
				0.9298	0.9998 above .90
				0.9297	0.9997 above .90
				0.9471	0.9684 above .90
				0.9387	0.9803 above .90
				0.9375	1.0023 above .90
				0.9418	0.9895 above .90
				0.9454	0.9867 above .90
				0.9360	1.0056 above .90

VOLTAGE REPORT TABLE

(	OUTAGED BRANCH	) (	VOLTAGE RANGE	) (	V-CONT	V-INIT
59538	(DIA131 269.000) TO BUS 59595 [RNM393 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	(	VOLTAGE RANGE	) (	0.9257	0.9803 above .90
					0.9131	0.9684 above .90
					0.9251	0.9797 above .90
					0.9440	0.9803 above .90
					0.9312	0.9854 above .90
59541	(RIV167 269.000) TO BUS 59602 [RIV406 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	(	VOLTAGE RANGE	) (	0.8872	0.9088 provide solut.
					0.8833	0.9049 provide solut.
					0.8866	0.9082 provide solut.
					0.8856	0.9073 provide solut.
					0.8600	0.8820 provide solut.
					0.9495	0.9826 above .90
59543	(NEO184 269.000) TO BUS 59560 [ROC296 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	(	VOLTAGE RANGE	) (	0.9449	0.9832 above .90
					0.9467	0.9830 above .90
59543	(NEO184 269.000) TO BUS 59563 [LIN314 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	(	VOLTAGE RANGE	) (	0.9318	0.9691 above .90
					0.9087	0.9831 above .90
					0.9067	0.9866 above .90
					0.9462	0.9828 above .90
59545	(FRP217 269.000) TO BUS 59635 [FRP217 134.500] CKT 1 VOLTAGE LESS THAN 0.9500:	(	VOLTAGE RANGE	) (	0.8486	1.0135 provide solut.
					0.8498	0.9671 provide solut.
					0.8485	0.9897 provide solut.
					0.8265	0.9469 provide solut.
					0.9410	1.0033 above .90
59546	(BIL221 269.000) TO BUS 59580 [REP359 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	(	VOLTAGE RANGE	) (	0.9467	0.9759 above .90
					0.9078	0.9663 above .90
59554	(BAX271 269.000) TO BUS 59601 [HOC404 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	(	VOLTAGE RANGE	) (	0.8879	0.9611 capacitor 69kv
					0.9494	0.9723 above .90
					0.8755	0.9088 provide solut.
					0.8714	0.9049 provide solut.
					0.8749	0.9082 provide solut.
					0.8738	0.9073 provide solut.
					0.8477	0.8820 provide solut.
59562	(OZD312 269.000) TO BUS 59603 [FOR410 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	(	VOLTAGE RANGE	) (	0.9419	1.0051 above .90
59568	(STK324 269.000) TO BUS 59616 [STK631J269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	(	VOLTAGE RANGE	) (	0.8979	0.9905 capacitor 69kv
					0.9237	0.9671 above .90
					0.9221	1.0232 above .90
					0.9029	0.9469 above .90
					0.9219	1.0033 above .90
59568	(STK324 269.000) TO BUS 59638 [STK324 134.500] CKT 1 VOLTAGE LESS THAN 0.9500:	(	VOLTAGE RANGE	) (	0.9290	0.9671 above .90
					0.9285	1.0232 above .90
					0.9086	0.9469 above .90
					0.9283	1.0033 above .90
59570	(OZK330 269.000) TO BUS 59604 [BHX415 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	(	VOLTAGE RANGE	) (	0.8604	0.9895 capacitor 69kv
					0.8656	0.9858 capacitor 69kv
59570	(OZK330 269.000) TO BUS 59609 [OZK434 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	(	VOLTAGE RANGE	) (	0.9370	0.9858 above .90
59587	(STR370 269.000) TO BUS 59596 [FRG397 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	(	VOLTAGE RANGE	) (	0.9383	0.9634 above .90
					0.9327	0.9617 above .90
59590	(QUA377 269.000) TO BUS 59601 [HOC404 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	(	VOLTAGE RANGE	) (	0.9035	0.9854 above .90
					0.9121	0.9933 above .90
					0.9097	0.9946 above .90

VOLTAGE REPORT TABLE

(	OUTAGED BRANCH	) (	VOLTAGE RANGE	) (	X---- BUS ----X)	V-CONT	V-INIT
59598	[LKW400 269.000] TO BUS 59613 [GRN614 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:				59550 GLD251 269.0	0.9437	0.9702 above .90
					59598 LKW400 269.0	0.9393	0.9728 above .90
59605	[STK418 269.000] TO BUS 59614 [SK631CJ269.000] CKT 1 VOLTAGE LESS THAN 0.9500:				59548 BOS249 269.0	0.9430	0.9711 above .90
					59549 ARC250 269.0	0.9190	0.9841 above .90
					59550 GLD251 269.0	0.9337	0.9702 above .90
					59568 STK324 269.0	0.9105	0.9905 above .90
					59598 LKW400 269.0	0.9284	0.9728 above .90
					59613 GRN614 269.0	0.9280	0.9770 above .90
					59614 SK631CJ269.0	0.9098	0.9913 above .90
					59616 STK631J269.0	0.9105	0.9907 above .90
					59637 HUM308 134.5	0.9284	0.9671 above .90
					59638 STK324 134.5	0.9425	1.0232 above .90
					59640 COL318 134.5	0.9078	0.9469 above .90
59635	[FRP217 134.500] TO BUS 59639 [DUN283 134.500] CKT 1 VOLTAGE LESS THAN 0.9500:				59641 CAP304 134.5	0.9376	1.0033 above .90
					59637 HUM308 134.5	0.8481	0.9671 provide solut.
					59639 DUN283 134.5	0.8464	0.9897 provide solut.
					59640 COL318 134.5	0.8246	0.9469 provide solut.
59637	[HUM308 134.500] TO BUS 59639 [DUN283 134.500] CKT 1 VOLTAGE LESS THAN 0.9500:				59641 CAP304 134.5	0.9404	1.0033 above .90
					59637 HUM308 134.5	0.8544	0.9671 provide solut.
					59640 COL318 134.5	0.8311	0.9469 provide solut.
					59641 CAP304 134.5	0.9433	1.0033 above .90
59637	[HUM308 134.500] TO BUS 59641 [CAP304 134.500] CKT 1 VOLTAGE LESS THAN 0.9500:				59637 HUM308 134.5	0.9291	0.9671 above .90
					59640 COL318 134.5	0.9087	0.9469 above .90
59638	[STK324 134.500] TO BUS 59641 [CAP304 134.500] CKT 1 VOLTAGE LESS THAN 0.9500:				59637 HUM308 134.5	0.9275	0.9671 above .90
					59640 COL318 134.5	0.9070	0.9469 above .90
					59641 CAP304 134.5	0.9261	1.0033 above .90
59484	[DEC392 5161.00] TO BUS 53139 [FLINTCR5161.00] CKT 1 VOLTAGE LESS THAN 0.9500:				59428 SMC414 269.0	0.9461	0.9883 above .90
					59569 DEC326 269.0	0.9479	1.0088 above .90
					59594 DEC392 269.0	0.9493	1.0118 above .90
59497	[RVS438 5161.00] TO BUS 52672 [TABLE R5161.00] CKT 1 VOLTAGE LESS THAN 0.9500:				59617 GRA700 269.0	0.9467	1.0025 above .90
					59473 RDS295 5 161	0.9260	0.9580 above .90
					59474 OZD312 5 161	0.9206	0.9651 above .90
					59475 BRN331 5 161	0.9183	0.9627 above .90
					59482 HOL387 5 161	0.9186	0.9672 above .90
					59488 BRN412 5 161	0.9183	0.9627 above .90
					59489 BRN413 5 161	0.9169	0.9665 above .90
					59492 RDS424 5 161	0.9223	0.9567 above .90
					59495 GRT433 5 161	0.9173	0.9643 above .90
					59497 RVS438 5 161	0.9171	0.9695 above .90
59605	[STK418 269.000] TO BUS 96118 [5STKAEC 161.00] CKT 1 VOLTAGE LESS THAN 0.9500:				59648 OZD312 14.60	0.9443	0.9880 above .90
					59548 BOS249 269.0	0.9431	0.9711 above .90
					59549 ARC250 269.0	0.9191	0.9841 above .90
					59550 GLD251 269.0	0.9337	0.9702 above .90
					59568 STK324 269.0	0.9107	0.9905 above .90
					59598 LKW400 269.0	0.9284	0.9728 above .90
					59605 STK418 269.0	0.9100	0.9927 above .90
					59613 GRN614 269.0	0.9281	0.9770 above .90
					59614 SK631CJ269.0	0.9100	0.9913 above .90
					59616 STK631J269.0	0.9107	0.9907 above .90
					59637 HUM308 134.5	0.9285	0.9671 above .90
					59638 STK324 134.5	0.9427	1.0232 above .90
					59640 COL318 134.5	0.9079	0.9469 above .90
					59641 CAP304 134.5	0.9377	1.0033 above .90

VOLTAGE REPORT TABLE

((OUTAGED BRANCH) (VOLTAGE RANGE) (X----- BUS -----X) V-CONT V-INIT	
CONTINGENCY SPP-12	
59207 [ARCHIE 5161.00] TO BUS 59240 [ADRIAN 5161.00] CKT 1 VOLTAGE LESS THAN 0.9500:	59637 HUM308 134.5 0.9443 0.9671 above .90
59216 [BUTLER 5161.00] TO BUS 59240 [ADRIAN 5161.00] CKT 1	59640 COL318 134.5 0.9236 0.9469 above .90
59208 [NEVADA 5161.00] TO BUS 59216 [BUTLER_5161.00] CKT 1	
2006 SUMMER PEAK ST. JOSEPH LIGHT AND POWER - AREA 679	
((OUTAGED BRANCH) (VOLTAGE RANGE) (X----- BUS -----X) V-CONT V-INIT	
69703 [ST JOE 5161.00] TO BUS 69708 [WOODBINS5161.00] CKT 1 VOLTAGE LESS THAN 0.9500:	69704 EAST 5 161 0.9494 1.0020 Acceptable
	69708 WOODBINS 161 0.9492 1.0063 Acceptable
2006 WINTER PEAK - MISSOURI PUBLIC SERVICE - AREA 540	
((OUTAGED BRANCH) (VOLTAGE RANGE) (X----- BUS -----X) V-CONT V-INIT	
59207 [ARCHIE 5161.00] TO BUS 59240 [ADRIAN 5161.00] CKT 1 VOLTAGE LESS THAN 0.9500:	59216 BUTLER_5 161 0.9462 1.0058 Acceptable
	59240 ADRIAN 5 161 0.9452 1.0115 Acceptable
	59256 KAMOTP 269.0 0.9314 0.9803 Acceptable
	59257 ELDRDO 269.0 0.9300 0.9791 Acceptable
	59258 WALKER 269.0 0.9434 0.9918 Acceptable
	59259 DEDRCK 269.0 0.9363 0.9850 Acceptable
	59309 METZ 269.0 0.9494 0.9974 Acceptable
	59310 3M 269.0 0.9445 0.9927 Acceptable
	59312 LAMAR 269.0 0.9416 0.9892 Acceptable
	59256 KAMOTP 269.0 0.9482 0.9803 Acceptable
	59257 ELDRDO 269.0 0.9469 0.9791 Acceptable
	59256 KAMOTP 269.0 0.9373 0.9803 Acceptable
	59257 ELDRDO 269.0 0.9360 0.9791 Acceptable
	59258 WALKER 269.0 0.9493 0.9918 Acceptable
	59259 DEDRCK 269.0 0.9422 0.9850 Acceptable
	59312 LAMAR 269.0 0.9474 0.9892 Acceptable
	59154 RGREEN#313.2 0.9480 1.0086 Acceptable
	59279 RGREEN 269.0 0.9480 1.0086 Acceptable
	59280 PHILL 269.0 0.9477 1.0104 Acceptable
	59290 BELTONS269.0 0.9450 0.9862 Acceptable
	59287 MARTCTY269.0 1.0560 1.0130 LTC
	59292 ANCONDA269.0 0.9462 1.0043 Acceptable
	59293 HSNVLW 269.0 0.9459 1.0050 Acceptable
	59294 HSNVLS 269.0 0.9453 1.0069 Acceptable
	59306 APCITY 269.0 0.9324 1.0037 Switch
	59307 NEVPLT 269.0 0.8795 1.0106 Switch
	59311 NEVJCT 269.0 0.8781 1.0095 Switch
	59312 LAMAR 269.0 0.8543 0.9892 Switch
	59159 NEVADA#113.2 1.0519 1.0131 LTC
	59308 NEVADA 269.0 1.0519 1.0131 LTC
	59242 CLINTON5 161 0.9038 1.0245 Acceptable
	59300 POSTOAK269.0 0.9407 1.0059 Acceptable
	59301 CLNTPLT269.0 0.9068 1.0088 Acceptable
	59302 CLNTGRN269.0 0.9058 1.0087 Acceptable
	59303 CLINTON269.0 0.9065 1.0115 Acceptable
	59304 URICHTP269.0 0.9209 1.0052 Acceptable
	59305 URICH 269.0 0.9189 1.0033 Acceptable
	59306 APCITY 269.0 0.9365 1.0037 Acceptable
59208 [NEVADA 5161.00] TO BUS 59216 [BUTLER 5161.00] CKT 1 VOLTAGE LESS THAN 0.9500:	
59216 [BUTLER 5161.00] TO BUS 59240 [ADRIAN 5161.00] CKT 1 VOLTAGE LESS THAN 0.9500:	
59225 [PHILL 5161.00] TO BUS 59280 [PHILL 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	
59286 [ORDNST 269.000] TO BUS 59287 [MARTCTY269.000] CKT 1 VOLTAGE GREATER THAN 1.0500:	
59294 [HSNVLS 269.000] TO BUS 59295 [HSNVL 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	
59307 [NEVPLT 269.000] TO BUS 59308 [NEVADA 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	
59308 [NEVADA 269.000] TO BUS 59309 [METZ 269.000] CKT 1 VOLTAGE GREATER THAN 1.0500:	
59242 [CLINTON5161.00] TO BUS 96071 [5CLINTN 161.00] CKT 1 VOLTAGE LESS THAN 0.9500:	

Schedule 1

VOLTAGE REPORT TABLE

(CONTINGENCY SPP-12	OUTAGED BRANCH	) (	VOLTAGE RANGE	) (X---- BUS ----X)	V-CONT	V-INIT
59207 [ARCHIE 5161.00] TO BUS 59240 [ADRIAN 5161.00] CKT 1	VOLTAGE LESS THAN 0.9500:			59216 BUTLER 5 161	0.9190	1.0058 Acceptable
59216 [BUTLER 5161.00] TO BUS 59240 [ADRIAN 5161.00] CKT 1				59256 KAMOTP 269.0	0.9388	0.9803 Acceptable
59208 [NEVADA 5161.00] TO BUS 59216 [BUTLER 5161.00] CKT 1				59257 ELDRDO 269.0	0.9375	0.9791 Acceptable
				59259 DEDRCK 269.0	0.9437	0.9850 Acceptable
				59312 LAMAR 269.0	0.9488	0.9892 Acceptable

2006 WINTER PEAK - EMPIRE DISTRICT ELECTRIC - AREA 544

(BASE CASE	OUTAGED BRANCH	) (	VOLTAGE RANGE	) (X---- BUS ----X)	V-CONT	V-INIT
59436 [CUPTAP 269.000] TO BUS 59585 [DAD368 269.000] CKT 1	VOLTAGE LESS THAN 0.9500:			59420 WEL186 134.5	0.9404	0.9404 above .90
				59640 COL318 134.5	0.9351	0.9351 above .90
				59436 CUPTAP 269.0	0.9429	1.0035 above .90
				59437 CUPSUB 269.0	0.9426	1.0033 above .90
				59598 LKW400 269.0	0.9463	0.9733 above .90
59436 [CUPTAP 269.000] TO BUS 59613 [GRN614 269.000] CKT 1	VOLTAGE LESS THAN 0.9500:			59613 GRN614 269.0	0.9451	0.9754 above .90
				59598 LKW400 269.0	0.9464	0.9733 above .90
				59613 GRN614 269.0	0.9452	0.9754 above .90
59464 [BOL 73 5161.00] TO BUS 59528 [BOL 73 269.000] CKT 1	VOLTAGE LESS THAN 0.9500:			59425 HER209 269.0	0.8640	0.9887 capacitor 69kv
				59432 BUF243J269.0	0.8841	0.9684 capacitor 69kv
				59433 BTRKAWO269.0	0.9210	0.9753 above .90
				59434 BUF409 269.0	0.8641	0.9612 capacitor 69kv
				59528 BOL 73 269.0	0.8864	1.0078 capacitor 69kv
				59529 SED 80 269.0	0.9337	0.9876 above .90
				59545 FRP217 269.0	0.9237	0.9905 above .90
				59547 BUF243 269.0	0.8839	0.9683 capacitor 69kv
				59567 BRT323 269.0	0.9089	0.9941 above .90
				59572 FGC333 269.0	0.8870	0.9688 capacitor 69kv
				59575 BUF342 269.0	0.8735	0.9696 capacitor 69kv
				59584 BOL367 269.0	0.8837	0.9875 capacitor 69kv
				59586 WIL445 269.0	0.9455	0.9866 above .90
				59587 STR370 269.0	0.9104	0.9727 above .90
				59596 FRG397 269.0	0.9080	0.9733 above .90
59474 [OZD312 5161.00] TO BUS 59562 [OZD312 269.000] CKT 1	VOLTAGE LESS THAN 0.9500:			59612 BOL602 269.0	0.8875	0.9856 capacitor 69kv
				59635 FRP217 134.5	0.9468	1.0103 above .90
59478 [DAD368 5161.00] TO BUS 59585 [DAD368 269.000] CKT 1	VOLTAGE LESS THAN 0.9500:			59637 HUM308 134.5	0.9071	0.9527 above .90
				59639 DUN283 134.5	0.9256	0.9803 above .90
				59640 COL318 134.5	0.8885	0.9351 provide solut.
59480 [MON383 5161.00] TO BUS 59591 [MON383 269.000] CKT 1	VOLTAGE LESS THAN 0.9500:			59691 WIL369 269.0	0.9441	0.9853 above .90
				59562 OZD312 269.0	0.9499	1.0131 above .90
				59603 FOR410 269.0	0.9499	1.0117 above .90
				59637 HUM308 134.5	0.9274	0.9527 above .90
				59640 COL318 134.5	0.9093	0.9351 above .90
				59401 MON376 269.0	0.9498	0.9915 above .90
				59402 MON416J269.0	0.9461	0.9880 above .90
				59403 MON416 269.0	0.9458	0.9878 above .90
				59404 PUR390 269.0	0.9276	0.9705 above .90
59487 [HOC404 5161.00] TO BUS 59601 [HOC404 269.000] CKT 1	VOLTAGE LESS THAN 0.9500:			59416 CHE299T134.5	0.9315	0.9584 above .90
				59417 CHE299 134.5	0.9288	0.9557 above .90
				59418 CHE300 134.5	0.9311	0.9580 above .90
				59419 TWN388 134.5	0.9304	0.9574 above .90
				59420 WEL186 134.5	0.9131	0.9404 above .90

VOLTAGE REPORT TABLE

59528 [BOL 73 269.000] TO BUS 59575 [BUF342 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:

59432	BUF243J269.0	0.9055	0.9684	above .90
59433	STRKAMO269.0	0.9463	0.9753	above .90
59434	BUF409 269.0	0.8817	0.9612	capacitor 69kv
59547	BUF243 269.0	0.9063	0.9683	above .90
59572	FGC333 269.0	0.9104	0.9688	above .90
59575	BUF342 269.0	0.8909	0.9696	capacitor 69kv
59587	STR370 269.0	0.9388	0.9727	above .90
59596	FRG397 269.0	0.9376	0.9733	above .90
59545	FRP217 269.0	0.9203	0.9905	above .90
59584	BOL367 269.0	0.8749	0.9875	capacitor 69kv
59612	BOL602 269.0	0.8796	0.9856	capacitor 69kv
59635	FRP217 134.5	0.9447	1.0103	above .90
59637	HUM308 134.5	0.9048	0.9527	above .90
59639	DUN283 134.5	0.9234	0.9803	above .90
59640	COL318 134.5	0.8862	0.9351	provide solut.
59432	BUF243J269.0	0.9452	0.9684	above .90
59547	BUF243 269.0	0.9451	0.9683	above .90
59572	FGC333 269.0	0.9442	0.9688	above .90
59587	STR370 269.0	0.9441	0.9727	above .90
59596	FRG397 269.0	0.9430	0.9733	above .90
59421	GNB347J269.0	0.9466	0.9898	above .90
59422	GNB347 269.0	0.9368	0.9800	above .90
59423	DIA242 269.0	0.9461	0.9892	above .90
59426	SEN375 269.0	0.9484	0.9758	above .90
59524	NEO 56 269.0	0.9296	0.9848	above .90
59563	LIN314 269.0	0.9278	0.9874	above .90
59637	HUM308 134.5	0.9273	0.9527	above .90
59639	DUN283 134.5	0.9495	0.9803	above .90
59640	COL318 134.5	0.9093	0.9351	above .90
59635	FRP217 134.5	0.7866	1.0103	provide solut.
59637	HUM308 134.5	0.7896	0.9527	provide solut.
59639	DUN283 134.5	0.7866	0.9803	provide solut.
59640	COL318 134.5	0.7681	0.9351	provide solut.
59641	CAP304 134.5	0.9102	0.9959	above .90
59576	REP345 269.0	0.9487	0.9822	above .90
59580	REP359 269.0	0.9360	0.9785	above .90
59603	FOR410 269.0	0.9489	1.0117	above .90
59568	STK324 269.0	0.8748	0.9883	capacitor 69kv
59637	HUM308 134.5	0.8985	0.9527	provide solut.
59638	STK324 134.5	0.8982	1.0197	provide solut.
59639	DUN283 134.5	0.9495	0.9803	above .90
59640	COL318 134.5	0.8806	0.9351	provide solut.
59641	CAP304 134.5	0.8980	0.9959	provide solut.
59637	HUM308 134.5	0.8994	0.9527	provide solut.
59638	STK324 134.5	0.8993	1.0197	provide solut.
59640	COL318 134.5	0.8815	0.9351	provide solut.
59641	CAP304 134.5	0.8990	0.9959	provide solut.
59570	OZK330 269.0	0.8754	0.9995	capacitor 69kv
59609	OZK434 269.0	0.8798	0.9953	capacitor 69kv
59609	OZK434 269.0	0.9404	0.9953	above .90
59427	COM381 269.0	0.9319	0.9963	above .90
59579	COM381J269.0	0.9369	1.0010	above .90
59590	QUA377 269.0	0.9350	1.0021	above .90

59528 [BOL 73 269.000] TO BUS 59584 [BOL367 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:

59529 [SED 80 269.000] TO BUS 59596 [FRG397 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:

59538 [DIA131 269.000] TO BUS 59595 [RNW393 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:

59543 [NEO184 269.000] TO BUS 59563 [LIN114 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:

59545 [FRP217 269.000] TO BUS 59585 [DAD368 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:

59545 [FRP217 269.000] TO BUS 59635 [FRP217 134.500] CKT 1 VOLTAGE LESS THAN 0.9500:

59546 [BIL221 269.000] TO BUS 59580 [REP359 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:

59562 [OZD312 269.000] TO BUS 59603 [FOR410 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:

59568 [STK324 269.000] TO BUS 59616 [STK631J269.000] CKT 1 VOLTAGE LESS THAN 0.9500:

59568 [STK324 269.000] TO BUS 59638 [STK324 134.500] CKT 1 VOLTAGE LESS THAN 0.9500:

59570 [OZK330 269.000] TO BUS 59604 [BHJ415 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:

59570 [OZK330 269.000] TO BUS 59609 [OZK434 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:

59590 [QUA377 269.000] TO BUS 59601 [HOC404 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:

VOLTAGE REPORT TABLE

59605 [STK418 269.000] TO BUS 59614 [SK631CJ269.000] CKT 1 VOLTAGE LESS THAN 0.9500:

59548 BOS249 269.0	0.9462	0.9750 above .90
59549 ARC250 269.0	0.9160	0.9823 above .90
59550 GLD251 269.0	0.9356	0.9729 above .90
59568 STK324 269.0	0.9068	0.9883 above .90
59598 LKW400 269.0	0.9282	0.9733 above .90
59613 GRN614 269.0	0.9259	0.9754 above .90
59614 SK631CJ269.0	0.9061	0.9891 above .90
59616 STK631J269.0	0.9068	0.9885 above .90
59637 HUM308 134.5	0.9122	0.9527 above .90
59638 STK324 134.5	0.9388	1.0197 above .90
59640 COL318 134.5	0.8942	0.9351 provide solut.
59641 CAP304 134.5	0.9295	0.9959 above .90

59635 [PRP217 134.500] TO BUS 59639 [DUN283 134.500] CKT 1 VOLTAGE GREATER THAN 1.0500:
VOLTAGE LESS THAN 0.9500:

59635 PRP217 134.5	1.0502	1.0103 above .90
59637 HUM308 134.5	0.7892	0.9537 provide solut.
59639 DUN283 134.5	0.7858	0.9803 provide solut.
59640 COL318 134.5	0.7680	0.9351 provide solut.
59641 CAP304 134.5	0.9099	0.9959 above .90

59637 [HUM308 134.500] TO BUS 59639 [DUN283 134.500] CKT 1 VOLTAGE LESS THAN 0.9500:

59637 HUM308 134.5	0.8060	0.9537 provide solut.
59640 COL318 134.5	0.7850	0.9351 provide solut.
59641 CAP304 134.5	0.9184	0.9959 above .90

59637 [HUM308 134.500] TO BUS 59641 [CAP304 134.500] CKT 1 VOLTAGE LESS THAN 0.9500:

59637 HUM308 134.5	0.9000	0.9537 provide solut.
59640 COL318 134.5	0.8821	0.9351 provide solut.

59638 [STK324 134.500] TO BUS 59641 [CAP304 134.500] CKT 1 VOLTAGE LESS THAN 0.9500:

59637 HUM308 134.5	0.8978	0.9527 provide solut.
59639 DUN283 134.5	0.9490	0.9803 above .90
59640 COL318 134.5	0.8799	0.9351 provide solut.
59641 CAP304 134.5	0.8968	0.9959 provide solut.

59497 [RV8438 5161.00] TO BUS 52672 [TABLE R5161.00] CKT 1 VOLTAGE LESS THAN 0.9500:

59473 RDS295 5 161	0.9442	0.9737 above .90
59474 OZD312 5 161	0.9366	0.9773 above .90
59475 BRN331 5 161	0.9346	0.9753 above .90
59482 HOL387 5 161	0.9345	0.9788 above .90
59488 BRN412 5 161	0.9347	0.9754 above .90
59489 BRN413 5 161	0.9328	0.9780 above .90
59492 RDS424 5 161	0.9407	0.9723 above .90
59495 GRT433 5 161	0.9334	0.9764 above .90
59497 RV8438 5 161	0.9329	0.9806 above .90

59605 [STK418 269.000] TO BUS 96118 [5STKAEC 161.00] CKT 1 VOLTAGE LESS THAN 0.9500:

59548 BOS249 269.0	0.9466	0.9750 above .90
59549 ARC250 269.0	0.9154	0.9823 above .90
59550 GLD251 269.0	0.9358	0.9729 above .90
59568 STK324 269.0	0.9060	0.9883 above .90
59598 LKW400 269.0	0.9281	0.9733 above .90
59605 STK418 269.0	0.9053	0.9906 above .90
59613 GRN614 269.0	0.9255	0.9754 above .90
59614 SK631CJ269.0	0.9053	0.9891 above .90
59616 STK631J269.0	0.9061	0.9885 above .90
59637 HUM308 134.5	0.9098	0.9527 above .90
59638 STK324 134.5	0.9377	1.0197 above .90
59640 COL318 134.5	0.8913	0.9351 provide solut.
59641 CAP304 134.5	0.9276	0.9959 above .90

VOLTAGE REPORT TABLE

2006 WINTER PEAK -ST. JOSEPH LIGHT AND POWER - AREA 679

2010 SUMMER PEAK -MISSOURI PUBLIC SERVICE - AREA 540

(OUTAGED BRANCH) (VOLTAGE RANGE) (X----- BUS -----X)

BASE CASE

VOLTAGE LESS THAN 0.9500:

59207 [ARCHIE 5161.00] TO BUS 59240 [ADRIAN 5161.00] CKT 1 VOLTAGE LESS THAN 0.9500:

	V-CONT	V-INIT
59208 NEVADA 5 161	0.9452	0.9452 Acceptable
59256 KAMOTP 269.0	0.9456	0.9456 Acceptable
59257 ELDRDO 269.0	0.9433	0.9433 Acceptable
59159 NEVADA#113.2	0.8750	1.0059 Generation
59208 NEVADA 5 161	0.8386	0.9452 Generation
59216 BUTLER_5 161	0.8288	0.9692 Generation
59240 ADRIAN 5 161	0.8266	0.9833 Generation
59256 KAMOTP 269.0	0.8034	0.9456 Generation
59257 ELDRDO 269.0	0.8007	0.9433 Generation
59258 WALKER 269.0	0.8204	0.9666 Generation
59259 DEDRCK 269.0	0.8134	0.9540 Generation
59304 URICHTP269.0	0.9423	1.0015 Generation
59305 URICH 269.0	0.9387	0.9981 Generation
59306 APCITY 269.0	0.9111	0.9948 Generation
59307 NEVPLT 269.0	0.8719	1.0015 Generation
59308 NEVADA 269.0	0.8750	1.0059 Generation
59309 METZ 269.0	0.8410	0.9772 Generation
59310 3M 269.0	0.8313	0.9688 Generation
59311 NEVJCT 269.0	0.8692	0.9992 Generation
59312 LAMAR 269.0	0.8253	0.9619 Generation
59159 NEVADA#113.2	0.9263	1.0059 Not Valid
59208 NEVADA 5 161	0.8799	0.9452 Not Valid
59256 KAMOTP 269.0	0.8598	0.9456 Not Valid
59257 ELDRDO 269.0	0.8572	0.9433 Not Valid
59258 WALKER 269.0	0.8830	0.9666 Not Valid
59259 DEDRCK 269.0	0.8691	0.9540 Not Valid
59306 APCITY 269.0	0.9440	0.9948 Not Valid
59307 NEVPLT 269.0	0.9227	1.0015 Not Valid
59308 NEVADA 269.0	0.9263	1.0059 Not Valid
59309 METZ 269.0	0.8946	0.9772 Not Valid
59310 3M 269.0	0.8855	0.9688 Not Valid
59311 NEVJCT 269.0	0.9202	0.9992 Not Valid
59312 LAMAR 269.0	0.8792	0.9619 Not Valid
59159 NEVADA#113.2	0.9217	1.0059 Generation
59256 KAMOTP 269.0	0.8548	0.9456 Generation
59257 ELDRDO 269.0	0.8522	0.9433 Generation
59258 WALKER 269.0	0.8781	0.9666 Generation
59259 DEDRCK 269.0	0.8641	0.9540 Generation
59306 APCITY 269.0	0.9433	0.9948 Generation
59307 NEVPLT 269.0	0.9183	1.0015 Generation
59308 NEVADA 269.0	0.9217	1.0059 Generation
59309 METZ 269.0	0.8899	0.9772 Generation
59310 3M 269.0	0.8807	0.9688 Generation
59311 NEVJCT 269.0	0.9158	0.9992 Generation
59312 LAMAR 269.0	0.8746	0.9619 Generation

59208 [NEVADA 5161.00] TO BUS 59216 [BUTLER_5161.00] CKT 1 VOLTAGE LESS THAN 0.9500:

59208 [NEVADA 5161.00] TO BUS 59308 [NEVADA 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:

VOLTAGE REPORT TABLE

(	OUTAGED BRANCH	) (	VOLTAGE RANGE	) (	VOLTAGE LESS THAN 0.9500:	(X----- BUS ----X)	V-CONT	V-INIT
59208	[NEVADA 5161.00] TO BUS 59308 [NEVADA 269.000]	CKT 2	VOLTAGE LESS THAN 0.9500:			59159 NEVADA#113.2 59256 KAMOTP 269.0 59257 ELDRDO 269.0 59258 WALKER 269.0 59259 DEDRCK 269.0 59307 NEVPLT 269.0 59308 NEVADA 269.0 59309 METZ 269.0 59310 3M 269.0 59311 NEVJCT 269.0 59312 LAMAR 269.0 59209 SEDALIAS161 59241 SEDASTS 161 59286 GRDWST 269.0 59287 MARTCTY269.0 59288 RGAFB 269.0 59289 BELTON 269.0 59290 BELTONS269.0 59159 NEVADA#113.2 59208 NEVADA 5 161 59216 BUTLER_5 161 59256 KAMOTP 269.0 59257 ELDRDO 269.0 59258 WALKER 269.0 59259 DEDRCK 269.0 59305 URICH 269.0 59306 APCITY 269.0 59307 NEVPLT 269.0 59308 NEVADA 269.0 59309 METZ 269.0 59310 3M 269.0 59311 NEVJCT 269.0 59312 LAMAR 269.0 59290 BELTONS269.0 59228 WBURGE 5 161 59234 WAFB 5 161 59267 ODESSA 269.0 59289 BELTON 269.0 59290 BELTONS269.0 59291 FREEMAN269.0 59292 ANCONDA269.0 59293 HSNVLM 269.0 59294 HSNVLS 269.0 59295 HSNVL 269.0 59296 HSNVLSW269.0 59297 HSNVLN 269.0 59298 GRDNCTY269.0 59299 SNCLRPS269.0 59261 LBRTYWT269.0 59270 KNOTER269.0	0.9450 0.8801 0.8776 0.9027 0.8892 0.9413 0.9450 0.9141 0.9052 0.9389 0.8989 0.9437 0.9486 0.9487 0.9465 0.9455 0.9450 0.8986 0.8569 0.8515 0.8298 0.8272 0.8538 0.8394 0.9493 0.9260 0.8953 0.8986 0.8659 0.8565 0.8927 0.8504 0.9467 0.9299 0.9347 0.9285 0.9499 0.9416 0.9195 0.9183 0.9184 0.9188 0.9205 0.9221 0.9263 0.9185 0.9185 1.0596 0.9483	1.0059 Generation 0.9456 Generation 0.9433 Generation 0.9666 Generation 0.9540 Generation 1.0015 Generation 1.0059 Generation 0.9772 Generation 0.9688 Generation 0.9992 Generation 0.9619 Generation 0.9683 Acceptable 0.9701 Acceptable 1.0100 Acceptable 1.0189 Acceptable 0.9844 Acceptable 0.9805 Acceptable 0.9757 Acceptable 1.0059 Not Valid 0.9452 Not Valid 0.9692 Not Valid 0.9456 Not Valid 0.9433 Not Valid 0.9666 Not Valid 0.9540 Not Valid 0.9981 Not Valid 0.9948 Not Valid 1.0015 Not Valid 1.0059 Not Valid 0.9772 Not Valid 0.9688 Not Valid 0.9992 Not Valid 0.9619 Not Valid 0.9757 Upgrade 0.9600 Acceptable 0.9609 Acceptable 1.0147 Acceptable 0.9805 Acceptable 0.9757 Acceptable 0.9876 Acceptable 1.0047 Acceptable 1.0059 Acceptable 1.0092 Acceptable 1.0148 Acceptable 1.0104 Acceptable 1.0053 Acceptable 1.0071 Acceptable 1.0071 Acceptable 1.0139 LTC 0.9997 Acceptable
59209	[SEDALIAS161.00] TO BUS 59217 [WINDSR 5161.00]	CKT 1	VOLTAGE LESS THAN 0.9500:					
59210	[MARTCTY5161.00] TO BUS 59287 [MARTCTY269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:					
59216	[BUTLER_5161.00] TO BUS 59240 [ADRIAN 5161.00]	CKT 1	VOLTAGE LESS THAN 0.9500:					
59225	[PHILL 5161.00] TO BUS 59280 [PHILL 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:					
59228	[WBURGE 5161.00] TO BUS 59229 [ODESSA 5161.00]	CKT 1	VOLTAGE LESS THAN 0.9500:					
59229	[ODESSA 5161.00] TO BUS 59267 [ODESSA 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:					
59239	[HSNVL 5161.00] TO BUS 59295 [HSNVL 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:					
59261	[LBRTYWT269.000] TO BUS 59262 [LIBERTY269.000]	CKT 1	VOLTAGE GREATER THAN 1.0500:					
59269	[WBURGE 269.000] TO BUS 59270 [KNOTER269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:					

VOLTAGE REPORT TABLE

(OUTAGED BRANCH)		(X---- BUS ----X)	V-COMT	V-INIT
59280	[PHILL 269.000] TO BUS 59290 [BELTONS269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	59288 RGAFB 269.0	0.9178	0.9844 Upgrade
		59289 BELTON 269.0	0.9093	0.9805 Upgrade
		59290 BELTONS269.0	0.8969	0.9757 Upgrade
		59291 FREEMAN269.0	0.9381	0.9876 Upgrade
59284	[GRDVWTP269.000] TO BUS 59285 [GRDWCTY269.000] CKT 1 VOLTAGE GREATER THAN 1.0500:	59287 MARTCTY269.0	1.0558	1.0189 LTC
59284	[GRDVWTP269.000] TO BUS 59288 [RGAFB 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	59288 RGAFB 269.0	0.9139	0.9844 Acceptable
		59289 BELTON 269.0	0.9147	0.9805 Acceptable
		59290 BELTONS269.0	0.9174	0.9757 Acceptable
		59291 FREEMAN269.0	0.9478	0.9876 Acceptable
59285	[GRDWCTY269.000] TO BUS 59286 [GRDWST 269.000] CKT 1 VOLTAGE GREATER THAN 1.0500:	59286 GRDWST 269.0	1.0723	1.0100 LTC
59286	[GRDWST 269.000] TO BUS 59287 [MARTCTY269.000] CKT 1 VOLTAGE GREATER THAN 1.0500:	59287 MARTCTY269.0	1.0761	1.0189 LTC
	VOLTAGE LESS THAN 0.9500:	59287 MARTCTY269.0	1.1039	1.0189 LTC
		59288 RGAFB 269.0	0.9486	1.0100 Acceptable
		59289 BELTON 269.0	0.9464	0.9844 Acceptable
		59290 BELTONS269.0	0.9454	0.9805 Acceptable
59288	[RGAFB 269.000] TO BUS 59289 [BELTON 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	59289 BELTON 269.0	0.9439	0.9757 Acceptable
59289	[BELTON 269.000] TO BUS 59290 [BELTONS269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	59290 BELTONS269.0	0.9290	0.9805 Acceptable
59291	[FREEMAN269.000] TO BUS 59292 [ANCONDA269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	59290 BELTONS269.0	0.9439	0.9757 Acceptable
59292	[ANCONDA269.000] TO BUS 59293 [HSNVLM 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	59291 FREEMAN269.0	0.9402	0.9876 Acceptable
		59292 ANCONDA269.0	0.9392	0.9876 Acceptable
59293	[HSNVLM 269.000] TO BUS 59294 [HSNVLS 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	59292 ANCONDA269.0	0.9386	1.0047 Acceptable
		59291 FREEMAN269.0	0.9301	0.9876 Acceptable
59294	[HSNVLS 269.000] TO BUS 59295 [HSNVL 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	59292 ANCONDA269.0	0.9265	1.0047 Acceptable
		59293 HSNVLM 269.0	0.9263	1.0059 Acceptable
59301	[CLNTPLT269.000] TO BUS 59304 [URICHTP269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	59290 BELTONS269.0	0.9496	0.9757 Upgrade
		59291 FREEMAN269.0	0.9106	0.9876 Upgrade
		59292 ANCONDA269.0	0.9005	1.0047 Upgrade
		59293 HSNVLM 269.0	0.8999	1.0059 Upgrade
		59294 HSNVLS 269.0	0.8989	1.0092 Upgrade
		59256 KAMOTP 269.0	0.9208	0.9456 Acceptable
		59257 ELDRDO 269.0	0.9184	0.9433 Acceptable
		59258 WALKER 269.0	0.9424	0.9666 Acceptable
		59259 DEDRCK 269.0	0.9294	0.9540 Acceptable
		59304 URICHTP269.0	0.9397	1.0015 Acceptable
		59305 URICH 269.0	0.9361	0.9981 Acceptable
		59306 APCITY 269.0	0.9437	0.9948 Acceptable
		59310 3M 269.0	0.9447	0.9688 Acceptable
		59312 LAMAR 269.0	0.9358	0.9619 Acceptable
59307	[NEVPLT 269.000] TO BUS 59308 [NEVADA 269.000] CKT 1 VOLTAGE GREATER THAN 1.0500:	59159 NEVADA#113.2	1.0621	1.0059 LTC
	VOLTAGE LESS THAN 0.9500:	59308 NEVADA 269.0	1.0621	1.0059 LTC
		59304 URICHTP269.0	0.8622	1.0015 Switch
		59305 URICH 269.0	0.8582	0.9981 Switch
		59306 APCITY 269.0	0.7815	0.9948 Switch
		59307 NEVPLT 269.0	0.6330	1.0015 Switch
		59311 NEVJCT 269.0	0.6292	0.9992 Switch
		59312 LAMAR 269.0	0.5707	0.9619 Switch
59308	[NEVADA 269.000] TO BUS 59309 [METZ 269.000] CKT 1 VOLTAGE GREATER THAN 1.0500:	59159 NEVADA#113.2	1.1002	1.0059 LTC
		59307 NEVPLT 269.0	1.0942	1.0015 LTC
		59308 NEVADA 269.0	1.1002	1.0059 LTC
		59311 NEVJCT 269.0	1.0922	0.9992 LTC
		59312 LAMAR 269.0	1.0586	0.9619 LTC

VOLTAGE REPORT TABLE

(OUTAGED BRANCH 59309 [METZ 269.000] TO BUS 59310 [3M 269.000] CKT 1 VOLTAGE GREATER THAN 1.0500:) (VOLTAGE RANGE)				(X---- BUS ----X)	V-CONT	V-INIT
59217 [WINDSR 5161.00] TO BUS 96071 [5CLINTN 161.00] CKT 1 VOLTAGE LESS THAN 0.9500:				59159 NEVADA#113.2	1.0805	1.0059 LTC
59241 [SEDEASTS161.00] TO BUS 31409 [OVERTON 161.00] CKT 1 VOLTAGE LESS THAN 0.9500:				59258 WALKER 269.0	1.0643	0.9666 LTC
59242 [CLINTONS161.00] TO BUS 96071 [5CLINTN 161.00] CKT 1 VOLTAGE LESS THAN 0.9500:				59259 DEDRCK 269.0	1.0529	0.9540 LTC
				59307 NEVPLT 269.0	1.0748	1.0015 LTC
				59308 NEVADA 269.0	1.0805	1.0059 LTC
				59309 METZ 269.0	1.0737	0.9772 LTC
				59311 NEVJCT 269.0	1.0728	0.9992 LTC
				59209 SEDALIA5 161	0.9412	0.9683 Acceptable
				59217 WINDSR 5 161	0.9388	0.9898 Acceptable
				59241 SEDEASTS 161	0.9464	0.9701 Acceptable
				59241 SEDEASTS 161	0.9473	0.9701 Acceptable
				59159 NEVADA#113.2	0.9209	1.0059 Accept Risk
				59208 NEVADA 5 161	0.9116	0.9452 Accept Risk
				59228 WBURGE 5 161	0.9347	0.9600 Accept Risk
				59234 WAPB 5 161	0.9394	0.9609 Accept Risk
				59242 CLINTONS 161	0.7093	1.0094 Accept Risk
				59256 KAMOTP 269.0	0.8538	0.9456 Accept Risk
				59257 ELDRDO 269.0	0.8512	0.9433 Accept Risk
				59258 WALKER 269.0	0.8772	0.9666 Accept Risk
				59259 DEDRCK 269.0	0.8632	0.9540 Accept Risk
				59268 WBURGP 269.0	0.9357	1.0085 Accept Risk
				59300 POSTOAK269.0	0.8269	1.0045 Accept Risk
				59301 CLNTPLT269.0	0.7477	1.0134 Accept Risk
				59302 CLNTGRN269.0	0.7454	1.0136 Accept Risk
				59303 CLINTON269.0	0.7469	1.0188 Accept Risk
				59304 URICHTP269.0	0.7742	1.0015 Accept Risk
				59305 URICH 269.0	0.7698	0.9981 Accept Risk
				59306 APCITY 269.0	0.8051	0.9948 Accept Risk
				59307 NEVPLT 269.0	0.9107	1.0015 Accept Risk
				59308 NEVADA 269.0	0.9209	1.0059 Accept Risk
				59309 METZ 269.0	0.8890	0.9772 Accept Risk
				59310 3M 269.0	0.8798	0.9688 Accept Risk
				59311 NEVJCT 269.0	0.9082	0.9992 Accept Risk
				59312 LAMAR 269.0	0.8665	0.9619 Accept Risk
CONTINGENCY SPP-12				59159 NEVADA#113.2	0.9021	1.0059 Generation
59207 [ARCHIB 5161.00] TO BUS 59240 [ADRIAN 5161.00] CKT 1 VOLTAGE LESS THAN 0.9500:				59208 NEVADA 5 161	0.8609	0.9452 Generation
59216 [BUTLER_5161.00] TO BUS 59240 [ADRIAN 5161.00] CKT 1				59216 BUTLER_5 161	0.8175	0.9692 Generation
59208 [NEVADA 5161.00] TO BUS 59216 [BUTLER_5161.00] CKT 1				59256 KAMOTP 269.0	0.8333	0.9456 Generation
				59257 ELDRDO 269.0	0.8307	0.9433 Generation
				59258 WALKER 269.0	0.8573	0.9666 Generation
				59259 DEDRCK 269.0	0.8429	0.9540 Generation
				59305 URICH 269.0	0.9499	0.9981 Generation
				59306 APCITY 269.0	0.9273	0.9948 Generation
				59307 NEVPLT 269.0	0.8987	1.0015 Generation
				59308 NEVADA 269.0	0.9021	1.0059 Generation
				59309 METZ 269.0	0.8694	0.9772 Generation
				59310 3M 269.0	0.8600	0.9688 Generation
				59311 NEVJCT 269.0	0.8962	0.9992 Generation
				59312 LAMAR 269.0	0.8538	0.9619 Generation

2010 SUMMER PEAK - EMPIRE DISTRICT ELECTRIC - AREA 544

OUTAGED BRANCH	(	VOLTAGE RANGE	)	(	X----- BUS ---X)	V-CONT	V-INIT
BASE CASE		VOLTAGE LESS THAN 0.9500:					
					59404 PUR390 269.0	0.9410	0.9410 above .90
					59416 CHE299T134.5	0.8955	0.8955 provide solut.
					59417 CHE299 134.5	0.8909	0.8909 provide solut.
					59418 CHE300 134.5	0.8948	0.8948 provide solut.
					59419 TWN388 134.5	0.8938	0.8938 provide solut.
					59420 WEL186 134.5	0.8681	0.8681 provide solut.
					59473 RDS295 5 161	0.9343	0.9343 above .90
					59474 OZD312 5 161	0.9400	0.9400 above .90
					59475 BRN331 5 161	0.9380	0.9380 above .90
					59482 HOL387 5 161	0.9430	0.9430 above .90
					59488 BRN412 5 161	0.9380	0.9380 above .90
					59489 BRN413 5 161	0.9427	0.9427 above .90
					59492 RDS424 5 161	0.9318	0.9318 above .90
					59495 GRT433 5 161	0.9401	0.9401 above .90
					59497 RVS438 5 161	0.9464	0.9464 above .90
					59417 CHE299 134.5	0.9493	0.8909 above .90
					59417 CHE299 134.5	0.9495	0.8909 above .90
					59416 CHE299T134.5	0.9451	0.8955 above .90
					59417 CHE299 134.5	0.9408	0.8909 above .90
					59418 CHE300 134.5	0.9450	0.8948 above .90
					59419 TWN388 134.5	0.9440	0.8938 above .90
					59436 CUPTAP 269.0	0.9493	1.0076 above .90
					59437 CUPSUB 269.0	0.9487	1.0071 above .90
					59425 HER209 269.0	0.9358	0.9912 above .90
					59432 BUP243J269.0	0.9311	0.9658 above .90
					59433 STRKAMO269.0	0.9366	0.9611 above .90
					59434 BUP409 269.0	0.9204	0.9614 above .90
					59493 BOL431 5 161	0.9444	0.9757 above .90
					59547 BUF243 269.0	0.9309	0.9656 above .90
					59572 FGC333 269.0	0.9330	0.9656 above .90
					59575 BUF342 269.0	0.9292	0.9698 above .90
					59587 STR370 269.0	0.9344	0.9615 above .90
					59596 FRG397 269.0	0.9360	0.9640 above .90
					59637 HUM308 134.5	0.9391	0.9719 above .90
					59640 COL318 134.5	0.9166	0.9503 above .90
					59691 WIL369 269.0	0.9482	0.9708 above .90
					59425 HER209 269.0	0.8473	0.9912 capacitor 69kv
					59432 BUP243J269.0	0.8688	0.9658 capacitor 69kv
					59433 STRKAMO269.0	0.8978	0.9611 capacitor 69kv
					59434 BUP409 269.0	0.8499	0.9614 capacitor 69kv
					59528 BOL 73 269.0	0.8776	1.0166 capacitor 69kv
					59529 SED 80 269.0	0.9141	0.9766 above .90
					59536 ASH121 269.0	0.9445	0.9797 above .90
					59542 NIC170 269.0	0.9329	0.9718 above .90
					59545 FRP217 269.0	0.9229	0.9995 above .90
					59547 BUF243 269.0	0.8686	0.9656 capacitor 69kv
					59552 LAW260 269.0	0.9496	0.9735 above .90
					59567 BRT323 269.0	0.8943	0.9921 capacitor 69kv
					59572 FGC333 269.0	0.8714	0.9656 capacitor 69kv
					59575 BUF342 269.0	0.8595	0.9698 capacitor 69kv
					59576 REP345 269.0	0.9316	0.9586 above .90
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VOLTAGE REPORT TABLE

(	OUTAGED BRANCH	) (	VOLTAGE RANGE	(X---- BUS ----X)	V-CONT	V-INIT
59484	[DEC392 5161.00] TO BUS 59594 [DEC392 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:			59594 DEC392 269.0	0.9463	1.0020 above .90
59487	[HOC404 5161.00] TO BUS 59601 [HOC404 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:			59594 DEC392 269.0	0.9463	1.0056 above .90
				59409 SCAM66 269.0	0.9412	0.9776 above .90
				59410 COL282T269.0	0.9421	0.9785 above .90
				59411 COL282 269.0	0.9359	0.9725 above .90
				59412 SEK225T269.0	0.9399	0.9765 above .90
				59413 SEK225 269.0	0.9398	0.9763 above .90
				59414 SMN425 269.0	0.9381	0.9747 above .90
				59415 SHR444 269.0	0.9388	0.9754 above .90
				59416 CHE299T134.5	0.8411	0.8955 provide solut.
				59417 CHE299 134.5	0.8363	0.8909 provide solut.
				59418 CHE300 134.5	0.8404	0.8948 provide solut.
				59419 TWN388 134.5	0.8394	0.8938 provide solut.
				59420 WEL186 134.5	0.8122	0.8681 provide solut.
				59427 COM381 269.0	0.9382	0.9859 above .90
				59530 COL 94 269.0	0.9476	0.9838 above .90
				59579 COM381T269.0	0.9469	0.9941 above .90
				59590 QUA377 269.0	0.9459	0.9956 above .90
				59601 HOC404 269.0	0.9482	1.0008 above .90
				59636 BAX271 134.5	0.9485	0.9963 above .90
59488	[BRN412 5161.00] TO BUS 59492 [RDS424 5161.00] CKT 1 VOLTAGE LESS THAN 0.9500:			59489 RDB424 5 161	0.9103	0.9318 above .90
59489	[BRN413 5161.00] TO BUS 59497 [RVS438 5161.00] CKT 1 VOLTAGE LESS THAN 0.9500:			59489 RDB424 5 161	0.9213	0.9427 above .90
59496	[NOL435 5161.00] TO BUS 59610 [NOL435 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:			59428 BWC414 269.0	0.9384	0.9761 above .90
59524	[NEO 56 269.000] TO BUS 59563 [LIN314 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:			59524 NEO 56 269.0	0.9404	0.9781 above .90
59528	[BOL 73 269.000] TO BUS 59575 [BUP342 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:			59432 BUF243J269.0	0.8896	0.9658 capacitor 69kv
				59433 STRKAMO269.0	0.9249	0.9611 above .90
				59434 BUF409 269.0	0.8636	0.9614 capacitor 69kv
				59547 BUF243 269.0	0.8894	0.9656 capacitor 69kv
				59572 FGC333 269.0	0.8937	0.9656 capacitor 69kv
				59575 BUF342 269.0	0.8731	0.9698 capacitor 69kv
				59587 STR370 269.0	0.9195	0.9615 above .90
				59596 FRG397 269.0	0.9199	0.9640 above .90
59528	[BOL 73 269.000] TO BUS 59584 [BOL367 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:			59545 FRP217 269.0	0.9454	0.9995 above .90
				59584 BOL367 269.0	0.9131	1.0001 above .90
				59612 BOL602 269.0	0.9154	0.9973 above .90
				59637 HUM308 134.5	0.9361	0.9719 above .90
59529	[SED 80 269.000] TO BUS 59596 [FRG397 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:			59640 COL318 134.5	0.9136	0.9503 above .90
				59432 BUF243J269.0	0.9449	0.9658 above .90
				59433 STRKAMO269.0	0.9392	0.9611 above .90
				59547 BUF243 269.0	0.9447	0.9656 above .90
				59572 FGC333 269.0	0.9434	0.9656 above .90
				59587 STR370 269.0	0.9358	0.9615 above .90
				59596 FRG397 269.0	0.9368	0.9640 above .90
59532	[CAR108 269.000] TO BUS 59533 [ATL109 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:			59532 CAR108 269.0	0.9466	0.9780 above .90
				59599 JAS403 269.0	0.9462	0.9728 above .90
				59600 JAS403T269.0	0.9469	0.9734 above .90
59536	[ASH121 269.000] TO BUS 59585 [DAD368 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:			59536 ASH121 269.0	0.9407	0.9797 above .90
				59552 LAW260 269.0	0.9476	0.9735 above .90
				59586 WIL445 269.0	0.9432	0.9734 above .90
				59691 WIL369 269.0	0.9404	0.9708 above .90
595936	[ASH121 269.000] TO BUS 59586 [WIL445 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:			59586 WIL445 269.0	0.9458	0.9734 above .90
				59691 WIL369 269.0	0.9431	0.9708 above .90

VOLTAGE REPORT TABLE

OUTAGED BRANCH			(X-----BUS-----X)	V-CONT	V-INIT
9537	[AUR124 269.000] TO BUS 59578 [AUR355 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:		59424 RES364 269.0 59563 LAW260 269.0 59553 ALB262 269.0 59573 HVC338 269.0 59577 MTV351 269.0 59578 AUR355 269.0 59606 MTV420 269.0 59611 MAR437 269.0 59421 GNB347J269.0 59422 GNB347 269.0 59423 DIA242 269.0 59430 SAR362 269.0 59538 DIA131 269.0 59544 WEN205 269.0 59582 SAR362T269.0 59416 CHE299T134.5 59417 CHE299 134.5 59418 CHE300 134.5 59419 TWN388 134.5 59420 WEL186 134.5 59429 BAX291 269.0 59576 REP345 269.0 59560 ROC296 269.0 59597 NEO398 269.0 59426 GEN375 269.0 59524 NEO 56 269.0 59563 LIN314 269.0 59589 RAC375 269.0 59430 SAR362 269.0 59535 FRP217 134.5 59637 HUN308 134.5 59639 DUN283 134.5 59640 COL318 134.5 59641 CAP304 134.5 59542 NIC170 269.0 59576 REP345 269.0 59580 REP359 269.0 59411 COL282 269.0 59414 SMN425 269.0 59415 SHR444 269.0 59416 CHE299T134.5 59417 CHE299 134.5 59418 CHE300 134.5 59419 TWN388 134.5 59420 WEL186 134.5 59561 NOL443 269.0 59566 AND322 269.0 59603 FOR410 269.0 59568 STK324 269.0 59637 HUM308 134.5 59638 STK324 134.5 59640 COL318 134.5 59641 CAP304 134.5	0.9320 0.9487 0.9351 0.9407 0.9197 0.9078 0.9183 0.9355 0.9108 0.8962 0.9102 0.9319 0.9169 0.9499 0.9393 0.8705 0.8658 0.8699 0.8688 0.8425 0.9474 0.9365 0.9377 0.9397 0.9304 0.9063 0.9041 0.9467 0.9441 0.8416 0.8432 0.8417 0.8178 0.9421 0.9399 0.8957 0.8731 0.9463 0.9485 0.9492 0.8565 0.8518 0.8558 0.8548 0.8281 0.9400 0.9474 0.9196 0.9064 0.9314 0.9307 0.9096 0.9306	0.9666 above .90 0.9735 above .90 0.9695 above .90 0.9711 above .90 0.9692 above .90 0.9855 above .90 0.9704 above .90 0.9736 above .90 0.9756 above .90 0.9619 capacitor 69kv 0.9750 above .90 0.9760 above .90 0.9814 above .90 0.9861 above .90 0.9831 above .90 0.8955 provide solut. 0.8909 provide solut. 0.8948 provide solut. 0.8938 provide solut. 0.8681 provide solut. 0.9824 above .90 0.9586 above .90 0.9776 above .90 0.9776 above .90 0.9667 above .90 0.9781 above .90 0.9812 above .90 0.9823 above .90 0.9760 above .90 1.0213 provide solut. 0.9719 provide solut. 0.9960 provide solut. 0.9503 provide solut. 1.0105 above .90 0.9718 above .90 0.9586 capacitor 69kv 0.9516 capacitor 69kv 0.9725 above .90 0.9747 above .90 0.9754 above .90 0.8955 provide solut. 0.8909 provide solut. 0.8948 provide solut. 0.8938 provide solut. 0.8681 provide solut. 0.9875 above .90 0.9822 above .90 1.0101 above .90 0.9981 above .90 0.9719 above .90 1.0317 above .90 0.9503 above .90 1.0105 above .90
9537	[AUR124 269.000] TO BUS 59611 [MAR437 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:				
9538	[DIA131 269.000] TO BUS 59595 [RNM393 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:				
9541	[RIV167 269.000] TO BUS 59602 [RIV406 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:				
9542	[NIC170 269.000] TO BUS 59576 [REP345 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:				
9543	[NEO184 269.000] TO BUS 59560 [ROC296 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:				
9543	[NEO184 269.000] TO BUS 59563 [LIN314 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:				
9544	[WEN205 269.000] TO BUS 59591 [MON383 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:				
9545	[FRP217 269.000] TO BUS 59635 [FRP217 134.500] CKT 1 VOLTAGE LESS THAN 0.9500:				
9546	[BIL221 269.000] TO BUS 59560 [REP359 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:				
9554	[BAX271 269.000] TO BUS 59601 [HOC404 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:				
561	[NOL443 269.000] TO BUS 59610 [NOL435 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:				
562	[O2D312 269.000] TO BUS 59603 [FOR410 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:				
568	[STK324 269.000] TO BUS 59616 [STK631J269.000] CKT 1 VOLTAGE LESS THAN 0.9500:				

VOLTAGE REPORT TABLE

(	OUTAGED BRANCH	) (	VOLTAGE RANGE	) (X---- BUS ----X)	V-CONT	V-INIT
59568	[STK324 269.000] TO BUS 59638 [STK324 134.500] CKT 1 VOLTAGE LESS THAN 0.9500:			59637 HUM308 134.5	0.9254	0.9719 above .90
				59638 STK324 134.5	0.9236	1.0317 above .90
				59640 COL318 134.5	0.9027	0.9503 above .90
				59641 CAP304 134.5	0.9235	1.0105 above .90
59569	[DEC326 269.000] TO BUS 59594 [DEC392 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:			59569 DEC326 269.0	0.9461	1.0020 above .90
59570	[OZK330 269.000] TO BUS 59604 [BHJ415 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:			59570 OZK330 269.0	0.8515	0.9824 provide solut
				59609 OZK434 269.0	0.8567	0.9791 provide solut
59570	[OZK330 269.000] TO BUS 59609 [OZK434 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:			59609 OZK434 269.0	0.9372	0.9791 above .90
59577	[MTV351 269.000] TO BUS 59606 [MTV420 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:			59577 MTV351 269.0	0.9482	0.9632 above .90
59578	[AUR355 269.000] TO BUS 59606 [MTV420 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:			59577 MTV351 269.0	0.9409	0.9632 above .90
				59606 MTV420 269.0	0.9406	0.9704 above .90
59587	[STR370 269.000] TO BUS 59596 [FRG397 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:			59433 STRKAMO269.0	0.9172	0.9611 above .90
				59587 STR370 269.0	0.9107	0.9615 above .90
59589	[RAC375 269.000] TO BUS 59592 [JOP389 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:			59426 SEN375 269.0	0.9370	0.9667 above .90
59590	[QUA377 269.000] TO BUS 59601 [HOC404 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:			59427 COM381 269.0	0.8938	0.9859 capacitor 69kv
				59579 COM381T269.0	0.9028	0.9941 above .90
				59590 QUA377 269.0	0.9000	0.9956 capacitor 69kv
59598	[LKW400 269.000] TO BUS 59613 [GRN614 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:			59548 BOS249 269.0	0.9474	0.9737 above .90
				59550 GLD251 269.0	0.9390	0.9739 above .90
				59598 LKW400 269.0	0.9340	0.9778 above .90
59605	[STK418 269.000] TO BUS 59614 [SK631CJ269.000] CKT 1 VOLTAGE LESS THAN 0.9500:			59548 BOS249 269.0	0.9409	0.9737 above .90
				59549 ARC250 269.0	0.9151	0.9908 above .90
				59550 GLD251 269.0	0.9313	0.9739 above .90
				59568 STK324 269.0	0.9052	0.9981 above .90
				59598 LKW400 269.0	0.9259	0.9778 above .90
				59613 GRN614 269.0	0.9257	0.9830 above .90
				59614 SK631CJ269.0	0.9044	0.9989 above .90
				59616 STK631J269.0	0.9053	0.9982 above .90
				59637 HUM308 134.5	0.9266	0.9719 above .90
				59638 STK324 134.5	0.9380	1.0317 above .90
				59640 COL318 134.5	0.9045	0.9503 above .90
				59641 CAP304 134.5	0.9340	1.0105 above .90
59635	[FRP217 134.500] TO BUS 59639 [DUN283 134.500] CKT 1 VOLTAGE GREATER THAN 1.0500: VOLTAGE LESS THAN 0.9500:			59635 FRP217 134.5	1.0589	1.0213 above .90
				59637 HUM308 134.5	0.8421	0.9719 provide solut.
				59639 DUN283 134.5	0.8405	0.9960 provide solut.
				59640 COL318 134.5	0.8167	0.9503 provide solut.
				59641 CAP304 134.5	0.9415	1.0105 above .90
59637	[HUM308 134.500] TO BUS 59639 [DUN283 134.500] CKT 1 VOLTAGE GREATER THAN 1.0500: VOLTAGE LESS THAN 0.9500:			59635 FRP217 134.5	1.0591	1.0213 above .90
				59639 DUN283 134.5	1.0580	0.9960 above .90
				59637 HUM308 134.5	0.8491	0.9719 provide solut.
				59640 COL318 134.5	0.8239	0.9503 provide solut.
				59641 CAP304 134.5	0.9446	1.0105 above .90
59637	[HUM308 134.500] TO BUS 59641 [CAP304 134.500] CKT 1 VOLTAGE LESS THAN 0.9500:			59637 HUM308 134.5	0.9322	0.9719 above .90
				59640 COL318 134.5	0.9104	0.9503 above .90
59638	[STK324 134.500] TO BUS 59641 [CAP304 134.500] CKT 1 VOLTAGE LESS THAN 0.9500:			59637 HUM308 134.5	0.9305	0.9719 above .90
				59640 COL318 134.5	0.9087	0.9503 above .90
				59641 CAP304 134.5	0.9291	1.0105 above .90
59484	[DEC392 5161.00] TO BUS 53139 [PLINTCR5161.00] CKT 1 VOLTAGE LESS THAN 0.9500:			59428 SWC414 269.0	0.9247	0.9761 above .90
				59484 DEC392 5 161	0.9386	1.0164 above .90
				59496 NOL435 5 161	0.9429	0.9928 above .90
				59561 NOL443 269.0	0.9395	0.9875 above .90
				59566 AND322 269.0	0.9429	0.9822 above .90
				59569 DEC326 269.0	0.9297	1.0020 above .90

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VOLTAGE REPORT TABLE

(	OUTAGED BRANCH	) (	VOLTAGE RANGE	)	(X----- BUS -----X)	V-CONT	V-INIT
	59497 [RVS438 5161.00] TO BUS 52672 [TABLE R5161.00] CKT 1 VOLTAGE LESS THAN 0.9500:				59610 NOL435 269.0 59617 GRA700 269.0 59473 RDS295 5 161 59474 OZD312 5 161 59475 BRN331 5 161 59482 HOL387 5 161 59488 BRN412 5 161 59489 BRN413 5 161 59492 RDS424 5 161 59495 GRT433 5 161 59497 RVS438 5 161 59648 OZD312 14.60 59548 BOS249 269.0 59549 ARC250 269.0 59550 GLD251 269.0 59568 STK324 269.0 59598 LKW400 269.0 59605 STK418 269.0 59613 GRN614 269.0 59614 SKG31CJ269.0 59616 STK631J269.0 59637 HUM308 134.5 59638 STK324 134.5 59640 COL318 134.5 59641 CAP304 134.5	0.9406 0.9276 0.8959 0.8864 0.8846 0.8844 0.8847 0.8828 0.8906 0.8835 0.8830 0.9106 0.9410 0.9152 0.9313 0.9054 0.9260 0.9046 0.9258 0.9046 0.9055 0.9268 0.9381 0.9046 0.9342	0.9912 above .90 0.9939 above .90 0.9343 provide solut. 0.9400 provide solut. 0.9380 provide solut. 0.9430 provide solut. 0.9380 provide solut. 0.9427 provide solut. 0.9318 provide solut. 0.9401 provide solut. 0.9464 provide solut. 0.9633 above .90 0.9737 above .90 0.9908 above .90 0.9739 above .90 0.9981 above .90 0.9778 above .90 1.0005 above .90 0.9830 above .90 0.9989 above .90 0.9982 above .90 0.9719 above .90 1.0317 above .90 0.9503 above .90 1.0105 above .90
	CONTINGENCY SPP-12				59434 BUP409 269.0 59478 DAD368 5 161 59637 HUM308 134.5 59640 COL318 134.5	0.9414 0.9423 0.9399 0.9175	0.9614 above .90 0.9626 above .90 0.9719 above .90 0.9503 above .90
	2010 SUMMER PEAK - ST. JOSEPH LIGHT AND POWER - AREA 679				69704 EAST 5 161 69708 WOODBINS 161	0.9482 0.9480	0.9990 Acceptable 1.0028 Acceptable
	69703 [ST JOE 5161.00] TO BUS 69708 [WOODBINS161.00] CKT 1 VOLTAGE LESS THAN 0.9500:						

VOLTAGE REPORT TABLE

(OUTAGED BRANCH) (VOLTAGE RANGE) (X---- BUS ----X)			V-INIT
59208 [NEVADA 5161.00] TO BUS 59308 [NEVADA 269.000] CKT 2 VOLTAGE LESS THAN 0.9500:			1.0059 Generation
			0.9450 Generation
			0.9456 Generation
			0.9433 Generation
			0.9666 Generation
			0.9540 Generation
			1.0015 Generation
			1.0059 Generation
			0.9772 Generation
			0.9688 Generation
			0.9992 Generation
			0.9619 Generation
			0.9683 Acceptable
			0.9701 Acceptable
			1.0100 Acceptable
			1.0189 Acceptable
			0.9844 Acceptable
			0.9805 Acceptable
			0.9757 Acceptable
			1.0059 Not Valid
			0.9452 Not Valid
			0.9692 Not Valid
			0.9456 Not Valid
			0.9433 Not Valid
			0.9666 Not Valid
			0.9540 Not Valid
			0.9981 Not Valid
			0.9948 Not Valid
			1.0015 Not Valid
			1.0059 Not Valid
			0.9772 Not Valid
			0.9688 Not Valid
			0.9992 Not Valid
			0.9619 Not Valid
			0.9757 Upgrade
			0.9600 Acceptable
			0.9609 Acceptable
			1.0147 Acceptable
			0.9805 Acceptable
			0.9757 Acceptable
			0.9876 Acceptable
			1.0047 Acceptable
			1.0059 Acceptable
			1.0092 Acceptable
			1.0148 Acceptable
			1.0104 Acceptable
			1.0053 Acceptable
			1.0071 Acceptable
			1.0071 Acceptable
			1.0139 LTC
			0.9997 Acceptable
59209 [SEDALIAS161.00] TO BUS 59217 [WINDSR 5161.00] CKT 1 VOLTAGE LESS THAN 0.9500:			0.9450
			0.8801
			0.8776
			0.9027
			0.8892
			0.9413
			0.9450
			0.9141
			0.9052
			0.9389
			0.8989
			0.9486
			0.9487
			0.9465
			0.9455
			0.9450
			0.8986
			0.8569
			0.8515
			0.8298
			0.8272
			0.8538
			0.8394
			0.9493
			0.9260
			0.8953
			0.8986
			0.8659
			0.8565
			0.8927
			0.8504
			0.9467
			0.9299
			0.9347
			0.9285
			0.9499
			0.9416
			0.9195
			0.9183
			0.9184
			0.9188
			0.9205
			0.9221
			0.9263
			0.9185
			0.9185
			1.0596
			0.9483
59225 [PHILL 5161.00] TO BUS 59280 [PHILL 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:			
59228 [WBURGE 5161.00] TO BUS 59229 [ODESSA 5161.00] CKT 1 VOLTAGE LESS THAN 0.9500:			
59229 [ODESSA 5161.00] TO BUS 59267 [ODESSA 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:			
59239 [HSNVL 5161.00] TO BUS 59295 [HSNVL 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:			
59261 [LIBRTYWT269.000] TO BUS 59262 [LIBERTY269.000] CKT 1 VOLTAGE GREATER THAN 1.0500:			
59269 [WBURGE 269.000] TO BUS 59270 [KNOSTER269.000] CKT 1 VOLTAGE LESS THAN 0.9500:			

VOLTAGE REPORT TABLE

(	OUTAGED BRANCH	) (	VOLTAGE RANGE	) (X---- BUS ----X)	V-CONT	V-INIT
59280	(PHILL 269.000) TO BUS 59290 [BELTONS269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:	59288 RGAFB 269.0	0.9178	0.9844 Upgrade
				59289 BELTON 269.0	0.9093	0.9805 Upgrade
				59290 BELTONS269.0	0.8969	0.9757 Upgrade
59284	(GRDVWTP269.000) TO BUS 59285 [GRDMCTY269.000]	CKT 1	VOLTAGE GREATER THAN 1.0500:	59291 FREEMAN269.0	0.9381	0.9876 Upgrade
59284	(GRDVWTP269.000) TO BUS 59288 [RGAFB 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:	59287 MARTCTY269.0	1.0558	1.0189 LTC
				59288 RGAFB 269.0	0.9139	0.9844 Acceptable
				59289 BELTON 269.0	0.9147	0.9805 Acceptable
				59290 BELTONS269.0	0.9174	0.9757 Acceptable
59285	(GRDMCTY269.000) TO BUS 59286 [GRDMST 269.000]	CKT 1	VOLTAGE GREATER THAN 1.0500:	59291 FREEMAN269.0	0.9478	0.9876 Acceptable
59286	(GRDMST 269.000) TO BUS 59287 [MARTCTY269.000]	CKT 1	VOLTAGE GREATER THAN 1.0500:	59286 GRDMST 269.0	1.0723	1.0100 LTC
				59287 MARTCTY269.0	1.0761	1.0189 LTC
				59288 RGAFB 269.0	1.1039	1.0189 LTC
				59289 BELTON 269.0	0.9486	1.0100 Acceptable
				59290 BELTONS269.0	0.9464	0.9844 Acceptable
59288	(RGAFB 269.000) TO BUS 59289 [BELTON 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:	59289 BELTON 269.0	0.9454	0.9805 Acceptable
59289	(BELTON 269.000) TO BUS 59290 [BELTONS269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:	59290 BELTONS269.0	0.9449	0.9757 Acceptable
59291	(FREEMAN269.000) TO BUS 59292 [ANCONDA269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:	59289 BELTON 269.0	0.9290	0.9805 Acceptable
59292	(ANCONDA269.000) TO BUS 59293 [HSNVLM 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:	59290 BELTONS269.0	0.9303	0.9757 Acceptable
59293	(HSNVLM 269.000) TO BUS 59294 [HSNVLS 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:	59291 FREEMAN269.0	0.9429	0.9757 Acceptable
59294	(HSNVLS 269.000) TO BUS 59295 [HSNVL 269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:	59292 ANCONDA269.0	0.9392	0.9876 Acceptable
				59293 FREEMAN269.0	0.9386	1.0047 Acceptable
				59294 HSNVLS 269.0	0.9301	0.9876 Acceptable
59301	(CLNTPLT269.000) TO BUS 59304 [URICHTP269.000]	CKT 1	VOLTAGE LESS THAN 0.9500:	59292 ANCONDA269.0	0.9265	1.0047 Acceptable
				59293 HSNVLM 269.0	0.9263	1.0059 Acceptable
				59294 HSNVLS 269.0	0.9496	0.9757 Upgrade
				59257 ELDRDO 269.0	0.9106	0.9876 Upgrade
				59258 WALKER 269.0	0.9095	1.0047 Upgrade
				59259 DEDRCK 269.0	0.8999	1.0059 Upgrade
				59304 URICHTP269.0	0.8989	1.0092 Upgrade
				59305 URICH 269.0	0.9361	0.9456 Acceptable
				59306 APCITY 269.0	0.9437	0.9433 Acceptable
				59310 3M 269.0	0.9447	0.9666 Acceptable
				59312 LAMAR 269.0	0.9358	0.9540 Acceptable
59307	(NEVPLT 269.000) TO BUS 59308 [NEVADA 269.000]	CKT 1	VOLTAGE GREATER THAN 1.0500:	59256 KAMOTP 269.0	0.9208	1.0015 Acceptable
				59308 NEVADA 269.0	1.0621	0.9981 Acceptable
				59304 URICHTP269.0	1.0621	0.9619 Acceptable
				59305 URICH 269.0	0.8582	1.0059 LTC
				59306 APCITY 269.0	0.7815	1.0015 Switch
				59307 NEVPLT 269.0	0.6330	0.9948 Switch
				59311 NEVJCT 269.0	0.6292	1.0015 Switch
				59312 LAMAR 269.0	0.5707	0.9992 Switch
59308	(NEVADA 269.000) TO BUS 59309 [NETZ 269.000]	CKT 1	VOLTAGE GREATER THAN 1.0500:	59159 NEVADA#113.2	1.1002	1.0059 LTC
				59307 NEVPLT 269.0	1.0942	1.0015 LTC
				59308 NEVADA 269.0	1.1002	1.0059 LTC
				59311 NEVJCT 269.0	1.0922	0.9992 LTC
				59312 LAMAR 269.0	1.0586	0.9619 LTC

VOLTAGE LESS THAN 0.9500:

VOLTAGE REPORT TABLE

(	OUTAGED BRANCH	(	(	VOLTAGE RANGE	)	(X----- BUS -----X)	V-CONT	V-INIT
59309	[METZ 269.000] TO BUS 59310 [3M	269.000]	CKT 1	VOLTAGE GREATER THAN 1.0500:		59159 NEVADA#113.2	1.0805	1.0059 LTC
						59258 WALKER 269.0	1.0643	0.9666 LTC
						59259 DEDRCK 269.0	1.0529	0.9540 LTC
						59307 NEVPLT 269.0	1.0748	1.0015 LTC
						59308 NEVADA 269.0	1.0805	1.0059 LTC
						59309 METZ 269.0	1.0737	0.9772 LTC
						59311 NEVJCT 269.0	1.0728	0.9992 LTC
59217	[WINDSR 5161.00] TO BUS 96071 [5CLINTN 161.00]	CKT 1	VOLTAGE LESS THAN 0.9500:			59209 SEDALIAS 161	0.9412	0.9683 Acceptable
						59217 WINDSR 5 161	0.9388	0.9898 Acceptable
						59241 SEDRST5 161	0.9464	0.9701 Acceptable
59241	[SEDRST5161.00] TO BUS 31409 [OVERTON 161.00]	CKT 1	VOLTAGE LESS THAN 0.9500:			59241 SEDRST5 161	0.9473	0.9701 Acceptable
59242	[CLINTON5161.00] TO BUS 96071 [5CLINTN 161.00]	CKT 1	VOLTAGE LESS THAN 0.9500:			59159 NEVADA#113.2	0.9209	1.0059 Accept Risk
						59208 NEVADA 5 161	0.9116	0.9452 Accept Risk
						59228 WBURGE 5 161	0.9347	0.9600 Accept Risk
						59234 WAFB 5 161	0.9394	0.9609 Accept Risk
						59242 CLINTON5 161	0.7093	1.0094 Accept Risk
						59256 KAMOTP 269.0	0.8538	0.9456 Accept Risk
						59257 ELDRDO 269.0	0.8512	0.9433 Accept Risk
						59258 WALKER 269.0	0.8772	0.9666 Accept Risk
						59259 DEDRCK 269.0	0.8632	0.9540 Accept Risk
						59268 WBURGP 269.0	0.9357	1.0085 Accept Risk
						59300 POSTOAK269.0	0.8269	1.0045 Accept Risk
						59301 CLNTPLT269.0	0.7477	1.0134 Accept Risk
						59302 CLNTORN269.0	0.7454	1.0136 Accept Risk
						59303 CLINTON269.0	0.7469	1.0188 Accept Risk
						59304 URICHTP269.0	0.7742	1.0015 Accept Risk
						59305 URICH 269.0	0.7698	0.9981 Accept Risk
						59306 APCITY 269.0	0.8051	0.9948 Accept Risk
						59307 NEVPLT 269.0	0.9107	1.0015 Accept Risk
						59308 NEVADA 269.0	0.9209	1.0059 Accept Risk
						59309 METZ 269.0	0.8890	0.9772 Accept Risk
						59310 3M 269.0	0.8798	0.9688 Accept Risk
						59311 NEVJCT 269.0	0.9082	0.9992 Accept Risk
						59312 LAMAR 269.0	0.8665	0.9619 Accept Risk
CONTINGENCY SPP-12								
59207	[ARCHIE 5161.00] TO BUS 59240 [ADRIAN 5161.00]	CKT 1	VOLTAGE LESS THAN 0.9500:			59159 NEVADA#113.2	0.9021	1.0059 Generation
59216	[BUTLER 5161.00] TO BUS 59240 [ADRIAN 5161.00]	CKT 1				59208 NEVADA 5 161	0.8609	0.9452 Generation
59208	[NEVADA 5161.00] TO BUS 59216 [BUTLER 5161.00]	CKT 1				59216 BUTLER 5 161	0.8175	0.9692 Generation
						59256 KAMOTP 269.0	0.8333	0.9456 Generation
						59257 ELDRDO 269.0	0.8307	0.9433 Generation
						59258 WALKER 269.0	0.8573	0.9666 Generation
						59259 DEDRCK 269.0	0.8429	0.9540 Generation
						59305 URICH 269.0	0.9499	0.9981 Generation
						59306 APCITY 269.0	0.9273	0.9948 Generation
						59307 NEVPLT 269.0	0.8987	1.0015 Generation
						59308 NEVADA 269.0	0.9021	1.0059 Generation
						59309 METZ 269.0	0.8694	0.9772 Generation
						59310 3M 269.0	0.8600	0.9688 Generation
						59311 NEVJCT 269.0	0.8962	0.9992 Generation
						59312 LAMAR 269.0	0.8538	0.9619 Generation

OUTAGED BRANCH	(X---- BUS ----X)	V-CONT	V-INIT
59468 [AUR124 5161.00] TO BUS 59473 [RDS295 5161.00] CKT 1 VOLTAGE LESS THAN 0.9500;	59580 REP359 269.0	0.9310	0.9516 above .90
59468 [AUR124 5161.00] TO BUS 59480 [MON383 5161.00] CKT 1 VOLTAGE LESS THAN 0.9500;	59584 BOL367 269.0	0.8817	1.0001 capacitor 69kv
	59586 WIL445 269.0	0.9252	0.9734 above .90
	59587 STR370 269.0	0.8893	0.9615 capacitor 69kv
	59596 FRG397 269.0	0.8886	0.9640 capacitor 69kv
	59612 BOL602 269.0	0.8852	0.9973 capacitor 69kv
	59635 FRP217 134.5	0.9486	1.0213 above .90
	59637 HUM308 134.5	0.9201	0.9719 above .90
	59639 DUN283 134.5	0.9337	0.9960 above .90
	59640 COL318 134.5	0.8972	0.9503 provide solut.
	59691 WIL369 269.0	0.9225	0.9708 above .90
	59473 RDS295 5161.00	0.9113	0.9343 above .90
	59434 RES364 269.0	0.9457	0.9666 above .90
	59468 AUR124 5161.00	0.9359	0.9576 above .90
	59553 ALB262 269.0	0.9487	0.9695 above .90
	59577 MTV351 269.0	0.9472	0.9692 above .90
	59606 MTV420 269.0	0.9482	0.9704 above .90
59469 [RIV167 5161.00] TO BUS 59487 [HOC404 5161.00] CKT 1 VOLTAGE LESS THAN 0.9500;	59417 CHE299 134.5	0.8656	0.8955 provide solut.
	59418 CHE300 134.5	0.8650	0.8909 provide solut.
	59419 TWN388 134.5	0.8639	0.8948 provide solut.
	59420 WEL186 134.5	0.8372	0.8938 provide solut.
	59486 HOC404 4 138	0.9409	0.8681 provide solut.
	59487 HOC404 5 161	0.9352	0.9765 above .90
	59562 OZD312 269.0	0.9195	0.9737 above .90
	59603 FOR410 269.0	0.9195	1.0123 above .90
	59434 BUF409 269.0	0.9374	1.0101 above .90
	59575 BUF342 269.0	0.9460	0.9614 above .90
	59637 HUM308 134.5	0.9444	0.9698 above .90
	59640 COL318 134.5	0.9222	0.9719 above .90
	59437 CUPSUB 269.0	0.9484	0.9503 above .90
	59536 ASH121 269.0	0.9444	1.0076 above .90
	59585 DAD368 269.0	0.9499	1.0071 above .90
	59586 WIL445 269.0	0.9446	0.9797 above .90
	59637 HUM308 134.5	0.9408	1.0135 above .90
	59640 COL318 134.5	0.9185	0.9734 above .90
	59691 WIL369 269.0	0.9419	0.9719 above .90
	59400 MON376 269.0	0.8835	0.9503 above .90
	59401 MON376 269.0	0.8820	0.9708 above .90
	59402 MON416 269.0	0.8763	0.9746 capacitor 69kv
	59403 MON416 269.0	0.8759	0.9732 capacitor 69kv
	59404 PUR390 269.0	0.8461	0.9681 capacitor 69kv
	59405 MON352 269.0	0.9106	0.9677 capacitor 69kv
	59406 MON352 269.0	0.9104	0.9410 capacitor 69kv
	59407 MON311 269.0	0.9089	0.9986 above .90
	59408 MON311 269.0	0.9087	0.9984 above .90
	59421 GNB347 269.0	0.9481	0.9970 above .90
	59422 GNB347 269.0	0.9340	0.9969 above .90
	59423 DIA242 269.0	0.9475	0.9756 above .90
	59430 SAR362 269.0	0.9235	0.9619 above .90
	59540 MON152 269.0	0.9181	0.9750 above .90
	59544 WEN205 269.0	0.9261	0.9760 above .90
	59582 SAR362 269.0	0.9309	1.0001 above .90
	59591 MON383 269.0	0.9160	0.9861 above .90
			0.9831 above .90
			1.0035 above .90

VOLTAGE REPORT TABLE

(	OUTAGED BRANCH	) (	VOLTAGE RANGE	(X----- BUS -----X)	V-CONT	V-INIT
59484	[DEC392 5161.00] TO BUS 59594 [DEC392 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	59569	DEC326 269.0	0.9463	1.0020	above .90
59487	[HOC404 5161.00] TO BUS 59601 [HOC404 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	59540	SCAM66 269.0	0.9412	1.0056	above .90
		59410	COL282T269.0	0.9421	0.9785	above .90
		59411	COL282 269.0	0.9359	0.9725	above .90
		59412	SEK225T269.0	0.9399	0.9765	above .90
		59413	SEK225 269.0	0.9398	0.9763	above .90
		59414	SMN425 269.0	0.9381	0.9747	above .90
		59415	SHR444 269.0	0.9388	0.9754	above .90
		59416	CHZ299T134.5	0.8411	0.8955	provide solut.
		59417	CHZ299 134.5	0.8363	0.8909	provide solut.
		59418	CHZ300 134.5	0.8404	0.8948	provide solut.
		59419	TWN388 134.5	0.8394	0.8938	provide solut.
		59420	WEL186 134.5	0.8122	0.8681	provide solut.
		59427	COM381 269.0	0.9382	0.9859	above .90
		59530	COL 94 269.0	0.9476	0.9838	above .90
		59579	COM381T269.0	0.9469	0.9841	above .90
		59590	QUA377 269.0	0.9459	0.9856	above .90
		59601	HOC404 269.0	0.9482	1.0008	above .90
		59636	BAX271 134.5	0.9485	0.9963	above .90
59488	[BRN412 5161.00] TO BUS 59492 [RDS424 5161.00] CKT 1 VOLTAGE LESS THAN 0.9500:	59492	RDS424 5 161	0.9103	0.9318	above .90
59489	[BRN413 5161.00] TO BUS 59497 [RVS438 5161.00] CKT 1 VOLTAGE LESS THAN 0.9500:	59489	BRN413 5 161	0.9213	0.9427	above .90
59496	[NOL435 5161.00] TO BUS 59610 [NOL435 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	59428	SMC414 269.0	0.9384	0.9761	above .90
59524	[NEO 56 269.000] TO BUS 59563 [LIN314 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	59524	NEO 56 269.0	0.9404	0.9781	above .90
59528	[BOL 73 269.000] TO BUS 59575 [BUF342 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	59432	BUF243J269.0	0.8896	0.9658	capacitor 69kv
		59433	STRKANO269.0	0.9249	0.9611	above .90
		59434	BUF409 269.0	0.8636	0.9614	capacitor 69kv
		59547	BUF243 269.0	0.8894	0.9656	capacitor 69kv
		59572	FGC333 269.0	0.8937	0.9656	capacitor 69kv
		59575	BUF342 269.0	0.8731	0.9698	capacitor 69kv
		59587	STR370 269.0	0.9195	0.9615	above .90
		59596	FRG397 269.0	0.9199	0.9640	above .90
59528	[BOL 73 269.000] TO BUS 59584 [BOL367 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	59545	FRP217 269.0	0.9454	0.9995	above .90
		59584	BOL367 269.0	0.9131	1.0001	above .90
		59612	BOL602 269.0	0.9154	0.9973	above .90
		59637	HUM308 134.5	0.9361	0.9719	above .90
59529	[SED 80 269.000] TO BUS 59596 [FRG397 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	59640	COL318 134.5	0.9136	0.9503	above .90
		59432	BUF243J269.0	0.9449	0.9658	above .90
		59433	STRKANO269.0	0.9392	0.9611	above .90
59532	[CAR108 269.000] TO BUS 59533 [ATL109 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	59547	BUF243 269.0	0.9447	0.9656	above .90
		59572	FGC333 269.0	0.9434	0.9656	above .90
		59587	STR370 269.0	0.9358	0.9615	above .90
		59596	FRG397 269.0	0.9368	0.9640	above .90
59532	[CAR108 269.000] TO BUS 59533 [ATL109 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	59532	CAR108 269.0	0.9466	0.9780	above .90
		59599	JAS403 269.0	0.9462	0.9728	above .90
		59600	JAS403T269.0	0.9469	0.9734	above .90
59536	[ASH121 269.000] TO BUS 59585 [DAD368 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	59536	ASH121 269.0	0.9407	0.9797	above .90
		59552	LAW260 269.0	0.9476	0.9735	above .90
		59586	WIL445 269.0	0.9432	0.9734	above .90
		59691	WIL369 269.0	0.9404	0.9708	above .90
59536	[ASH121 269.000] TO BUS 59586 [WIL445 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	59586	WIL445 269.0	0.9458	0.9734	above .90
		59691	WIL369 269.0	0.9431	0.9708	above .90

VOLTAGE REPORT TABLE

(	OUTAGED BRANCH	(X---- BUS ----X)	VOLTAGE RANGE	V-CONT	V-INIT
59537	[AUR124 269.000] TO BUS 59578 [AUR355 269.000] CKT 1 VOLTAGE LESS THAN 0.9500;	59424 RES364 269.0 0.9320		0.9666 above .90	
		59552 LAW260 269.0 0.9487		0.9735 above .90	
		59553 ALB262 269.0 0.9351		0.9695 above .90	
		59573 HTC338 269.0 0.9407		0.9711 above .90	
		59577 MTV351 269.0 0.9197		0.9692 above .90	
		59578 AUR355 269.0 0.9078		0.9855 above .90	
		59606 MTV420 269.0 0.9183		0.9704 above .90	
59537	[AUR124 269.000] TO BUS 59611 [MAR437 269.000] CKT 1 VOLTAGE LESS THAN 0.9500;	59611 MAR437 269.0 0.9355		0.9736 above .90	
59538	[DIA131 269.000] TO BUS 59595 [RNM393 269.000] CKT 1 VOLTAGE LESS THAN 0.9500;	59421 GNB347J269.0 0.9108		0.9756 above .90	
		59422 GNB347 269.0 0.8962		0.9619 capacitor 69kv	
		59423 DIA242 269.0 0.9102		0.9750 above .90	
		59430 SAR362 269.0 0.9319		0.9760 above .90	
		59538 DIA131 269.0 0.9169		0.9814 above .90	
		59544 MEN205 269.0 0.9499		0.9861 above .90	
		59582 SAR362T269.0 0.9393		0.9831 above .90	
59541	[RIV167 269.000] TO BUS 59602 [RIV406 269.000] CKT 1 VOLTAGE LESS THAN 0.9500;	59416 CHE299T134.5 0.8705		0.8955 provide solut.	
		59417 CHE299 134.5 0.8658		0.8909 provide solut.	
		59418 CHE300 134.5 0.8699		0.8948 provide solut.	
		59419 TWN388 134.5 0.8688		0.8938 provide solut.	
		59420 WEL186 134.5 0.8425		0.8681 provide solut.	
		59429 BAX291 269.0 0.9474		0.9824 above .90	
59542	[NIC170 269.000] TO BUS 59576 [REP345 269.000] CKT 1 VOLTAGE LESS THAN 0.9500;	59576 REP345 269.0 0.9365		0.9586 above .90	
59543	[NEO184 269.000] TO BUS 59560 [ROC296 269.000] CKT 1 VOLTAGE LESS THAN 0.9500;	59560 ROC296 269.0 0.9377		0.9776 above .90	
		59597 NEO398 269.0 0.9397		0.9667 above .90	
59543	[NEO184 269.000] TO BUS 59563 [LIN314 269.000] CKT 1 VOLTAGE LESS THAN 0.9500;	59426 SEN375 269.0 0.9304		0.9781 above .90	
		59524 NEO 56 269.0 0.9063		0.9812 above .90	
		59563 LIN314 269.0 0.9041		0.9823 above .90	
		59589 RAC375 269.0 0.9467		0.9760 above .90	
59544	[MEN205 269.000] TO BUS 59591 [MON383 269.000] CKT 1 VOLTAGE LESS THAN 0.9500;	59430 SAR362 269.0 0.9441		1.0213 provide solut.	
59545	[FRP217 269.000] TO BUS 59635 [FRP217 134.500] CKT 1 VOLTAGE LESS THAN 0.9500;	59635 FRP217 134.5 0.8416		0.9719 provide solut.	
		59637 HUM308 134.5 0.8432		0.9960 provide solut.	
		59639 DUN283 134.5 0.8417		0.9503 provide solut.	
		59640 COL318 134.5 0.8178		1.0105 above .90	
		59641 CAP304 134.5 0.9421		0.9718 above .90	
59546	[BIL221 269.000] TO BUS 59580 [REP359 269.000] CKT 1 VOLTAGE LESS THAN 0.9500;	59542 NIC170 269.0 0.9399		0.9586 capacitor 69kv	
		59576 REP345 269.0 0.8957		0.9516 capacitor 69kv	
		59580 REP359 269.0 0.8731		0.9725 above .90	
59554	[BAX271 269.000] TO BUS 59601 [HOC404 269.000] CKT 1 VOLTAGE LESS THAN 0.9500;	59411 COL282 269.0 0.9463		0.9747 above .90	
		59414 SMN425 269.0 0.9485		0.9754 above .90	
		59415 SHR444 269.0 0.9492		0.8955 provide solut.	
		59416 CHE299T134.5 0.8565		0.8909 provide solut.	
		59417 CHE299 134.5 0.8518		0.8948 provide solut.	
		59418 CHE300 134.5 0.8558		0.8938 provide solut.	
		59419 TWN388 134.5 0.8548		0.8681 provide solut.	
		59420 WEL186 134.5 0.8281		0.9875 above .90	
59561	[NOL443 269.000] TO BUS 59610 [NOL435 269.000] CKT 1 VOLTAGE LESS THAN 0.9500;	59561 NOL443 269.0 0.9400		0.9822 above .90	
		59566 AND322 269.0 0.9474		1.0101 above .90	
59562	[OZD312 269.000] TO BUS 59603 [FOR410 269.000] CKT 1 VOLTAGE LESS THAN 0.9500;	59603 FOR410 269.0 0.9196		0.9981 above .90	
59568	[STK324 269.000] TO BUS 59616 [STK631J269.000] CKT 1 VOLTAGE LESS THAN 0.9500;	59568 STK324 269.0 0.9064		0.9719 above .90	
		59637 HUM308 134.5 0.9314		1.0317 above .90	
		59638 STK324 134.5 0.9307		0.9503 above .90	
		59640 COL318 134.5 0.9096		1.0105 above .90	
		59641 CAP304 134.5 0.9306			

VOLTAGE REPORT TABLE

(	OUTAGED BRANCH	(	(X----- BUS -----X)	V-CONT	V-INIT
59568	[STK324 269.000] TO BUS 59638 [STK324 134.500] CKT 1 VOLTAGE LESS THAN 0.9500:	59637	HUM308 134.5	0.9254	0.9719 above .90
		59638	STK324 134.5	0.9236	1.0317 above .90
		59640	COL318 134.5	0.9027	0.9503 above .90
		59641	CAP304 134.5	0.9235	1.0105 above .90
59569	[DEC326 269.000] TO BUS 59594 [DEC392 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	59569	DEC326 269.0	0.9461	1.0020 above .90
59570	[OZK330 269.000] TO BUS 59604 [BHUJ415 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	59570	OZK330 269.0	0.8515	0.9824 provide solut
		59609	OZK434 269.0	0.8567	0.9791 provide solut
59570	[OZK330 269.000] TO BUS 59609 [OZK434 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	59609	OZK434 269.0	0.9372	0.9791 above .90
59577	[MTV351 269.000] TO BUS 59606 [MTV420 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	59577	MTV351 269.0	0.9482	0.9692 above .90
59578	[AUR355 269.000] TO BUS 59606 [MTV420 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	59577	MTV351 269.0	0.9409	0.9692 above .90
		59606	MTV420 269.0	0.9406	0.9704 above .90
59587	[STR370 269.000] TO BUS 59596 [FRG397 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	59433	STRKAMO269.0	0.9172	0.9611 above .90
		59587	STR370 269.0	0.9107	0.9615 above .90
59589	[RAC375 269.000] TO BUS 59592 [JOP389 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	59426	SEN375 269.0	0.9370	0.9667 above .90
59590	[QUA377 269.000] TO BUS 59601 [HOC404 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	59427	COM381 269.0	0.8938	0.9859 capacitor 69kv
		59579	COM381T269.0	0.9028	0.9941 above .90
		59590	QUA377 269.0	0.9000	0.9956 capacitor 69kv
59598	[LKW400 269.000] TO BUS 59613 [GRN614 269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	59548	BOS249 269.0	0.9474	0.9737 above .90
		59550	GLD251 269.0	0.9390	0.9739 above .90
		59598	LKW400 269.0	0.9340	0.9778 above .90
59605	[STK418 269.000] TO BUS 59614 [SK631CJ269.000] CKT 1 VOLTAGE LESS THAN 0.9500:	59548	BOS249 269.0	0.9409	0.9737 above .90
		59549	ARC250 269.0	0.9151	0.9908 above .90
		59550	GLD251 269.0	0.9313	0.9739 above .90
		59568	STK324 269.0	0.9052	0.9981 above .90
		59598	LKW400 269.0	0.9259	0.9778 above .90
		59613	GRN614 269.0	0.9257	0.9830 above .90
		59614	SK631CJ269.0	0.9044	0.9989 above .90
		59616	STK631J269.0	0.9053	0.9982 above .90
		59637	HUM308 134.5	0.9266	0.9719 above .90
		59638	STK324 134.5	0.9380	1.0317 above .90
		59640	COL318 134.5	0.9045	0.9503 above .90
		59641	CAP304 134.5	0.9340	1.0105 above .90
59635	[FRP217 134.500] TO BUS 59639 [DUN283 134.500] CKT 1 VOLTAGE GREATER THAN 1.0500:	59635	FRP217 134.5	1.0589	1.0213 above .90
	VOLTAGE LESS THAN 0.9500:	59637	HUM308 134.5	0.8421	0.9719 provide solut.
		59639	DUN283 134.5	0.8405	0.9960 provide solut.
		59640	COL318 134.5	0.8167	0.9503 provide solut.
		59641	CAP304 134.5	0.9415	1.0105 above .90
59637	[HUM308 134.500] TO BUS 59641 [CAP304 134.500] CKT 1 VOLTAGE GREATER THAN 1.0500:	59635	FRP217 134.5	1.0591	1.0213 above .90
	VOLTAGE LESS THAN 0.9500:	59639	DUN283 134.5	1.0580	0.9960 above .90
		59637	HUM308 134.5	0.8491	0.9719 provide solut.
		59640	COL318 134.5	0.8239	0.9503 provide solut.
		59641	CAP304 134.5	0.9446	1.0105 above .90
59638	[STK324 134.500] TO BUS 59641 [CAP304 134.500] CKT 1 VOLTAGE LESS THAN 0.9500:	59637	HUM308 134.5	0.9322	0.9719 above .90
		59640	COL318 134.5	0.9104	0.9503 above .90
		59641	CAP304 134.5	0.9087	0.9719 above .90
59639	[HUM308 134.500] TO BUS 59641 [CAP304 134.500] CKT 1 VOLTAGE LESS THAN 0.9500:	59641	CAP304 134.5	0.9291	0.9503 above .90
		59428	SWC414 269.0	0.9247	0.9761 above .90
		59484	DEC392 5 161	0.9386	1.0164 above .90
		59496	NOL435 5 161	0.9429	0.9928 above .90
		59561	NOL443 269.0	0.9395	0.9875 above .90
		59566	AND322 269.0	0.9429	0.9822 above .90
		59569	DEC326 269.0	0.9297	1.0020 above .90

CONTINUED ON NEXT PAGE

VOLTAGE REPORT TABLE

(	OUTAGED BRANCH	) (	VOLTAGE RANGE	) (X---- BUS ----X)	V-CONT	V-INT
59497	[RVS438 5161.00] TO BUS 52672 [TABLE R5161.00] CKT 1 VOLTAGE LESS THAN 0.9500:59473 RDS295 5 161			59610 NOL435 269.0	0.9406	0.9912 above .90
				59617 GRA700 269.0	0.9276	0.9939 above .90
				59474 OZD312 5 161	0.8859	0.9343 provide solut.
				59475 BRN331 5 161	0.8864	0.9400 provide solut.
				59482 HOL387 5 161	0.8846	0.9380 provide solut.
				59488 BRN412 5 161	0.8844	0.9430 provide solut.
				59489 BRN413 5 161	0.8847	0.9380 provide solut.
				59492 RDS424 5 161	0.8828	0.9427 provide solut.
				59495 GRT433 5 161	0.8906	0.9318 provide solut.
				59497 RVB438 5 161	0.8835	0.9401 provide solut.
				59498 OZD312 14.60	0.8830	0.9464 provide solut.
59605	[STK418 269.000] TO BUS 96118 [5STKAC 161.00] CKT 1 VOLTAGE LESS THAN 0.9500: 59548 BOS249 269.0			59549 ARC250 269.0	0.9410	0.9633 above .90
				59550 GLD251 269.0	0.9152	0.9737 above .90
				59568 STK324 269.0	0.9313	0.9908 above .90
				59598 LKW400 269.0	0.9054	0.9739 above .90
				59605 STK418 269.0	0.9260	0.9981 above .90
				59613 GRN614 269.0	0.9046	0.9778 above .90
				59614 SK631CJ269.0	0.9258	1.0005 above .90
				59616 STK631J269.0	0.9046	0.9830 above .90
				59637 HUM308 134.5	0.9055	0.9989 above .90
				59638 STK324 134.5	0.9268	0.9982 above .90
				59640 COL318 134.5	0.9381	0.9719 above .90
				59641 CAP304 134.5	0.9046	1.0317 above .90
					0.9342	0.9503 above .90
						1.0105 above .90
CONTINGENCY SPP-13						
59207	[ARCHIE 5161.00] TO BUS 59240 [ADRIAN 5161.00] CKT 1 VOLTAGE LESS THAN 0.9500:59434 BUP409 269.0			59478 DAD368 5 161	0.9414	0.9614 above .90
59216	[BUTLER 5161.00] TO BUS 59240 [ADRIAN 5161.00] CKT 1			59637 HUM308 134.5	0.9423	0.9626 above .90
59208	[NEVADA 5161.00] TO BUS 59216 [BUTLER 5161.00] CKT 1			59640 COL318 134.5	0.9399	0.9719 above .90
2010 SUMMER PEAK - ST. JOSEPH LIGHT AND POWER - AREA 679						
69703	[ST JOE 5161.00] TO BUS 69708 [WOODBINS5161.00] CKT 1 VOLTAGE LESS THAN 0.9500: 69704 EAST 5 161			69708 WOODBINS 161	0.9482	0.9990 Acceptable
						1.0028 Acceptable

MUSTANG WATER TREATMENT PLANT											
2006/07 Winter Peak											
From	To	Analysis Side-Transfer Level	New FCITC	Base FCITC	Limiting Facility	Initial Flow	Limit	Study Flow	OTDF - Outaged Facility	Solutions	From To
EL6 & SLP	AM-3	Export - 200	0	20	5690 JAGGARD3 115 5654 PENTA03 115 1	91.5	92	91.7	0.0236	New Overhead - Contractor Limited	WEHL WERE
		Import - 200	15	20	5690 JAGGARD3 115 5654 PENTA03 115 1	91.6	92	92	0.0236	New Overhead - Contractor Limited	WEHL WERE
MP6 & EDE	SLLP	Export - 200			No Limits Found						
		Import - 200			No Limits Found						
MP6 & SLLP	EDE	Export - 200	14	14	5690 JAGGARD3 115 5654 PENTA03 115 1	91.6	92	91.4	-0.0128	New Overhead - Contractor Limited	WEHL WERE
		Import - 200			No Limits Found						

From	To	Analysis	Base-Transfer Level	New FCITC	Base FCITC	Landing Facility	2008 Summer Peak	Line	Study Flow	OTDP	Outaged Facility	Solutions	From To
EE&L3AP	WPS	Export	300	Import	200	No Limits Found							
WPS	EE&L3AP	Import	200	Export	300	No Limits Found							
EE&L3AP	EE&L3AP	Export	200	Import	200	No Limits Found							
EE&L3AP	EE&L3AP	Export	200	Import	200	No Limits Found							
EE&L3AP	EE&L3AP	Export	200	Import	200	No Limits Found							

From		To	Analysis Side-Transfer Level	New FCTC	Base FCTC	Landing Facility	Initial Flow	Light	Study Flow	OTDF	Outaged Facility	Solutions	From To
ECC & SLP		APS	Export - 200			No Limit Found							
APS & ECC		SLP	Import - 200			No Limit Found							
APS & SLP		ECC	Export - 200			No Limit Found							
APS & SLP		ECC	Import - 200			No Limit Found							
APS & ECC		SLP	Export - 200	140	140	63128 PLINTCRS 161 63187 QENTRVRB 161 1	322.3	326	324.6	0.0176	63151 DVEE08 6 161 63128 EROGEPAS 161 1	New Overhead Residence Switch	CE SW CE SW
APS & SLP		ECC	Import - 200	71	140	63128 PLINTCRS 161 63187 QENTRVRB 161 1	322.3	325	323.6	0.0176	63151 DVEE08 9 161 63128 EROGEPAS 161 1	New Overhead Residence Switch	CE SW CE SW

2004 Summer Peak												
From	To	Analysis Side-Transfer Level	New FCIC	Base FCIC	Limiting Facility	Initial Flow	Limit	Study Flow	OTDF	Outaged Facility	Solutions	From To
LE4 & SLP	MP5	Export - 200	50	234	5641 JABALD3 115 5681 STRANG3 115 1	-220.2	-22.1	-220.9	0.0116	56158 STRANG3 245 57177 CHAG 7 245 1	New Overload - Transformer	WHLN, WELN
			80	120	53888 CARTHAG5 161 53890 CARTHO 268 0 1	79.7	84	82.8	0.0332	53888 CARTHAG5 161 53890 CARTHO 268 0 2	New Overload - Transformer	SWPA, SWPA
			101	120	53888 CARTHAG5 161 53890 CARTHO 268 0 2	79.2	84	82.7	0.0349	53888 CARTHAG5 161 53890 CARTHO 268 0 1	New Overload - Transformer	SWPA, SWPA
		Import - 200	121	123	53888 CARTHAG5 161 53890 CARTHO 268 0 1	79.7	84	83.8	0.0332	53888 CARTHAG5 161 53890 CARTHO 268 0 2	New Overload - Transformer	SWPA, SWPA
MP5 & EDE	SLP	Export - 200	84	256	53888 CARTHAG5 161 53890 CARTHO 268 0 1	79.7	84	81.2	0.0187	53888 CARTHAG5 161 53890 CARTHO 268 0 2	New Overload - Transformer	SWPA, SWPA
			106	253	53888 CARTHAG5 161 53890 CARTHO 268 0 2	79.2	84	80.8	0.0145	53888 CARTHAG5 161 53890 CARTHO 268 0 1	New Overload - Transformer	SWPA, SWPA
		Import - 200			No Limit Found							
MP5 & SLP	EDE	Export - 200	101	187	53131 DYESS 8 161 53135 EROGERS 161 1	240.6	245	244.9	0.0238	53133 ECHRTM5 161 53187 GENTATM5 161 1	New Overload - Transformer	CEWH, CEWH
		Import - 200	113	187	53131 DYESS 8 161 53135 EROGERS 161 1	240.6	245	243.2	0.0238	53133 ECHRTM5 161 53187 GENTATM5 161 1	New Overload - Transformer	CEWH, CEWH

From	To	Analysis Side-Transfer Level	New FCITC	Base FCITC	Limiting Facility	Initial Flow	Study Flow	OTDF	Outaged Facility	Solutions	From To
EDE & SLP	MPs	Export - 200			No Limits Found						
MPs & EDE	SLP	Import - 200			No Limits Found						
MPs & SLP	EDE	Export - 200	2	2	53131 DYESB 5 161 53135 EROGERSB 161 1	245	245	0 0228	53138 FLINTORS 161 53167 GENTRYNS 161 1	New Overhead Conductor Limited	CE SW, CE SW
		Import - 200	0	2	53131 DYESB 5 161 53135 EROGERSB 161 1	245	245	0 0228	53138 FLINTORS 161 53167 GENTRYNS 161 1	New Overhead Conductor Limited	CE SW, CE SW
			137	208	53131 DYESB 5 161 53135 EROGERSB 161 1	240.2	245	0 0228	53138 FLINTORS 161 53167 GENTRYNS 161 1	New Overhead Conductor Limited	CE SW, CE SW

From To		Analysis Side-Transfer Level	New FCITC	Base FCITC	Limiting Facility	Initial Flow	Limit	Study Flow	OTDF	Outaged Facility	Solutions	From To
EDE & S.JLP MPS		Export - 200			No Limits Found	2001 Spring Peak						
MPS & EDE SLP		Import - 200			No Limits Found							
MPS & EDE EDE		Export - 200			No Limits Found							
		Import - 200			No Limits Found							

From	To	Analysis Side-Transfer Level	New ECITC	Base ECITC	Linking Facility	Initial Flow	Link	Study Flow	OTDF	Outaged Facility	Solutions	From To
LOC & SLP	MP3	Export - 200			No Limits Found							
MP3 & EDE	SLP	Import - 200			No Limits Found							
MP3 & SLP	EME	Export - 200			No Limits Found							
		Import - 200			No Limits Found							

Schedule No. 7

From	To	Analysis Side-Transfer Level	New FOTC	Base FOTC	Limiting Facility	2001 All-Park	Study Flow	OTDF	Outaged Facility	Solutions	From To
EDGE 8.5.1.P	MPS	Export - 200			No Limits Found						
		Import - 200			No Limits Found						
EDGE 8.5.1.P		Export - 200			No Limits Found						
		Import - 200			No Limits Found						
EDGE 8.5.1.P		Export - 200			No Limits Found						
		Import - 200			No Limits Found						

From	To	Analysis Side-Transfer Level	New FCITC	Base FCITC	Limiting Facility	Input Flow	Limit	Study Flow	OTDR - Outgoing Facility	Solutions	From To
MPS & SLP	MPS	Export - 200	04	1171	60081 GLENWARE080 56203 LIBERTY208.0	9	-46	2.7	-0.0641 56203 SIBLEY 6 181 56203 SIBLEY 269.0	OP Guide to Limit Generation at Soley	MADP/MPU
		Import - 114			No Limits Found						
MPS & SLP	EDE	Export - 200	04	773	60081 GLENWARE080 56203 LIBERTY208.0	8	-46	-0.5	-0.087 56203 SIBLEY 6 181 56203 SIBLEY 269.0	OP Guide to Limit Generation at Soley	MADP/MPU
		Import - 200			No Limits Found						

From	To	Analysis Side-Transfer Level	New FCITC	Base FCITC	Limiting Facility	Initial Flow	Limit	Study Flow	OTDF	Outaged Facility	Solutions	From To
LUE & Exp	141'S	Export: 200			No Limits Found							
MPG & EDE	612P	Import: 200			No Limits Found							
MPG & EDE	612P	Export: 200			No Limits Found							
MPG & EDE	612P	Import: 200			No Limits Found							
MPG & EDE	612P	Export: 200			No Limits Found							
MPG & EDE	612P	Import: 200			No Limits Found							

From	To	Analysis	Base-Transfer Level	New FCITC	Base FCITC	Drinking Facility	Initial Flow	Limit	Study Flow	OTDF	Outaged Facility	Solutions	From To
EDE & LIP	MPS		Export - 200			No Limits Found							
			Import - 200			No Limits Found							
MPS & EDE	LIP		Export - 200			No Limits Found							
			Import - 200			No Limits Found							
MPS & LIP	EDE		Export - 200			No Limits Found							
			Import - 200			No Limits Found							



*Southwest
Power Pool*

**System Impact Study for
Transmission Service Requests**

from

UTILICORP UNITED

(WestPlains Energy-Kansas)

**SPP TRANSMISSION REQUEST # 163523
TRANSACTION PERIOD 10/01/00 - 10/01/10**

**SPP-2000-007
April 20, 2000**

SPP Transmission Planning

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	E. BASE CASE BRANCH LOADINGS ABOVE 100% OF RATING SET A:	10SP-3
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	H. ACCC OVERLOAD REPORT MONITORED ELEMENTS LOADED	
	ABOVE 100.0 % OF RATING SET B & ACCC VOLTAGE REPORT	10SP-(4-8)

I. Executive Summary

Southwest Power Pool evaluated the impacts of the 10 year network service request (#163522) for WestPlains Energy - UtiliCorp. Multiple cases were developed and reviewed during the analysis portion of the study. The engineering results of the study show that one facility upgrade is required to accommodate the requested transmission service from the designated resources to the designated load as early as the summer of 2004. Two transformers overload with the contingency of a parallel one in multiple cases. Numerous voltage conditions were reviewed with all of them meeting UtiliCorp Criteria, eliminated through a generation redispatch, or by transformer tap changing. A summary of these results are provided in Section V. Detailed engineering data is provided for completeness in section IV.

II. Introduction

UTILICORP UNITED has requested a System Impact Study (#163522) for its four operating companies: WEPL, MIPU, SJPL, and EMDE. The three Missouri companies are to be considered one control area and the Kansas company a separate control area. This report deals only with WEPL. The period of the study is from 10/01/00 to 10/01/10.

The principal objective of this study is to identify system problems that will need to be upgraded in order to maintain system reliability.

III. Study Methodology

1. Description

This study was done in two separate parts. The first part was to study the 14 base cases to see what overloads or voltage problems exist. In the second part, one branch or selected multiple branches were removed to study the affect of their removal on the system. The SPP base case models were modified to reflect the most current modeling information.

The steady-state analysis part was done to ensure current SPP Criteria and NERC Planning Standards requirements are fulfilled.

The Southwest Power Pool (SPP) meets the NERC Planning Standards, Table No. 1, which provides the requirements related to thermal overloads with a contingency. It requires that all facilities be within emergency ratings after a contingency.

2. Model Updates

Cases for year 2000 Spring Peak, 2000 Summer Peak, 2000 Fall Peak, 2000/01 Winter Peak, 2001 April Minimum, 2001 Spring Peak, 2001 Summer Peak, 2001 Fall Peak, and 2001/02 Winter Peak, 2004 Summer Peak, 2004/05 Winter Peak, 2006 Summer Peak, 2006/07 Winter Peak, and 2010 Summer Peak were included. These cases were modified to reflect future firm transfers not already included in the January 2000 base case series.

3. Study Analysis

Using the created models and the ACCC function of PSS/E, single and select double contingency outages were analyzed.

PSS/E CHOICES IN RUNNING LOAD FLOW PROGRAM AND ACCC.

BASE CASES:

Solutions - Fixed slope decoupled Newton-Raphson solution (FDNS)

- A. Tap adjustment - Stepping
- B. Area interchange control - Tie lines only
- C. Var limits - Apply immediately
- D. Phase isolation options - ☒ Phase shift adjustment
 - Flat start
 - Lock DC taps
 - Lock switched shunts

ACCC CASES:

Solutions - AC contingency checking (ACCC)

- A. MW mismatch tolerance - 1.0
- B. Contingency case rating - Rate B
- C. Percent of rating - 100
- D. Output code - Summary
- E. Min flow change in overload report - 1mw
- F. Excl'd cases w/ no overloads form report - YES
- G. Exclude interfaces from report - NO
- H. Perform voltage limit check - YES
- I. Elements in available capacity table - 60000
- J. Cutoff threshold for available capacity table - 99999.0
- K. Min. contng. case Vltg chng for report - 0.02
- L. Sorted output - None

Newton Solution:

- Tap adjustment - Stepping
- Area interchange control - Tie lines only
- Var limits - Apply automatically
- Solution options - ☒ Phase shift adjustment
 - Flat start
 - Lock DC taps
 - Lock switched shunts

UNIT	CAPACITY
Jeffrey Energy Center Unit 1	59
Jeffrey Energy Center Unit 2	59
Jeffrey Energy Center Unit 3	58
Judson Large Generator (JLS)	143
A.M. Mullergren Generator (AMS)	90
Cimarron River Plant Generator #1	58
Cimarron River Plant Generator #2	14
Clifton Generator #1	71
Clifton Generator #1	2
Total	554

4. SUMMARY THERMAL OVERLOAD TABLE, WEPL

NO	BRANCHES	LOADED TO	100% OF	THEIR B	RATING
1. 2000 FALL PEAK					
2. 2000 SUMMER PEAK					
3. 2000 SPRING PEAK					
4. 2000 WINTER PEAK					
5. 2001 APRIL MINIMUM					
6. 2001 FALL PEAK					
7. 2001 SUMMER PEAK					
8. 2001 SPRING PEAK					
9. 2001 WINTER PEAK					
10. 2004 SUMMER PEAK					
(	OUTAGED BRANCH				
58784	{OTISSUB3} 58823	{OTISSUB1}	CKT 1 58784	OTISSUB1 2	4.6
58784	{OTISSUB3} 58823	{OTISSUB1}	CKT 2 58784	OTISSUB1 1	3.7
11. 2004 WINTER PEAK					
12. 2006 SUMMER PEAK					
(	OUTAGED BRANCH				
58784	{OTISSUB3} 58823	{OTISSUB1}	CKT 1 58784	OTISSUB1 2	4.9
58784	{OTISSUB3} 58823	{OTISSUB1}	CKT 2 58784	OTISSUB1 1	3.8
13. 2006 WINTER PEAK					
14. 2010 SUMMER PEAK					
(	OUTAGED BRANCH				
58784	{OTISSUB3} 58823	{OTISSUB1}	CKT 1 58784*OTISSUB3	58823 OTISSUB1 2	5.4
58784	{OTISSUB3} 58823	{OTISSUB1}	CKT 2 58784*OTISSUB3	58823 OTISSUB1 1	4.2

b. SUMMARY: VOLTAGE LIMIT TABLE, WEPL

1. 2000 FALL PEAK

(	OUTAGED BRANCH	)	(	VOLTAGE RANGE	)	(X----- BUS ----X) (V-CONT)	(V-INIT)
58756	[CLIFTON3] 58765 [GRNLEAF31] CKT 1			VOLTAGE GREATER THAN 1.0500:		58804 CLIFSUB134.5 1.0674	1.0431 LTC
58773	[MED-LDG3] 58797 [SUNCITY31] CKT 1			VOLTAGE GREATER THAN 1.0500:		58833 SUNCITY134.5 1.0703	1.042 LTC
58759	[CUDAHY 3] 58771 [JUD-LRG31] CKT 1			VOLTAGE LESS THAN 0.9500:		58753 CIM-PLT113.8 0.9498	0.9829 above .90
58778	[MULGREN3] 58779 [MULGREN62] CKT 1			VOLTAGE LESS THAN 0.9500:		58760 EHALLTP3 115 0.9477	1.0190 above .90
						58766 GBENDTP3 115 0.9418	1.0175 above .90
						58778 MULGREN3 115 0.9371	1.0235 above .90
						58784 OTISSUB3 115 0.9348	1.0223 above .90
						58801 RUSSELL3 115 0.9499	1.0184 above .90
						58823 OTISSUB134.5 0.9328	1.0342 above .90
						58761 E-GBEND3 115 0.9327	1.0206 above .90
						58777 MULGREN113.8 0.9371	1.0235 above .90
						58781 N-GBEND3 115 0.9349	1.0221 above .90
						58789 S-GBEND3 115 0.9322	1.0202 above .90
						58807 E-GBEND134.5 0.9497	1.0432 above .90
						58828 S-GBEND134.5 0.9470	1.0411 above .90
58754	[CIM-PLT3] 56455 [NCIMARN31],CKT 1			VOLTAGE LESS THAN 0.9500:		58753 CIM-PLT113.8 0.9453	0.9829 above .90
2. 2000 SUMMER PEAK							
BASE CASE							
58757	[CONCORD3] 58758 [CONCORD6],CKT 1			VOLTAGE LESS THAN 0.9500:		58787 PRATT 3 115 0.9438	0.9438 above .90
						58785 PHLEBURG3 115 0.9472	0.9837 above .90
						58793 SMITH-C3 115 0.9425	0.9897 above .90
						58798 WALDO 3 115 0.9412	0.9800 above .90
						58801 RUSSELL3 115 0.9500	0.9824 above .90
58760	[EHALLTP3] 58778 [MULGREN3] CKT 1			VOLTAGE LESS THAN 0.9500:		58760 EHALLTP3 115 0.8810	0.9841 planned
						58762 ELLSWTH3 115 0.8838	0.9910 2002
						58793 SMITH-C3 115 0.9472	0.9897 Ellsworth
						58798 WALDO 3 115 0.8938	0.9800 to
						58801 RUSSELL3 115 0.8833	0.9824 Rice
						58808 ELLSWTH134.5 0.9231	1.0404
						58834 WALDO 134.5 0.9289	1.0299
58764	[GRNBURG3] 58771 [JUD-LRG3] CKT 1			VOLTAGE LESS THAN 0.9500:		58773 MED-LDG3 115 0.9390	0.9674 above .90
						58787 PRATT 3 115 0.9166	0.9438 above .90
						58797 SUNCITY3 115 0.9462	0.9772 above .90

SUMMARY: VOLTAGE, MIT TABLE, WEPL

(OUTAGED BRANCH 58764 [GRNBURG3] 58797 [SUNCITY3] CKT 1	(VOLTAGE RANGE VOLTAGE GREATER THAN 1.0500: VOLTAGE LESS THAN 0.9500:	(X----- BUS ----X) (V-CONT) 58810 GRNBURG134.5 1.0784 58773 MED-LDG3 115 0.9324 58787 PRATT 3 115 0.9144 58797 SUNCITY3 115 0.9331	(V-INIT) 1.0379 LTC 0.9674 above .90 0.9438 above .90 0.9772 above .90
58766 [GBENDTP3] 58778 [MULGREN3] CKT 1	VOLTAGE LESS THAN 0.9500:	58766 GBENDTP3 115 0.9310 58787 PRATT 3 115 0.9190 58792 SEWARD 3 115 0.9307 58796 ST-JOHN3 115 0.9231	0.9948 above .90 0.9438 above .90 0.9756 above .90 0.9565 above .90
58766 [GBENDTP3] 58792 [SEWARD 3] CKT 1	VOLTAGE LESS THAN 0.9500:	58787 PRATT 3 115 0.9180 58792 SEWARD 3 115 0.9291 58796 ST-JOHN3 115 0.9219	0.9438 above .90 0.9756 above .90 0.9565 above .90
58768 [HARPER 4] 58775 [MILANTP4] CKT 1	VOLTAGE LESS THAN 0.9500:	58768 HARPER 4 138 0.9125 58773 MED-LDG3 115 0.9301 58774 MED-LDG4 138 0.9285 58787 PRATT 3 115 0.9206 58797 SUNCITY3 115 0.9499 58813 HARPER 134.5 0.9414	0.9943 above .90 0.9674 above .90 0.9844 above .90 0.9438 above .90 0.9772 above .90 1.0398 above .90
58773 [MED-LDG3] 58774 [MED-LDG4] CKT 1	VOLTAGE GREATER THAN 1.0500:	58813 HARPER 134.5 1.0645	1.0398 LTC
58773 [MED-LDG3] 58787 [PRATT 3] CKT 1	VOLTAGE GREATER THAN 1.0500: VOLTAGE LESS THAN 0.9500:	58817 MED-LDG134.5 1.0772 58833 SUNCITY134.5 1.0674 58787 PRATT 3 115 0.8982	1.0372 LTC 1.0364 LTC 0.9438 OK
58773 [MED-LDG3] 58797 [SUNCITY3] CKT 1	VOLTAGE GREATER THAN 1.0500: VOLTAGE LESS THAN 0.9500:	58810 GRNBURG134.5 1.0859 58833 SUNCITY134.5 1.1080 58773 MED-LDG3 115 0.9310 58787 PRATT 3 115 0.9141	1.0379 LTC 1.0364 LTC 0.9674 above .90 0.9438 above .90
58779 [MULGREN6] 58795 [SPEARVL6] CKT 1	VOLTAGE LESS THAN 0.9500:	58751 ALEXNDR3 115 0.9465	0.9823 above .90
58787 [PRATT 3] 58796 [ST-JOHN3] CKT 1	VOLTAGE LESS THAN 0.9500:	58773 MED-LDG3 115 0.9434 58787 PRATT 3 115 0.9020	0.9674 above .90 0.9438 above .90
58792 [SEWARD 3] 58796 [ST-JOHN3] CKT 1	VOLTAGE LESS THAN 0.9500:	58773 MED-LDG3 115 0.9424 58787 PRATT 3 115 0.9004 58796 ST-JOHN3 115 0.8989	0.9674 above .90 0.9438 above .90 0.9565 generation

SUMMARY: VOLTAGE .MIT TABLE, WEPL

(OUTAGED BRANCH)		(VOLTAGE RANGE)		(X----- BUS ----X) (V-CONT)		(V-INIT)	
58779	[MULGREN6] 56601 [HEIZER 3] CKT 1	VOLTAGE LESS THAN	0.9500:	58751 ALEXNDR3 115	0.9222	0.9823	above .90
				58783 NESS-CT3 115	0.9427	0.9884	above .90
58786	[PLAINVL3] 56551 [SALINE 3] CKT 1	VOLTAGE LESS THAN	0.9500:	58785 PHLBURG3 115	0.9267	0.9837	above .90
				58786 PLAINVL3 115	0.9216	0.9904	above .90
58795	[SPEARVL6] 56470 [SPERXFR6] CKT 1	VOLTAGE LESS THAN	0.9500:	58751 ALEXNDR3 115	0.9446	0.9823	above .90
CONTINGENCY SPP-17							
56469	[SPERVIL7] 56470 [SPERXFR6] CKT 1	VOLTAGE LESS THAN	0.9500:	58751 ALEXNDR3 115	0.9464	0.9823	above .90
56470	[SPERXFR6] 58795 [SPEARVL6] CKT 1						
56468	[SPERTER1] 56470 [SPERXFR6] CKT 1						
3. 2000 SPRING PEAK							
58773	[MED-LDG3] 58787 [PRATT 3] CKT 1	VOLTAGE GREATER THAN	1.0500:	58817 MED-LDG134.5	1.0739	1.0441	LTC
				58833 SUNCITY134.5	1.0681	1.0437	LTC
				58787 PRATT 3 115	0.9364	0.9928	above .90
58773	[MED-LDG3] 58797 [SUNCITY3]	VOLTAGE GREATER THAN	1.0500:	58833 SUNCITY134.5	1.0662	1.0437	LTC
58778	[MULGREN3] 58779 [MULGREN6] CKT 1	VOLTAGE LESS THAN	0.9500:	58761 E-GBEND3 115	0.9482	1.0054	above .90
				58781 N-GBEND3 115	0.9497	1.0065	above .90
				58784 OTISSUB3 115	0.9499	1.0067	above .90
				58789 S-GBEND3 115	0.9478	1.0051	above .90
58786	[PLAINVL3] 56551 [SALINE 3] CKT 1	VOLTAGE GREATER THAN	1.0500:	58824 PHLBURG134.5	1.0623	1.0388	LTC
				58825 PLAINVL134.5	1.0862	1.0448	LTC
58795	[SPEARVL6] 56470 [SPERXFR6] CKT 1	VOLTAGE LESS THAN	0.9500:	58751 ALEXNDR3 115	0.9459	0.9997	above .90
CONTINGENCY SPP-17							
56469	[SPERVIL7] 56470 [SPERXFR6] CKT 1	VOLTAGE LESS THAN	0.9500:	58751 ALEXNDR3 115	0.9479	0.9997	above .90
56470	[SPERXFR6] 58795 [SPEARVL6] CKT 1						
56468	[SPERTER1] 56470 [SPERXFR6] CKT 1						

4. 2000 WINTER PEAK

SUMMARY: VOLTAGE .MIT TABLE, WEPL

(	OUTAGED BRANCH	(	VOLTAGE RANGE	(	(X----- BUS ----X)	(V-CONT)	(V-INT)
58752	[CMRIVTP3] 58759 [CUDAHY 3] CKT 1	VOLTAGE GREATER THAN	1.0500:	58806	CUDAHY 134.5	1.0789	1.0483 LTC
		VOLTAGE LESS THAN	0.9500:	58752	CMRIVTP3 115	0.9255	0.9699 above .90
				58753	CIM-PLT113.8	0.9148	0.9598 above .90
				58754	CIM-PLT3 115	0.9264	0.9678 above .90
				58772	E-LIBER3 115	0.9254	0.9666 above .90
				58782	NLIBTAP3 115	0.9243	0.9657 above .90
				58790	S-LIBER3 115	0.9246	0.9659 above .90
				58791	SATANTA3 115	0.9438	0.9720 above .90
				58800	W-LIBER3 115	0.9204	0.9620 above .90
				58837	NLIB 3 115	0.9227	0.9642 above .90
58759	[CUDAHY 3] 58771 [JUD-LRG3] CKT 1	VOLTAGE LESS THAN	0.9500:	58752	CMRIVTP3 115	0.9244	0.9699 above .90
				58753	CIM-PLT113.8	0.9136	0.9598 above .90
				58754	CIM-PLT3 115	0.9254	0.9678 above .90
				58759	CUDAHY 3 115	0.9234	0.9891 above .90
				58772	E-LIBER3 115	0.9243	0.9666 above .90
				58782	NLIBTAP3 115	0.9232	0.9657 above .90
				58790	S-LIBER3 115	0.9235	0.9659 above .90
				58791	SATANTA3 115	0.9427	0.9720 above .90
				58800	W-LIBER3 115	0.9193	0.9620 above .90
				58837	NLIB 3 115	0.9216	0.9642 above .90
58773	[MED-LDG3] 58787 [PRATT 3] CKT 1	VOLTAGE GREATER THAN	1.0500:	58817	MED-LDG134.5	1.0669	1.0438 LTC
		VOLTAGE LESS THAN	0.9500:	58787	PRATT 3 115	0.9419	0.9876 above .90
58773	[MED-LDG3] 58797 [SUNCITY3] CKT 1	VOLTAGE GREATER THAN	1.0500:	58833	SUNCITY134.5	1.0722	1.0431 LTC
58778	[MULGREN3] 58779 [MULGREN6] CKT 1	VOLTAGE LESS THAN	0.9500:	58760	EHALLTP3 115	0.9338	1.0072 above .90
				58761	E-GBEND3 115	0.9172	1.0057 above .90
				58762	ELLSWTH3 115	0.9371	1.0121 above .90
				58777	MULGREN113.8	0.9226	1.0094 above .90
				58781	N-GBEND3 115	0.9199	1.0075 above .90
				58789	S-GBEND3 115	0.9166	1.0053 above .90
				58796	ST-JOHN3 115	0.9469	0.9897 above .90
				58801	RUSSELL3 115	0.9364	1.0072 above .90
				58821	N-GBEND134.5	0.9455	1.0399 above .90
				58828	S-GBEND134.5	0.9460	1.0429 above .90
				58766	GBENDTP3 115	0.9285	1.0052 above .90
				58778	MULGREN3 115	0.9226	1.0094 above .90
				58784	OTISSUB3 115	0.9197	1.0077 above .90
				58792	SEWARD 3 115	0.9404	0.9967 above .90
				58798	WALDO 3 115	0.9465	1.0086 above .90
				58807	E-GBEND134.5	0.9434	1.0391 above .90
				58823	OTISSUB134.5	0.9337	1.0400 above .90

MIT TABLE, WEPL

(	(	OUTAGED BRANCH	)	(	VOLTAGE RANGE	)	(X----- BUS ----X) (V-CONT)	(V-INIT)
58779	[MULGREN6]	58795	[SPEARVL6]	CKT 1	VOLTAGE LESS THAN	0.9500:	58751 ALEXNDR3 115 0.9332	1.0039 above .90
							58760 EHALLTP3 115 0.9468	1.0072 above .90
							58761 E-GBEND3 115 0.9387	1.0057 above .90
							58777 MULGREN113.8 0.9436	1.0094 above .90
							58779 MULGREN6 230 0.9466	1.0076 above .90
							58784 OTISSUB3 115 0.9411	1.0077 above .90
							58789 S-GBEND3 115 0.9381	1.0053 above .90
							58796 ST-JOHN3 115 0.9340	0.9897 above .90
							58766 GBENDTP3 115 0.9410	1.0052 above .90
							58778 MULGREN3 115 0.9436	1.0094 above .90
							58781 N-GBEND3 115 0.9411	1.0075 above .90
							58787 PRATT 3 115 0.9393	0.9876 above .90
							58792 SEWARD 3 115 0.9356	0.9967 above .90
							58801 RUSSELL3 115 0.9480	1.0072 above .90
58782	[NLBTAP3]	58837	[NLIB 3]	CKT 1	VOLTAGE GREATER THAN	1.0500:	58816 E-LIBER134.5 1.0693	1.0457 LTC
		58829	S-LIBER134.5	1.0678	1.0438			
58754	[CIM-PLT3]	56455	[NCIMARN3]	CKT 1	VOLTAGE GREATER THAN	1.0500:	58830 SATANTA134.5 1.0688	1.0392 above .90
					VOLTAGE LESS THAN	0.9500:	58752 CMRIVTP3 115 0.9237	0.9699 above .90
							58753 CIM-PLT113.8 0.9064	0.9598 above .90
							58754 CIM-PLT3 115 0.9185	0.9678 above .90
							58782 NLBTAP3 115 0.9188	0.9657 above .90
							58800 W-LIBER3 115 0.9149	0.9620 above .90
							58772 E-LIBER3 115 0.9204	0.9666 above .90
							58790 S-LIBER3 115 0.9196	0.9659 above .90
							58837 NLIB 3 115 0.9172	0.9642 above .90
58795	[SPEARVL6]	56470	[SPERXFR6]	CKT 1	VOLTAGE LESS THAN	0.9500:	58752 CMRIVTP3 115 0.9455	0.9699 above .90
							58754 CIM-PLT3 115 0.9438	0.9678 above .90
							58782 NLBTAP3 115 0.9422	0.9657 above .90
							58791 SATANTA3 115 0.9474	0.9720 above .90
							58837 NLIB 3 115 0.9407	0.9642 above .90
							58753 CIM-PLT113.8 0.9338	0.9598 above .90
							58772 E-LIBER3 115 0.9433	0.9666 above .90
							58790 S-LIBER3 115 0.9426	0.9659 above .90
							58800 W-LIBER3 115 0.9384	0.9620 above .90
CONTINGENCY SPP-17								
56469	[SPERVIL7]	56470	[SPERXFR6]	CKT 1	VOLTAGE LESS THAN	0.9500:	58752 CMRIVTP3 115 0.9458	0.9699 above .90
56470	[SPERXFR6]	58795	[SPEARVL6]	CKT 1			58754 CIM-PLT3 115 0.9442	0.9678 above .90
56468	[SPETER1]	56470	[SPERXFR6]	CKT 1			58782 NLBTAP3 115 0.9425	0.9657 above .90
							58791 SATANTA3 115 0.9478	0.9720 above .90
							58837 NLIB 3 115 0.9410	0.9642 above .90
							58753 CIM-PLT113.8 0.9342	0.9598 above .90

((VOLTAGE RANG.))
58772 E-LIBER3 115 0.9436 0.9666 above .90

(X----- BUS ----X) (V-CONT)

(V-INIT)

58790 S-LIBER3 115 0.9429 0.9659 above .90
58800 W-LIBER3 115 0.9387 0.9620 above .90

CONTINGENCY SPP-22

51534 [TUCO 7] 54119 [O.K.U.-7] CKT 1 0.9500: 0.9699 above .90
51533 [TUCO 6] 51534 [TUCO 7] CKT 1 0.9231 0.9678 above .90
58782 NLBTAP3 115 0.9127 0.9657 above .90
58791 SATANTA3 115 0.9494 0.9720 above .90
58837 NLIB 3 115 0.9111 0.9642 above .90
58753 CIM-PLT113.8 0.9111 0.9598 above .90
58772 E-LIBER3 115 0.9120 0.9666 above .90
58790 S-LIBER3 115 0.9112 0.9659 above .90
58800 W-LIBER3 115 0.9087 0.9620 above .90

CONTINGENCY SPP-28

51534 [TUCO 7] 54119 [O.K.U.-7] CKT 1 0.9245 0.9699 above .90
51533 [TUCO 6] 51534 [TUCO 7] CKT 1 0.9227 0.9678 above .90
54119 [O.K.U.-7] 54131 [L.E.S.-7] CKT 1 0.9123 0.9657 above .90
54119 [O.K.U.-7] 59991 [OKLAUN 7] CKT 1 0.9492 0.9720 above .90
58837 NLIB 3 115 0.9106 0.9642 above .90
58753 CIM-PLT113.8 0.9107 0.9598 above .90
58772 E-LIBER3 115 0.9116 0.9666 above .90
58790 S-LIBER3 115 0.9107 0.9659 above .90
58800 W-LIBER3 115 0.9083 0.9620 above .90

5. 2001 APRIL MINIMUM

58752 [CMRIVTP3] 58759 [CUDAHY 3] CKT 1 1.0705 1.0471 LTC
58786 [PLAINVL3] 56551 [SALINE 3] CKT 1 1.0627 1.0361 LTC
58825 [PLAINVL3] 56551 [SALINE 3] CKT 1 1.0775 1.0360 LTC

CONTINGENCY SPP-16

56446 [HLCKFMR6] 56449 [HOLCOMB7] CKT 1 1.0540 1.0302 LTC
56446 [HLCKFMR6] 56448 [HOLCOMB3] CKT 1
56446 [HLCKFMR6] 56450 [HOLCTER1] CKT 1

6. 2001 FALL PEAK

58752 [CMRIVTP3] 58759 [CUDAHY 3] CKT 1 1.0670 1.0449 LTC
58753 CIM-PLT113.8 0.9456 0.9803 above .90
58756 [CLIFTON3] 58765 [GRNLEAF3] CKT 1 1.0559 1.0329 LTC

SUMMARY: VOLTAGE .MIT TABLE, WEPL

(OUTAGED BRANCH 58759 [CUDAHY 3] 58771 [JUD-LRG3] CKT 1	(VOLTAGE RANGE VOLTAGE LESS THAN	(X----- BUS -----X) (V-CONT) 58753 CIM-PLT113.8 0.9448 58800 W-LIBER3 115 0.9497	(V-INIT) 0.9803 above .90 0.9827 above .90
58773 [MED-LDG3] 58787 [PRATT 3] CKT 1	VOLTAGE GREATER THAN VOLTAGE LESS THAN	58817 MED-LDG134.5 1.0692 58787 PRATT 3 115 0.9489	1.0464 LTC 0.9896 above .90
58773 [MED-LDG3] 58797 [SUNCITY3] CKT 1	VOLTAGE GREATER THAN	58833 SUNCITY134.5 1.0619	1.0392 LTC
58778 [MULGREN3] 58779 [MULGREN6] CKT 1	VOLTAGE LESS THAN	58760 EHALLTP3 115 0.9345 58762 ELLSWTH3 115 0.9382 58777 MULGREN113.8 0.9260 58781 N-GBEND3 115 0.9236 58789 S-GBEND3 115 0.9206 58796 ST-JOHN3 115 0.9487 58801 RUSSELL3 115 0.9365 58819 MULLERGI34.5 0.9485 58823 OTISSUB134.5 0.9396 58761 E-GBEND3 115 0.9212 58766 GBENDTP3 115 0.9316 58778 MULGREN3 115 0.9260 58784 OTISSUB3 115 0.9240 58792 SEWARD 3 115 0.9428 58798 WALDO 3 115 0.9446 58807 E-GBEND134.5 0.9428 58821 N-GBEND134.5 0.9445 58828 S-GBEND134.5 0.9399	1.0093 above .90 1.0146 above .90 1.0155 above .90 1.0139 above .90 1.0119 above .90 0.9908 above .90 1.0085 above .90 1.0403 above .90 1.0373 above .90 1.0123 above .90 1.0102 above .90 1.0155 above .90 1.0144 above .90 0.9994 above .90 1.0073 above .90 1.0405 above .90 1.0409 above .90 1.0381 above .90
58782 [NLIBTAP3] 58837 [NLIB 3] CKT 1	VOLTAGE GREATER THAN	58816 E-LIBER134.5 1.0644 58829 S-LIBER134.5 1.0640	1.0433 LTC 1.0425 LTC
58754 [CIM-PLT3] 56455 [NCIMARN3] CKT 1	VOLTAGE LESS THAN	58753 CIM-PLT113.8 0.9417 58800 W-LIBER3 115 0.9486	0.9803 above .90 0.9827 above .90
7. 2001 SUMMER PEAK			
58757 [CONCORD3] 58758 [CONCORD6] CKT 1	VOLTAGE LESS THAN	58785 PHLBURG3 115 0.9467 58793 SMITH-C3 115 0.9430 58798 WALDO 3 115 0.9441	0.9856 above .90 0.9938 above .90 0.9842 above .90

SUMMARY: VOLTAGE MIT TABLE, WEPL

(	OUTAGED BRANCH	)	(	VOLTAGE RANGE	)	(X----- BUS ----X) (V-CONT)	(V-INIT)
58760	[EHALLTP3] 58778 [MULGREN3] CKT 1			VOLTAGE LESS THAN 0.9500:		58760 EHALLTP3 115 0.8780	0.9878 planned
						58793 SMITH-C3 115 0.9479	0.9938 2002
						58801 RUSSELL3 115 0.8805	0.9863 Ellsworth
						58834 WALDO 134.5 0.9245	1.0332 to
						58762 ELLSWTH3 115 0.8802	0.9945 Rice
						58798 WALDO 3 115 0.8916	0.9842
						58808 ELLSWTH134.5 0.9185	1.0437
58764	[GRNBURG3] 58771 [JUD-LRG3] CKT 1			VOLTAGE LESS THAN 0.9500:		58787 PRATT 3 115 0.9333	0.9534 above .90
58764	[GRNBURG3] 58797 [SUNCITY3] CKT 1			VOLTAGE GREATER THAN 1.0500:		58810 GRNBURG134.5 1.0762	1.0482 LTC
				VOLTAGE LESS THAN 0.9500:		58773 MED-LDG3 115 0.9478	0.9794 above .90
						58787 PRATT 3 115 0.9301	0.9534 above .90
						58797 SUNCITY3 115 0.9485	0.9895 above .90
58766	[GBENDTP3] 58778 [MULGREN3] CKT 1			VOLTAGE LESS THAN 0.9500:		58766 GBENDTP3 115 0.9390	0.9976 above .90
						58787 PRATT 3 115 0.9296	0.9534 above .90
						58792 SEWARD 3 115 0.9387	0.9801 above .90
						58796 ST-JOHN3 115 0.9324	0.9634 above .90
58766	[GBENDTP3] 58792 [SEWARD 3] CKT 1			VOLTAGE LESS THAN 0.9500:		58787 PRATT 3 115 0.9288	0.9534 above .90
						58792 SEWARD 3 115 0.9372	0.9801 above .90
						58796 ST-JOHN3 115 0.9314	0.9634 above .90
58768	[HARPER 4] 58775 [MILANTP4] CKT 1			VOLTAGE LESS THAN 0.9500:		58768 HARPER 4 138 0.9061	0.9999 above .90
						58773 MED-LDG3 115 0.9249	0.9794 above .90
						58774 MED-LDG4 138 0.9229	0.9895 above .90
						58787 PRATT 3 115 0.9165	0.9534 above .90
						58797 SUNCITY3 115 0.9455	0.9895 above .90
						58813 HARPER 134.5 0.9322	1.0448 above .90
58773	[MED-LDG3] 58774 [MED-LDG4] CKT 1			VOLTAGE GREATER THAN 1.0500:		58813 HARPER 134.5 1.0655	1.0448 LTC
58773	[MED-LDG3] 58787 [PRATT 3] CKT 1			VOLTAGE GREATER THAN 1.0500:		58813 HARPER 134.5 1.0660	1.0448 LTC
						58817 MED-LDG134.5 1.0844	1.0438 LTC
						58787 PRATT 3 115 0.8974	0.9534 generation
						58796 ST-JOHN3 115 0.9338	0.9634 generation
58773	[MED-LDG3] 58797 [SUNCITY3] CKT 1			VOLTAGE GREATER THAN 1.0500:		58810 GRNBURG134.5 1.0834	1.0482 LTC
				VOLTAGE LESS THAN 0.9500:		58833 SUNCITY134.5 1.1041	1.0495 LTC
						58773 MED-LDG3 115 0.9461	0.9794 above .90
						58787 PRATT 3 115 0.9292	0.9534 above .90

SUMMARY: VOLTAGE .MIT TABLE, WEPL

(	OUTAGED BRANCH	)	(	VOLTAGE RANGE	)	(X----- BUS ----X) (V-CONT)	(V-INIT)
58779	[MULGREN6] 58795 [SPEARVL6] CKT 1			VOLTAGE LESS THAN	0.9500:	58751 ALEXNDR3 115 0.9499	0.9838 above .90
58782	[NLIBTAP3] 58837 [NLIB 3] CKT 1			VOLTAGE GREATER THAN	1.0500:	58816 E-LIBER134.5 1.0690 58829 S-LIBER134.5 1.0670	1.0475 LTC 1.0448 LTC
58787	[PRATT 3] 58796 [ST-JOHN3] CKT 1			VOLTAGE LESS THAN	0.9500:	58787 PRATT 3 115 0.9139	0.9534 above .90
58792	[SEWARD 3] 58796 [ST-JOHN3] CKT 1			VOLTAGE LESS THAN	0.9500:	58787 PRATT 3 115 0.9137 58796 ST-JOHN3 115 0.9120	0.9534 above .90 0.9634 above .90
58779	[MULGREN6] 56601 [HEIZER 3] CKT 1			VOLTAGE LESS THAN	0.9500:	58751 ALEXNDR3 115 0.9329	0.9838 above .90
58786	[PLAINVL3] 56551 [SALINE 3] CKT 1			VOLTAGE LESS THAN	0.9500:	58785 PHLBURG3 115 0.9323 58786 PLAINVL3 115 0.9269	0.9856 above .90 0.9916 above .90
58795	[SPEARVL6] 56470 [SPERXFR6] CKT 1			VOLTAGE LESS THAN	0.9500:	58751 ALEXNDR3 115 0.9482 58791 SATANTA3 115 0.9499	0.9838 above .90 0.9748 above .90
CONTINGENCY SPP-16							
56446	[HLCXFR6] 56449 [HOLCOMB7] CKT 1			VOLTAGE LESS THAN	0.9500:	58791 SATANTA3 115 0.9492	0.9748 above .90
56446	[HLCXFR6] 56448 [HOLCOMB3] CKT 1			VOLTAGE LESS THAN	0.9500:		
56446	[HLCXFR6] 56450 [HOLCTER1] CKT 1			VOLTAGE LESS THAN	0.9500:		
CONTINGENCY SPP-17							
56469	[SPERVIL7] 56470 [SPERXFR6] CKT 1			VOLTAGE LESS THAN	0.9500:	58751 ALEXNDR3 115 0.9455 58791 SATANTA3 115 0.9496	0.9838 above .90 0.9748 above .90
56470	[SPERXFR6] 58795 [SPEARVL6] CKT 1						
56468	[SPERTER1] 56470 [SPERXFR6] CKT 1						
8. 2001 SPRING PEAK							
58752	[CMRIVTP3] 58759 [CUDAHY 3] CKT 1			VOLTAGE GREATER THAN	1.0500:	58806 CUDAHY 134.5 1.0688 58752 CMRIVTP3 115 0.9469 58753 CIM-PLT13.8 0.9376 58754 CIM-PLT3 115 0.9473 58772 E-LIBER3 115 0.9476 58782 NLIBTAP3 115 0.9466 58790 S-LIBER3 115 0.9471 58800 W-LIBER3 115 0.9435 58837 NLIB 3 115 0.9454	1.0454 LTC 0.9812 above .90 0.9723 above .90 0.9792 above .90 0.9794 above .90 0.9785 above .90 0.9790 above .90 0.9755 above .90 0.9774 above .90

SUMMARY: VOLTAGE MIT TABLE, WEPL

(	OUTAGED BRANCH	(	VOLTAGE RANGE	(	(X----- BUS -----X) (V-CONT)	(V-INIT)
58759	[CUDAHY 3] 58771 [JUD-LRG3] CKT 1	)	VOLTAGE LESS THAN 0.9500:	)	58752 CMRIVTP3 115 0.9470	0.9812 above .90
					58753 CIM-PLT113.8 0.9377	0.9723 above .90
					58754 CIM-PLT3 115 0.9474	0.9792 above .90
					58759 CUDAHY 3 115 0.9464	0.9966 above .90
					58772 E-LIBER3 115 0.9477	0.9794 above .90
					58782 NLBTAP3 115 0.9467	0.9785 above .90
					58790 S-LIBER3 115 0.9472	0.9790 above .90
					58800 W-LIBER3 115 0.9436	0.9755 above .90
					58837 NLIB 3 115 0.9455	0.9774 above .90
58773	[MED-LDG3] 58787 [PRATT 3] CKT 1	)	VOLTAGE GREATER THAN 1.0500:	)	58817 MED-LDG134.5 1.0656	1.0352 LTC
					58833 SUNCITY134.5 1.0637	1.0386 LTC
					58787 PRATT 3 115 0.9434	0.9788 above .90
58773	[MED-LDG3] 58797 [SUNCITY3] CKT 1	)	VOLTAGE GREATER THAN 1.0500:	)	58810 GRNBURG134.5 1.0616	1.0394 LTC
58778	[MULGREN3] 58779 [MULGREN6] CKT 1	)	VOLTAGE LESS THAN 0.9500:	)	58833 SUNCITY134.5 1.0725	1.0386 LTC
					58761 E-GBEND3 115 0.9491	0.9965 above .90
					58789 S-GBEND3 115 0.9487	0.9962 above .90
58792	[SEWARD 3] 58796 [ST-JOHN3] CKT 1	)	VOLTAGE LESS THAN 0.9500:	)	58796 ST-JOHN3 115 0.9401	0.9739 above .90
58754	[CIM-PLT3] 56455 [NCIMARN3] CKT 1	)	VOLTAGE GREATER THAN 1.0500:	)	58830 SATANTA134.5 1.0681	1.0447 LTC
					58752 CMRIVTP3 115 0.9488	0.9812 above .90
					58753 CIM-PLT113.8 0.9346	0.9723 above .90
					58754 CIM-PLT3 115 0.9444	0.9792 above .90
					58772 E-LIBER3 115 0.9469	0.9794 above .90
					58782 NLBTAP3 115 0.9455	0.9785 above .90
					58790 S-LIBER3 115 0.9463	0.9790 above .90
					58800 W-LIBER3 115 0.9424	0.9755 above .90
					58837 NLIB 3 115 0.9443	0.9774 above .90
58786	[PLAINVL3] 56551 [SALINE 3] CKT 1	)	VOLTAGE GREATER THAN 1.0500:	)	58824 PHLBURG134.5 1.0592	1.0389 LTC
					58825 PLAINVL134.5 1.0760	1.0396 LTC
58795	[SPEARVL6] 56470 [SPERXFR6] CKT 1	)	VOLTAGE LESS THAN 0.9500:	)	58753 CIM-PLT113.8 0.9493	0.9723 above .90
CONTINGENCY SPD-17						
56469	[SPERVIL7] 56470 [SPERXFR6] CKT 1	)	VOLTAGE LESS THAN 0.9500:	)	58753 CIM-PLT113.8 0.9496	0.9723 above .90
56470	[SPERXFR6] 58795 [SPEARVL6] CKT 1	)				
56468	[SPERTER1] 56470 [SPERXFR6] CKT 1	)				

9. 2001 WINTER

SUMMARY: VOLTAGE MIT TABLE, WEPL

(	OUTAGED BRANCH	)	(	VOLTAGE RANGE	)	(X----- BUS ----X) (V-CONT)	(V-INIT)
58752	[CMRIVTP3] 58759 [CUDAH3] CKT 1			VOLTAGE GREATER THAN	1.0500:	58806 CUDAH3 134.5	1.0428 LTC
				VOLTAGE LESS THAN	0.9500:	58752 CMRIVTP3 115	0.9697 above .90
						58753 CIM-PLT113.8	0.9595 above .90
						58754 CIM-PLT3 115	0.9675 above .90
						58772 E-LIBER3 115	0.9662 above .90
						58782 NLBTAP3 115	0.9653 above .90
						58790 S-LIBER3 115	0.9655 above .90
						58791 SATANTA3 115	0.9719 above .90
						58800 W-LIBER3 115	0.9615 above .90
						58837 NLIB 3 115	0.9638 above .90
58759	[CUDAH3] 58771 [JUD-LRG3] CKT 1			VOLTAGE LESS THAN	0.9500:	58752 CMRIVTP3 115	0.9697 above .90
						58753 CIM-PLT113.8	0.9595 above .90
						58754 CIM-PLT3 115	0.9675 above .90
						58759 CUDAH3 3 115	0.9899 above .90
						58772 E-LIBER3 115	0.9662 above .90
						58782 NLBTAP3 115	0.9653 above .90
						58790 S-LIBER3 115	0.9655 above .90
						58791 SATANTA3 115	0.9719 above .90
						58800 W-LIBER3 115	0.9615 above .90
						58837 NLIB 3 115	0.9638 above .90
58773	[MED-LDG3] 58787 [PRATT 3] CKT 1			VOLTAGE GREATER THAN	1.0500:	58817 MED-LDG134.5	1.0376 LTC
				VOLTAGE LESS THAN	0.9500:	58833 SUNCITY134.5	1.0444 LTC
						58787 PRATT 3 115	0.9870 above .90
58773	[MED-LDG3] 58797 [SUNCITY3] CKT 1			VOLTAGE GREATER THAN	1.0500:	58810 GRNBURG134.5	1.0470 LTC
						58833 SUNCITY134.5	1.0444 LTC
58778	[MULGREN3] 58779 [MULGREN6] CKT 1			VOLTAGE LESS THAN	0.9500:	58760 EHALTP3 115	1.0069 above .90
						58761 E-GBEND3 115	1.0073 above .90
						58762 ELLSWTH3 115	1.0116 above .90
						58766 GBENDTP3 115	1.0064 above .90
						58777 MULGREN113.8	1.0112 above .90
						58778 MULGREN3 115	1.0112 above .90
						58781 N-GBEND3 115	1.0092 above .90
						58784 OTISSUB3 115	1.0097 above .90
						58787 PRATT 3 115	0.9870 above .90
						58789 S-GBEND3 115	1.0068 above .90

SUMMARY: VOLTAGE .MIT TABLE, WEPL

10. 2004 SUMMER PEAK

(BASE CASE	OUTAGED BRANCH	)	(VOLTAGE RANGE VOLTAGE LESS THAN	)	(X----- BUS ----X) (V-CONT)	(V-INIT)
58757 [CONCORD3]	58758 [CONCORD6]	CKT 1	VOLTAGE LESS THAN	0.9500:	58787 PRATT 3 115 0.9418	0.9418 above .90
58764 [GRNBURG3]	58771 [JUD-LRG3]	CKT 1	VOLTAGE LESS THAN	0.9500:	58763 GLENELD3 115 0.9477 58785 PHLBURG3 115 0.9418 58793 SMITH-C3 115 0.9407	0.9963 above .90 0.9784 above .90 0.9871 above .90
58764 [GRNBURG3]	58771 [JUD-LRG3]	CKT 1	VOLTAGE LESS THAN	0.9500:	58764 GRNBURG3 115 0.9498 58773 MED-LDG3 115 0.9370 58774 MED-LDG4 138 0.9436 58787 PRATT 3 115 0.9180 58797 SUNCITY3 115 0.9433	0.9963 above .90 0.9689 above .90 0.9757 above .90 0.9418 above .90 0.9813 above .90
58764 [GRNBURG3]	58797 [SUNCITY3]	CKT 1	VOLTAGE GREATER THAN VOLTAGE LESS THAN	1.0500: 0.9500:	58810 GRNBURG134.5 1.0748 58773 MED-LDG3 115 0.9320 58774 MED-LDG4 138 0.9414 58787 PRATT 3 115 0.9158 58797 SUNCITY3 115 0.9324	1.0426 LTC 0.9689 above .90 0.9757 above .90 0.9418 above .90 0.9813 above .90
58766 [GBENDTP3]	58778 [MULGREN3]	CKT 1	VOLTAGE LESS THAN	0.9500:	58766 GBENDTP3 115 0.9272 58787 PRATT 3 115 0.9144 58792 SEWARD 3 115 0.9269 58796 ST-JOHN3 115 0.9192	0.9939 above .90 0.9418 above .90 0.9739 above .90 0.9541 above .90
58766 [GBENDTP3]	58792 [SEWARD 3]	CKT 1	VOLTAGE LESS THAN	0.9500:	58787 PRATT 3 115 0.9136 58792 SEWARD 3 115 0.9254 58796 ST-JOHN3 115 0.9181	0.9418 above .90 0.9739 above .90 0.9541 above .90
58768 [HARPER 4]	58774 [MED-LDG4]	CKT 1	VOLTAGE LESS THAN	0.9500:	58773 MED-LDG3 115 0.9447 58774 MED-LDG4 138 0.9447	0.9689 above .90 0.9757 above .90
58768 [HARPER 4]	58775 [MILANTP4]	CKT 1	VOLTAGE LESS THAN	0.9500:	58768 HARPER 4 138 0.8792 58773 MED-LDG3 115 0.9036 58774 MED-LDG4 138 0.9000 58787 PRATT 3 115 0.8969 58796 ST-JOHN3 115 0.9297 58797 SUNCITY3 115 0.9279 58813 HARPER 134.5 0.9089	0.9860 generation 0.9689 generation 0.9757 generation 0.9418 generation 0.9541 generation 0.9813 generation 1.0431 generation
58773 [MED-LDG3]	58774 [MED-LDG4]	CKT 1	VOLTAGE GREATER THAN VOLTAGE LESS THAN	1.0500: 0.9500:	58813 HARPER 134.5 1.0647 58773 MED-LDG3 115 0.9448	1.0431 LTC 0.9689 above .90

SUMMARY: VOLTAGE MIT TABLE, WEPL

(	OUTAGED BRANCH	)	(	VOLTAGE RANGE	)	(X----- BUS -----X) (V-CONT)	(V-INIT)
58773	[MED-LDG3] 58787 [PRATT 3] CKT 1			VOLTAGE GREATER THAN 1.0500:		58810 GRNBURG134.5 1.0636 58813 HARPER 134.5 1.0666 58817 MED-LDG134.5 1.0784 58833 SUNCITY134.5 1.0790 58787 PRATT 3 115 0.8821 58796 ST-JOHN3 115 0.9224	1.0426 LTC 1.0431 LTC 1.0359 LTC 1.0440 LTC 0.9418 generation 0.9541 generation
58773	[MED-LDG3] 58797 [SUNCITY3] CKT 1			VOLTAGE GREATER THAN 1.0500: VOLTAGE LESS THAN 0.9500:		58810 GRNBURG134.5 1.0815 58833 SUNCITY134.5 1.1065 58773 MED-LDG3 115 0.9314 58774 MED-LDG4 138 0.9414 58787 PRATT 3 115 0.9157	1.0426 LTC 1.0440 LTC 0.9689 above .90 0.9757 above .90 0.9418 above .90
58782	[NLIBTAP3] 58837 [NLIB 3] CKT 1			VOLTAGE GREATER THAN 1.0500:		58816 E-LIBER134.5 1.0645 58829 S-LIBER134.5 1.0676	1.0430 LTC 1.0451 LTC
58787	[PRATT 3] 58796 [ST-JOHN3] CKT 1			VOLTAGE LESS THAN 0.9500:		58773 MED-LDG3 115 0.9377 58774 MED-LDG4 138 0.9467 58787 PRATT 3 115 0.8906	0.9689 above .90 0.9757 above .90 0.9418 OK
58792	[SEWARD 3] 58796 [ST-JOHN3] CKT 1			VOLTAGE LESS THAN 0.9500:		58773 MED-LDG3 115 0.9418 58787 PRATT 3 115 0.8967 58796 ST-JOHN3 115 0.8966 58751 ALEXNDR3 115 0.9326	0.9689 generation 0.9418 generation 0.9541 generation 0.9866 above .90
58779	[MULGREN6] 56601 [HEIZER 3] CKT 1			VOLTAGE LESS THAN 0.9500:			
11. 2004 WINTER PEAK							
(	OUTAGED BRANCH	)	(	VOLTAGE RANGE	)	(X----- BUS -----X) (V-CONT)	(V-INIT)
58756	[CLIFTON3] 58765 [GRNLEAF3] CKT 1			VOLTAGE GREATER THAN 1.0500:		58804 CLIFSUB134.5 1.0622	1.0400 LTC
58773	[MED-LDG3] 58787 [PRATT 3] CKT 1			VOLTAGE GREATER THAN 1.0500: VOLTAGE LESS THAN 0.9500:		58817 MED-LDG134.5 1.0703 58833 SUNCITY134.5 1.0667 58787 PRATT 3 115 0.9341	1.0406 LTC 1.0424 LTC 0.9822 above .90
58773	[MED-LDG3] 58797 [SUNCITY3] CKT 1			VOLTAGE GREATER THAN 1.0500:		58833 SUNCITY134.5 1.0706	1.0424 LTC
58782	[NLIBTAP3] 58837 [NLIB 3] CKT 1			VOLTAGE GREATER THAN 1.0500:		58816 E-LIBER134.5 1.0705 58829 S-LIBER134.5 1.0685	1.0484 LTC 1.0459 LTC

SUMMARY: VOLTAGE MIT TABLE, WEPL

(	OUTAGED BRANCH	)	(	VOLTAGE RANGE	)	(X----- BUS ----X) (V-CONT)	(V-INIT)
						58753 CIM-PLT113.8	0.8907
						58754 CIM-PLT3 115	0.9056
						58759 CUDAHY 3 115	0.9489
						58772 E-LIBER3 115	0.9075
						58782 NLBTAP3 115	0.9056
						58790 S-LIBER3 115	0.9065
						58800 W-LIBER3 115	0.9011
						58837 NLJB 3 115	0.9037
							0.9771 generator
							0.9847 generator
							0.9982 generator
							0.9822 generator
							0.9814 generator
							0.9814 generator
							0.9773 generator
							0.9797 generator
						58763 GLENEID3 115	0.9443
						58769 JEWELL 3 115	0.9473
						58785 PHLBURG3 115	0.9403
						58793 SMITH-C3 115	0.9387
							0.9969 above .90
							1.0015 above .90
							0.9791 above .90
							0.9880 above .90
						58773 MED-LDG3 115	0.9469
						58787 PRATT 3 115	0.9363
							0.9754 above .90
							0.9581 above .90
						58810 GRNBURG134.5	1.0719
						58773 MED-LDG3 115	0.9422
						58774 MED-LDG4 138	0.9483
						58787 PRATT 3 115	0.9343
						58797 SUNCITY3 115	0.9424
							1.0445 above .90
							0.9754 above .90
							0.9795 above .90
							0.9581 above .90
							0.9858 above .90
						58787 PRATT 3 115	0.9380
							0.9581 above .90
						58768 HARPER 4 138	0.8911
						58773 MED-LDG3 115	0.9169
						58774 MED-LDG4 138	0.9129
						58787 PRATT 3 115	0.9173
						58797 SUNCITY3 115	0.9377
						58813 HARPER 134.5	0.9192
							1.0374 generator
						58817 MED-LDG134.5	1.0677
						58833 SUNCITY134.5	1.0614
						58787 PRATT 3 115	0.9173
							1.0417 LTC
							1.0399 LTC
							0.9581 above .90
						58810 GRNBURG134.5	1.0778
						58833 SUNCITY134.5	1.0927
						58773 MED-LDG3 115	0.9420
						58774 MED-LDG4 138	0.9487
						58787 PRATT 3 115	0.9345
							1.0445 LTC
							1.0399 LTC
							0.9754 above .90
							0.9795 above .90
							0.9581 above .90

12. 2006 SUMMER PEAK

SUMMARY: VOLTAGE MIT TABLE, WEPL

(	OUTAGED BRANCH	3) CKT 1	(	VOLTAGE RANGE	)	(X----- BUS ----X) (V-CONT)	(V-INIT)
58782	[NLIBTAP3]	58837 [NLIB 3] CKT 1		VOLTAGE GREATER THAN 1.0500:		58816 E-LIBER134.5 1.0682 58829 S-LIBER134.5 1.0694	1.0445 LTC 1.0446 LTC
58785	[PHLBURG3]	58786 [PLAINVL3] CKT 1		VOLTAGE LESS THAN 0.9500:		58785 PHLBURG3 115 0.9485	0.9791 above .90
58787	[PRATT 3]	58796 [ST-JOHN3] CKT 1		VOLTAGE LESS THAN 0.9500:		58773 MED-LDG3 115 0.9213 58774 MED-LDG4 138 0.9310 58787 PRATT 3 115 0.8694 58797 SUNCITY3 115 0.9413 58826 PRATT 134.5 0.9445	0.9754 generator 0.9795 generator 0.9581 generator 0.9858 generator 1.0425 generator
58792	[SEWARD 3]	58796 [ST-JOHN3] CKT 1		VOLTAGE LESS THAN 0.9500:		58787 PRATT 3 115 0.9325 58796 ST-JOHN3 115 0.9479	0.9581 above .90 0.9801 above .90
58779	[MULGREN6]	56601 [HEIZER 3] CKT 1		VOLTAGE LESS THAN 0.9500:		58751 ALEXNDR3 115 0.9392	0.9905 above .90
13. 2006 WINTER PEAK							
58752	[CMRIVTP3]	58759 [CUDAHY 3] CKT 1		VOLTAGE GREATER THAN 1.0500: VOLTAGE LESS THAN 0.9500:		58806 CUDAHY 134.5 1.0664 58753 CIM-PLT113.8 0.9499	1.0442 LTC 0.9748 above .90
58757	[CONCORD3]	58758 [CONCORD6] CKT 1		VOLTAGE LESS THAN 0.9500:		58805 CONCORD134.5 0.9480	1.0364 above .90
58759	[CUDAHY 3]	58771 [JUD-LRG3] CKT 1		VOLTAGE LESS THAN 0.9500:		58753 CIM-PLT113.8 0.9489	0.9748 above .90
58773	[MED-LDG3]	58787 [PRATT 3] CKT 1		VOLTAGE GREATER THAN 1.0500: VOLTAGE LESS THAN 0.9500:		58817 MED-LDG134.5 1.0618 58833 SUNCITY134.5 1.0584 58787 PRATT 3 115 0.9362	1.0342 LTC 1.0356 LTC 0.9790 above .90
58773	[MED-LDG3]	58797 [SUNCITY3] CKT 1		VOLTAGE GREATER THAN 1.0500:		58810 GRNBURG134.5 1.0532 58833 SUNCITY134.5 1.0706	1.0304 LTC 1.0356 LTC
58782	[NLIBTAP3]	58837 [NLIB 3] CKT 1		VOLTAGE GREATER THAN 1.0500:		58816 E-LIBER134.5 1.0700 58829 S-LIBER134.5 1.0739	1.0459 LTC 1.0490 LTC
58792	[SEWARD 3]	58796 [ST-JOHN3] CKT 1		VOLTAGE GREATER THAN 1.0500:		58826 PRATT 134.5 1.0651	1.0352 LTC
58800	[W-LIBER3]	58836 [W-LIBER1] CKT 1		VOLTAGE GREATER THAN 1.0500:		58838 NLIB 134.5 1.0656	1.0449 LTC
58800	[W-LIBER3]	58837 [NLIB 3] CKT 1		VOLTAGE GREATER THAN 1.0500:		58838 NLIB 134.5 1.0651	1.0449 LTC

SUMMARY: VOLTAGE .MIT TABLE, WEPL

(58754 [CIM-PLT3] 56455 [NCIMARN3] CKT 1	(OUTAGED BRANCH	(VOLTAGE RANGE VOLTAGE GREATER THAN VOLTAGE LESS THAN	(VOLTAGE RANGE VOLTAGE GREATER THAN VOLTAGE LESS THAN	(X----- BUS -----X) (V-CONT)	(V-INIT)
58754 [CIM-PLT3] 56455 [NCIMARN3] CKT 1	OUTAGED BRANCH	VOLTAGE GREATER THAN	VOLTAGE GREATER THAN	58830 SATANTA134.5 1.0658	1.0382 LTC
		VOLTAGE LESS THAN	VOLTAGE LESS THAN	58752 CMRIVTP3 115 0.9099	0.9838 LTC
				58753 CIM-PLT113.8 0.8890	0.9748 generation
				58754 CIM-PLT3 115 0.9041	0.9826 generation
				58759 CUDAHY 3 115 0.9484	0.9981 generation
				58772 E-LIBER3 115 0.9060	0.9807 generation
				58782 NLIBTAP3 115 0.9040	0.9796 generation
				58790 S-LIBER3 115 0.9049	0.9798 generation
				58800 W-LIBER3 115 0.8992	0.9753 generation
				58837 NLIB 3 115 0.9019	0.9779 generation
14. 2010 SUMMER					
BASE CASE				58787 PRATT 3 115 0.9433	0.9433 above .90
58754 [CIM-PLT3] 58782 [NLIBTAP3] CKT 1		VOLTAGE LESS THAN	VOLTAGE LESS THAN	58782 NLIBTAP3 115 0.9475	0.9684 above .90
				58800 W-LIBER3 115 0.9417	0.9630 above .90
				58837 NLIB 3 115 0.9442	0.9653 above .90
58757 [CONCORD3] 58758 [CONCORD6] CKT 1		VOLTAGE LESS THAN	VOLTAGE LESS THAN	58757 CONCORD3 115 0.9416	1.0072 above .90
				58763 GLENELD3 115 0.9281	0.9819 above .90
				58769 JEWELL 3 115 0.9320	0.9879 above .90
				58785 PHLBURG3 115 0.9284	0.9658 above .90
				58793 SMITH-C3 115 0.9259	0.9738 above .90
				58798 WALDO 3 115 0.9476	0.9758 above .90
58757 [CONCORD3] 58763 [GLENELD3] CKT 1		VOLTAGE LESS THAN	VOLTAGE LESS THAN	58763 GLENELD3 115 0.9341	0.9819 above .90
				58785 PHLBURG3 115 0.9404	0.9658 above .90
				58793 SMITH-C3 115 0.9408	0.9738 above .90
58757 [CONCORD3] 58769 [JEWELL 3] CKT 1		VOLTAGE LESS THAN	VOLTAGE LESS THAN	58769 JEWELL 3 115 0.9445	0.9879 above .90
58764 [GRNBURG3] 58771 [JUD-LRG3] CKT 1		VOLTAGE LESS THAN	VOLTAGE LESS THAN	58764 GRNBURG3 115 0.9414	0.9910 above .90
				58773 MED-LDG3 115 0.9310	0.9652 above .90
				58774 MED-LDG4 138 0.9370	0.9709 above .90
				58787 PRATT 3 115 0.9175	0.9433 above .90
				58797 SUNCITY3 115 0.9358	0.9769 above .90

SUMMARY: VOLTAGE, MIT TABLE, WEPL

(58764	OUTAGED BRANCH [GRNBURG3]	58797 [SUNCITY3]	CKT 1	(VOLTAGE RANGE VOLTAGE GREATER THAN VOLTAGE LESS THAN	(1.0500: 0.9500:	(X----- BUS ----X) 58810 GRNBURG134.5 58773 MED-LDG3 115 58774 MED-LDG4 138 58787 PRATT 3 115 58797 SUNCITY3 115	(V-CONT) 1.0729 0.9291 0.9378 0.9177 0.9289	(V-INIT) 1.0435 LTC 0.9652 above .90 0.9709 above .90 0.9433 above .90 0.9769 above .90
58766	[GBENDTP3]	58778 [MULGREN3]	CKT 1	VOLTAGE LESS THAN	0.9500:	58766 GBENDTP3 115 58787 PRATT 3 115 58792 SEWARD 3 115 58796 ST-JOHN3 115	0.9417 0.9198 0.9414 0.9366	0.9956 above .90 0.9433 above .90 0.9798 above .90 0.9666 above .90
58766	[GBENDTP3]	58792 [SEWARD 3]	CKT 1	VOLTAGE LESS THAN	0.9500:	58787 PRATT 3 115 58792 SEWARD 3 115 58796 ST-JOHN3 115	0.9189 0.9398 0.9355	0.9433 above .90 0.9798 above .90 0.9666 above .90
58768	[HARPER 4]	58774 [MED-LDG4]	CKT 1	VOLTAGE LESS THAN	0.9500:	58773 MED-LDG3 115 58774 MED-LDG4 138	0.9389 0.9389	0.9652 above .90 0.9709 above .90
58768	[HARPER 4]	58775 [MILANTP4]	CKT 1	VOLTAGE GREATER THAN VOLTAGE LESS THAN	1.0500: 0.9500:	58818 MILAN 134.5 58764 GRNBURG3 115 58768 HARPER 4 138 58773 MED-LDG3 115 58774 MED-LDG4 138 58787 PRATT 3 115 58796 ST-JOHN3 115 58797 SUNCITY3 115 58813 HARPER 134.5 58817 MED-LDG134.5	1.0669 0.9394 0.8329 0.8722 0.8641 0.8775 0.9294 0.9009 0.8322 0.9253	1.0468 LTC 0.9910 generation 0.9819 generation 0.9652 generation 0.9709 generation 0.9433 generation 0.9666 generation 0.9769 generation 1.0317 generation 1.0331 generation
58773	[MED-LDG3]	58774 [MED-LDG4]	CKT 1	VOLTAGE GREATER THAN VOLTAGE LESS THAN	1.0500: 0.9500:	58813 HARPER 134.5 58773 MED-LDG3 115	1.0564 0.9389	1.0317 LTC 0.9652 above .90
58773	[MED-LDG3]	58787 [PRATT 3]	CKT 1	VOLTAGE GREATER THAN VOLTAGE LESS THAN	1.0500: 0.9500:	58813 HARPER 134.5 58817 MED-LDG134.5 58833 SUNCITY134.5 58787 PRATT 3 115 58796 ST-JOHN3 115	1.0518 1.0679 1.0746 0.8918 0.9386	1.0317 generation 1.0331 generation 1.0457 generation 0.9433 generation 0.9666 generation
58773	[MED-LDG3]	58797 [SUNCITY3]	CKT 1	VOLTAGE GREATER THAN VOLTAGE LESS THAN	1.0500: 0.9500:	58810 GRNBURG134.5 58833 SUNCITY134.5 58773 MED-LDG3 115 58774 MED-LDG4 138 58787 PRATT 3 115	1.0781 1.1026 0.9300 0.9391 0.9185	1.0435 LTC 1.0457 LTC 0.9652 above .90 0.9709 above .90 0.9433 above .90

SUMMARY: VOLTAGE MIT TABLE, WEPL

(	OUTAGED BRANCH	)	(	VOLTAGE RANGE	)	(X----- BUS -----X) (V-CONT)	(V-INIT)
58780	[N-DODGE3] 58840 [EDODGE 3] CKT 1			VOLTAGE GREATER THAN	1.0500:	58839 EDODGE 134.5	1.0461 LTC
58782	[NLBTAP3] 58837 [NLIB 3] CKT 1			VOLTAGE GREATER THAN	1.0500:	58816 E-LIBER134.5	1.0438 LTC
						58829 S-LIBER134.5	1.0389 LTC
58785	[PHLBURG3] 58786 [PLAINVL3] CKT 1			VOLTAGE LESS THAN	0.9500:	58785 PHLBURG3 115	0.9658 above .90
58785	[PHLBURG3] 58824 [PHLBURG1] CKT 1			VOLTAGE GREATER THAN	1.0500:	58831 SMITH-C134.5	1.0428 LTC
58787	[PRATT 3] 58796 [ST-JOHN3] CKT 1			VOLTAGE LESS THAN	0.9500:	58768 HARPER 4 138	0.9819 generation
						58773 MED-LDG3 115	0.9652 generation
						58774 MED-LDG4 138	0.9709 generation
						58787 PRATT 3 115	0.9433 above .90
						58796 ST-JOHN3 115	0.9666 above .90
58792	[SEWARD 3] 58796 [ST-JOHN3] CKT 1			VOLTAGE LESS THAN	0.9500:	58773 MED-LDG3 115	0.9652 above .90
						58774 MED-LDG4 138	0.9709 above .90
58799	[W-DODGE3] 58835 [W-DODGE1] CKT 1			VOLTAGE GREATER THAN	1.0500:	58812 HAGGARD134.5	1.0395 LTC
58779	[MULGREN6] 56601 [HEIZER 3] CKT 1			VOLTAGE LESS THAN	0.9500:	58751 ALEXNDR3 115	0.9888 above .90
						58785 PHLBURG3 115	0.9658 above .90
58786	[PLAINVL3] 56551 [SALINE 3] CKT 1			VOLTAGE LESS THAN	0.9500:	58785 PHLBURG3 115	0.9658 above .90
						58786 PLAINVL3 115	0.9819 above .90
						58793 SMITH-C3 115	0.9738 above .90
						58798 WALDO 3 115	0.9758 above .90

1. 2000 FALL PEAK

A. AREA 539 TOTALS

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, APR 03 2000 8:03
1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL AREA TOTALS
2000 FALL PEAK - UTILICORP BASE CASE WITH WERE CHANGES IN MW/MVAR

AREA	FROM GENERATION	TO LOAD	TO BUS SHUNT	TO LINE SHUNT	FROM CHARGING	TO NET INT	LOSSES	DESIRED NET INT
539	122.1	344.4	0.0	0.0	0.0	-236.0	13.7	-236.0
WEPL	-1.7	116.7	-144.5	0.0	124.2	70.8	79.4	
TOTALS	122.1	344.4	0.0	0.0	0.0	-236.0	13.7	-236.0
	-1.7	116.7	-144.5	0.0	124.2	70.8	79.4	

B. INTER-AREA TRANSFER DATA

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E	MON, APR 03 2000	8:18
1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL	INTER-AREA	
2000 FALL PEAK - UTILICORP BASE CASE WITH WERE CHANGES	TRANSFER DATA	

X	FROM AREA-X	X	TO AREA-X	ID	PTRANS	PTOTAL	DESINT
539	[WEPL	]	515 [SWPA	]	1	-20.0	
539	[WEPL	]	534 [SUNC	]	1	-50.0	
539	[WEPL	]	534 [SUNC	]	2	-2.0	
539	[WEPL	]	536 [WERE	]	1	-166.0	
539	[WEPL	]	536 [WERE	]	2	2.0	
						-236.0	-236.0

C. GENERATOR UNIT DATA

PTI INTERACTIVE POWER SYSTEM SIMULATOR-PSS/E MON, APR 03 2000 8:19
1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL GENERATOR
2000 FALL PEAK - UTILICORP BASE CASE WITH WERE CHANGES UNIT DATA

BUS#	NAME	BSKV	CD	ID	ST	PGEN	QGEN	QMAX	QMIN	PMAX	PMIN	OWN	FRACT
58753	CIM-PLT113.8	-2	1	0	0	0	0	28.0	-15.0	58.0	25.0	1	1.000
58753	CIM-PLT113.8	-2	2	0	0	0	0	10.0	-5.0	14.0	2.0	1	1.000
58755	CLIFTON113.8	-2	1	0	0	0	0	32.0	-15.0	70.0	5.0	1	1.000
58770	JUD-LRG113.8	2	4	1	122.1		-1.7	98.0	-45.0	143.0	30.0	1	1.000
58777	MULGREN113.8	-2	3	0	0	0	0	34.0	-16.0	93.0	30.0	1	1.000

D. TRANSFORMER DATA

1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL
2000 FALL PEAK - UTILICORP BASE CASE WITH WERE CHANGES

TRANSFORMER DATA

FROM	TO	CKT	TP	RATIO	ANGLE	RG	CONT	RMAX	RMIN	VMAX	VMIN	STEP	TABLE	CR	CX
56470	58795	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
56565	58792	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
56601	58779	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58751	58802	1	F	1.0250	0.00	1	-58802	1.1000	0.9000	1.0500	1.0300	0.00625			
58753	58754	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58755	58756	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58756	58804	1	T	0.9937	0.00	1	-58804	1.1000	0.9000	1.0500	1.0300	0.00625			
58757	58758	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58757	58805	1	T	1.0063	0.00	1	-58805	1.1000	0.9000	1.0500	1.0300	0.00625			
58759	58806	1	T	1.0500	0.00	1	-58806	1.1000	0.9000	1.0500	1.0300	0.00625			
58761	58807	1	T	1.0187	0.00	1	-58807	1.1000	0.9000	1.0500	1.0300	0.00625			
58762	58808	1	T	1.0063	0.00	1	-58808	1.1000	0.9000	1.0500	1.0300	0.00625			
58763	58809	1	T	1.0375	0.00	1	-58809	1.1000	0.9000	1.0500	1.0300	0.00625			
58764	58810	1	T	1.0375	0.00	1	-58810	1.1000	0.9000	1.0500	1.0300	0.00625			
58765	58811	1	T	1.0375	0.00	1	-58811	1.1000	0.9000	1.0500	1.0300	0.00625			
58767	58812	1	T	1.0250	0.00	1	-58812	1.1000	0.9000	1.0500	1.0300	0.00625			
58768	58813	1	T	1.0125	0.00	1	-58813	1.1000	0.9000	1.0500	1.0300	0.00625			
58769	58814	1	T	0.9812	0.00	1	-58814	1.1000	0.9000	1.0500	1.0300	0.00625			
58770	58771	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58771	58815	1	T	1.0250	0.00	1	-58815	1.1000	0.9000	1.0500	1.0300	0.00625			
58772	58816	1	T	1.0187	0.00	1	-58816	1.1000	0.9000	1.0500	1.0300	0.00625			
58773	58774	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58773	58817	1	T	1.0313	0.00	1	-58817	1.1000	0.9000	1.0500	1.0300	0.00625			
58776	58818	1	T	1.0063	0.00	1	-58818	1.1000	0.9000	1.0500	1.0300	0.00625			
58777	58778	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58778	58779	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58778	58819	1	T	1.0187	0.00	1	-58819	1.1000	0.9000	1.0500	1.0300	0.00625			
58780	58820	1	T	1.0313	0.00	1	-58820	1.1000	0.9000	1.0500	1.0300	0.00625			
58781	58821	1	T	1.0125	0.00	1	-58821	1.1000	0.9000	1.0500	1.0300	0.00625			
58783	58822	1	T	1.0250	0.00	1	-58822	1.1000	0.9000	1.0500	1.0300	0.00625			
58784	58823	1	T	1.0187	0.00	1	-58823	1.1000	0.9000	1.0500	1.0300	0.00625			
58785	58824	1	T	1.0187	0.00	1	-58824	1.1000	0.9000	1.0500	1.0300	0.00625			
58786	58825	1	T	1.0188	0.00	1	-58825	1.1000	0.9000	1.0500	1.0300	0.00625			
58787	58826	1	T	1.0313	0.00	1	-58826	1.1000	0.9000	1.0500	1.0300	0.00625			
58788	58827	1	T	1.0063	0.00	1	-58827	1.1000	0.9000	1.0500	1.0300	0.00625			
58789	58828	1	T	1.0250	0.00	1	-58828	1.1000	0.9000	1.0500	1.0300	0.00625			
58790	58829	1	T	1.0562	0.00	1	-58829	1.1000	0.9000	1.0500	1.0300	0.00625			
58791	58830	1	T	1.0562	0.00	1	-58830	1.1000	0.9000	1.0500	1.0300	0.00625			
58793	58831	1	T	1.0125	0.00	1	-58831	1.1000	0.9000	1.0500	1.0300	0.00625			
58794	58795	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58794	58832	1	T	1.0250	0.00	1	-58832	1.1000	0.9000	1.0500	1.0300	0.00625			
58797	58833	1	T	1.0063	0.00	1	-58833	1.1000	0.9000	1.0500	1.0300	0.00625			
58798	58834	1	T	1.0500	0.00	1	-58834	1.1000	0.9000	1.0500	1.0300	0.00625			
58799	58835	1	T	1.0313	0.00	1	-58835	1.1000	0.9000	1.0500	1.0300	0.00625			
58800	58836	1	T	1.0812	0.00	1	-58836	1.1000	0.9000	1.0500	1.0300	0.00625			
58837	58838	1	T	1.0562	0.00	1	-58838	1.1000	0.9000	1.0500	1.0300	0.00625			
58839	58840	1	F	1.0375	0.00	1	-58839	1.1000	0.9000	1.0500	1.0300	0.00625			

E. BASE CASE BRANCH LOADINGS ABOVE 100.0 % OF RATING SET A:
 PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, APR 03 2000 8:27
 1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL
 2000 FALL PEAK - UTILICORP BASE CASE WITH WERE CHANGES
 OUTPUT FOR AREA 539 [WEPL]

BRANCH LOADINGS ABOVE 100% OF RATING SET A:

BUS	NAME	BSKV AREA	BUS	NAME	BSKV AREA	CTK	LOADING	RATING	PERCENT	CURRENT (MVA)
X-----	FROM BUS	-----X	X-----	TO BUS	-----X					

• NONE *

F. BASE CASE BUSES WITH VOLTAGE GREATER THAN 1.0500:
 PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, APR 03 2000 10:00
 1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL
 2000 FALL PEAK - UTILICORP BASE CASE WITH WERE CHANGES

BUSES WITH VOLTAGE GREATER THAN 1.0500:

X-----	BUS	-----X	AREA	V(PU)	V(KV)	X-----	BUS	-----X	AREA	V(PU)	V(KV)

* NONE *

G. BASE CASE BUSES WITH VOLTAGE LESS THAN 0.9500:
 X----- BUS -----X AREA V(PU) V(KV) X----- BUS -----X AREA V(PU) V(KV)

* NONE *

H. ACCC OVERLOAD REPORT MONITORED ELEMENTS LOA ABOVE 100.0 % OF RATING SET B & VOLTAGE REPORT

1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL

2000 FALL PEAK - UTILICORP BASE CASE WITH WERE CHANGES

*** ACCC OVERLOAD REPORT: MONITORED ELEMENTS LOADED ABOVE 100.0 % OF RATING SET B ***

*** ACCC VOLTAGE REPORT ***

DISTRIBUTION FACTOR FILE: Dfax00FA.sgf
SUBSYSTEM DESCRIPTION FILE: USER DIALOGUE
MONITORED ELEMENT FILE: opsmor539.txt
CONTINGENCY DESCRIPTION FILE: opscon2k.txt

CONTINGENCY EVENTS OVERLOADED LINES X X-MVA(MW)FLOW--X
X--- MULTI-SECTION LINE GROUPINGS ---X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 58756 [CLIFTON3115.00] TO BUS 58765 [GRNLEAF3115.00] CKT 1 CONTINGENCY SINGLE 7
*** NONE ***

AREA 539 BUSES WITH VOLTAGE GREATER THAN 1.0500: 58804 CLIFSUB134.5 1.0674 1.0431
X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT

CONTINGENCY EVENTS OVERLOADED LINES X X-MVA(MW)FLOW--X
X--- MULTI-SECTION LINE GROUPINGS ---X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 58759 [CUDAHY 3115.00] TO BUS 58771 [JUD-LRG3115.00] CKT 1 CONTINGENCY SINGLE 13
*** NONE ***

AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58753 CIM-PLT113.8 0.9498 0.9829
X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT

CONTINGENCY EVENTS OVERLOADED LINES X X-MVA(MW)FLOW--X
X--- MULTI-SECTION LINE GROUPINGS ---X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 58773 [MED-LDG3115.00] TO BUS 58797 [SUNCITY3115.00] CKT 1 CONTINGENCY SINGLE 46
*** NONE ***

AREA 539 BUSES WITH VOLTAGE GREATER THAN 1.0500: 58833 SUNCITY134.5 1.0703 1.0421
X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT

CONTINGENCY EVENTS OVERLOADED LINES X X-MVA(MW)FLOW--X
X--- MULTI-SECTION LINE GROUPINGS ---X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 58778 [MULGREN3115.00] TO BUS 58779 [MULGREN6230.00] CKT 1 CONTINGENCY SINGLE 50
*** NONE ***

AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500:
X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
58760 EHALTP3 115 0.9477 1.0190 58761 E-GBEND3 115 0.9327 1.0206
58766 GBENDTP3 115 0.9418 1.0175 58777 MULGREN113.8 0.9371 1.0235
58778 MULGREN3 115 0.9371 1.0235 58781 N-GBEND3 115 0.9349 1.0221
58784 OTISSUB3 115 0.9348 1.0223 58789 S-GBEND3 115 0.9322 1.0202
58801 RUSSELL3 115 0.9499 1.0184 58807 E-GBEND134.5 0.9497 1.0432
58823 OTISSUB134.5 0.9328 1.0342 58828 S-GBEND134.5 0.9470 1.0411

CONTINGENCY EVENTS OVERLOADED LINES X X-MVA(MW)FLOW--X
X--- MULTI-SECTION LINE GROUPINGS ---X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 58754 [CIM-PLT3115.00] TO BUS 56455 [NCIMARN3115.00] CKT 1 CONTINGENCY SINGLE 86
*** NONE ***

AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58753 CIM-PLT113.8 0.9453 0.9829
X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT

2. 00 SPRING PEAK

A. AREA 539 TOTALS

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E WED, APR 05 2000 14:19
 1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL AREA TOTALS
 2000 SPRING PEAK - UTILICORP BASE CASE WITH WERE CHANGES IN MW/MVAR

AREA	GENERATION	FROM LOAD	TO BUS SHUNT	TO LINE SHUNT	FROM CHARGING	TO NET INT	LOSSES	DESIRED NET INT
539	76.2	313.1	0.0	0.0	0.0	-249.9	13.0	-250.0
WEPL	3.6	105.1	-148.4	0.0	122.8	92.1	77.6	
TOTALS	76.2	313.1	0.0	0.0	0.0	-249.9	13.0	-250.0
	3.6	105.1	-148.4	0.0	122.8	92.1	77.6	

B. INTER-AREA TRANSFER DATA

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E WED, APR 05 2000 14:21
 1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL INTER-AREA
 2000 SPRING PEAK - UTILICORP BASE CASE WITH WERE CHANGES TRANSFER DATA
 X--FROM AREA-X X---TO AREA--X ID PTRANS PTOTAL DESINT

539 [WEPL]	515 [SWPA]	1	-20.0
539 [WEPL]	534 [SUNC]	1	-50.0
539 [WEPL]	534 [SUNC]	2	-2.0
539 [WEPL]	536 [WERE]	1	-166.0
539 [WEPL]	536 [WERE]	2	2.0
539 [WEPL]	536 [WERE]	3	-14.0
			-250.0

C. GENERATOR UNIT DATA

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E WED, APR 05 2000 14:22
 1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL GENERATOR
 2000 SPRING PEAK - UTILICORP BASE CASE WITH WERE CHANGES UNIT DATA

BUS#	NAME	BSKV	CD	ID	ST	PGEN	QGEN	QMAX	QMIN	PMAX	PMIN	OWN	FRACT
58753	CIM-PLT	113.8	-2	1	0	0.0	0.0	28.0	-15.0	58.0	25.0	1	1.000
58753	CIM-PLT	113.8	-2	2	0	0.0	0.0	10.0	-5.0	14.0	2.0	1	1.000
58755	CLIFTON	113.8	-2	1	0	0.0	0.0	32.0	-15.0	70.0	5.0	1	1.000
58770	JUD-LRG	113.8	2	4	1	76.2	3.6	98.0	-45.0	143.0	30.0	1	1.000
58777	MULGREN	113.8	-2	3	0	0.0	0.0	34.0	-16.0	93.0	30.0	1	1.000

D. TRANSFORMER DATA

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E
WED, APR 05 2000 14:22

TRANSFORMER DATA

1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL

2000 SPRING PEAK - UTILICORP BASE CASE WITH WERE CHANGES

FROM	TO	CT	TP	RATIO	ANGLE	RG	CONT	RMAX	RMIN	VMAX	VMIN	STEP	TABLE	CR	CX
56470	58795	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
56565	58792	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
56601	58779	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58751	58802	1	T	1.0438	0.00	1	-58802	1.1000	0.9000	1.0500	1.0300	0.00625			
58753	58754	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58755	58756	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58756	58804	1	T	0.9750	0.00	1	-58804	1.1000	0.9000	1.0500	1.0300	0.00625			
58757	58758	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58757	58805	1	T	0.9937	0.00	1	-58805	1.1000	0.9000	1.0500	1.0300	0.00625			
58759	58806	1	T	1.0500	0.00	1	-58806	1.1000	0.9000	1.0500	1.0300	0.00625			
58761	58807	1	T	1.0375	0.00	1	-58807	1.1000	0.9000	1.0500	1.0300	0.00625			
58762	58808	1	T	1.0125	0.00	1	-58808	1.1000	0.9000	1.0500	1.0300	0.00625			
58763	58809	1	T	1.0000	0.00	1	-58809	1.1000	0.9000	1.0500	1.0300	0.00625			
58764	58810	1	T	0.9875	0.00	1	-58810	1.1000	0.9000	1.0500	1.0300	0.00625			
58765	58811	1	T	0.9812	0.00	1	-58811	1.1000	0.9000	1.0500	1.0300	0.00625			
58767	58812	1	T	1.0250	0.00	1	-58812	1.1000	0.9000	1.0500	1.0300	0.00625			
58768	58813	1	T	0.9937	0.00	1	-58813	1.1000	0.9000	1.0500	1.0300	0.00625			
58769	58814	1	T	0.9688	0.00	1	-58814	1.1000	0.9000	1.0500	1.0300	0.00625			
58770	58771	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58771	58815	1	T	1.0375	0.00	1	-58815	1.1000	0.9000	1.0500	1.0300	0.00625			
58772	58816	1	T	1.0438	0.00	1	-58816	1.1000	0.9000	1.0500	1.0300	0.00625			
58773	58774	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58773	58817	1	T	1.0250	0.00	1	-58817	1.1000	0.9000	1.0500	1.0300	0.00625			
58776	58818	1	T	0.9875	0.00	1	-58818	1.1000	0.9000	1.0500	1.0300	0.00625			
58777	58778	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58778	58779	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58778	58819	1	T	1.0375	0.00	1	-58819	1.1000	0.9000	1.0500	1.0300	0.00625			
58780	58820	1	T	1.0688	0.00	1	-58820	1.1000	0.9000	1.0500	1.0300	0.00625			
58781	58821	1	T	1.0313	0.00	1	-58821	1.1000	0.9000	1.0500	1.0300	0.00625			
58783	58822	1	T	1.0438	0.00	1	-58822	1.1000	0.9000	1.0500	1.0300	0.00625			
58784	58823	1	T	1.0375	0.00	1	-58823	1.1000	0.9000	1.0500	1.0300	0.00625			
58785	58824	1	T	1.0187	0.00	1	-58824	1.1000	0.9000	1.0500	1.0300	0.00625			
58786	58825	1	T	1.0250	0.00	1	-58825	1.1000	0.9000	1.0500	1.0300	0.00625			
58787	58826	1	T	1.0313	0.00	1	-58826	1.1000	0.9000	1.0500	1.0300	0.00625			
58788	58827	1	T	1.0063	0.00	1	-58827	1.1000	0.9000	1.0500	1.0300	0.00625			
58789	58828	1	T	1.0438	0.00	1	-58828	1.1000	0.9000	1.0500	1.0300	0.00625			
58790	58829	1	T	1.0562	0.00	1	-58829	1.1000	0.9000	1.0500	1.0300	0.00625			
58791	58830	1	T	1.0562	0.00	1	-58830	1.1000	0.9000	1.0500	1.0300	0.00625			
58793	58831	1	T	1.0000	0.00	1	-58831	1.1000	0.9000	1.0500	1.0300	0.00625			
58794	58795	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58794	58832	1	T	1.0313	0.00	1	-58832	1.1000	0.9000	1.0500	1.0300	0.00625			
58797	58833	1	T	0.9937	0.00	1	-58833	1.1000	0.9000	1.0500	1.0300	0.00625			
58798	58834	1	T	1.0500	0.00	1	-58834	1.1000	0.9000	1.0500	1.0300	0.00625			
58799	58835	1	T	1.0313	0.00	1	-58835	1.1000	0.9000	1.0500	1.0300	0.00625			
58800	58836	1	T	1.0750	0.00	1	-58836	1.1000	0.9000	1.0500	1.0300	0.00625			
58837	58838	1	T	1.0562	0.00	1	-58838	1.1000	0.9000	1.0500	1.0300	0.00625			

E. BASE CASE BRANCH LOADINGS ABOVE 100.0 % OF RATING SET A:
 PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E WED, APR 05 2000 14:31
 1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL
 2000 SPRING PEAK - UTILICORP BASE CASE WITH WERE CHANGES
 OUTPUT FOR AREA 539 (WEPL)
 BRANCH LOADINGS ABOVE 100.0 % OF RATING SET A:

BUS	NAME	BSKV AREA	BUS	NAME	BSKV AREA	CKT	LOADING	RATING	PERCENT	CURRENT (MVA)
X-----	FROM BUS-----	X	-----	TO BUS-----	X					

* NONE *

F. BASE CASE BUSES WITH VOLTAGE GREATER THAN 1.0500:
 PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, APR 03 2000 9:58
 1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL
 2000 SUMMER PEAK - UTILICORP BASE CASE WITH WERE CHANGES

BUSES WITH VOLTAGE GREATER THAN 1.0500:

X-----	BUS	-----	X	AREA	V (PU)	V (KV)	X	-----	BUS	-----	X	AREA	V (PU)	V (KV)

* NONE *

G. BASE CASE BUSES WITH VOLTAGE LESS THAN 0.9500:
 X----- BUS -----X AREA V (PU) V (KV) X----- BUS -----X AREA V (PU) V (KV)

* NONE *

ACCC OVERLOAD REPORT: MONITORED ELEMENTS LOADED ABOVE 100.0 % OF RATING SET B & ACCC VOLTAGE RE.

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, APR 02 2000 20:37

1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL

2000 SPRING PEAK - UTILICORP BASE CASE WITH WERE CHANGES

*** ACCC OVERLOAD REPORT: MONITORED ELEMENTS LOADED ABOVE 100.0 % OF RATING SET B ***

*** ACCC VOLTAGE REPORT ***

DISTRIBUTION FACTOR FILE: Dfax00SR.sgf
SUBSYSTEM DESCRIPTION FILE: USER DIALOGUE
MONITORED ELEMENT FILE: opsmor539.txt
CONTINGENCY DESCRIPTION FILE: opscon2k.txt

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 58773 (MED-LDG3115.00) TO BUS 58787 (PRATT 3115.00) CKT 1 ----- CONTINGENCY SINGLE 45
*** NONE ***

AREA 539 BUSES WITH VOLTAGE GREATER THAN 1.0500: 58817 MED-LDG134.5 1.0739 1.0441 58833 SUNCITY134.5 1.0681 1.0437
X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT

AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58787 PRATT 3 115 0.9364 0.9928

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 58773 (MED-LDG3115.00) TO BUS 58797 (SUNCITY3115.00) CKT 1 ----- CONTINGENCY SINGLE 46
*** NONE ***

AREA 539 BUSES WITH VOLTAGE GREATER THAN 1.0500: 58833 SUNCITY134.5 1.0662 1.0437
X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 58778 (MULGREN3115.00) TO BUS 58779 (MULGREN6230.00) CKT 1 ----- CONTINGENCY SINGLE 50
*** NONE ***

AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58761 E-GBEND3 115 0.9482 1.0054 58781 N-GBEND3 115 0.9497 1.0065
58784 OTISSUB3 115 0.9499 1.0067 58789 S-GBEND3 115 0.9478 1.0051
X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 58786 (PLAINVL3115.00) TO BUS 56551 (SALINE 3115.00) CKT 1 ----- CONTINGENCY SINGLE 88
*** NONE ***

AREA 539 BUSES WITH VOLTAGE GREATER THAN 1.0500: 58824 PHLBURG134.5 1.0623 1.0388 58825 PLAINVL134.5 1.0862 1.0448
X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 58795 (SPEARVL6230.00) TO BUS 56470 (SPERXFR6287.00) CKT 1 ----- CONTINGENCY SINGLE 90
*** NONE ***

AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58751 ALEXNDR3 115 0.9459 0.9997
X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/A SUN, APR 02 2000 20:37
 1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL
 2000 SPRING PEAK - UTILICORP BASE CASE WITH WERE CHANGES
 *** ACCC OVERLOAD REPORT: MONITORED ELEMENTS LOADED ABOVE 100.0 % OF RATING SET B ***
 *** ACCC VOLTAGE REPORT ***

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
 X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 56469 (SPERVIL7345.00) TO BUS 56470 (SPERXFR6287.00) CKT 1 ----- CONTINGENCY SPP-17
 OPEN LINE FROM BUS 56470 (SPERXFR6287.00) TO BUS 58795 (SPEARVL6230.00) CKT 1
 OPEN LINE FROM BUS 56468 (SPERTER113.800) TO BUS 56470 (SPERXFR6287.00) CKT 1

*** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58751 ALEXNDR3 115 0.9479 0.9997

A. AREA 539 TOTALS

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, APR 03 2000 10:25
 1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL AREA TOTALS
 2000 SUMMER PEAK - UTILICORP BASE CASE WITH WERE CHANGES IN MW/MVAR

AREA	GENERATION	FROM LOAD	TO BUS SHUNT	TO LINE SHUNT	FROM CHARGING	TO NET INT	LOSSES	DESIRE NET INT
539	275.6	521.9	0.0	0.0	0.0	-269.0	22.7	-269.0
WEPL	39.9	174.5	-207.0	0.0	119.6	61.8	130.2	
TOTALS	275.6	521.9	0.0	0.0	0.0	-269.0	22.7	-269.0
	39.9	174.5	-207.0	0.0	119.6	61.8	130.2	

B. INTER-AREA TRANSFER DATA

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, APR 03 2000 10:27
 1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL INTER-AREA
 2000 SUMMER PEAK - UTILICORP BASE CASE WITH WERE CHANGES TRANSFER DATA

X--FROM	AREA-X	X--TO	AREA--X	ID	PTRANS	POTAL	DESINT
539	{WEPL	}	515	{SWPA	}	1	-20.0
539	{WEPL	}	531	{MIDW	}	1	0.0
539	{WEPL	}	534	{SUNC	}	1	0.0
539	{WEPL	}	534	{SUNC	}	2	-2.0
539	{WEPL	}	534	{SUNC	}	3	-190.0
539	{WEPL	}	536	{WERE	}	1	-45.0
539	{WEPL	}	536	{WERE	}	2	2.0
539	{WEPL	}	536	{WERE	}	3	-14.0
						-269.0	-269.0

C. GENERATOR UNIT DATA

1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL GENERATOR
 2000 SUMMER PEAK - UTILICORP BASE CASE WITH WERE CHANGES UNIT DATA

BUS#	NAME	BSKV	CD	ID	ST	PGEN	QGEN	QMAX	QMIN	PMAX	PMIN	OWN	FRACT
58753	CIM-PLT	113.8	2	1	1	50.0	8.8	28.0	-15.0	58.0	25.0	1	1.000
58753	CIM-PLT	113.8	2	2	0	0.0	0.0	10.0	-5.0	14.0	2.0	1	1.000
58755	CLIFTON	113.8	2	1	1	30.0	1.4	32.0	-15.0	70.0	5.0	1	1.000
58770	JUD-LRG	113.8	2	4	1	130.6	15.9	98.0	-45.0	143.0	30.0	1	1.000
58777	MULGREN	113.8	2	3	1	65.0	13.8	34.0	-16.0	93.0	30.0	1	1.000

D. TRANSFORMER DATA

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E/ MON, APR 03 2000 10:28
1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL TRANSFORMER DATA
2000 SUMMER PEAK - UTILICORP BASE CASE WITH WERE CHANGES

FROM	TO	CT	TP	RATIO	ANGLE	RG	CONT	RMAX	RMIN	VMAX	VMIN	STEP	TABLE	CR	CX
56470	58795	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
56565	58792	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
56601	58779	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58751	58802	1	T	1.0625	0.00	1	-58802	1.1000	0.9000	1.0500	1.0300	0.00625			
58753	58754	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58755	58756	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58756	58804	1	T	1.0000	0.00	1	-58804	1.1000	0.9000	1.0500	1.0300	0.00625			
58757	58758	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58757	58805	1	T	1.0063	0.00	1	-58805	1.1000	0.9000	1.0500	1.0300	0.00625			
58759	58806	1	T	1.0562	0.00	1	-58806	1.1000	0.9000	1.0500	1.0300	0.00625			
58761	58807	1	T	1.0313	0.00	1	-58807	1.1000	0.9000	1.0500	1.0300	0.00625			
58762	58808	1	T	1.0313	0.00	1	-58808	1.1000	0.9000	1.0500	1.0300	0.00625			
58763	58809	1	T	1.0187	0.00	1	-58809	1.1000	0.9000	1.0500	1.0300	0.00625			
58764	58810	1	T	1.0000	0.00	1	-58810	1.1000	0.9000	1.0500	1.0300	0.00625			
58765	58811	1	T	1.0187	0.00	1	-58811	1.1000	0.9000	1.0500	1.0300	0.00625			
58767	58812	1	T	1.0313	0.00	1	-58812	1.1000	0.9000	1.0500	1.0300	0.00625			
58768	58813	1	T	1.0500	0.00	1	-58813	1.1000	0.9000	1.0500	1.0300	0.00625			
58769	58814	1	T	1.0063	0.00	1	-58814	1.1000	0.9000	1.0500	1.0300	0.00625			
58770	58771	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58771	58815	1	T	1.0375	0.00	1	-58815	1.1000	0.9000	1.0500	1.0300	0.00625			
58772	58816	1	T	1.0250	0.00	1	-58816	1.1000	0.9000	1.0500	1.0300	0.00625			
58773	58774	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58773	58817	1	T	1.0812	0.00	1	-58817	1.1000	0.9000	1.0500	1.0300	0.00625			
58776	58818	1	T	1.0063	0.00	1	-58818	1.1000	0.9000	1.0500	1.0300	0.00625			
58777	58778	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58778	58779	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58778	58819	1	T	1.0375	0.00	1	-58819	1.1000	0.9000	1.0500	1.0300	0.00625			
58780	58820	1	T	1.0625	0.00	1	-58820	1.1000	0.9000	1.0500	1.0300	0.00625			
58781	58821	1	T	1.0313	0.00	1	-58821	1.1000	0.9000	1.0500	1.0300	0.00625			
58783	58822	1	T	1.0688	0.00	1	-58822	1.1000	0.9000	1.0500	1.0300	0.00625			
58784	58823	1	T	1.0875	0.00	1	-58823	1.1000	0.9000	1.0500	1.0300	0.00625			
58785	58824	1	T	1.0625	0.00	1	-58824	1.1000	0.9000	1.0500	1.0300	0.00625			
58786	58825	1	T	1.0438	0.00	1	-58825	1.1000	0.9000	1.0500	1.0300	0.00625			
58787	58826	1	T	1.0750	0.00	1	-58826	1.1000	0.9000	1.0500	1.0300	0.00625			
58788	58827	1	T	1.0063	0.00	1	-58827	1.1000	0.9000	1.0500	1.0300	0.00625			
58789	58828	1	T	1.0438	0.00	1	-58828	1.1000	0.9000	1.0500	1.0300	0.00625			
58790	58829	1	T	1.0688	0.00	1	-58829	1.1000	0.9000	1.0500	1.0300	0.00625			
58791	58830	1	T	1.0688	0.00	1	-58830	1.1000	0.9000	1.0500	1.0300	0.00625			
58793	58831	1	T	1.0500	0.00	1	-58831	1.1000	0.9000	1.0500	1.0300	0.00625			
58794	58795	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58794	58832	1	T	1.0375	0.00	1	-58832	1.1000	0.9000	1.0500	1.0300	0.00625			
58797	58833	1	T	1.0438	0.00	1	-58833	1.1000	0.9000	1.0500	1.0300	0.00625			
58798	58834	1	T	1.1000	0.00	1	-58834	1.1000	0.9000	1.0500	1.0300	0.00625			
58799	58835	1	T	1.0625	0.00	1	-58835	1.1000	0.9000	1.0500	1.0300	0.00625			
58800	58836	1	T	1.0625	0.00	1	-58836	1.1000	0.9000	1.0500	1.0300	0.00625			
58837	58838	1	T	1.0688	0.00	1	-58838	1.1000	0.9000	1.0500	1.0300	0.00625			
58839	58840	1	F	1.0625	0.00	1	-58839	1.1000	0.9000	1.0500	1.0300	0.00625			

E. BASE CASE BRANCH LOADINGS ABOVE 100.0 % OF .ING SET A:
 PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, APR 03 2000 10:31
 1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL
 2000 SUMMER PEAK - UTILICORP BASE CASE WITH WERE CHANGES
 OUTPUT FOR AREA 539 [WEPL]

BRANCH LOADINGS ABOVE 100% OF RATING SET A:

BUS	NAME	BSKV AREA	BUS	NAME	BSKV AREA	CKT LOADING	RATING PERCENT	CURRENT (MVA)
X-----	FROM BUS-----	X	X-----	TO BUS-----	X			

* NONE *

F. BASE CASE BUSES WITH VOLTAGE GREATER THAN 1.0500:
 PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, APR 03 2000 10:31
 1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL
 2000 SUMMER PEAK - UTILICORP BASE CASE WITH WERE CHANGES

BUSES WITH VOLTAGE GREATER THAN 1.0500:

X-----	BUS	-----X	AREA	V(PU)	V(KV)	X-----	BUS	-----X	AREA	V(PU)	V(KV)

* NONE *

G. BASE CASE BUSES WITH VOLTAGE LESS THAN 0.9500:
 X----- BUS -----X AREA V(PU) V(KV) X----- BUS -----X AREA V(PU) V(KV)
 58787 PRATT 3 115 539 0.9438 108.54

ACCC OVERLOAD REPORT: MONITORED ELEMENTS LOADED ABOVE 100.0 % OF RATING SET B & ACCC VOLTAGE REP.

1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL
2000 SUMMER PEAK - UTILICORP BASE CASE WITH WERE CHANGES

*** ACCC OVERLOAD REPORT: MONITORED ELEMENTS LOADED ABOVE 100.0 % OF RATING SET B ***
*** ACCC VOLTAGE REPORT ***

DISTRIBUTION FACTOR FILE: Dfax00SP.sgf
SUBSYSTEM DESCRIPTION FILE: USER DIALOGUE
MONITORED ELEMENT FILE: opsmom539.txt
CONTINGENCY DESCRIPTION FILE: opscm2k.txt

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
BASE CASE
*** NONE ***

AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58787 PRATT 3 115 0.9438 0.9438
X-----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 58757 [CONCORD3115.00] TO BUS 58758 [CONCORD6230.00] CKT 1 ----- CONTINGENCY SINGLE 9
*** NONE ***

AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58785 PHILBURG3 115 0.9472 0.9837 58793 SMITH-C3 115 0.9425 0.9897
58798 WALDO 3 115 0.9412 0.9800 58801 RUSSELL3 115 0.9500 0.9824

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 58760 [EHALLTP3115.00] TO BUS 58778 [MULGREN3115.00] CKT 1 ----- CONTINGENCY SINGLE 16
*** NONE ***

AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58760 EHALLTP3 115 0.8810 0.9841 58762 ELLSWTH3 115 0.8838 0.9910
58793 SMITH-C3 115 0.9472 0.9897 58798 WALDO 3 115 0.8938 0.9800
58801 RUSSELL3 115 0.8833 0.9824 58808 ELLSWTH134.5 0.9231 1.0404
58834 WALDO 134.5 0.9289 1.0299

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 58764 [GRNBURG3115.00] TO BUS 58771 [JUD-LRG3115.00] CKT 1 ----- CONTINGENCY SINGLE 24
*** NONE ***

AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58773 MED-LDG3 115 0.9390 0.9674 58787 PRATT 3 115 0.9166 0.9438
58797 SUNCITY3 115 0.9462 0.9772

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 58764 [GRNBURG3115.00] TO BUS 58797 [SUNCITY3115.00] CKT 1 ----- CONTINGENCY SINGLE 25
*** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
AREA 539 BUSES WITH VOLTAGE GREATER THAN 1.0500: 58810 GRNBURG134.5 1.0784 1.0379
AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58773 MED-LDG3 115 0.9324 0.9674 58787 PRATT 3 115 0.9144 0.9438
58797 SUNCITY3 115 0.9331 0.9772

X-----
 DT IN G E N C Y E V E N T S X-- O V E R L O A D L I N E S --X X--MVA (MW) FLOW--X
 X-----
 MULTI-SECTION LINE GROUPINGS --X X FROM NAME TO NAME C K T P R E -C N T P O S T -C N T R A T I N G P E R C E N T
 O P E N L I N E F R O M B U S 5 8 7 6 6 [G B E N D T P 3 1 1 5 . 0 0] T O B U S 5 8 7 7 8 [M U L G R E N 3 1 1 5 . 0 0] C K T 1 ----- C O N T I N G E N C Y S I N G L E 2 8
 *** NONE ***
 X-----
 AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: B U S -----X V-CONT V-INIT X-----
 58766 GBENDTP3 115 0.9310 0.9948 58787 PRATT 3 115 0.9190 0.9438
 58792 SEWARD 3 115 0.9307 0.9756 58796 ST-JOHN3 115 0.9231 0.9565
 X-----
 C O N T I N G E N C Y E V E N T S X-- O V E R L O A D E D L I N E S --X X--MVA (MW) FLOW--X
 X-----
 MULTI-SECTION LINE GROUPINGS --X X FROM NAME TO NAME C K T P R E -C N T P O S T -C N T R A T I N G P E R C E N T
 O P E N L I N E F R O M B U S 5 8 7 6 6 [G B E N D T P 3 1 1 5 . 0 0] T O B U S 5 8 7 9 2 [S E W A R D 3 1 1 5 . 0 0] C K T 1 ----- C O N T I N G E N C Y S I N G L E 2 9
 *** NONE ***
 X-----
 AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: B U S -----X V-CONT V-INIT X-----
 58787 PRATT 3 115 0.9180 0.9438 58792 SEWARD 3 115 0.9291 0.9756
 58796 ST-JOHN3 115 0.9219 0.9565
 X-----
 C O N T I N G E N C Y E V E N T S X-- O V E R L O A D E D L I N E S --X X--MVA (MW) FLOW--X
 X-----
 MULTI-SECTION LINE GROUPINGS --X X FROM NAME TO NAME C K T P R E -C N T P O S T -C N T R A T I N G P E R C E N T
 O P E N L I N E F R O M B U S 5 8 7 6 8 [H A R P E R 4 1 3 8 . 0 0] T O B U S 5 8 7 7 5 [M I L A N T P 4 1 3 8 . 0 0] C K T 1 ----- C O N T I N G E N C Y S I N G L E 3 3
 *** NONE ***
 X-----
 AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: B U S -----X V-CONT V-INIT X-----
 58768 HARPER 4 138 0.9125 0.9943 58773 MED-LDG3 115 0.9301 0.9674
 58774 MED-LDG4 138 0.9285 0.9844 58787 PRATT 3 115 0.9206 0.9438
 58797 SUNCITY3 115 0.9499 0.9772 58813 HARPER 134.5 0.9414 1.0398
 X-----
 C O N T I N G E N C Y E V E N T S X-- O V E R L O A D E D L I N E S --X X--MVA (MW) FLOW--X
 X-----
 MULTI-SECTION LINE GROUPINGS --X X FROM NAME TO NAME C K T P R E -C N T P O S T -C N T R A T I N G P E R C E N T
 O P E N L I N E F R O M B U S 5 8 7 7 3 [M E D - L D G 3 1 1 5 . 0 0] T O B U S 5 8 7 7 4 [M E D - L D G 4 1 3 8 . 0 0] C K T 1 ----- C O N T I N G E N C Y S I N G L E 4 4
 *** NONE ***
 X-----
 AREA 539 BUSES WITH VOLTAGE GREATER THAN 1.0500: B U S -----X V-CONT V-INIT X-----
 58813 HARPER 134.5 1.0645 1.0398
 X-----
 C O N T I N G E N C Y E V E N T S X-- O V E R L O A D E D L I N E S --X X--MVA (MW) FLOW--X
 X-----
 MULTI-SECTION LINE GROUPINGS --X X FROM NAME TO NAME C K T P R E -C N T P O S T -C N T R A T I N G P E R C E N T
 O P E N L I N E F R O M B U S 5 8 7 7 3 [M E D - L D G 3 1 1 5 . 0 0] T O B U S 5 8 7 8 7 [P R A T T 3 1 1 5 . 0 0] C K T 1 ----- C O N T I N G E N C Y S I N G L E 4 5
 *** NONE ***
 X-----
 AREA 539 BUSES WITH VOLTAGE GREATER THAN 1.0500: B U S -----X V-CONT V-INIT X-----
 58817 MED-LDG134.5 1.0772 1.0372 58833 SUNCITY134.5 1.0674 1.0364
 58787 PRATT 3 115 0.8982 0.9438 58796 ST-JOHN3 115 0.9336 0.9565
 X-----
 C O N T I N G E N C Y E V E N T S X-- O V E R L O A D E D L I N E S --X X--MVA (MW) FLOW--X
 X-----
 MULTI-SECTION LINE GROUPINGS --X X FROM NAME TO NAME C K T P R E -C N T P O S T -C N T R A T I N G P E R C E N T
 O P E N L I N E F R O M B U S 5 8 7 7 3 [M E D - L D G 3 1 1 5 . 0 0] T O B U S 5 8 7 9 7 [S U N C I T Y 3 1 1 5 . 0 0] C K T 1 ----- C O N T I N G E N C Y S I N G L E 4 6
 *** NONE ***
 X-----
 AREA 539 BUSES WITH VOLTAGE GREATER THAN 1.0500: B U S -----X V-CONT V-INIT X-----
 58810 GRNBURG134.5 1.0859 1.0379 58833 SUNCITY134.5 1.1080 1.0364
 X-----
 AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58773 MED-LDG3 115 0.9310 0.9674 58787 PRATT 3 115 0.9141 0.9438
 X-----
 C O N T I N G E N C Y E V E N T S X-- O V E R L O A D E D L I N E S --X X--MVA (MW) FLOW--X
 X-----
 MULTI-SECTION LINE GROUPINGS --X X FROM NAME TO NAME C K T P R E -C N T P O S T -C N T R A T I N G P E R C E N T
 O P E N L I N E F R O M B U S 5 8 7 7 9 [M U L G R E N 6 2 3 0 . 0 0] T O B U S 5 8 7 9 5 [S P E A R V L 6 2 3 0 . 0 0] C K T 1 ----- C O N T I N G E N C Y S I N G L E 5 4
 *** NONE ***
 X-----
 AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: B U S -----X V-CONT V-INIT X-----
 58751 ALEXNDR3 115 0.9465 0.9823

X----- T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 58787 [PRATT 3115.00] TO BUS 58796 [ST-JOHN3115.00] CKT 1 ----- CONTINGENCY SINGLE 66
*** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58773 MED-LDG3 115 0.9434 0.9674 58787 PRATT 3 115 0.9020 0.9438

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 58792 [SEWARD 3115.00] TO BUS 58796 [ST-JOHN3115.00] CKT 1 ----- CONTINGENCY SINGLE 72
*** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58773 MED-LDG3 115 0.9424 0.9674 58787 PRATT 3 115 0.9004 0.9438
58796 ST-JOHN3 115 0.8989 0.9565

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 58779 [MULGRENG230.00] TO BUS 56601 [HEIZER 3115.00] CKT 1 ----- CONTINGENCY SINGLE 88
*** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58751 ALEXNDR3 115 0.9222 0.9823 58783 NESS-CT3 115 0.9427 0.9884

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 58786 [PLAINVL3115.00] TO BUS 56551 [SALINE 3115.00] CKT 1 ----- CONTINGENCY SINGLE 90
*** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58785 PHLBURG3 115 0.9267 0.9837 58786 PLAINVL3 115 0.9216 0.9904

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 58795 [SPEARVL6230.00] TO BUS 56470 [SPERXFRG287.00] CKT 1 ----- CONTINGENCY SINGLE 92
*** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58751 ALEXNDR3 115 0.9446 0.9823

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 56469 [SPERVIL7345.00] TO BUS 56470 [SPERXFRG287.00] CKT 1 ----- CONTINGENCY SPP-17
OPEN LINE FROM BUS 56470 [SPERXFRG287.00] TO BUS 58795 [SPEARVL6230.00] CKT 1
OPEN LINE FROM BUS 56468 [SPEKTER113.800] TO BUS 56470 [SPERXFRG287.00] CKT 1
*** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58751 ALEXNDR3 115 0.9464 0.9823

4. JO WINTER PEAK

A. AREA 539 TOTALS

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, APR 03 2000 10:55
 1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL AREA TOTALS
 2000 WINTER PEAK - UTILICORP BASE CASE WITH WERE CHANGES IN MW/MVAR

AREA	GENERATION	FROM LOAD	TO BUS	TO LINE SHUNT	FROM CHARGING	TO NET INT	LOSSES	DESIRED NET INT
539	131.8	365.3	0.0	0.0	0.0	-249.0	15.5	-249.0
WEPL	10.6	123.6	-147.0	0.0	122.6	60.3	96.3	
TOTALS	131.8	365.3	0.0	0.0	0.0	-249.0	15.5	-249.0
	10.6	123.6	-147.0	0.0	122.6	60.3	96.3	

B. INTER-AREA TRANSFER DATA

1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL INTER-AREA
 2000 WINTER PEAK - UTILICORP BASE CASE WITH WERE CHANGES TRANSFER DATA

X--FROM AREA-X	X--TO AREA--X	ID	PTRANS	PTOTAL	DESINT
539 [WEPL]	515 [SWPA]	1	-20.0		
539 [WEPL]	531 [MIDW]	1	0.0		
539 [WEPL]	534 [SUNC]	1	-50.0		
539 [WEPL]	534 [SUNC]	2	-2.0		
539 [WEPL]	534 [SUNC]	3	0.0		
539 [WEPL]	536 [WERE]	1	-165.0		
539 [WEPL]	536 [WERE]	2	2.0		
539 [WEPL]	536 [WERE]	3	-14.0	-249.0	-249.0

C. GENERATOR UNIT DATA

1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL GENERATOR
 2000 WINTER PEAK - UTILICORP BASE CASE WITH WERE CHANGES UNIT DATA

BUSH#	NAME	BSKV	CD	ID	ST	PGEN	QGEN	QMAX	QMIN	PMAX	PMIN	OWN	FRACT	OWN	FRACT
58753	CIM-PLT	113.8	-2	1	0	0.0	0.0	28.0	-15.0	58.0	25.0	1	1.000		
58753	CIM-PLT	113.8	-2	2	0	0.0	0.0	10.0	-5.0	14.0	2.0	1	1.000		
58755	CLIFTON	113.8	-2	1	0	0.0	0.0	32.0	-15.0	70.0	5.0	1	1.000		
58770	JUD-LRG	113.8	2	4	1	131.8	10.6	98.0	-45.0	143.0	30.0	1	1.000		
58777	MULGREN	113.8	-2	3	0	0.0	0.0	34.0	-16.0	93.0	30.0	1	1.000		

D. TRANSFORMER DATA

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E
MON, APR 03 2000 11:07

TRANSFORMER DATA

1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL

2000 WINTER PEAK - UTILICORP BASE CASE WITH WERE CHANGES

FROM	TO	CKT	TP	RATIO	ANGLE	RG	CONT	RMAX	RMIN	VMAX	VMIN	STEP	TABLE	CR	CX
56470	58795	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
56565	58792	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
56601	58779	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58751	58802	1	T	1.0375	0.00	1	-58802	1.1000	0.9000	1.0500	1.0300	0.00625			
58753	58754	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58755	58756	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58756	58804	1	T	0.9812	0.00	1	-58804	1.1000	0.9000	1.0500	1.0300	0.00625			
58757	58758	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58757	58805	1	T	0.9937	0.00	1	-58805	1.1000	0.9000	1.0500	1.0300	0.00625			
58759	58806	1	T	1.0688	0.00	1	-58806	1.1000	0.9000	1.0500	1.0300	0.00625			
58761	58807	1	T	1.0313	0.00	1	-58807	1.1000	0.9000	1.0500	1.0300	0.00625			
58762	58808	1	T	1.0125	0.00	1	-58808	1.1000	0.9000	1.0500	1.0300	0.00625			
58763	58809	1	T	1.0063	0.00	1	-58809	1.1000	0.9000	1.0500	1.0300	0.00625			
58764	58810	1	T	1.0000	0.00	1	-58810	1.1000	0.9000	1.0500	1.0300	0.00625			
58765	58811	1	T	0.9937	0.00	1	-58811	1.1000	0.9000	1.0500	1.0300	0.00625			
58767	58812	1	T	1.0375	0.00	1	-58812	1.1000	0.9000	1.0500	1.0300	0.00625			
58768	58813	1	T	1.0125	0.00	1	-58813	1.1000	0.9000	1.0500	1.0300	0.00625			
58769	58814	1	T	0.9750	0.00	1	-58814	1.1000	0.9000	1.0500	1.0300	0.00625			
58770	58771	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58771	58815	1	T	1.0313	0.00	1	-58815	1.1000	0.9000	1.0500	1.0300	0.00625			
58772	58816	1	T	1.0688	0.00	1	-58816	1.1000	0.9000	1.0500	1.0300	0.00625			
58773	58774	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58773	58817	1	T	1.0375	0.00	1	-58817	1.1000	0.9000	1.0500	1.0300	0.00625			
58776	58818	1	T	1.0063	0.00	1	-58818	1.1000	0.9000	1.0500	1.0300	0.00625			
58777	58778	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58778	58779	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58778	58819	1	T	1.0313	0.00	1	-58819	1.1000	0.9000	1.0500	1.0300	0.00625			
58780	58820	1	T	1.0750	0.00	1	-58820	1.1000	0.9000	1.0500	1.0300	0.00625			
58781	58821	1	T	1.0250	0.00	1	-58821	1.1000	0.9000	1.0500	1.0300	0.00625			
58783	58822	1	T	1.0438	0.00	1	-58822	1.1000	0.9000	1.0500	1.0300	0.00625			
58784	58823	1	T	1.0438	0.00	1	-58823	1.1000	0.9000	1.0500	1.0300	0.00625			
58785	58824	1	T	1.0250	0.00	1	-58824	1.1000	0.9000	1.0500	1.0300	0.00625			
58786	58825	1	T	1.0188	0.00	1	-58825	1.1000	0.9000	1.0500	1.0300	0.00625			
58787	58826	1	T	1.0375	0.00	1	-58826	1.1000	0.9000	1.0500	1.0300	0.00625			
58788	58827	1	T	1.0125	0.00	1	-58827	1.1000	0.9000	1.0500	1.0300	0.00625			
58789	58828	1	T	1.0438	0.00	1	-58828	1.1000	0.9000	1.0500	1.0300	0.00625			
58790	58829	1	T	1.0812	0.00	1	-58829	1.1000	0.9000	1.0500	1.0300	0.00625			
58791	58830	1	T	1.0688	0.00	1	-58830	1.1000	0.9000	1.0500	1.0300	0.00625			
58793	58831	1	T	1.0063	0.00	1	-58831	1.1000	0.9000	1.0500	1.0300	0.00625			
58794	58795	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58794	58832	1	T	1.0313	0.00	1	-58832	1.1000	0.9000	1.0500	1.0300	0.00625			
58797	58833	1	T	1.0063	0.00	1	-58833	1.1000	0.9000	1.0500	1.0300	0.00625			
58798	58834	1	T	1.0562	0.00	1	-58834	1.1000	0.9000	1.0500	1.0300	0.00625			
58799	58835	1	T	1.0500	0.00	1	-58835	1.1000	0.9000	1.0500	1.0300	0.00625			
58800	58836	1	T	1.1000	0.00	1	-58836	1.1000	0.9000	1.0500	1.0300	0.00625			
58837	58838	1	T	1.0875	0.00	1	-58838	1.1000	0.9000	1.0500	1.0300	0.00625			
58839	58840	1	F	1.0500	0.00	1	-58839	1.1000	0.9000	1.0500	1.0300	0.00625			

E. BASE CASE BRANCH LOADINGS ABOVE 100% OF RAT. SET A:
 PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, APR 03 2000 11:08
 1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL
 2000 WINTER PEAK - UTILICORP BASE CASE WITH WERE CHANGES
 OUTPUT FOR AREA 539 [WEPL]
 BRANCH LOADINGS ABOVE 100% OF RATING SET A:

BUS	NAME	BSKV AREA	BUS	NAME	BSKV AREA	CKT	LOADING	RATING	PERCENT	CURRENT (MVA)
X-----	FROM BUS	-----X	X-----	TO BUS	-----X					

* NONE *

F. BASE CASE BUSES WITH VOLTAGE GREATER THAN 1.0500:
 PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, APR 03 2000 11:21
 1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL
 2000 WINTER PEAK - UTILICORP BASE CASE WITH WERE CHANGES
 BUSES WITH VOLTAGE GREATER THAN 1.0500:

X-----	BUS	-----X	AREA	V (PU)	V (KV)	X-----	BUS	-----X	AREA	V (PU)	V (KV)

* NONE *

G. BASE CASE BUSES WITH VOLTAGE LESS THAN 0.9500:
 X----- BUS -----X AREA V (PU) V (KV) X----- BUS -----X AREA V (PU) V (KV)

* NONE *

ACCC OVERLOAD REPORT MONITORED ELEMENTS LOADED JVE 100.0 % OF RATING SET B & ACCC VOLTAGE REPC

1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL
 2000 WINTER PEAK - UTILICORP BASE CASE WITH WERE CHANGES
 *** ACCC OVERLOAD REPORT: MONITORED ELEMENTS LOADED ABOVE 100.0 % OF RATING SET B ***
 *** ACCC VOLTAGE REPORT ***

DISTRIBUTION FACTOR FILE: Dfax00WP.sgf
 SUBSYSTEM DESCRIPTION FILE: USER DIALOGUE
 MONITORED ELEMENT FILE: opsmom539.txt
 CONTINGENCY DESCRIPTION FILE: opacon2k.txt

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 58752 (CMRIVTP3115.00) TO BUS 58759 (CUDAHY 3115.00) CKT 1 ----- CONTINGENCY SINGLE 3
 *** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 AREA 539 BUSES WITH VOLTAGE GREATER THAN 1.0500: 58806 CUDAHY 134.5 1.0789 1.0483

AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58752 CMRIVTP3 115 0.9255 0.9699 58753 CIM-PLT113.8 0.9148 0.9598
 58754 CIM-PLT3 115 0.9264 0.9678 58772 E-LIBER3 115 0.9254 0.9666
 58782 NLIBTAP3 115 0.9243 0.9657 58790 S-LIBER3 115 0.9246 0.9659
 58791 SATANTA3 115 0.9438 0.9720 58800 W-LIBER3 115 0.9204 0.9620
 58837 NLIB 3 115 0.9227 0.9642

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 58759 (CUDAHY 3115.00) TO BUS 58771 (JUD-LRG3115.00) CKT 1 ----- CONTINGENCY SINGLE 13
 *** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58752 CMRIVTP3 115 0.9244 0.9699 58753 CIM-PLT113.8 0.9136 0.9598
 58754 CIM-PLT3 115 0.9254 0.9678 58759 CUDAHY 3 115 0.9234 0.9891
 58772 E-LIBER3 115 0.9243 0.9666 58782 NLIBTAP3 115 0.9232 0.9657
 58790 S-LIBER3 115 0.9235 0.9659 58791 SATANTA3 115 0.9427 0.9720
 58800 W-LIBER3 115 0.9193 0.9620 58837 NLIB 3 115 0.9216 0.9642

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 58773 (MED-LDG3115.00) TO BUS 58787 (PRATT 3115.00) CKT 1 ----- CONTINGENCY SINGLE 45
 *** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 AREA 539 BUSES WITH VOLTAGE GREATER THAN 1.0500: 58817 MED-LDG134.5 1.0669 1.0438
 AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58787 PRATT 3 115 0.9419 0.9876

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 58773 (MED-LDG3115.00) TO BUS 58797 (SUNCITY3115.00) CKT 1 ----- CONTINGENCY SINGLE 46
 *** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 AREA 539 BUSES WITH VOLTAGE GREATER THAN 1.0500: 58833 SUNCITY134.5 1.0722 1.0431

1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL
 2000 WINTER PEAK - UTILICORP BASE CASE WITH WERE CHANGES
 *** ACCC OVERLOAD REPORT: MONITORED ELEMENTS LOADED ABOVE 100.0 % OF RATING SET B ***
 *** ACCC VOLTAGE REPORT ***

CONTINGENCY EVENTS OVERLOADED LINES --X X--MVA(MW)FLOW--X
 X--- MULTI-SECTION LINE GROUPINGS ---X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 58778 [MULGREN3115.00] TO BUS 58779 [MULGREN6230.00] CKT 1 --- CONTINGENCY SINGLE 50
 *** NONE ***

AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500:
 X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 58760 EHALTP3 115 0.9338 1.0072 58761 E-GBEND3 115 0.9172 1.0057
 58762 ELLSWTH3 115 0.9371 1.0121 58766 GBENDTP3 115 0.9285 1.0052
 58777 MULGREN113.8 0.9226 1.0094 58778 MULGREN3 115 0.9226 1.0094
 58781 N-GBEND3 115 0.9199 1.0075 58784 OTISSUB3 115 0.9197 1.0077
 58789 S-GBEND3 115 0.9166 1.0053 58792 SEWARD 3 115 0.9404 0.9967
 58796 ST-JOHN3 115 0.9469 0.9897 58798 WALDO 3 115 0.9465 1.0086
 58801 RUSSELL3 115 0.9364 1.0072 58807 E-GBEND134.5 0.9434 1.0391
 58821 N-GBEND134.5 0.9455 1.0399 58823 OTISSUB134.5 0.9337 1.0400
 58828 S-GBEND134.5 0.9460 1.0429

CONTINGENCY EVENTS OVERLOADED LINES --X X--MVA(MW)FLOW--X
 X--- MULTI-SECTION LINE GROUPINGS ---X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 58779 [MULGREN6230.00] TO BUS 58795 [SPEARVL6230.00] CKT 1 --- CONTINGENCY SINGLE 54
 *** NONE ***

AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500:
 X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 58751 ALEXNDR3 115 0.9332 1.0039 58760 EHALTP3 115 0.9468 1.0072
 58761 E-GBEND3 115 0.9387 1.0057 58766 GBENDTP3 115 0.9410 1.0052
 58777 MULGREN113.8 0.9436 1.0094 58778 MULGREN3 115 0.9436 1.0094
 58779 MULGREN6 230 0.9466 1.0076 58781 N-GBEND3 115 0.9411 1.0075
 58784 OTISSUB3 115 0.9411 1.0077 58787 PRATT 3 115 0.9393 0.9876
 58789 S-GBEND3 115 0.9381 1.0053 58792 SEWARD 3 115 0.9356 0.9967
 58796 ST-JOHN3 115 0.9340 0.9897 58801 RUSSELL3 115 0.9480 1.0072

CONTINGENCY EVENTS OVERLOADED LINES --X X--MVA(MW)FLOW--X
 X--- MULTI-SECTION LINE GROUPINGS ---X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 58782 [NLBTAP3115.00] TO BUS 58837 [NLIB 3115.00] CKT 1 --- CONTINGENCY SINGLE 59
 *** NONE ***

AREA 539 BUSES WITH VOLTAGE GREATER THAN 1.0500:
 X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 58816 E-LIBER134.5 1.0693 1.0457 58829 S-LIBER134.5 1.0678 1.0438

CONTINGENCY EVENTS OVERLOADED LINES --X X--MVA(MW)FLOW--X
 X--- MULTI-SECTION LINE GROUPINGS ---X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 58754 [CIM-PLT3115.00] TO BUS 58455 [NCIMARN3115.00] CKT 1 --- CONTINGENCY SINGLE 86
 *** NONE ***

AREA 539 BUSES WITH VOLTAGE GREATER THAN 1.0500:
 X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 58830 SATANTA134.5 1.0688 1.0392

AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500:
 58752 CMRIVTP3 115 0.9237 0.9699 58753 CIM-PLT113.8 0.9064 0.9598
 58754 CIM-PLT3 115 0.9185 0.9678 58772 E-LIBER3 115 0.9204 0.9666
 58782 NLBTAP3 115 0.9188 0.9657 58790 S-LIBER3 115 0.9196 0.9659
 58800 W-LIBER3 115 0.9149 0.9620 58837 NLIB 3 115 0.9172 0.9642

X-----ATTINGENCY EVENTS-----X--OVERLOAD X--MVA(MW)FLOW--X
X-----MULTI-SECTION LINE GROUPINGS-----X
OPEN LINE FROM BUS 58795 [SPEARVL6230.00] TO BUS 56470 [SPERXFR6287.00] CKT 1-----CONTINGENCY SINGLE 92
*** NONE ***

AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500:
X-----BUS-----X V-CONT V-INIT X-----BUS-----X V-CONT V-INIT
58752 CMRIWTP3 115 0.9455 0.9699 58753 CIM-PLT113.8 0.9338 0.9598
58754 CIM-PLT3 115 0.9438 0.9678 58772 E-LIBER3 115 0.9433 0.9666
58782 NLIBTAP3 115 0.9422 0.9657 58790 S-LIBER3 115 0.9426 0.9659
58791 SATANTAP3 115 0.9474 0.9720 58800 W-LIBER3 115 0.9384 0.9620
58837 NLIB 3 115 0.9407 0.9642

X-----CONTINGENCY EVENTS-----X--OVERLOADED X--MVA(MW)FLOW--X
X-----MULTI-SECTION LINE GROUPINGS-----X
OPEN LINE FROM BUS 56469 [SPERVL7345.00] TO BUS 56470 [SPERXFR6287.00] CKT 1-----CONTINGENCY SPP-17
OPEN LINE FROM BUS 56470 [SPERXFR6287.00] TO BUS 58795 [SPEARVL6230.00] CKT 1
OPEN LINE FROM BUS 56468 [SPERTER113.800] TO BUS 56470 [SPERXFR6287.00] CKT 1
*** NONE ***

AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500:
X-----BUS-----X V-CONT V-INIT X-----BUS-----X V-CONT V-INIT
58752 CMRIWTP3 115 0.9458 0.9699 58753 CIM-PLT113.8 0.9342 0.9598
58754 CIM-PLT3 115 0.9442 0.9678 58772 E-LIBER3 115 0.9436 0.9666
58782 NLIBTAP3 115 0.9425 0.9657 58790 S-LIBER3 115 0.9429 0.9659
58791 SATANTAP3 115 0.9478 0.9720 58800 W-LIBER3 115 0.9387 0.9620
58837 NLIB 3 115 0.9410 0.9642

X-----CONTINGENCY EVENTS-----X--OVERLOADED X--MVA(MW)FLOW--X
X-----MULTI-SECTION LINE GROUPINGS-----X
OPEN LINE FROM BUS 51534 [TUCO 7345.00] TO BUS 54119 [O.K.U.-7345.00] CKT 1-----CONTINGENCY SPP-22
OPEN LINE FROM BUS 51533 [TUCO 6230.00] TO BUS 51534 [TUCO 7345.00] CKT 1
*** NONE ***

AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500:
X-----BUS-----X V-CONT V-INIT X-----BUS-----X V-CONT V-INIT
58752 CMRIWTP3 115 0.9249 0.9699 58753 CIM-PLT113.8 0.9111 0.9598
58754 CIM-PLT3 115 0.9231 0.9678 58772 E-LIBER3 115 0.9120 0.9666
58782 NLIBTAP3 115 0.9127 0.9657 58790 S-LIBER3 115 0.9112 0.9659
58791 SATANTAP3 115 0.9494 0.9720 58800 W-LIBER3 115 0.9087 0.9620
58837 NLIB 3 115 0.9111 0.9642

X-----MULTI-SECTION LINE GROUPINGS-----X
OPEN LINE FROM BUS 51534 [TUCO 7345.00] TO BUS 54119 [O.K.U.-7345.00] CKT 1-----CONTINGENCY SPP-28
OPEN LINE FROM BUS 51533 [TUCO 6230.00] TO BUS 51534 [TUCO 7345.00] CKT 1
OPEN LINE FROM BUS 54119 [O.K.U.-7345.00] TO BUS 54131 [L.E.S.-7345.00] CKT 1
OPEN LINE FROM BUS 54119 [O.K.U.-7345.00] TO BUS 59991 [OKLAUN 7345.00] CKT 1
*** NONE ***

AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500:
X-----BUS-----X V-CONT V-INIT X-----BUS-----X V-CONT V-INIT
58752 CMRIWTP3 115 0.9245 0.9699 58753 CIM-PLT113.8 0.9107 0.9598
58754 CIM-PLT3 115 0.9227 0.9678 58772 E-LIBER3 115 0.9116 0.9666
58782 NLIBTAP3 115 0.9123 0.9657 58790 S-LIBER3 115 0.9107 0.9659
58791 SATANTAP3 115 0.9492 0.9720 58800 W-LIBER3 115 0.9083 0.9620
58837 NLIB 3 115 0.9106 0.9642

5. J1 APRIL MINIMUM

A. AREA 539 TOTALS

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, APR 03 2000 11:34
1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL AREA TOTALS
2001 APRIL MINIMUM - UTILICORP BASE CASE WITH WERE CHANGES IN MW/MVAR

AREA	GENERATION	FROM LOAD	TO BUS SHUNT	TO LINE SHUNT	FROM CHARGING	TO NET INT	LOSSES	DESIRED NET INT
539	38.9	138.8	0.0	0.0	0.0	-102.9	3.0	-103.0
WEPL	0.0	51.4	-14.8	0.0	126.6	72.6	17.3	
TOTALS	38.9	138.8	0.0	0.0	0.0	-102.9	3.0	-103.0
	0.0	51.4	-14.8	0.0	126.6	72.6	17.3	

B. INTER-AREA TRANSFER DATA

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, APR 03 2000 11:35
1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL INTER-AREA
2001 APRIL MINIMUM - UTILICORP BASE CASE WITH WERE CHANGES TRANSFER DATA

X--FROM AREA-X	X--TO AREA--X	ID	PTRANS	PTOTAL	DESINT
539 [WEPL]	534 [SUNC]	1	-50.0		
539 [WEPL]	534 [SUNC]	2	-2.0		
539 [WEPL]	536 [WERE]	1	-39.0		
539 [WEPL]	536 [WERE]	2	2.0		
539 [WEPL]	536 [WERE]	3	-14.0	-103.0	-103.0

C. GENERATOR UNIT DATA

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, APR 03 2000 11:36
1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL GENERATOR
2001 APRIL MINIMUM - UTILICORP BASE CASE WITH WERE CHANGES UNIT DATA

BUS#	NAME	BSKV	CD	ID	ST	PGEN	QGEN	QMAX	QMIN	PMAX	PMIN	OWN	FRACT
58753	CIM-PLT113.8	-2	1	0	0.0	0.0	0.0	28.0	-15.0	58.0	25.0	1	1.000
58753	CIM-PLT113.8	-2	2	0	0.0	0.0	0.0	10.0	-5.0	14.0	2.0	1	1.000
58755	CLIFTON113.8	-2	1	0	0.0	0.0	0.0	32.0	-15.0	70.0	5.0	1	1.000
58770	JUD-LRG113.8	-2	4	1	38.9	0.0	0.0	0.0	0.0	143.0	30.0	1	1.000
58777	MULGREN113.8	-2	3	0	0.0	0.0	0.0	34.0	-16.0	93.0	30.0	1	1.000

D. TRANSFORMER DATA

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, APR 03 2000 11:37
 1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL TRANSFORMER DATA
 2001 APRIL MINIMUM - UTILICORP BASE CASE WITH WERE CHANGES

FROM	TO	CT	TP	RATIO	ANGLE	RG	CONT	RMAX	RMIN	VMAX	VMIN	STEP	TABLE	CR	CX
56470	58795	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
56565	58792	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
56601	58779	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58751	58802	1	T	1.0000	0.00	1	-58802	1.1000	0.9000	1.0500	1.0300	0.00625			
58753	58754	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58755	58756	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58756	58804	1	T	1.0000	0.00	1	-58804	1.1000	0.9000	1.0500	1.0300	0.00625			
58757	58758	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58757	58805	1	T	1.0000	0.00	1	-58805	1.1000	0.9000	1.0500	1.0300	0.00625			
58759	58806	1	T	1.0375	0.00	1	-58806	1.1000	0.9000	1.0500	1.0300	0.00625			
58761	58807	1	T	1.0125	0.00	1	-58807	1.1000	0.9000	1.0500	1.0300	0.00625			
58762	58808	1	T	1.0063	0.00	1	-58808	1.1000	0.9000	1.0500	1.0300	0.00625			
58763	58809	1	T	1.0063	0.00	1	-58809	1.1000	0.9000	1.0500	1.0300	0.00625			
58764	58810	1	T	1.0125	0.00	1	-58810	1.1000	0.9000	1.0500	1.0300	0.00625			
58765	58811	1	T	1.0000	0.00	1	-58811	1.1000	0.9000	1.0500	1.0300	0.00625			
58767	58812	1	T	1.0313	0.00	1	-58812	1.1000	0.9000	1.0500	1.0300	0.00625			
58768	58813	1	T	1.0187	0.00	1	-58813	1.1000	0.9000	1.0500	1.0300	0.00625			
58769	58814	1	T	1.0000	0.00	1	-58814	1.1000	0.9000	1.0500	1.0300	0.00625			
58770	58771	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58771	58815	1	T	1.0187	0.00	1	-58815	1.1000	0.9000	1.0500	1.0300	0.00625			
58772	58816	1	T	1.0562	0.00	1	-58816	1.1000	0.9000	1.0500	1.0300	0.00625			
58773	58774	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58773	58817	1	T	1.0125	0.00	1	-58817	1.1000	0.9000	1.0500	1.0300	0.00625			
58776	58818	1	T	1.0125	0.00	1	-58818	1.1000	0.9000	1.0500	1.0300	0.00625			
58777	58778	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58778	58779	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58778	58819	1	T	1.0063	0.00	1	-58819	1.1000	0.9000	1.0500	1.0300	0.00625			
58780	58820	1	T	1.0313	0.00	1	-58820	1.1000	0.9000	1.0500	1.0300	0.00625			
58781	58821	1	T	1.0125	0.00	1	-58821	1.1000	0.9000	1.0500	1.0300	0.00625			
58783	58822	1	T	1.0000	0.00	1	-58822	1.1000	0.9000	1.0500	1.0300	0.00625			
58784	58823	1	T	1.0250	0.00	1	-58823	1.1000	0.9000	1.0500	1.0300	0.00625			
58785	58824	1	T	1.0187	0.00	1	-58824	1.1000	0.9000	1.0500	1.0300	0.00625			
58786	58825	1	T	1.0313	0.00	1	-58825	1.1000	0.9000	1.0500	1.0300	0.00625			
58787	58826	1	T	1.0187	0.00	1	-58826	1.1000	0.9000	1.0500	1.0300	0.00625			
58788	58827	1	T	1.0187	0.00	1	-58827	1.1000	0.9000	1.0500	1.0300	0.00625			
58789	58828	1	T	1.0188	0.00	1	-58828	1.1000	0.9000	1.0500	1.0300	0.00625			
58790	58829	1	T	1.0562	0.00	1	-58829	1.1000	0.9000	1.0500	1.0300	0.00625			
58791	58830	1	T	1.0562	0.00	1	-58830	1.1000	0.9000	1.0500	1.0300	0.00625			
58793	58831	1	T	1.0063	0.00	1	-58831	1.1000	0.9000	1.0500	1.0300	0.00625			
58794	58795	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58794	58832	1	T	1.0125	0.00	1	-58832	1.1000	0.9000	1.0500	1.0300	0.00625			
58797	58833	1	T	1.0187	0.00	1	-58833	1.1000	0.9000	1.0500	1.0300	0.00625			
58798	58834	1	T	1.0125	0.00	1	-58834	1.1000	0.9000	1.0500	1.0300	0.00625			
58799	58835	1	T	1.0313	0.00	1	-58835	1.1000	0.9000	1.0500	1.0300	0.00625			
58800	58836	1	T	1.0562	0.00	1	-58836	1.1000	0.9000	1.0500	1.0300	0.00625			
58837	58838	1	T	1.0562	0.00	1	-58838	1.1000	0.9000	1.0500	1.0300	0.00625			
58839	58840	1	F	1.0250	0.00	1	-58839	1.1000	0.9000	1.0500	1.0300	0.00625			

E. BASE CASE BRANCH LOADINGS ABOVE 100% OF RAI SET A:
 PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, APR 03 2000 11:39
 1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL
 2001 APRIL MINIMUM - UTILICORP BASE CASE WITH WERE CHANGES
 OUTPUT FOR AREA 539 [WEPL]
 BRANCH LOADINGS ABOVE 100.0 % OF RATING SET A:

BUS	NAME	BSKV AREA	BUS	NAME	BSKV AREA	CTK	LOADING	RATING	PERCENT	CURRENT (MVA)
X-----	FROM BUS	-----X	X-----	TO BUS	-----X					

* NONE *

F. BASE CASE BUSES WITH VOLTAGE GREATER THAN 1.0500:
 PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, APR 03 2000 11:41
 1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL
 2001 APRIL MINIMUM - UTILICORP BASE CASE WITH WERE CHANGES

BUSES WITH VOLTAGE GREATER THAN 1.0500:

X-----	BUS	-----X	AREA	V (PU)	V (KV)	X-----	BUS	-----X	AREA	V (PU)	V (KV)

* NONE *

G. BASE CASE BUSES WITH VOLTAGE LESS THAN 0.9500:
 X----- BUS -----X AREA V (PU) X----- BUS -----X AREA V (PU) V (KV)

* NONE *

ACCC OVERLOAD REPORT MONITORED ELEMENTS LOADED JVE 100.0 % OF RATING SET B & ACCC VOLTAGE REP.

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, APR 02 2000 20:41

1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL
2001 APRIL MINIMUM - UTILICORP BASE CASE WITH WERE CHANGES

*** ACCC OVERLOAD REPORT: MONITORED ELEMENTS LOADED ABOVE 100.0 % OF RATING SET B ***
*** ACCC VOLTAGE REPORT ***

DISTRIBUTION FACTOR FILE: Dfax01AP.sgf
SUBSYSTEM DESCRIPTION FILE: USER DIALOGUE
MONITORED ELEMENT FILE: opemon539.txt
CONTINGENCY DESCRIPTION FILE: opacon2k.txt

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
X----- M U L T I - S E C T I O N L I N E G R O U P I N G S -----X F R O M N A M E T O N A M E C K T P R E - C N T P O S T - C N T R A T I N G P E R C E N T
O P E N L I N E F R O M B U S 5 8 7 5 2 [C M R I V T P 3 1 1 5 . 0 0] T O B U S 5 8 7 5 9 [C U D A H Y 3 1 1 5 . 0 0] C K T 1 ----- C O N T I N G E N C Y S I N G L E 3
*** NONE ***

AREA 539 BUSES WITH VOLTAGE GREATER THAN 1.0500: 58806 CUDAHY 134.5 1.0705 1.0471
X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
X----- M U L T I - S E C T I O N L I N E G R O U P I N G S -----X F R O M N A M E T O N A M E C K T P R E - C N T P O S T - C N T R A T I N G P E R C E N T
O P E N L I N E F R O M B U S 5 8 7 8 6 [P L A I N V L 3 1 1 5 . 0 0] T O B U S 5 6 5 5 1 [S A L I N E 3 1 1 5 . 0 0] C K T 1 ----- C O N T I N G E N C Y S I N G L E 9 0
*** NONE ***

AREA 539 BUSES WITH VOLTAGE GREATER THAN 1.0500: 58824 PHILBURG 134.5 1.0627 1.0361 58825 PLAINVL 134.5 1.0775 1.0360
X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
X----- M U L T I - S E C T I O N L I N E G R O U P I N G S -----X F R O M N A M E T O N A M E C K T P R E - C N T P O S T - C N T R A T I N G P E R C E N T
O P E N L I N E F R O M B U S 5 6 4 4 6 [H L C X F M R 6 2 3 0 . 0 0] T O B U S 5 6 4 4 9 [H O L C O M B 7 3 4 5 . 0 0] C K T 1 ----- C O N T I N G E N C Y S P P - 1 6
O P E N L I N E F R O M B U S 5 6 4 4 6 [H L C X F M R 6 2 3 0 . 0 0] T O B U S 5 6 4 4 8 [H O L C O M B 3 1 1 5 . 0 0] C K T 1
O P E N L I N E F R O M B U S 5 6 4 4 6 [H L C X F M R 6 2 3 0 . 0 0] T O B U S 5 6 4 5 0 [H O L C T E R 1 1 3 . 9 0 0] C K T 1
*** NONE ***

AREA 539 BUSES WITH VOLTAGE GREATER THAN 1.0500: 58795 SPEARVL 6 230 1.0540 1.0302
X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT

6. J1 FALL PEAK

A. AREA 539 TOTALS

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, APR 03 2000 11:47
 1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL AREA TOTALS
 2001 FALL PEAK - UTILICORP BASE CASE WITH WERE CHANGES IN MW/MVAR

AREA	FROM GENERATION	TO LOAD	TO BUS SHUNT	TO LINE SHUNT	FROM CHARGING	TO NET INT	LOSSES	DESIRED NET INT
539	114.4	352.1	0.0	0.0	0.0	-250.1	12.4	-250.0
WEPL	-2.4	119.2	-143.9	0.0	122.7	67.9	76.9	
TOTALS	114.4	352.1	0.0	0.0	0.0	-250.1	12.4	-250.0
	-2.4	119.2	-143.9	0.0	122.7	67.9	76.9	

B. INTER-AREA TRANSFER DATA

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, APR 03 2000 11:49
 1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL INTER-AREA
 2001 FALL PEAK - UTILICORP BASE CASE WITH WERE CHANGES TRANSFER DATA

X--FROM AREA-X	X--TO AREA--X	ID	PTRANS	PTOTAL	DESINT
539 [WEPL	] 515 [SWPA	] 1	-20.0		
539 [WEPL	] 534 [SUNC	] 1	-50.0		
539 [WEPL	] 534 [SUNC	] 2	-2.0		
539 [WEPL	] 536 [WERE	] 1	-166.0		
539 [WEPL	] 536 [WERE	] 2	2.0		
539 [WEPL	] 536 [WERE	] 3	-14.0	-250.0	-250.0

C. GENERATOR UNIT DATA

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, APR 03 2000 11:49
 1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL GENERATOR
 2001 FALL PEAK - UTILICORP BASE CASE WITH WERE CHANGES UNIT DATA

BUS#	NAME	BSKV	CD	ID	ST	PGEN	QGEN	QMAX	QMIN	PMAX	PMIN	OWN	FRACT
58753	CIM-PLT113.8	-2	1	0	0	0.0	0.0	28.0	-15.0	58.0	25.0	1	1.000
58753	CIM-PLT113.8	-2	2	0	0	0.0	0.0	10.0	-5.0	14.0	2.0	1	1.000
58755	CLIFTON113.8	-2	1	0	0	0.0	0.0	32.0	-15.0	70.0	5.0	1	1.000
58770	JUD-LRG113.8	2	4	1	114.4	-2.4	-2.4	98.0	-45.0	143.0	30.0	1	1.000
58777	MULGREN113.8	-2	3	0	0	0.0	0.0	34.0	-16.0	93.0	30.0	1	1.000

D. TRANSFORMER DATA

1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL

2001 FALL PEAK - UTILICORP BASE CASE WITH WERE CHANGES

FROM	TO	CKT	TP	RATIO	ANGLE	RG	CONT	RMAX	RMIN	VMAX	VMIN	STEP	TABLE	CR	CX
56470	58795	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
56565	58792	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
56601	58779	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58751	58802	1	T	1.0250	0.00	1	-58802	1.1000	0.9000	1.0500	1.0300	0.00625			
58753	58754	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58755	58756	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58756	58804	1	T	0.9937	0.00	1	-58804	1.1000	0.9000	1.0500	1.0300	0.00625			
58757	58758	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58757	58805	1	T	1.0063	0.00	1	-58805	1.1000	0.9000	1.0500	1.0300	0.00625			
58759	58806	1	T	1.0500	0.00	1	-58806	1.1000	0.9000	1.0500	1.0300	0.00625			
58761	58807	1	T	1.0250	0.00	1	-58807	1.1000	0.9000	1.0500	1.0300	0.00625			
58762	58808	1	T	1.0125	0.00	1	-58808	1.1000	0.9000	1.0500	1.0300	0.00625			
58763	58809	1	T	1.0438	0.00	1	-58809	1.1000	0.9000	1.0500	1.0300	0.00625			
58764	58810	1	T	1.0313	0.00	1	-58810	1.1000	0.9000	1.0500	1.0300	0.00625			
58765	58811	1	T	1.0375	0.00	1	-58811	1.1000	0.9000	1.0500	1.0300	0.00625			
58767	58812	1	T	1.0250	0.00	1	-58812	1.1000	0.9000	1.0500	1.0300	0.00625			
58768	58813	1	T	1.0125	0.00	1	-58813	1.1000	0.9000	1.0500	1.0300	0.00625			
58769	58814	1	T	0.9875	0.00	1	-58814	1.1000	0.9000	1.0500	1.0300	0.00625			
58770	58771	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58771	58815	1	T	1.0250	0.00	1	-58815	1.1000	0.9000	1.0500	1.0300	0.00625			
58772	58816	1	T	1.0187	0.00	1	-58816	1.1000	0.9000	1.0500	1.0300	0.00625			
58773	58774	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58773	58817	1	T	1.0375	0.00	1	-58817	1.1000	0.9000	1.0500	1.0300	0.00625			
58776	58818	1	T	1.0063	0.00	1	-58818	1.1000	0.9000	1.0500	1.0300	0.00625			
58777	58778	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58778	58779	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58778	58819	1	T	1.0250	0.00	1	-58819	1.1000	0.9000	1.0500	1.0300	0.00625			
58780	58820	1	T	1.0313	0.00	1	-58820	1.1000	0.9000	1.0500	1.0300	0.00625			
58781	58821	1	T	1.0187	0.00	1	-58821	1.1000	0.9000	1.0500	1.0300	0.00625			

E. BASE CASE BRANCH LOADINGS ABOVE 100% OF RA. SET A:

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, APR 03 2000 11:54

1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL
2001 FALL PEAK - UTILICORP BASE CASE WITH WERE CHANGES
OUTPUT FOR AREA 539 (WEPL 1

BRANCH LOADINGS ABOVE 100.0 % OF RATING SET A:

BUS	NAME	BSKV AREA	BUS	NAME	BSKV AREA	CKT	LOADING	RATING	PERCENT	CURRENT (MVA)
X-----	FROM BUS	-----X	X-----	TO BUS	-----X					

* NONE *

F. BASE CASE BUSES WITH VOLTAGE GREATER THAN 1.0500:

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, APR 03 2000 11:55

1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL
2001 FALL PEAK - UTILICORP BASE CASE WITH WERE CHANGES

BUSES WITH VOLTAGE GREATER THAN 1.0500:

X-----	BUS	-----X	AREA	V (PU)	V (KV)	X-----	BUS	-----X	AREA	V (PU)	V (KV)

* NONE *

G. BASE CASE BUSES WITH VOLTAGE LESS THAN 0.9500:

X-----	BUS	-----X	AREA	V (PU)	V (KV)	X-----	BUS	-----X	AREA	V (PU)	V (KV)

* NONE *

ACCC OVERLOAD REPORT MONITORED ELEMENTS LOADED /E 100.0 % OF RATING SET B & ACCC VOLTAGE REPORT

1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL
 2001 FALL PEAK - UTILICORP BASE CASE WITH WERE CHANGES
 *** ACCC OVERLOAD REPORT: MONITORED ELEMENTS LOADED ABOVE 100.0 % OF RATING SET B ***
 *** ACCC VOLTAGE REPORT ***

DISTRIBUTION FACTOR FILE: Dfax01FA.bgf
 SUBSYSTEM DESCRIPTION FILE: USER DIALOGUE
 MONITORED ELEMENT FILE: opsmom539.txt
 CONTINGENCY DESCRIPTION FILE: opacon2k.txt

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 58752 [CMRIVTP3115.00] TO BUS 58759 [CUDAHY 3115.00] CKT 1 ----- CONTINGENCY SINGLE 3
 *** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 AREA 539 BUSES WITH VOLTAGE GREATER THAN 1.0500: 58806 CUDAHY 134.5 1.0670 1.0449
 AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58753 CIM-PLT113.8 0.9456 0.9803

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 58756 [CLIFTON3115.00] TO BUS 58765 [GRNLEAF3115.00] CKT 1 ----- CONTINGENCY SINGLE 7
 *** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 AREA 539 BUSES WITH VOLTAGE GREATER THAN 1.0500: 58804 CLIFSUB134.5 1.0559 1.0329

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 58759 [CUDAHY 3115.00] TO BUS 58771 [JUD-LRG3115.00] CKT 1 ----- CONTINGENCY SINGLE 13
 *** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58753 CIM-PLT113.8 0.9448 0.9803 58800 W-LIBER3 115 0.9497 0.9827

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 58773 [MED-LDG3115.00] TO BUS 58787 [PRATT 3115.00] CKT 1 ----- CONTINGENCY SINGLE 45
 *** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 AREA 539 BUSES WITH VOLTAGE GREATER THAN 1.0500: 58817 MED-LDG134.5 1.0692 1.0464

AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58787 PRATT 3 115 0.9489 0.9896

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 58773 [MED-LDG3115.00] TO BUS 58797 [SUNCITY3115.00] CKT 1 ----- CONTINGENCY SINGLE 46
 *** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 AREA 539 BUSES WITH VOLTAGE GREATER THAN 1.0500: 58833 SUNCITY134.5 1.0619 1.0392

1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL
2001 FALL PEAK - UTILICORP BASE CASE WITH WERE CHANGES

*** ACCC OVERLOAD REPORT: MONITORED ELEMENTS LOADED ABOVE 100.0 % OF RATING SET B ***
*** ACCC VOLTAGE REPORT ***

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 58778 [MULGREN3115.00] TO BUS 58779 [MULGREN6230.00] CKT 1 ----- CONTINGENCY SINGLE 50

*** NONE ***

X-----	BUS	-----X	V-CONT	V-INIT	X-----	BUS	-----X	V-CONT	V-INIT
AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500:	58760 EHALTP3	115	0.9345	1.0093	58761 E-GBEND3	115	0.9212	1.0123	
	58762 ELLSWTH3	115	0.9382	1.0146	58766 GBENDTP3	115	0.9316	1.0102	
	58777 MULGREN113.8	0.9260	1.0155		58778 MULGREN3	115	0.9260	1.0155	
	58781 N-GBEND3	115	0.9236	1.0139	58784 OTISSUB3	115	0.9240	1.0144	
	58789 S-GBEND3	115	0.9206	1.0119	58792 SEWARD 3	115	0.9428	0.9994	
	58796 ST-JOHN3	115	0.9487	0.9908	58798 WALDO 3	115	0.9446	1.0073	
	58801 RUSSELL3	115	0.9365	1.0085	58807 E-GBEND134.5	0.9428	1.0405		
	58819 MULLERG134.5	0.9485	1.0403		58821 N-GBEND134.5	0.9445	1.0409		
	58823 OTISSUB134.5	0.9396	1.0373		58828 S-GBEND134.5	0.9399	1.0381		

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 58782 [NLIETAP3115.00] TO BUS 58837 [NLIB 3115.00] CKT 1 ----- CONTINGENCY SINGLE 59

*** NONE ***

X-----	BUS	-----X	V-CONT	V-INIT	X-----	BUS	-----X	V-CONT	V-INIT
AREA 539 BUSES WITH VOLTAGE GREATER THAN 1.0500:	58816 E-LIBER134.5	1.0644	1.0433		58829 S-LIBER134.5	1.0640	1.0425		

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 58754 [CIM-PLT3115.00] TO BUS 56455 [NCIMARN3115.00] CKT 1 ----- CONTINGENCY SINGLE 87

*** NONE ***

X-----	BUS	-----X	V-CONT	V-INIT	X-----	BUS	-----X	V-CONT	V-INIT
AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500:	58753 CIM-PLT113.8	0.9417	0.9803		58800 W-LIBER3	115	0.9486	0.9827	

A. AREA 539 TOTALS

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, APR 03 2000 14:55
 1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL AREA TOTALS
 2001 SPRING PEAK - UTILICORP BASE CASE WITH WERE CHANGES IN MW/MVAR

AREA	GENERATION	FROM LOAD	TO BUS SHUNT	TO LINE SHUNT	FROM CHARGING	TO NET INT	LOSSES	DESIRE NET INT
539	82.7	320.1	0.0	0.0	0.0	-250.0	12.5	-250.0
WEPL	7.1	108.8	-146.8	0.0	120.9	92.1	73.9	
TOTALS	82.7	320.1	0.0	0.0	0.0	-250.0	12.5	-250.0
	7.1	108.8	-146.8	0.0	120.9	92.1	73.9	

B. INTER-AREA TRANSFER DATA

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, APR 03 2000 14:56
 1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL INTER-AREA
 2001 SPRING PEAK - UTILICORP BASE CASE WITH WERE CHANGES TRANSFER DATA
 X--FROM AREA-X X---TO AREA--X ID PTRANS PTOTAL DESINT

539 [WEPL]	515 [SWPA]	1	-20.0
539 [WEPL]	534 [SUNC]	1	-50.0
539 [WEPL]	534 [SUNC]	2	-2.0
539 [WEPL]	536 [WERE]	1	-166.0
539 [WEPL]	536 [WERE]	2	2.0
539 [WEPL]	536 [WERE]	3	-14.0
			-250.0

C. GENERATOR UNIT DATA

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, APR 03 2000 14:56
 1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL GENERATOR
 2001 SPRING PEAK - UTILICORP BASE CASE WITH WERE CHANGES UNIT DATA

BUS#	NAME	BSKV	CD	ID	ST	PGEN	QGEN	QMAX	QMIN	PMAX	PMIN	OWN	FRACT
58753	CIM-PLT113.8	-2	1	0	0.0	0.0	0.0	28.0	-15.0	58.0	25.0	1	1.000
58753	CIM-PLT113.8	-2	2	0	0.0	0.0	0.0	10.0	-5.0	14.0	2.0	1	1.000
58755	CLIFTON113.8	-2	1	0	0.0	0.0	0.0	32.0	-15.0	70.0	5.0	1	1.000
58770	JUD-LRG113.8	2	4	1	82.7	7.1	98.0	-45.0	143.0	143.0	30.0	1	1.000
58777	MULGREN113.8	-2	3	0	0.0	0.0	0.0	34.0	-16.0	93.0	30.0	1	1.000

D. TRANSFORMER DATA

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E
MON, APR 03 2000 14:58
TRANSFORMER DATA

1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL
2001 SPRING PEAK - UTILICORP BASE CASE WITH WERE CHANGES

FROM	TO	CT	TP	RATIO	ANGLE	RQ	CONT	RMAX	RMIN	VMAX	VMIN	STEP	TABLE	CR	CX
56470	58795	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
56565	58792	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
56601	58779	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58751	58802	1	T	1.0375	0.00	1	-58802	1.1000	0.9000	1.0500	1.0300	0.00625			
58753	58754	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58755	58756	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58756	58804	1	T	0.9813	0.00	1	-58804	1.1000	0.9000	1.0500	1.0300	0.00625			
58757	58758	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58757	58805	1	T	0.9937	0.00	1	-58805	1.1000	0.9000	1.0500	1.0300	0.00625			
58759	58806	1	T	1.0562	0.00	1	-58806	1.1000	0.9000	1.0500	1.0300	0.00625			
58761	58807	1	T	1.0375	0.00	1	-58807	1.1000	0.9000	1.0500	1.0300	0.00625			
58762	58808	1	T	1.0125	0.00	1	-58808	1.1000	0.9000	1.0500	1.0300	0.00625			
58763	58809	1	T	1.0063	0.00	1	-58809	1.1000	0.9000	1.0500	1.0300	0.00625			
58764	58810	1	T	0.9937	0.00	1	-58810	1.1000	0.9000	1.0500	1.0300	0.00625			
58765	58811	1	T	0.9938	0.00	1	-58811	1.1000	0.9000	1.0500	1.0300	0.00625			
58767	58812	1	T	1.0250	0.00	1	-58812	1.1000	0.9000	1.0500	1.0300	0.00625			
58768	58813	1	T	1.0125	0.00	1	-58813	1.1000	0.9000	1.0500	1.0300	0.00625			
58769	58814	1	T	0.9750	0.00	1	-58814	1.1000	0.9000	1.0500	1.0300	0.00625			
58770	58771	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58771	58815	1	T	1.0313	0.00	1	-58815	1.1000	0.9000	1.0500	1.0300	0.00625			
58772	58816	1	T	1.0500	0.00	1	-58816	1.1000	0.9000	1.0500	1.0300	0.00625			
58773	58774	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58773	58817	1	T	1.0313	0.00	1	-58817	1.1000	0.9000	1.0500	1.0300	0.00625			
58776	58818	1	T	1.0063	0.00	1	-58818	1.1000	0.9000	1.0500	1.0300	0.00625			
58777	58778	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58778	58779	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58778	58819	1	T	1.0375	0.00	1	-58819	1.1000	0.9000	1.0500	1.0300	0.00625			
58780	58820	1	T	1.0625	0.00	1	-58820	1.1000	0.9000	1.0500	1.0300	0.00625			
58781	58821	1	T	1.0313	0.00	1	-58821	1.1000	0.9000	1.0500	1.0300	0.00625			
58783	58822	1	T	1.0375	0.00	1	-58822	1.1000	0.9000	1.0500	1.0300	0.00625			
58784	58823	1	T	1.0375	0.00	1	-58823	1.1000	0.9000	1.0500	1.0300	0.00625			
58785	58824	1	T	1.0250	0.00	1	-58824	1.1000	0.9000	1.0500	1.0300	0.00625			
58786	58825	1	T	1.0250	0.00	1	-58825	1.1000	0.9000	1.0500	1.0300	0.00625			
58787	58826	1	T	1.0375	0.00	1	-58826	1.1000	0.9000	1.0500	1.0300	0.00625			
58788	58827	1	T	1.0063	0.00	1	-58827	1.1000	0.9000	1.0500	1.0300	0.00625			
58789	58828	1	T	1.0438	0.00	1	-58828	1.1000	0.9000	1.0500	1.0300	0.00625			
58790	58829	1	T	1.0625	0.00	1	-58829	1.1000	0.9000	1.0500	1.0300	0.00625			
58791	58830	1	T	1.0625	0.00	1	-58830	1.1000	0.9000	1.0500	1.0300	0.00625			
58793	58831	1	T	1.0063	0.00	1	-58831	1.1000	0.9000	1.0500	1.0300	0.00625			
58794	58795	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58794	58832	1	T	1.0313	0.00	1	-58832	1.1000	0.9000	1.0500	1.0300	0.00625			
58797	58833	1	T	1.0000	0.00	1	-58833	1.1000	0.9000	1.0500	1.0300	0.00625			
58798	58834	1	T	1.0563	0.00	1	-58834	1.1000	0.9000	1.0500	1.0300	0.00625			
58799	58835	1	T	1.0313	0.00	1	-58835	1.1000	0.9000	1.0500	1.0300	0.00625			
58800	58836	1	T	1.0875	0.00	1	-58836	1.1000	0.9000	1.0500	1.0300	0.00625			
58837	58838	1	T	1.0688	0.00	1	-58838	1.1000	0.9000	1.0500	1.0300	0.00625			
58839	58840	1	F	1.0438	0.00	1	-58839	1.1000	0.9000	1.0500	1.0300	0.00625			

E. BASE CASE BRANCH LOADINGS ABOVE 100% OF RAT. SET A:
 PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, APR 03 2000 14:59
 1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL
 2001 SPRING PEAK - UTILICORP BASE CASE WITH WERE CHANGES
 OUTPUT FOR AREA 539 [WEPL]
 BRANCH LOADINGS ABOVE 100.0 % OF RATING SET A:

BUS	NAME	BSKV AREA	BUS	NAME	BSKV AREA	CKT	LOADING	RATING	PERCENT	CURRENT (MVA)
X-----	FROM BUS-----	X	X-----	TO BUS-----	X					

* NONE *

F. BASE CASE BUSES WITH VOLTAGE GREATER THAN 1.0500:
 PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, APR 03 2000 15:01
 1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL
 2001 SPRING PEAK - UTILICORP BASE CASE WITH WERE CHANGES

BUSES WITH VOLTAGE GREATER THAN 1.0500:

X-----	BUS	-----X	AREA	V (PU)	V (KV)	X-----	BUS	-----X	AREA	V (PU)	V (KV)

* NONE *

G. BASE CASE BUSES WITH VOLTAGE LESS THAN 0.9500:
 X----- BUS -----X AREA V (PU) V (KV) X----- BUS -----X AREA V (PU) V (KV)

* NONE *

ACCC OVERLOAD REPORT MONITORED ELEMENTS LOADED OVE 100.0 % OF RATING SET B & ACCC VOLTAGE REPORT

1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL
2001 SPRING PEAK - UTILICORP BASE CASE WITH WERE CHANGES

*** ACCC OVERLOAD REPORT: MONITORED ELEMENTS LOADED ABOVE 100.0 % OF RATING SET B ***
*** ACCC VOLTAGE REPORT ***

DISTRIBUTION FACTOR FILE: Dfax01SR.bgf
SUBSYSTEM DESCRIPTION FILE: USER DIALOGUE
MONITORED ELEMENT FILE: opsmon539.txt
CONTINGENCY DESCRIPTION FILE: opscon2k.txt

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 58752 (CMRIVTP3115.00) TO BUS 58759 (CUDAHY 3115.00) CKT 1 ----- CONTINGENCY SINGLE 3

*** NONE ***

AREA 539 BUSES WITH VOLTAGE GREATER THAN 1.0500: 58806 CUDAHY 134.5 1.0688 1.0454
X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT

AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58752 CMRIVTP3 115 0.9469 0.9812 58753 CIM-PLT113.8 0.9376 0.9723
58754 CIM-PLT3 115 0.9473 0.9792 58772 E-LIBER3 115 0.9476 0.9794
58782 NLBTAP3 115 0.9466 0.9785 58790 S-LIBER3 115 0.9471 0.9790
58800 W-LIBER3 115 0.9435 0.9755 58837 NLIB 3 115 0.9454 0.9774

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X

X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 58759 (CUDAHY 3115.00) TO BUS 58771 (JUD-LRG3115.00) CKT 1 ----- CONTINGENCY SINGLE 13

*** NONE ***

AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58752 CMRIVTP3 115 0.9470 0.9812 58753 CIM-PLT113.8 0.9377 0.9723
58754 CIM-PLT3 115 0.9474 0.9792 58759 CUDAHY 3 115 0.9464 0.9966
58772 E-LIBER3 115 0.9477 0.9794 58782 NLBTAP3 115 0.9467 0.9785
58790 S-LIBER3 115 0.9472 0.9790 58800 W-LIBER3 115 0.9436 0.9755
58837 NLIB 3 115 0.9455 0.9774

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X

X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 58773 (MED-LDG3115.00) TO BUS 58787 (PRATT 3115.00) CKT 1 ----- CONTINGENCY SINGLE 45

*** NONE ***

AREA 539 BUSES WITH VOLTAGE GREATER THAN 1.0500: 58817 MED-LDG134.5 1.0656 1.0352 58833 SUNCITY134.5 1.0637 1.0386
X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT

AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58787 PRATT 3 115 0.9434 0.9788

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X

X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 58773 (MED-LDG3115.00) TO BUS 58797 (SUNCITY3115.00) CKT 1 ----- CONTINGENCY SINGLE 46

*** NONE ***

AREA 539 BUSES WITH VOLTAGE GREATER THAN 1.0500: 58810 GRNBURG134.5 1.0616 1.0394 58833 SUNCITY134.5 1.0725 1.0386
X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT

--- T I N G E N C Y E V E N T S ---X X-- O V E R L O A D L I N E S --X X--MVA(MW)FLOW--X
X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
NE FROM BUS 58778 [MULGREN3115.00] TO BUS 58779 [MULGREN6230.00] CKT 1 ----- CONTINGENCY SINGLE 50
*** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58761 E-GBEND3 115 0.9491 0.9965 58789 S-GBEND3 115 0.9487 0.9962

--- C O N T I N G E N C Y E V E N T S ---X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
LINE FROM BUS 58792 [SEWARD 3115.00] TO BUS 58796 [ST-JOHN3115.00] CKT 1 ----- CONTINGENCY SINGLE 72
*** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58796 ST-JOHN3 115 0.9401 0.9739

--- C O N T I N G E N C Y E V E N T S ---X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
LINE FROM BUS 58754 [CIM-PLT3115.00] TO BUS 56455 [NCIMARN3115.00] CKT 1 ----- CONTINGENCY SINGLE 86
*** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
AREA 539 BUSES WITH VOLTAGE GREATER THAN 1.0500: 58830 SATANTA134.5 1.0681 1.0447

AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58752 CMRIWTP3 115 0.9488 0.9812 58753 CIM-PLT113.8 0.9346 0.9723
58754 CIM-PLT3 115 0.9444 0.9792 58772 E-LIBER3 115 0.9469 0.9794
58782 NLIBTAP3 115 0.9455 0.9785 58790 S-LIBER3 115 0.9463 0.9790
58800 W LINEK3 115 0.9424 0.9755 58837 NLIR 3 115 0.9443 0.9774

--- C O N T I N G E N C Y E V E N T S ---X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
IN LINE FROM BUS 58786 [PLAINVL3115.00] TO BUS 56551 [BALINE 3115.00] CKT 1 ----- CONTINGENCY SINGLE 90
*** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
AREA 539 BUSES WITH VOLTAGE GREATER THAN 1.0500: 58824 PHLBURG134.5 1.0592 1.0389 58825 PLAINVL134.5 1.0760 1.0396

--- C O N T I N G E N C Y E V E N T S ---X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
IN LINE FROM BUS 58795 [SPEARVL6230.00] TO BUS 56470 [SPERXFR6287.00] CKT 1 ----- CONTINGENCY SINGLE 92
*** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58753 CIM-PLT113.8 0.9493 0.9723

--- C O N T I N G E N C Y E V E N T S ---X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
IN LINE FROM BUS 56469 [SPERVIL7345.00] TO BUS 56470 [SPERXFR6287.00] CKT 1 ----- CONTINGENCY SPP-17
IN LINE FROM BUS 56470 [SPERXFR6287.00] TO BUS 58795 [SPEARVL6230.00] CKT 1
IN LINE FROM BUS 56468 [SPERXFR6287.00] TO BUS 56470 [SPERXFR6287.00] CKT 1
*** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58753 CIM-PLT113.8 0.9496 0.9723

8. .1 SUMMER PEAK

A. AREA 539 TOTALS

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E
1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL
2001 SUMMER PEAK - UTILICORP BASE CASE WITH WERE CHANGES

AREA	FROM GENERATION	TO LOAD	TO BUS SHUNT	TO LINE SHUNT	FROM CHARGING	TO NET INT	LOSSES	DESIRED NET INT
539	227.5	533.5	0.0	0.0	0.0	-324.1	18.0	-324.0
WEPL	39.0	178.3	-208.1	0.0	120.6	75.1	114.3	
TOTALS	227.5	533.5	0.0	0.0	0.0	-324.1	18.0	-324.0
	39.0	178.3	-208.1	0.0	120.6	75.1	114.3	

B. INTER-AREA TRANSFER DATA

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PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E      MON, APR 03 2000  13:49
1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL
2001 SUMMER PEAK - UTILICORP BASE CASE WITH WERE CHANGES
X--FROM AREA-X X---TO AREA--X ID PTRANS PTOTAL DESINT
INTER-AREA
TRANSFER DATA

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539	[WEPL	] 515	[SWPA	] 1	-20.0
539	[WEPL	] 531	[MIDW	] 1	0.0
539	[WEPL	] 534	[SUNC	] 1	0.0
539	[WEPL	] 534	[SUNC	] 2	-2.0
539	[WEPL	] 534	[SUNC	] 3	-180.0
539	[WEPL	] 536	[WERE	] 1	-110.0
539	[WEPL	] 536	[WERE	] 2	2.0
539	[WEPL	] 536	[WERE	] 3	-14.0
					-324.0

C. GENERATOR UNIT DATA

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, APR 03 2000 13:52
1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL GENERATOR
2001 SUMMER PEAK - UTILICORP BASE CASE WITH WERE CHANGES UNIT DATA

BUS#	NAME	BSKV	CD	ID	ST	PGEN	QGEN	QMAX	QMIN	PMAX	PMIN	OWN	FRACT
58753	CIM-PLT113.8	2	1	1		30.0	13.4	28.0	-15.0	58.0	25.0	1	1.000
58753	CIM-PLT113.8	2	2	0		0.0	0.0	10.0	-5.0	14.0	2.0	1	1.000
58755	CIFLTON113.8	2	1	1		30.0	-1.9	32.0	-15.0	70.0	5.0	1	1.000
58770	JUD-LRG113.8	2	4	1		112.5	15.6	98.0	-45.0	143.0	30.0	1	1.000
58777	MULGREN113.8	2	3	1		55.0	11.9	34.0	-16.0	93.0	30.0	1	1.000

D. TRANSFORMER DATA

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E

MON, APR 03 2000 13:52

TRANSFORMER DATA

1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL
2001 SUMMER PEAK - UTILICORP BASE CASE WITH WERE CHANGES

FROM	TO	CT	TP	RATIO	ANGLE	RG	CONT	RMAX	RMIN	VMAX	VMIN	STEP	TABLE	CR	CX
56470	58795	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
56565	58792	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
56601	58779	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58751	58802	1	T	1.0688	0.00	1	-58802	1.1000	0.9000	1.0500	1.0300	0.00625			
58753	58754	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58755	58756	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58756	58804	1	T	1.0000	0.00	1	-58804	1.1000	0.9000	1.0500	1.0300	0.00625			
58757	58758	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58757	58805	1	T	1.0063	0.00	1	-58805	1.1000	0.9000	1.0500	1.0300	0.00625			
58759	58806	1	T	1.0625	0.00	1	-58806	1.1000	0.9000	1.0500	1.0300	0.00625			
58761	58807	1	T	1.0313	0.00	1	-58807	1.1000	0.9000	1.0500	1.0300	0.00625			
58762	58808	1	T	1.0313	0.00	1	-58808	1.1000	0.9000	1.0500	1.0300	0.00625			
58763	58809	1	T	1.0187	0.00	1	-58809	1.1000	0.9000	1.0500	1.0300	0.00625			
58764	58810	1	T	1.0000	0.00	1	-58810	1.1000	0.9000	1.0500	1.0300	0.00625			
58765	58811	1	T	1.0187	0.00	1	-58811	1.1000	0.9000	1.0500	1.0300	0.00625			
58767	58812	1	T	1.0313	0.00	1	-58812	1.1000	0.9000	1.0500	1.0300	0.00625			
58768	58813	1	T	1.0500	0.00	1	-58813	1.1000	0.9000	1.0500	1.0300	0.00625			
58769	58814	1	T	1.0125	0.00	1	-58814	1.1000	0.9000	1.0500	1.0300	0.00625			
58770	58771	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58771	58815	1	T	1.0375	0.00	1	-58815	1.1000	0.9000	1.0500	1.0300	0.00625			
58772	58816	1	T	1.0313	0.00	1	-58816	1.1000	0.9000	1.0500	1.0300	0.00625			
58773	58774	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58773	58817	1	T	1.0750	0.00	1	-58817	1.1000	0.9000	1.0500	1.0300	0.00625			
58776	58818	1	T	1.0063	0.00	1	-58818	1.1000	0.9000	1.0500	1.0300	0.00625			
58777	58778	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58778	58779	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58778	58819	1	T	1.0375	0.00	1	-58819	1.1000	0.9000	1.0500	1.0300	0.00625			
58780	58820	1	T	1.0688	0.00	1	-58820	1.1000	0.9000	1.0500	1.0300	0.00625			
58781	58821	1	T	1.0313	0.00	1	-58821	1.1000	0.9000	1.0500	1.0300	0.00625			
58783	58822	1	T	1.0750	0.00	1	-58822	1.1000	0.9000	1.0500	1.0300	0.00625			
58784	58823	1	T	1.0500	0.00	1	-58823	1.1000	0.9000	1.0500	1.0300	0.00625			
58784	58823	2	T	1.0500	0.00	1	-58823	1.1000	0.9000	1.0500	1.0300	0.00625			
58785	58824	1	T	1.0688	0.00	1	-58824	1.1000	0.9000	1.0500	1.0300	0.00625			
58786	58825	1	T	1.0438	0.00	1	-58825	1.1000	0.9000	1.0500	1.0300	0.00625			
58787	58826	1	T	1.0750	0.00	1	-58826	1.1000	0.9000	1.0500	1.0300	0.00625			
58788	58827	1	T	1.0063	0.00	1	-58827	1.1000	0.9000	1.0500	1.0300	0.00625			
58789	58828	1	T	1.0500	0.00	1	-58828	1.1000	0.9000	1.0500	1.0300	0.00625			
58790	58829	1	T	1.0750	0.00	1	-58829	1.1000	0.9000	1.0500	1.0300	0.00625			
58791	58830	1	T	1.0750	0.00	1	-58830	1.1000	0.9000	1.0500	1.0300	0.00625			
58793	58831	1	T	1.0500	0.00	1	-58831	1.1000	0.9000	1.0500	1.0300	0.00625			
58794	58795	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58794	58832	1	T	1.0375	0.00	1	-58832	1.1000	0.9000	1.0500	1.0300	0.00625			
58797	58833	1	T	1.0438	0.00	1	-58833	1.1000	0.9000	1.0500	1.0300	0.00625			
58798	58834	1	T	1.1000	0.00	1	-58834	1.1000	0.9000	1.0500	1.0300	0.00625			
58799	58835	1	T	1.0688	0.00	1	-58835	1.1000	0.9000	1.0500	1.0300	0.00625			
58800	58836	1	T	1.0750	0.00	1	-58836	1.1000	0.9000	1.0500	1.0300	0.00625			
58837	58838	1	T	1.0750	0.00	1	-58838	1.1000	0.9000	1.0500	1.0300	0.00625			
58839	58840	1	F	1.0625	0.00	1	-58839	1.1000	0.9000	1.0500	1.0300	0.00625			

01SP-2

E. BASE CASE BRANCH LOADINGS ABOVE 100% OF RAT. SET A:

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, APR 03 2000 13:53

1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL
2001 SUMMER PEAK - UTILICORP BASE CASE WITH WERE CHANGES

OUTPUT FOR AREA 539 [WEPL]

BRANCH LOADINGS ABOVE 100.0 % OF RATING SET A:

X-----FROM BUS-----X		X-----TO BUS-----X		CURRENT (MVA)						
BUS	NAME	BSKV	AREA	BUS	BSKV	AREA	CKT	LOADING	RATING	PERCENT

* NONE *

F. BASE CASE BUSES WITH VOLTAGE GREATER THAN 1.0500:

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, APR 03 2000 14:42

1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL
2001 SUMMER PEAK - UTILICORP BASE CASE WITH WERE CHANGES

BUSES WITH VOLTAGE GREATER THAN 1.0500:

X-----	BUS	-----X	AREA	V(PU)	V(KV)	X-----	BUS	-----X	AREA	V(PU)	V(KV)

* NONE *

G. BASE CASE BUSES WITH VOLTAGE LESS THAN 0.9500:

X-----	BUS	-----X	AREA	V(PU)	V(KV)	X-----	BUS	-----X	AREA	V(PU)	V(KV)

* NONE *

ACCC OVERLOAD REPORT MONITORED ELEMENTS LOADED OVER 100.0 % OF RATING SET B & ACCC VOLTAGE REPORT

1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL
2001 SUMMER PEAK - UTILICORP BASE CASE WITH WERE CHANGES

*** ACCC OVERLOAD REPORT: MONITORED ELEMENTS LOADED ABOVE 100.0 % OF RATING SET B ***
*** ACCC VOLTAGE REPORT ***

DISTRIBUTION FACTOR FILE: Dfax01SP.sgf
SUBSYSTEM DESCRIPTION FILE: USER DIALOGUE
MONITORED ELEMENT FILE: opmon539.txt
CONTINGENCY DESCRIPTION FILE: opscon2k.txt

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 58757 [CONCORD3115.00] TO BUS 58758 [CONCORD6230.00] CKT 1 ----- CONTINGENCY SINGLE 9
*** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58785 PHLBURG3 115 0.9467 0.9856 58793 SMITH-C3 115 0.9430 0.9938
58798 WALDO 3 115 0.9441 0.9842

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 58760 [EHALLTP3115.00] TO BUS 58778 [MULGREN3115.00] CKT 1 ----- CONTINGENCY SINGLE 16
*** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58760 EHALLTP3 115 0.8780 0.9878 58762 ELLSWTH3 115 0.8802 0.9945
58793 SMITH-C3 115 0.9479 0.9938 58798 WALDO 3 115 0.8916 0.9842
58801 RUSSELL3 115 0.8805 0.9863 58808 ELLSWTH134.5 0.9185 1.0437
58834 WALDO 134.5 0.9245 1.0332

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 58764 [GRNBURG3115.00] TO BUS 58771 [JUD-LRG3115.00] CKT 1 ----- CONTINGENCY SINGLE 24
*** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58787 PRATT 3 115 0.9333 0.9534

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 58764 [GRNBURG3115.00] TO BUS 58797 [SUNCITY3115.00] CKT 1 ----- CONTINGENCY SINGLE 25
*** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
AREA 539 BUSES WITH VOLTAGE GREATER THAN 1.0500: 58810 GRNBURG134.5 1.0762 1.0482

AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58773 MED-LDG3 115 0.9478 0.9794 58787 PRATT 3 115 0.9301 0.9534
58797 SUNCITY3 115 0.9485 0.9895

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 58766 [GBENDTP3115.00] TO BUS 58778 [MULGREN3115.00] CKT 1 ----- CONTINGENCY SINGLE 28
*** NONE ***

1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL
2001 SUMMER PEAK - UTILICORP BASE CASE WITH WERE CHANGES

*** ACCC OVERLOAD REPORT: MONITORED ELEMENTS LOADED ABOVE 100.0 % OF RATING SET B ***
*** ACCC VOLTAGE REPORT ***

AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58766 GBENDTP3 115 0.9390 0.9976 58787 PRATT 3 115 0.9296 0.9534
58792 SEWARD 3 115 0.9387 0.9801 58796 ST-JOHN3 115 0.9324 0.9634
X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
X----- M U L T I -S E C T I O N L I N E G R O U P I N G S -----X X-- F R O M N A M E T O N A M E C K T P R E -C N T P O S T -C N T R A T I N G P E R C E N T
O P E N L I N E F R O M B U S 5 8 7 6 6 [GBENDTP3115.00] T O B U S 5 8 7 9 2 [SEWARD 3115.00] C K T 1 ----- CONTINGENCY SINGLE 29
*** NONE ***

AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58787 PRATT 3 115 0.9288 0.9534 58792 SEWARD 3 115 0.9372 0.9801
58796 ST-JOHN3 115 0.9314 0.9634
X----- B U S -----X V -C O N T V -I N I T X----- B U S -----X V -C O N T V -I N I T

AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58768 HARPER 4 138 0.9061 0.9999 58773 MED-LDG3 115 0.9249 0.9794
58774 MED-LDG4 138 0.9229 0.9895 58787 PRATT 3 115 0.9165 0.9534
58797 SUNCITY3 115 0.9455 0.9895 58813 HARPER 134.5 0.9322 1.0448
X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
X----- M U L T I -S E C T I O N L I N E G R O U P I N G S -----X X-- F R O M N A M E T O N A M E C K T P R E -C N T P O S T -C N T R A T I N G P E R C E N T
O P E N L I N E F R O M B U S 5 8 7 6 8 [HARPER 4138.00] T O B U S 5 8 7 7 5 [MILANTP4138.00] C K T 1 ----- CONTINGENCY SINGLE 33
*** NONE ***

AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58768 HARPER 4 138 0.9061 0.9999 58773 MED-LDG3 115 0.9249 0.9794
58774 MED-LDG4 138 0.9229 0.9895 58787 PRATT 3 115 0.9165 0.9534
58797 SUNCITY3 115 0.9455 0.9895 58813 HARPER 134.5 0.9322 1.0448
X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
X----- M U L T I -S E C T I O N L I N E G R O U P I N G S -----X X-- F R O M N A M E T O N A M E C K T P R E -C N T P O S T -C N T R A T I N G P E R C E N T
O P E N L I N E F R O M B U S 5 8 7 7 3 [MED-LDG3115.00] T O B U S 5 8 7 7 4 [MED-LDG4138.00] C K T 1 ----- CONTINGENCY SINGLE 44
*** NONE ***

AREA 539 BUSES WITH VOLTAGE GREATER THAN 1.0500: 58813 HARPER 134.5 1.0655 1.0448
X----- B U S -----X V -C O N T V -I N I T X----- B U S -----X V -C O N T V -I N I T
X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
X----- M U L T I -S E C T I O N L I N E G R O U P I N G S -----X X-- F R O M N A M E T O N A M E C K T P R E -C N T P O S T -C N T R A T I N G P E R C E N T
O P E N L I N E F R O M B U S 5 8 7 7 3 [MED-LDG3115.00] T O B U S 5 8 7 8 7 [PRATT 3115.00] C K T 1 ----- CONTINGENCY SINGLE 45
*** NONE ***

AREA 539 BUSES WITH VOLTAGE GREATER THAN 1.0500: 58813 HARPER 134.5 1.0650 1.0448 58817 MED-LDG134.5 1.0844 1.0438
58833 SUNCITY134.5 1.0825 1.0495
X----- B U S -----X V -C O N T V -I N I T X----- B U S -----X V -C O N T V -I N I T
X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
X----- M U L T I -S E C T I O N L I N E G R O U P I N G S -----X X-- F R O M N A M E T O N A M E C K T P R E -C N T P O S T -C N T R A T I N G P E R C E N T
O P E N L I N E F R O M B U S 5 8 7 7 3 [MED-LDG3115.00] T O B U S 5 8 7 9 7 [SUNCITY3115.00] C K T 1 ----- CONTINGENCY SINGLE 46
*** NONE ***

AREA 539 BUSES WITH VOLTAGE GREATER THAN 1.0500: 58810 GRNBURG134.5 1.0834 1.0482 58833 SUNCITY134.5 1.1041 1.0495
58833 SUNCITY134.5 1.0825 1.0495
X----- B U S -----X V -C O N T V -I N I T X----- B U S -----X V -C O N T V -I N I T
X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
X----- M U L T I -S E C T I O N L I N E G R O U P I N G S -----X X-- F R O M N A M E T O N A M E C K T P R E -C N T P O S T -C N T R A T I N G P E R C E N T
O P E N L I N E F R O M B U S 5 8 7 7 3 [MED-LDG3 115 0.9461 0.9794 58787 PRATT 3 115 0.9292 0.9534
*** NONE ***

1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL
2001 SUMMER PEAK - UTILICORP BASE CASE WITH WERE CHANGES

*** ACCC OVERLOAD REPORT: MONITORED ELEMENTS LOADED ABOVE 100.0 % OF RATING SET B ***
*** ACCC VOLTAGE REPORT ***

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 58779 [MULGRENE6230.00] TO BUS 58795 [SPEARVL6230.00] CKT 1 ----- CONTINGENCY SINGLE 54
*** NONE ***

AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58751 ALEXNDR3 115 0.9499 0.9838
X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 58782 [NLJBTAP3115.00] TO BUS 58837 [NLJB 3115.00] CKT 1 ----- CONTINGENCY SINGLE 59
*** NONE ***

AREA 539 BUSES WITH VOLTAGE GREATER THAN 1.0500: 58816 E-LIBER134.5 1.0690 1.0475 58829 S-LIBER134.5 1.0670 1.0448
X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 58787 [PRATT 3115.00] TO BUS 58796 [ST-JOHN3115.00] CKT 1 ----- CONTINGENCY SINGLE 67
*** NONE ***

AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58787 PRATT 3 115 0.9139 0.9534
X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 58792 [SEWARD 3115.00] TO BUS 58796 [ST-JOHN3115.00] CKT 1 ----- CONTINGENCY SINGLE 73
*** NONE ***

AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58787 PRATT 3 115 0.9137 0.9534 58796 ST-JOHN3 115 0.9120 0.9634
X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 58779 [MULGRENE6230.00] TO BUS 56601 [HEIZER 3115.00] CKT 1 ----- CONTINGENCY SINGLE 89
*** NONE ***

AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58751 ALEXNDR3 115 0.9329 0.9838
X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 58786 [PLAINVL3115.00] TO BUS 56551 [SALINE 3115.00] CKT 1 ----- CONTINGENCY SINGLE 91
*** NONE ***

AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58785 PHLBURG3 115 0.9323 0.9856 58786 PLAINVL3 115 0.9269 0.9916
X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, APR 02 2000 20:45

1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL

2001 SUMMER PEAK - UTILICORP BASE CASE WITH WERE CHANGES

*** ACCC OVERLOAD REPORT: MONITORED ELEMENTS LOADED ABOVE 100.0 % OF RATING SET B ***

*** ACCC VOLTAGE REPORT ***

X----- C O N T I N G E N C Y E V E N T S X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
X----- M U L T I -S E C T I O N L I N E G R O U P I N G S --X--X F R O M N A M E T O N A M E C K T P R E -C N T P O S T -C N T R A T I N G P E R C E N T
O P E N L I N E F R O M B U S 5 8 7 9 5 [S P E A R V L 6 2 3 0 . 0 0] T O B U S 5 6 4 7 0 [S P E R X F R 6 2 8 7 . 0 0] C K T 1 ----- C O N T I N G E N C Y S I N G L E 9 3
*** N O N E ***

AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58751 ALEXNDR3 115 0.9482 0.9838 58791 SATANTA3 115 0.9499 0.9748

X----- C O N T I N G E N C Y E V E N T S X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
X----- M U L T I -S E C T I O N L I N E G R O U P I N G S --X--X F R O M N A M E T O N A M E C K T P R E -C N T P O S T -C N T R A T I N G P E R C E N T
O P E N L I N E F R O M B U S 5 6 4 4 6 [H L C X F M R 6 2 3 0 . 0 0] T O B U S 5 6 4 4 9 [H O L C O M B 7 3 4 5 . 0 0] C K T 1 ----- C O N T I N G E N C Y S P P - 1 6
O P E N L I N E F R O M B U S 5 6 4 4 6 [H L C X F M R 6 2 3 0 . 0 0] T O B U S 5 6 4 4 8 [H O L C O M B 3 1 1 5 . 0 0] C K T 1
O P E N L I N E F R O M B U S 5 6 4 4 6 [H L C X F M R 6 2 3 0 . 0 0] T O B U S 5 6 4 5 0 [H O L C T E R 1 1 3 . 8 0 0] C K T 1
*** N O N E ***

AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58791 SATANTA3 115 0.9492 0.9748

X----- C O N T I N G E N C Y E V E N T S X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
X----- M U L T I -S E C T I O N L I N E G R O U P I N G S --X--X F R O M N A M E T O N A M E C K T P R E -C N T P O S T -C N T R A T I N G P E R C E N T
O P E N L I N E F R O M B U S 5 6 4 6 9 [S P E R V I L 7 3 4 5 . 0 0] T O B U S 5 6 4 7 0 [S P E R X F R 6 2 8 7 . 0 0] C K T 1 ----- C O N T I N G E N C Y S P P - 1 7
O P E N L I N E F R O M B U S 5 6 4 7 0 [S P E R X F R 6 2 8 7 . 0 0] T O B U S 5 8 7 9 5 [S P E A R V L 6 2 3 0 . 0 0] C K T 1
O P E N L I N E F R O M B U S 5 6 4 6 8 [S P E R T E R 1 1 3 . 8 0 0] T O B U S 5 6 4 7 0 [S P E R X F R 6 2 8 7 . 0 0] C K T 1
*** N O N E ***

AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58751 ALEXNDR3 115 0.9455 0.9838 58791 SATANTA3 115 0.9496 0.9748

9. J1 WINTER PEAK

A. AREA 539 TOTALS

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, APR 03 2000 15:06
1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL AREA TOTALS
2001 WINTER PEAK - UTILICORP BASE CASE WITH WERE CHANGES IN MW/MVAR

AREA	GENERATION	FROM LOAD	TO BUS SHUNT	TO LINE SHUNT	FROM CHARGING	TO NET INT	LOSSES	DESIRE NET INT
539	139.5	373.4	0.0	0.0	0.0	-249.1	15.1	-249.0
WEPL	6.7	126.2	-146.9	0.0	122.6	55.3	94.7	
TOTALS	139.5	373.4	0.0	0.0	0.0	-249.1	15.1	-249.0
	6.7	126.2	-146.9	0.0	122.6	55.3	94.7	

B. INTER-AREA TRANSFER DATA

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, APR 03 2000 15:07
1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL INTER-AREA
2001 WINTER PEAK - UTILICORP BASE CASE WITH WERE CHANGES TRANSFER DATA
X--FROM AREA-X X--TO AREA--X ID PTRANS PTOTAL DESINT

539	[WEPL]	1	515	[SWPA]	1	-20.0
539	[WEPL]	1	534	[SUNC]	1	-50.0
539	[WEPL]	1	534	[SUNC]	2	-2.0
539	[WEPL]	1	536	[WERE]	1	-165.0
539	[WEPL]	1	536	[WERE]	2	2.0
539	[WEPL]	1	536	[WERE]	3	-14.0
						-249.0
						-249.0

C. GENERATOR UNIT DATA

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, APR 03 2000 15:07
1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL GENERATOR
2001 WINTER PEAK - UTILICORP BASE CASE WITH WERE CHANGES UNIT DATA

BUS#	NAME	BSKV	CD	ID	ST	PGEN	QGEN	QMAX	QMIN	PMAX	PMIN	OWN	FRACT	OWN	FRACT
58753	CIM-PLT113.8	-2	1	0	0.0	0.0	0.0	28.0	-15.0	58.0	25.0	1	1.000		
58753	CIM-PLT113.8	-2	2	0	0.0	0.0	0.0	10.0	-5.0	14.0	2.0	1	1.000		
58755	CLIFTON113.8	-2	1	0	0.0	0.0	0.0	32.0	-15.0	70.0	5.0	1	1.000		
58770	JUD-LRG113.8	2	4	1	139.5	6.7	98.0	-45.0	143.0	143.0	30.0	1	1.000		
58777	MULGREN113.8	-2	3	0	0.0	0.0	0.0	34.0	-16.0	93.0	30.0	1	1.000		

D. TRANSFORMER DATA

TRANSFORMER DATA

1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL
2001 WINTER PEAK - UTILICORP BASE CASE WITH WERE CHANGES

FROM	TO	CKT	TP	RATIO	ANGLE	RG	CONT	RMAX	RMIN	VMAX	VMIN	STEP	TABLE	CR	CX
56470	58795	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
56565	58792	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
56601	58779	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58751	58802	1	T	1.0313	0.00	1	-58802	1.1000	0.9000	1.0500	1.0300	0.00625			
58753	58754	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58755	58756	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58756	58804	1	T	0.9812	0.00	1	-58804	1.1000	0.9000	1.0500	1.0300	0.00625			
58757	58758	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58757	58805	1	T	1.0000	0.00	1	-58805	1.1000	0.9000	1.0500	1.0300	0.00625			
58759	58806	1	T	1.0625	0.00	1	-58806	1.1000	0.9000	1.0500	1.0300	0.00625			
58761	58807	1	T	1.0313	0.00	1	-58807	1.1000	0.9000	1.0500	1.0300	0.00625			
58762	58808	1	T	1.0125	0.00	1	-58808	1.1000	0.9000	1.0500	1.0300	0.00625			
58763	58809	1	T	1.0063	0.00	1	-58809	1.1000	0.9000	1.0500	1.0300	0.00625			
58764	58810	1	T	1.0000	0.00	1	-58810	1.1000	0.9000	1.0500	1.0300	0.00625			
58765	58811	1	T	0.9937	0.00	1	-58811	1.1000	0.9000	1.0500	1.0300	0.00625			
58767	58812	1	T	1.0375	0.00	1	-58812	1.1000	0.9000	1.0500	1.0300	0.00625			
58768	58813	1	T	1.0187	0.00	1	-58813	1.1000	0.9000	1.0500	1.0300	0.00625			
58769	58814	1	T	0.9750	0.00	1	-58814	1.1000	0.9000	1.0500	1.0300	0.00625			
58770	58771	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58771	58815	1	T	1.0375	0.00	1	-58815	1.1000	0.9000	1.0500	1.0300	0.00625			
58772	58816	1	T	1.0688	0.00	1	-58816	1.1000	0.9000	1.0500	1.0300	0.00625			
58773	58774	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58773	58817	1	T	1.0313	0.00	1	-58817	1.1000	0.9000	1.0500	1.0300	0.00625			
58776	58818	1	T	1.0063	0.00	1	-58818	1.1000	0.9000	1.0500	1.0300	0.00625			
58777	58778	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58778	58779	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58778	58819	1	T	1.0250	0.00	1	-58819	1.1000	0.9000	1.0500	1.0300	0.00625			
58780	58820	1	T	1.0688	0.00	1	-58820	1.1000	0.9000	1.0500	1.0300	0.00625			
58781	58821	1	T	1.0187	0.00	1	-58821	1.1000	0.9000	1.0500	1.0300	0.00625			
58783	58822	1	T	1.0313	0.00	1	-58822	1.1000	0.9000	1.0500	1.0300	0.00625			
58784	58823	1	T	1.0313	0.00	1	-58823	1.1000	0.9000	1.0500	1.0300	0.00625			
58785	58824	1	T	1.0313	0.00	1	-58824	1.1000	0.9000	1.0500	1.0300	0.00625			
58786	58825	1	T	1.0250	0.00	1	-58825	1.1000	0.9000	1.0500	1.0300	0.00625			
58787	58826	1	T	1.0313	0.00	1	-58826	1.1000	0.9000	1.0500	1.0300	0.00625			
58788	58827	1	T	1.0125	0.00	1	-58827	1.1000	0.9000	1.0500	1.0300	0.00625			
58789	58828	1	T	1.0375	0.00	1	-58828	1.1000	0.9000	1.0500	1.0300	0.00625			
58790	58829	1	T	1.0812	0.00	1	-58829	1.1000	0.9000	1.0500	1.0300	0.00625			
58791	58830	1	T	1.0688	0.00	1	-58830	1.1000	0.9000	1.0500	1.0300	0.00625			
58793	58831	1	T	1.0125	0.00	1	-58831	1.1000	0.9000	1.0500	1.0300	0.00625			
58794	58795	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58794	58832	1	T	1.0313	0.00	1	-58832	1.1000	0.9000	1.0500	1.0300	0.00625			
58797	58833	1	T	1.0063	0.00	1	-58833	1.1000	0.9000	1.0500	1.0300	0.00625			
58798	58834	1	T	1.0562	0.00	1	-58834	1.1000	0.9000	1.0500	1.0300	0.00625			
58799	58835	1	T	1.0438	0.00	1	-58835	1.1000	0.9000	1.0500	1.0300	0.00625			
58800	58836	1	T	1.1000	0.00	1	-58836	1.1000	0.9000	1.0500	1.0300	0.00625			
58837	58838	1	T	1.0875	0.00	1	-58838	1.1000	0.9000	1.0500	1.0300	0.00625			
58839	58840	1	F	1.0500	0.00	1	-58839	1.1000	0.9000	1.0500	1.0300	0.00625			

1. BASE CASE BRANCH LOADINGS ABOVE 100% OF RAT. SET A:
 PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, APR 03 2000 15:09
 1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL
 2001 WINTER PEAK - UTILICORP BASE CASE WITH WERE CHANGES
 OUTPUT FOR AREA 539 [WEPL 1
 BRANCH LOADINGS ABOVE 100.0 % OF RATING SET A:

BUS	NAME	BSKV AREA	BUS	NAME	BSKV AREA	CKT	LOADING	RATING	PERCENT	CURRENT(MVA)
X-----	FROM BUS-----	X	X-----	TO BUS-----	X					

* NONE *

F. BASE CASE BUSES WITH VOLTAGE GREATER THAN 1.0500:
 PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, APR 03 2000 15:10
 1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL
 2001 WINTER PEAK - UTILICORP BASE CASE WITH WERE CHANGES

BUSES WITH VOLTAGE GREATER THAN 1.0500:

X-----	BUS	-----	X	AREA	V(PU)	V(KV)	X	-----	BUS	-----	X	AREA	V(PU)	V(KV)

* NONE *

G. BASE CASE BUSES WITH VOLTAGE LESS THAN 0.9500:
 X----- BUS -----X AREA V(PU) V(KV) X----- BUS -----X AREA V(PU) V(KV)

* NONE *

ACCC OVERLOAD REPORT MONITORED ELEMENTS LOADED OVER 100.0 % OF RATING SET B & ACCC VOLTAGE REPORT

1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL
2001 WINTER PEAK - UTILICORP BASE CASE WITH WERE CHANGES

*** ACCC OVERLOAD REPORT: MONITORED ELEMENTS LOADED ABOVE 100.0 % OF RATING SET B ***
*** ACCC VOLTAGE REPORT ***

DISTRIBUTION FACTOR FILE: Dfax01WP.99f
SUBSYSTEM DESCRIPTION FILE: USER DIALOGUE
MONITORED ELEMENT FILE: opsmon539.txt
CONTINGENCY DESCRIPTION FILE: opscon2k.txt

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 58752 [CMRIVTP3115.00] TO BUS 58759 [CUDAHY 3115.00] CKT 1 ----- CONTINGENCY SINGLE 3
*** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
AREA 539 BUSES WITH VOLTAGE GREATER THAN 1.0500: 58806 CUDAHY 134.5 1.0752 1.0428

AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58752 CMRIVTP3 115 0.9229 0.9697 58753 CIM-PLT113.8 0.9120 0.9595
58754 CIM-PLT3 115 0.9239 0.9675 58772 E-LIBER3 115 0.9226 0.9662
58782 NLIBTAP3 115 0.9215 0.9653 58790 S-LIBER3 115 0.9218 0.9655
58791 SATANTAP3 115 0.9422 0.9719 58800 W-LIBER3 115 0.9175 0.9615
58837 NLIB 3 115 0.9199 0.9638

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 58759 [CUDAHY 3115.00] TO BUS 58771 [JUD-LRG3115.00] CKT 1 ----- CONTINGENCY SINGLE 13
*** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58752 CMRIVTP3 115 0.9216 0.9697 58753 CIM-PLT113.8 0.9106 0.9595
58754 CIM-PLT3 115 0.9226 0.9675 58759 CUDAHY 3 115 0.9205 0.9899
58772 E-LIBER3 115 0.9213 0.9662 58782 NLIBTAP3 115 0.9202 0.9653
58790 S-LIBER3 115 0.9205 0.9655 58791 SATANTAP3 115 0.9410 0.9719
58800 W-LIBER3 115 0.9162 0.9615 58837 NLIB 3 115 0.9186 0.9638

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 58773 [MED-LDG3115.00] TO BUS 58787 [PRATT 3115.00] CKT 1 ----- CONTINGENCY SINGLE 45
*** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
AREA 539 BUSES WITH VOLTAGE GREATER THAN 1.0500: 58817 MED-LDG134.5 1.0624 1.0376 58833 SUNCITY134.5 1.0654 1.0444

AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58787 PRATT 3 115 0.9382 0.9870

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 58773 [MED-LDG3115.00] TO BUS 58797 [SUNCITY3115.00] CKT 1 ----- CONTINGENCY SINGLE 46
*** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
AREA 539 BUSES WITH VOLTAGE GREATER THAN 1.0500: 58810 GRNBURG134.5 1.0674 1.0470 58833 SUNCITY134.5 1.0742 1.0444

1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL
2001 WINTER PEAK - UTILICORP BASE CASE WITH WERE CHANGES

*** ACCC OVERLOAD REPORT: MONITORED ELEMENTS LOADED ABOVE 100.0 % OF RATING SET B ***
*** ACCC VOLTAGE REPORT ***

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA (MW) FLOW--X
X----- M U L T I -S E C T I O N L I N E G R O U P I N G S ----X F R O M N A M E T O N A M E C K T P R E -C N T P O S T -C N T R A T I N G P E R C E N T
O P E N L I N E F R O M B U S 58800 [W-LIBER3115.00] T O B U S 58837 [NLIB 3115.00] C K T 1 ----- C O N T I N G E N C Y S I N G L E 83

*** NONE ***

AREA 539 BUSES WITH VOLTAGE GREATER THAN 1.0500: 58838 NLIB 134.5 1.0669 1.0457
X-----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA (MW) FLOW--X
X----- M U L T I -S E C T I O N L I N E G R O U P I N G S ----X F R O M N A M E T O N A M E C K T P R E -C N T P O S T -C N T R A T I N G P E R C E N T
O P E N L I N E F R O M B U S 58754 [CIM-PLT3115.00] T O B U S 58455 [NCIMARN3115.00] C K T 1 ----- C O N T I N G E N C Y S I N G L E 87

*** NONE ***

AREA 539 BUSES WITH VOLTAGE GREATER THAN 1.0500: 58830 SATANTA134.5 1.0670 1.0385
X-----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT

AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58752 CMRIVT3 115 0.9240 0.9697 58753 CIM-PLT113.8 0.9065 0.9595
58754 CIM-PLT3 115 0.9187 0.9675 58772 E-LIBER3 115 0.9203 0.9662
58782 NLIBTAP3 115 0.9187 0.9653 58790 S-LIBER3 115 0.9194 0.9655
58800 W-LIBER3 115 0.9146 0.9615 58837 NLIB 3 115 0.9170 0.9638

A. AREA 539 TOTALS

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, APR 03 2000 15:21
 1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL AREA TOTALS
 2004 SUMMER PEAK - UTILICORP BASE CASE WITH WERE CHANGES IN MW/MVAR

AREA	GENERATION	FROM LOAD	TO BUS SHUNT	TO LINE SHUNT	FROM CHARGING	TO NET INT	LOSSES	DESIRED NET INT
539	248.2	569.4	0.0	0.0	0.0	-339.0	17.8	-339.0
WEPL	45.6	190.1	-202.4	0.0	123.6	65.8	115.7	
TOTALS	248.2	569.4	0.0	0.0	0.0	-339.0	17.8	-339.0
	45.6	190.1	-202.4	0.0	123.6	65.8	115.7	

B. INTER-AREA TRANSFER DATA

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, APR 03 2000 15:23
 1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL INTER-AREA
 2004 SUMMER PEAK - UTILICORP BASE CASE WITH WERE CHANGES TRANSFER DATA
 X--FROM AREA-X X--TO AREA--X ID PTRANS PTOTAL DESINT

539 [WEPL]	]	515 [SWPA	]	1	-20.0
539 [WEPL]	]	534 [SUNC	]	2	-2.0
539 [WEPL]	]	534 [SUNC	]	3	-140.0
539 [WEPL]	]	536 [WERE	]	1	-165.0
539 [WEPL]	]	536 [WERE	]	2	2.0
539 [WEPL]	]	536 [WERE	]	3	-14.0

-339.0

C. GENERATOR UNIT DATA

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, APR 03 2000 15:23
 1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL GENERATOR
 2004 SUMMER PEAK - UTILICORP BASE CASE WITH WERE CHANGES UNIT DATA

BUS#	NAME	BSKV	CD	ID	ST	PGEN	QGEN	QMAX	QMIN	PMAX	PMIN	OWN	FRACT
58753	CIM-PLT113.8	2	1	1	40.0	12.9	28.0	-15.0	58.0	25.0	1	1.000	
58753	CIM-PLT113.8	2	2	0	0.0	0.0	10.0	-5.0	14.0	2.0	1	1.000	
58755	CLIFTON113.8	2	1	1	30.0	0.9	32.0	-15.0	70.0	5.0	1	1.000	
58770	JUD-LRG113.8	2	4	1	123.2	17.7	98.0	-45.0	143.0	30.0	1	1.000	
58777	MULGREN113.8	2	3	1	55.0	14.1	34.0	-16.0	93.0	30.0	1	1.000	

D. TRANSFORMER DATA

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E
MON, APR 03 2000 15:22

TRANSFORMER DATA

1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL

2004 SUMMER PEAK - UTILICORP BASE CASE WITH WERE CHANGES

FROM	TO	CT	TP	RATIO	ANGLE	RG	CONT	RMAX	RMIN	VMAX	VMIN	STEP	TABLE	CR	CX
56470	58795	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
56565	58792	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
56601	58779	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58751	58802	1	T	1.0562	0.00	1	-58802	1.1000	0.9000	1.0500	1.0300	0.00625			
58753	58754	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58755	58756	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58756	58804	1	T	1.0063	0.00	1	-58804	1.1000	0.9000	1.0500	1.0300	0.00625			
58757	58758	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58757	58805	1	T	1.0125	0.00	1	-58805	1.1000	0.9000	1.0500	1.0300	0.00625			
58759	58806	1	T	1.0625	0.00	1	-58806	1.1000	0.9000	1.0500	1.0300	0.00625			
58761	58807	1	T	1.0375	0.00	1	-58807	1.1000	0.9000	1.0500	1.0300	0.00625			
58762	58808	1	T	1.0688	0.00	1	-58808	1.1000	0.9000	1.0500	1.0300	0.00625			
58763	58809	1	T	1.0313	0.00	1	-58809	1.1000	0.9000	1.0500	1.0300	0.00625			
58764	58810	1	T	1.0000	0.00	1	-58810	1.1000	0.9000	1.0500	1.0300	0.00625			
58765	58811	1	T	1.0250	0.00	1	-58811	1.1000	0.9000	1.0500	1.0300	0.00625			
58767	58812	1	T	1.0313	0.00	1	-58812	1.1000	0.9000	1.0500	1.0300	0.00625			
58768	58813	1	T	1.0688	0.00	1	-58813	1.1000	0.9000	1.0500	1.0300	0.00625			
58769	58814	1	T	1.0250	0.00	1	-58814	1.1000	0.9000	1.0500	1.0300	0.00625			
58770	58771	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58771	58815	1	T	1.0438	0.00	1	-58815	1.1000	0.9000	1.0500	1.0300	0.00625			
58772	58816	1	T	1.0313	0.00	1	-58816	1.1000	0.9000	1.0500	1.0300	0.00625			
58773	58774	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58773	58817	1	T	1.0812	0.00	1	-58817	1.1000	0.9000	1.0500	1.0300	0.00625			
58776	58818	1	T	1.0187	0.00	1	-58818	1.1000	0.9000	1.0500	1.0300	0.00625			
58777	58778	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58778	58779	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58778	58819	1	T	1.0375	0.00	1	-58819	1.1000	0.9000	1.0500	1.0300	0.00625			
58780	58820	1	T	1.0688	0.00	1	-58820	1.1000	0.9000	1.0500	1.0300	0.00625			
58781	58821	1	T	1.0375	0.00	1	-58821	1.1000	0.9000	1.0500	1.0300	0.00625			
58783	58822	1	T	1.0688	0.00	1	-58822	1.1000	0.9000	1.0500	1.0300	0.00625			
58784	58823	1	T	1.0562	0.00	1	-58823	1.1000	0.9000	1.0500	1.0300	0.00625			
58784	58823	2	T	1.0562	0.00	1	-58823	1.1000	0.9000	1.0500	1.0300	0.00625			
58785	58824	1	T	1.0812	0.00	1	-58824	1.1000	0.9000	1.0500	1.0300	0.00625			
58786	58825	1	T	1.0500	0.00	1	-58825	1.1000	0.9000	1.0500	1.0300	0.00625			
58787	58826	1	T	1.0875	0.00	1	-58826	1.1000	0.9000	1.0500	1.0300	0.00625			
58788	58827	1	T	1.0063	0.00	1	-58827	1.1000	0.9000	1.0500	1.0300	0.00625			
58789	58828	1	T	1.0500	0.00	1	-58828	1.1000	0.9000	1.0500	1.0300	0.00625			
58790	58829	1	T	1.0812	0.00	1	-58829	1.1000	0.9000	1.0500	1.0300	0.00625			
58791	58830	1	T	1.0625	0.00	1	-58830	1.1000	0.9000	1.0500	1.0300	0.00625			
58793	58831	1	T	1.0625	0.00	1	-58831	1.1000	0.9000	1.0500	1.0300	0.00625			
58794	58795	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58794	58832	1	T	1.0313	0.00	1	-58832	1.1000	0.9000	1.0500	1.0300	0.00625			
58797	58833	1	T	1.0500	0.00	1	-58833	1.1000	0.9000	1.0500	1.0300	0.00625			
58798	58834	1	T	1.0875	0.00	1	-58834	1.1000	0.9000	1.0500	1.0300	0.00625			
58799	58835	1	T	1.0750	0.00	1	-58835	1.1000	0.9000	1.0500	1.0300	0.00625			
58800	58836	1	T	1.0812	0.00	1	-58836	1.1000	0.9000	1.0500	1.0300	0.00625			
58837	58838	1	T	1.0812	0.00	1	-58838	1.1000	0.9000	1.0500	1.0300	0.00625			
58839	58840	1	F	1.0688	0.00	1	-58839	1.1000	0.9000	1.0500	1.0300	0.00625			

E. BASE CASE BRANCH LOADINGS ABOVE 100% OF RAT. SET A:
 PT1 INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, APR 03 2000 15:25
 1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL
 2004 SUMMER PEAK - UTILICORP BASE CASE WITH WERE CHANGES
 OUTPUT FOR AREA 539 [WEPL]
 BRANCH LOADINGS ABOVE 100.0 % OF RATING SET A:

X-----FROM BUS-----X X-----TO BUS-----X		CURRENT (MVA)	
BUS	NAME BSKV AREA	BUS	NAME BSKV AREA CKT LOADING RATING PERCENT
			* NONE *

F. BASE CASE BUSES WITH VOLTAGE GREATER THAN 1.0500:
 PT1 INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, APR 03 2000 15:26
 1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL
 2004 SUMMER PEAK - UTILICORP BASE CASE WITH WERE CHANGES
 BUSES WITH VOLTAGE GREATER THAN 1.0500:

X-----	BUS	-----X	AREA	V(PU)	V(KV)	X-----	BUS	-----X	AREA	V(PU)	V(KV)

* NONE *

G. BASE CASE BUSES WITH VOLTAGE LESS THAN 0.9500:
 X----- BUS -----X AREA V(PU) V(KV) X----- BUS -----X AREA V(PU) V(KV)
 58787 PRATT 3 115 539 0.9418 108.30

ACCC OVERLOAD REPORT MONITORED ELEMENTS LOADED OVER 100.0 % OF RATING SET B & ACCC VOLTAGE REPORT

1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL
 2004 SUMMER PEAK - UTILICORP BASE CASE WITH WERE CHANGES
 *** ACCC OVERLOAD REPORT: MONITORED ELEMENTS LOADED ABOVE 100.0 % OF RATING SET B ***
 *** ACCC VOLTAGE REPORT ***

DISTRIBUTION FACTOR FILE: Dfax04SP.89f
 SUBSYSTEM DESCRIPTION FILE: USER DIALOGUE
 MONITORED ELEMENT FILE: opemon539.txt
 CONTINGENCY DESCRIPTION FILE: opcon2k.txt

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
 X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 BASE CASE

*** NONE ***
 X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58787 PRATT 3 115 0.9418 0.9418

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
 X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 58757 [CONCORD3115.00] TO BUS 58758 [CONCORD6230.00] CKT 1 ----- CONTINGENCY SINGLE 9
 *** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58763 GLENELD3 115 0.9477 0.9963 58785 PHLBURG3 115 0.9418 0.9784
 58793 SMITH-C3 115 0.9407 0.9871

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
 X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 58764 [GRNBURG3115.00] TO BUS 58771 [JUD-LRG3115.00] CKT 1 ----- CONTINGENCY SINGLE 24
 *** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58764 GRNBURG3 115 0.9498 0.9963 58773 MED-LDG3 115 0.9370 0.9689
 58774 MED-LDG4 138 0.9436 0.9757 58787 PRATT 3 115 0.9180 0.9418
 58797 SUNCITY3 115 0.9433 0.9813

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
 X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 58764 [GRNBURG3115.00] TO BUS 58797 [SUNCITY3115.00] CKT 1 ----- CONTINGENCY SINGLE 25
 *** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 AREA 539 BUSES WITH VOLTAGE GREATER THAN 1.0500: 58810 GRNBURG134.5 1.0748 1.0426

AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58773 MED-LDG3 115 0.9320 0.9689 58774 MED-LDG4 138 0.9414 0.9757
 58787 PRATT 3 115 0.9158 0.9418 58797 SUNCITY3 115 0.9324 0.9813

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
 X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 58766 [GBENDTP3115.00] TO BUS 58778 [MULGREN3115.00] CKT 1 ----- CONTINGENCY SINGLE 28
 *** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58766 GBENDTP3 115 0.9272 0.9939 58787 PRATT 3 115 0.9144 0.9418
 58792 SEWARD 3 115 0.9269 0.9739 58796 ST-JOHN3 115 0.9192 0.9541

1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL
 2004 SUMMER PEAK - UTILICORP BASE CASE WITH WERE CHANGES
 *** ACCC OVERLOAD REPORT: MONITORED ELEMENTS LOADED ABOVE 100.0 % OF RATING SET B ***
 *** ACCC VOLTAGE REPORT ***

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
 X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 58766 [GBENDTP3115.00] TO BUS 58792 [SEWARD 3115.00] CKT 1 ----- CONTINGENCY SINGLE 29
 *** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58787 PRATT 3 115 0.9136 0.9418 58792 SEWARD 3 115 0.9254 0.9739
 58796 ST-JOHN3 115 0.9181 0.9541

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
 X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 58768 [HARPER 4138.00] TO BUS 58774 [MED-LDG4138.00] CKT 1 ----- CONTINGENCY SINGLE 32
 *** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58773 MED-LDG3 115 0.9447 0.9689 58774 MED-LDG4 138 0.9447 0.9757

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
 X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 58768 [HARPER 4138.00] TO BUS 58775 [MILANTPA138.00] CKT 1 ----- CONTINGENCY SINGLE 33
 *** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58768 HARPER 4 138 0.8792 0.9860 58773 MED-LDG3 115 0.9036 0.9689
 58774 MED-LDG4 138 0.9000 0.9757 58787 PRATT 3 115 0.8969 0.9418
 58796 ST-JOHN3 115 0.9297 0.9541 58797 SUNCITY3 115 0.9279 0.9813
 58813 HARPER 134.5 0.9089 1.0431

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
 X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 58773 [MED-LDG3115.00] TO BUS 58774 [MED-LDG4138.00] CKT 1 ----- CONTINGENCY SINGLE 44
 *** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 AREA 539 BUSES WITH VOLTAGE GREATER THAN 1.0500: 58813 HARPER 134.5 1.0647 1.0431
 AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58773 MED-LDG3 115 0.9448 0.9689

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
 X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 58773 [MED-LDG3115.00] TO BUS 58787 [PRATT 3115.00] CKT 1 ----- CONTINGENCY SINGLE 45
 *** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 AREA 539 BUSES WITH VOLTAGE GREATER THAN 1.0500: 58810 GRNBURG134.5 1.0636 1.0426 58813 HARPER 134.5 1.0666 1.0431
 58817 MED-LDG134.5 1.0784 1.0359 58833 SUNCITY134.5 1.0790 1.0440
 AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58787 PRATT 3 115 0.8821 0.9418 58796 ST-JOHN3 115 0.9224 0.9541

X----- N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D L I N E S --X X--MVA(MW)FLOW--X
X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 58773 [MED-LDG3115.00] TO BUS 58797 [SUNCITY3115.00] CKT 1 ----- CONTINGENCY SINGLE 46

*** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
AREA 539 BUSES WITH VOLTAGE GREATER THAN 1.0500: 58810 GRNBURG134.5 1.0815 1.0426 58833 SUNCITY134.5 1.1065 1.0440

AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58773 MED-LDG3 115 0.9314 0.9689 58774 MED-LDG4 138 0.9414 0.9757
58787 PRATT 3 115 0.9157 0.9418

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X

X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 58782 [NLIBTAP3115.00] TO BUS 58837 [NLIB 3115.00] CKT 1 ----- CONTINGENCY SINGLE 59

*** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
AREA 539 BUSES WITH VOLTAGE GREATER THAN 1.0500: 58816 E-LIBER134.5 1.0645 1.0430 58829 S-LIBER134.5 1.0676 1.0451

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 58784 [OTISSUB134.500] TO BUS 58823 [OTISSUB134.500] CKT 1 ----- CONTINGENCY SINGLE 61
58784*OTISSUB3 115 58823 OTISSUB134.5 2 4.6 8.5 8.0 105.9

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X

X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 58784 [OTISSUB134.500] TO BUS 58823 [OTISSUB134.500] CKT 2 ----- CONTINGENCY SINGLE 62
58784*OTISSUB3 115 58823 OTISSUB134.5 1 3.7 8.7 8.0 108.9

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X

X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 58787 [PRATT 3115.00] TO BUS 58796 [ST-JOHN3115.00] CKT 1 ----- CONTINGENCY SINGLE 68

*** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58773 MED-LDG3 115 0.9377 0.9689 58774 MED-LDG4 138 0.9467 0.9757
58787 PRATT 3 115 0.8906 0.9418

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X

X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 58792 [SEWARD 3115.00] TO BUS 58796 [ST-JOHN3115.00] CKT 1 ----- CONTINGENCY SINGLE 74

*** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58773 MED-LDG3 115 0.9418 0.9689 58787 PRATT 3 115 0.8967 0.9418
58796 ST-JOHN3 115 0.8966 0.9541

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X

X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 58779 [MULGREN230.00] TO BUS 56601 [HEIZER 3115.00] CKT 1 ----- CONTINGENCY SINGLE 90

*** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58751 ALEXNDR3 115 0.9326 0.9866

A. AREA 539 TOTALS

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, APR 03 2000 15:46
 1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL AREA TOTALS
 2004 WINTER PEAK - UTILICORP BASE CASE WITH WERE CHANGES IN MW/MVAR

AREA	GENERATION	FROM	TO	TO BUS	TO LINE	SHUNT	SHUNT CHARGING	FROM	TO	LOSSES	DESIRE
			LOAD	SHUNT					NET INT		NET INT
539	163.2	398.6	0.0	0.0	0.0	0.0	0.0	0.0	-248.9	13.5	-249.0
WEPL	13.2	134.6	-142.2	0.0	0.0	126.0	66.2	80.6			
TOTALS	163.2	398.6	0.0	0.0	0.0	0.0	-248.9	13.5	-249.0		
	13.2	134.6	-142.2	0.0	0.0	126.0	66.2	80.6			

B. INTER-AREA TRANSFER DATA

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, APR 03 2000 15:47
 1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL INTER-AREA
 2004 WINTER PEAK - UTILICORP BASE CASE WITH WERE CHANGES TRANSFER DATA
 X--FROM AREA-X X--TO AREA--X ID PTRANS PTOTAL DESINT

539 [WEPL]	515 [SWPA]	1	-20.0
539 [WEPL]	534 [SUNC]	1	-50.0
539 [WEPL]	534 [SUNC]	2	-2.0
539 [WEPL]	536 [WERE]	1	-165.0
539 [WEPL]	536 [WERE]	2	2.0
539 [WEPL]	536 [WERE]	3	-14.0
			-249.0
			-249.0

C. GENERATOR UNIT DATA

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, APR 03 2000 15:47
 1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL GENERATOR
 2004 WINTER PEAK - UTILICORP BASE CASE WITH WERE CHANGES UNIT DATA

BUS#	NAME	BSKV	CD	ID	ST	PGEN	QGEN	QMAX	QMIN	PMAX	PMIN	OWN	FRACT
58753	CIM-PLT113.8	-2	1	0	0.0	0.0	28.0	-15.0	58.0	25.0	1	1.000	
58753	CIM-PLT113.8	-2	2	0	0.0	0.0	10.0	-5.0	14.0	2.0	1	1.000	
58755	CLIFTON113.8	-2	1	0	0.0	0.0	32.0	-15.0	70.0	5.0	1	1.000	
58770	JUD-LRG113.8	2	4	1	123.2	7.8	98.0	-45.0	143.0	30.0	1	1.000	
58777	MULGREN113.8	2	3	1	40.0	5.4	34.0	-16.0	93.0	30.0	1	1.000	

D. TRANSFORMER DATA

MON, APR 03 2000 15:48
TRANSFORMER DATAPTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E
1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL
2004 WINTER PEAK - UTILICORP BASE CASE WITH WERE CHANGES

FROM	TO	CNT	TP	RATIO	ANGLE	RG	CONT	RMAX	RMIN	VMAX	VMIN	STEP	TABLE	CR	CX
56470	58795	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
56565	58792	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
56601	58779	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58751	58802	1	T	1.0250	0.00	1	-58802	1.1000	0.9000	1.0500	1.0300	0.00625			
58753	58754	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58755	58756	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58756	58804	1	T	1.0000	0.00	1	-58804	1.1000	0.9000	1.0500	1.0300	0.00625			
58757	58758	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58757	58805	1	T	1.0125	0.00	1	-58805	1.1000	0.9000	1.0500	1.0300	0.00625			
58759	58806	1	T	1.0562	0.00	1	-58806	1.1000	0.9000	1.0500	1.0300	0.00625			
58761	58807	1	T	1.0250	0.00	1	-58807	1.1000	0.9000	1.0500	1.0300	0.00625			
58762	58808	1	T	1.0250	0.00	1	-58808	1.1000	0.9000	1.0500	1.0300	0.00625			
58763	58809	1	T	1.0250	0.00	1	-58809	1.1000	0.9000	1.0500	1.0300	0.00625			
58764	58810	1	T	0.9937	0.00	1	-58810	1.1000	0.9000	1.0500	1.0300	0.00625			
58765	58811	1	T	1.0438	0.00	1	-58811	1.1000	0.9000	1.0500	1.0300	0.00625			
58767	58812	1	T	1.0375	0.00	1	-58812	1.1000	0.9000	1.0500	1.0300	0.00625			
58768	58813	1	T	1.0187	0.00	1	-58813	1.1000	0.9000	1.0500	1.0300	0.00625			
58769	58814	1	T	0.9937	0.00	1	-58814	1.1000	0.9000	1.0500	1.0300	0.00625			
58770	58771	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58771	58815	1	T	1.0313	0.00	1	-58815	1.1000	0.9000	1.0500	1.0300	0.00625			
58772	58816	1	T	1.0562	0.00	1	-58816	1.1000	0.9000	1.0500	1.0300	0.00625			
58773	58774	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58773	58817	1	T	1.0375	0.00	1	-58817	1.1000	0.9000	1.0500	1.0300	0.00625			
58776	58818	1	T	1.0000	0.00	1	-58818	1.1000	0.9000	1.0500	1.0300	0.00625			
58777	58778	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58778	58779	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58778	58819	1	T	1.0250	0.00	1	-58819	1.1000	0.9000	1.0500	1.0300	0.00625			
58780	58820	1	T	1.0750	0.00	1	-58820	1.1000	0.9000	1.0500	1.0300	0.00625			
58781	58821	1	T	1.0250	0.00	1	-58821	1.1000	0.9000	1.0500	1.0300	0.00625			
58783	58822	1	T	1.0313	0.00	1	-58822	1.1000	0.9000	1.0500	1.0300	0.00625			
58784	58823	1	T	1.0313	0.00	1	-58823	1.1000	0.9000	1.0500	1.0300	0.00625			
58784	58823	2	T	1.0313	0.00	1	-58823	1.1000	0.9000	1.0500	1.0300	0.00625			
58785	58824	1	T	1.0375	0.00	1	-58824	1.1000	0.9000	1.0500	1.0300	0.00625			
58786	58825	1	T	1.0250	0.00	1	-58825	1.1000	0.9000	1.0500	1.0300	0.00625			
58787	58826	1	T	1.0375	0.00	1	-58826	1.1000	0.9000	1.0500	1.0300	0.00625			
58788	58827	1	T	1.0125	0.00	1	-58827	1.1000	0.9000	1.0500	1.0300	0.00625			
58789	58828	1	T	1.0375	0.00	1	-58828	1.1000	0.9000	1.0500	1.0300	0.00625			
58790	58829	1	T	1.0688	0.00	1	-58829	1.1000	0.9000	1.0500	1.0300	0.00625			
58791	58830	1	T	1.0500	0.00	1	-58830	1.1000	0.9000	1.0500	1.0300	0.00625			
58793	58831	1	T	1.0250	0.00	1	-58831	1.1000	0.9000	1.0500	1.0300	0.00625			
58794	58795	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58794	58832	1	T	1.0250	0.00	1	-58832	1.1000	0.9000	1.0500	1.0300	0.00625			
58797	58833	1	T	1.0063	0.00	1	-58833	1.1000	0.9000	1.0500	1.0300	0.00625			
58798	58834	1	T	1.0500	0.00	1	-58834	1.1000	0.9000	1.0500	1.0300	0.00625			
58799	58835	1	T	1.0500	0.00	1	-58835	1.1000	0.9000	1.0500	1.0300	0.00625			
58800	58836	1	T	1.0938	0.00	1	-58836	1.1000	0.9000	1.0500	1.0300	0.00625			
58837	58838	1	T	1.0688	0.00	1	-58838	1.1000	0.9000	1.0500	1.0300	0.00625			
58839	58840	1	F	1.0500	0.00	1	-58839	1.1000	0.9000	1.0500	1.0300	0.00625			

E. BASE CASE BRANCH LOADINGS ABOVE 100% OF RAT. SET A:

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, APR 03 2000 15:49
 1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL
 2004 WINTER PEAK - UTILICORP BASE CASE WITH WERE CHANGES
 OUTPUT FOR AREA 539 (WEPL)

BRANCH LOADINGS ABOVE 100.0 % OF RATING SET A:

BUS	NAME	BSKV AREA	BUS	NAME	BSKV AREA	CKT	LOADING	RATING	PERCENT	CURRENT (MVA)
X-----	FROM BUS	-----X	X-----	TO BUS	-----X					

* NONE *

F. BASE CASE BUSES WITH VOLTAGE GREATER THAN 1.0500:

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, APR 03 2000 15:50
 1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL
 2004 WINTER PEAK - UTILICORP BASE CASE WITH WERE CHANGES
 BUSES WITH VOLTAGE GREATER THAN 1.0500:

X-----	BUS	-----X	AREA	V(PU)	V(KV)	X-----	BUS	-----X	AREA	V(PU)	V(KV)

* NONE *

G. BASE CASE BUSES WITH VOLTAGE LESS THAN 0.9500:

X-----	BUS	-----X	AREA	V(PU)	V(KV)	X-----	BUS	-----X	AREA	V(PU)	V(KV)

* NONE *

.. ACCC OVERLOAD REPORT MONITORED ELEMENTS LOADED AOVE 100.0 % OF RATING SET B & ACCC VOLTAGE REPO

1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL

2004 WINTER PEAK - UTILICORP BASE CASE WITH WERE CHANGES

*** ACCC OVERLOAD REPORT: MONITORED ELEMENTS LOADED ABOVE 100.0 % OF RATING SET B ***

*** ACCC VOLTAGE REPORT ***

DISTRIBUTION FACTOR FILE: Dfax04WP.sgf
SUBSYSTEM DESCRIPTION FILE: USER DIALOGUE
MONITORED ELEMENT FILE: opamon539.txt
CONTINGENCY DESCRIPTION FILE: opscon2k.txt

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 58756 [CLIFTON3115.00] TO BUS 58765 [GRNLEAF3115.00] CKT 1 ----- CONTINGENCY SINGLE 7
*** NONE ***

AREA 539 BUSES WITH VOLTAGE GREATER THAN 1.0500: 58804 CLIFSUB134.5 1.0622 1.0400
X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 58773 [MED-LDG3115.00] TO BUS 58787 [PRATT 3115.00] CKT 1 ----- CONTINGENCY SINGLE 45
*** NONE ***

AREA 539 BUSES WITH VOLTAGE GREATER THAN 1.0500: 58817 MED-LDG134.5 1.0703 1.0406 58833 SUNCITY134.5 1.0667 1.0424
X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT

AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58787 PRATT 3 115 0.9341 0.9822

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 58773 [MED-LDG3115.00] TO BUS 58797 [SUNCITY3115.00] CKT 1 ----- CONTINGENCY SINGLE 46
*** NONE ***

AREA 539 BUSES WITH VOLTAGE GREATER THAN 1.0500: 58833 SUNCITY134.5 1.0706 1.0424
X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 58782 [NLIBTAP3115.00] TO BUS 58837 [NLIB 3115.00] CKT 1 ----- CONTINGENCY SINGLE 59
*** NONE ***

AREA 539 BUSES WITH VOLTAGE GREATER THAN 1.0500: 58816 E-LIBER134.5 1.0705 1.0484 58829 S-LIBER134.5 1.0685 1.0459
X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 58754 [CIM-PLT3115.00] TO BUS 56455 [NCIMARN3115.00] CKT 1 ----- CONTINGENCY SINGLE 88
*** NONE ***

AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500:
X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
58752 CWRIVTP3 115 0.9113 0.9856 58753 CIM-PLT113.8 0.8907 0.9771
58754 CIM-PLT3 115 0.9056 0.9847 58759 CUDAHY 3 115 0.9489 0.9982
58772 E-LIBER3 115 0.9075 0.9822 58782 NLIBTAP3 115 0.9056 0.9814
58790 S-LIBER3 115 0.9065 0.9814 58800 W-LIBER3 115 0.9011 0.9773
58837 NLIB 3 115 0.9037 0.9797

1: 006 SUMMER PEAK

A. AREA 539 TOTALS

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, APR 03 2000 16:00
 1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL AREA TOTALS
 2006 SUMMER PEAK - UTILICORP BASE CASE WITH WERE CHANGES IN MW/MVAR

AREA	GENERATION	FROM LOAD	TO BUS SHUNT	TO LINE SHUNT	FROM CHARGING	TO NET INT	LOSSES	DESIRE NET INT
539	288.9	595.6	0.0	0.0	0.0	-324.9	18.3	-325.0
WEPL	43.1	198.7	-207.9	0.0	124.3	54.7	121.8	
TOTALS	288.9	595.6	0.0	0.0	0.0	-324.9	18.3	-325.0
	43.1	198.7	-207.9	0.0	124.3	54.7	121.8	

B. INTER-AREA TRANSFER DATA

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, APR 03 2000 16:01
 1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL INTER-AREA
 2006 SUMMER PEAK - UTILICORP BASE CASE WITH WERE CHANGES TRANSFER DATA
 X--FROM AREA-X X---TO AREA--X ID PTRANS PTOTAL DESINT

539	[WEPL	] 515	[SWPA	] 1	-20.0
539	[WEPL	] 534	[SUNC	] 1	-50.0
539	[WEPL	] 534	[SUNC	] 2	-2.0
539	[WEPL	] 536	[WERE	] 1	-241.0
539	[WEPL	] 536	[WERE	] 2	2.0
539	[WEPL	] 536	[WERE	] 3	-14.0
					-325.0
					-325.0

C. GENERATOR UNIT DATA

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, APR 03 2000 16:01
 1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL GENERATOR

2006 SUMMER PEAK - UTILICORP BASE CASE WITH WERE CHANGES
 BUS# NAME BSKV CD ID ST PGEN QGEN QMAX QMIN PMAX PMIN OWN FRACT

58753	CIM-PLT113.8	2	1	1	50.0	13.7	28.0	-15.0	58.0	25.0	1	1.000
58753	CIM-PLT113.8	2	2	0	0.0	0.0	10.0	-5.0	14.0	2.0	1	1.000
58755	CLIFTON113.8	2	1	1	40.0	-0.6	32.0	-15.0	70.0	5.0	1	1.000
58770	JUD-LRG113.8	2	4	1	128.9	20.4	98.0	-45.0	143.0	30.0	1	1.000
58777	MULGREN113.8	2	3	1	70.0	9.6	34.0	-16.0	93.0	30.0	1	1.000

D. TRANSFORMER DATA

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E
MON, APR 03 2000 16:02

TRANSFORMER DATA

1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL

2006 SUMMER PEAK - UTILICORP BASE CASE WITH WERE CHANGES

FROM	TO	CKT	TP	RATIO	ANGLE	RG	CONT	RMAX	RMIN	VMAX	VMIN	STEP	TABLE	CR	CX
56470	58795	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
56565	58792	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
56601	58779	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58751	58802	1	T	1.0562	0.00	1	-58802	1.1000	0.9000	1.5000	1.0300	0.00625			
58753	58754	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58755	58756	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58756	58804	1	T	1.0063	0.00	1	-58804	1.1000	0.9000	1.0500	1.0300	0.00625			
58757	58758	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58757	58805	1	T	1.0187	0.00	1	-58805	1.1000	0.9000	1.0500	1.0300	0.00625			
58759	58806	1	T	1.0688	0.00	1	-58806	1.1000	0.9000	1.0500	1.0300	0.00625			
58761	58807	1	T	1.0375	0.00	1	-58807	1.1000	0.9000	1.0500	1.0300	0.00625			
58762	58808	1	T	1.0313	0.00	1	-58808	1.1000	0.9000	1.0500	1.0300	0.00625			
58763	58809	1	T	1.0250	0.00	1	-58809	1.1000	0.9000	1.0500	1.0300	0.00625			
58764	58810	1	T	1.0000	0.00	1	-58810	1.1000	0.9000	1.0500	1.0300	0.00625			
58765	58811	1	T	1.0313	0.00	1	-58811	1.1000	0.9000	1.0500	1.0300	0.00625			
58767	58812	1	T	1.0438	0.00	1	-58812	1.1000	0.9000	1.0500	1.0300	0.00625			
58768	58813	1	T	1.0688	0.00	1	-58813	1.1000	0.9000	1.0500	1.0300	0.00625			
58769	58814	1	T	1.0187	0.00	1	-58814	1.1000	0.9000	1.0500	1.0300	0.00625			
58770	58771	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58771	58815	1	T	1.0438	0.00	1	-58815	1.1000	0.9000	1.0500	1.0300	0.00625			
58772	58816	1	T	1.0375	0.00	1	-58816	1.1000	0.9000	1.0500	1.0300	0.00625			
58773	58774	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58773	58817	1	T	1.0812	0.00	1	-58817	1.1000	0.9000	1.0500	1.0300	0.00625			
58776	58818	1	T	1.0187	0.00	1	-58818	1.1000	0.9000	1.0500	1.0300	0.00625			
58777	58778	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58778	58779	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58778	58819	1	T	1.0375	0.00	1	-58819	1.1000	0.9000	1.0500	1.0300	0.00625			
58780	58820	1	T	1.0812	0.00	1	-58820	1.1000	0.9000	1.0500	1.0300	0.00625			
58781	58821	1	T	1.0313	0.00	1	-58821	1.1000	0.9000	1.0500	1.0300	0.00625			
58783	58822	1	T	1.0688	0.00	1	-58822	1.1000	0.9000	1.0500	1.0300	0.00625			
58784	58823	1	T	1.0562	0.00	1	-58823	1.1000	0.9000	1.0500	1.0300	0.00625			
58784	58823	2	T	1.0562	0.00	1	-58823	1.1000	0.9000	1.0500	1.0300	0.00625			
58785	58824	1	T	1.0750	0.00	1	-58824	1.1000	0.9000	1.0500	1.0300	0.00625			
58786	58825	1	T	1.0438	0.00	1	-58825	1.1000	0.9000	1.0500	1.0300	0.00625			
58787	58826	1	T	1.0688	0.00	1	-58826	1.1000	0.9000	1.0500	1.0300	0.00625			
58788	58827	1	T	1.0125	0.00	1	-58827	1.1000	0.9000	1.0500	1.0300	0.00625			
58789	58828	1	T	1.0562	0.00	1	-58828	1.1000	0.9000	1.0500	1.0300	0.00625			
58790	58829	1	T	1.0875	0.00	1	-58829	1.1000	0.9000	1.0500	1.0300	0.00625			
58791	58830	1	T	1.0688	0.00	1	-58830	1.1000	0.9000	1.0500	1.0300	0.00625			
58793	58831	1	T	1.0625	0.00	1	-58831	1.1000	0.9000	1.0500	1.0300	0.00625			
58794	58795	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58794	58832	1	T	1.0375	0.00	1	-58832	1.1000	0.9000	1.0500	1.0300	0.00625			
58797	58833	1	T	1.0438	0.00	1	-58833	1.1000	0.9000	1.0500	1.0300	0.00625			
58798	58834	1	T	1.0812	0.00	1	-58834	1.1000	0.9000	1.0500	1.0300	0.00625			
58799	58835	1	T	1.0812	0.00	1	-58835	1.1000	0.9000	1.0500	1.0300	0.00625			
58800	58836	1	T	1.0875	0.00	1	-58836	1.1000	0.9000	1.0500	1.0300	0.00625			
58837	58838	1	T	1.0938	0.00	1	-58838	1.1000	0.9000	1.0500	1.0300	0.00625			
58839	58840	1	F	1.0688	0.00	1	-58839	1.1000	0.9000	1.0500	1.0300	0.00625			

068P-2

S. BASE CASE BRANCH LOADINGS ABOVE 100% OF RAT. SET A:
 PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, APR 03 2000 16:03
 1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL
 2006 SUMMER PEAK - UTILICORP BASE CASE WITH WERE CHANGES
 OUTPUT FOR AREA 539 [WEPL]
 BRANCH LOADINGS ABOVE 100% OF RATING SET A:

BUS	NAME	BSKV AREA	BUS	NAME	BSKV AREA	CKT	LOADING	RATING	PERCENT	CURRENT (MVA)
X-----	FROM BUS-----	X	X-----	TO BUS-----	X					

* NONE *

F. BASE CASE BUSES WITH VOLTAGE GREATER THAN 1.0500:
 PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, APR 03 2000 16:03
 1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL
 2006 SUMMER PEAK - UTILICORP BASE CASE WITH WERE CHANGES
 BUSES WITH VOLTAGE GREATER THAN 1.0500:

X-----	BUS	-----X	AREA	V(PU)	V(KV)	X-----	BUS	-----X	AREA	V(PU)	V(KV)

* NONE *

G. BASE CASE BUSES WITH VOLTAGE LESS THAN 0.9500:
 X----- BUS -----X AREA V(PU) V(KV) X----- BUS -----X AREA V(PU) V(KV)

* NONE *

ACCC OVERLOAD REPORT MONITORED ELEMENTS LOADED .OVE 100.0 % OF RATING SET B & ACCC VOLTAGE REPOA

1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL

2006 SUMMER PEAK - UTILICORP BASE CASE WITH WERE CHANGES

*** ACCC OVERLOAD REPORT: MONITORED ELEMENTS LOADED ABOVE 100.0 % OF RATING SET B ***

*** ACCC VOLTAGE REPORT ***

DISTRIBUTION FACTOR FILE: Dfax06SP.sgf

SUBSYSTEM DESCRIPTION FILE: USER DIALOGUE

MONITORED ELEMENT FILE: opsmom539.txt

CONTINGENCY DESCRIPTION FILE: opacon2k.txt

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X

X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT

OPEN LINE FROM BUS 58757 [CONCORD3115.00] TO BUS 58758 [CONCORD6230.00] CKT 1 ----- CONTINGENCY SINGLE 9

*** NONE ***

AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
58763 GLENEL3 115 0.9443 0.9969 58769 JEWELL 3 115 0.9473 1.0015
58785 PHLBURG3 115 0.9403 0.9791 58793 SMITH-C3 115 0.9387 0.9880

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X

X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT

OPEN LINE FROM BUS 58764 [GRNBURG3115.00] TO BUS 58771 [JUD-LRG3115.00] CKT 1 ----- CONTINGENCY SINGLE 24

*** NONE ***

AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
58773 MED-LDG3 115 0.9469 0.9754 58787 PRATT 3 115 0.9363 0.9581

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X

X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT

OPEN LINE FROM BUS 58764 [GRNBURG3115.00] TO BUS 58797 [SUNCITY3115.00] CKT 1 ----- CONTINGENCY SINGLE 25

*** NONE ***

AREA 539 BUSES WITH VOLTAGE GREATER THAN 1.0500: X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
58810 GRNBURG134.5 1.0719 1.0445

AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58773 MED-LDG3 115 0.9422 0.9754 58774 MED-LDG4 138 0.9483 0.9795
58787 PRATT 3 115 0.9343 0.9581 58797 SUNCITY3 115 0.9424 0.9858

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X

X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT

OPEN LINE FROM BUS 58766 [GBENDTP3115.00] TO BUS 58792 [SEWARD 3115.00] CKT 1 ----- CONTINGENCY SINGLE 29

*** NONE ***

AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
58787 PRATT 3 115 0.9380 0.9581

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X

X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT

OPEN LINE FROM BUS 58768 [HARPER 4138.00] TO BUS 58775 [MILANTP4138.00] CKT 1 ----- CONTINGENCY SINGLE 33

*** NONE ***

AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
58768 HARPER 4 138 0.8911 0.9849 58773 MED-LDG3 115 0.9169 0.9754
58774 MED-LDG4 138 0.9129 0.9795 58787 PRATT 3 115 0.9173 0.9581

1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL
2006 SUMMER PEAK - UTILICORP BASE CASE WITH WERE CHANGES

*** ACCC OVERLOAD REPORT: MONITORED ELEMENTS LOADED ABOVE 100.0 % OF RATING SET B ***
*** ACCC VOLTAGE REPORT ***

58797 SUNCITY3 115 0.9377 0.9858 58813 HARPER 134.5 0.9192 1.0374

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
X----- M U L T I -S E C T I O N L I N E G R O U P I N G S -----X F R O M N A M E T O N A M E C K T P R E -C N T P O S T -C N T R A T I N G P E R C E N T
O P E N L I N E F R O M B U S 5 8 7 7 3 [M E D -L D G 3 1 1 5 . 0 0] T O B U S 5 8 7 8 7 [P R A T T 3 1 1 5 . 0 0] C K T 1 ----- C O N T I N G E N C Y S I N G L E 4 5
*** N O N E ***

X----- B U S -----X V -C O N T V -I N I T X----- B U S -----X V -C O N T V -I N I T
A R E A 5 3 9 B U S E S W I T H V O L T A G E G R E A T E R T H A N 1.0500: 58817 M E D -L D G 1 3 4 . 5 1.0677 1.0417 58833 S U N C I T Y 1 3 4 . 5 1.0614 1.0399

A R E A 5 3 9 B U S E S W I T H V O L T A G E L E S S T H A N 0.9500: 58787 P R A T T 3 1 1 5 0.9173 0.9581

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
X----- M U L T I -S E C T I O N L I N E G R O U P I N G S -----X F R O M N A M E T O N A M E C K T P R E -C N T P O S T -C N T R A T I N G P E R C E N T
O P E N L I N E F R O M B U S 5 8 7 7 3 [M E D -L D G 3 1 1 5 . 0 0] T O B U S 5 8 7 9 7 [S U N C I T Y 3 1 1 5 . 0 0] C K T 1 ----- C O N T I N G E N C Y S I N G L E 4 6
*** N O N E ***

X----- B U S -----X V -C O N T V -I N I T X----- B U S -----X V -C O N T V -I N I T
A R E A 5 3 9 B U S E S W I T H V O L T A G E G R E A T E R T H A N 1.0500: 58810 G R N B U R G 1 3 4 . 5 1.0778 1.0445 58833 S U N C I T Y 1 3 4 . 5 1.0927 1.0399

A R E A 5 3 9 B U S E S W I T H V O L T A G E L E S S T H A N 0.9500: 58773 M E D -L D G 3 1 1 5 0.9420 0.9754 58774 M E D -L D G 4 1 3 8 0.9487 0.9795
58787 P R A T T 3 1 1 5 0.9345 0.9581

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
X----- M U L T I -S E C T I O N L I N E G R O U P I N G S -----X F R O M N A M E T O N A M E C K T P R E -C N T P O S T -C N T R A T I N G P E R C E N T
O P E N L I N E F R O M B U S 5 8 7 8 2 [N L I B T A P 3 1 1 5 . 0 0] T O B U S 5 8 8 3 7 [N L I B 3 1 1 5 . 0 0] C K T 1 ----- C O N T I N G E N C Y S I N G L E 5 9
*** N O N E ***

X----- B U S -----X V -C O N T V -I N I T X----- B U S -----X V -C O N T V -I N I T
A R E A 5 3 9 B U S E S W I T H V O L T A G E G R E A T E R T H A N 1.0500: 58816 E -L I B E R 1 3 4 . 5 1.0682 1.0445 58829 S -L I B E R 1 3 4 . 5 1.0694 1.0446

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
X----- M U L T I -S E C T I O N L I N E G R O U P I N G S -----X F R O M N A M E T O N A M E C K T P R E -C N T P O S T -C N T R A T I N G P E R C E N T
O P E N L I N E F R O M B U S 5 8 7 8 4 [O T I S S U B 3 1 1 5 . 0 0] T O B U S 5 8 8 2 3 [O T I S S U B 1 3 4 . 5 0 0] C K T 1 ----- C O N T I N G E N C Y S I N G L E 6 1
58784*O T I S S U B 3 1 1 5 58823 O T I S S U B 1 3 4 . 5 2 4.9 8.9 8.0 111.7

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
X----- M U L T I -S E C T I O N L I N E G R O U P I N G S -----X F R O M N A M E T O N A M E C K T P R E -C N T P O S T -C N T R A T I N G P E R C E N T
O P E N L I N E F R O M B U S 5 8 7 8 4 [O T I S S U B 3 1 1 5 . 0 0] T O B U S 5 8 8 2 3 [O T I S S U B 1 3 4 . 5 0 0] C K T 2 ----- C O N T I N G E N C Y S I N G L E 6 2
58784*O T I S S U B 3 1 1 5 58823 O T I S S U B 1 3 4 . 5 1 3.8 9.1 8.0 113.9

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
X----- M U L T I -S E C T I O N L I N E G R O U P I N G S -----X F R O M N A M E T O N A M E C K T P R E -C N T P O S T -C N T R A T I N G P E R C E N T
O P E N L I N E F R O M B U S 5 8 7 8 5 [P H L B U R G 3 1 1 5 . 0 0] T O B U S 5 8 7 8 6 [P L A I N V L 3 1 1 5 . 0 0] C K T 1 ----- C O N T I N G E N C Y S I N G L E 6 3
*** N O N E ***

X----- B U S -----X V -C O N T V -I N I T X----- B U S -----X V -C O N T V -I N I T
A R E A 5 3 9 B U S E S W I T H V O L T A G E L E S S T H A N 0.9500: 58785 P H L B U R G 3 1 1 5 0.9485 0.9791

1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL

2006 SUMMER PEAK - UTILICORP BASE CASE WITH WERE CHANGES

*** ACCC OVERLOAD REPORT: MONITORED ELEMENTS LOADED ABOVE 100.0 % OF RATING SET B ***

*** ACCC VOLTAGE REPORT ***

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 58787 [PRATT 3115.00] TO BUS 58796 [ST-JOHN3115.00] CKT 1 ----- CONTINGENCY SINGLE 68

*** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58773 MED-LDG3 115 0.9213 0.9754 58774 MED-LDG4 138 0.9310 0.9795
 58787 PRATT 3 115 0.8694 0.9581 58797 SUNCITY3 115 0.9413 0.9858
 58826 PRATT 134.5 0.9445 1.0425

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 58792 [SEWARD 3115.00] TO BUS 58796 [ST-JOHN3115.00] CKT 1 ----- CONTINGENCY SINGLE 74

*** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58787 PRATT 3 115 0.9325 0.9581 58796 ST-JOHN3 115 0.9479 0.9801

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 58779 [MULGRENE6230.00] TO BUS 58601 [HEIZER 3115.00] CKT 1 ----- CONTINGENCY SINGLE 90

*** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58751 ALEXNDR3 115 0.9392 0.9905

1. J06 WINTER PEAK

A. AREA 539 TOTALS

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, APR 03 2000 16:10
 1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL AREA TOTALS
 2006 WINTER PEAK - UTILICORP BASE CASE WITH WERE CHANGES IN MW/MVAR

AREA	GENERATION	FROM	TO	TO BUS	TO LINE	SHUNT	SHUNT CHARGING	FROM	TO	LOSSES	DESIRED
539		181.1	416.9	0.0	0.0	0.0	0.0	0.0	-248.9	13.2	-249.0
WEPL		9.0	140.5	-152.8	0.0	0.0	127.2		63.9	84.6	
TOTALS		181.1	416.9	0.0	0.0	0.0	0.0	0.0	-248.9	13.2	-249.0
		9.0	140.5	-152.8	0.0	0.0	127.2		63.9	84.6	

B. INTER-AREA TRANSFER DATA

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, APR 03 2000 16:11
 1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL INTER-AREA
 2006 WINTER PEAK - UTILICORP BASE CASE WITH WERE CHANGES TRANSFER DATA
 X--FROM AREA-X X--TO AREA-X ID PTRANS PTOTAL DESINT

539 [WEPL	] 515 [SWPA	] 1	-20.0
539 [WEPL	] 534 [SUNC	] 1	-50.0
539 [WEPL	] 534 [SUNC	] 2	-2.0
539 [WEPL	] 536 [WERE	] 1	-165.0
539 [WEPL	] 536 [WERE	] 2	2.0
539 [WEPL	] 536 [WERE	] 3	-14.0
			-249.0

C. GENERATOR UNIT DATA

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, APR 03 2000 16:11
 1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL GENERATOR
 2006 WINTER PEAK - UTILICORP BASE CASE WITH WERE CHANGES UNIT DATA

HUS#	NAME	BSKV	CD	ID	ST	PGEN	QGEN	QMAX	QMIN	PMAX	PMIN	OWN	FRACT
58753	CIM-PLT113.8	-2	1	0	0.0	0.0	0.0	28.0	-15.0	58.0	25.0	1	1.000
58753	CIM-PLT113.8	-2	2	0	0.0	0.0	0.0	10.0	-5.0	14.0	2.0	1	1.000
58755	CLIFTON113.8	-2	1	0	0.0	0.0	0.0	32.0	-15.0	70.0	5.0	1	1.000
58770	JUD-LRG113.8	2	4	1	126.1	5.2	98.0	98.0	-45.0	143.0	30.0	1	1.000
58777	MULGREN113.8	2	3	1	55.0	3.7	34.0	34.0	-16.0	93.0	30.0	1	1.000

D. TRANSFORMER DATA

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E
MON, APR 03 2000 16:12
TRANSFORMER DATA

1-2006 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL
2006 WINTER PEAK - UTILICORP BASE CASE WITH WERE CHANGES

FROM	TO	CT	TP	RATIO	ANGLE	RG	CONT	RMAX	RMIN	VMAX	VMIN	STEP	TABLE	CR	CX
58470	58795	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58565	58792	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58601	58779	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58751	58802	1	T	1.0250	0.00	1	-58802	1.1000	0.9000	1.0500	1.0300	0.00625			
58753	58754	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58755	58756	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58756	58804	1	T	0.9812	0.00	1	-58804	1.1000	0.9000	1.0500	1.0300	0.00625			
58757	58758	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58757	58805	1	T	1.0000	0.00	1	-58805	1.1000	0.9000	1.0500	1.0300	0.00625			
58759	58806	1	T	1.0562	0.00	1	-58806	1.1000	0.9000	1.0500	1.0300	0.00625			
58761	58807	1	T	1.0250	0.00	1	-58807	1.1000	0.9000	1.0500	1.0300	0.00625			
58762	58808	1	T	1.0187	0.00	1	-58808	1.1000	0.9000	1.0500	1.0300	0.00625			
58763	58809	1	T	1.0063	0.00	1	-58809	1.1000	0.9000	1.0500	1.0300	0.00625			
58764	58810	1	T	0.9875	0.00	1	-58810	1.1000	0.9000	1.0500	1.0300	0.00625			
58765	58811	1	T	0.9937	0.00	1	-58811	1.1000	0.9000	1.0500	1.0300	0.00625			
58767	58812	1	T	1.0375	0.00	1	-58812	1.1000	0.9000	1.0500	1.0300	0.00625			
58768	58813	1	T	1.0187	0.00	1	-58813	1.1000	0.9000	1.0500	1.0300	0.00625			
58769	58814	1	T	0.9750	0.00	1	-58814	1.1000	0.9000	1.0500	1.0300	0.00625			
58770	58771	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58771	58815	1	T	1.0313	0.00	1	-58815	1.1000	0.9000	1.0500	1.0300	0.00625			
58772	58816	1	T	1.0562	0.00	1	-58816	1.1000	0.9000	1.0500	1.0300	0.00625			
58773	58774	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58773	58817	1	T	1.0375	0.00	1	-58817	1.1000	0.9000	1.0500	1.0300	0.00625			
58776	58818	1	T	1.0000	0.00	1	-58818	1.1000	0.9000	1.0500	1.0300	0.00625			
58777	58778	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58778	58779	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58778	58819	1	T	1.0187	0.00	1	-58819	1.1000	0.9000	1.0500	1.0300	0.00625			
58780	58820	1	T	1.0438	0.00	1	-58820	1.1000	0.9000	1.0500	1.0300	0.00625			
58781	58821	1	T	1.0188	0.00	1	-58821	1.1000	0.9000	1.0500	1.0300	0.00625			
58783	58822	1	T	1.0250	0.00	1	-58822	1.1000	0.9000	1.0500	1.0300	0.00625			
58784	58823	1	T	1.0250	0.00	1	-58823	1.1000	0.9000	1.0500	1.0300	0.00625			
58784	58823	2	T	1.0250	0.00	1	-58823	1.1000	0.9000	1.0500	1.0300	0.00625			
58785	58824	1	T	1.0313	0.00	1	-58824	1.1000	0.9000	1.0500	1.0300	0.00625			
58786	58825	1	T	1.0250	0.00	1	-58825	1.1000	0.9000	1.0500	1.0300	0.00625			
58787	58826	1	T	1.0375	0.00	1	-58826	1.1000	0.9000	1.0500	1.0300	0.00625			
58788	58827	1	T	1.0063	0.00	1	-58827	1.1000	0.9000	1.0500	1.0300	0.00625			
58789	58828	1	T	1.0313	0.00	1	-58828	1.1000	0.9000	1.0500	1.0300	0.00625			
58790	58829	1	T	1.0750	0.00	1	-58829	1.1000	0.9000	1.0500	1.0300	0.00625			
58791	58830	1	T	1.0562	0.00	1	-58830	1.1000	0.9000	1.0500	1.0300	0.00625			
58793	58831	1	T	1.0125	0.00	1	-58831	1.1000	0.9000	1.0500	1.0300	0.00625			
58794	58795	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58794	58832	1	T	1.0250	0.00	1	-58832	1.1000	0.9000	1.0500	1.0300	0.00625			
58797	58833	1	T	1.0063	0.00	1	-58833	1.1000	0.9000	1.0500	1.0300	0.00625			
58798	58834	1	T	1.0500	0.00	1	-58834	1.1000	0.9000	1.0500	1.0300	0.00625			
58799	58835	1	T	1.0438	0.00	1	-58835	1.1000	0.9000	1.0500	1.0300	0.00625			
58800	58836	1	T	1.0938	0.00	1	-58836	1.1000	0.9000	1.0500	1.0300	0.00625			
58837	58838	1	T	1.0750	0.00	1	-58838	1.1000	0.9000	1.0500	1.0300	0.00625			
58839	58840	1	F	1.0438	0.00	1	-58839	1.1000	0.9000	1.0500	1.0300	0.00625			

E. BASE CASE BRANCH LOADINGS ABOVE 100% OF RATING SET A:
 PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, APR 03 2000 16:13
 1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL
 2006 WINTER PEAK - UTILICORP BASE CASE WITH WERE CHANGES
 OUTPUT FOR AREA 539 (WEPL)
 BRANCH LOADINGS ABOVE 100.0 % OF RATING SET A:

BUS	NAME	BSKV AREA	BUS	NAME	BSKV AREA	CKT	LOADING	RATING	PERCENT	CURRENT (MVA)
X-----	FROM BUS-----	X	X-----	TO BUS-----	X					

* NONE *

F. BASE CASE BUSES WITH VOLTAGE GREATER THAN 1.0500:
 PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, APR 03 2000 16:13
 1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL
 2006 WINTER PEAK - UTILICORP BASE CASE WITH WERE CHANGES

BUSES WITH VOLTAGE GREATER THAN 1.0500:

X-----	BUS	-----X	AREA	V(PU)	V(KV)	X-----	BUS	-----X	AREA	V(PU)	V(KV)

* NONE *

G. BASE CASE BUSES WITH VOLTAGE LESS THAN 0.9500:
 X----- BUS -----X AREA V(PU) V(KV) X----- BUS -----X AREA V(PU) V(KV)

* NONE *

ACCC OVERLOAD REPORT MONITORED ELEMENTS LOADED OVER 100.0 % OF RATING SET B & ACCC VOLTAGE REPL

1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL
 2006 WINTER PEAK - UTILICORP BASE CASE WITH WERE CHANGES
 *** ACCC OVERLOAD REPORT: MONITORED ELEMENTS LOADED ABOVE 100.0 % OF RATING SET B ***
 *** ACCC VOLTAGE REPORT ***

DISTRIBUTION FACTOR FILE: Dfax06WP.sgf
 SUBSYSTEM DESCRIPTION FILE: USER DIALOGUE
 MONITORED ELEMENT FILE: opamon539.txt
 CONTINGENCY DESCRIPTION FILE: opacon2k.txt

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA (MW) FLOW--X
 X----- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 58752 [CMRVT93115.00] TO BUS 58759 [CUDAHY 3115.00] CKT 1 ----- CONTINGENCY SINGLE 3
 *** NONE ***

AREA 539 BUSES WITH VOLTAGE GREATER THAN 1.0500: 58806 CUDAHY 134.5 1.0664 1.0442
 X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT

AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58753 CIM-PLT113.8 0.9499 0.9748

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA (MW) FLOW--X
 X----- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 58757 [CONCORD3115.00] TO BUS 58758 [CONCORD6230.00] CKT 1 ----- CONTINGENCY SINGLE 9
 *** NONE ***

AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58805 CONCORD134.5 0.9480 1.0364
 X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA (MW) FLOW--X
 X----- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 58759 [CUDAHY 3115.00] TO BUS 58771 [JUD-LRG3115.00] CKT 1 ----- CONTINGENCY SINGLE 13
 *** NONE ***

AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58753 CIM-PLT113.8 0.9489 0.9748
 X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA (MW) FLOW--X
 X----- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 58773 [MED-LDG3115.00] TO BUS 58787 [PRATT 3115.00] CKT 1 ----- CONTINGENCY SINGLE 45
 *** NONE ***

AREA 539 BUSES WITH VOLTAGE GREATER THAN 1.0500: 58817 MED-LDG134.5 1.0618 1.0342 58833 SUNCITY134.5 1.0584 1.0356
 X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT

AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58787 PRATT 3 115 0.9362 0.9790

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA (MW) FLOW--X
 X----- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 58773 [MED-LDG3115.00] TO BUS 58797 [SUNCITY3115.00] CKT 1 ----- CONTINGENCY SINGLE 46
 *** NONE ***

AREA 539 BUSES WITH VOLTAGE GREATER THAN 1.0500: 58810 GRNEUR134.5 1.0532 1.0304 58833 SUNCITY134.5 1.0706 1.0356
 X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT

1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL
 2006 WINTER PEAK - UTILICORP BASE CASE WITH WERE CHANGES
 *** ACCC OVERLOAD REPORT: MONITORED ELEMENTS LOADED ABOVE 100.0 % OF RATING SET B ***
 *** ACCC VOLTAGE REPORT ***

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA (MW)FLOW--X
 X----- M U L T I -S E C T I O N L I N E G R O U P I N G S -----X F R O M N A M E T O N A M E C K T P R E -C N T P O S T -C N T R A T I N G P E R C E N T
 O P E N L I N E F R O M B U S 58782 [NLIBTAP3115.00] T O B U S 58837 [NLIB 3115.00] C K T 1 ----- C O N T I N G E N C Y S I N G L E 59
 *** NONE ***

X----- B U S -----X V -C O N T V -I N I T X----- B U S -----X V -C O N T V -I N I T
 A R E A 539 B U S E S W I T H V O L T A G E G R E A T E R T H A N 1.0500: 58816 E-LIBER134.5 1.0700 1.0459 58829 S-LIBER134.5 1.0739 1.0490
 X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA (MW)FLOW--X
 X----- M U L T I -S E C T I O N L I N E G R O U P I N G S -----X F R O M N A M E T O N A M E C K T P R E -C N T P O S T -C N T R A T I N G P E R C E N T
 O P E N L I N E F R O M B U S 58792 [SEWARD 3115.00] T O B U S 58796 [ST-JOHN3115.00] C K T 1 ----- C O N T I N G E N C Y S I N G L E 74
 *** NONE ***

X----- B U S -----X V -C O N T V -I N I T X----- B U S -----X V -C O N T V -I N I T
 A R E A 539 B U S E S W I T H V O L T A G E G R E A T E R T H A N 1.0500: 58826 PRATT 134.5 1.0651 1.0352
 X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA (MW)FLOW--X
 X----- M U L T I -S E C T I O N L I N E G R O U P I N G S -----X F R O M N A M E T O N A M E C K T P R E -C N T P O S T -C N T R A T I N G P E R C E N T
 O P E N L I N E F R O M B U S 58800 [W-LIBER3115.00] T O B U S 58836 [W-LIBER134.500] C K T 1 ----- C O N T I N G E N C Y S I N G L E 83
 *** NONE ***

X----- B U S -----X V -C O N T V -I N I T X----- B U S -----X V -C O N T V -I N I T
 A R E A 539 B U S E S W I T H V O L T A G E G R E A T E R T H A N 1.0500: 58830 NLIB 134.5 1.0656 1.0449
 X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA (MW)FLOW--X
 X----- M U L T I -S E C T I O N L I N E G R O U P I N G S -----X F R O M N A M E T O N A M E C K T P R E -C N T P O S T -C N T R A T I N G P E R C E N T
 O P E N L I N E F R O M B U S 58800 [W-LIBER3115.00] T O B U S 58837 [NLIB 3115.00] C K T 1 ----- C O N T I N G E N C Y S I N G L E 84
 *** NONE ***

X----- B U S -----X V -C O N T V -I N I T X----- B U S -----X V -C O N T V -I N I T
 A R E A 539 B U S E S W I T H V O L T A G E G R E A T E R T H A N 1.0500: 58830 NLIB 134.5 1.0651 1.0449
 X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA (MW)FLOW--X
 X----- M U L T I -S E C T I O N L I N E G R O U P I N G S -----X F R O M N A M E T O N A M E C K T P R E -C N T P O S T -C N T R A T I N G P E R C E N T
 O P E N L I N E F R O M B U S 58754 [CIM-PLT3115.00] T O B U S 56455 [NCIMARN3115.00] C K T 1 ----- C O N T I N G E N C Y S I N G L E 88
 *** NONE ***

X----- B U S -----X V -C O N T V -I N I T X----- B U S -----X V -C O N T V -I N I T
 A R E A 539 B U S E S W I T H V O L T A G E G R E A T E R T H A N 1.0500: 58830 SATANTA134.5 1.0658 1.0382
 A R E A 539 B U S E S W I T H V O L T A G E L E S S T H A N 0.9500: 58752 CMRIVT3 115 0.9099 0.9838 58753 CIM-PLT113.8 0.8890 0.9748
 58754 CIM-PLT3 115 0.9041 0.9826 58759 CUDAHY 3 115 0.9484 0.9981
 58772 E-LIBER3 115 0.9060 0.9807 58782 NLIBTAP3 115 0.9040 0.9796
 58790 S-LIBER3 115 0.9049 0.9798 58800 W-LIBER3 115 0.8992 0.9753
 58837 NLIB 3 115 0.9019 0.9779

A. AREA 539 TOTALS

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, APR 03 2000 16:19
 1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL AREA TOTALS
 2010 SUMMER PEAK - UTILICORP BASE CASE WITH WERE CHANGES IN MW/MVAR

AREA	GENERATION	FROM LOAD	TO BUS SHUNT	TO LINE SHUNT	FROM CHARGING	TO NET INT	LOSSES	DESIRE NET INT
539	321.9	646.0	0.0	0.0	0.0	-345.1	20.9	-345.0
WEPL	67.4	215.1	-208.0	0.0	124.3	44.0	140.5	
TOTALS	321.9	646.0	0.0	0.0	0.0	-345.1	20.9	-345.0
	67.4	215.1	-208.0	0.0	124.3	44.0	140.5	

B. INTER-AREA TRANSFER DATA

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, APR 03 2000 16:20
 1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL INTER-AREA
 2010 SUMMER PEAK - UTILICORP BASE CASE WITH WERE CHANGES TRANSFER DATA
 X---FROM AREA-X X---TO AREA--X ID PTRANS PTOTAL DESINT

539 [WEPL]	515 [SWPA]	1	-20.0
539 [WEPL]	534 [SUNC]	1	-50.0
539 [WEPL]	534 [SUNC]	2	-2.0
539 [WEPL]	536 [WERE]	1	-261.0
539 [WEPL]	536 [WERE]	2	2.0
539 [WEPL]	536 [WERE]	3	-14.0 -345.0 -345.0

C. GENERATOR UNIT DATA

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, APR 03 2000 16:21
 1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL GENERATOR
 2010 SUMMER PEAK - UTILICORP BASE CASE WITH WERE CHANGES UNIT DATA

BUS#	NAME	BSKV	CD	ID	ST	PGEN	QGEN	QMAX	QMIN	PMAX	PMIN	OWN	FRACT
58753	CIM-PLT113.8	2	1	1	50.0	18.2	28.0	-15.0	58.0	25.0	1	1.000	
58753	CIM-PLT113.8	2	2	0	0.0	0.0	10.0	-5.0	14.0	2.0	1	1.000	
58755	CLIFTON113.8	2	1	1	55.0	4.4	32.0	-15.0	70.0	5.0	1	1.000	
58770	JUD-LRG113.8	2	4	1	136.9	29.5	98.0	-45.0	143.0	30.0	1	1.000	
58777	MULGREN113.8	2	3	1	80.0	15.3	34.0	-16.0	93.0	30.0	1	1.000	

D. TRANSFORMER DATA

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E
MON, APR 03 2000 16:21
TRANSFORMER DATA

1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL

2010 SUMMER PEAK - UTILICORP BASE CASE WITH WERE CHANGES

FROM	TO	CT	TP	RATIO	ANGLE	RG	CONT	RMAX	RMIN	VMAX	VMIN	STEP	TABLE	CR	CX
56370	58795	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
56565	58792	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
56601	58779	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58751	58802	1	T	1.0625	0.00	1	-58802	1.1000	0.9000	1.0500	1.0300	0.00625			
58753	58754	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58755	58756	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58756	58804	1	T	1.0125	0.00	1	-58804	1.1000	0.9000	1.0500	1.0300	0.00625			
58757	58758	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58757	58805	1	T	1.0313	0.00	1	-58805	1.1000	0.9000	1.0500	1.0300	0.00625			
58759	58806	1	T	1.0812	0.00	1	-58806	1.1000	0.9000	1.0500	1.0300	0.00625			
58761	58807	1	T	1.0562	0.00	1	-58807	1.1000	0.9000	1.0500	1.0300	0.00625			
58762	58808	1	T	1.0500	0.00	1	-58808	1.1000	0.9000	1.0500	1.0300	0.00625			
58763	58809	1	T	1.0500	0.00	1	-58809	1.1000	0.9000	1.0500	1.0300	0.00625			
58764	58810	1	T	1.0063	0.00	1	-58810	1.1000	0.9000	1.0500	1.0300	0.00625			
58765	58811	1	T	1.0438	0.00	1	-58811	1.1000	0.9000	1.0500	1.0300	0.00625			
58767	58812	1	T	1.0562	0.00	1	-58812	1.1000	0.9000	1.0500	1.0300	0.00625			
58768	58813	1	T	1.0750	0.00	1	-58813	1.1000	0.9000	1.0500	1.0300	0.00625			
58769	58814	1	T	1.0438	0.00	1	-58814	1.1000	0.9000	1.0500	1.0300	0.00625			
58770	58771	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58771	58815	1	T	1.0562	0.00	1	-58815	1.1000	0.9000	1.0500	1.0300	0.00625			
58772	58816	1	T	1.0562	0.00	1	-58816	1.1000	0.9000	1.0500	1.0300	0.00625			
58773	58774	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58773	58817	1	T	1.0875	0.00	1	-58817	1.1000	0.9000	1.0500	1.0300	0.00625			
58776	58818	1	T	1.0187	0.00	1	-58818	1.1000	0.9000	1.0500	1.0300	0.00625			
58777	58778	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58778	58779	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58778	58819	1	T	1.0438	0.00	1	-58819	1.1000	0.9000	1.0500	1.0300	0.00625			
58780	58820	1	T	1.1000	0.00	1	-58820	1.1000	0.9000	1.0500	1.0300	0.00625			
58781	58821	1	T	1.0438	0.00	1	-58821	1.1000	0.9000	1.0500	1.0300	0.00625			
58783	58822	1	T	1.0750	0.00	1	-58822	1.1000	0.9000	1.0500	1.0300	0.00625			
58784	58823	1	T	1.0688	0.00	1	-58823	1.1000	0.9000	1.0500	1.0300	0.00625			
58784	58823	2	T	1.0688	0.00	1	-58823	1.1000	0.9000	1.0500	1.0300	0.00625			
58785	58824	1	T	1.0938	0.00	1	-58824	1.1000	0.9000	1.0500	1.0300	0.00625			
58786	58825	1	T	1.0625	0.00	1	-58825	1.1000	0.9000	1.0500	1.0300	0.00625			
58787	58826	1	T	1.0812	0.00	1	-58826	1.1000	0.9000	1.0500	1.0300	0.00625			
58788	58827	1	T	1.0187	0.00	1	-58827	1.1000	0.9000	1.0500	1.0300	0.00625			
58789	58828	1	T	1.0625	0.00	1	-58828	1.1000	0.9000	1.0500	1.0300	0.00625			
58790	58829	1	T	1.1000	0.00	1	-58829	1.1000	0.9000	1.0500	1.0300	0.00625			
58791	58830	1	T	1.0875	0.00	1	-58830	1.1000	0.9000	1.0500	1.0300	0.00625			
58793	58831	1	T	1.0812	0.00	1	-58831	1.1000	0.9000	1.0500	1.0300	0.00625			
58794	58795	1	F	1.0000	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625			
58794	58832	1	T	1.0375	0.00	1	-58832	1.1000	0.9000	1.0500	1.0300	0.00625			
58797	58833	1	T	1.0625	0.00	1	-58833	1.1000	0.9000	1.0500	1.0300	0.00625			
58798	58834	1	T	1.1000	0.00	1	-58834	1.1000	0.9000	1.0500	1.0300	0.00625			
58799	58835	1	T	1.1000	0.00	1	-58835	1.1000	0.9000	1.0500	1.0300	0.00625			
58800	58836	1	T	1.1000	0.00	1	-58836	1.1000	0.9000	1.0500	1.0300	0.00625			
58837	58838	1	T	1.1000	0.00	1	-58838	1.1000	0.9000	1.0500	1.0300	0.00625			
58839	58840	1	F	1.0812	0.00	1	-58839	1.1000	0.9000	1.0500	1.0300	0.00625			

E. BASE CASE BRANCH LOADINGS ABOVE 100.0 % OF RATING SET A:

1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL
 2010 SUMMER PEAK - UTILICORP BASE CASE WITH WERE CHANGES

FROM BUS		TO BUS		CURRENT (MVA)			
BUS	NAME	BUS	NAME	BSKV AREA	CKT LOADING	RATING	PERCENT
58771	JUD-LRG3	115	539	58840*	EDODGE	3	115 539 1 89.4 86.0 103.9

F. BASE CASE BUSES WITH VOLTAGE GREATER THAN 1.0500:

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, APR 03 2000 16:23

1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL
 2010 SUMMER PEAK - UTILICORP BASE CASE WITH WERE CHANGES

BUSES WITH VOLTAGE GREATER THAN 1.0500:

BUS	NAME	V(PU)	V(KV)	X	AREA	V(PU)	V(KV)
58771	JUD-LRG3	115	539	1	89.4	86.0	103.9

* NONE *

G. BASE CASE BUSES WITH VOLTAGE LESS THAN 0.9500:

BUS	NAME	V(PU)	V(KV)	X	AREA	V(PU)	V(KV)
58787	PRATT	3	115	539	0.9433	108.48	

H. ACCC RLOAD REPORT MONITORED ELEMENTS LOADED ABOVE 10 % OF RATING SET B & ACCC VOLTAGE REPORT

1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL

2010 SUMMER PEAK - UTILICORP BASE CASE WITH WERR CHANGES

*** ACCC OVERLOAD REPORT: MONITORED ELEMENTS LOADED ABOVE 100.0 % OF RATING SET B ***

*** ACCC VOLTAGE REPORT ***

Distribution Factor File: Dfax10SP.egf
User Dialogue File: USER DIALOGUE
opsmon539.txt
opsmon2k.txt
Contingency Description File: opscon2k.txt

[illegible]

NONE

[illegible]

X-X-----	CONTINGENCY EVENTS -----X-X-- OVERLOADED LINES --X X-MVA(MW)FLOW--X
X----	MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 58754 [CIM-PLT3115.00] TO BUS 58782 [NLIBVAP3115.00]	CKT 1 ----- CONTINGENCY SINGLE 5

*** NONE ***

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X----- BUS -----X Y-CONT V-INIT X----- BUS -----X V-CONT V-INIT
AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58762 NLIETAP3 115 0.9475 0.9684 58800 W-LIBER3 115 0.9417 0.9630
58837 NLIB 3 115 0.9442 0.9653

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CONTINGENCY EVENTS -----X-X-- OVERLOADED LINES --X X--MVA(MM)FLOW--X
X---- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 58757 [CONCORD3115.00] TO BUS 58758 [CONCORD6230.00] CKT 1 ----- CONTINGENCY SINGLE 9

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★★★ NONE ★★★★★

AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500:	X-----	BUS	-----X	V-CONT	V-INIT	X-----	BUS	-----X	V-CONT	V-INIT
58757 CONCORD3	115	0.9416	1.0072	58763	GLENELD3	115	0.9281	0.9819		
58769 JEWELL 3	115	0.9320	0.9879	58785	PHILBURG3	115	0.9284	0.9658		
58793 SMITH-C3	115	0.9259	0.9738	58798	WALDO 3	115	0.9476	0.9758		

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CONTINGENCY EVENTS-----X--OVERLOADED LINES--X X-WVA(MM)FLOW--X
X---MULTI-SECTION LINE GROUPINGS-----X TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 58757 [CONCORD3115.00] TO BUS 58763 [GLENELD3115.00] CKT 1-----CONTINGENCY SINGLE 10

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*** NONE ***

	X-----	BUG	-----X	V-CONT	V-INIT	X-----	BUG	-----X	V-CONT	V-INIT
AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500:	58763	GLENELD3	115	0.9341	0.9819	58785	PHLBURG3	115	0.9404	0.9658
	58793	SMITH-C3	115	0.9408	0.9738					

CONTINGENCY	EVENTS	OVERLOADED	LINES	CT	PRE-CNT	RATING	PERCENT
X-X	X-X	X-X	X-X	X-X	X-X	X-X	X-X
MULTI-SECTION	LINE GROUPINGS	FROM	NAME	TO	NAME	CT	PRE-CNT
OPEN LINE FROM BUS 58757 [CONCORD3115.00]	TO BUS 58769 [JEWELL 3115.00]	CKT 1					CONTINGENCY SINGLE 11

NONE 無

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AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58769 JEWELL 3 115 0.9445 0.9879
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1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL
2010 SUMMER PEAK - UTILICORP BASE CASE WITH WERE CHANGES
*** ACCC OVERLOAD REPORT: MONITORED ELEMENTS LOADED ABOVE 100.0 % OF RATING SET B ***
*** ACCC VOLTAGE REPORT ***

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 58764 [GRNBURG3115.00] TO BUS 58771 [JUD-LRG3115.00] CKT 1 ----- CONTINGENCY SINGLE 24

*** NONE ***

AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
58764 GRNBURG3 115 0.9414 0.9910 58773 MED-LDG3 115 0.9310 0.9652
58774 MED-LDG4 138 0.9370 0.9709 58787 PRATT 3 115 0.9175 0.9433
58797 SUNCITY3 115 0.9358 0.9769

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 58764 [GRNBURG3115.00] TO BUS 58797 [SUNCITY3115.00] CKT 1 ----- CONTINGENCY SINGLE 25

*** NONE ***

AREA 539 BUSES WITH VOLTAGE GREATER THAN 1.0500: X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
58810 GRNBURG134.5 1.0729 1.0435
AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58773 MED-LDG3 115 0.9291 0.9652 58774 MED-LDG4 138 0.9378 0.9709
58787 PRATT 3 115 0.9177 0.9433 58797 SUNCITY3 115 0.9289 0.9769

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 58766 [GBENDTP3115.00] TO BUS 58778 [MULGREN3115.00] CKT 1 ----- CONTINGENCY SINGLE 28

*** NONE ***

AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
58766 GBENDTP3 115 0.9417 0.9956 58787 PRATT 3 115 0.9198 0.9433
58792 SEWARD 3 115 0.9414 0.9798 58796 ST-JOHN3 115 0.9366 0.9666

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 58766 [GBENDTP3115.00] TO BUS 58792 [SEWARD 3115.00] CKT 1 ----- CONTINGENCY SINGLE 29

*** NONE ***

AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
58787 PRATT 3 115 0.9189 0.9433 58792 SEWARD 3 115 0.9398 0.9798
58796 ST-JOHN3 115 0.9355 0.9666

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 58768 [HARPER 4138.00] TO BUS 58774 [MED-LDG4138.00] CKT 1 ----- CONTINGENCY SINGLE 32

*** NONE ***

AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
58773 MED-LDG3 115 0.9389 0.9652 58774 MED-LDG4 138 0.9389 0.9709

1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL
 2010 SUMMER PEAK - UTILICORP BASE CASE WITH WERE CHANGES
 *** ACCC OVERLOAD REPORT: MONITORED ELEMENTS LOADED ABOVE 100.0 % OF RATING SET B ***
 *** ACCC VOLTAGE REPORT ***

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
 X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 58768 [HARPER 4138.00] TO BUS 58775 [MILANTP4138.00] CKT 1 ----- CONTINGENCY SINGLE 33
 *** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 AREA 539 BUSES WITH VOLTAGE GREATER THAN 1.0500: 58818 MILAN 134.5 1.0669 1.0468
 AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58764 GRNBURG3 115 0.9394 0.9910 58768 HARPER 4 138 0.8329 0.9819
 58773 MED-LDG3 115 0.8722 0.9652 58774 MED-LDG4 138 0.8641 0.9709
 58787 PRATT 3 115 0.8775 0.9433 58796 ST-JOHN3 115 0.9294 0.9666
 58797 SUNCITY3 115 0.9009 0.9769 58813 HARPER 134.5 0.8322 1.0317
 58817 MED-LDG134.5 0.9253 1.0331

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
 X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 58773 [MED-LDG3115.00] TO BUS 58774 [MED-LDG4138.00] CKT 1 ----- CONTINGENCY SINGLE 44
 *** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 AREA 539 BUSES WITH VOLTAGE GREATER THAN 1.0500: 58813 HARPER 134.5 1.0564 1.0317
 AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58773 MED-LDG3 115 0.9389 0.9652

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
 X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 58773 [MED-LDG3115.00] TO BUS 58787 [PRATT 3115.00] CKT 1 ----- CONTINGENCY SINGLE 45
 *** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 AREA 539 BUSES WITH VOLTAGE GREATER THAN 1.0500: 58813 HARPER 134.5 1.0518 1.0317 58817 MED-LDG134.5 1.0679 1.0331
 58833 SUNCITY134.5 1.0746 1.0457
 AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58787 PRATT 3 115 0.8918 0.9433 58796 ST-JOHN3 115 0.9386 0.9666

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
 X----- MULTI-SECTION LINE GROUPINGS -----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 58773 [MED-LDG3115.00] TO BUS 58797 [SUNCITY3115.00] CKT 1 ----- CONTINGENCY SINGLE 46
 *** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 AREA 539 BUSES WITH VOLTAGE GREATER THAN 1.0500: 58810 GRNBURG134.5 1.0781 1.0435 58833 SUNCITY134.5 1.1026 1.0457
 AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58773 MED-LDG3 115 0.9300 0.9652 58774 MED-LDG4 138 0.9391 0.9709
 58787 PRATT 3 115 0.9185 0.9433

1-2000 SOUTHWEST POWER POOL BASE CASE POWER FLOW MODEL
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 *** ACCC OVERLOAD REPORT: MONITORED ELEMENTS LOADED ABOVE 100.0 % OF RATING SET B ***
 *** ACCC VOLTAGE REPORT ***

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 58780 [N-DODGE3115.00] TO BUS 58840 [EDODGE 3115.00] CKT 1 ----- CONTINGENCY SINGLE 57

*** NONE ***
 X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 AREA 539 BUSES WITH VOLTAGE GREATER THAN 1.0500: 58839 EDODGE 134.5 1.0662 1.0461

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 58782 [NLIBTAP3115.00] TO BUS 58837 [NLIB 3115.00] CKT 1 ----- CONTINGENCY SINGLE 59

*** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 AREA 539 BUSES WITH VOLTAGE GREATER THAN 1.0500: 58816 E-LIBER134.5 1.0713 1.0438 58829 S-LIBER134.5 1.0673 1.0389

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 58784 [OTISSUB3115.00] TO BUS 58823 [OTISSUB134.500] CKT 1 ----- CONTINGENCY SINGLE 61
 58784*OTISSUB3 115 58823 OTISSUB134.5 2 5.4 9.9 8.0 123.6

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 58784 [OTISSUB3115.00] TO BUS 58823 [OTISSUB134.500] CKT 2 ----- CONTINGENCY SINGLE 62
 58784*OTISSUB3 115 58823 OTISSUB134.5 1 4.2 10.1 8.0 126.5

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 58785 [PHLBURG3115.00] TO BUS 58786 [PLAINVL3115.00] CKT 1 ----- CONTINGENCY SINGLE 63

*** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58785 PHLBURG3 115 0.9244 0.9658

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 58785 [PHLBURG3115.00] TO BUS 58824 [PHLBURG134.500] CKT 1 ----- CONTINGENCY SINGLE 65

*** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 AREA 539 BUSES WITH VOLTAGE GREATER THAN 1.0500: 58831 SMITH-C134.5 1.0658 1.0428

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 58787 [PRATT 3115.00] TO BUS 58796 [ST-JOHN3115.00] CKT 1 ----- CONTINGENCY SINGLE 68

*** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58768 HARPER 4 138 0.9481 0.9819 58773 MED-LDG3 115 0.9042 0.9652
 58774 MED-LDG4 138 0.9155 0.9709 58787 PRATT 3 115 0.8444 0.9433
 58797 SUNCITY3 115 0.9267 0.9769 58826 PRATT 134.5 0.9272 1.0381

1-2000 SOUTHWEST POWER POOL BASE CASE JMER FLOW MODEL
 2010 SUMMER PEAK - UTILICORP BASE CASE WITH WERE CHANGES
 *** ACCC OVERLOAD REPORT: MONITORED ELEMENTS LOADED ABOVE 100.0 % OF RATING SET B ***
 *** ACCC VOLTAGE REPORT ***

X----- C O N T I N G E N C Y E V E N T S - - - - - X X - - O V E R L O A D E D L I N E S - - X X - - M V A (M M) F L O W - - X
 X - - - - M U L T I - S E C T I O N L I N E G R O U P I N G S - - - - - X F R O M N A M E T O C K T 1 - - - - - C O N T I N G E N C Y P E R C E N T
 O P E N L I N E F R O M B U S 5 8 7 9 2 [S E W A R D 3 1 1 5 . 0 0] T O B U S 5 8 7 9 6 [S T - J O H N 3 1 1 5 . 0 0] C K T 1 - - - - - C O N T I N G E N C Y S I N G L E 7 4
 *** N O N E ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58773 MED-LDG3 115 0.9421 0.9652 58774 MED-LDG4 138 0.9495 0.9709
 58787 PRATT 3 115 0.9053 0.9433 58796 ST-JOHN3 115 0.9185 0.9666

X----- C O N T I N G E N C Y E V E N T S - - - - - X X - - O V E R L O A D E D L I N E S - - X X - - M V A (M M) F L O W - - X
 X - - - - M U L T I - S E C T I O N L I N E G R O U P I N G S - - - - - X F R O M N A M E T O C K T 1 - - - - - C O N T I N G E N C Y P E R C E N T
 O P E N L I N E F R O M B U S 5 8 7 9 9 [W - D O D G E 3 1 1 5 . 0 0] T O B U S 5 8 8 3 5 [W - D O D G E 1 3 4 . 5 0 0] C K T 1 - - - - - C O N T I N G E N C Y S I N G L E 8 2
 *** N O N E ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 AREA 539 BUSES WITH VOLTAGE GREATER THAN 1.0500: 58812 HAGGARD134.5 1.0637 1.0395

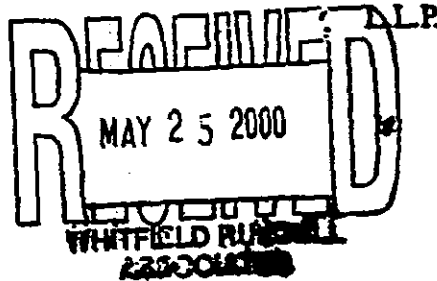
X----- C O N T I N G E N C Y E V E N T S - - - - - X X - - O V E R L O A D E D L I N E S - - X X - - M V A (M M) F L O W - - X
 X - - - - M U L T I - S E C T I O N L I N E G R O U P I N G S - - - - - X F R O M N A M E T O C K T 1 - - - - - C O N T I N G E N C Y P E R C E N T
 O P E N L I N E F R O M B U S 5 8 7 7 9 [M U L G R E N 6 2 3 0 . 0 0] T O B U S 5 6 6 0 1 [H E I Z E R 3 1 1 5 . 0 0] C K T 1 - - - - - C O N T I N G E N C Y S I N G L E 9 0
 *** N O N E ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58751 ALEXNDR3 115 0.9372 0.9888 58785 PHLBURG3 115 0.9452 0.9658

X----- C O N T I N G E N C Y E V E N T S - - - - - X X - - O V E R L O A D E D L I N E S - - X X - - M V A (M M) F L O W - - X
 X - - - - M U L T I - S E C T I O N L I N E G R O U P I N G S - - - - - X F R O M N A M E T O C K T 1 - - - - - C O N T I N G E N C Y P E R C E N T
 O P E N L I N E F R O M B U S 5 8 7 8 6 [P L A I N V L 3 1 1 5 . 0 0] T O B U S 5 6 5 5 1 [S A L I N E 3 1 1 5 . 0 0] C K T 1 - - - - - C O N T I N G E N C Y S I N G L E 9 2
 *** N O N E ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 AREA 539 BUSES WITH VOLTAGE LESS THAN 0.9500: 58785 PHLBURG3 115 0.9278 0.9658 58786 PLAINVL3 115 0.9349 0.9819
 58793 SMITH-C3 115 0.9467 0.9738 58798 WALDO 3 115 0.9453 0.9758

HOGAN & HARTSON



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PARTNER
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JPMATHIS@HHHLAW.COM

May 19, 2000

BY HAND DELIVERY

MAY 23 2000

Mr. David P. Boergers, Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, DC 20426

SPINER & McDIARMID

Re: UtiliCorp United Inc., et al., Docket Nos. EC00-27-000 and
EC00-28-000

Dear Mr. Boergers:

By letter dated April 17, 2000, Mr. Michael C. McLaughlin, Director of the Division of Corporate Applications of the Office of Markets, Tariffs and Rates, requested the preparation of certain additional competitive analyses (as well as other information) from the Applicants in the referenced proceedings, for the stated purpose of expediting further consideration of the subject Application by the Commission. That letter order ("the April 17 order") called for a response by Applicants within twenty-one days of its issuance, which would have been May 8, 2000. By letter dated May 4, 2000, Applicants requested an extension of time, to May 12, 2000, to file their response. On May 11, 2000, Applicants requested a further extension, to May 19, 2000. Both requested extensions were granted. With the submission transmitted herewith, Applicants hereby file their response to the April 17 order.

While Applicants now respond in full to the April 17 order, we wish to note our disagreement with the premise on which it was issued - namely, that as of March 10, 2000, a significant change had occurred with respect to the Application, which required that the review process be started over. The April 17 order noted that the Application had not included a competitive analysis of the Applicants' systems based on the assumption of future integration, because "it would be too speculative to try to analyze future interconnections that might or might not occur" (quoting Applicants' witness, Dr. Mark Frankena). Apparently focusing solely on

May 19, 2000

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that statement by Dr. Frankena and ignoring the more detailed direct (and rebuttal) testimony of Applicants' witness, Richard C. Kreul, the order asserted that Applicants had "stated for the first time on March 10, 2000, that integration would definitely occur." (April 17 order at pages one and two.) The April 17 order went on to state:

"...[I]t now appears certain that Applicants will integrate their systems but are still contemplating different ways in which to accomplish such integration. The integration of the merging systems could materially change the results of the initial competitive analysis filed by the Applicants as part of their application. The Commission cannot evaluate the competitive effects of the proposed merger without incorporating the effects of such integration and the application does not contain the information necessary to do so."

In responding herein to the April 17 order, Applicants wish to state that it has always been their intention to integrate the merged systems in the future and believed that they had so indicated in the totality of the testimony contained in their Application filed last November. We thus disagree with the suggestion in the April 17 order that such intention was stated by Applicants for the first time on March 10, 2000. The uncertainties previously noted by Applicants as the reason for their decision not to attempt to provide competitive analyses of the merged systems in one or more hypothetical, future configurations, related to the question of *how* such integration would be accomplished in the future, not to the issue of *whether* it would be done.^{1/}

It should also be noted that all of the potential options for permanently integrating Applicants' systems after the merger would be accomplished by making substantial investments in transmission upgrades or new lines, which then would

^{1/} Such uncertainty regarding the method of future integration is to be expected, given the continuing uncertain state of affairs with respect to the development of Regional Transmission Organizations in the region surrounding Missouri and Kansas. Indeed, Applicants still cannot state definitively how such integration will be accomplished; however, in order to respond to the April 17 order, Applicants have prepared analyses for the two remaining integration options under consideration.

May 19, 2000

Page 3

be placed under the control of regional transmission entities. The competitive impact of future integration in those circumstances could only be positive, and additional Appendix A analyses assuming post-merger integration under all potential future configurations then under consideration seemed superfluous, at best.

Applicants take exception, therefore, to the statement in the April 17 order that there have been "significant changes" to the merger proposal requiring the new analyses requested, which "will start the Commission's merger review process over." (April 17 order at page two). Notwithstanding such disagreement, Applicants have moved as quickly as possible to carry out and provide the requested analyses. We tender those materials and the other information requested for the Commission's review at this time, with the request that the Commission now act promptly to approve the mergers involved in this Application. Consistent with the twenty-one day period for intervenor comments on this filing, required by the April 17 order, Applicants respectfully request that the Commission approve the Application by no later than July 12, 2000.

Sincerely,



John P. Mathis
Counsel for UtiliCorp United Inc.,
on behalf of all Applicants

Enclosures

cc: Hon. James J. Hoecker, Chairman
Hon. Linda Key Breathitt, Commissioner
Hon. Curt Hebert, Jr., Commissioner
Hon. William L. Massey, Commissioner
Mr. Michael C. McLaughlin, Director, Division of Corporate Applications,
Office of Markets, Tariffs and Rates
All parties of record

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

UtiliCorp United Inc. and	)	Docket No. EC00-27-000
St. Joseph Light & Power Company	)	
	)	
UtiliCorp United Inc. and	)	Docket No. EC00-28-000
The Empire District Electric Company	)	

RESPONSE OF APPLICANTS
TO LETTER ORDER DATED APRIL 17, 2000

INTRODUCTION

UtiliCorp United Inc. ("UtiliCorp"), St. Joseph Light & Power Company ("St. Joseph") and The Empire District Electric Company ("Empire"), the Applicants in the above-captioned proceedings ("the Applicants"), hereby submit their response to the Commission's Letter Order dated April 17, 2000 (the "April 17 order"). In that letter order, the Commission requested that Applicants supplement the competitive analysis filed with their Application on November 23, 1999, to take into account the post-merger integration of UtiliCorp's Missouri Public Service division ("MPS") with the systems of St. Joseph and Empire. The Commission also requested that Applicants explain certain transactions relating to natural gas that were announced after November 1999.

In response to the April 17 Order, Applicants submit the Supplemental Testimony of Mr. Richard C. Kreul and of Dr. Mark W. Frankena, attached hereto. As Mr. Kreul explains, the purpose of his testimony is to provide the Commission

with certain updated information concerning the Applicants' plans with respect to the future permanent integration of the MPS, St. Joseph and Empire systems. Dr. Frankena's testimony describes the additional competitive analyses performed at Applicants' request, which incorporate the assumptions regarding the future integration options that Mr. Kreul testifies are under consideration by Applicants, and also explains the competitive significance of the results of those analyses.

Applicants respectfully submit that the Supplemental Testimony of Mr. Kreul and of Dr. Frankena provide a full and complete response to the April 17 order. This additional information and analysis provide further confirmation that the mergers before the Commission in this proceeding do not present significant competitive concerns under any future integration scenario under consideration and that the Commission should now proceed to approve the Application without further delay.

DESCRIPTION OF TESTIMONY AND EXHIBITS INCLUDED IN RESPONSE

With respect to the question of the potential future options for permanent integration of the merged companies' currently separate systems in Missouri (i.e., the MPS, St. Joseph and Empire systems), Mr. Kreul provides an update of events that have occurred since his rebuttal testimony was filed on February 10, 2000. He points out that UtiliCorp received on April 21, 2000, the initial results of the System Impact Study prepared by the Southwest Power Pool ("SPP"), in connection with its consideration of UtiliCorp's application for network service, described in his rebuttal testimony (dated February 10, 2000). Upon review

of the data provided by the SPP System Impact Study, Mr. Kreul states that UtiliCorp has concluded that the costs of the upgrades to SPP member company systems that would be required in order to meet SPP's requirements for agreeing to provide network service, when coupled with the charges for such service under the SPP tariff, will cause the total cost of that approach to integration to exceed by a substantial margin the costs involved with construction of the new facilities contemplated originally as the likely integration option for the merged systems in question. (Kreul Supplemental Testimony at 3-4) In addition, Mr. Kreul's supplemental testimony points out that the comparative operational benefits favor the original integration approach as well. (Id.) As a result, he states that UtiliCorp has decided not to continue the application to the SPP for network service and has thus ruled out the use of that approach to the future integration of the subject systems. Because that potential option to future integration is no longer under consideration, Applicants have not attempted to furnish a competitive analysis of the mergers based on that assumption.

Mr. Kreul explains that the Applicants are now limited to the consideration of only two potential alternatives for such integration, both of which involve construction of the new transmission facilities described in his direct testimony, filed in November 1999. Those options are quite straightforward. They are: (a) to place the subject systems of the merged companies, as interconnected by the new transmission facilities, under the SPP regional transmission tariff, or (b) to place such systems, as interconnected, under the regional transmission tariff of the

Midwest Independent System Operator ("the Midwest ISO"). Mr. Kreul emphasizes in his supplemental testimony that the earliest time by which the subject systems could be interconnected (or "integrated") under either the SPP tariff or the Midwest ISO by means of such new facilities is mid-to-late 2002 (Id. at 6). He also notes that during that two-year period, there will likely be significant changes in the structure and configuration of those regional transmission entities. Mr. Kreul states that the Applicants have no objection to being required to join a Regional Transmission Organization meeting the criteria of Order No. 2000 (an "RTO") as a condition of approval of their mergers, but they have requested that they be given the same latitude afforded to all other public utilities under that Order regarding the timing of their statement of intentions with respect to the specific RTO they intend to join. ^{1/}

In view of the above described developments, the Applicants (through the undersigned) instructed Dr. Frankena to prepare competitive analyses utilizing both potential alternative approaches to future integration that remain under active consideration. Thus, analyses of the competitive impact of the mergers assuming integration via construction of the new lines and placing the subject systems under the SPP regional tariff, in the one situation, and under the Midwest ISO, in the other, are furnished and explained in Dr. Frankena's supplemental testimony submitted herewith.

^{1/} See, e.g., American Electric Power Co. and Central and South West Corp., 90 FERC ¶ 61,242, opinion and order dismissing in part, denying in part, and granting

Dr. Frankena notes at the outset that data used for the pre- and post-merger cases have been updated to reflect changes in generation and transmission in the relevant market since his direct testimony was prepared over six months ago. And of course, the other major difference from his previous analyses is the fact that the current post-merger assumptions include the addition of the new transmission lines interconnecting MPS with St. Joseph and Empire, under the two integration scenarios described above. The supplemental Appendix A analyses cover the same 3,960 cases that were considered in Dr. Frankena's direct testimony, where no future integration was assumed. 2/ As a result of conducting the requested supplemental analyses, Dr. Frankena found that for each of the two alternatives, the combined effect of the two mergers is to cause an increase in the Herfindahl-Hirschman Index ("HHI") slightly above "Screen 1" 3/ in only 27 (for Alternative A) and 25 (for Alternative B) of the 3,960 cases. There are only 7 results which are above "Screen 2" 4/ by a trivial amount for each of the alternative integration options analyzed.

in part reh'g, 91 FERC ¶ 61,129 (2000) (conditionally approving merger while permitting applicants to determine appropriate RTO(s) to join).

2/ There are 3,960 cases for each alternative because there are 33 destinations, 15 periods, two capacity types (Economic Capacity and Available Economic Capacity), two methods of allocating transmission capability, and two sets of proxies for pre-merger market prices ($33 \times 15 \times 2 \times 2 \times 2 = 3,960$), as explained in Dr. Frankena's direct testimony.

3/ Screen 1 is an increase of 100 or more in a market in which the post-merger HHI is between 1,000 and 1,800.

4/ Screen 2 is an increase of 50 or more in a market in which the post-merger HHI is 1800 or more.

As Dr. Frankena explains in his supplemental testimony, among the supplemental HHI results that are above Screen 1, none of the post-merger HHIs is above 1,450, and the increases in HHIs are all 188 or less. Dr. Frankena explains that it would be highly unusual for a federal antitrust agency or court to find that a merger that left the HHI well below 1,800 would raise significant competitive concerns or violate the antitrust laws, particularly where the increase in the HHI was under 200. For the HHI results above Screen 2, the increase in HHI is 62 or less, which is indistinguishable from the safe harbor level of 50 in markets with a post-merger HHI of 1,800 or more. (Frankena Supplemental Testimony at 13).

Dr. Frankena's supplemental analyses do not raise competitive concerns for several fundamental reasons. First, based on their small size and limited historical sales, UtiliCorp, St. Joseph, and Empire would not be significant competitors in any market for electric power absent the proposed merger. Second, the HHI results suggest that the proposed mergers are not likely to increase market power, regardless of entry conditions. Third, all of the screen failures are for Economic Capacity, and as long as utilities retain obligations to serve retail load, the relevant measure of market shares for competitive analysis is Available Economic Capacity. Fourth, entry conditions are such that the proposed mergers are not likely to increase market power, regardless of HHI results. Neither of the supplemental analyses has any relevance until after the new interconnections are completed and after obligations to serve retail load are substantially eliminated in

the region. Because such obligations to serve are unlikely to be eliminated within the next several years, the ease of entry of new generation virtually eliminates any concerns regarding the competitive consequences of the mergers. (Frankena Supplemental Testimony at 12-16). 5/

THE COMMISSION SHOULD ACT PROMPTLY TO APPROVE THE MERGERS

The supplemental material included with this response reinforces the conclusions contained in the original Application, namely that the mergers of UtiliCorp and St. Joseph and of UtiliCorp and Empire are consistent with the public interest and should be approved. 6/ Even if one concedes the premise of the April 17 order, the Commission now has before it all of the information it requires to approve the proposed mergers. In its Merger Policy Statement, the Commission stated that it would make every reasonable effort to issue an initial order on a complete merger application within 120 to 150 days of the filing of the application. The Applicants filed their Application on November 23, 1999. The Commission issued the April 17 Order 146 days later. Applicants therefore respectfully request that the

5/ Dr. Frankena also provides testimony explaining why none of the natural gas transactions involving UtiliCorp subsidiaries that have occurred since November 1999 is of any significance for the level of competition in any market for electric power.

6/ Indeed, Mr. Kreul's Supplemental Testimony resolves the most contentious issue raised by intervenors in response to the original application. Several intervenors had argued that the merged company should be required to place all of its Missouri and Kansas transmission facilities under a single regional tariff. Mr. Kreul now explains that upon completion of the planned transmission facility additions necessary to interconnect the Applicants' systems, all of the merged company's Missouri and Kansas transmission facilities will be placed under a single RTO, either the SPP or the Midwest ISO.

Commission approve the proposed mergers expeditiously -- if possible, by no later than the Commission's July 12, 2000 meeting. Since Intervenor comments on this filing are required by the April 17 order to be filed by June 9, 2000, the July 12 meeting would provide the Commission with over 30 days after the filing of such comments to issue its order.

The Commission's July 12 meeting is 232 days after the original Application was filed. The Commission has approved mergers with far more significant competitive consequences on much shorter timetables. For example, on November 22, 1999, one day before the Applicants filed their application in these dockets, Commonwealth Edison Company and PECO Energy Company filed their merger application in Docket No. EC00-26-000. Although the applicants in that docket were many times the relative size of UtiliCorp, St. Joseph and Empire, and the applicants' competitive analysis showed Appendix A screen failures far more significant than those at issue in this proceeding, 7/ the Commission approved the merger on April 12, 2000. 8/

7/ For example, applicants economic capacity analysis (without mitigation) showed significant screen failures for 10 of 11 time periods for the Commonwealth Edison destination market. The post-merger HHIs ranged from 4395 to 5671 and the HHI changes ranged from 179 to 297. The analysis showed similar results for available economic capacity. Despite these screen failures, the Commission approved the merger without requiring any form of mitigation.

8/ Commonwealth Edison Co and PECO Energy Co., 91 FERC ¶ 61,036 (2000).

CONCLUSION

The Applicants thus respectfully request that the Commission issue a decision approving the proposed mergers of UtiliCorp and St. Joseph and of UtiliCorp and Empire as expeditiously as possible.

Respectfully submitted,

Eugene R. Elrod *by JRM*

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On behalf of
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John P. Mathis

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On behalf of
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Michael E. Small *by JRM*

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Wright & Talisman
1200 G Street, N.W., Suite 600
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On behalf of
The Empire District Electric Company

Date: May 19, 2000

CERTIFICATE OF SERVICE

I hereby certify that I have this day served, by U.S. mail, the foregoing document upon each person designated on the official service list compiled by the Secretary in this proceeding.

Dated at Washington, D.C. this 19th day of May, 2000.



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UtiliCorp United Inc. and St. Joseph Light & Power Company	))	Docket No. EC00-27-000
UtiliCorp United Inc. and The Empire District Electric Company	))	Docket No. EC00-28-000

1 Q. Please state your name, position and business address.

2 A. My name is Richard C. Kreul. I am employed by UtiliCorp United Inc.

3 ("UCU"), within the operating group, UtiliCorp Energy Delivery

4 ("UED"), as Vice President of Transmission Services. My business

5 address is 10700 East 350 Highway, P.O. Box 11739, Kansas City, MO

6 64138.

7 Q. Are you the same Richard C. Kreul who provided direct testimony on

8 behalf of UCU in the above-captioned dockets on November 23, 1999

9 and rebuttal testimony on February 10, 2000?

10 A. Yes.

11 Q. What is the purpose of this supplemental testimony?

12 A. In a letter order dated April 17, 2000, the Commission directed the

13 Applicants in these proceedings to provide additional competitive

14 analyses to reflect the integration of Applicants' systems by any

1 mechanisms under consideration for achieving such integration. The
2 purpose of this supplemental testimony is to describe such mechanisms
3 that remain under consideration, which are the bases for the
4 additional analyses undertaken by Applicants' expert witness, Dr.
5 Mark W. Frankena, in response to the April 17 letter order.

6 Q. Have there been any additional factual developments since your
7 rebuttal testimony was filed on February 10, 2000, that have a bearing
8 on the subject matter of the Company's response to the April 17 order?

9 A. Yes.

10 Q. Please explain.

11 A. As I mentioned in my rebuttal testimony last February, UtiliCorp
12 applied on December 6, 1999, for network service under the Southwest
13 Power Pool ("SPP") tariff and on February 8, 2000, executed System
14 Impact Study Agreements with the SPP related to that request. As I
15 stated at that time, the option of potentially integrating the merged
16 companies' systems using network service under the SPP tariff would
17 be considered in the context of the results of the System Impact Study.
18 A principal benefit of such a Study is that it provides UtiliCorp with
19 load flow and other data that permit it to estimate the costs involved in
20 the option of taking network service under the SPP tariff, as compared
21 to the costs associated with the Company's original integration concept
22 of building its own transmission lines (or having such lines built) to

1 join the systems of UtiliCorp's Missouri Public Service ("MPS") division
2 with those of St. Joseph Light & Power Company ("St. Joseph") and
3 The Empire District Electric Company ("Empire"). (A detailed
4 description of those lines is contained in my direct testimony, dated
5 November 15, 1999, at pages 12 and 13.) The initial results of the
6 System Impact Study were delivered by the SPP to UtiliCorp on April
7 21, 2000.

8 Q. What is the significance of those results to the Applicants' thinking
9 regarding the options for the future integration of the systems of the
10 merged companies referred to above?

11 A. Based on our analysis and estimates of the likely cost of the upgrades
12 to SPP member company systems that the SPP has stated will be
13 required in order to approve UtiliCorp's application for network
14 service, it appears that the costs of those upgrade investments, coupled
15 with the SPP's charges for network service, will cause the total costs of
16 that integration option to exceed by a substantial amount the costs
17 that have been estimated for UtiliCorp's original concept of building
18 new transmission lines connecting MPS / St. Joseph and MPS /
19 Empire. It also appears on further study that the comparative benefits
20 to the merged companies' operations of integrating through the use of
21 network service under the SPP tariff will be inferior to those which can
22 be obtained through the construction of the above-described new lines

1 joining the merged companies' systems. Thus, it does not appear
2 fruitful for UtiliCorp to continue to pursue the application for network
3 service with the SPP, and to incur the related costs of that process, at
4 the present time.

5 Q. What options then are Applicants currently considering for the future
6 integration of the systems in question?

7 A. Two options remain under serious consideration, both of which involve
8 the construction of the new transmission lines mentioned above and in
9 my direct testimony. The first option would be to build the lines
10 described (or have them built) and then to place the merged-company
11 systems in question under the SPP transmission tariff but without
12 taking network service (because if the lines are built, network service
13 would no longer be required in order to permit those systems to be
14 joined into a single control area). The second option would be to build
15 such lines and place the systems in question under the transmission
16 tariff of the Midwest Independent System Operator.

17 Q. Are the Applicants willing to limit the amount of transfer capability
18 that is reserved between the three current control areas?

19 A. Yes. Under normal operating conditions, the Applicants are willing,
20 for a period of three years after completion of the integration of the
21 systems described, to limit the amount of priority transfer rights to the
22 following amounts:

	<u>From</u>	<u>To</u>	<u>Megawatts</u>
1	MPS	SJLP	200
2	MPS	EDE	200
3	SJLP	MPS	100
4	EDE	MPS	100
5			

6 Q. What is the basis for those transfer amounts?

7 A. The above transfer amounts permit the Applicants to achieve the
8 energy cost savings which are one of the benefits resulting from the
9 integration of the power supply functions of the Applicants.

10 Q. Are there any situations in which the Applicants would exceed the
11 above transfer amounts?

12 A. Yes. Under abnormal operating conditions (such as loss of a major
13 generating unit), the transfer amounts shown above may be exceeded
14 due to redispatch or other system requirements, which would be
15 determined by the applicable regional transmission system operator.

16 Q. Is any approach, other than the two options described, for the
17 permanent integration of the merged companies' systems under
18 consideration by Applicants at this time?

19 A. No.

20 Q. Why is UtiliCorp not making an immediate decision regarding whether
21 to place the future integrated systems of MPS, St. Joseph and Empire
22 under the SPP or the Midwest ISO?

23 A. There are several reasons underlying UtiliCorp's belief that such an
24 immediate decision on that choice remains premature at this time.

1 First, when we address the question of the future integration of the
2 subject systems by means of the new lines described, we are talking
3 about an event that will not take place for at least the next two years.
4 The process of planning, siting and building the subject transmission
5 lines will require a minimum of eighteen months from the formal
6 commencement of that process, which will not begin in earnest until
7 after all regulatory approvals for the mergers have been obtained and
8 financial closing of the merger transactions has occurred. That timing
9 would mean that the commencement of integrated operations utilizing
10 those facilities could not occur prior to mid-to-late 2002. Second,
11 UtiliCorp anticipates that the organizational structures and
12 configurations of both the SPP and the Midwest ISO will change
13 significantly during the next six to eighteen months and that a
14 decision on which of the two regional transmission entities the merged
15 systems should join will become clearer than it is today. In fact,
16 discussions among the affected parties in the region regarding the
17 possibilities for changes and additions to the current configurations of
18 the SPP and Midwest ISO are occurring on almost a continuous basis.
19 It is also entirely possible that within the two-year period mentioned
20 above, there may be either in place or in prospect a broader regional
21 entity that encompasses some or all of the systems presently within
22 both the SPP and the Midwest ISO, which of course would remove all

1 uncertainty as to this issue and moot any concerns about whether the
2 merged company systems should be in one entity or the other, for
3 reasons unrelated to the merger.

4 Q. What do you consider to be the date when a definitive decision on this
5 issue should or must be made?

6 A. Given the Commission's requirement in Order No. 2000 that all public
7 utilities must inform it by October 15, 2000, regarding their plans for
8 joining a regional transmission organization meeting the criteria set
9 forth in that Order, UtiliCorp considers that date to be the practical
10 deadline for a decision on this issue, and that is the latitude that the
11 Applicants have requested in the current proceeding. Neither the SPP
12 nor the Midwest ISO has been approved by the Commission as an RTO
13 meeting the criteria of Order No. 2000; however, both of those entities
14 are administering regional transmission tariffs under which they
15 exercise effective control over the operation of the facilities subject to
16 them. Thus, regardless of which of those two entities the merged
17 companies should elect to join, the transmission facilities of the merged
18 companies would be under the control of an operator independent of
19 such companies. And, finally, I would reiterate a point made earlier in
20 these proceedings that Applicants' transmission facilities are *already*
21 under the operational control of regional transmission entities – the

1 SPP, in the case of Empire, and MAPP, in the case of MPS, St. Joseph
2 and UtiliCorp's WestPlains Energy - Kansas division.

3 Q. Do Applicants have any objection to the imposition by the Commission,
4 as a condition of approval of the Application in this proceeding, of a
5 requirement that the merged companies join a Regional Transmission
6 Organization?

7 A. No. As I stated previously, Applicants ask only that they not be
8 required to disclose their intentions on that issue any earlier than the
9 date provided by Order No. 2000 for all public utilities to do so --
10 October 15, 2000. That latitude will provide the maximum opportunity
11 for the choices on that issue to become clearer in Applicants' region
12 than they are today, but nevertheless with a reasonably prompt
13 deadline for a decision on this subject of importance to the region.

14 Q. Does that conclude your supplemental testimony?

15 A. Yes.

AFFIDAVIT

State of Missouri)
) ss.
County of Jackson)

Richard C. Kreul, having been duly sworn, upon his oath, states that he is the Vice President, Transmission Services of UtiliCorp United Inc., and that he has participated in the preparation of the foregoing written testimony, in question and answer form, and believes that the statements therein are true and correct to the best of his knowledge, information and belief.

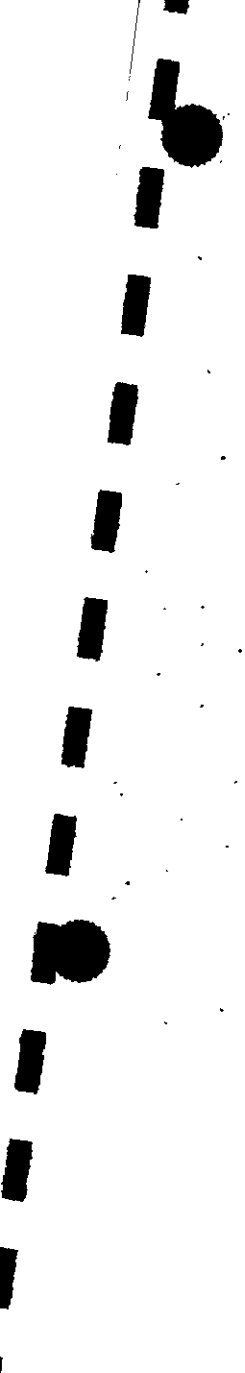

RICHARD C. KREUL

Subscribed and sworn to before me this 18th day of May, 2000.


NOTARY PUBLIC

My Commission Expires:

NANCY J. MANION
NOTARY PUBLIC STATE OF MISSOURI
JACKSON COUNTY
MY COMMISSION EXPIRES 7/31/2001



SUPPLEMENTAL TESTIMONY OF MARK W. FRANKENA

I INTRODUCTION

1
2 **Q. What is your name, company affiliation and position?**

3 **A. My name is Mark W. Frankena. I am a Principal at Economists Incorporated, an**
4 **economics consulting firm located at 1200 New Hampshire Avenue, N.W.,**
5 **Washington, D.C. 20036.**

6 **Q. Are you the same Mark W. Frankena who submitted Direct Testimony and**
7 **Rebuttal Testimony on behalf of Applicants in the above-captioned dockets**
8 **in November 1999 and February 2000?**

9 **A. Yes.**

10 **Q. What is the purpose of your Supplemental Testimony?**

11 **A. In a letter order dated April 17, 2000, the Commission requested that Applicants**
12 **supplement the competitive analyses filed on November 23, 1999, to take into**
13 **account post-merger integration of Missouri Public Service Co. (MPS), St. Joseph**
14 **Light & Power Co. (St. Joseph) and The Empire District Electric Co. (Empire).**
15 **The Commission also requested that Applicants explain certain transactions**
16 **relating to natural gas that were announced after November 1999.**

17 **Counsel for UtiliCorp United Inc. (UtiliCorp), St. Joseph and Empire**
18 **asked me to carry out the additional competitive analyses requested by the**

1 Commission in a manner that is consistent with Appendix A to the Commission's
2 1996 *Merger Policy Statement* and 1998 *Notice of Proposed Rulemaking* relating
3 to merger filings. Also, counsel asked me to provide an explanation of the
4 competitive implications of the natural gas transactions identified by the
5 Commission that took place after November 1999.

6 Q. Does your Supplemental Testimony revise or replace any of your Direct
7 Testimony or Rebuttal Testimony?

8 A. No. My Supplemental Testimony responds to the Commission's request for
9 additional analyses. Moreover, the exposition in my Supplemental Testimony
10 assumes that the reader is familiar with my Direct Testimony.

11 Q. How is your Supplemental Testimony organized?

12 A. Section II is a summary. Section III presents the additional Appendix A analyses
13 with post-merger system integration of MPS, St. Joseph and Empire. Section IV
14 explains that the proposed mergers and the integration of MPS, St. Joseph and
15 Empire raise no competitive concerns. Section V evaluates the relevance of
16 natural gas transactions involving UtiliCorp subsidiaries that have occurred since
17 November 1999. Section VI is a conclusion. Data and detailed results for the
18 supplemental Appendix A analyses are provided on a CD-ROM.

19

II. SUMMARY OF SUPPLEMENTAL TESTIMONY

Q. Please summarize the findings of the Appendix A analysis that you presented earlier in your Direct Testimony.

A. In my Direct Testimony, I used the Appendix A methodology to analyze the effects of the proposed mergers in 33 destinations during 15 time periods, or a total of 495 non-firm and short-term energy markets ($33 \times 15 = 495$). For each of these 495 markets, I presented eight analyses, one for each combination of (i) each of two methods of measuring market shares, based on Economic Capacity and Available Economic Capacity, (ii) each of two sets of market prices, based on system lambdas and *Power Markets Week* data, and (iii) each of two methods of allocating transmission capacity, Economic and Pro-rata ($2 \times 2 \times 2 = 8$). Among the resulting 3,960 cases analyzed ($495 \times 8 = 3,960$), there was no case in which the two mergers combined caused an increase in the Herfindahl-Hirschman Index (HHI) of market concentration above either of the screens used by the Commission, namely:

- *Screen 1*: An increase in the HHI of 100 in a market in which the post-merger HHI is between 1,000 and 1,800.
- *Screen 2*: An increase in the HHI of 50 in a market in which the post-merger HHI is 1,800 or more.

1 Q. How do the supplemental Appendix A analyses differ from the analyses
2 presented in your Direct Testimony?

3 A. In the supplemental analyses, the post-merger cases reflect integration of the
4 MPS, St. Joseph and Empire systems through construction of direct transmission
5 interconnections. Also, data used for the pre- and post-merger cases have been
6 updated to reflect changes in generation and transmission since my Direct
7 Testimony was prepared.

8 Q. What methods are Applicants considering for integrating their systems after
9 the mergers?

10 A. Richard C. Kreul explains in his Supplemental Testimony that Applicants are
11 giving serious consideration to two alternatives for integrating their systems after
12 the mergers (Alternatives A and B). Both alternatives involve construction of the
13 same two direct interconnections, one between MPS and St. Joseph and the other
14 between MPS and Empire. The difference between the two alternatives is that in
15 Alternative A the Applicants would participate in the Southwest Power Pool
16 (SPP) regional transmission organization, while in Alternative B they would join
17 the Midwest Independent System Operator (MISO).

18 Q. What are the results of the supplemental Appendix A analyses?

19 A. For each of the two integration alternatives, the combined effect of the two
20 mergers is to increase HHIs modestly above Screen 1 and very slightly above
21 Screen 2 in a small number of markets.

1 Q. Do the results of the supplemental analyses change your previous finding
2 that there is no indication that the proposed mergers would lead to a
3 significant increase in generation market power?

4 A. No, this finding is not changed. There are several reasons that the supplemental
5 analyses do not raise competitive concerns. First, as I explained in my Direct
6 Testimony, UtiliCorp is a small owner of electric generating resources, and St.
7 Joseph and Empire are very small owners. Based on the competitive analysis and
8 the review of historical trade data that are presented in my Direct Testimony, it is
9 clear that absent the proposed mergers UtiliCorp, St. Joseph and Empire would
10 not compete significantly in any market. The proposed mergers therefore raise no
11 concerns about generation market power.

12 Second, the supplemental HHI results are not significantly above the
13 Commission's safe harbor levels, and the results are not close to the levels that
14 raise concerns under merger enforcement standards used by the federal antitrust
15 agencies and courts.

16 Third, no supplemental HHI result that is above the Commission's screens
17 is of any potential relevance to evaluation of competition until both (i) Applicants
18 have completed transmission interconnections and integrated their systems and
19 (ii) states in the relevant region have reduced utilities' obligations to serve to the
20 point that market shares are appropriately measured based on Economic Capacity
21 rather than Available Economic Capacity. Entry by new generators into relevant
22 markets will be easy by the time that both (i) and (ii) have occurred, and hence the

1 supplemental HHI results provide no basis for concern about increased market
2 power as a result of the merger. Applicants will not even complete the
3 interconnections needed to integrate their systems before mid-to-late 2002.

4 In addition, the merged company will be a member of a regional
5 transmission organization and will add transmission lines. Therefore, the mergers
6 will not create or enhance transmission market power. Moreover, Mr. Kreul states
7 in his Direct Testimony that Applicants will not effectuate any interconnection
8 plan that would reduce Available Transmission Capacity into or out of
9 Applicants' systems below the levels needed by a transmission dependent entity
10 to import energy to serve its load or to export energy from existing generation.
11 Also, as I explained in my Direct Testimony, the proposed mergers will not create
12 or enhance vertical (gas-electric) market power.

13 Q. Did you analyze whether the natural gas transactions involving UtiliCorp's
14 Aquila Energy subsidiary that are identified in the fourth paragraph of the
15 Commission's April 17, 2000, letter order would affect the competitive
16 analyses of the proposed mergers?

17 A. Yes, I did analyze this. Those transactions have no effect on the competitive
18 analyses of the proposed mergers, including the analysis of the effects of the
19 mergers on vertical (gas-electric) market power. None of those transactions could
20 contribute to market power in any market, and they certainly would not increase
21 UtiliCorp's ability and incentive to reduce the supply of natural gas to rival

1 generators in such a way that St. Joseph's and Empire's generators would sell
2 output at higher wholesale prices.

3 Q. In summary, did any of the supplemental analyses that you carried out
4 indicate that the two proposed mergers, individually or together, are likely to
5 result in a significant reduction in competition in any market for electric
6 power?

7 A. No, they did not. The issues addressed in my Supplemental Testimony do not lead
8 to any change in the conclusions in my Direct Testimony.

9

10 III. ADDITIONAL APPENDIX A ANALYSES WITH
11 POST-MERGER INTEGRATION
12

13 Q. How have you responded to the Commission's request for additional
14 Appendix A analyses that reflect post-merger integration of the MPS, St.
15 Joseph and Empire systems?

16 A. I analyzed two alternative post-merger integration scenarios.

17 *Alternative A:* UtiliCorp would build or have built transmission facilities that
18 would directly connect the MPS, St. Joseph and Empire areas and would operate
19 the combined area as a single control area. MPS, WestPlains Energy-Kansas
20 (WPE-Kansas) and St. Joseph are presently members of the Mid-Continent Area
21 Power Pool (MAPP) and participate in the MAPP regional tariff. MAPP has
22 agreed to merge with the Midwest Independent System Operator (MISO).

1 Therefore, absent the proposed mergers these utilities would soon obtain service
2 under the MISO tariff, and service over their systems would be available to others
3 under the MISO tariff. In Alternative A, after the mergers MPS, WPE-Kansas and
4 St. Joseph would join Empire as members of the SPP regional transmission
5 organization, and transmission service over the four systems would be available to
6 others under the SPP tariff.

7 *Alternative B:* UtiliCorp would build or have built the same transmission facilities
8 considered in Alternative A. After the mergers MPS, WPE-Kansas, St. Joseph and
9 Empire would be members of the MISO, and transmission service over the four
10 systems would be available to others under the MISO tariff.

11 **Q. What transmission facilities would be added in Alternatives A and B?**

12 **A.** Applicants would add two transmission lines. Specifically, Applicants would add
13 a 25-mile 161 kV line rated at 312 MVA between the St. Joseph and MPS areas
14 and a 42-mile 161 kV transmission line rated at 251 MVA between the Empire
15 and MPS areas. Applicants would take out of service (open) a 161 kV
16 transmission line rated at 153 MVA between St. Joseph and KCPL that limits
17 power flows. These changes in transmission facilities are summarized in Exhibit
18 No. ____ (MWF-26).

19 **Q. How did you model system integration in Alternatives A and B?**

20 **A.** I assumed that after the mergers the transmission line changes identified above
21 would be implemented and that as a result Applicants would have new priority for

1 certain power transfers among the MPS, St. Joseph and Empire areas. Based on
2 the commitment stated in Mr. Kreul's Supplemental Testimony, I assumed there
3 would be 200 MW of new priority transfers from the MPS area to the St. Joseph
4 area when evaluating the St. Joseph destination, 200 MW from the MPS area to
5 the Empire area when evaluating the Empire destination, and 100 MW from the
6 St. Joseph area and 100 MW from the Empire area to the MPS area when
7 evaluating the MPS destination. Therefore, as a result of the merger in my
8 analysis Applicants would have 200 MW of new priority transfers to each of St.
9 Joseph, Empire and MPS.

10 Q. In carrying out the additional Appendix A analyses did you update any data,
11 beyond making the changes described above relating to the integration
12 alternatives?

13 A. Yes. I updated data on transmission pricing, flowgates, anticipated mergers, and
14 generating units. These updated data were used in computing HHIs both before
15 and after the proposed mergers.

16 Q. Please explain the updates to transmission pricing data.

17 A. MAPP is merging with the MISO. Therefore, for transmission pricing in MAPP I
18 used the license plate pricing system of the MISO instead of the megawatt-mile
19 pricing system of MAPP's Schedule F.

1 Q. Please explain the updates to flowgate data.

2 A. I updated flowgate data to reflect the latest publicly available NERC summer and
3 winter reference cases, Summer 1999 Trial 7 and Winter 1999/2000 Trial 5.
4 Based on these reference cases, I calculated new flowgate and net import limits as
5 well as new transfer distribution factors based on the latest Book of Flowgates by
6 using MUST (v 3.01). Post-merger transfer distribution factors are different from
7 pre-merger ones in Alternatives A and B because of improvements in the
8 transmission system.

9 Q. Please explain the updates to anticipated mergers.

10 A. Since my Direct Testimony was prepared, KCPL and Western Resources have
11 abandoned their proposed merger. Therefore, I have returned to KCPL ownership
12 of KCPL's generating units and responsibility for KCPL's loads.

13 Q. Please explain the updates to generating unit data.

14 A. There have been a number of additions to generating capacity in the relevant
15 region since my Direct Testimony was prepared. Exhibit No. ____ (MWF-27)
16 summarizes the generation additions (none of which are owned by Applicants)
17 that are now included in the data.

1 Q. Where do you summarize the results from the competitive analysis screen if
2 Applicants adopt post-merger integration Alternative A or B.

3 A. Summaries for all results for Alternatives A and B that are above Screen 1 or
4 Screen 2 are provided in Exhibit No. ____ (MWF-25).¹ Summaries for remaining
5 cases and details of the 3,960 cases for each alternative are provided on the CD-
6 ROM.

7

8 IV. IMPLICATIONS OF THE SUPPLEMENTAL ANALYSES
9

10 Q. Do the results of the supplemental analyses change your previous finding
11 that there is no indication that the proposed mergers would lead to a
12 significant increase in market power?

13 A. No, this finding is not changed. There are four reasons that the results of the
14 supplemental analyses do not raise competitive concerns.

15 Q. What is the first reason that the supplemental results do not raise
16 competitive concerns?

17 A. As I explained in my Direct Testimony, UtiliCorp is a small owner of electric
18 generating resources, and St. Joseph and Empire are very small owners. At
19 present, UtiliCorp owns 1,607 MW of generating capacity in Kansas and Missouri

¹ The reader is referred to my Direct Testimony and the exhibits to my Direct Testimony for explanations of the data and methodology used for the competitive analysis screen, how the HHLs have

1 while St. Joseph owns a mere 378 MW and Empire owns only 878 MW. If the
2 three companies were now merged, UtiliCorp would still own only 2,863 MW of
3 generating capacity, or less than Kansas City Power & Light (3,574 MW) and
4 much less than Western Resources (5,600 MW) and other still larger utilities in
5 the region, such as Ameren and Entergy, whose mergers were approved in the
6 1990s. Based on the competitive analysis and the review of historical trade data
7 that are presented in my Direct Testimony, it is clear that absent the proposed
8 mergers UtiliCorp, St. Joseph and Empire would not compete with each other
9 significantly in any market. The proposed mergers therefore raise no concerns
10 about generation market power. Furthermore, after the proposed mergers
11 UtiliCorp will be a member of a regional transmission organization that will
12 control its transmission facilities, and service over UtiliCorp's transmission
13 facilities will be available to others under a regional tariff. Consequently, the
14 proposed mergers would not create or enhance transmission market power. My
15 Direct Testimony further explains that the proposed mergers would not create or
16 enhance vertical (gas-electric) market power.

been computed, and relevant antitrust enforcement standards. The exposition in my Supplemental Testimony assumes that the reader is familiar with my Direct Testimony.

1 Q. What is the second reason that the supplemental results do not raise
2 competitive concerns?

3 A. None of the supplemental HHI results is significantly above the Commission's
4 safe harbor levels,² and the results are not close to the levels that raise concerns
5 under the merger enforcement standards used by the federal antitrust agencies and
6 courts.

7 Among the supplemental HHI results that are above Screen 1, none of the
8 post-merger HHIs is much above the middle of the "moderately concentrated"
9 range (1,000 to 1,800), or above the level in a market with seven equal sellers
10 (1,429). Moreover, all increases in the HHIs that result from the mergers in the
11 cases that are above Screen 1 are less than 200. It would be highly unusual for a
12 federal antitrust agency or court to find that a merger that left the HHI well below
13 1,800 would raise significant competitive concerns or violate the antitrust laws,
14 particularly when the increase in the HHI was under 200.³

15 A few of the 3,960 HHI results for each of Alternatives A and B are above
16 Screen 2 by a trivial amount. None of the increases in the HHI is greater than 62,
17 which is indistinguishable from the safe harbor level of 50 in markets with a post-
18 merger HHI of 1,800 or more.

2 ² The 1992 Department of Justice and Federal Trade Commission *Horizontal Merger Guidelines* (*Merger Guidelines*), which have been adopted by the Federal Energy Regulatory Commission, state that "Other things being equal, cases falling just above and just below a threshold present comparable competitive issues." (Section 1.5)

1 Q. What is the third reason that the supplemental results do not raise
2 competitive concerns?

3 A. All of the HHI results for Alternatives A and B that are above Screen 1 or Screen
4 2 are based on market shares for Economic Capacity. None is based on market
5 shares for Available Economic Capacity. As long as utilities have existing
6 obligations to serve, the relevant measure of market shares for competitive
7 analysis is Available Economic Capacity, Economic Capacity is not relevant
8 because sellers would receive the benefit of higher prices only on energy
9 produced by their Available Economic Capacity.

10 Therefore, the proposed mergers combined with system integration will
11 not have any results above either of the Commission's screens as long as utilities
12 have existing obligations to serve. Given the pace of state restructuring, it will be
13 some years before utilities are relieved of their obligations to serve and HHI
14 results based on Economic Capacity become potentially relevant to market power.
15 I will return to this point when I discuss entry conditions in the next answer.

16 Q. What is the fourth reason that the supplemental results do not raise
17 competitive concerns?

18 A. Suppose, contrary to fact, that absent the proposed mergers the merging
19 companies would be significant competitors in the sale of electric power. Even in

³ See M. B. Coate, "Merger Enforcement at the Reagan/Bush FTC," in M. B. Coate and A. N. Kleit, eds., *The Economics of the Antitrust Process*, Kluwer, 1996, Chap. 7.

1 that case there would be no reason for competitive concerns in the markets with
2 results above Screen 1 and Screen 2 because entry by new generators is easy.

3 Almost all the supplemental results that are above Screen 1 or Screen 2
4 relate to time periods during which, based on the *Power Markets Week* data used
5 in the analysis, competitive market prices are above \$26.50/MWh. That is, energy
6 prices are sufficiently high so that in the analysis modern gas-fired combustion
7 turbines operate. During these periods, entry could take the form of construction
8 of new combustion turbines. In my Direct Testimony (pp. 36-37, 57-60 and
9 Exhibit No. ____ (MWF-17)), I provided convincing evidence that entry by new
10 combustion turbines is easy under the Commission's standards because entry
11 would occur in less than two years in response to an exercise of market power.
12 Given easy entry, there is no basis for concern that the proposed mergers would
13 be likely to cause a significant increase in market power in the markets in
14 question.

15 Moreover, none of the results that are above Screen 1 or Screen 2 for
16 Alternatives A and B has any relevance until more than two years after
17 consummation of the proposed mergers. This is true because Alternatives A and B
18 are irrelevant until (i) Applicants complete direct interconnections among MPS,
19 St. Joseph and Empire and (ii) obligations to serve have been substantially
20 eliminated in the relevant region. Mr. Kreul explains in his Supplemental
21 Testimony that Alternatives A and B will not be implemented prior to mid-to-late
22 2002. As I explained in my preceding answer, obligations to serve are unlikely to

1 be substantially eliminated for some years. These facts provide additional time for
2 entry of new generating capacity that would prevent any hypothetical increase in
3 market power, beyond the two-year time period specified in the *Merger*
4 *Guidelines*.

5 Entry by not only new combustion turbines but also new combined cycle
6 generating capacity, which would operate during all conditions in which there are
7 results above Screen 1 or Screen 2, is likely to be easy by the time that both (i)
8 Alternative A or B has been implemented and (ii) state restructuring has
9 proceeded to the point at which market shares based on Economic Capacity are
10 relevant. Given typical lead times for new combined cycle projects, entry by new
11 combined cycle generators in 2003 would be easy. There are two reasons to
12 believe that entry by combined cycle units is likely to be easy before the end of
13 2002. First, it is likely that some combined cycle projects that are in various
14 stages of planning would be speeded up if there were increased concern over
15 market power. Second, combustion turbine units that are already installed in the
16 region, or that are being installed in the region, probably could be converted to
17 combined cycle operation by mid-to-late 2002.

V. TRANSACTIONS SINCE NOVEMBER 1999

Q. The Commission inquired about some transactions that have taken place since November 1999. What do these transactions have in common?

A. All these transactions involve UtiliCorp's subsidiary Aquila Energy, and all involve natural gas. Therefore, any relevance these transactions might be thought to have to the proposed mergers would involve vertical (gas-electric) market power. However, the analyses contained in my Direct Testimony are sufficient to reach the conclusion that none of these transactions is of any significance for the level of competition in any market for electric power.

Q. The Commission asked for an explanation of how Aquila Energy's long-term contract with American Public Energy Agency (APEA) would be likely to influence the competitive effects of the proposed mergers. Would you please address this issue?

A. On December 8, 1999, UtiliCorp announced that its subsidiary Aquila Energy and APEA had signed a 12-year contract under which Aquila Energy will provide the commodity natural gas to APEA for sale to APEA's municipal utility customers and other public agencies across the U.S. APEA has prepaid for the gas, and Aquila Energy's obligation to deliver and APEA's obligation to take the gas are firm. For reasons that are set out in my Direct Testimony, Aquila Energy's long-term gas supply contracts do not increase UtiliCorp's market power or the effects of the proposed mergers on market power in any relevant market. In my Direct

1 Testimony, I explained the following with reference to Aquila Energy's long-term
2 contracts to supply the commodity natural gas to electric generators:

3 UtiliCorp's Aquila Energy Marketing sells the commodity natural
4 gas to electric generators. Exhibit No. ____ (MWF-8) is a list of
5 plants served by Aquila Energy Marketing under long-term
6 contracts. These contracts do not provide UtiliCorp with control
7 over natural gas supplies to these generators, because these
8 supplies are governed by the contracts. For other electric
9 generators that are not under contract, and for the ones now under
10 contract once the contracts expire, Aquila Energy Marketing must
11 compete, and in the future will have to compete, with dozens of
12 other gas marketers to supply gas. (Exhibit No. ____ (MWF-1),
13 page 83)

14 In short, Aquila Energy's long-term contracts to supply the commodity natural
15 gas directly or indirectly to electric generators do not increase UtiliCorp's ability
16 or incentive to raise prices for electric power. Thus, regardless of the extent to
17 which the natural gas sold by Aquila Energy to APEA would be used to generate
18 electric energy for sale in any market in which St. Joseph's or Empire's
19 generating plants might sell energy, the contract announced in December 1999
20 could not raise a competitive issue relating to the proposed mergers in any
21 relevant market for electric power.

22 It follows from the explanation included in my Direct Testimony, as well
23 as from the discussion immediate above, that the Aquila Energy-APEA contract is
24 not relevant to the effects of the proposed mergers on market power.

1 Q. The Commission asked for an explanation of how Aquila Energy's
2 acquisition of the marketing assets of U.S. Gas Transportation, Inc. (USGT),
3 which was announced on March 14, 2000, would be likely to influence the
4 competitive effects of the proposed mergers. Would you please address this
5 issue?

6 A. Dallas-based USGT was a marketer of natural gas serving the midwestern and
7 western US and Canada. Most of its activity was in markets off the Transwestern
8 and El Paso pipelines. As part of the transaction, Aquila took assignment of
9 USGT's gas purchase and sales contracts, the majority of which involve
10 purchases in Texas and sales in California and to a lesser extent in Arizona and
11 New Mexico. The transactions in question involve less than 5 percent of
12 Transwestern's capacity. USGT now operates under the name USGT/Aquila, L.P.
13 and is a subsidiary of Aquila Energy.

14 This acquisition could not have any significant effect on market power in
15 any relevant market nor any effect on the competitive evaluation of the proposed
16 mergers between UtiliCorp and St. Joseph and between UtiliCorp and Empire.
17 First, marketing of natural gas is not concentrated, as I explained in my Direct
18 Testimony:

19 The merger presents no substantive competitive issues with respect
20 to marketing of natural gas. Gas marketing in North America is
21 unconcentrated, with an HHI below 650, and UtiliCorp's share is
22 approximately 8 percent. (Exhibit No. ____ (MWF-7)) These
23 figures are substantially below the minimum levels that might

1 suggest potential competitive concerns. (Exhibit No. ____ (MWF-
2 1), page 83)

3 Second, USGT was a small company with 20 employees. There is no barrier to
4 entry by natural gas marketing companies of that size, and no barrier to expansion
5 of smaller natural gas marketing companies to reach that size. Therefore, the
6 acquisition of a company of that size could not affect market power. Third, the
7 terms on which the gas is sold under USGT's contracts are fixed by the contracts
8 and the buyers are located principally in the Western States Coordinating Council
9 area, which has only limited electric transmission connections to the SPP.

10 It follows from the explanation included in my Direct Testimony, and also
11 from the discussion immediately above, that the Aquila Energy-USGT acquisition
12 has no impact on the competitive effects of the proposed mergers.

13 **Q. The Commission asked for an explanation of how the February 2000**
14 **acquisition by an Aquila subsidiary from USGT of land and development**
15 **rights for a natural gas storage facility in Texas would be likely to influence**
16 **the competitive effects of the proposed mergers. Would you please address**
17 **this issue?**

18 **A. The potential gas storage facility in question, known as the Chaparral project, is**
19 **located in the west Texas Permian Basin, four miles from the Waha gas**
20 **transportation hub. At present, the property is undeveloped desert and a salt dome.**
21 **Aquila has not decided whether or when it will create a gas storage facility there.**
22 **A review of area water supplies, which are critical to the development, is ongoing.**

1 It is estimated that if the storage facility is completed it will hold up to 6 billion
2 cubic feet (Bcf) of natural gas. The Aquila subsidiary would have the ability to
3 inject or withdraw natural gas on a short-notice basis.

4 My Direct Testimony addressed storage of natural gas but not specifically
5 the Chaparral project. My Direct Testimony states:

6 The merger presents no substantive competitive issues with respect
7 to storage of natural gas....Aquila owns three storage facilities in
8 Texas: Katy, Ambassador, and Pottsville. Katy and Ambassador
9 have a combined capacity of 28.6 Bcf. Pottsville, which is in
10 inactive storage, has capacity of approximately 4 Bcf. In addition,
11 Aquila has contracted for 1 Bcf of capacity at the Moss Bluff field
12 in Texas through March 2002. UtiliCorp's owned and contracted
13 capacity in Texas is less than 5 percent of the 684 Bcf of storage
14 capacity in Texas....Given these low shares of storage capacity [in
15 Texas and other states], it is clear that UtiliCorp does not have the
16 ability materially to affect storage. Nowhere in the country do
17 Applicants have a share of storage capacity that would create
18 competitive concerns of control or vertical foreclosure. (Exhibit
19 No. ____ (MWF-1), pages 79-81)

20 From this information in my Direct Testimony plus the fact that—if developed—
21 the Chapparral project would have a capacity of up to 6 Bcf,⁴ one can compute that
22 the Chapparral project would account for just under 1 percent of natural gas
23 storage capacity in Texas. Also, one can compute that UtiliCorp's ownership of
24 the Chaparral project would increase UtiliCorp's share of natural gas storage
25 capacity in Texas from 4.9 percent to 5.8 percent. This share of storage capacity is
26 much too low to raise competitive concerns relating to control over natural gas for
27 electric generators, or more specifically vertical foreclosure that would impact

⁴ UtiliCorp, March 14, 2000, press release, cited in the Commission's April 17, 2000, letter order.

1 relevant markets in which St. Joseph's and Empire's generators would be likely to
2 have significant shares of wholesale sales of electric energy.

3 It follows from the discussion in my Direct Testimony and the fact that the
4 Chapparral project would have a capacity of up to 6 Bcf that Aquila Energy's
5 acquisition of development rights relating to the Chapparral project has no impact
6 on the competitive effects of the proposed mergers.

7
8 VI. CONCLUSION

9 Q. Please summarize your conclusions.

10 A. None of the issues raised in the Commission's April 17, 2000, letter order change
11 my conclusion that the proposed mergers do not raise competitive concerns.

12 Q. Does this conclude your Supplemental Testimony?

13 A. Yes.

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

UtiliCorp United Inc. and
St. Joseph Light & Power Company

)

Docket No. EC00-27-000

UtiliCorp United Inc. and
The Empire District Electric Company

)

Docket No. EC00-28-000

SUPPLEMENTAL TESTIMONY OF MARK W. FRANKENA

City of Washington

)

District of Columbia

)

ss:

I, the undersigned, Mark W. Frankena, being duly sworn, depose and say that the content of the foregoing Supplemental Testimony on behalf of UtiliCorp United Inc., St. Joseph Light & Power Company, and The Empire District Electric Company is true, correct, accurate and complete to the best of my knowledge, information, and belief.

/s/ Mark Frankena
Mark W. Frankena

Subscribed and sworn to before me this 18th day of May 2000.

Sandra L. Resau
Notary Public

SANDRA L. RESAU
A Notary Public of District of Columbia
My Commission Expires May 31, 2004

Alternative A Results Above FERC Screen

Season	Time	Capacity	UtiliCorp			St. Joseph & Empire			Post-merger Share	Change	FERC Screen	
			Pre-merger Price	MW	Share	Pre-merger MW	Share	Post-merger Share				
Destination Utility: Missouri Public Service												
Pro-Rata Allocation, Pre-merger Prices based on Lambda Data												
Spring/Fall	Top 5%	EC	\$26.24	1354	29.2	12.1	0.3	33.4	141	1185	Above 1	
	Summer	EC	\$23.39	1544.3	32.8	11.2	0.2	36.2	151	1402	Above 1	
	Summer	Next 10%	EC	\$23.49	1544.2	32.8	11.1	0.2	36.2	151	1402	Above 1
Pro-Rata Allocation, Pre-merger Prices based on Power Markets Week Data												
Spring/Fall	Top 5%	EC	\$30.66	1354	29.2	12.1	0.3	33.6	145	1183	Above 1	
	Spring/Fall	Next 10%	EC	\$28.27	1354.2	29.3	10.7	33.7	144	1186	Above 1	
	Spring/Fall	Low Peak	EC	\$21.45	1298.6	28.2	13.6	32	127	1128	Above 1	
Summer	Top 5%	EC	\$100.00	1593.6	33.7	13.5	0.3	37.2	157	1433	Above 1	
	Summer	Next 10%	EC	\$85.00	1593.6	33.7	13.5	37.2	157	1433	Above 1	
	Summer	Low Peak	EC	\$28.40	1544	33	10.2	36.6	154	1399	Above 1	
Summer	Weekend	EC	\$21.48	1541.9	33.3	10.4	0.2	36.5	149	1408	Above 1	
	Winter	Top 5%	EC	\$27.02	1422	30.3	10.9	34.5	144	1266	Above 1	
	Winter	Next 10%	EC	\$26.51	1422.3	30.2	11.5	34.4	145	1269	Above 1	
Economic Allocation, Pre-merger Prices based on Lambda Data												
Spring/Fall	Top 5%	EC	\$26.24	1348.5	20.6	62.8	1	23.1	101	1032	Above 1	
	Summer	Top 5%	EC	\$23.39	1538.4	22.9	118	25.3	134	1265	Above 1	
	Summer	Next 10%	EC	\$23.49	1538.4	22.9	118	25.3	134	1266	Above 1	
Economic Allocation, Pre-merger Prices based on Power Markets Week Data												
Spring/Fall	Low Peak	EC	\$21.45	1294.4	20	85.3	1.3	22.3	101	1017	Above 1	
	Summer	Top 5%	EC	\$100.00	1588.8	23.4	72.9	25.3	108	1244	Above 1	
	Summer	Next 10%	EC	\$85.00	1588.8	23.4	72.9	25.3	108	1244	Above 1	
Summer	Low Peak	EC	\$28.40	1538.4	22.8	86	1.3	25.2	121	1263	Above 1	
	Summer	Weekend	EC	\$21.48	1538.4	22.9	119.2	25.1	131	1268	Above 1	
	Winter	Top 5%	EC	\$27.02	1416.2	21.4	58.3	23.7	100	1053	Above 1	
Winter	Next 10%	EC	\$26.51	1416.2	21.4	59	0.9	23.8	101	1057	Above 1	

Alternative A Results Above FERC Screen

Season	Time	Capacity	Pre-merger		UtiliCorp		St. Joseph & Empire		Post-merger	Share	Change	FERC
			Price	MW	Share	MW	Share	Share				

Destination Utility: West Plains Energy - Kansas

Economic Allocation, Pre-merger Prices based on Power Markets Week Data												
Summer	Top 5%	EC	\$100.00	535.2	26.4	19.9	1	27.9	2004	2005	Above 2	Above 2
Summer	Next 10%	EC	\$85.00	535.2	26.4	19.9	1	27.9	2004	2005	Above 2	Above 2

Destination Utility: Empire

Pro-Rata Allocation, Pre-merger Prices based on Lambda Data												
Summer	Top 5%	EC	\$60.88	13.8	0.4	1140.3	32.4	36	1372	1372	Above 1	Above 1
Summer	Next 10%	EC	\$38.77	14.7	0.4	1140.2	32.1	36	1365	1365	Above 1	Above 1

Pro-Rata Allocation, Pre-merger Prices based on Power Markets Week Data												
Summer	Top 5%	EC	\$100.00	13.3	0.4	1140.5	32.5	36	1371	1371	Above 1	Above 1
Summer	Next 10%	EC	\$85.00	13.3	0.4	1140.5	32.4	36	1371	1371	Above 1	Above 1
Summer	Low Peak	EC	\$28.40	9.3	0.2	1127.5	29.8	35.8	1285	1285	Above 1	Above 1

Destination Utility: Kansas City Power & Light

Economic Allocation, Pre-merger Prices based on Lambda Data												
Summer	Low Peak	EC	\$22.37	716.6	7.8	309.7	3.4	11	1816	1816	Above 2	Above 2
Summer	Weekend	EC	\$20.19	659.5	7.8	309.5	3.5	11	1871	1871	Above 2	Above 2

Economic Allocation, Pre-merger Prices based on Power Markets Week Data												
Summer	Low Peak	EC	\$28.40	654.7	8.3	370.1	3.6	9.7	1956	1956	Above 2	Above 2
Summer	Weekend	EC	\$21.48	709.7	8.1	306.5	3.5	11.4	1886	1886	Above 2	Above 2

Destination Utility: Sunflower Electric Corp.

Economic Allocation, Pre-merger Prices based on Power Markets Week Data												
Summer	Top 5%	EC	\$100.00	412.5	21.6	23.9	1.3	22.3	2281	2281	Above 2	Above 2

Alternative B Results Above FERC Screen

Season	Time	Capacity	Pre-merger		UtiliCorp		St. Joseph & Empire		Post-merger	HHI	Change	Post-merger	HHI	Screen
			Price	MW	Share	MW	Share	Share						

Destination Utility: Missouri Public Service

Pro-Rata Allocation, Pre-merger Prices based on Lambda Data											
Spring/Fall	Top 5%	EC	\$26.24	1354	29.2	12.1	0.3	33.2	140	1180	Above 1
Summer	Top 5%	EC	\$23.39	1544.3	32.8	11.2	0.2	36.2	150	1395	Above 1
Summer	Next 10%	EC	\$23.49	1544.2	32.8	11.1	0.2	36.2	151	1395	Above 1

Pro-Rata Allocation, Pre-merger Prices based on Power Markets Week Data

Spring/Fall	Top 5%	EC	\$30.66	1354	29.2	12.1	0.3	33.4	143	1172	Above 1
Spring/Fall	Next 10%	EC	\$28.27	1354.2	29.3	10.7	0.2	33.4	142	1174	Above 1
Spring/Fall	Low Peak	EC	\$21.45	1298.6	28.2	13.6	0.3	31.9	127	1125	Above 1
Summer	Top 5%	EC	\$100.00	1593.6	33.7	13.5	0.3	37	155	1426	Above 1
Summer	Next 10%	EC	\$85.00	1593.6	33.7	13.5	0.3	37	155	1425	Above 1
Summer	Low Peak	EC	\$28.40	1544	33	10.2	0.2	36.4	152	1388	Above 1
Summer	Weekend	EC	\$21.48	1541.9	33.3	10.4	0.2	36.6	150	1412	Above 1
Winter	Top 5%	EC	\$27.02	1422	30.3	10.9	0.2	34.3	143	1259	Above 1
Winter	Next 10%	EC	\$26.51	1422.3	30.2	11.5	0.2	34.3	143	1262	Above 1

Economic Allocation, Pre-merger Prices based on Lambda Data

Summer	Top 5%	EC	\$23.39	1538.4	22.9	118	1.8	25.3	135	1267	Above 1
Summer	Next 10%	EC	\$23.49	1538.4	22.9	118	1.8	25.3	135	1268	Above 1

Economic Allocation, Pre-merger Prices based on Power Markets Week Data

Spring/Fall	Low Peak	EC	\$21.45	1294.4	20	85.3	1.3	22.2	102	1008	Above 1
Summer	Top 5%	EC	\$100.00	1588.6	23.4	72.9	1.1	25.3	108	1248	Above 1
Summer	Next 10%	EC	\$85.00	1588.6	23.4	72.9	1.1	25.3	108	1248	Above 1
Summer	Low Peak	EC	\$28.40	1636.4	22.6	86	1.3	24.9	115	1268	Above 1
Summer	Weekend	EC	\$21.48	1636.4	22.9	119.2	1.8	25.2	133	1267	Above 1

Alternative B Results Above FERC Screen

Season	Time	Capacity	Utility Corp		St. Joseph & Empire		Post-merger Share	HHI Change	Post-merger HHI	FERC Screen
			Pre-merger Price	MW	Pre-merger Share	MW				

Destination Utility: West Plains Energy - Kansas

Economic Allocation, Pre-merger Prices based on Power Markets Week Data										
Summer	Top 5%	EC	\$100.00	535.2	26.4	19.9	1	27.4	52	1959 Above 2
Summer	Next 10%	EC	\$85.00	535.2	26.4	19.9	1	27.4	52	1944 Above 2

Destination Utility: Empire

Pro-Rata Allocation, Pre-merger Prices based on Lambda Data										
Summer	Top 5%	EC	\$50.89	13.8	0.4	1140.3	32.4	35.9	187	1367 Above 1
Summer	Next 10%	EC	\$38.77	14.7	0.4	1140.2	32.1	35.8	187	1369 Above 1

Pro-Rata Allocation, Pre-merger Prices based on Power Markets Week Data										
Summer	Top 5%	EC	\$100.00	13.3	0.4	1140.5	32.4	35.9	187	1365 Above 1
Summer	Next 10%	EC	\$85.00	13.3	0.4	1140.5	32.4	35.9	187	1365 Above 1
Summer	Low Peak	EC	\$28.40	9.3	0.2	1127.6	29.8	35.4	179	1277 Above 1

Destination Utility: Kansas City Power & Light

Economic Allocation, Pre-merger Prices based on Lambda Data										
Summer	Low Peak	EC	\$22.37	716.6	7.6	309.7	3.4	11.2	68	1815 Above 2
Summer	Weekend	EC	\$20.19	659.5	7.6	306.5	3.5	11.1	69	1909 Above 2

Economic Allocation, Pre-merger Prices based on Power Markets Week Data										
Summer	Low Peak	EC	\$28.40	664.7	6.3	370.1	3.6	9.9	61	1955 Above 2
Summer	Weekend	EC	\$21.48	709.7	8.1	306.5	3.5	11.6	62	1866 Above 2

Destination Utility: Sunflower Electric Corp.

Economic Allocation, Pre-merger Prices based on Power Markets Week Data										
Summer	Top 5%	EC	\$100.00	412.5	21.6	23.9	1.3	22.8	54	2275 Above 2

Transmission Line Changes in Alternatives A and B

From Bus			To Bus			Electric Characteristics			Line Rating (MVA)		Length (Miles)
Number	Name	Nominal KV	Number	Name	Nominal KV	Resistance (R, PU)	Reactance (X, PU)	Charging (B, PU)	Normal	Emergency	
Add the following line between MPS and St. Joseph:											
57503	NASHUA5	161	69705	LAKE RD5	161	0.0108	0.0916	0.0475	312	312	25.5
Add the following line between MPS and Empire:											
57508	NEVADA 5	161	58202	ASB349 5	161	0.0191	0.1134	0.0807	251	251	42
Open the following line between St. Joseph and KCPL so it will be out of service:											
57728	NASHUA 5	161	69705	LAKE RD5	161	0.0327	0.1005	0.0449	163	172	-

Source: UtiliCorp.

Additions to Generating Capacity

Control Area*	Unit Owner*	Plant Name	Plant ID	Unit ID	Type	Fuel	Capacity MW	Old Capacity MW	Dispatch Cost \$/MWh	Heat Rate mmbtu/MWh	Fuel Cost \$/mmbtu	VOM \$/MWh	SO2
CSWSPP	PANDAE	Oneta			CT	Gas	1000		24.81	12	1.8892	2.14	0
CSWSPP	CTRIXE	Green County		1	CC	Gas	800		15.50	7	1.9087	2.14	0
KCPL	KCPL	Hawthorne 7-8		7-8	CT	Gas	154		24.81	12	1.8892	2.14	0
KCPL	KCPL	Hawthorne 4		4	CC	Gas	140		15.36	7	1.8892	2.14	0
OKGE	WRI	Logan City			CT	Gas	300		24.81	12	1.8892	2.14	0
OKGE	OKGE	Mustang 1-2		1-2	Boiler	Gas	115		19.69	10	1.8892	0.8	0
WRI	WRI	Gordon Evans			CT	Gas	200		24.93	12	1.8989	2.14	0
WRI	WRI	Gordon Evans			CT	Gas	100		24.93	12	1.8989	2.14	0
KCPL	KCPL	Hawthorn	2079	5	Boiler	Coal	500	479	8.21	10,318	0.7024	0.87	0.83
ASEC	ASEC	New ASEC	X028	1	CC	Gas	530	250	15.36	7	1.8892	2.14	0
ASEC	ASEC	St. Francis	X028	2	CC	Gas	250	34	15.36	7	1.8892	2.14	0

Sources: RDI BaseCase, UtiliCorp, trade press, company web sites.

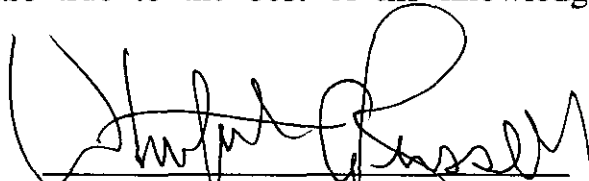
Notes: * Control area abbreviations in Names file on CD-ROM.

** Owner abbreviations in Names file on CD-ROM.

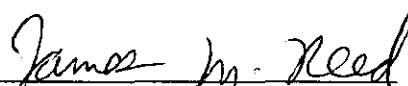
In the Matter of the Joint Application of)
UtiliCorp United Inc. and The Empire District)
Electric Company for Authority to Merge)
The Empire District Electric Company with) Case No. EM-2000-369
and Into UtiliCorp United Inc., and in)
Connection Therewith, Certain Other)
Related Transactions)

**AFFIDAVIT
OF
WHITFIELD A. RUSSELL**

WHITFIELD A. RUSSELL, on oath, deposes and states that the foregoing **Rebuttal Testimony and Exhibits**, on behalf of Springfield (MO) City Utilities before the Public Service Commission of the State of Missouri were prepared by him or at his direction and under his supervision, and that if asked the question herein, he would give the answers as shown, and that the facts stated herein are true to the best of his knowledge, information and belief.


WHITFIELD A. RUSSELL

Subscribed and sworn to before me on this 19th day of June, 2000.


NOTARY PUBLIC
My Commission Expires:

JAMES M. REED
Notary Public District of Columbia
My Commission Expires June 30, 2002