

Exhibit No.:
Issues: Description of KCPL Generation,
Transmission, and Distribution
Facilities and Operations
Witness: Frank L. Branca
Sponsoring Party: Western Resources, Inc. and
Kansas City Power & Light
Company
Type of Exhibit: Direct Testimony
Case No.:

IN THE MATTER OF THE
MERGER APPLICATION OF
WESTERN RESOURCES, INC. AND
KANSAS CITY POWER & LIGHT COMPANY

DIRECT TESTIMONY
OF
FRANK L. BRANCA
WESTERN RESOURCES, INC.

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

DIRECT TESTIMONY
OF
FRANK L. BRANCA
VICE PRESIDENT
WHOLESALE AND TRANSMISSION SERVICES
KANSAS CITY POWER & LIGHT COMPANY

CASE NO. _____

I. INTRODUCTION

1 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 A. My name is Frank L. Branca and my business address is 1201 Walnut Street,
3 Kansas City, Missouri 64106.

4 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

5 A. I am employed by Kansas City Power & Light Company ("KCPL" or the "Company")
6 as Vice President-Wholesale and Transmission Services.

7 **Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.**

8 A. I graduated from St. Louis University in 1970 with a degree of Bachelor of Science,
9 Electrical Engineering. Following graduation, I joined KCPL and worked in various
10 engineering positions in the Commercial Operations Division, Rates and
11 Regulation, and Systems Planning. In November 1984, I became Director of
12 Power Supply. In May 1989, I was elected Vice President-Power Supply and in

1 1994 was named Vice President-Wholesale and Transmission Services. I have
2 been a registered professional engineer in the State of Missouri since 1974. In
3 my current position, I am responsible for planning and operating the KCPL bulk
4 power system, bulk power marketing and fuel procurement. My duties include
5 management responsibility for the following functional areas: generation dispatch,
6 interchange power and capacity marketing, bulk transmission system planning,
7 construction and operations, resource planning, and fossil fuel procurement.

8 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

9 A. The purpose of my testimony is to provide an overview of KCPL's 1) generating
10 resources, 2) transmission and distribution systems, 3) bulk power transactions,
11 and 4) transmission relationships. Other witnesses will provide testimony
12 regarding: 1) the generation and transmission systems of Western Resources, Inc.
13 ("Western Resources"), 2) plans for post-merger structure and operation of the
14 combined system, and 3) the effect of the merger on the regional transmission
15 network.

16 **Q. ARE YOU SPONSORING ANY OTHER ASPECTS OF THIS MERGER OR**
17 **PROVIDING OTHER RELATED TESTIMONY?**

18 A. Yes. I cosponsor portions of Sections II and IV of the Merger Analysis, Schedule
19 TJF-2 to the Direct Testimony of Thomas J. Flaherty. I co-sponsor the portions of
20 those sections that concern KCPL's system.

1 **II. GENERATION AND CAPACITY PURCHASES**

2 **Q. PLEASE DISCUSS THE GENERATING RESOURCES OF KCPL.**

3 A. KCPL had a total installed generating capacity of 3,135 MW in 1996. This
4 capacity consists of coal, gas, oil and nuclear generating facilities, many of which
5 KCPL has joint interests with other utilities in the region. KCPL and Kansas Gas
6 and Electric Company ("KGE") each own 47 percent of the Wolf Creek Generating
7 Station, a 1,163 MW pressurized water nuclear generating station located near
8 Burlington, Kansas, (Kansas Electric Power Cooperative, Inc. ["KEPCo"] owns the
9 other 6 percent.) KCPL and KGE also own or lease 50 percent each of the
10 LaCygne Station, located near LaCygne, Kansas, which is comprised of two coal-
11 fired units with a combined capacity of 1,354 MW.

12 KCPL owns 70 percent of Iatan Station, a 670 MW coal-fired unit near
13 Weston, Missouri. Empire District Electric Company ("EDE") and St. Joseph Light
14 & Power ("SJLP") own the other 30 percent of Iatan. KCPL is the sole owner of the
15 Montrose (469 MW), Hawthorne (621 MW), Northeast (442 MW) and Grand
16 Avenue (73 MW) generating stations. A table summarizing KCPL generation
17 resources is contained in Schedule FLB-1. KCPL's capacity purchases are
18 discussed later in my testimony.

19 **Q. DOES KCPL PARTICIPATE IN ANY POWER POOLING OR COORDINATION**
20 **AGREEMENTS WHICH AFFECT ITS RESOURCE REQUIREMENTS?**

1 A. Yes. KCPL and Western Resources are members of the Southwest Power Pool
2 ("SPP") and MOKAN Power Pool ("MOKAN"). SPP is a reliability council that has
3 a capacity margin requirement of 15.3 percent. MOKAN is a reserve-sharing pool
4 with eleven utility members. Like SPP, MOKAN currently requires its members to
5 maintain at least a 15.3 percent capacity margin. The MOKAN membership has
6 voted to lower the required capacity margin beginning June 1, 1997 to 13.04
7 percent. The decision to use a lower capacity margin in its planning is the
8 outcome of MOKAN planning studies which concluded that, based on the projected
9 growth of MOKAN utilities and the projected mix of resources, existing levels of
10 reliability can be maintained with a lower planning capacity margin. The decision
11 by KCPL to adopt a lower planning capacity margin beginning June 1, 1997 is
12 unrelated to the merger with Western Resources.

13 KCPL is also a member of the Regional Transmission Committee and the
14 Power and Energy Market group of the Mid-Continent Area Power Pool ("MAPP").
15 KCPL is not a member of the Regional Reliability Council or the Generation
16 Reserve-Sharing Pool and, therefore, does not have any MAPP supply resource
17 requirements.

18 **Q. WHAT ARE KCPL'S PROJECTIONS OF LOAD, GENERATION RESOURCES**
19 **AND CAPACITY MARGIN THROUGH 2001?**

20 A. Schedule FLB-2 presents KCPL's projections through 2001.

1 Q. DOES SCHEDULE FLB-2 REPRESENT THE MOST RECENT LOAD AND
2 CAPABILITY FORECAST WHICH KCPL HAS DEVELOPED?

3 A. Yes.

4 Q. PLEASE SUMMARIZE ANY NEW CAPACITY ADDITIONS OR FIRM
5 PURCHASES PLANNED BY KCPL (ON A STAND-ALONE BASIS) DURING THE
6 1998-2001 PERIOD.

7 A. New resources scheduled to be acquired by KCPL during the 1998-2001 period
8 are identified in the load and capability forecast shown in Schedule FLB-2. These
9 resources include unit upratings and capacity purchases.

10 Q. PLEASE DESCRIBE KCPL'S CAPACITY PURCHASES.

11 A. Over the past several years, KCPL has obtained much of its native load
12 requirement for new peaking capacity by purchasing such capacity from other
13 utilities. Capacity purchases for the 1998-2001 planning period are summarized in
14 Schedule FLB-2. Capacity purchases and sales are categorized as system
15 participation, unit participation or capacity transactions. Each of these categories
16 are discussed below.

17 (a) System Participation Transactions

18 System participation refers to the fact that such transactions are supplied from
19 system-wide resources. The capacity is subject to curtailment by the seller just
20 prior to curtailment of its own native load customers. Energy can be scheduled up

1 to the capacity limit and is priced as a function of the seller's incremental costs at
2 the time of delivery.

3 (b) Unit Participation Transactions

4 A few of the transactions on Schedule FLB-2 are unit participation transactions. In
5 such transactions, the availability of the contracted capacity and associated energy
6 is subject to the availability of one or more generating units specified in the
7 contract. Scheduled energy is priced as a function of the generating unit's
8 operating costs.

9 (c) Capacity Transactions

10 One of the transactions shown in Schedule FLB-2 is a KCPL capacity purchase. In
11 this type of transaction, energy delivery is guaranteed up to the capacity level
12 specified in the contract. Non-performance on the part of the seller is backed-up
13 with financial guarantees tied to either the purchaser's cost of acquiring
14 replacement energy or a specified liquidated damage amount.

15 **Q. WHAT IS THE LEAD-TIME TYPICALLY ASSUMED BY KCPL AND OTHER**
16 **MOKAN UTILITIES IN PLANNING NEW CAPACITY ADDITIONS?**

17 **A.** For planning purposes, KCPL typically assumes a two year lead time for a simple
18 cycle combustion turbine, four years for a new combined cycle intermediate use
19 power plant and a minimum of six years for a new baseload coal plant.

20 **Q. HOW IS KCPL'S GENERATION DISPATCHED?**

1 A. KCPL operates as a separate control area within SPP, one of the ten reliability
2 council regions in the U.S. All of KCPL's generation is economically dispatched
3 from a control center located in Kansas City.

4 **Q. ARE THERE ADEQUATE PLANT SITES AVAILABLE IN THE REGION TO MEET**
5 **THE NEEDS OF OTHER MOKAN UTILITIES AND NON-UTILITY GENERATORS**
6 **FOR NEW GENERATION FACILITIES?**

7 A. In my opinion, there are numerous locations where new facilities could be sited in
8 the MOKAN region. In recent years, several MOKAN utilities have added
9 combustion turbine peaking units at existing sites. In addition, recent capacity
10 solicitations by MOKAN utilities have resulted in proposals from non-utility
11 generators for new combined cycle and base load coal units. Finally, MOKAN's
12 own planning studies have identified existing sites where additional generating
13 units could be added. Based on my experience in resource planning and the
14 reasons noted above, it is my belief that new capacity could be added at many new
15 or existing sites in the region. Relatively few of these sites are owned or controlled
16 by the Joint Applicants. With the exception of a permit held by KCPL to construct
17 a gas turbine peaking plant at an existing site and preliminary permit applications
18 filed by a KCPL affiliate (KLT Power) relating to Iatan II, a base load coal-fired unit,
19 KCPL does not hold any permits or have any permit applications pending to
20 develop new generation.

1 **III. TRANSMISSION AND DISTRIBUTION SYSTEMS**

2 **Q. PLEASE DESCRIBE GENERALLY THE TRANSMISSION AND DISTRIBUTION**
3 **SYSTEMS OF KCPL.**

4 A. KCPL, like most of the utilities in the SPP and MAPP regions, has a substantial
5 transmission network with multiple interconnections with neighboring utilities.
6 Schedule FLB-3 is a diagram of KCPL's 69 kV to 345 kV transmission system,
7 superimposed over KCPL's retail service territory. KCPL owns approximately 8,900
8 miles of overhead distribution lines and approximately 3,000 miles of underground
9 distribution lines.

10 **Q. PLEASE DESCRIBE KCPL'S INTERCONNECTIONS WITH OTHER UTILITIES.**

11 A. KCPL is interconnected directly with eight "first tier" utilities including Western
12 Resources, Empire District Electric (EDE), Missouri Public Service ("MPS"), the City
13 of Independence, Missouri ("Independence"), the Board of Public Utilities of Kansas
14 City, Kansas ("BPU"), Union Electric ("UE"), St. Joseph Light and Power (SJLP) and
15 Associated Electric Cooperative ("AEC").

16 **Q. IN ADDITION TO THESE "FIRST TIER" INTERCONNECTED SYSTEMS, DOES**
17 **KCPL HAVE TRANSMISSION TIES TO OTHER UTILITIES?**

18 A. Yes. In addition to the eight (first tier) direct interconnections above, KCPL is
19 "contractually" interconnected to several other utilities under the terms of a joint
20 ownership arrangement of one 345 kV transmission line.

1 KCPL is a participant in the Cooper-Fairport-St. Joseph 345 kV
2 interconnection, commonly called the "MINT Line" (MINT is an abbreviation for
3 Missouri-Iowa-Nebraska Tie). The MINT Line is owned by AEC except for the small
4 portion located in Nebraska, which is owned by the Nebraska Public Power District
5 ("NPPD"). KCPL leases its interest in these facilities. The participants are
6 MidAmerican Energy Company (MEC), SJLP, Lincoln (Nebraska) Electric System
7 ("LES"), NPPD and Omaha Public Power District ("OPPD"). The MINT Line
8 extends from St. Joseph, Missouri, to Cooper Station in Nebraska. Fifty percent of
9 the line's transfer capability is set aside in equal shares for each participant to
10 provide firm transmission service. The other half of the line's transfer capability is
11 set aside, in equal shares for each participant, for reliability purposes under the
12 Agreement's Emergency Service schedule and to provide non-firm transmission
13 service. Specifically, parties to the Agreement use this capacity to provide
14 emergency support in the event of the loss of generation or purchased power
15 resources. The MINT Line provides KCPL direct access to four non-directly
16 interconnected utilities (NPPD, OPPD, LES and MEC) as well as access to other
17 MAPP members.

18 Previously, KCPL had been contractually interconnected with other utilities
19 under the terms of a joint ownership arrangement for a 345 kV transmission line
20 commonly called the "West Line." The owners filed with the FERC on December

1 31, 1996, to terminate the West Line agreement. The memberships of KCPL and
2 SJLP in MAPP negated the need for the agreement.

3 **Q. PLEASE DESCRIBE ANY OTHER TRANSMISSION FACILITIES IN WHICH KCPL**
4 **HAS A JOINT INTEREST.**

5 A. KCPL, Western Resources and MPS have joint interests in the 345 kV line from
6 Wichita, Kansas, to Sibley, Missouri, under the "345 kV MOKAN Coordination
7 Agreement". This direct interconnection among the participants is used for
8 transmission service and power and energy interchanges, under either the MOKAN
9 General Participation Agreement service schedules or pursuant to separate
10 bilateral agreements.

11 KCPL and MPS also have joint interests in the 345 kV line from Sibley,
12 Missouri, to UE's Overton Substation, under the "345 kV Missouri Coordination
13 Agreement". This line provides an interconnection between KCPL, MPS and UE for
14 transmission service and power and energy interchange transactions under
15 coordination agreements among the participants.

16 Schedule FLB-4 provides a summary of the interconnection voltage and
17 thermal rating for each of the direct and contractual interconnections between
18 KCPL and its neighboring utilities. Lines with joint interests are noted.

19 **Q. WHAT ARE THE REGULATORY REQUIREMENTS GOVERNING THE ABILITY**
20 **TO CONSTRUCT NEW TRANSMISSION FACILITIES IN MISSOURI AND**
21 **KANSAS?**

1 A. If a proposed transmission facility is to be located within a company's Missouri retail
2 service territory, no regulatory approvals would be needed. If a proposed line is
3 within Missouri, but part or all of it is outside the company's service territory, the
4 company must obtain certification from the Missouri Public Service Commission. In
5 order to obtain that certification, the company would have to show that the new
6 transmission line is required in the public interest.

7 The Kansas regulatory requirements essentially are the same as those of
8 Missouri, with two additional considerations. First, the company would have to file
9 what is called an "EL Report" with the Commission for construction of any major
10 new lines. The purpose of the EL Report is to assure that the new line meets all
11 applicable engineering standards and is coordinated with the transmission networks
12 of neighboring systems. If a proposed transmission line is at least five miles long
13 and at or above 230 kV, the company also would have to obtain a siting permit from
14 the Commission before construction could be started. Following the merger, the
15 company generally would be free to construct new transmission lines in the
16 Missouri and Kansas jurisdictions, subject to the regulatory approvals outlined
17 above.

18 **Q. WHAT IS THE RECENT HISTORY OF DEVELOPING NEW TRANSMISSION**
19 **LINES IN THE PRINCIPAL AREAS THAT WILL BE SERVED BY THE MERGED**
20 **COMPANY?**

1 A. Over the past 15 years, three major new 345 kV interconnections between MOKAN
2 utilities have been completed. In 1983, Western Resources built a 345 kV
3 interconnection from its Jeffrey Energy Center to KCPL's Iatan-Craig line. In 1988,
4 a 345 kV line was built from Morgan, in southwest Missouri, to Flint Creek, in
5 Arkansas, to the Grand River Dam Authority ("GRDA") in Oklahoma. AEC, EDE,
6 Springfield (Missouri) City Utility, Central & Southwest ("CSW") and GRDA are the
7 participants in that particular line. The 345 kV MINT Line discussed earlier in my
8 testimony was completed in 1992.

9 The only exception to this track record of successful new line construction is
10 KCPL's application to the KCC for authority to construct a 345 kV line from the Wolf
11 Creek Generating Station east to KCPL's retail service territory. This application
12 was denied in 1984 on the grounds that KCPL had not demonstrated an operational
13 need for the line. KCPL responded to this denial by leasing capacity on a KGE 345
14 kV transmission line running from Wolf Creek to LaCygne, thus securing a path to
15 KCPL's service territory to deliver its share of Wolf Creek capacity and energy. To
16 my knowledge, with this one exception, utilities in Kansas and Missouri have not
17 been denied needed approvals to construct new transmission facilities.

18 **IV. PROFILE OF BULK POWER SALES**

19 **Q. DOES KCPL CURRENTLY SERVE FULL AND PARTIAL REQUIREMENTS**
20 **WHOLESALE CUSTOMERS?**

1 A. Yes. KCPL has both full and partial requirements contracts with a number of
2 municipalities and cooperatives. Schedule FLB-5 lists KCPL's full requirements
3 customers. Schedule FLB-6 lists KCPL's partial requirements customers and the
4 services each purchases from KCPL. Most of KCPL's partial requirements service
5 is provided under contracts referred to as Municipal Participation Agreements.
6 These agreements allow municipal systems to participate in regional power pooling
7 arrangements and to select a level of service that provides them considerable
8 flexibility in structuring their resource portfolios.

9 **Q. PLEASE DISCUSS COORDINATION SALES KCPL MAKES TO OTHER**
10 **REGIONAL UTILITIES.**

11 A. KCPL sells interchange energy to a variety of utilities. In general, the largest
12 percentage of KCPL's non-firm energy sales occur outside of the summer peak
13 season, when much of KCPL's generating capacity is not needed to serve its native
14 load. KCPL sells power directly to utilities as far north as Northern States Power
15 ("NSP") in Minnesota, as far to the east as UE, and south to AEC and EDE. In
16 addition, KCPL's participation in the Western Systems Power Pool ("WSPP")
17 Coordinating Agreement has facilitated transactions with power marketers and
18 utilities located beyond KCPL's direct (first-tier) interconnections.

19 **Q. HOW ARE MOST OF KCPL's ENERGY SALES STRUCTURED?**

20 A. Energy sales by KCPL are made pursuant to a number of coordinating agreements
21 with other utilities and electric power marketers. KCPL does not engage in

1 "economy" (split-savings) transactions to the same extent as many utilities. Instead,
2 energy sales in the region most often are made on an incremental "cost-plus" basis.
3 This reflects the region's highly competitive market conditions and buyer
4 preferences.

5 **Q. ARE THERE MANY SELLERS IN THE ENERGY COORDINATION MARKET?**

6 A. Yes. As discussed above, most of the regional utilities are summer-peaking. Thus,
7 there is an abundance of coal-fired energy available for sale by other utilities in the
8 region during off-peak season periods. Because of this competition among
9 suppliers, it is not uncommon for KCPL and others to compete for sales that cover
10 several weeks or months at a fixed energy price. Long-term energy sales with
11 commitments of a week or longer generally constitute a significant portion
12 (approximately 70 percent in 1996) of KCPL's total non-firm energy sales.

13 **Q. PLEASE DESCRIBE ANY FIRM POWER SALES BY KCPL.**

14 A. Currently, KCPL sells 23 MW of Firm Power Service of which 18 MW is provided to
15 full requirements customers and 5 MW is provided to partial requirements
16 customers. The 1996 loads by customer are shown on Schedules FLB-5 and 6.

17 **Q. ARE THERE ANY SIGNIFICANT CONSTRAINTS ON THE KCPL TRANSMISSION**
18 **SYSTEM LIMITING TRANSFERS WITH INTERCONNECTED SYSTEMS?**

19 A. There are no significant constraints on the KCPL system that would limit transfers
20 with any of its interconnected neighboring systems. Transfers between KCPL and

1 EDE are constrained by the limited line capacity of the tie and the commitment of
2 much of that capacity to EDE to import power from its share of the Iatan plant.

3 **Q. HAVE THERE BEEN INSTANCES WHERE KCPL HAS BEEN UNABLE TO**
4 **PROVIDE TRANSMISSION SERVICE OVER ITS SYSTEM TO THIRD PARTIES?**

5 A. There have been only a few such instances where a party has requested service
6 under KCPL's open access transmission tariff and KCPL has been unable to
7 accommodate the request. Schedule FLB-7 lists the instances in 1996 when KCPL
8 was unable to fulfill requests for transmission service. There were 23 such
9 instances which were generally due to errors in the request submitted.

10 **Q. PLEASE DISCUSS THE POWER POOLING AND REGIONAL COORDINATION**
11 **ARRANGEMENTS IN WHICH KCPL PARTICIPATES.**

12 A. As I said earlier, KCPL and Western Resources are members of MOKAN and SPP.
13 MOKAN was established in 1962 by five Kansas and Missouri investor-owned
14 utilities to share generating reserves. MOKAN now has 11 members including
15 KCPL, Western Resources, MPS, West Plains Energy-Kansas, EDE, Midwest
16 Energy, Sunflower, SJLP, BPU, KEPCo and Independence. Although MOKAN's
17 primary purpose has always been reserve sharing among its members, there also
18 are pool service schedules for Emergency Energy, System Energy, Term Energy,
19 Purchases for Resale (under FERC Order 84) and Economy Energy. In addition to
20 reserve sharing and interchange transactions, the MOKAN members engage in joint
21 planning activities. Subcommittees of MOKAN work on generation planning,

1 coordination of unit maintenance schedules and procedures such as unit
2 accreditation testing. The SPP is the regional reliability council in which KCPL and
3 Western Resources participate. The purpose of SPP is to encourage greater joint
4 planning and coordination of the generation and transmission systems of the
5 member utilities. SPP sponsors interregional studies to provide for increased
6 operating efficiencies and assure adequate reliability of service. SPP recommends
7 minimum standards for interconnected system operation, and provides for an
8 exchange of information between its member utilities and the North American
9 Electric Reliability Council ("NERC"). KCPL has been active in SPP activities and
10 studies including ongoing discussions related to the possible development of a
11 Regional Transmission Group and a single transmission tariff for the region.

12 As stated earlier, KCPL is a member of the MAPP Regional Transmission
13 Committee. The purpose of this group is to provide for the comparable and efficient
14 provision of transmission service within and contiguous to the MAPP region on a
15 consistent basis, to realize further the benefits of coordinated regional transmission
16 planning, and to resolve disputes regarding the provision of transmission services.

17 **Q. DOES MAPP HAVE PROCEDURES IN PLACE FOR ALLEVIATING OVERLOADS**
18 **OR POTENTIAL OVERLOADS OF TRANSMISSION FACILITIES?**

19 A. Yes. MAPP implements Line Loading Relief (LLR) Procedures to alleviate
20 overloads or potential overloads of transmission facilities. Transactions are
21 curtailed based on two factors. First, transactions are curtailed in accordance to

1 the priority of the type and term of the transmission service reserved for the
2 transaction. That is, non-firm transmission service is curtailed before firm and the
3 transmission service with the shortest term within a type is curtailed first. Second,
4 only transactions with a Power Transfer Distribution Factor (PTDF) of greater than
5 5 percent are curtailed. The PTDF is calculated based on the source and sink
6 information given by the sellers when the procedure is implemented. During a LLR
7 curtailment procedure, changes to transactions and new transactions that will
8 aggravate the condition cannot be made without approval from the MAPP Center.

9 **Q. ARE THERE OTHER SIGNIFICANT CONTRACTUAL RELATIONSHIPS**
10 **BETWEEN KCPL AND OTHER REGIONAL UTILITIES?**

11 **A.** KCPL has bilateral coordinating agreements with all utilities with which it is directly
12 interconnected, including those in MOKAN. Apart from the MOKAN utilities, KCPL
13 has interchange agreements with UE, KEPCo and AEC. As noted earlier, KCPL
14 also has various forms of partial requirements service agreements with several
15 municipalities that have their own generation, and full requirements service
16 contracts with several other municipal and cooperative systems.

17 **Q. THANK YOU.**

Western Resources, Inc. and
Kansas City Power & Light Company
KCPL 1997 Accredited Capacities

Description	Variance From 1996 Accredited Capacities	Net Accredited Capacity - MW (KCPL Share)	Net Winter Capacity - MW 1997-1998 (KCPL Share)
Wolf Creek		547	547
Iatan 1		469	469
La Cygne 1		343	343
La Cygne 2	+3	334	334
Station Total		677	677
Hawthorn 5		479	479
Hawthorn 6		142	162
Station Total		621	641
Montrose 1	+5	155	155
Montrose 2	+1	153	153
Montrose 3		161	161
Station Total		469	469
Grand Avenue #9	+3	39	39
Grand Avenue #7	-4	34	34
Station Total		73	73
Northeast 11	+3	52	65
Northeast 12	+3	53	65
Northeast 13		57	65
Northeast 14	-1	53	65
Northeast 15		53	65
Northeast 16		58	65
Northeast 17		57	65
Northeast 18	+8	59	65
Station Total		442	520
Generating Capacity		3,298	3,396
Purchases:			
AEC/Entergy		200	200
Assoc Electric Coop		300	300
Gardner		12	12
Higginsville	+2	36	36
Independence		55	55
Total Capacity Purchases		603	603
Sales:			
Independence		(60)	(60)
Union Electric		0	0
St Joseph L & P		(10)	(10)
Missouri Public Service		(30)	0
Power Marketer		(4)	(4)
IES		(50)	0
Total Capacity Sales		(154)	(74)
Total Accredited Capacity		3,747	3,925

SYSTEM: KCPL

Load and Capability Forecast

5 Year Projection of Load and Capability Data

YEAR	SYSTEM PEAK RESPONSIBILITY (MW)				SYSTEM CAPACITY RESP. (MW)	SYSTEM CAPACITY (MW)							
	SYSTEM PEAK LOAD NET 1-HR	FIRM PURCHASE (-)	FIRM SALES (+)	TOTAL SYSTEM PEAK RESP.	TOT SYSTEM CAPACITY RESP. * (5)/(1-CM)	ACCREDITED GENERATING CAPACITY	PEAKING CAPACITY PURCHASE (HYDRO)	CAPACITY SALES (-)	CAPACITY PURCHASE (+)	PLANNED CAPACITY ADDITIONS	TOTAL SYSTEM CAPACITY	CAPACITY BALANCE (12-6)	CAPACIT MARGIN (%) (12-5)/(12)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1997	3046	0 a	9	3055	3512	3156	45 b	199 c	603 h	142 m	3747	235	18.47%
1998	3116	0 a	9	3125	3592	3298	45 b	195 d	547 i	7 n	3702	110	15.59%
1999	3190	0 a	9	3199	3677	3305	45 b	230 e	546 j	0	3666	-11	12.74%
2000	3266	0 a	9	3275	3764	3305	45 b	135 f	544 k	3 o	3762	-2	12.95%
2001	3344	0 a	9	3353	3854	3308	45 b	96 g	594 l	0	3851	-3	12.93%

FOOTNOTES:

a KEPCO

b KCK(SPA-EDE)39; KMEA(SPA-EDE)2;
Higginsville(SPA-EDE)3;
KPL-Kaw Valley Coop(SPA-EDE)1c INDN 60; MPS 30; SJLP 10
PWR MKTR 4, IES 50
KCK(SPA-EDE)39; KMEA(SPA-EDE)2;
Higginsville(SPA-EDE)3;
KPL-Kaw Valley Coop(SPA-EDE)1d INDN 60; MPS 60; SJLP 30
KCK(SPA-EDE)39; KMEA(SPA-EDE)2;
Higginsville(SPA-EDE)3;
KPL-Kaw Valley Coop(SPA-EDE)1e INDN 60; MPS 90; SJLP 35
KCK(SPA-EDE)39; KMEA(SPA-EDE)2;
Higginsville(SPA-EDE)3;
KPL-Kaw Valley Coop(SPA-EDE)1

f INDN 90

KCK(SPA-EDE)39; KMEA(SPA-EDE)2;
Higginsville(SPA-EDE)3;
KPL-Kaw Valley Coop(SPA-EDE)1

g Springfield 51

KCK(SPA-EDE)39; KMEA(SPA-EDE)2;
Higginsville(SPA-EDE)3;
KPL-Kaw Valley Coop(SPA-EDE)1

h Gardner 12; ASEC 500; HIGV 36; INDN 55

i Gardner 11; ASEC 500; HIGV 36

j Gardner 10; ASEC 500; HIGV 36

k Gardner 9; ASEC 150; HIGV 35; PWR MKTR 100; Purchase 250

l Gardner 8; ASEC 150; HIGV 35; PWR MKTR 151; Purchase 250

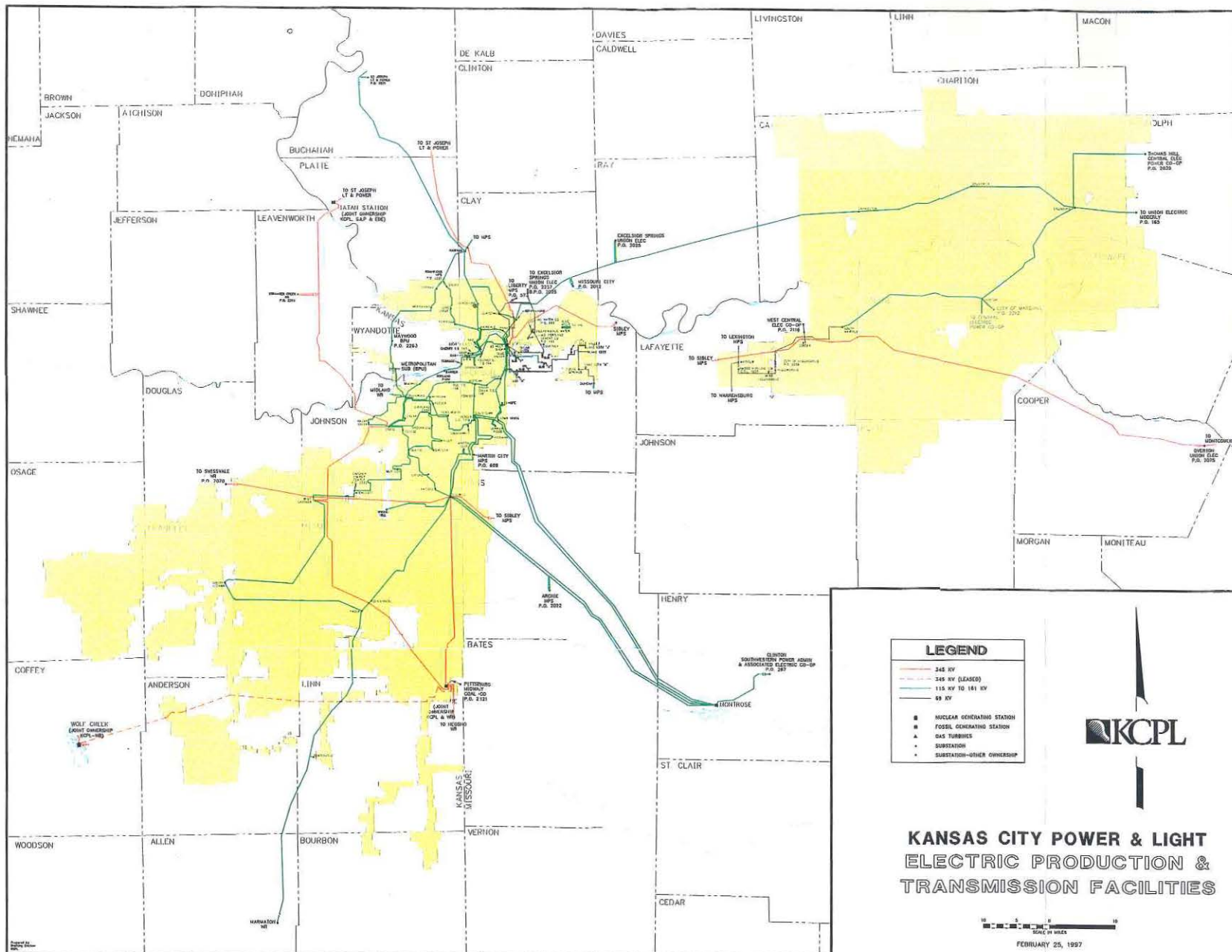
m 1CT-Hawthorn 6(+142)

n NECTs(+7)

o NECTs(+3)

* Minimum Capacity Margin = 0.1304

Total Sys. Capacity Resp. =	Total System Peak Responsibility + .499
1 - 0.1304 + 0.0005	



KCPL DIRECT INTERCONNECTIONS AND JOINT INTEREST FACILITIES

DIRECT INTERCONNECTIONS

<u>Interconnecting Utility</u>	<u>Facility</u>	<u>Voltage(KV)</u>	<u>Summer Thermal Rating (MVA)</u>
AEC	Montrose-Clinton Line	161	370
AEC	Salisbury-Thomas Hill Line	161	277
AEC	Birmingham-MO City Line	161	187
AEC	Excelsior Springs-MO City Line	161	187
AEC	Norton Bus Tie	161	<u>223</u>
AEC	Total		1244
BPU	Greenwood-Metro Line	161	224
BPU	Terrace-Barber Line	161	293
BPU	Weatherby-Maywood Line	161	273
BPU	Shawnee-Barber Line	161	<u>224</u>
BPU	Total		1014
EDE	Centerville-Marmaton Line ⁽¹⁾	161	233
Independence	Leed-Sub N Line	161	320
Independence	Hawthorn-Sub M Line	161	320
Independence	Courtney-Sub H Line	69	63
Independence	Lake City J-Blue Valley Line	69	71
Independence	Sugar Creek-Sub H Line	69	57
Independence	Hawthorne-Sub E Line	69	<u>43</u>
Independence	Total		874
MPS	Montrose-Archie Line	161	224
MPS	Stilwell-Archie Line	161	224
MPS	Martin City-Martin City (MPS) Line	161	293
MPS	Southtown-Martin City (MPS) Line	161	224
MPS	Barry-Roanridge Line	161	293
MPS	Tiffany-Roanridge Line	161	293
MPS	Nashua-Roanridge Line	161	293
MPS	Duncan Transformer	161/69	60
MPS	Nashua Bus Tie	161	335
MPS	Glenaire-Liberty Line	69	66
MPS	Amoco Pipeline-Mayview Line	69	<u>71</u>
MPS	Total		2376

<u>Interconnecting Utility</u>	<u>Facility</u>	<u>Voltage(KV)</u>	<u>Summer Thermal Rating (MVA)</u>
SJLP	Hawthorn-St. Joe Line	345	721
SJLP	Iatan-St. Joe Line	345	956
SJLP	Nashua-Lake Rd Line	161	<u>153</u>
SJLP	Total		1830
UE	Salisbury-Moberly Line	161	180
WR (KPL)	Greenwood-Pentagon Line	161	224
WR (KGE)	Centerville-Marmaton Line ⁽¹⁾	161	233
WR (KGE)	LaCygne-Neosho Line	345	956
WR (KGE)	LaCygne-Wolf Creek Line ⁽²⁾	345	1195
WR (KPL)	Iatan-Stranger Creek Line	345	1099
WR (KPL)	Craig-Stranger Creek Line	345	1099
WR (KPL)	Spring Hill Transformer	161/115	<u>50</u>
WR	Total		4856
WR (KGE)	Total		2384
WR (KPL)	Total		2472

JOINT INTEREST FACILITIES

AEC, LES, MEC	MINT Line	345	956
NPPD, OPPD, SJLP			
	Available to KCPL		142
MPS, UE	Missouri Interconnection	345	598
MPS, WR	MOKAN Interconnection	345	721

⁽¹⁾ EDE has an arrangement with WR to utilize the capacity of this line.

⁽²⁾ KCPL leases this line from WR.

KANSAS CITY POWER & LIGHT
FULL REQUIREMENTS CUSTOMERS

<u>CUSTOMER</u>	<u>FERC DESIGN</u>	<u>CONTRACT DATED</u>	<u>NOTICE PERIOD</u>	<u>TERM (1)</u>	<u>DELIVERY VOLTAGE (MV)</u>	<u>95 PEAK DEMAND (KW)</u>
KEPCO-CC	69	5-09-69	12 MO	5-74	12/34	2903
MPS	74	2-25-75	18 MO	5-06	13.2	887
PRESCOTT, KS	76	3-08-76	18 MO	5-81	2.4	469
POMONA, KS	82	2-07-77	18 MO	5-06	12.5	1797
KEPCO-UEC	84	7-07-77	18 MO	5-82	34	7211
SLATER, MO	98	4-12-83	18 MO	5-06	4.2	5096

Notes:

1. The term is to the date indicated and year to year thereafter.
2. In addition to the above full requirements customers, firm power service is currently being taken by three partial requirements customers: Osawatomie (1 MW), Garnett (1 MW) and Higginsville (4 MW).

Western Resources, Inc. and
Kansas City Power & Light Company
KCPL Partial Requirements Customers

Customer	KCPL's		Notice Period	Term (1)	Delivery Voltage (MV)	Generally available services						
	Rate Designation	Contract Dated				Firm (2)	Trans- mission	Stand by	System Participation	Economy Energy	Load Regulation	Equal- ization
Osawatomie, Ks	77	8-11-1975	42 Months	5-06	34	X	X	X	X	X	X	X
Garnett, Ks	78	12-19-1975	42 Months	5-06	34	X	X	X	X	X	X	X
Marshall, Mo	83	9-15-1975	42 Months	5-98	161	X		X	X	X	X	X
Baldwin City, Ks	85	1-30-1978	42 Months	5-83	34	X	X	X	X	X	X	X
Carrollton, Mo	86	2-2-1978	36 Months	5-98	34	X		X	X	X	X	X
Ottawa, Ks	90	6-1-1980	42 Months	5-98	34	X	X	X	X	X	X	X
Salisbury, Mo	100	11-7-1985	42 Months	5-06	34	X		X	X	X	X	X
Gardner, Ks	105	3-6-1989	42 Months	5-10	161	X		X	X	X	X	X
Higginsville, Mo	108	4-8-1992	42 Months	5-16	69	X	X	X	X	X	X	X

Notes:

- 1) The term is to the date indicated and year to year thereafter.
- 2) Firm power service is available to all customers but is currently being taken by only Osawatomie (1MW), Garnett (1MW) and Higginsville (4MW).

Western Resources, Inc. and
 Kansas City Power and Light Company
 Kansas City Power and Light Unfulfilled Requests for Transmission Service

ID	Request Date	Time	MW	Start Date	Stop Date
1436	Jan 27, 1996	1221		Jan 27, 1996	Jan 27, 1996
1315	Jan 12, 1996	1051	150	Feb 1, 1996	Feb 29, 1996
1562	Feb 5, 1996	1038		Feb 5, 1996	Feb 5, 1996
1582	Feb 7, 1996	0645		Feb 7, 1996	Feb 7, 1996
1585	Feb 7, 1996	0748	1	Feb 11, 1996	Feb 11, 1996
2164	Mar 26, 1996	0636		Mar 26, 1996	Mar 26, 1996
2258	Mar 31, 1996	0024		Mar 31, 1996	Mar 31, 1996
2671	Apr 30, 1996	1317	150	May 1, 1996	May 31, 1996
3309	Jun 3, 1996	1401		Jun 4, 1996	Jun 4, 1996
3368	Jun 6, 1996	0734	35	Jun 6, 1996	Jun 6, 1996
3369	Jun 6, 1996	0735	10	Jun 6, 1996	Jun 6, 1996
4500	Jul 29, 1996	0700		Jul 30, 1996	Jul 30, 1996
4636	Aug 6, 1996	1000		Aug 6, 1996	Aug 6, 1996
4654	Aug 6, 1996	1600	500	Aug 6, 1996	Aug 6, 1996
4722	Aug 12, 1996	1231		Aug 13, 1996	Aug 13, 1996
4723	Aug 12, 1996	1232		Aug 13, 1996	Aug 13, 1996
4724	Aug 12, 1996	1233		Aug 12, 1996	Aug 13, 1996
4725	Aug 12, 1996	1234		Aug 13, 1996	Aug 13, 1996
4726	Aug 12, 1996	1235		Aug 13, 1996	Aug 13, 1996
4727	Aug 12, 1996	1236		Aug 13, 1996	Aug 13, 1996
5693	Oct 13, 1996	1429	20	Oct 13, 1996	Oct 13, 1996
6252	Nov 12, 1996	1016		Nov 13, 1996	Nov 13, 1996
6812	Dec 9, 1996	1219		Dec 9, 1996	Dec 9, 1996