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Issue: Public Interest
Witness: John R. Carlson
Type of Exhibit: Rebuttal Testimony
Sponsoring Parties: Kansas City Power & Light Company and
KCP&L Greater Missouri Operations Company
File Nos.: EO-2013-0396
EO-2013-0431
Date Testimony Prepared: May 24, 2013

MISSOURI PUBLIC SERVICE COMMISSION

FILE NOS. EO-2013-0396 and EO-2013-0431

DIRECT TESTIMONY

OF

JOHN R. CARLSON

ON BEHALF OF

KANSAS CITY POWER & LIGHT COMPANY

AND

KCP&L GREATER MISSOURI OPERATIONS COMPANY

**Kansas City, Missouri
May 2013**

*** [REDACTED] *** Designates "Highly Confidential" Information
Has Been Removed Pursuant to 4 CSR 240-2.135.

KCP&L Exhibit No. 18NP
Date 6-18-13 Reporter KF
File No. EO-2013-0396
EO-2013-0431

DIRECT TESTIMONY

OF

JOHN R. CARLSON

File Nos. EO-2013-0396 and EO-2013-0431

1 **Q: Please state your name and business address.**

2 A: My name is John R. Carlson. My business address is 1200 Main Street, Kansas City,
3 Missouri 64105.

4 **Q: By whom and in what capacity are you employed?**

5 A: I am employed by Kansas City Power & Light Company ("KCP&L") as Originator,
6 Generation Sales and Services.

7 **Q: On whose behalf are you testifying?**

8 A: I am testifying on behalf of KCP&L and KCP&L Greater Missouri Operations Company
9 ("GMO"), (collectively referred to as the "Company").

10 **Q: What are your responsibilities?**

11 A: My primary responsibilities are to structure and market long-term power purchases and
12 sales to meet the operational and wholesale needs of the Company. I also develop and
13 manage the Company's budget for Regional Transmission Organization ("RTO") fees
14 and transmission charges.

15 **Q: Please describe your education, experience and employment history.**

16 A: I received a Bachelor of Science degree in Architectural Engineering from the University
17 of Kansas in 1997. In 2004, I received a Master of Business Administration from the
18 University of Chicago Booth School of Business. From 1997 to 2001, I worked for
19 Custom Energy and Enron Energy Services, companies focused on performance

1 contracting and other energy efficiency project financing structures. In 2002, I stepped
2 outside the energy industry and worked in financial services focusing on asset
3 management and risk management. I joined KCP&L in 2006 as an Energy Consultant in
4 the Delivery Division. My responsibilities included managing all facets of the customer
5 relationship for KCP&L's large industrial customers and developing solutions that met
6 the customer's needs, to include demand response and energy efficiency opportunities.
7 In 2007, I became Manager of Market Competitiveness where I was responsible for
8 developing and implementing non-regulated products and services for residential,
9 commercial and industrial customers. In 2010, I moved to the Generation Division at the
10 Company and started work as an Originator of wholesale power transactions. Since that
11 time I have also been assigned with developing and managing the Company's budget for
12 RTO fees and transmission charges.

13 **Q: Have you previously testified in a proceeding at the Missouri Public Service**
14 **Commission ("MPSC") or before any other utility regulatory agency?**

15 A: Yes, I have. I provided testimony to the MPSC in the Company's most recent Missouri
16 rate cases, ER-2012-0174 and ER-2012-0175.

17 **Q: On what subjects will you be testifying?**

18 A: I will be testifying on (1) the projected transmission expense increase; and (2) the
19 potential impact on off-system sales, due to the proposed transfer of Entergy Arkansas
20 Inc.'s ("EAI") transmission assets to ITC Midsouth, Inc. ("ITC") in File No. EO-2013-
21 0396 ("Merger Application") and due to EAI's intent to change functional control of its
22 Missouri electric transmission facilities over to the Midcontinent Independent System

Operator (“MISO”) regional transmission organization (“RTO”) in File No. EO-2013-0431 (“RTO Application”).

Q: Are the transfer of assets and the change of functional control separate issues?

A: The applicants have attempted to cast the two dockets as separate issues. In principle, the issues do not have to be linked, and the merger could have been accomplished without putting the EAI transmission facilities and other Entergy operating companies’ transmission facilities under the MISO Open Access Transmission, Energy and Operating Reserve Markets Tariff (“MISO Tariff”). However, the applicants have elected for the transfer of assets to be placed under the MISO Tariff, and this is an integral component of the state regulatory proceedings regarding approval of the merger. The manner in which the merger application has been presented to the MPSC does not allow the MPSC to consider the transaction without the proposed transfer of the Entergy operating companies’ transmission facilities to the MISO Tariff.

TRANSMISSION EXPENSE

Q: Please describe the existing transmission service agreement between Entergy Services, Inc. (“Entergy”) and GMO for capacity and energy from the Crossroads generating facility.

A: GMO currently has four (4) firm point-to-point Transmission Service Requests (“TSR”) on Entergy’s Open Access Same-time Information System (“OASIS”). These requests are for 75 MW each for a total of 300 MW, sourcing at the Crossroads generating station located in Clarksdale, Mississippi, within the Entergy footprint, and sinking at the American Electric Power Central and Southwest Balancing Area (“CSWS”), where it is picked up on Southwest Power Pool, Inc.’s (“SPP”) transmission service and sinks at

GMO. Service on these four (4) TSRs started on March 1, 2009 and runs through February 28, 2029. Additionally, this transmission service utilizes the Entergy to SPP interconnections at the Omaha switching station to Ozark Beach. These Missouri facilities are part of the assets EAI is planning to transfer to ITC.

In accordance with the Entergy Open Access Transmission Tariff ("OATT"), current charges for the four (4) TSRs include: Firm Point-to-point Transmission Charges (Schedule 7), Ancillary Services, which include Scheduling, System Control and Dispatch Service and Reactive Supply and Voltage Control (Schedule 1) and Recovery of ICT Operations Costs (Schedule 10).

Q: What are the current monthly transmission rates for Entergy's Schedules 1, 7 and 10?

A: The rates shown in the table below are those in effect as of June 1, 2012 for the Entergy transmission system (Schedule JRC-1). The Schedule 7 rate for long term firm point-to-point service is a flat monthly rate as shown below. To calculate an equivalent \$/MWh rate the Company multiplied the Schedule 7 monthly rate by 12 months/yr and then divided by 8,760 hrs/yr.

Entergy Schedule	Rate
1 – Scheduling, System Control and Dispatch	\$0.100/MWh
7 – Firm Point-to-point	\$1,550.00/MW-month
10 – Recovery of ICT Operations	\$0.095/MWh
<i>Equivalent Total Rate</i>	<i>\$2.32/MWh</i>

Entergy does not currently charge for Reactive Supply and Voltage Control.

1 **Q: How will the proposed transfer of EAI assets to ITC affect the Entergy transmission**
2 **service mentioned above?**

3 A: Because the transmission service will be administered under the MISO Tariff, GMO will
4 have to start managing transmission congestion risk through MISO's Financial
5 Transmission Rights ("FTR") auction process. The most drastic impact to GMO's
6 transmission costs is the projected increase in transmission service rates that occurs when
7 moving from the Entergy OATT to the MISO Tariff. ITC has not demonstrated any
8 incremental benefit to offset the projected increases to both the financial costs of MISO
9 transmission and the administrative costs with managing MISO congestion.

10 **Q: How will the transmission service rates change when moving from the Entergy**
11 **OATT to the MISO Tariff?**

12 A: It is GMO's understanding, based on multiple conversations with MISO representatives,
13 that Schedules 1, 2, 7, 10 and 26 from the MISO Tariff (Schedule JRC-2) will be
14 applicable to the GMO transmission sourcing at Crossroads and sinking at CSWS. The
15 table below summarizes those rates. The Schedules 2, 7 and 26 were converted to a
16 \$/MWh rate similar to the way the Company converted the Entergy Schedule 7 rate
17 earlier in this testimony.

MISO Schedule	Rate
1 – Scheduling, System Control and Dispatch	\$68.024/MW-month
2 – Reactive Supply and Voltage Control	\$173.9564/MW-month
7 – Firm Point-to-point (through-and-out)	\$2,725.1722/MW-month
10 – Recovery of FERC fees	\$0.04566/MWh
26 – Network Upgrade Charge	\$348.6743/MW-month
<i>Equivalent Total Rate</i>	<i>\$4.59/MWh</i>

1 Q: What is the financial impact of these transmission rates on an annual basis?

2 A: Because the Crossroads generating facility is a peaking facility, or one that runs farther
3 down in the generation stack when demand is high, the annual days of run-time are fairly
4 low. Assuming approximately 60 days of on-peak run-time, for the 300 MWs of TSRs,
5 on an annual basis, the projected annual financial impact to GMO is \$6,095,917. More
6 detail can be found in Schedule JRC-3.

	\$/MW-yr	\$/kW-yr	Projected \$/yr	Difference
Existing Entergy				
Sched 1	\$96.00			
Sched 7	\$18,600.00			
Sched 10	\$91.20			
<i>TOTAL Entergy</i>	<i>\$18,787.20</i>	<i>\$18.79</i>	<i>\$5,636,160</i>	
Projected MISO				
Sched 1	\$89.456			
Sched 2	\$2,087.48			
Sched 7	\$32,702.07			
Sched 10	\$43.8336			
Sched 26	\$4,184.0916			
<i>TOTAL MISO</i>	<i>\$39,106.92</i>	<i>\$39.11</i>	<i>\$11,732,077</i>	<i>\$6,095,917</i>

7 Q: If the current Crossroads transmission is not in GMO's electric rates, why is this
8 increase of concern?

9 A: While it is true that the Entergy transmission for the Crossroads generating facility has
10 not been allowed in GMO's electric rates to-date,¹ it is GMO's intention to continue to
11 file for inclusion of this transmission in its rates, similar to The Empire District Electric
12 Company's transmission for the Plum Point generating facility, also currently located in

1 Entergy. At such time this transmission expense is placed in rates there will be a material
2 impact to Missouri retail customers.

3 In addition, a large increase in any expense, in this case transmission expense,
4 absent an offsetting benefit, could put financial pressure on Great Plains Energy Inc.
5 ("GXP"). Equity investors and analysts could see less return and financial stability in the
6 company which would negatively impact stock price and credit metrics. Debt investors
7 could then require higher coupon rates on bonds issued which ultimately would raise the
8 borrowing costs of GXP. These changes could impact the capital structure and cost of
9 capital of GXP and have an impact on Missouri retail customers.

10 **OFF-SYSTEM SALES**

11 **Q: Please describe the nature of KCP&L's SPP transmission service sinking at**
12 **Entergy.**

13 A: KCP&L has a total of 238 MW of firm point-to-point TSRs on SPP's system, sourcing at
14 KCP&L and sinking at Entergy. While the transmission reservations state a particular
15 sinking location, in actuality energy from KCP&L flows across all SPP to Entergy
16 interconnections on the transmission system, including the Omaha switching station to
17 Ozark Beach.

18 Historically speaking, Entergy has been a liquid market to sell energy, meaning
19 there have been many buyers and sellers such that price discovery is not an issue and
20 transactions can be completed relatively easily. Furthermore, Entergy has shown to have,
21 on average, higher prices to those in SPP and thus is an advantageous location to sink
22 energy. In other words, historically, the Entergy market has been a favorable market for
23 KCP&L to make off-system sales.

¹ The Commission's orders concerning Crossroads are currently on appeal.

1 **Q: What type of energy transactions does KCP&L complete when utilizing this**
2 **transmission?**

3 A: Because of the firm nature of the KCP&L transmission and the reliability of its
4 generation assets, counterparties have shown an interest in multiple energy transaction
5 types. KCP&L has completed bilateral transactions for on-peak and off-peak energy for
6 both short-term (real-time and day-ahead) and long-term (up to one year) durations.
7 KCP&L has also transacted through a broker that specializes in the Entergy and
8 Southeast energy markets. The broker will find counterparties interested in purchasing
9 energy and work with KCP&L and the counterparty to come to agreement on price and
10 terms.

11 In addition to utilizing the firm SPP point-to-point transmission for energy
12 transactions, KCP&L will, at times, re-direct other point-to-point transmission and/or
13 purchase non-firm transmission on a short-term basis to make sales at Entergy.

14 **Q: What do KCP&L's counterparties do with the energy once purchased at Entergy?**

15 A: KCP&L believes that some counterparties will sink the energy within Entergy while
16 other counterparties will "wheel" the energy out of the Entergy footprint to a neighboring
17 transmission system such as Southern Company or the Tennessee Valley Authority.
18 Regardless of where the energy ultimately sinks, there will be a financial impact that will
19 affect Missouri retail customers.

20 **Q: How many MWbs of off-system sales to Entergy has KCP&L had over the past**
21 **year?**

22 A: For the period January 1, 2012 to December 31, 2012, KCP&L had ** [REDACTED] **
23 of on-peak energy sales and ** [REDACTED] ** of off-peak energy sales into or through

1 the Entergy system. This represents ** [REDACTED] ** of KCP&L's total MWhs
2 of off-system sales during 2012.

3 **Q: How will the proposed transfer of EAI assets to ITC affect off-system sales sinking**
4 **at Entergy?**

5 A: KCP&L's off-system sales margin will most likely decrease due to the proposed transfer
6 of EAI assets to ITC. Schedule JRC-4 includes analysis that estimates the potential
7 impact to counterparties purchasing energy from KCP&L at the SPP/Entergy border.
8 Under the Entergy OATT, it does not make a difference if a counterparty sinks the energy
9 they purchased from KCP&L in Entergy or outside of the Entergy system; the
10 transmission rates are the same.

11 Absent information to suggest otherwise, the Company used the existing average
12 MISO transmission rate as a proxy for transmission rates that would be in effect if EAI
13 transferred its Missouri transmission assets to ITC. Under the MISO Tariff, a
14 counterparty that sinks the energy within Entergy would settle in a particular zone and be
15 subject to that settlement zone's transmission rate. Because KCP&L does not know the
16 ultimate sink location for the counterparties we do business with, it has assumed an
17 average rate, across all the MISO zonal rates, for the purposes of calculating a zonal
18 transmission rate. As seen in the top section of Schedule JRC-4, the projected increase in
19 transmission rates, after summing the applicable rates for both existing Entergy
20 transmission and projected MISO transmission, for an average MISO zonal settlement of
21 energy is \$5.17/MWh on-peak and \$2.38/MWh off-peak.

22 Under the MISO Tariff there is a specific transmission rate used when
23 transmitting energy through-and-out of the system for settlement in another transmission

1 system. While less than some of the MISO zonal settlement locations, this rate is still a
2 sharp increase to the existing Entergy rate. The bottom part of Schedule JRC-4 has a
3 similar analysis to the top section, but instead focuses on through-and-out transmission.
4 For counterparties sinking energy outside of Entergy the increase in transmission rates
5 when transmission service is moved to the MISO Tariff equates to \$4.78/MWh on-peak
6 and \$2.19/MWh off-peak.

7 These increases in transmission rates will result in counterparties offering lower
8 prices for the same energy, regardless of where they ultimately sink the energy, in order
9 to recover their increased transaction costs.

10 KCP&L could see off-system sales margins from sales utilizing their 238 MW of
11 firm point-to-point transmission, sinking at the SPP/Entergy border, reduced by up to
12 \$5.17/MWh on-peak and \$2.38/MWh off-peak. In addition to the reduction in margin,
13 KCP&L's off-system MWh sales volume could decrease due to counterparties finding
14 alternative sources of energy outside of the Entergy system.

15 **Q: Why is the potential decrease in off-system sales margins of concern in this**
16 **proceeding?**

17 **A:** Decreases in off-system sales have a direct impact on Missouri retail customers. Off-
18 system sales are used to reduce power supply costs for Missouri retail customers.
19 Ratemaking for KCP&L includes a credit for off-system sales, which is imbedded in the
20 overall rates for KCP&L's retail customers and serves to reduce those overall rates.
21 Because KCP&L retail electric customers receive a credit for off-system sales, any
22 reduction in off-system sales will have a direct and negative effect on Missouri retail
23 rates.

1 **Q:** Does that conclude your testimony?

2 **A:** Yes, it does.

In the Matter of the Joint Application of Entergy Arkansas, Inc.,)
Mid South TransCo LLC, Transmission Company Arkansas,)
LLC and ITC Midsouth LLC for Approval of Transfer of Assets) Case No. EO-2013-0396
and Certificate of Convenience and Necessity, and Merger and,)
in connection therewith, Certain Other Related Transactions.)

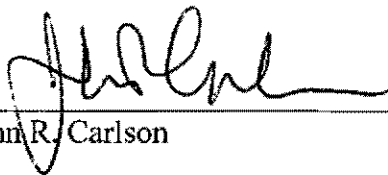
In the Matter of Entergy Arkansas, Inc.'s Notification of Intent to Change Functional Control of Its Missouri Electric Transmission Facilities to the Midwest Independent Transmission System Operator, Inc. Regional Transmission System Organization or Alternative Request to Change Functional Control and Motions for Waiver and Expedited Treatment))))))) Case No. EO-2013-0431

STATE OF MISSOURI)
) ss
COUNTY OF JACKSON)

1. My name is John R. Carlson. I work in Kansas City, Missouri, and I am employed by Kansas City Power & Light Company as Originator, Supply Resources.

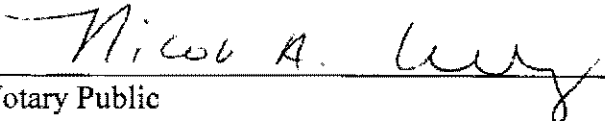
3. I have knowledge of the matters set forth therein. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded, including

any attachments thereto, are true and accurate to the best of my knowledge, information and belief.



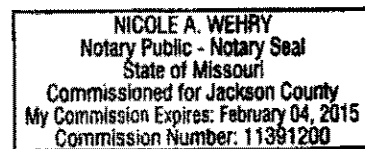
John R. Carlson

Subscribed and sworn before me this 24th day of May, 2013.



Notary Public

My commission expires: Feb. 4, 2015



ENTERGY TRANSMISSION SERVICE RATES**Effective June 1, 2012****Rates:****FIRM POINT-TO-POINT TRANSMISSION SERVICE:**

Service	Price	Units
DAILY ON-PEAK (Monday through Friday)	\$74.00	MW-DAY
DAILY OFF-PEAK (Saturday and Sunday)	\$53.00	MW-DAY
WEEKLY	\$371.00	MW-WEEK
MONTHLY	\$1610.00	MW-MONTH
LONG TERM (ONE YEAR OR LONGER)	\$1550.00	MW-MONTH

NON-FIRM POINT-TO-POINT TRANSMISSION SERVICE:

Service	Price	Units
HOURLY ON PEAK (Hour Ending 0700 through Hour Ending 2200 on Monday through Friday.)	\$4.64	MWH
HOURLY OFF PEAK (All Other Hours)	\$2.20	MWH
DAILY ON-PEAK (Monday through Friday)	\$74.00	MW-DAY
DAILY OFF-PEAK (Saturday and Sunday)	\$53.00	MW-DAY
WEEKLY	\$371.00	MW-WEEK
MONTHLY	\$1610.00	MW-MONTH

Schedule JRC-1

NETWORK TRANSMISSION SERVICE:

Service	Price	Units
NETWORK SERVICE REVENUE REQUIREMENT	\$578,334,006	Annual

NOTICE TO ALL TRANSMISSION CUSTOMERS

Firm requests for next day business must be queued into the Entergy Oasis by 12:00 Noon and Non-Firm requests must be queued in by 2:00 PM

Entergy asked that all next day accepted requests be confirmed or withdrawn by 3:00 PM and that all NERC Tags be sent to Entergy by 4:00 PM.

Entergy does not provide long-term non-firm service or hourly firm service.

CAPS

The total daily cost for hourly service is capped at the amount daily service would cost for the maximum amount of reservation for any hour of the same day.

LOSSES

3% of the amount to be delivered at Entergy's point of delivery must be provided to cover system losses. Losses should be spread evenly over the duration of the schedule. The total losses for the day must be 3% of the amount delivered to Entergy's point of delivery, rounded up to the next whole number of MW of losses.

ANCILLARY SERVICES

1. The Scheduling, System Control and Dispatch ancillary service is required to be purchased from Entergy for all transmission service reservations. The charge for this service is applied to all transmission service schedules at the posted price of \$.10/MWH and will appear as a separate charge on invoices.
2. Entergy does not charge for the Reactive Supply and Voltage Control from Generation Sources Service.
3. Please refer to the Entergy OATT for the current service rates for the following ancillary services: Regulation and Frequency Response Service, Operating Reserve - Spinning Reserve Service, Operating Reserve - Supplemental Reserve Service, and Energy Imbalance Service
4. Entergy will not discount its charges posted on the Entergy OASIS for the various types of transmission service offerings and its posted charges for ancillary services. Any changes or further discounts from posted prices will appear in the form of a new posting.

COST RECOVERY CHARGES

1. The Schedule 10 "Recovery of ICT Operations Costs" (\$.0950/MWH) will appear as a separate charge on invoices.
2. Entergy will not discount its charges posted on the Entergy OASIS for Cost Recovery Charges. Any changes or further discounts from posted prices will appear in the form of a new posting.

ICT CONTACTS

Business Hours	Name	Phone Number	Fax Number
Same Day Service	ICT Tariff Coordinator	1-317-249-5037	1-317-249-7992
Next Day and Next Week Service	ICT Tariff Coordinator	1-317-249-5037	1-317-249-7992

Schedule JRC-1

Monthly and Long-Term Service	ICT Tariff Coordinator	1-317-249-5037	1-317-249-7992
Nights, Weekends, and Holidays	ICT Tariff Coordinator	1-317-249-5037	1-317-249-7992
TTC Postings	ICT OPS Engineer	1-317-249-5037	1-317-249-7992
OASIS Registration	OATI Help Desk	1-763-201-2020	1-763-553-2813
Long Term Studies	ICT Planning Engineer	1-317-249-5037	1-317-249-7992

Note: Interchange scheduling questions or issues should be directed to the **Entergy Real-Time Scheduling** Desk at 870-541-3973.

All Transmission Service requests will be processed through OASIS.

MISO Transmission Rates Effective January 1, 2013

Scheduling, System Control and Dispatch Service

MISO Schedule 1 2013

Zone		\$/MW-YR	\$/MW-MO	\$/MW-WK	\$/MW-DAY	\$/MW-HR	\$/MW-DAY	\$/MW-HR
	Midwest ISO Drive-Through and Out rate	\$816.2851	\$68.0238	\$15.6978	\$3.1396	\$0.1962	\$2.2364	\$0.0932
	Drive-Through and Out rate,							
1	ITC Midwest	\$1,852.8668	\$154.4056	\$35.6321	\$7.1264	\$0.4454	\$5.0763	\$0.2115
2A	ATCLLC Madison G&E	\$1,091.7967	\$90.9831	\$20.9961	\$4.1992	\$0.2625	\$2.9912	\$0.1246
2B	ATCLLC Wisconsin Public Service	\$1,091.7967	\$90.9831	\$20.9961	\$4.1992	\$0.2625	\$2.9912	\$0.1246
2C	ATCLLC Wisconsin P&L	\$1,091.7967	\$90.9831	\$20.9961	\$4.1992	\$0.2625	\$2.9912	\$0.1246
2D	ATCLLC Wisconsin Energy	\$1,091.7967	\$90.9831	\$20.9961	\$4.1992	\$0.2625	\$2.9912	\$0.1246
2E	ATCLLC UPPC	\$1,091.7967	\$90.9831	\$20.9961	\$4.1992	\$0.2625	\$2.9912	\$0.1246
3A	Ameren Illinois	\$361.6712	\$30.1393	\$6.9552	\$1.3910	\$0.0869	\$0.9909	\$0.0413
3B	Ameren Missouri	\$374.8585	\$31.2382	\$7.2088	\$1.4418	\$0.0901	\$1.0270	\$0.0428
4	Reserved							
5	Cinergy Services (DEI only (incl. IMPA & WVPA)	\$892.7599	\$74.3967	\$17.1685	\$3.4337	\$0.2146	\$2.4459	\$0.1019
6	City of Columbia, Missouri	\$1,749.9098	\$145.8258	\$33.6521	\$6.7304	\$0.4207	\$4.7943	\$0.1998
7	City Water, Light & Power (Springfield, IL)	\$6,285.9843	\$523.8320	\$120.8843	\$24.1769	\$1.5111	\$17.2219	\$0.7176
8	Great River Energy	\$1,141.2391	\$95.1033	\$21.9469	\$4.3894	\$0.2743	\$3.1267	\$0.1303
9	Hoosier Energy	\$810.2085	\$67.5174	\$15.5809	\$3.1162	\$0.1948	\$2.2197	\$0.0925
10	International Transmission Company	\$309.6767	\$25.8064	\$5.9553	\$1.1911	\$0.0744	\$0.8484	\$0.0354
11	Indianapolis Power & Light	\$499.8226	\$41.6519	\$9.6120	\$1.9224	\$0.1201	\$1.3694	\$0.0571
12	Lincoln Electric (Neb.) System	Availability Suspended						
13	Michigan Joint Zone (METC)	\$709.7258	\$59.1438	\$13.6486	\$2.7297	\$0.1706	\$1.9445	\$0.0810
14	Minnesota Power	\$1,947.7500	\$162.3125	\$37.4567	\$7.4913	\$0.4682	\$5.3363	\$0.2223
15	Montana-Dakota Utilities Co.	\$604.2978	\$50.3582	\$11.6211	\$2.3242	\$0.1453	\$1.6556	\$0.0690
16	NSP Companies	\$802.4120	\$66.8677	\$15.4310	\$3.0862	\$0.1929	\$2.1984	\$0.0916
17	Northern Indiana Public Service Company	\$1,157.4755	\$96.4563	\$22.2591	\$4.4518	\$0.2782	\$3.1712	\$0.1321
18	Otter Tail Power	\$1,361.4330	\$113.4528	\$26.1614	\$5.2363	\$0.3273	\$3.7300	\$0.1554
19	Southern Illinois Power Cooperative	\$4,515.9657	\$376.3305	\$86.8455	\$17.3691	\$1.0856	\$12.3725	\$0.5155
20	Southern Minnesota Municipal Power Agency	\$136.8032	\$11.4003	\$2.6308	\$0.5262	\$0.0329	\$0.3748	\$0.0156
21	Aquila, Inc. Kansas (West Plains Energy)	Availability Suspended						
22	Aquila, Inc. Missouri (St Joseph L&P, Mo Pub Svc Co)	Availability Suspended						
23	Vectren Energy	\$1,476.4655	\$123.0368	\$28.3936	\$5.6767	\$0.3549	\$4.0451	\$0.1685
24	MidAmerican Energy Company	\$333.1934	\$27.7661	\$6.4076	\$1.2815	\$0.0801	\$0.9129	\$0.0380
25	Muscatine Power and Water	\$727.6182	\$60.6349	\$13.9927	\$2.7985	\$0.1749	\$1.9935	\$0.0831
26	Dairyland Power Cooperative	\$1,431.4864	\$119.2905	\$27.5286	\$5.5057	\$0.3441	\$3.9219	\$0.1634
27	Big Rivers Electric Corporation	\$2,094.9794	\$174.5816	\$40.2881	\$8.0576	\$0.5036	\$5.7397	\$0.2392

MISO Transmission Rates Effective January 1, 2013

Reactive Supply and Voltage Control from Generation Sources Service MISO Schedule 2 2013

				On-Peak Rates		Off-Peak Rates	
	\$/MW-YR	\$/MW-MO	\$/MW-WK	\$/MW-DAY	\$/MW-HR	\$/MW-DAY	\$/MW-HR
Midwest ISO	\$2,087.4768	\$173.9564	\$40.1438	\$8.0288	\$0.5018	\$5.7191	\$0.2383
Average Drive through/Out							

MISO Transmission Rates Effective January 1, 2013

Year 2013 MISO Rates for OATT Schedule 7

Firm Point to Point

ZONE		\$/MW-YR	\$/MW-MO	\$/MW-WK	\$/MW-DAY /1	\$/MW-DAY
	Midwest ISO Drive-Through and Out rate /2	\$32,702.0669	\$2,725.1722	\$628.8859	\$125.7772	\$89.5947
	Drive-Through and Out rate.					
1	ITC Midwest	\$96,444.8282	\$8,037.0690	\$1,854.7082	\$370.9416	\$264.2324
2A	ATCLLC Madison G&E	\$53,167.8938	\$4,430.6578	\$1,022.4595	\$204.4919	\$145.6655
2B	ATCLLC Wisconsin Public Service	\$53,167.8938	\$4,430.6578	\$1,022.4595	\$204.4919	\$145.6655
2C	ATCLLC Wisconsin P&L	\$53,167.8938	\$4,430.6578	\$1,022.4595	\$204.4919	\$145.6655
2D	ATCLLC Wisconsin Energy	\$53,167.8938	\$4,430.6578	\$1,022.4595	\$204.4919	\$145.6655
2E	ATCLLC UPPC	\$53,167.8938	\$4,430.6578	\$1,022.4595	\$204.4919	\$145.6655
3A	Ameren Illinois	\$19,720.8124	\$1,643.4010	\$379.2464	\$75.8493	\$54.0296
3B	Ameren Missouri	\$11,608.4859	\$967.3738	\$223.2401	\$44.6480	\$31.8041
4	Reserved					
5	Cinergy Services (DEI only (incl. IMPA & WVPA))	\$23,251.3929	\$1,937.6161	\$447.1422	\$89.4284	\$63.7024
6	City of Columbia, Missouri	\$11,261.8376	\$938.4885	\$216.5738	\$43.3148	\$30.8543
7	City Water, Light & Power (Springfield, IL)	\$20,309.1539	\$1,692.4295	\$390.5807	\$78.1121	\$55.6415
8	Great River Energy	\$54,857.3710	\$4,571.4476	\$1,054.9494	\$210.9899	\$150.2942
9	Hoosier Energy	\$52,011.0324	\$4,334.2527	\$1,000.2122	\$200.0424	\$142.4960
10	International Transmission Company	\$26,194.3583	\$2,182.8632	\$503.7377	\$100.7475	\$71.7654
11	Indianapolis Power & Light	\$8,151.7789	\$679.3150	\$156.7650	\$31.3530	\$22.3336
12	Lincoln Electric (Neb.) System		Availability Suspended			
13	Michigan Joint Zone (METC, MPPA, Wolverine)	\$33,916.5587	\$2,826.3799	\$652.2415	\$130.4483	\$92.9221
13A	Michigan Joint Zone Subzone	\$3,600.7141	\$300.0595	\$69.2445	\$13.8489	\$9.8650
14	Minnesota Power	\$22,454.4286	\$1,871.2024	\$431.8159	\$86.3632	\$61.5190
15	Montana-Dakota Utilities Co.	\$30,082.0993	\$2,506.8416	\$578.5019	\$115.7004	\$82.4167
16	NSP Companies	\$45,550.5866	\$3,795.8822	\$875.9728	\$175.1946	\$124.7961
17	Northern Indiana Public Service Company	\$41,387.5309	\$3,448.9609	\$795.9141	\$159.1828	\$113.3905
18	Otter Tail Power	\$33,462.5000	\$2,788.5417	\$643.5096	\$128.7019	\$91.6781
19	Southern Illinois Power Cooperative	\$26,844.2130	\$2,237.0178	\$516.2349	\$103.2470	\$73.5458
20	Southern Minnesota Municipal Power Agency	\$38,718.1282	\$3,226.5107	\$744.5794	\$148.9159	\$106.0771
21	Aquila, Inc. Kansas (West Plains Energy)		Availability Suspended			
22	Aquila, Inc. Missouri (St Joseph L&P, Mo Pub Svc Co)		Availability Suspended			
23	Vectren Energy	\$24,814.3832	\$2,067.8653	\$477.1997	\$95.4399	\$67.9846
24	MidAmerican Energy Company	\$25,147.6178	\$2,095.6348	\$483.6080	\$96.7216	\$68.8976
25	Muscatine Power and Water	\$13,864.1242	\$1,155.3437	\$266.6178	\$53.3236	\$37.9839
26	Dairyland Power Cooperative	\$49,598.8166	\$4,133.2347	\$953.8234	\$190.7647	\$135.8872
27	Big Rivers Electric Corporation	\$17,082.0713	\$1,423.5059	\$328.5014	\$65.7003	\$46.8002

Note:

1 Rate capped at weekly rate.

2 MISO rate includes all zones (excludes MP HVDC).

14	Minnesota Power (HVDC)	\$35,381.1058	\$2,948.4255	\$680.4059	\$136.0812	\$96.9345
			\$2,862.5898		\$132.1186	\$94.1119

MISO Transmission Rates Effective January 1, 2013

Year 2013 MISO Rates for OATT Schedule 8

Non Firm Point to Point

ZONE		(Rate Not to Exceed)		(Rate Not to Exceed)		(Rate Not to Exceed)	
		\$/MW-MO	\$/MW-WK	\$/MW-DAY /1	\$/MW-HR /2	\$/MW-DAY	\$/MW-HR
	Midwest ISO Drive-Through and Out rate /3	\$2,725.1722	\$626.8659	\$125.7772	\$7.8611	\$89.5947	\$3.7331
	Drive-Through and Out rate does NOT include Schedule 14 charges.						
1	ITC Midwest	\$8,037.0690	\$1,854.7082	\$370.9416	\$23.1839	\$264.2324	\$11.0097
2A	ATCLLC Madison G&E	\$4,430.6578	\$1,022.4595	\$204.4919	\$12.7807	\$145.6655	\$6.0694
2B	ATCLLC Wisconsin Public Service	\$4,430.6578	\$1,022.4595	\$204.4919	\$12.7807	\$145.6655	\$6.0694
2C	ATCLLC Wisconsin P&L	\$4,430.6578	\$1,022.4595	\$204.4919	\$12.7807	\$145.6655	\$6.0694
2D	ATCLLC Wisconsin Energy	\$4,430.6578	\$1,022.4595	\$204.4919	\$12.7807	\$145.6655	\$6.0694
2E	ATCLLC UPPC	\$4,430.6578	\$1,022.4595	\$204.4919	\$12.7807	\$145.6655	\$6.0694
3A	Ameren Illinois	\$1,643.4010	\$379.2484	\$75.8493	\$4.7406	\$54.0296	\$2.2512
3B	Ameren Missouri	\$967.3738	\$223.2401	\$44.6480	\$2.7905	\$31.8041	\$1.3252
4	Reserved						
5	Cinergy Services (DEI only (incl. IMPA & WVPA))	\$1,937.6161	\$447.1422	\$89.4284	\$5.5693	\$63.7024	\$2.6543
6	City of Columbia, Missouri	\$938.4865	\$216.5738	\$43.3148	\$2.7072	\$30.8543	\$1.2856
7	City Water, Light & Power (Springfield, IL)	\$1,892.4295	\$390.6607	\$78.1121	\$4.8820	\$55.6415	\$2.3184
8	Great River Energy	\$4,571.4476	\$1,054.9494	\$210.9899	\$13.1869	\$150.2942	\$6.2623
9	Hoosier Energy	\$4,334.2527	\$1,000.2122	\$200.0424	\$12.5027	\$142.4960	\$5.9373
10	International Transmission Company	\$2,182.8632	\$503.7377	\$100.7475	\$6.2967	\$71.7654	\$2.9902
11	Indianapolis Power & Light	\$678.3150	\$156.7650	\$31.3530	\$1.9596	\$22.3336	\$0.9306
12	Lincoln Electric (Neb.) System	Availability Suspended					
13	Michigan Joint Zone	\$2,828.3799	\$652.2415	\$130.4483	\$8.1530	\$92.9221	\$3.8718
13A	Michigan Joint Zone Subzone	\$300.0595	\$69.2445	\$13.8489	\$0.8656	\$9.8650	\$0.4110
14	Minnesota Power	\$1,871.2024	\$431.8159	\$86.3632	\$5.3977	\$61.5190	\$2.5633
15	Montana-Dakota Utilities Co.	\$2,506.8416	\$578.5019	\$115.7004	\$7.2313	\$82.4167	\$3.4340
16	NSP Companies	\$3,795.8822	\$875.9728	\$175.1946	\$10.9497	\$124.7961	\$5.1998
17	Northern Indiana Public Service Company	\$3,448.9809	\$795.9141	\$159.1828	\$9.9489	\$113.3905	\$4.7246
18	Otter Tail Power	\$2,788.5417	\$643.5096	\$128.7019	\$8.0439	\$91.6781	\$3.8199
19	Southern Illinois Power Cooperative	\$2,237.0178	\$516.2349	\$103.2470	\$6.4529	\$73.5458	\$3.0644
20	Southern Minnesota Municipal Power Agency	\$3,226.5107	\$744.5794	\$148.9159	\$9.3072	\$106.0771	\$4.4199
21	Aquila, Inc. Kansas (West Plains Energy)	Availability Suspended					
22	Aquila, Inc. Missouri (St Joseph L&P, Mo Pub Svc Co)	Availability Suspended					
23	Vectren Energy	\$2,067.8653	\$477.1897	\$95.4399	\$5.9650	\$67.9646	\$2.8327
24	MidAmerican Energy Company	\$2,095.6346	\$483.8080	\$96.7216	\$6.0451	\$68.8976	\$2.8707
25	Muscatine Power and Water	\$1,155.3437	\$266.8178	\$53.3236	\$3.3327	\$37.9839	\$1.5827
26	Dairyland Power Cooperative	\$4,133.2347	\$953.8234	\$190.7647	\$11.9228	\$135.8872	\$5.6620
27	Big Rivers Electric Corporation	\$1,423.5059	\$328.5014	\$65.7003	\$4.1063	\$46.8002	\$1.9500
Note:							
1 Rate capped at weekly rate.							
2 Rate capped at weekly and daily rate.							
3 MISO rate includes all zones (excludes MP HVDC).							
14	Minnesota Power (HVDC) per ER09-1727 (11/24/09 Order, Para. 34)	\$730.0000	\$168.4615	\$33.6923	\$2.1058	\$24.0000	\$1.0000
		\$2,862.5698		\$132.1186	\$8.2574	\$94.1119	\$3.9213

MISO Transmission Rates Effective January 1, 2013

Year 2013 MISO Rates for OATT Schedule 26

Network Upgrade Charge

ZONE		\$/MW-YR	\$/MW-MO	\$/MW-WK	\$/MW-DAY /1	\$/MW-HRLY /2	\$/MW-DAY	\$/MW-HRLY
	Midwest ISO Drive-Through and Out rate	\$4,184.0910	\$348.6743	\$80.4633	\$16.0927	\$1.0058	\$11.4633	\$0.4776
1	ITC Midwest	\$9,992.0644	\$832.6720	\$192.1551	\$38.4310	\$2.4019	\$27.3755	\$1.1406
2A	ATCLLC Madison G&E	\$6,355.2350	\$529.6029	\$122.2161	\$24.4432	\$1.5277	\$17.4116	\$0.7255
2B	ATCLLC Wisconsin Public Service	\$6,355.2350	\$529.6029	\$122.2161	\$24.4432	\$1.5277	\$17.4116	\$0.7255
2C	ATCLLC Wisconsin P&L	\$6,355.2350	\$529.6029	\$122.2161	\$24.4432	\$1.5277	\$17.4116	\$0.7255
2D	ATCLLC Wisconsin Energy	\$6,355.2350	\$529.6029	\$122.2161	\$24.4432	\$1.5277	\$17.4116	\$0.7255
2E	ATCLLC UPPC	\$6,355.2350	\$529.6029	\$122.2161	\$24.4432	\$1.5277	\$17.4116	\$0.7255
3A	Ameren Illinois	\$759.4138	\$63.2845	\$14.6041	\$2.9208	\$0.1826	\$2.0806	\$0.0867
3B	Ameren Missouri	\$1,624.8936	\$135.4078	\$31.2480	\$6.2496	\$0.3906	\$4.4518	\$0.1855
4	Reserved							
5	Cinergy Services (DEI only (incl. IMPA & WVPA))	\$1,517.9646	\$126.4971	\$29.1916	\$5.8383	\$0.3649	\$4.1588	\$0.1733
6	City of Columbia, Missouri	\$279.9320	\$23.3277	\$5.3833	\$1.0767	\$0.0673	\$0.7669	\$0.0320
7	City Water, Light & Power (Springfield, IL)	\$2,041.8076	\$170.1506	\$39.2655	\$7.8531	\$0.4908	\$5.5940	\$0.2331
8	Great River Energy	\$3,706.2630	\$308.8553	\$71.2743	\$14.2549	\$0.8909	\$10.1541	\$0.4231
9	Hoosier Energy	\$2,085.7288	\$173.8107	\$40.1102	\$8.0220	\$0.5014	\$5.7143	\$0.2381
10	International Transmission Company	\$2,444.1573	\$203.6798	\$47.0030	\$9.4006	\$0.5875	\$6.6963	\$0.2790
11	Indianapolis Power & Light	\$768.4291	\$64.0358	\$14.7775	\$2.9555	\$0.1847	\$2.1053	\$0.0877
12	Lincoln Electric (Neb.) System	Availability Suspended						
13	Michigan Joint Zone (METC, MPPA, Wolverine)	\$9,811.1685	\$817.5974	\$188.6763	\$37.7353	\$2.3585	\$26.8799	\$1.1200
13A	Michigan Joint Zone Subzone	\$32.2151	\$2.6846	\$0.6195	\$0.1239	\$0.0077	\$0.0883	\$0.0037
14	Minnesota Power	\$7,569.8230	\$630.8186	\$145.5735	\$29.1147	\$1.8197	\$20.7392	\$0.8641
15	Montana-Dakota Utilities Co.	\$3,588.0237	\$299.0020	\$69.0005	\$13.8001	\$0.8625	\$9.8302	\$0.4096
16	NSP Companies	\$6,048.0748	\$504.0062	\$116.3091	\$23.2618	\$1.4539	\$16.5701	\$0.6904
17	Northern Indiana Public Service Company	\$2,053.5090	\$171.1258	\$39.4906	\$7.8981	\$0.4936	\$5.6261	\$0.2344
18	Otter Tail Power	\$13,769.9424	\$1,147.4952	\$264.8066	\$52.9613	\$3.3101	\$37.7259	\$1.5719
19	Southern Illinois Power Cooperative	\$414.0021	\$34.5002	\$7.9616	\$1.5923	\$0.0995	\$1.1343	\$0.0473
20	Southern Minnesota Municipal Power Agency	\$2,094.5193	\$174.5433	\$40.2792	\$8.0558	\$0.5035	\$5.7384	\$0.2391
21	Aquila, Inc. Kansas (West Plains Energy)	Availability Suspended						
22	Aquila, Inc. Missouri (St. Joseph L&P, Mo. Pub. Svc. Co.)	Availability Suspended						
23	Vectren Energy	\$7,849.5357	\$654.1280	\$150.9526	\$30.1905	\$1.8869	\$21.5056	\$0.8961
24	MidAmerican Energy Company	\$14.4295	\$1.2025	\$0.2775	\$0.0555	\$0.0035	\$0.0395	\$0.0016
25	Muscatine Power and Water	\$8.6945	\$0.7245	\$0.1672	\$0.0334	\$0.0021	\$0.0238	\$0.0010
26	Dairyland Power Cooperative	\$43.1165	\$3.5930	\$0.8292	\$0.1658	\$0.0104	\$0.1181	\$0.0049
27	Big Rivers Electric Corporation	\$11.3704	\$0.9475	\$0.2187	\$0.0437	\$0.0027	\$0.0312	\$0.0013

Note:

- 1 Rate capped at weekly rate.
- 2 Rate capped at weekly and daily rate.

Crossroads Transmission Rates - Current and Projected

	Capacity	300 60	MW days				
As of June 1, 2012							
Current Entergy							
Sched 1 (Sched, Sys Control and Dispatch)				<u>\$/MW-month</u>	<u>\$/MWh</u>	<u>\$/MW-Yr</u>	<u>\$/kW-Yr</u>
(assuming 60 days of on-peak runtime)					\$ 0.100	\$ 96.00	
Sched 7 (Long-term Firm Point-to-point)				\$ 1,550.00		\$ 18,600.00	
Sched 10 (Recovery of ICT Operations)					\$ 0.095	\$ 91.20	
(assuming 60 days of on-peak runtime)							
						\$ 18,787.20	\$ 18.79
							\$ 5,636,160
As of January 1, 2013							
Projected MISO							
Schedule 1 (Sched, Sys Control and Dispatch)				<u>\$/MW-month</u>	<u>\$/MWh</u>	<u>\$/MW-Yr</u>	
(assuming on-peak Sched 1 charges, 60 days runtime)				\$ 68.024		\$ 89.456	
Schedule 2 (React Supply and Volt Control)				\$ 173.9564		\$ 2,087.48	
Schedule 7 (Drive through and out rate)				\$ 2,725.1722		\$ 32,702.07	
Schedule 10 (Demand, energy and FERC)					\$ 0.04566	\$ 43.8336	
(assuming 60 days of on-peak runtime)							
Schedule 26 (Network upgrade charge)				\$ 348.6743		\$ 4,184.0916	
						\$ 39,106.92	\$ 39.11
							\$ 11,732,077
							\$ 6,095,917

KCP&L Off-system Sales Impact - Zonal and Through-and-out

Subsequent to EAL's transmission assets being placed under the MISO OATT

Firm and Non-firm Zone Settlement

As of June 1, 2012

Current Entergy (ZONAL)

	\$/MW-month	\$/MW-day On Pk	\$/MW-day Off Pk	\$/MWh On Pk	\$/MWh Off Pk
Sched 1 (Sched, Sys Control and Dispatch)				\$ 0.100	\$ 0.100
Sched 7/8 (LT Firm and Non-firm PTP)	\$ 1,610.00	\$ 74.00	\$ 53.00	\$ 4.640	\$ 2.200
Sched 10 (Recovery of ICT Operations)				\$ 0.095	\$ 0.095
Current Entergy ZONAL \$/MWh rate				\$ 4.84	\$ 2.40

As of January 1, 2013

Projected MISO (ZONAL)

	\$/MW-month	\$/MW-day On Pk	\$/MW-day Off Pk	\$/MWh On Pk	\$/MWh Off Pk
Sched 1 (Sched, Sys Control and Dispatch)				\$ 0.1962	\$ 0.0932
Sched 2 (React Supply and Volt Control)	\$ 173.9564	\$ 8.0288	\$ 5.7191	\$ 0.5018	\$ 0.2383
Sched 7/8 (AVE LT Firm and Non-firm PTP across all Zones)	\$ 2,862.5698	\$ 132.1186	\$ 94.1119	\$ 8.2574	\$ 3.9213
Sched 10 (Demand, energy and FERC)				\$ 0.04566	\$ 0.04566
Sched 26 (Network upgrade charge)	\$ 348.6743			\$ 1.0058	\$ 0.4776
Projected MISO ZONAL \$/MWh rate				\$ 10.01	\$ 4.78

Projected Average ZONAL \$/MWh rate increase

\$ 5.17 \$ 2.38

Firm and Non-firm Through and Out

As of June 1, 2012

Current Entergy

	\$/MW-month	\$/MW-day On Pk	\$/MW-day Off Pk	\$/MWh On Pk	\$/MWh Off Pk
Sched 1 (Sched, Sys Control and Dispatch)				\$ 0.100	\$ 0.100
Sched 7/8 (LT Firm and Non-firm PTP)	\$1,550.00	\$ 74.00	\$ 53.00	\$ 4.640	\$ 2.200
Sched 10 (Recovery of ICT Operations)				\$ 0.095	\$ 0.095
Current Entergy THROUGH-AND-OUT \$/MWh rate				\$ 4.84	\$ 2.40

As of January 1, 2013

Projected MISO

	\$/MW-month	\$/MW-day On Pk	\$/MW-day Off Pk	\$/MWh On Pk	\$/MWh Off Pk
Sched 1 (Sched, Sys Control and Dispatch)				\$ 0.1962	\$ 0.0932
Sched 2 (React Supply and Volt Control)	\$ 173.9564	\$ 8.0288	\$ 5.7191	\$ 0.5018	\$ 0.2383
Sched 7/8 (LT Firm and Non-firm PTP Drive through and out rate)	\$ 2,725.1722	\$ 125.7772	\$ 89.5947	\$ 7.8611	\$ 3.7331
Sched 10 (Demand, energy and FERC)				\$ 0.04566	\$ 0.04566
Sched 26 (Network upgrade charge)	\$ 348.6743			\$ 1.0058	\$ 0.4776
Projected MISO THROUGH-AND-OUT \$/MWh rate				\$ 9.61	\$ 4.59

Projected THROUGH-AND-OUT \$/MWh rate increase

\$ 4.78 \$ 2.19