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Reliability
Witness: Michael S. Proctor
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Sponsoring Party: MoPSC Staff
Case No.: EM-2000-369

ON BEHALF OF THE
MISSOURI PUBLIC SERVICE COMMISSION
UTILITY OPERATIONS DIVISION

CROSS-SURREBUTTAL TESTIMONY
OF
MICHAEL S. PROCTOR

UTILICORP UNITED INC. AND
THE EMPIRE DISTRICT ELECTRIC COMPANY
CASE NO. EM-2000-369

Jefferson City, Missouri

August, 2000

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4 **UTILICORP UNITED INC. AND**

5 **THE EMPIRE DISTRICT ELECTRIC COMPANY**

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7
8 **Q. WHAT IS YOUR NAME AND BUSINESS ADDRESS?**

9 A. My name is Michael S. Proctor. My business address is 301 West High St.,
10 P.O. Box 360, Jefferson City, Mo. 65102-0360.

11 **Q. ARE YOU THE SAME MICHAEL S. PROCTOR WHO FILED**
12 **REBUTTAL TESTIMONY IN THIS INSTANT CASE?**

13 A. Yes, I am.

14 **Q. WHAT IS THE PURPOSE OF YOUR CROSS-SURREBUTTAL**
15 **TESTIMONY?**

16 A. The purpose of my cross-surrebuttal testimony is to address some of the issues
17 raised in the rebuttal testimony of Mr. Whitfield A. Russell filed on behalf of Springfield
18 (MO) City Utilities. My cross-surrebuttal testimony focuses on the fundamental policy
19 issue raised by Mr. Russell and the relationship to that policy of the Southwest Power
20 Pool's (SPP's) response to Utilicorp United Inc.'s (UCU's) request for network service.

21 Specifically, at page 7 (lines 19-22) of his rebuttal testimony, Mr. Russell makes a
22 statement that characterizes his position and the policy issue:

1 *The evidence seems to show that although these new facilities may be the*
2 *least costly integration option for UtiliCorp, this approach will impose*
3 *substantial costs on other users of the regional transmission system.*
4

5 In this statement "the new facilities" refers to UCU's proposal to electrically
6 connect Missouri Public Service (MPS, a current division of UCU), St. Joseph
7 Light & Power Company (SJLP) and Empire District Electric Company (EDE) so
8 as to form a single control area in which power supply resources are jointly
9 dispatched.

10 Mr. Russell's position is that the UCU proposal is not what is best for the
11 entire region. Therefore, at the heart of Mr. Russell's rebuttal testimony is the
12 fundamental policy issue of whether, as a condition for merger approval, the
13 Commission should adopt a policy of minimizing the costs for the merged entity
14 or take a broader perspective of the public interest in which the cost and the
15 benefits for the entire region are taken into account.

16 **Q. WHAT IS THE SPECIFIC UCU PLAN TO CONNECT MPS,**
17 **SJLP AND EDE AS A SINGLE CONTROL AREA?**

18 A. According to the direct testimony of Mr. Richard C. Kreul, UCU's
19 minimum cost plan for directly connecting MPS to SJLP appears to be leasing,
20 from Kansas City Power & Light Company (KCPL), a 161 kV line connecting
21 UCU's Nashua substation to SJLP's Lake Road substation. [Direct Testimony of
22 Kreul at page 12, EM-2000-292]. UCU's minimum cost plan for directly
23 connecting MPS to EDE appears to be the construction of a new 161 kV line
24 connecting UCU's Nevada substation with EDE's Asbury power plant. [Direct
25 Testimony of Kreul at page 11, instant case]. With the above upgrade/lease and

1 new construction, UCU's position is that it will be able to jointly dispatch the
2 power supply resources of the three divisions to meet the coincident loads of the
3 three divisions.

4 **Q. WHY IS THIS PLAN OF CONCERN TO MR. RUSSELL?**

5 A. Mr. Russell raises two concerns that are specific to his client, but puts
6 these concerns in a broader context of the public interest throughout the northern
7 SPP region, and, in particular, the other Missouri utilities and retail customers
8 within that region. The concerns to Springfield City Utilities are:

9 Allowing UCU to jointly dispatch the three divisions will use transmission
10 transfer capability within the region that will not be replaced through the
11 proposed upgrades and construction included in the UCU plan [Rebuttal
12 Testimony of Russell at pages 4-5]. This could negatively impact
13 Springfield City Utilities in two ways:

- 14 1. A reduction in transfer capability within the region will make it
15 more difficult for Springfield City Utilities to carry out
16 transactions in the off-system energy markets. This could
17 result in higher cost to its native load customers. [Rebuttal
18 Testimony of Russell at page 13].
- 19 2. A reduction in transfer capability within the region may result
20 in higher transmission costs for Springfield City Utilities to
21 transmit power it has purchased from the KCPL Montrose
22 plant, starting in 2001. [Rebuttal Testimony of Russell at
23 page 12].

24 Of course, these same impacts would apply to any utility or power marketers
25 wanting to transmit power through the northern SPP region, including the
26 Associated Electric Cooperative, Inc.'s transmission system, to which MPS, SJLP
27 and EDE are all directly connected.

1 **Q. DID MR. RUSSELL PRESENT EVIDENCE THAT THE**
2 **PROPOSED UCU PLAN WOULD REDUCE TRANSFER CAPABILITY**
3 **WITHIN THE REGION?**

4 A. No. Mr. Russell states that he was not able to do this because of lack
5 of data with respect to the joint dispatch of the combined systems. UCU provided
6 Mr. Russell with the same pre-merger specifications of power supply resources
7 and transmission network ratings that it used and provided to the SPP to be used
8 in its transmission analysis of the entire SPP region. This data would not include
9 a dispatch of power supply resources that corresponds to the joint dispatch of the
10 MPS, SJLP and EDE systems.

11 **Q. DID MR. RUSSELL PERFORM LOAD-FLOW STUDIES**
12 **USING THE DATA PROVIDED BY UCU?**

13 A. Yes, such load-flow studies were performed for the UCU system, but
14 were not performed for the region. These studies appeared to indicate some of the
15 weaknesses that exist in UCU's current system, but this does not address the
16 primary question of UCU's plan for connecting MPS, SJLP and EDE, and its
17 hypothesized impact of reducing transfer capability within the region. Such
18 regional studies would need to be performed using what are called "base case"
19 inputs from all the utilities within the region.

20 **Q. DID UCU HAVE SPP PERFORM A REGIONAL STUDY OF**
21 **LOAD FLOWS WITH RESPECT TO UCU JOINTLY DISPATCHING**
22 **THE MPS, SJLP AND EDE SYSTEMS?**

1 A. Yes, but the study was not based on a joint economic dispatch. In
2 response to my data request, I was provided the SPP study performed in response
3 to UCU's request for network service and UCU's economic analysis of that study.
4 In order to gain a better understanding of the SPP study, I have discussed the
5 details of the study with Mr. Pat Bourne of the SPP Staff and Mr. Dave Macey of
6 the UCU Staff. My understanding is that the SPP study was performed under the
7 assumption that the MPS, SJLP and EDE systems would not be connected.
8 Instead, the study assumed that 200 megawatts of transfer capability between the
9 three systems would be needed to carry out the joint dispatch.

10 In other words, the base case for the SPP study is the same as the
11 information provided to Mr. Russell. From that base case, the SPP study looked
12 at "worse case" scenarios to implement 200 megawatts of transfers. These
13 "worse case" scenarios do not represent the power supply dispatch resulting from
14 a joint economic dispatch of the three systems. Instead, a "worse case" dispatch
15 of power supply resources models the dispatch that has the most detrimental
16 impact on the regional transmission system. The results of running "worse case"
17 dispatch scenarios are likely to be more severe than what would be the impact of
18 running a case where a joint, economic dispatch of the three systems is used.

19 **Q. WHAT WERE THE RESULTS OF THE SPP STUDY?**

20 A. The SPP study showed what transmission system upgrades would be
21 needed in order to restore the security of the regional system to acceptable levels
22 when these "worse case" transfers take place. The UCU request was for ten (10)
23 years of network service, and so the SPP study went out 10 years into the future.

1 The SPP results showed upgrades needed in each year, and presumably, these
2 upgrades would continue out into the future if UCU were to continue taking
3 network service from the SPP. Some of the upgrades were in the UCU post-
4 merger control area, but many of the upgrades were in the control areas of other
5 utilities within the entire SPP region. The net present value cost of the proposed
6 upgrades to the SPP network was found by UCU to be higher than the cost of the
7 UCU plan to connect MPS and the two possible new divisions, SJLP and EDE.

8 **Q. ON WHAT BASIS DOES SPP PROPOSE TO CHARGE UCU**
9 **FOR THE UPGRADES TO THE TRANSMISSION SYSTEMS OF OTHER**
10 **TRANSMISSION PROVIDERS?**

11 A. SPP is proposing to apply incremental cost pricing to UCU. In this
12 approach, UCU would pay the incremental cost of the entire upgrade. For
13 example, if under a "worse case" dispatch, a specific line would operate at 105%
14 of its rating, then the upgrade might be to install a new line (conductor) with a
15 larger capacity. Since conductors come in discrete sizes, the installation of the
16 new line might result in it now operating at 65% of its higher rating. This leaves
17 an additional 35% that can be used by the market, but UCU has paid for the entire
18 upgrade and would not receive any revenues from the market's use of the
19 expanded capacity.

20 **Q. WHAT CONCLUSION FOLLOWS FROM THE SPP REGIONAL**
21 **PLAN BEING HIGHER COST COMPARED TO THE UCU PLAN?**

22 A. If the assumptions going into the SPP regional plan correctly model the
23 impact of combining the MPS, SJLP and EDE systems, then it might first appear that

1 UCU's plan results in reducing the transfer capability within the region as predicted by
2 Mr. Russell. However, because of the assumptions used, the SPP study does not
3 conclusively show this.

4 First, the SPP study did not include the upgrade of the Nashua to Lake Road line
5 or the new Nevada to Asbury line. Thus, the specific impacts of these upgrades to the
6 transmission system were not modeled.

7 Second, the SPP study did not incorporate the assumptions regarding the joint
8 dispatch of the three systems, but instead used "worse case" dispatches for the transfers.

9 Third, with UCU having to pay for the entire upgrade via incremental cost, the
10 cost to UCU does not match the benefits received by UCU and, in effect, UCU is being
11 asked to subsidize the rest of the market.

12 Until corrections are made to both the SPP study and the SPP incremental pricing
13 policy, it is not possible to reach conclusions regarding a comparison of the costs of the
14 two plans.

15 **Q. REGARDING HAVING A SINGLE CONTROL AREA IN WHICH**
16 **THE POWER SUPPLY RESOURCES OF MPS, SJLP AND EDE ARE JOINTLY**
17 **DISPATCHED, SHOULD THE COMMISSION SUPPORT REGION-WIDE**
18 **OPTIMIZATION OF THE TRANSMISSION SYSTEM VERSUS INDIVIDUAL**
19 **COST MINIMIZATION BY THE UCU AS PROPOSED BY MR. RUSSELL?**

20 A. As a general matter, I recommend that the Commission support region-wide
21 optimization of the transmission system, but only when the cost of doing so is properly
22 matched with the benefits. Specifically, with regional pricing policies, such as requiring
23 UCU to pay the full incremental cost without any revenue recovery from the market's use

1 of the incremental transfer capability created by an upgrade, I cannot recommend that the
2 Commission support the SPP proposal for providing UCU network service as a viable
3 alternative. However, I also cannot recommend that the Commission support the UCU
4 proposal for connecting MPS, SJLP and EDE until it is clear that this plan does not have
5 detrimental impacts on the regional grid. In order to determine the impact on the regional
6 grid, the Commission should require UCU to have a region-wide load-flow study
7 performed that models the load-flow impacts of UCU's proposal to connect MPS, SJLP
8 and EDE. Such a study can be requested of the SPP by UCU.

9 **Q. WHAT SPECIFICS SHOULD BE INCLUDED IN THIS REGION-WIDE**
10 **STUDY BY THE SPP?**

11 A. As proposed by Mr. Russell [Rebuttal Testimony of Russell at pages 28-30],
12 that study should incorporate the upgrade of the Nashua to Lake Road line and the
13 construction of the Nevada to Asbury line, and should also incorporate a dispatch of
14 generation that is consistent with the joint dispatch of the MPS-SJLP-EDE system. In
15 this regard, this SPP study would not involve a request for network service, but instead a
16 determination of whether or not UCU's plan to connect MPS, SJLP and EDE meets
17 SPP's regional transmission planning criteria 3.3.2, Planning Assessment Studies
18 [*Southwest Power Pool Criteria*, page 3-2]:

19 Individual transmission owners shall perform individual transmission
20 planning studies and shall cooperate in SPP and Inter-Regional studies. These
21 planning studies are for the purposes of identifying any planning criteria
22 violations that may exist and developing plans to mitigate such violations.
23 Members shall contact the Transmission Assessment Working Group whenever
24 new facilities are in the conceptual planning stage so that optimal integration of
25 any new facilities and potentially benefiting parties can be identified. Studies
26 affecting more than one system owner or user will be conducted on a joint
27 system basis. Reliability studies will examine post-contingency steady-state
28 conditions as well as stability, overload, cascading, and voltage collapse
29 conditions. Updates to the transmission assessments will be performed, as
30 appropriate, to reflect anticipated significant changes in system conditions.

1 Notice that in the above criteria, the utility is required to contact the Transmission
2 Assessment Working Group “whenever new facilities are in the conceptual planning
3 stage.” The purpose is to identify the “optimal integration of any new facilities and
4 potentially benefiting parties.” To my knowledge, this process has not yet been followed
5 by UCU for its proposed plan to integrate the MPS, SJLP and EDE systems.

6 **Q. WITH RESPECT TO THIS MERGER, WHAT PROCEDURES**
7 **SHOULD THE COMMISSION FOLLOW REGARDING THIS STUDY?**

8 A. As proposed by Mr. Russell, the Commission should require UCU to file the
9 results of this SPP study in the instant case as supplemental direct testimony by UCU.
10 Then each party should be given no more than four weeks to provide rebuttal testimony,
11 with no more than two weeks for UCU to file surrebuttal. Hearings on this specific issue
12 should then occur.

13 **Q. DOES THIS COMPLETE YOUR CROSS-SURREBUTTAL**
14 **TESTIMONY?**

15 A. Yes, it does.

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) CASE NO. EM-2000-369
 with and into UtiliCorp United Inc., and,)
 in Connection Therewith, Certain Other)
 Related Transactions.)

STATE OF MISSOURI)
) ss
COUNTY OF COLE)

Michael S. Proctor
Michael S. Proctor

Subscribed and sworn to before me this 17th day of August, 2000.

My commission expires _____

Joyce C. Neuner
Notary Public, State of Missouri
County of Osage
My Commission Exp. 05/18/2011

Joyce C. Neuner
Notary Public