

Exhibit No.:  
Issue: Plant-in-Service  
Witness: C. Bruce Deering  
Sponsoring Party: MoPSC Staff  
Case No.: ER-97-81

**MISSOURI PUBLIC SERVICE COMMISSION**

**UTILITY OPERATIONS DIVISION**

**THE EMPIRE DISTRICT ELECTRIC COMPANY**

**CASE NO. ER-97-81**

**DIRECT TESTIMONY**

**OF**

**C. BRUCE DEERING**

*Jefferson City, Missouri  
February 1997*

**FILED**  
**FEB 13 1997**  
**MISSOURI**  
**PUBLIC SERVICE COMMISSION**

**\*\*Denotes Highly Confidential Information\*\***

**NP**



Direct Testimony of  
C. Bruce Deering

1 responsible for expansion planning studies, reliability studies, transmission and distribution  
2 design, and a group of engineering project managers responsible for conceptual and final design  
3 of assigned power plants.

4 In 1979, I returned to Black & Veatch where I worked for the next eight  
5 years. During that time, I directed activities that impacted the firm's policy, internal procedures,  
6 productivity, and competitiveness, (e.g. computerized information management systems, generic  
7 schedule reductions, modularized plant design and construction, marketing, etc.) Additionally,  
8 I was responsible for conceptual design, bid preparation and marketing of Independent Power  
9 Projects as well as assigned Investor Owned Power Projects.

10 In 1987, I became an independent consultant to the energy and financial  
11 industries. I performed an independent assessment of the Palo Verde Nuclear Project prudency  
12 review (nuclear steam supplier's scope of responsibility) and assisted in the management of two  
13 corporate turn-arounds. Since November of 1992, I have been employed by the Commission.

14 Q. What is the purpose of your testimony in this case?

15 A. The purpose of my testimony is to 1) identify certain generation and  
16 transmission facilities of The Empire District Electric Company (EDE or Company) to be treated  
17 as "isolated adjustments" for purposes of this case and 2) address the questions of whether  
18 construction costs associated with these facilities should be added to the cost account, Plant-in-  
19 Service, for purposes of determining rates.

20 Q. What facilities do you recommend be treated as "isolated adjustments"?

Direct Testimony of  
C. Bruce Deering

1           A.    The four facilities listed below should be treated as "isolated adjustments"  
2           and included in Plant-in-Service if certain criteria regarding construction and testing have been  
3           satisfied.

- 4           •    State Line Combustion Turbine Unit #2, including certain Unit #1 and #2 "Common  
5           Facilities" excluded in the previous EDE rate case, Rate Case No. ER-95-279 (EDE 95  
6           Rate Case).
- 7           •    State Line Combustion Turbine Unit #1 NOx Abatement Equipment, excluded in the EDE  
8           95 Rate Case.
- 9           •    State Line-to-7th Street Substation Transmission Line (Substation #439 to Substation  
10          #145), including substation modifications.
- 11          •    Branson Southwest-to-Riverside Transmission Line (Substation #413 to Substation #438),  
12          including substation modifications.

13           Q.   How do you propose to determine if State Line Unit #2 meets the  
14          requirements/criteria for inclusion as Plant-in-Service?

15           A.   I am sponsoring the in-service test criteria shown in Schedule 1 to determine  
16          if the unit qualifies for Plant-in-Service. If the requirements in this set of in-service criteria are  
17          achieved on or before May 31, 1997, I propose that the costs associated with the Unit be  
18          included in Plant-in-Service.

19           Q.   What are "Common Facilities"?

20           A.   Common facilities are facilities that support the operation of both Unit #1  
21          and Unit #2. In the EDE 95 Rate Case certain costs for common facilities, built at that time,

Direct Testimony of  
C. Bruce Deering

1 were excluded for purposes of ratemaking since only Unit #1 went into service at that time. If  
2 Unit #2 successfully meets the proposed in-service test criteria shown in Schedule 1, then the  
3 costs associated with Unit #2 common facilities (excluded in the EDE 95 Rate Case) should be  
4 included in this rate case. A duplicate copy of the schedule from my testimony in the last rate  
5 case showing the percentage of common facility costs excluded from the EDE 95 Rate Case is  
6 shown in Schedule 2. These percentages, those labeled Column B, should be used in calculating  
7 the cost for inclusion in this rate case if Unit #2 successfully meets its in-service test criteria.

8 Q. Were the costs associated with the low NOx option for Unit #1 excluded  
9 from the EDE 95 Rate Case?

10 A. Yes. \*\* \_\_\_\_\_ \*\*, the contract price for the low NOx option, were  
11 excluded from the EDE 95 Rate Case since Unit #1 did not achieve its target for NOx emissions.

12 I propose that this amount be included in this rate case if Unit #1  
13 successfully demonstrates that it can meet the low NOx criteria.

14 Q. What proof do you require that this test was completed successfully?

15 A. The Company should submit to the MPSC Staff (Staff) a copy of the  
16 certified test-results report from an independent testing company demonstrating that the Unit  
17 complied with specifications in the Unit #1 in-service test criteria contained in the EDE 95 Rate  
18 Case.

19 Q. Would you address the two transmission projects which you are proposing  
20 as isolated adjustments for this case?

Direct Testimony of  
C. Bruce Deering

1           A.   Yes. The State Line-to-7th Street Substation Transmission Line extends  
2           from the State Line Station, where Unit #2 is currently being installed, to the 7th Street  
3           Substation in the western part of Joplin, Missouri. This line is anticipated to be completed and  
4           energized concurrently with the start-up of Unit #2. If the criteria listed below have been  
5           satisfied, then the cost of the line and modifications to the substations should be included in the  
6           Plant-in-Service.

- 7           •   Construction has been completed.
- 8           •   The line has been energized.
- 9           •   Liability for construction costs have been recorded.

10           Q.   Would you address the Branson Southwest-to-Riverside transmission line  
11           running between Substations #413 and #438?

12           A.   Yes. This transmission line is scheduled to be completed near the end of  
13           March 1997, the true-up date for this case. However, it is conceivable that the line will not be  
14           energized until April or May. I am proposing this transmission project be included in Plant-in-  
15           Service for purposes of this rate case if it meets the criteria listed in the previous question and  
16           answer above for that transmission line.

17           Q.   Recognizing that the flow of accounting data may lag actual startup, testing,  
18           energization and results analysis, how do you propose to accommodate for this lag in accounting  
19           information?

Direct Testimony of  
C. Bruce Deering

1                   A. In order for the isolated adjustments to be included in this case, the  
2 documentation should be submitted in accordance with the procedures and schedule outlined in  
3 the testimony of Staff witness David G. Winter.

4                   Q. Would you summarize your testimony?

5                   A. Yes. I am proposing that Unit #2 at the State Line Generating Station  
6 (including Unit #2 Common Facilities), State Line Unit #1 NOx Abatement Equipment, the State  
7 Line-to-7th Street Substation Transmission Line, and the Branson Southwest-to-Riverside  
8 Transmission line be treated as "isolated adjustments" and be included in Plant-in-Service if the  
9 facilities satisfactorily meet the requirements/criteria specified herein.

10                  Q. Does this conclude your direct testimony?

11                  A. Yes, it does.

**The Empire District Electric Company  
Case No. ER-97-81**

**STATE LINE ELECTRIC POWER STATION  
UNIT #2 COMBUSTION TURBINE  
IN-SERVICE TEST CRITERIA**

1. Construction and pre-operational testing shall have been completed. This shall be determined through:
  - a) Physical inspection conducted by a member or members of the Missouri Public Service Commission Staff.
  - b) The Company's plant manager, or responsible officer, attesting to the fact that all pre-operational testing has been successfully completed in accordance with written test procedures, and
  - c) Establishment that liability for final payment of equipment and construction contracts is recorded on the books.
2. The generating unit shall demonstrate its ability to start when prompted only by a signal from a remotely located control center, once burning natural gas and once while burning distillate oil.
3. The generating unit shall demonstrate its ability to smoothly and successfully shut-down when prompted only by a signal from a remotely located control center.
4. The generating unit shall demonstrate its ability to accept a load increase from zero megawatts to 20 MW within ten minutes, starting from turning gear operation.
5. The generating unit shall demonstrate its ability to accept a load increase from zero megawatts to Base Capacity<sup>1</sup> within thirty-two minutes, starting from turning gear operation. This thirty-two minute test period may include the ten minute ascension test to 20 MW, if the Company elects to integrate the two tests, or alternately the thirty-two minute test to Base Capacity<sup>1</sup> can be run as a separate test.
6. While burning natural gas, the generating unit shall run continuously for four hours at or above Base Capacity<sup>1</sup>, \*\* \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_. \*\*
7. While burning natural gas and operating at the Base Capacity<sup>1</sup> condition, the generating unit shall achieve the warranted heat rate of \*\* \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_. \*\*



- \*\*

- Schedule 1-2

<sup>1</sup>Base Capacity is defined to be \*\* \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_\*\*

<sup>2</sup>\*\* \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_\*\*

**The Empire District Electric Company  
Case No. ER-97-81**

The Empire District Electric Company  
Case No. ER-95-279

COMMON FACILITIES AT EMPIRE'S STATE LINE PLANT (UNITS #1 and #2)

		COLUMN A* (%)	COLUMN B** (%)
1	Land	91	9
2	Site Preparation	80	20
3	Entrance Driveway	100	-
4	Railway Spur	100	-
5	Construction Shed	100	-
6	Water Well, Pump & Well House	100	-
7	Fire/Service Water Tank	100	-
8	Fire Water System	100	-
9	Site Services Transformer	100	-
10	Substation (Excluding Land)	100	-
11	General Services Building	100	-
12	Water Pump Building	90	10
13	Fuel Oil Pump Building	85	15
14	Oil Retention Pond/Berm, inc. Liner	75	25
15	Underground Facilities, exc. Ductbank and Unit 2 valve pit	100	-
16	Underground Facilities, Ductbank	89	11
17	Underground Facilities, Unit 2 Valve Pit		100

\*COLUMN A--This fraction (%) of the cost of the itemized facility should be considered for inclusion in Rate Case No. ER-95-279.

\*\*COLUMN B--This fraction (%) of the cost of the itemized facility should be excluded from plant-in-service for purposes of rate making in Rate Case No. ER-95-279.

Schedule 8


BEFORE THE PUBLIC SERVICE COMMISSION  
OF THE STATE OF MISSOURI

In the matter of The Empire District Electric       )  
Company of Joplin, Missouri, for authority to file    )  
tariffs increasing rates for electric service provided    )       Case No. ER-97-81  
to customers in the Missouri service area of the       )  
Company.    )

AFFIDAVIT OF C. BRUCE DEERING

STATE OF MISSOURI       )  
                                      )       ss.  
COUNTY OF COLE        )

C. Bruce Deering, of lawful age, on his oath states: that he has participated in the preparation of the foregoing Direct Testimony in question and answer form consisting of 6 pages and 2 schedules to be presented in the above case; that the answers in the foregoing Direct Testimony were given by him; that he has knowledge of the matters set forth in such answers; and that such matters are true and correct to the best of his knowledge and belief.

  
\_\_\_\_\_  
C. BRUCE DEERING

Subscribed and sworn to before me this 11th day of February, 1997.

  
\_\_\_\_\_  
Notary Public

JUDY FRITSCHE  
NOTARY PUBLIC STATE OF MISSOURI  
COLE COUNTY  
MY COMMISSION EXPIRES SEP. 24, 1997

My Commission Expires: \_\_\_\_\_