

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the matter of the determination of in-service)
criteria for Union Electric Company's Callaway)
nuclear plant and Callaway rate base and related) Case No. EO-85-17
issues.)
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In the matter of Union Electric Company of)
St. Louis, Missouri, for authority to file)
tariffs increasing rates for electric service) Case No. ER-85-160
provided to customers in the Missouri service)
area of the company (filing January 15, 1985).)
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APPEARANCES: Paul A. Agathen, General Attorney, James J. Cook, Juanita Feigenbaum,
and Michael F. Barnes, Attorneys, Union Electric Company, Post Office
Box 149, St. Louis, Missouri 63166,
and
Gerald Charnoff, Attorney at Law, 1800 M Street, N.W., Washington, D.C.
20036, for Union Electric Company.

Kenneth J. Neises, Attorney, Laclede Gas Company, 720 Olive Street,
Room 1528, St. Louis, Missouri 63101, for Laclede Gas Company.

Michael Madsen, Attorney at Law, 211 East Capitol Avenue, Post Office
Box 235, Jefferson City, Missouri 65102,
and

Boyd J. Springer, Attorney at Law, Three First National Plaza,
Suite 5200, Chicago, Illinois 60602, for Dundee Cement Company.

Willard C. Reine, Attorney at Law, 314 East High Street,
Jefferson City, Missouri 65101,

and
Sam Overfelt, Attorney at Law, 200 Madison Street, Post Office
Box 1336, Jefferson City, Missouri 65102, for Missouri Retailers
Association.

Robert C. Johnson, Attorney at Law, and George M. Pond, Attorney at
Law, 720 Olive Street, 24th Floor, St. Louis, Missouri 63101, for:
American Can Company; Anheuser-Busch, Inc.; Chrysler Corporation; Ford
Motor Company; General Motors Corporation; Mallinckrodt, Inc.;
McDonnell Douglas Corporation; Monsanto Company; National Can Corpora-
tion; Nooter Corporation; PPG Industries, Inc.; Pea Ridge Iron Ore Co.;
River Cement Company; and St. Joe Minerals Corporation (the
Industrials).

Richard S. Brownlee, III, Attorney at Law, Post Office Box 1069,
Jefferson City, Missouri 65102, for Missouri Limestone Producers
Association and Missouri LP Gas Association.

Gary Mayes, Attorney at Law, and Charles A. Newman, Attorney at Law, One Mercantile Center, St. Louis, Missouri 63101, for Metropolitan St. Louis Sewer District.

Robert C. McNicholas, Associate City Attorney, Room 314, City Hall, St. Louis, Missouri 63103, for the city of St. Louis and James J. Wilson, City Counselor.

Rollin J. Moerschel, Attorney at Law, 200 North Third Street, St. Charles, Missouri 63301, for the city of St. Peters, Missouri.

William M. Barvick, Attorney at Law, 231 Madison Street, Jefferson City, Missouri 65101, for the cities of Jefferson, Belle, Bevier, Elsberry, Kearney, Louisiana, Moberly, New Bloomfield, Mexico, Ashland, Troy, Greentop, Renick, Gorin, Cape Girardeau, Warrenton, Winfield, Lawson, Excelsior Springs, Wyaconda, Knox City, Boonville, Wood Heights, Charleston, Bowling Green, Center, Parma, Versailles, Edina, St. Charles and Eldon.

Howard Hickman, Attorney at Law, 404 South Elson, Kirksville, Missouri 63501, for the city of Kirksville, Missouri.

Fred Boeckmann, Attorney at Law, 401 Independence, Cape Girardeau, Missouri 63701, for the city of Cape Girardeau, Missouri.

William Clark Kelly, Assistant Attorney General, Office of the Attorney General, Post Office Box 899, Jefferson City, Missouri 65102, for the state of Missouri.

Tom Ryan, Attorney at Law, 4144 Lindell, St. Louis, Missouri 63108, for Missouri Public Interest Research Group.

E. Massey Watson, Attorney at Law, 1310 Old 63 South, Columbia, Missouri 65201, for Missouri Coalition for the Environment and Electric Ratepayers Protection Project.

Douglas M. Brooks, Public Counsel, Richard W. French, First Assistant Public Counsel, and Daniel Maher, Assistant Public Counsel, Office of Public Counsel, Post Office Box 7800, Jefferson City, Missouri 65102, for the Office of Public Counsel and the public.

Kent M. Ragsdale, General Counsel, William C. Harrelson, General Counsel, Edward J. Cadieux, Deputy General Counsel, A. Scott Cauger, Martin J. Rothfelder, Paul H. Gardner, Michael C. Pendergast, Thomas M. Byrne, and Linda K. Malinowski, Assistants General Counsel, Missouri Public Service Commission, Post Office Box 360, Jefferson City, Missouri 65102, for the staff of the Missouri Public Service Commission.

HEARING
EXAMINER:

Cecil I. Wright.

REPORT AND ORDER ON REMAND

On March 29, 1985, the Commission issued a Report And Order which established the revenue requirement and rate design for Union Electric Company (UE), which included the costs associated with the Callaway nuclear plant. RE: Union Electric Company, 27 Mo. P.S.C. (N.S.) 183 (1985). The rate design decision of the Commission was appealed to the Cole County Circuit Court, which reversed the Commission. The Circuit Court order was appealed to the Missouri Western District Court of Appeals, which reversed the Circuit Court and affirmed the Commission decision on the allocation of production costs, but remanded certain other issues to the Commission for further findings of fact. State ex rel. A.P. Green Refractories, et al. v. P.S.C., 752 S.W.2d 385 (Mo. App. 1988). The Court of Appeals remanded for further findings: (1) fuel cost allocations; (2) three-step demand charge in the Primary Service class; (3) phasing in of Rider B credits; and (4) the refusal to amend Rider E.

The Commission determined that there was sufficient competent and substantial evidence in the existing record to make the findings of fact ordered by the Court of Appeals. The Commission is therefore issuing this order which addresses those issues remanded.

Findings of Fact

Having considered all of the competent and substantial evidence upon the whole record, the Missouri Public Service Commission makes the following findings of fact.

RIDER E

The Commission in its Report And Order issued initially did not address the issue of Rider E. The issue was raised by the direct testimony of Maurice Brubaker, a witness for the Industrials. Brubaker contended that Rider E was unreasonable because it treated customers with their own generating facilities in a manner different from customers without generating facilities. Brubaker testified he knew of one

customer who was adversely affected by the provisions of Rider E. Brubaker proposed that Rider E be modified so that the minimum bill paid by the customer would be based only on the demand imposed upon UE's system as a result of a customer's generating unit outage.

UE was the only other party to file testimony on this issue. UE's basic position was that it had not filed any proposed modifications to Rider E as a part of its direct case and it was inappropriate for Brubaker to raise Rider E as a new issue. UE's witness, Richard S. Kovack, then testified he was aware of the one customer mentioned by Brubaker and that UE and the customer had resolved the situation. UE's position was that no new tariff provisions were necessary.

The Commission's failure to address the Rider E issue in its original Report And Order indicated its acceptance of UE's position that Rider E was not an issue in the case. Since the Court of Appeals has remanded this issue for findings, the Commission will now address the issue.

The Rider E tariff is found in UE's tariffs at Schedule 5, Sheets No. 103(M), 104(M) and 105(M). The Commission is taking official notice of this Rider E tariff, which is on file at the Commission. The tariff establishes a rate to be charged to compensate UE for maintaining the capability of supplying energy to a customer which generates a portion of its own electricity in case the customer's generating unit fails or is shut down. UE defines this service as Supplementary Service and requires the customer to pay, in addition for any energy taken, a minimum charge based upon the number of kilowatts mutually agreed upon or the maximum demand established by the customer's use.

The Rider E tariff requires the customer with self-generation to pay a minimum bill based on total kilowatt demand. As shown in the tariff, this minimum bill compensates UE for the requirement that UE stand ready to serve the customer's total load (self-generation plus Supplementary Service). This minimum bill compensates UE for its backup facilities. Industrials contend that the minimum bill should

on be for the additional demands placed on UE's system which would occur due to failure or an outage of the customer's generation. The Industrials contend that the minimum bill should only be for these additional demands, rather than total demand.

Although Industrials' position may have some intuitive appeal, it does not take into account UE's responsibility to supply the customer's total usage and to build facilities to meet the customer's total demand. These facilities are built for the customer's benefit to ensure the customer has the energy needed to continue operations even if its own generation fails. Under Industrials' proposal, the customer would be free to decrease its supplemental usage to zero, but UE would be obligated to maintain facilities to supply total demand when necessary. Industrials also fail to propose a reasonable method of calculating the additional demand upon which the minimum bill would be determined. The question of whether UE would have to wait for an outage to determine the additional demand or whether UE must perform some independent analyses of the possibility of the customer having an outage, renders Industrials' position impractical.

The Commission finds that Industrials' proposed modification is not reasonable since it does not compensate UE for UE's responsibility to supply the customer's total demand. Industrials contend Rider E should be based on additional demand but there is no evidence to show that this could be calculated, nor is it reasonable for UE to provide backup service without compensation. The customer also may reduce its total usage but UE still has its facilities in place and ready to provide total service. Rider E provides a reasonable method of charging a customer for UE's service.

Also, the one customer which experienced a problem under the provisions of Rider E was able to resolve the problem with UE. The Commission does not think it is reasonable to modify a tariff based upon a problem which has been resolved. If UE encounters a significant number of these problems, it may become necessary for it to file a new tariff with provisions that address those problems.

RIDER B

The Commission in its initial Report And Order determined that Rider B credits should be phased in with the Primary Service rates approved in the Report And Order. The Commission determined there would be a mismatch between the credits and the Primary Service rate otherwise. The Court of Appeals remanded this issue for further findings to support the Commission's determination.

Rider B credits are discounts which higher voltage Primary Service customers receive for owning or leasing substation equipment. UE proposed the credits be phased in since the Rider B credits are calculated as discounts from the demand and energy charges, which were being phased in. Industrials proposed the credits be implemented in the first year of the phase-in based upon their contention that higher voltage customers within the Primary Service class were paying higher rates of return. Industrials' rate of return calculation was based upon their single peak allocation method of production costs.

Based upon the Commission decision, Rider B credits have been phased in as UE's rate increases were phased in for Primary Service rates. The Commission phased in the Rider B credits to avoid a mismatch of the phase-in of production costs and the Rider B credits which would be discounted from the phased-in ^{production} costs. Also, since the Commission had rejected Industrials' single peak allocation of production costs, it determines that adoption of a one-time Rider B credit based upon that allocation method would not be reasonable.

The Commission on December 21, 1987, issued a Report And Order in which it determined that the phase-in approved in this case should be ended with a final rate increase on December 31, 1987. Cases No. EC-87-114, EC-87-115. Since the phase-in has ended, so does the phase-in of Rider B credits. If the Rider B credits had been implemented immediately based upon the total rate increase in this case, these customers would have been receiving more credits than have now been found to be reasonable based upon the elimination of the phase-in, and an adjustment to Rider B

credits would have been required. These circumstances indicate the reasonableness of the Commission decision and now render the issue moot.

DECLINING BLOCK DEMAND CHARGE

The Commission in the initial Report And Order adopted a single winter demand charge for Primary Service customers. RE: UE, 27 Mo. P.S.C. (N.S.) at 305-308. Staff and UE had supported a flat winter demand charge; while Industrials had proposed the retention of a three-step declining block demand charge. The Court of Appeals remanded this issue for further findings of fact.

The primary dispute over whether UE should retain a declining block demand charge for Primary Service customers revolves around whether there are economies of scale associated with customer size which should be reflected in declining demand charges as customer size increases. Industrials contend that large voltage customers which take service from UE substations avoid costs associated with primary distribution circuits and so should pay a lower demand charge.

The Commission upon review of the evidence finds that a flat demand charge for Primary Service is reasonable. Based upon the testimony of UE witness Kovach, the Commission finds that economies occur through the avoidance of distribution facilities such as secondary lines, transformers and distribution services. Primary Service rate base consists of 90 percent transmission and generation and only 10 percent distribution plant. The evidence indicated that there are no economies of scale in generation and transmission, which provide the major portion of the costs associated with Primary Service, and UE located substations to reduce the overall costs of distribution facilities on its system. The Commission has determined, since there are few economies of scale associated with Primary Service and UE's substation placement policy attempts to reduce overall costs, any savings associated with distribution plant should be shared by all Primary Service customers. The Commission also finds that the evidence did not show a relationship between customer size and economies of scale.

The Commission also finds the flat demand charge is supported by UE witness Kovack's testimony that based upon the relationship between coincidence factor and customer size, the demand rate should increase slightly, then decrease. This increase and decrease, though, are not significant and this evidence supports a flat demand charge. The Commission finds further that the flat demand charge will provide savings to Primary Service customers who maintain high load factors.

RUNNING COSTS ALLOCATIONS

The Commission in its Report And Order adopted the time-of-use (TOU) method for allocating production costs among the customer classes on UE's system. Production costs include both capacity and running costs. Running costs include fuel expense and variable operations and maintenance expenses. The Court of Appeals upheld the Commission on the issue of allocation of production capacity costs, but remanded for further findings the issue of allocation of running costs.

Staff's position on allocation of fuel costs or running costs mirrored its TOU proposal for allocating production capacity costs. The premise upon which TOU is based is that running costs should be allocated to the classes based upon the fuel costs and demands of each class at each hour of the year. Staff developed a production cost model to calculate running costs for the TOU method. This model shows that running costs vary by plant and plant production varies by the time it is used, thus running costs vary by time of use.

Staff then allocated running costs to each month of the year based upon a calculation of the utilization of a plant during a base period and a peak period for each month. The base period was based upon base load generation during each month, while the peak period was based upon demand at the single hour of system peak. Base period is associated with coal and nuclear plants while peak period is associated with oil and gas plant. Staff's method showed that 80 percent of running costs were associated with base period demand and Staff's evidence showed a significant

difference between running costs between coal and nuclear, on the one hand, and gas and oil, on the other.

Industrials proposed allocation of running costs based upon a capital substitution theory which would allocate running costs consistent with Industrials' coincidental peak method for allocating capacity costs. Industrials contended that if more capacity costs are allocated to them, then they should benefit from the lower running costs associated with that capacity.

The Commission found that the TOU method for allocating capacity costs was the most appropriate based upon the finding that the need for generating capacity was caused by total system demand for electricity. The Commission now determines that running costs should be allocated by the TOU method since the evidence shows that they vary with time of use during the year. This method is consistent with the Commission's decision concerning allocation of capacity. Production costs, both capacity and running, are caused by total use of UE's system and should be allocated accordingly.

The Commission finds further that Staff's evidence supporting the calculation of the base period and peak period is reasonable. The significant difference in running costs between UE's coal and nuclear plants and UE's oil and gas fired plants shows that Staff's method reflects UE's system. Industrials' proposal to use the average and excess method is not reasonable because it is based upon a coincidental peak causation of production costs. Staff's method of calculating base period and peak period allocations is consistent with the TOU method and is reasonable.

Conclusions of Law

The Missouri Public Service Commission has arrived at the following conclusions of law.

The issues addressed by the Commission in this Report And Order are before the Commission on remand from the Missouri Western District Court of Appeals. The Court of Appeals reversed and remanded for further findings of fact these portions of

the Commission's initial Report And Order. The Commission had jurisdiction over these issues pursuant to Chapters 386 and 393, R.S.Mo. 1986.

The Commission determined that it could make the necessary findings of fact based upon the record in this matter without taking further evidence or requiring additional briefs. The findings herein are based upon the reconsideration of the record on the issues addressed. Based upon the evidence in the record, the Commission finds and concludes that its original decisions concerning these issues were reasonable. The Commission concludes that production costs, including running costs, shall be allocated based upon Staff's TOU method and base period/peak period allocations. The Commission concludes that there are not economies of scale to support declining block demand charges for Primary Service customers. The Commission concludes that the issue of the phase-in of Rider B credits is moot. The Commission concludes, finally, that it is reasonable to require a minimum bill for Rider E customers based upon total contract demand.

It is, therefore,

ORDERED: 1. That production running costs for Union Electric Company shall be allocated based upon Staff's time-of-use method.

ORDERED: 2. That Union Electric Company shall maintain a flat winter demand charge for Primary Service.

ORDERED: 3. That the phase-in of Rider B credits is moot.

ORDERED: 4. That the Rider E tariff is reasonable and shall be maintained.

ORDERED: 5. That this Report And Order On Remand shall become effective on the 20th day of December, 1988.

BY THE COMMISSION

Harvey G. Hubbs
Harvey G. Hubbs
Secretary

(S E A L)

Steinmeier, Chm., Musgrave,
Mueller, Hendren and Fischer,
CC., concur and certify
compliance with the provisions
of Section 536.080, R.S.Mo. 1986.

Dated at Jefferson City, Missouri,
on this 7th day of December, 1988.