Unofficial FERC-Generated PDF of 19990802-0579 Issued by FERC OSEC 07/30/1999 in Docket#: ER93-540-006

88 FERC ¶ 61,141

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

OPINION NO. 440

American Electric Power Service Corporation	)	Docket No. ER93-540-006

OPINION AND ORDER AFFIRMING IN PART AND REVERSING IN PART INITIAL DECISION

Issued: July 30, 1999

FERC - DOCKETED
JUL 30 1999

990806 0579-1

Unofficial FERC-Generated PDF of 19990802-0579 Issued by FERC OSEC 07/30/1999 in Docket#: ER93-540-006

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

American Electric Power Service Corporation	))	Docket No. ER93-540-006

OPINION NO. 440

APPEARANCES

Edward J. Brady, and Kevin F. Duffy, on behalf of American Electric Power Service Corporation.

James N. Horwood, Mark S. Hegedus, and John W. Bentine, on behalf of American Municipal Power-Ohio, Inc., and Indiana Municipal Power Agency.

Frederick H. Ritts, and Julie B. Greenisen on behalf of Blue Ridge Power Agency.

Don F. Morton, Charles W. Ritz, III, and James A.L. Buddenbaum, on behalf of Wabash Valley Power Association, Inc.

John J. Bartus, Warren C. Wood, Richard L. Miles, and Stan Berman, on behalf of the Federal Energy Regulatory Commission Trial Staff.

Unofficial FERC-Generated PDF of 19990802-0579 Issued by FERC OSEC 07/30/1999 in Docket#: ER93-540-006

Discussion

We reverse the judge's finding on our own initiative and determine that AEP's proposal to price these ancillary services using the levelized gross plant method is reasonable. We have repeatedly approved the use of the levelized gross plant method of pricing as a reasonable approach. Although in this proceeding, as in KU, we have rejected company proposals to use a levelized gross plant method to price transmission tariff rates, this was because these cases involved company proposals to switch pricing methods (from a non-levelized net plant pricing to a levelized gross plant pricing) in mid-stream for what were similar transmission services. It is this switching of methods, and not the levelized gross plant method itself, that we find has led to the development of rates that have not been shown to be just and reasonable. Conversely, here there is no switching of methods involved because these ancillary services are new services that were not previously provided as separate services. This is a key distinction that makes the KU precedent on the pricing of transmission rates inapposite here.

For these reasons, and because no party has shown that the ancillary rates produced by AEP's levelized gross plant method are otherwise unjust, unreasonable or unduly discriminatory, we adopt AEP's pricing approach.

2. Scheduling, System Control and Dispatch Service

We agree with the judge that there are no remaining issues involving this ancillary service. 80 FERC at 65,071. Ex. Jt-1 at 21. The per unit rates will be affected by the cost divisor ultimately found just and reasonable, which we find is the same divisor we found proper for the base transmission rate -- 19,488 MW. See section III.A.5 above.

3. Reactive Supply and Voltage Control (VAr)

a. Active and Reactive Allocation Factor

Positions of the Parties

AEP explained that since generator/exciters and an allocated portion of accessory electric equipment produce active and reactive power, "it was necessary to arrive at an allocation factor to segregate the reactive (VAr) production function from the active power (Watt) production function." AEP Initial Brief at 37. While both AEP and trial staff generally agreed on the methodology to calculate allocation factor applicable to reactive

Unofficial FERC-Generated PDF of 19990802-0579 Issued by FERC OSEC 07/30/1999 in Docket#: ER93-540-006

production, 66/ they disagreed on the location at which the reactive capability should be measured. Depending on the measuring point location chosen, costs will be shifted between customers taking transmission service and native load customers. AEP asserted that the name-plate reactive capability at the generator terminals should be used. 67/ Trial staff explained that some of the reactive power produced by the generators actually is consumed by AEP's plant auxiliary loads and by the GSUs, before it reaches the transmission system. 68/ Accordingly, trial staff argued that the Commission should not use the generator's nameplate reactive capability, but instead should use the reactive capability at the GSU terminals available to the transmission system. Ex. S-88. Thus, while AEP proposed a reactive power allocation factor of 21 percent, trial staff recommended only 11.47 percent.

AEP, however, maintained that the GSUs should remain a part of the transmission system. Also, even if GSUs are functionalized to production, AEP argued that despite the reactive power losses associated with auxiliary loads and GSUs, the generating plant must be capable of producing reactive power in excess of that which ultimately reaches the transmission system in order to have enough reactive power remaining to provide adequate voltage support on the transmission system. AEP Reply Brief at 43.

Initial Decision

The judge found merit in AEP's argument that there must be enough reactive power remaining at the transmission terminal to provide the voltage control support on the system. Accordingly, he determined that AEP's proposed 21 percent allocation factor for reactive power measured at the generator terminals was just and reasonable. 69/

66/ The parties agreed to use the formula $MVAr^2/MVA^2$ to determine the allocation factor.

67/ AEP maintains that reactive capability should be measured at generator terminals (the low-voltage side of the GSU), while trial staff maintains that it should be measured at the GSU terminals nearest to the transmission system (the high-voltage side of the GSU).

68/ As noted earlier, trial staff argued that the GSUs should be refunctionalized to production.

69/ 80 FERC at 65,079. The judge found that the GSUs perform transmission functions. Id. He therefore did not reach trial staff's contentions that relied on the facilities

(continued...)

Unofficial FERC-Generated PDF of 19990802-0579 Issued by FERC OSEC 07/30/1999 in Docket#: ER93-540-006

Exceptions

Trial staff filed exceptions arguing again that, during the step up of power and energy from the generator terminal voltage to transmission voltage, some of the reactive power produced by the generators actually is consumed by AEP's plant auxiliary loads and by the GSUs. In its exceptions, trial staff reiterates its position that the critical issue here is whether GSUs perform a transmission function or a generation function. Trial staff argues that the judge erroneously determined that the GSUs should be assigned to the transmission function, and that, consequently, the reactive power losses in the GSUs belong to the transmission function. However, trial staff contends that the judge's finding was erroneous. Trial staff states that, in the event the Commission reverses the judge on GSUs, it should adopt the trial staff's reactive power allocation factor of 11.47 percent. Trial Staff Brief on Exceptions at 32-33.

In its Brief Opposing Exceptions, AEP disagrees with trial staff's contention that the functionalization of GSUs to transmission or production is controlling on this issue because the allocation factor is based on capability. AEP argues that, irrespective of the location at which reactive power capability is measured, the generating equipment must be capable of producing reactive power in excess of that which ultimately reaches the transmission system in order to have enough reactive power remaining to provide adequate voltage support on the transmission system. AEP Brief Opposing Exceptions at 37-38.

Discussion

We adopt the judge's finding that 21 percent is the appropriate allocation factor to segregate the costs of reactive (VAr) production from those of active (Watt) production. We are not persuaded by trial staff's assertion that the reactive capability of the generators should be reduced by the VArs consumed by GSUs and auxiliary loads before developing an allocation factor. We agree with AEP (and the judge) that the allocation factor should be based on the capability of the generators to produce VArs and that this capability should be measured at the generator terminals. We find merit in AEP's assertion that a generating plant must be capable of producing reactive power in excess of that which ultimately reaches the transmission system in order to have enough reactive power remaining to provide adequate voltage support on the transmission

---

69/ (...continued)
being deemed to perform generation functions.

Unofficial FERC-Generated PDF of 19990802-0579 Issued by FERC OSEC 07/30/1999 in Docket#: ER93-540-006

system. 70/ See AEP Reply Brief at 43. For these reasons, and for the reasons stated by the judge in the Initial Decision, we affirm the judge's ruling on this issue in the Initial Decision.

b. Unrelated O&M Expenses

Positions of the Parties

AEP proposed to include all O&M expenses that are directly and indirectly related to the production of reactive power in its carrying charge rate 71/ of 22.1 percent. AEP claimed that its methodology excludes O&M expenses unrelated to reactive power production. Exs. A-28 at 1; and A-95. Trial staff agreed. Trial Staff Reply Brief at 39.

AIW argued that AEP's method will lead to an overrecovery of its O&M expenses because in developing its carrying charge, AEP improperly included costs from O&M accounts that have no direct relation to the production of reactive power. AIW also argued that AEP's method allocates O&M expenses on a different basis than it allocates plant costs related to VAr production. In addition, AIW argued that AEP should remedy the problem by performing an account-by-account analysis of which O&M costs are actually related to the production of reactive power, and that only those costs should be included in the development of the fixed charge rate. Ex. AIW-11 at 58. AIW Initial Brief at 70-71.

AEP disagreed with AIW's argument that O&M expenses indirectly related to production equipment should be excluded from the development of the carrying charge rate because they do not directly contribute to reactive power production. AEP Initial Brief at 39-40. AEP further stated, "[t]here is no production equipment [that] does not contribute to reactive power production." Ex. A-53 at 43.

Initial Decision

The judge ruled that AIW's method of allocating O&M expenses related to reactive power production is superior to AEP's method because AIW logically assigned O&M expenses to the VAr producing equipment in the same proportion as its investment in such equipment. The judge found that AEP had not justified why O&M

70/ However, we will require AEP to recalculate the transmission loss factor to exclude real power losses that take place in GSUs.

71/ Carrying charge is a component of revenue requirements that provides for the return of and on capital invested in plant, taxes, and insurance premiums.

Unofficial FERC-Generated PDF of 19990802-0579 Issued by FERC OSEC 07/30/1999 in Docket#: ER93-540-006

expenses related to VAr production should be allocated on a different basis than the plant costs related to VAr production, and he thus rejected AEP's proposal (which would have produced higher rates). The judge found AIW's approach to be reasonable because it provided for a consistent treatment of the plant costs and O&M expenses related to VAr production. The judge also found that AEP's argument (that there is no production equipment that does not contribute to reactive power production) is unavailing because the issue here does not concern the total exclusion of the O&M expenses from the VAr charge, but instead involves the proper allocation of O&M expenses to the VAr charge. However, the judge noted that in accordance with his ruling that the non-levelized net plant method is appropriate for developing ancillary services rates, the issue of allocation of O&M expenses is moot because there will be no carrying charge under the non-levelized method. 80 FERC at 65,081-82.

Exceptions

No party filed exceptions on this issue.

Discussion

In accordance with our ruling approving AEP's use of a levelized gross plant rate design for developing the ancillary services rates, the proper allocation of reactive power O&M expenses is no longer moot. We affirm the judge's finding that AIW's method of allocating reactive power O&M expenses is superior to AEP's method for the reasons stated in the Initial Decision.

4. **Operating Reserves (Spinning Reserves/Supplemental Reserves/Regulation and Frequency Response)**

a. Pricing for Regulation and Frequency Response Service, Spinning Reserve Service and Supplemental Reserve Service

Positions of the Parties

AEP proposed to allocate the minimum East Central Reliability Council (ECAR) requirement of a 6 percent operating reserve level as follows: 1.5 percent for Regulation and Frequency Response Service; 1.5 percent for Spinning Reserve Service; and 3 percent for Supplemental Reserve Service. AEP Initial Brief at 40-41.

While no party took issue with AEP's allocation of 3 percent for Supplemental Reserve Service, trial staff, AIW, and IUGC disagreed with AEP's method of dividing the 3 percent ECAR minimum Spinning Reserve in equal amounts between Regulation and