BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of the Request of The Empire District Electric Company d/b/a Liberty for Authority to File Tariffs Increasing Rates for Electric Service Provided to Customers in its Missouri Service Area.	)))))	**Case No. ER-2021-0312**

Staff's Reply Brief

COMES NOW the Staff of the Missouri Public Service Commission, by and through counsel, and for its *Reply Brief,* states as follows:

Argument

The single issue submitted for Commission decision is how to allocate the Revenue Responsibility among the several customer classes. Staff and the Office of the Public Counsel ("OPC"), on the same page for once, propose an even percentage increase for each customer class. Liberty[1] and the Missouri Energy Consumers' Group ("MECG"), on the other hand, urge the Commission to take this opportunity to correct the alleged subsidization of the Residential Class by the Commercial and Industrial Classes via class cost responsibility shifts. Under the latter proposal, the Revenue Responsibility would be allocated unevenly, with the Residential Class receiving a larger increase than the Commercial and Industrial Classes.[2] However, the Class Cost of Service study

[1] In its *Initial Brief,* Staff referred to the Company as "Empire." Empire and Liberty are identical for the purposes of this case.

[2] Liberty amended its position at the hearing to propose an increase of 8.3% for the Residential Class. Tr. vol. 6, p. 111, ll. 11-16. MECG requests an adjustment of 25% of the disparity; this adjustment, plus the agreed Revenue Requirement increase of 7.64%, would result in an effective increase to the Residential Class of 12.3875%. MECG Statement of Position, p. 1. 18.99 * 0.25 = 4.7475; 4.7475 + 7.64 = 12.3875.

("CCOS") that Liberty and MECG rely on is flawed and unreliable and should not be used as the basis for class cost responsibility shifts.

What's wrong with the CCOS study that Liberty and MECG base their arguments on? The study in question purports to show that the rates of the Residential Class are nearly 20% below the actual cost of serving that class.[3] The Industrial and Commercial Customer Classes, on the other hand, are purportedly paying about 20% more than their actual cost of service.[4] Those industrial customers are MECG's clients. The necessary and unavoidable effect of the class cost responsibility shifts proposed by MECG and Liberty would be that the rates of the Industrial and Commercial Classes will go down and the Residential rates will go up.

Staff's expert, Sarah Lange, provided a detailed analysis of the defects in the CCOS studies relied on by Liberty and MECG in her Rebuttal Testimony. Ms. Lange pointed out that Liberty's peaks are not robust and are subject to error due to the effects of rate switching.[5] Liberty's normalized and annualized revenues and NSI differed from Staff's and are less reliable.[6] Staff criticized the demand data relied on by Liberty and by MECG.[7] Staff also criticized Liberty's CCOS study for its reliance on class peak demand.[8]

Ms. Lange went on to testify that the unreliability stemming from the rate switching permeates the entire CCOS study "because of the reliance on peak allocation within the

[3] *MECG Statement of Position,* citing Ex. 354, Sch. KM-4s (page 2 of 2).

[4] *Id.*

[5] Lange Rebuttal, p. 17, l. 21, to p. 18, l. 8.

[6] Lange Rebuttal, p. 18, ll. 8-10.

[7] Tr. vol. 6, p. 74, ll. 19-22.

[8] Tr. vol. 6, p. 76, ll. 10-13.

Empire study as the basis for many "external" allocators upon which many "internal" allocators are derived."[9] Likewise, Ms. Lange explained that Liberty's class data is not precise enough either for assignment of market energy costs[10] or the creation of highly-differentiated ToU rate designs.[11] The allocators selected by Liberty for the accounts associated with the stable production-related revenue requirement, variable production-related revenue requirement, the cost of market energy, and the proceeds of energy market participation are not reasonable and are internally inconsistent.[12] Ms. Lange testified that it is also not reasonable to allocate generation revenue requirement that has been incurred for reasons other than provision of capacity as capacity-related.[13] The Liberty study allocators selected for the accounts associated with the stable production-related revenue requirement (capital costs, a portion of operating expenses, a related allocation of property tax) are based on an assumption that the plant was built primarily for meeting peak capacity requirements.[14] However, the truth is that Liberty's plants were built, and are managed, to make money on the Southwest Power Pool ("SPP") energy market.[15] The inequity of this allocator selection is compounded by the fact that a significant portion of the production facilities in the Liberty fleet have low costs or no costs or expenses that vary with the number of kWh generated.[16]

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[9] Lange Rebuttal, p. 18, ll. 11-15.

[10] Lange Rebuttal, p. 18, ll. 18-19.

[11] Lange Rebuttal, p. 18, n. 5.

[12] Lange Rebuttal, p. 19, ll. 2-6.

[13] Lange Rebuttal, p. 19, ll. 6-7.

[14] Lange Rebuttal, p. 19, ll. 7-11.

[15] *OPC's Initial Brief,* p. 4-6; citing Lange Rebuttal, p. 19; Mantle Rebuttal, p. 18; Mooney Direct, pp. 4-10.

[16] Lange Rebuttal, p. 19, ll. 11-13.

Ms. Lange testified that it is not reasonable to allocate the capital costs of low- or no-variable cost generation based on class capacity requirements.[17] While it may be possible to conduct a study under which specific generation facilities are allocated entirely, or proportionately, to a given class and all costs, expenses, and revenues associated with that facility are proportionately allocated to that class, that is not how Liberty treated production facilities in its study.[18] Based on Staff's accounting schedules, approximately 1/3 of Liberty's production rate base and depreciation expense is related to non-dispatchable resources, such as wind, that have essentially no expenses that vary with the number of kWh generated.[19] The most reasonable and simplest allocation approach to apply within the context of Liberty's CCOS would be to allocate non-dispatchable generation on class energy requirements, which produces the same result as levelizing the stable revenue requirement of the facility over the kWh produced by the facility.[20]

Ms. Lange testified that it is important to consider how both stable and variable generation costs, including fuel, are allocated when allocating the cost of market energy, and the proceeds of energy market participation.[21] Liberty participates in the SPP integrated market and it is fundamentally unfair to charge one group of customers for the costs of building and maintaining a power plant, while providing the sales revenue

[17] Lange Rebuttal, p. 19, ll. 14-16.

[18] Lange Rebuttal, p. 19, ll. 16-19.

[19] Lange Rebuttal, p. 19, l. 20, through p. 20, l. 1.

[20] Lange Rebuttal, p. 20, ll. 1-4.

[21] Lange Rebuttal, p. 20, ll. 5-8.

from that power plant to another group of customers.[22] This is acutely true where generation with little to no marginal costs such as fuel are concerned.[23] Specifically, under the MECG study and the Liberty study that it is based on, the Residential, CB, SH, and Lighting rate schedules are paying for 58% of the cost of wind but only receiving 49% of the wind revenue; conversely, the LP, GP, TEB, and Feedmill rate schedules are paying for only 43% of the cost of wind, but receiving 52% of the wind revenue.[24] This is fundamentally unfair, and represents too large a portion of Liberty's revenue requirement and net energy revenues to ignore or dismiss.[25]

Ms. Lange explained that it is not a simple matter, particularly in the context of an A&E study,[26] to realign net revenues to align the revenue requirement benefits of capacity with the cost responsibility for that capacity.[27] The A&E study predates the development and implementation of today's integrated energy markets, such as the SPP market in which Liberty participates.[28] Because hourly loads are not available to assign market energy expenses to the classes by the hour in which those expenses are experienced, there is no reliable way in this case to allocate the value for energy that was obtained.[29] Further, there is no way to disaggregate fuel costs for the hours in which Liberty's load used energy from the fuel costs from the hours in which Liberty's generation

[22] Lange Rebuttal, p. 20, ll. 8-10.

[23] Lange Rebuttal, p. 20, ll. 10-11.

[24] Lange Rebuttal, p. 20, ll. 12-15. Values are rounded.

[25] Lange Rebuttal, p. 20, ll. 15-16. The Empire surrebuttal study did improve this misalignment with regard to wind revenues.

[26] "A&E" means Average and Excess.

[27] Lange Rebuttal, p. 20, ll. 17-20.

[28] Lange Rebuttal, p. 20, ll. 20-21.

[29] Lange Rebuttal, p. 20, l. 21, through p. 21, l. 2.

exceeded its load.[30] OPC expressed its support of Ms. Lange's testimony, saying "the forgoing … is sufficient to reject both Mr. Lyons' class cost-of service study as he presented it and as Ms. Maini modified it as a basis for making any revenue neutral inter-class revenue requirement responsibility changes."[31]

Liberty's direct CCOS Study, the MECG study, and the Liberty surrebuttal study for non-wind revenues allocated fuel expenses and the revenues from energy sales, Renewable Energy Certificate Sales, and Production tax credits by netting all "energy" related costs and revenues.[32] This approach is not appropriate where a utility's generation does not more or less align to its native load, nor where a utility participates in an integrated energy market.[33] In this case, Liberty does both.[34] These concerns do not affect only the revenue requirement driven by production accounts; most of the internally-created allocators in the Liberty study rely on the plant allocations within the production accounts.[35]

Ms. Lange also testified that it is not reasonable to allocate the costs of Liberty's company-use Electric Vehicle ("EV") charging equipment and current publicly available EV charging equipment solely to Liberty's customers that are served at secondary.[36] These costs are caused by management decisions that are unrelated to the distribution

[30] Lange Rebuttal, p. 21, ll. 2-4.

[31] *OPC's Initial Brief,* p. 7.

[32] Lange Rebuttal, p. 21, ll. 5-7.

[33] Lange Rebuttal, p. 21, ll. 7-9.

[34] Lange Rebuttal, p. 21, l. 9.

[35] Lange Rebuttal, p. 21, ll. 10-13.

[36] Lange Rebuttal, p. 21, ll. 15-17.

infrastructure requirements of customers in general, let alone the distribution infrastructure requirements of only those customers served at secondary voltage.[37]

Ms. Lange testified that Liberty's distribution classifications are not generally reasonable.[38] Liberty did not attempt to classify customer-specific infrastructure associated with service to primary customers as customer-related for allocation among primary customers.[39] Liberty's classification of significant amounts of distribution plant as customer-related is against the emerging industry best practices, and should be improved in future cases through application of the "basic customer" approach.[40] These concerns do not affect only the revenue requirement driven by the distribution account because most of the internally-created allocators in the Liberty study rely on the plant allocations within the distribution accounts.[41]

The Liberty CCOS study is not reliable for the purpose of introducing changes to the revenue responsibility of the rate classes in this case.[42] In addition to the discussions above, Staff is concerned that the subscription solar revenue requirement appears to be generally allocated to the rate classes instead of being more directly assigned for recovery from the benefiting customers, and regulatory expense is allocated as related to class-allocations of labor instead of a more reasonable allocator such as revenue or sales.[43]

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[37] Lange Rebuttal, p. 21, ll. 18-20.

[38] Lange Rebuttal, p. 22, ll. 1-2.

[39] Lange Rebuttal, p. 22, ll. 2-5.

[40] Lange Rebuttal, p. 22, ll. 6-8.

[41] Lange Rebuttal, p. 22, ll. 9-12.

[42] Lange Rebuttal, p. 22, ll. 14-16.

[43] Lange Rebuttal, p. 22, ll. 16-20.

Ms. Lange explained that Staff didn't prepare a modification to the Liberty study to address these issues because the issues identified as Staff's concerns with Liberty's peak information and class makeup so undermine the Liberty study that reasonable results are not possible from simply changing which costs and expenses are allocated by the unreliable allocators.[44] These fundamental weaknesses mean that Ms. Maini's attempt to tweak the Liberty CCOS study cannot result in a useful or reliable product. Within the Liberty study, unreasonable classes were selected to develop unreliable class loads, which were used to develop unreliable class peaks, which are then used to allocate non-dispatchable generation and to unreasonably allocate the proceeds of generation.[45] Incorporating an attempt to disaggregate market activities would not cure the underlying problem with the reasonableness of the peaks and class makeup.[46] These same factors, among others, prevent the reasonable implementation of high-differential Time of Use ("ToU") rates at this time.[47] Neither the available hourly load information, nor the underlying cost information is precise enough to move beyond the ToU rate designs recommended by Staff in the Rate Design Report.[48]

Liberty has now fully deployed Advanced Metering Infrastructure ("AMI") metering, and the highest-quality load data obtained in the history of the State of Missouri will be the basis of its next rate case.[49] This case presents an excellent opportunity to effectively

[44] Lange Rebuttal, p. 22, l. 21, through p. 23, l. 3.

[45] Lange Rebuttal, p. 23, ll. 3-6.

[46] Lange Rebuttal, p. 23, ll. 7-8.

[47] Lange Rebuttal, p. 23, n. 8.

[48] Lange Rebuttal, p. 23, n. 8.

[49] Lange Rebuttal, p. 23, ll. 8-10.

set aside an attempt to debate detailed results based on broad-brush inputs, and to instead focus on rate design elements that will better recover costs from customers while also educating customers as to the basic drivers of their electric bills.[50]

Ms. Maini's adjustment to the Liberty study does not address Staff's concerns with the reliability of Liberty's study for shifting class revenue responsibilities.[51] It is not reasonable to rely on Edison Electric Institute ("EEI") average bill data to understand the bill increases that may or may not be experienced by particular customers as discussed extensively in Ms. Maini's testimony.[52] EEI data is useful for understanding a utility's revenues, but not for understanding a customer's bills. Changes in customer makeup, for example, rate switching or growth of particular customers or the number of similar customers within a rate schedule can drive apparent changes in EEI results that are not indicative of the experiences of customers who remain in a rate schedule.[53]

Ms. Maini's contention that closely aligning rates with each class' cost of service fulfills the important goals of promoting equity among classes and encouraging economic efficiency is no longer fully accurate in today's regulatory world, in that a modern CCOS study encompasses significant offsetting revenues, and in that rates can be more closely aligned to determinants across classes given the advent of cost-effective advanced metering.[54] Today, a customer's class is no longer the best tool for pricing a

[50] Lange Rebuttal, p. 23, ll. 10-13.

[51] Lange Rebuttal, p. 23, ll. 15-17.

[52] Lange Rebuttal, p. 23, l. 18, through p. 24, l. 1.

[53] Lange Rebuttal, p. 24, ll. 1-5.

[54] Lange Rebuttal, p. 24, ll. 16-19.

customer's energy.[55] Historically, it was prohibitively expensive to meter and bill exactly how much energy each customer used at all times.[56] Classes were used as a shortcut for setting rates, and Liberty's class distinctions were based on annual demand, and on end use.[57] The general premise of a class is a simplifying assumption that customers within a class used energy similarly enough that they could be billed based on either the total usage in a month or the highest usage in an interval in a month, or a simple relationship of those amounts, without regard to the time of day that energy is actually consumed or the time of day at which a customer experienced its peak demand.[58] Grouping customers into classes based on more or less the average annual demand is no longer the best tool for aligning a customer's rates with their cost causation.[59] With the advent of cost-effective AMI metering, billing customers by the energy they actually consume is now capable of providing a more meaningful price signal than billing customers based on the rate schedule under which they are served.[60]

At page 12, Ms. Maini explains how economic efficiency may be achieved.[61] Staff's expert responds that Ms. Maini's view is not accurate in the context of embedded cost rates and within the parameters of Missouri energy regulation and Liberty's existing regulatory mechanisms.[62] Most blatantly, this view ignores the impact of the revenues

[55] Lange Rebuttal, p. 24, l. 19.

[56] Lange Rebuttal, p. 24, ll. 20-21.

[57] Lange Rebuttal, p. 24, ll. 21-22.

[58] Lange Rebuttal, p. 24, ll. 22-27.

[59] Lange Rebuttal, p. 26, ll. 3-4.

[60] Lange Rebuttal, p. 26, ll. 4-7.

[61] Lange Rebuttal, p. 26, ll. 8-33.

[62] Lange Rebuttal, p. 26, l. 34, through p. 27, l. 2.

from energy sales, Renewable Energy Credit ("REC") sales, and Production Tax Credits ("PTCs") to reduce the net embedded energy cost.[63] Within its CCOS, Liberty has classified these costs as energy-related, however, they are not related to the energy requirements of Liberty's load.[64]

Ms. Maini's purported correction of Mr. Lyons' load factor/A&E calculation, including the treatment of interruptible credit value advocated by MECG, does not appear to be internally consistent in terms of the treatment of the net value of capacity and energy-related costs and revenues.[65] MECG relies on the Net Base Energy Cost ("NBEC") calculation to determine the level of "energy" costs in energy rates.[66] This is unreasonable and is the result of applying the cost of market energy that has been offset by other revenues to rate design.[67] This approach is problematic in the context of class cost of service and the ToU NBEC, as discussed above.[68] It is also inappropriate in the context of rate design.[69] Adjusting the NBEC to remove revenues and reduce fuel by the simple proportion of load to generation results in an NBEC of roughly $0.042 per kWh.[70] The net energy cost value that MECG cites in its discussion includes $14 million in transmission revenues, $221,928 in sales of RECs, and a net of approximately

[63] Lange Rebuttal, p. 27, ll. 2-4.

[64] Lange Rebuttal, p. 27, ll. 4-5.

[65] Lange Rebuttal, p. 27, ll. 6-10.

[66] Lange Rebuttal, p. 27, ll. 11-13.

[67] Lange Rebuttal, p. 27, ll. 13-14.

[68] Lange Rebuttal, p. 27, ll. 14-15.

[69] Lange Rebuttal, p. 27, ll. 15-16.

[70] Lange Rebuttal, p. 27, ll. 16-17.

$165 million in off system sales revenues net of excess fuel costs.[71] It is not reasonable, as Liberty and MECG do, to ignore the actual incremental cost of obtaining energy in favor of that cost, minus unrelated revenues.[72]

While Liberty's amended position is an 8.3% increase for the Residential Class, Liberty's expert witness admitted that he was not opposed to allocating an increase to the Residential Class that reflected the overall Revenue Requirement increase of 7.64%.[73] He agreed that, with the deployment of AMI meters, a better data set would be available for class cost responsibility adjustments in Empire's next rate case.[74] He agreed that his original study required revision and that MECG relied upon his original study rather than upon his corrected study.[75]

Conclusion

Staff is of the opinion that class cost responsibility shifts should not be made on the basis of untrustworthy studies. Much better studies will be available in the future due to the AMI meters deployed by Liberty. Staff urges the Commission to leave any class cost responsibility shifts for Liberty's next rate case, when they can be made with confidence. In particular, they should not be made to benefit the Industrial and Commercial Classes at the expense of the Residential Class.

[71] Lange Rebuttal, p. 27, ll. 17-20.

[72] Lange Rebuttal, p. 27, ll. 20-21.

[73] Tr. vol. 6, p. 98, l. 23, through p. 99, l. 10.

[74] Tr. vol. 6, p. 99, ll. 11-25.

[75] Tr. vol. 6, p. 100, l. 1, through p. 101, l. 1.

WHEREFORE, Staff prays that the Commission will accept its *Reply Brief* and determine this issue as Staff recommends; and grant such other and further relief as is just in the circumstances.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing was served by electronic mail, or First Class United States Mail, postage prepaid, to all counsel of record pursuant to the Service List maintained by the Commission's Data Center, **on this 8th day of March, 2022.**

/s/ Kevin A. Thompson