Exhibit No. 243

MoPSC Staff – Exhibit 243
Sarah L.K. Lange
Rebuttal Testimony
File Nos. ER-2022-0129 & ER-2022-0130

Exhibit No.:	
Issue(s):	*Class Cost of Service, Rate Design, Time of Use*
Witness:	*Sarah L.K. Lange*
Sponsoring Party:	*MoPSC Staff*
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Date Testimony Prepared:	*July 13, 2022*

MISSOURI PUBLIC SERVICE COMMISSION

INDUSTRIAL ANALYSIS DIVISION

TARIFF/RATE DESIGN DEPARTMENT

REBUTTAL TESTIMONY

OF

SARAH L.K. LANGE

Evergy Metro, Inc., d/b/a Evergy Missouri Metro
Case No. ER-2022-0129

Evergy Missouri West, Inc., d/b/a Evergy Missouri West
Case No. ER-2022-0130

Jefferson City, Missouri
July 2022

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REBUTTAL TESTIMONY OF

SARAH L.K. LANGE

Evergy Metro, Inc., d/b/a Evergy Missouri Metro
Case No. ER-2022-0129

Evergy Missouri West, Inc., d/b/a Evergy Missouri West
Case No. ER-2022-0130

REBUTTAL TESTIMONY

OF

SARAH L.K. LANGE

Evergy Metro, Inc., d/b/a Evergy Missouri Metro
Case No. ER-2022-0129

Evergy Missouri West, Inc., d/b/a Evergy Missouri West
Case No. ER-2022-0130

Q. Please state your name and business address.

A. My name is Sarah L.K. Lange, 200 Madison Street, Jefferson City, MO 65101.

Q. By whom are you employed and in what capacity?

A. I am employed by the Missouri Public Service Commission ("Commission") as an Economist for the Tariff/Rate Design Department, in the Industry Analysis Division.

EXECUTIVE SUMMARY

Q. What is the purpose of your direct testimony?

A. I will respond to certain direct testimony and tariff proposals of Evergy Metro ("EMM") and Evergy West ("EMW"), and also those of interveners related to class cost of service, revenue recovery allocations, rate design, the Rate Modernization Plan, stipulation commitments, the Time of Use (ToU) Evaluation, Measurement, and Verification (EM&V), and certain tariff requests. I will provide additional context for the Rate of Return testimony of Ms. Ann E. Bulkley on behalf of EMM and EMW

Q. Which new tariff requests will you address?

A. I will address the following proposals, in conjunction with the indicated additional Staff expert witnesses:

Business EV Charging Service (new)
Commercial EV Charging Service (new)
Residential Subscription Pricing (new), in conjunction with Contessa King
Residential Advance Easy Pay Pilot Program (new), in conjunction with Scott Glasgow
New two period ToU rate schedule (new)
New three period ToU rate schedule targeted to EV charging (new)

Q. Do you have any corrections to make to your direct testimony?

A. Yes. Page 35 contains two typos. The sentence beginning on Line 8 should read "However, I used an A&E 4**N**CP allocator consistent with the 1992 NARUC Cost Allocation Manual, which differs from the A&E 4**CP** allocator developed by the Company." Emphasis added for clarity only.

Q. Is it clear what is meant by Ms. Marisol E. Miller's request for potential "extra time" to "work through various implementation scenarios" in the promulgation of tariffs at the conclusion of this case past the effective date of rates?

A. No. The discussion on page 23 of Ms. Miller's testimony is the full extent of my knowledge of these plans, despite Ms. Miller's representation that "the company expects to share implementation plans and needs as the rate case evolves."

PROPOSED TARIFFS FOR NEW SERVICES

Q At page 54 of the EMM version of her testimony, Evergy witness Kimberly H. Winslow clarifies that the company anticipates that its requested array of new optional tariffed programs will cost up to $150 per customer, in excess of any new revenues or avoided costs occasioned by the program. In general, is the analysis supporting the $150/customer program net acquisition reasonable?

A. No. These are optional programs that are proposed for improving Evergy's brand perception, not for need or system benefits. They should be fully borne by program

participants in the cost of participation, in real time, to the extent programs are authorized. To the extent Evergy chooses to and is authorized to proceed with optional programs, any failure of those programs to provide adequate revenues for shareholders to accrue a positive return is a failure of Evergy and should be borne by shareholders. The idea of providing optional programs that lose $150 per participant, to be spread out to other ratepayers is unreasonable. Finally, Ms. Winslow bases this amount on the experience of deploying the opt-in ToU rates, which is not necessarily relevant to the programs to which she seeks to apply the requested amount in terms of internal verses external capabilities, or potential system needs. Further, the application of any "net" figure would require objective criteria for calculation of claimed benefits, in addition to costs.

Residential Subscription Pricing

Q. Have you reviewed EMW's proposed Schedule RSP "Residential Subscription Pricing Pilot," Original Sheet 169 et seq. and the related EMM sheet?

A. Yes. I will be providing Staff's recommendations for this proposed tariff, in conjunction with Contessa King.

Q. Please describe the Evergy Subscription Pricing Pilot.

A. Evergy proposes to overcharge residential customers, remove those customers' incentives to manage their load or limit consumption, retain the proceeds for shareholders, (at best) initiate an untargeted peak pricing program or possibly an unlawful interim energy charge, and in the future, charge nonparticipating customers $150 per participant.

Q. Does Staff recommend the program be authorized?

A. No. The program is unreasonable and the Commission imprimatur should not be placed on this program. Additional Staff concerns with the program are discussed by staff expert Contessa King.

Q. Mr. Bradley D. Lutz, at page 34 of the EMM version of his testimony, describes the Evergy-proposed accounting treatment for Subscription participants in future general rate cases, is this approach reasonable?

A. No. The program is inherently unreasonable, but the approach Mr. Lutz describes creates a below-the-line revenue stream associated with the program. If the program is adopted, revenues from the program should be recognized in future rate cases, but any shortfalls should be absorbed by Evergy.

Q. Is your proposed treatment symmetrical?

A. No. Staff does not recommend this program be promulgated. This program is a bad idea, with a bad design, for no real end goal. If the Commission decides to let Evergy play in this arena, Evergy should bear any costs of that decision.

Residential Advance Easy Pay Pilot Program

Q. Have you reviewed EMW's proposed Schedule AEP "Residential Advance Easy Pay Pilot Program," Original Sheet 170 et seq. and the related EMM sheet?

A. Yes. I will be providing Staff's recommendations for this proposed tariff, in conjunction with staff expert Scott J. Glasgow. Staff recommends rejection of this requested optional program.

Q. Does Staff support the proposed Prepay Pilot program requested by Evergy?

A. No. The benefits of the program that Evergy asserts can be achieved without a prepay design. At page 39 of his EMM testimony, Mr. Lutz states that currently AMI

information can be used for "Energy education - Evergy has partnered with a digital solution provider to help customers manage their energy usage, provide energy savings tips, and perform a rate comparison to ensure that they are on the rate that provides them with the lowest bill, or determine if time-of-use rates would be a good fit for their home." At page 41, he identifies other potential uses of AMI's for "Home Energy Insights – While Evergy has begun to tap disaggregation capabilities using AMI data, increased disaggregation sophistication will only increase the ability for customers to use whole home usage disaggregation to make more informed home energy management decisions. For example, the ability for a customer to see their washer and dryer usage, HVAC system energy use and alerts for appliances left on. -- Behavioral Conservation (Home Energy Calculator) – Assists customers with evaluation of private solar options. Customers can access a solar calculator that leverages their smart meter recorded energy usage history, rate and solar exposure. -Usage Alert Tools – Through new web capabilities, utilities can use smart meters to create alerts for customers throughout the month if their bills are projected to be higher than normal and could impact the customers expected bill at the end of the month."

Q. Is participation in any prepayment program necessary to achieve these benefits?

A. No.

Q. Is it reasonable that other customers should contribute $150 per participant to establish a prepay program?

A. No. If the Commission adopts this program against Staff's recommendation, participants or shareholders should bear all program costs.

Limited Time-Related Pricing Program

Q. Have you reviewed EMW's proposed "Limited Time-Related Pricing (TRP Service Electric," Original Sheet 164 et seq. and the related EMM sheets?

A. Yes.

Q. What is the basis for the rate differential offered for "Power Load," and "General Load" customers?

A. None is apparent, and the distinction does not appear cost-based.

Q. Do you agree with the determinant used for facilities demand?

A. No. It would be more reasonable to base the facilities demand charge on the around-the-clock customer non-coincident peak occurring in the last 3 to 5 years, as the local facilities in place to safely serve the customer do not vary on an annual basis.

Q. The tariff includes "Minimum Demand," how is this criteria used?

A. There appears to be a drafting error on this point. Typically, minimum demand provisions are used as the amount subject to a monthly demand charge, whether or not that level of demand is met in a given month. However, the draft tariff indicates that the bill will consist only of a customer charge, a facilities charge, and an energy charge. While the availability section refers to demands, it sets a floor of an average capacity of 150 kW over the past twelve months. It is unclear if a monthly demand charge was intended, but omitted.

Q. Should a monthly demand charge be included?

A. Yes. It would be reasonable to include a monthly demand charge, and it would be best practice for that demand charge to be associated with the customer's peak during some period of "on peak" time, such as summer days between the hours of 4 pm and 8 pm, or winter days between the hours of 6 am and 10 am, and 4 pm and 8 pm.

Q. Are the energy charges reasonable?

A. While it is unclear why different charges are prescribed for "General" and "Power" customers are charged different energy charges, the "summer" rates appear generally consistent with expectations. The weekday/weekend distinctions are likely not necessary, but not particularly problematic. However, the "Winter" season should be subdivided for a shoulder season including the months of October, April, and May, and a true winter season consisting of November, December, January, and February. Staff would also accept mid-month seasonal changes for the shoulder months.

Q. Is a reactive demand charge applicable under the schedule?

A. It does not appear that a reactive demand charge is applicable, but it would be reasonable to incorporate one.

Q. Is this proposed tariff similar to Staff's proposed Real Time Pricing Schedule?

A. Yes. While Evergy's proposed schedule includes fixed energy prices per hour, Staff's schedule relies on a formula and actual Day Ahead LMPs.

Q. Does Staff recommend promulgation of the Limited Time-Related Pricing Service Electric rate schedule?

A. With incorporation of the recommendations described above, Staff does not oppose promulgation of the Limited Time-Related Pricing Service Electric rate schedule.

Other Newly Proposed Programs

Q. Are there additional newly proposed tariffs that you will respond to later in this testimony?

A. Yes. I will respond to the proposed Residential High Differential Time of Use RTOU-3 Rate Schedule, the Separately Metered EV Time of Use RTOU-EV Rate Schedule,

and the Residential Time of Use – Two Period RTOU-2 Rate Schedule (EMM Only) later in this testimony in my discussion of residential rate schedules.

Q. Does the suspended EMW tariff include the Schedule MKT tariff, "Special High-Load Factor Market Rate" in compliance with File No. EO-2022-0061?

A. Evergy West has filed a MKT tariff in YE-2022-0202, the tariff packet associated with ER-2022-0130, however Staff intends to complete its review of the compliance tariff for File No. EO-2022-0061 in File No. EO-2022-0061. Staff does not recommend promulgation of the form of the MKT tariff currently suspended in YE-2022-0202, which is the tariff packet associated with ER-2022-0130.

EV Charging Tariffs Reviewed in File No. ET-2021-0151

Q. Could you summarize the Commission's Report and Order issued 1/12/2022 in File No. ET-2021-0151 (consolidated from ET-2021-0269)?

A. Yes. In the Report and Order, the Commission considered a number of electric vehicle charging-related requests made by Evergy. Ultimately, several of those requests were approved in whole or in part.

Concerning the proposed Business EV Charging Service Rate, the Commission Decision states, at page 23:

> The Commission is not opposed to the concept of a commercial EV charger rebate program, but Evergy has failed to demonstrate that such a program is needed in its service territories. The existing Clean Charging Network appears to be sufficient to meet charging needs at this time, and in the near future Missouri expects to receive a large infusion of federal funding to support expansion of an EV charging network. Based upon the record, there is no evidence that a commercial EV charger rebate program is needed and it will not be approved.
> The following identified sub-issues would only need to be addressed if the Commission approved the commercial EV charger rebate program. Since the Commission has not approved that program they need not be addressed.

> a. If the Commission approves Evergy's proposed Commercial EV Charger Rebate Program, should the Commission modify the program consistent with ChargePoint's recommendations?
> b. If the Commission approves Evergy's proposed Commercial EV Charger Rebate Program, should the Commission require that 20 percent of commercial rebates be reserved for multi-family locations?
> c. If the Commission Approves Evergy's Proposed Commercial EV Charger Rebate Program, should the Commission order rebate incentive amounts be capped on a percentage basis not to exceed 20 percent of the total costs for a charger station?

Concerning the proposed Business EV Charging Service Rate, the Commission Decision states, at page 33:

> There are many unanswered questions about the details of the Business EV Charging Service Rate. The Commission is not opposed to the concepts behind that rate, but since Evergy acknowledges that it does not anticipate providing substantial amounts of electricity under this rate in the near future, and Evergy intends to file a new rate case in the near future, it is appropriate for the Commission to consider this proposed rate within the context of a general rate case. The Business EV Charging Service Rate will be rejected at this time.
> The following identified sub-issues would only need to be addressed if the Commission approved the Business EV Charging Service Rate. Since the Commission has not approved that rate these sub-issues need not be addressed.
> a. Is it lawful for the Commission to approve a rate for this new service outside of a general rate case?
> b. Is it lawful for the Commission to approve a rate for this new service at this time given the Company has elected PISA?
> c. If the Commission does approve this new rate should the Company use the revenue received from the rate schedule to offset the costs Evergy is requesting to defer to a regulatory asset account?

Commercial EV Charger Rebate

Q. Have you reviewed EMW's proposed Schedule CECR "Commercial EV Charger Rebate" Original Sheet 161 et seq. and the related EMM sheets?

A. Yes.

Q. In what respects does this proposed tariff vary from that rejected in File No. ET-2021-0151?

A. Certain general provisions have been shifted from separate "Transportation Electrification Pilot Program" sheets to the "Commercial EV Charger Rebate" sheets. Definitions for "Builder," "Developer," "EV Service Provider," "EV Outlet," and "Highway Corridor," have been removed, and a definition for "Affiliate Entity" has been added, reading "Any entities that directly or indirectly control, are controlled by, or are under common control with other entities, with "control" meaning the possession, directly or indirectly, of the power to direct management and policies, whether through the ownership of voting securities (if applicable) or by contract or otherwise." The Definition for "DCFC" has been reduced from a maximum demand of 350kW to 150kW, and an option for paired chargers has been added. The definition for "Multifamily has been modified to read "MULTIFAMILY – A residential development with a parking facility of at least eight (8) parking spaces that serves at least five (5) or more housing units such as apartment buildings and condominiums." The definition of "Workplace" has been revised to specify eligibility is for a "site with at least ten (10) onsite employees." Various dates have been extended by approximately 1 year, and a requirement has been inserted that "All projects must be completed and applications submitted no later than January 31, 2028." The overall budgets have been slightly modified, Commercial Highway Corridor sites have been eliminated, and a new category of "Commercial Fleet" sites have been distinguished from "Commercial Workplace" sites, with the available ports defined by "number of onsite employees: 10-34 (2 ports); 35-54 (4 ports); 55-74 (6 ports); 75-94 (8 ports); 95+ (10 ports)." For Multifamily, a new note states that "(2) The number of eligible ports is equivalent to 25% of the housing units up to the maximum."

The following requirements have been established or elaborated:

- A minimum of 2 ports are required for Qualified L2 EVSE
- Notwithstanding the limits on incentives at each individual site, a single affiliate entity installing highway corridor charging stations may not receive total incentives under the Program of more than $500,000.
- A single affiliate entity installing non-highway public, workplace, fleet, or multifamily charging stations may not receive total incentives under the Program of more than $150,000.
- Evergy will develop and maintain a list of qualified EVSE eligible for rebates and criteria for the individual site types. These lists will be available on the Evergy website (www.evergy.com).
- A Commercial Rebate application will expire nine months (9) after it has been accepted and pre-approved by Evergy and the project has not met all the completion requirements upon the earlier of:
  1. Nine (9) months from the date of the Rebate pre-approval, or
  2. January 31, 2028

  Payment will be made within sixty (60) days of receipt of a final approved application and validation of customer's W-9 information.

Q. Do these modifications address Staff's concerns raised in File No. ET-2021-0151?

A. Some of these improved criteria address some of Staff's concerns. However, as described in File No. ET-2021-0151:

(1) the proposed program is simply redundant of existing Clean Charge Network EV charging deployments,

(2) there is no reasonable reason to expect the proposed investment level to provide accretive revenues to offset its costs,

(3) there are not adequate safeguards to mitigate contributions to system and local peaks exacerbating the need for distribution, transmission, and generation capacity,

(4) Staff's review of the study in ET-2021-0151 demonstrated that the premise of the program is unsound, and

(5) to the extent the program is promulgated, it would be best practice for accretive revenues to offset any deferral authorized.

Q. Does Staff recommend rejection or approval of Schedule CECR "Commercial EV Charger Rebate"?

A. Rejection. If the Commission does not reject the program, a cap on the available rebate amount is appropriate.

Business EV Charging Service

Q. Have you reviewed EMW's proposed Schedule BEVCS "Business EV Charging Service" Original Sheet 158 et seq. and the related EMM sheet?

A. Yes.

Q. In what respects does this proposed tariff vary from that rejected in File No. ET-2021-0151?

A. The Facility Demand Charge has been corrected to use of the Facility Demand determinant instead of the Billing Demand determinant. The rates have been increased.

Q. Is this rate design reasonable?

A. This design continues to suffer the flaws detailed in ET-2021-0151. The design is built on assumptions about typical consumption patterns for non-EV customers. However, since this rate schedule is targeted at new load, and Staff views the shaping of new separately-metered load as a reasonable policy goal, Staff does not object to this rate design at this time. The rate design will require study and refinement when usage data becomes available.

Q. Is the "Carbon Free Option" rate element reasonable?

A. No. In addition to the concerns discussed in ET-2021-0151, this element is duplicative of the Evergy proposed "Green Pricing Rec Program Rider."

Q. Is the "Carbon Free Option" rate value reasonable?

A. Evergy's proposed Carbon Free Option rate is $0.0025/kWh. Evergy's proposed "Green Pricing Rec Program Rider," rate is $0.0047/kWh. Staff is unaware of a reason why

the Carbon Free Option Rate should be approximately 50% of the Green Pricing Rec Program Rider rate.

Q. If the rate is approved, should reporting requirements be imposed that are similar to those imposed in ET-2021-0151 for Schedule ETS?

A. Yes. Staff recommends the following reporting requirements if Schedule BEVCS is approved:

1. Number of unique vehicles charged per station,
2. Number of unique vehicles charged in aggregate,
3. Charges per station,
4. kWh consumption by hour, by station,
5. kW consumption by 15 minute interval, by station,
6. Amount of power (kWh) consumed from carbon free resources
7. Revenue by charger
8. Any infrastructure investment incurred by Evergy related to the BEVCS Rate
9. All incremental costs associated with serving the BEVCS rate, including fuel and purchase power costs

Q. Should revenues accrued from the BEVCS rate, net of the applicable FAC base factor, offset deferrals under the Commercial EV Charger Rebate program, if promulgated?

A. Yes.

Q. If promulgated, should participants in the Commercial EV Charger Rebate program be required to take service under BEVCS?

A. Yes.

Q. If promulgated, should BEVCS be revised to include a critical peak component that can be called by Evergy?

A. Yes.

Q. Should the Schedule BEVCS be approved?

A. If the Commercial EV Charger Rebate program is approved in any fashion, Schedule BEVCS should be promulgated with the above-described modifications. Schedule BEVCS should be required for participants in the Commercial EV Charger Rebate program. In the absence of approval of the EV Charger Rebate program, Schedule BEVCS is unnecessary.

Electric Transit Service Schedule ETS

Q. Did Evergy propose in this case to increase its rates under Schedule ETS promulgated consistent with ET-2021-0151?

A. No. Staff assumes that this omission is due to the date of the promulgation of Schedules ETS relative to the filing date of these general rate cases. Nevertheless, Staff recommends any overall increase awarded in these cases be implemented as an equal percentage increase to the rates indicated on Schedules ETS for the respective utility.

Response to CCOS Direct Testimony of ChargePoint

Q. In general, what is Staff's response to the Class Cost of Service (CCOS) Direct Testimony of Mr. Justin D. Wilson on behalf of ChargePoint concerning Evergy's transportation electrification requests?

A. To the extent Mr. Wilson recommends approval of Evergy's request, my response is the same as to Evergy's underlying request. Staff does not oppose Mr. Wilson's customer education recommendations. I will respond to additional recommendations made by Mr. Wilson below.

Q. Does Staff recommend adoption of Mr. Wilson's recommended modifications to the proposed Schedule RTOU-EV?

A. No. At pages 3-4, Mr. Wilson recommends eliminating the requirement for a separate meter, eliminating the corresponding customer charge, and allowing submetering through a non-utility meter. While these recommendations on their face appear consistent with the resolution of the Empire EV case, these recommendations do not incorporate the full sets of agreements made in that case that enabled Staff to recommend approval of the redesigned Empire program.

Q. Does Staff recommend adoption of Mr. Wilson's recommended modifications to the proposed Commercial EV Charger Rebate Program?

A. Staff does not oppose some of Mr. Wilson's recommendations. At page 4, Mr. Wilson makes the following recommendations:

1. Direct Evergy to require that chargers be network-capable, ENERGY STAR certified for Level 2, safety certified, and managed charging capable;
2. Direct Evergy to collect only the following data from site hosts (on a monthly basis): number of charging events, total energy (kWh) dispensed, average energy consumption (kWh) per charging event, and average duration of charging events;
3. Direct Evergy not to impose any demand response requirements on DCFCs supported by the CRP;
4. Direct Evergy to allow CRP participants to opt out of particular demand response events as needed;
5. Direct Evergy to subject its CCN chargers to the same demand response requirements that would apply to participants in the CRP.

The first, fourth, and fifth recommendations are reasonable. However, Staff objects to the second and third requirements, should the CRP be promulgated.

Q. Why is it unreasonable to limit the information collected by Evergy from site hosts?

A. Based on Mr. Wilson's recommendations, Evergy would be unable to provide hourly usage information or demand information. Both pieces of information are critical to evaluating the reasonableness of the associated rate designs, and for recommending future rate designs. Also, to the extent that Evergy has portrayed the CRP as a learning opportunity, additional information will likely be necessary to assess the learning objectives

Q. Why is it unreasonable to direct Evergy not to impose any demand response requirements on DCFCs supported by the CRP?

A. One of the few justifications for utility-supported EV charging infrastructure deployment is load management. Demand response (with opt-out ability, or penalty) or critical peak pricing are intrinsic to load management. Further, it borders on unconscionable to cut power to customers' homes and businesses due to system conditions without first limiting the capacity made available to utility-funded DCFC devices.

RESPONSE TO CLASS COST OF SERVICE AND REVENUE ALLOCATION

Q. Are the CCOS studies provided by EMM or EMW reliable?

A. No, as discussed below, they are not reliable for purposes of recommending shifts in interclass revenue responsibility, and they are particularly unreliable for purposes of intraclass rate design. Necessarily, the derivative MECG studies and MIEC's reliance on the studies are unreliable as well.

Distribution Classification and Allocation

Q. How many customers do EMM and EMW serve at each voltage on each rate schedule?

A. Evergy's workpapers indicated the following customer composition and energy consumption, by voltage and rate schedule:

Class	EMM Customer #	EMM Energy (MWh)	EMM Energy / Customer (kWh)	% of EMM Customers by Class	% of EMM Usage by Class	EMW Customer #	EMW Energy (MWh)	EMM Energy / Customer (kWh)	% of EMW Customers by Class	% of EMW Usage by Class
Residential	260,212	2,692,633	10,348	100%	100%	290,955	3,566,326	12,257	100%	100%
SGS Secondary	27,651	537,793	19,450	99.8%	11387.4%	37,835	1,184,814	31,315	99.9%	20016.4%
SGS Primary	47	4,723	100,429	0.2%	100.0%	50	5,919	119,426	0.1%	100.0%
MGS Secondary	5,179	1,104,545	213,286	99.2%	2238.8%					
MGS Primary	39	49,336	1,257,522	0.8%	100.0%					
LGS Secondary	778	1,501,661	1,931,391	88.6%	309.3%	1,289	1,095,528	850,165	97.1%	1258.1%
LGS Primary	100	485,565	4,852,638	11.4%	100.0%	39	87,076	2,253,445	2.9%	100.0%
LPS Secondary	16	280,923	17,557,678	30.8%	19.3%	138	976,009	7,072,532	77.5%	100.9%
LPS Primary	29	834,968	28,792,014	55.8%	57.3%	24	501,267	20,886,118	13.5%	51.8%
LPS Substation	2	248,457	124,228,319	3.8%	17.0%	10	335,638	33,563,810	5.6%	34.7%
LPS Transmission	5	373,875	74,774,940	9.6%	25.7%	6	130,698	21,782,977	3.4%	13.5%
Lighting	68	78,217	1,154,493	100%	100%	217	43,758	201,885	100%	100%
CCN	333	368	1,107	100%	100%	224	7,555	33,776	100%	100%

Q. Would you expect the customer-specific distribution facilities (including a meter, a service drop, and a line transformer) associated with delivering an average of 7 million to 12 million kWh of energy on an annual basis to be more expensive or less expensive than the customer-specific distribution facilities associated with delivering an average of 10 thousand to 30 thousand kWh on an annual basis?

A. While Evergy failed to provide requested information to verify the relative cost of such facilities, I would expect the facilities associated with LPS secondary customer-specific infrastructure to have a significantly greater revenue requirement than the facilities associated with Residential, LGS, Lighting, or CCN secondary customer-specific infrastructure.[1]

[1] For question: 0211, "For each voltage and phase combination at which the company operates transmission or distribution equipment, please identify the typical or representative retirement units and quantities associated with providing 1 span of overhead (and the equivalent distance of underground) infrastructure including devices. For each combination, by overhead and underground, please indicate the number of pole miles, and the typical number of conductors. If multiple conductor numbers are in common use, please identify the number of pole miles associated with each number of conductors," Evergy confirmed in an email from Brad Lutz to Sarah Lange on March 2, 2022, that "It does appear that we could provide additional detail to certain plant accounts. For example, OH conductors, I understand we could provide a breakdown of the amount of conductor by voltage. This appears to be available consistently down to the Primary voltage with some information into secondaries." It was my understanding from a phone call on approximately February 16, 2022, that Evergy possessed the knowledge to provide typical or representative units and quantities as requested, which was confirmed in the same email, indicating "we could produce sample design packages for some combination of voltages to give you a relative cost differential."

For question: 0212, "Please identify, by retirement unit and account, the transmission or distribution plant associated with providing service to isolated customers. Please identify, by rate schedule and voltage and phase at which service is taken, the retirement unit and account associated with transmission or distribution plant associated with providing service to isolated customers. For example, if a customer is served at 34kV but is adjacent to a

Q. Within the EMM and EMW tariffs, do facilities charges vary by voltage in excess of the voltage adjustment factor associated with service at various voltages?

A. Yes. The current and requested EMM and EMW facilities charges, by voltage, are provided in the table below:

LPS Facilties Charges per MW	EMM Current	EMM Requested	EMW Current	EMW Requested
Secondary	$ 3.85	$ 4.05	$ 3.15	$ 3.43
Primary	$ 3.19	$ 3.36	$ 2.75	$ 2.99
Substation	$ 0.96	$ 1.01	$ -	$ -
Transmission	$ -	$ -	$ -	$ -
Secondary Premium	17%	17%	13%	13%
Primary Premium	70%	70%	100%	100%
	100%	100%		

69kV, please identify the transformation equipment, conductor, switchgear, etc, used to facilitate service to that customer; or the line transformer and conductor combination used as a service drop for a given size of secondary customer. Please specify plant that may be shared to a limited extent by adjacent customers, such as line transformers." Evergy confirmed in an email from Brad Lutz to Sarah Lange on March 2, 2022, that "our data detail within the secondary/service level varies by jurisdiction and tends to include the prevalent use of blanket orders, generic representations of the customer service lines," and "Our work management system has information about job costs, but connection to individual customers is unreliable. This is due to a number of reasons. In many cases the job is completed for a developer, not the final occupant. Also the jobs are frequently inclusive of multiple homes and delineating the cost to a specific home is unclear. As the job are completed, some of the data goes to the mapping system and the rest to the accounting system. In mapping, as noted above, detail becomes generalized at the service level and within the accounting systems, many of the details we seek are converted to mass property and all customer linkages lost. I am not sure if it is what you might need, but we could produce sample design packages for some combination of voltages to give you a relative cost differential."

For question: 0214, "A. Please identify each voltage and phase combination at which service is provided to customers, and identify the number of customers taking service on each, by rate schedule. B. For each voltage and phase combination at which service is provided to customers, identify (1) the typical or representative retirement units and quantities associated with providing 1 span of overhead (and the equivalent distance of underground) infrastructure including devices, and (2) the typical or representative meter(s) and related installations, by retirement unit or more specific information if available. (3) if these items vary with usage characteristics of customers, Company shall provide items 1 & 2 for a minimum of high, medium, and low infrastructure customers." As described above, Mr. Lutz indicated in a March 2, 2022 email that "we could produce sample design packages for some combination of voltages to give you a relative cost differential." I responded to this email on that same date and indicated "We will take a look at what you can provide. Sample information is better than nothing." To date, nothing has been provided.

Note the 17%, 13%, and 70% premiums as the voltage level decreases. This pricing indicates an assumption that the revenue requirement associated with the facilities to serve secondary customers exceeds that associated with the facilities to serve primary customers, on a per kW basis; and that the revenue requirement associated with the facilities to serve primary customers exceeds that associated with the facilities to serve substations customers, on a per kW basis, etc.

Q. Based on the evidence in this case, what is the difference in revenue requirement associated with the facilities to serve secondary customers, primary customers, and transmission and substation customers, within each class?

A. There is no evidence in this case, including in the EMM and EMW cost studies that considers this question. This is information that is in the unique possession of EMM and EMW, which Staff or other parties cannot independently create to review the specific impact of its omission on the EMM and EMW studies.

Q. Could you briefly explain the difference in how utilities account for customer-specific facilities to serve secondary customers and customer-specific facilities to serve customers served at higher voltages?

A. It is my understanding that within the Evergy utilities, the conductor that spans from the utility pole (or underground circuit) to the customer's weatherhead (the fixture securing the service line to a customer's structure, connecting to the meterbase), when that customer is served at a secondary voltage, is recorded as a "service" into a USOA 369 account. If that customer is not served at a secondary voltage, that conductor would be recorded into either account 365, "overhead conductors and devices," or account 367, "underground conductors and devices."

It is my understanding that the transformer that drops from the applicable network voltage to the applicable secondary voltage is recorded into account 368, "line transformers," while, for example, if a customer served at a primary voltage is situated next to a network conductor that is operating at a higher primary voltage, that transformers would be recorded as "station equipment," in account 362. It is my understanding that if a substation were constructed to serve a single customer or industrial park, that substation would be recorded into accounts 361 "structures and improvements," and 362, "station equipment."

Q. Did EMM and EMW allocate any of account 369-services to the LGS or LPS classes?

A. No revenue requirement associated with services was allocated to the LGS or LPS classes.

Q. Was the allocation of account 369 weighted among the classes to which it was allocated by the size or cost of service drops to serve a Residential, SGS, or MGS?

A. No. The allocation of account 369 was not weighted by the size or cost or service drops to serve customers of various sizes.

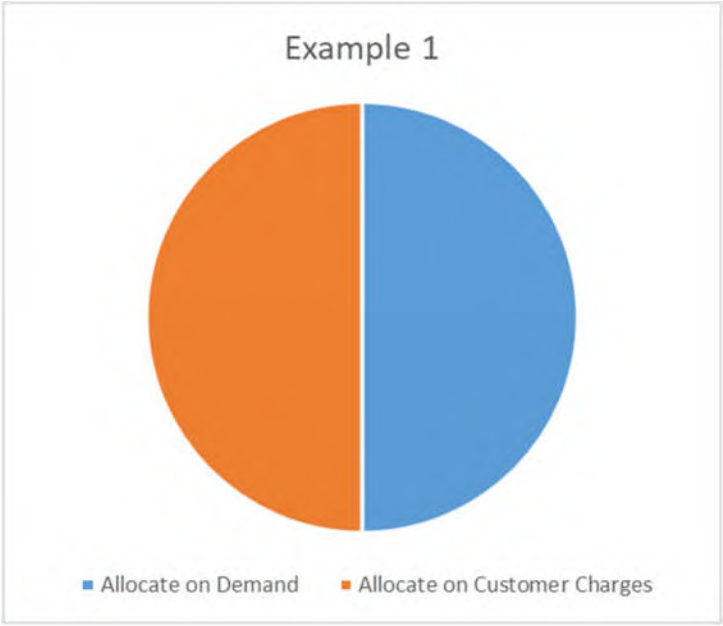
Q. Is this issue with the 369 services accounts your only concern with the EMM and EMW (and derivative) CCOS studies?

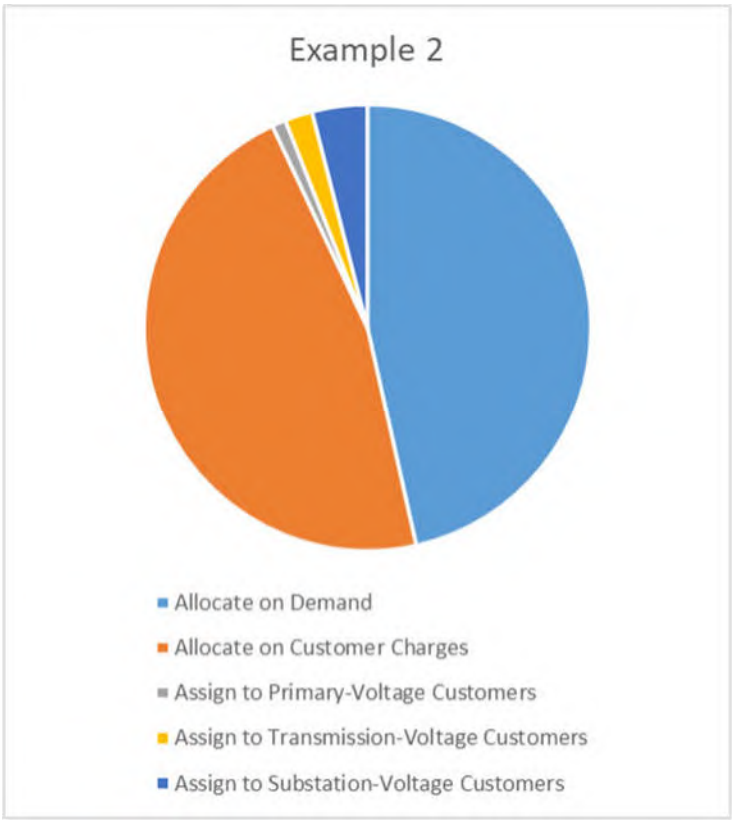
A. No. This is simply a straightforward concern. A related concern is the failure to allocate or assign the revenue requirement associated with customer-specific infrastructure that has been recorded in other distribution accounts to the classes (and rate codes within those classes) that are the sole users of that infrastructure. In essence, under the EMM and EMW distribution allocations, SGS and Residential customers may each require a few dozen feet of cable that costs a few dollars per foot, but they are also allocated the costs for LGS and LPS

customers served at secondary voltage who may each require a few hundred feet of conductors that may cost several dollars per foot. However, customers served at voltages above secondary do not specifically bear revenue responsibility for analogous customer-specific infrastructure that can cost in the millions of dollars per customer.

Q. Because customers above secondary voltage do bear some responsibility for the non-service distribution accounts, is a specific allocation or assignment of customer-specific infrastructure necessary?

A. Yes, it is still necessary to allocate or assign the revenue requirement for customer-specific infrastructure in the non-services distribution and transmission accounts to customers served above secondary voltage.





In Example 1, we see in blue the total amount that would be allocated to all customer classes on the basis of demand, and in orange the total amount that would be allocated to all customer classes based on the number of customers. In Example 2, we see that the orange slices and the blue slices are both smaller, once the gray, yellow, and dark blue slices are incorporated into the pie chart. The size of the slices is for illustration only, but the existence of the slices at a non-zero allocation necessarily results in smaller allocations of revenue requirement on the basis of customer numbers and customer demands.

Note, in EMM and EMW's current and proposed rates, there are no facilities charges for EMW substation voltage or transmission voltage customers, nor for EMM transmission voltage customers.

Q. How many customers are served at substation voltage or transmission voltage?

A. EMM indicates that it serves two customers at substation, and five at transmission, while EMW indicates that it serves 10 customers at substation, and 6 at transmission.

Q. Would it be difficult to generally identify the infrastructure associated with seven and sixteen customers, respectively?

A. It may be difficult to tie a given conductor to a given retirement unit in a continuing property record, but for many reasons I hope that it would not be difficult for Evergy to identify an employee within their utility who could provide information like, "Customer 1 location has a designated lug in XYZ transmission substation. From the substation to the meter base there are 7 conductors, on three 75' towers, a total distance of 300'. Each conductor is a type ABC. The meter is a model LMNO. There are two transformers to enable metering, each is a model QRS." Additional information such as the most-recently installed cost, or the average cost, or both, of each material type would also be helpful.

Q. Does Staff expect Evergy to conduct similar surveys of the infrastructure of customers served at primary voltage?

A. No. Staff would accept as reasonable for CCOS and rate design purposes a survey of a reasonable number of variously-sized primary customers that the company considers representative.

Q. Is a similar survey of the secondary customers within each class necessary?

A. Yes. Staff is doubtful that the customer-specific infrastructure used for an LPS customer served at secondary is comparable in cost to the customer-specific infrastructure used for an SGS or Residential customer.

Q. Are there additional concerns with the EMM, EMW, and derivative CCOS studies?

A. Yes. Evergy's treatment of solar-related distribution assets, such as transformers and batteries is not isolated from the study. Going forward, at page 60 of the EMM version of her testimony, Ms. Winslow notes that the EV programs it proposes in this case will give rise to approximately $5.2 million in additional distribution infrastructure, but she does not outline any plan for that infrastructure to be identified in future cost studies for allocation to participants in the EV program, or to be isolated away from classes which do not participate in the EV programs.

Q. Are Staff's requested improvements to distribution data underlying CCOS studies consistent with Evergy's stated intended uses of AMI?

A. Yes. At page 41 of the EMM version of his testimony, Mr. Lutz states, as a potential benefit of AMI that, "Usage data from AMI meters can be tied to the specs and performance of distribution transformers to find overloaded transformers." He also states "Voltage Load Profile Data - Ability to gain system insight for better energy delivery options. This may drive construction designs and future planning of the system. That data can be used to identify faulty transformers and capacitor banks as well."

Generation Allocation

Q. In discussing the Average and Excess (A&E) allocation method, what consideration does the 1992 NARUC Cost Allocation Manual highlight for choice of demand type?

A. At page 50, the 1992 NARUC Cost Allocation Manual includes the following,

> If your objective is – as it should be using this method – to reflect the impact of average demand on production plant costs, then it is a mistake

to allocate the excess demand with a coincident peak allocation factor because it produces allocation factors that are identical to those derived using a CP method. Rather, use the NCP to allocate the excess demands.

Q. Did EMM and EMW use CP or NCP demands?

A. EMM and EMW made the "mistake" of using CP demands.

Q. What does the 1992 NARUC Cost Allocation Manual suggest as the basis for choice between a CP method or an energy-weighted method such as the A&E?

A. At page 39 the 1992 NARUC Cost Allocation Manual includes the following,

IV. METHODS FOR CLASSIFYING AND ALLOCATING PRODUCTION PLANT COSTS

In the past, utility analysts thought that production plant costs were driven only by system maximum peak demands. The prevailing belief was that utilities built plants exclusively to serve their annual system peaks as though only that single hour was important for planning. Correspondingly, cost of service analysts used a single maximum peak approach to allocate production costs. Over time it became apparent to some that hours other than the peak hour were critical from the system planner's perspective, and utilities moved toward multiple peak allocation methods. The Federal Energy Regulatory Commission began encouraging the use of a method based on the 12 monthly peak demands, and many utilities accordingly adopted this approach for allocating costs within their retail jurisdictions as well as their resale markets.

This section is divided into three parts. The first two contain a discussion of peak demand and energy weighted cost allocation methods. The third part covers time-differentiated cost of service methods for allocating production plant costs. Tables 4-1 through 4-4 contain illustrative load data supplied by the Southern California Edison Company for monthly peak demands, summer and winter peak demands, class noncoincident peak demands, on-peak and off-peak energy use. These data are used to illustrate the derivation of various demand and energy allocation factors throughout this Section as well as Section III.

The common objective of the methods reviewed in the following two parts is to allocate production plant costs to customer classes consistent with the cost impact that the class loads impose on the utility system. If the utility plans its generating capacity additions to serve its demand in the peak hour of the year, then the demand of each class in the peak hour is regarded as an appropriate basis for allocating demand-related production costs.

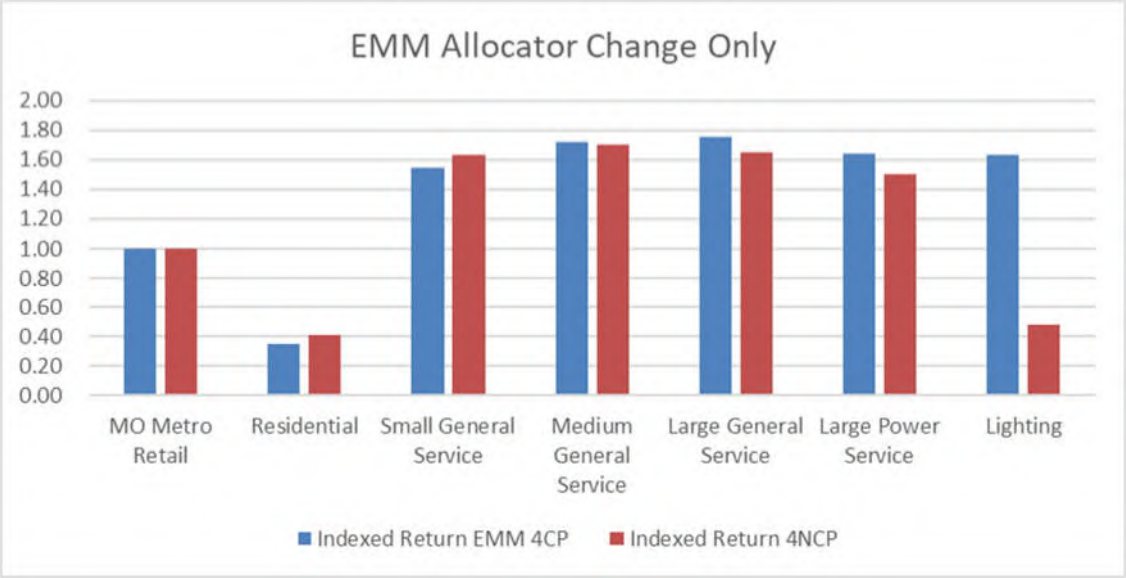
If the utility bases its generation expansion planning on reliability criteria -- such as loss of load probability or expected unserved energy -- that have significant values in a number of hours, then the classes' demands in hours other than the single peak hour may also provide an appropriate basis for allocating demand-related production costs. Use of multiple-hour methods also greatly reduces the possibility of atypical conditions influencing the load data used in the cost allocation.

39

Note, page 35 of the 1992 NARUC Cost Allocation Manual indicates that Steam Production Plant Rate Base that has not been specifically assigned to customers is properly classified as "Demand Related" and as "Customer Related."

Q. Did you replace the A&E 4CP allocator with the A&E 4NCP allocator in the EMM study to review its results?

A. Yes, and the results are provided below as indexed rate of return under current revenues, by class; however, I have omitted depiction of the CCN/Other class so that the scale is readable. To summarize, the A&E 4CP allocates more revenue responsibility to the Residential and SGS classes, and less revenue responsibility to the MGS, LGS, LPS, and Lighting classes than does the A&E 4NCP method described in the 1992 NARUC Manual.



The results provided above rely in full on the workpapers provided by Evergy, with the only modification to the study being the replacement of the A&E 4CP allocator with the A&E 4NCP allocator, calculated consistent with the 1992 NARUC Cost Allocation Manual.

EMM

Evergy Testimony

Q. Is the EMM CCOS study reliable?

A. No. Some of the shortcomings of the Evergy studies are alluded to in my CCOS direct testimony at pages 25 – 36, and the discussion above. In short, due to its use of an unreasonable A&E 4CP allocator and selection of a net energy allocator which ignore the existence of the SPP integrated energy market, the EMM study also fails to properly classify distribution assets, substation assets, and transmission assets that would not have been installed but-for facilitation of service to unique customers served at primary, substation, and transmission voltage.

These defects tend to over-allocate net revenue requirement to the residential, SGS, and lighting classes, and under-allocate net revenue requirement to the LPS and LGS classes. The impact to the MGS net revenue requirement is less clear.

Q. Given their basis in the deficient EMM study, do Ms. Miller's recommendations warrant further discussion?

A. No.

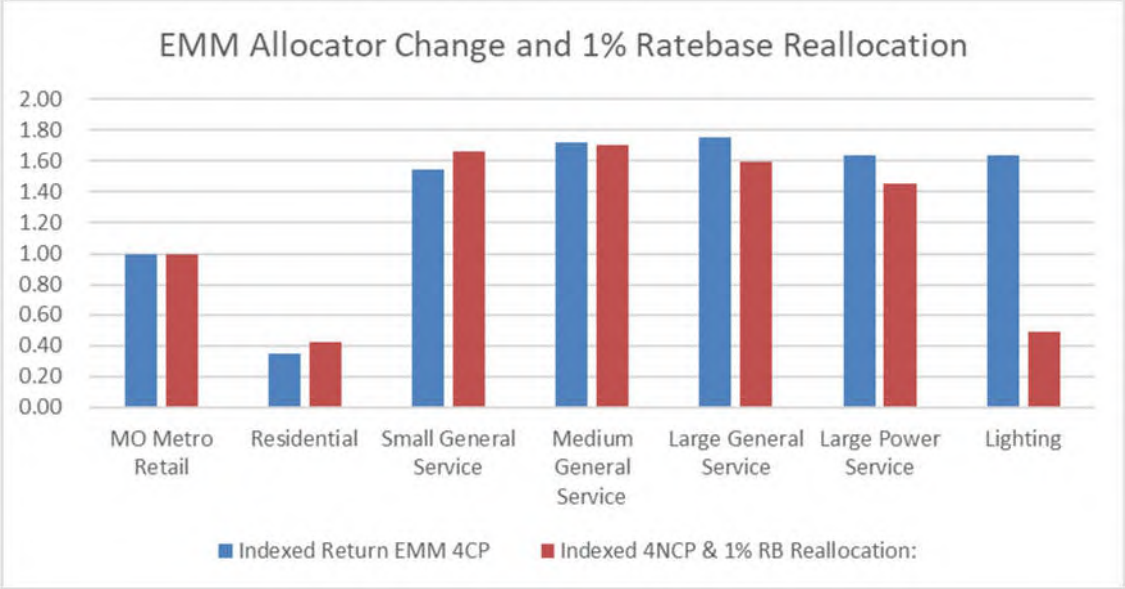
Q. Have you attempted to adjust the EMM study results for these defects in order to identify reasonable shifts in Class Revenue responsibilities for purposes of this case?

A. Yes. The interpretation of these results are largely consistent with my direct-filed CCOS Studies.

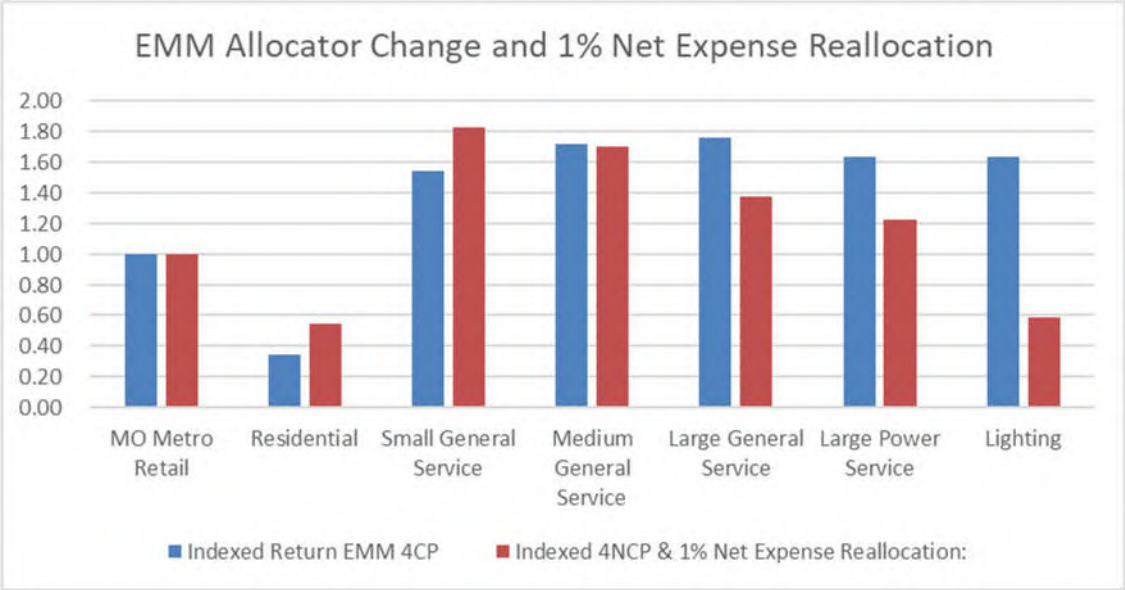
Q. How did you adjust the EMM results?

A. First, I examined the A&E 4NCP results if 1% of the ratebase were reallocated away from the combined Residential, SGS, and Lighting classes, and allocated to the LGS and

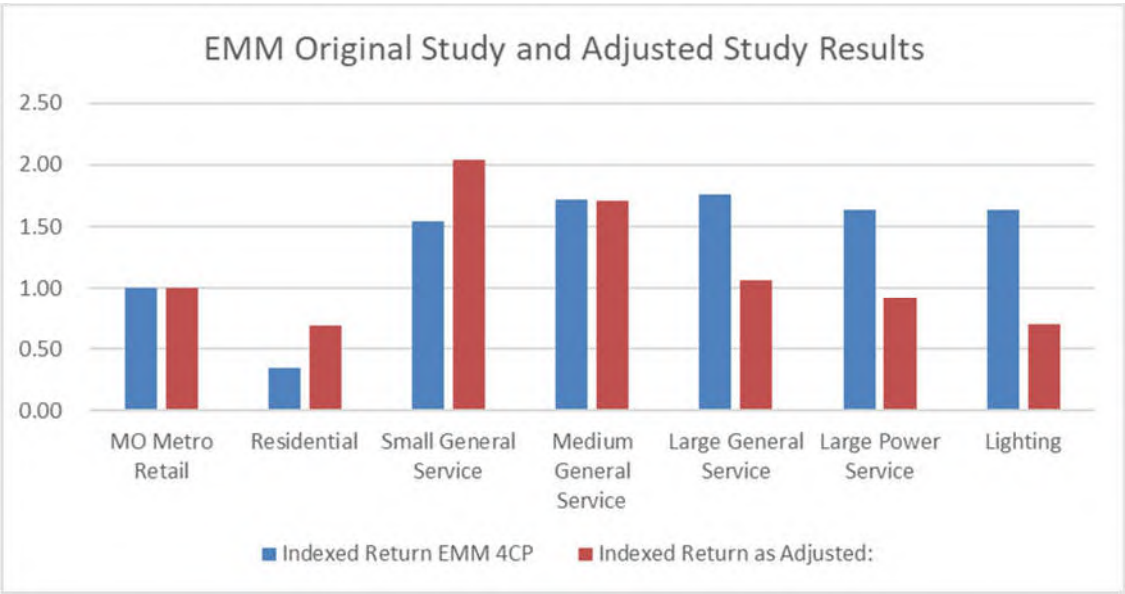
LPS classes. I provide the results of these adjustments as the rate of return provided by each class, indexed to the system average. In other words, classes providing above the system average rate of return will result in a number greater than 1, and classes providing less than the system average rate of return will result in a number less than one. As long as a class produces any number greater than 1, it is providing revenues sufficient to meet allocated expenses and no true subsidy exists, in that other customers are not worse off by that class' existence under the study. Note, this approach does not fully acknowledge the shift in income tax responsibility, which would accompany an actual reallocation of ratebase:



Next, I examined the A&E 4NCP results if 1% of the net expenses were reallocated away from the combined Residential, SGS, and Lighting classes, and allocated to the LGS and LPS classes.



Finally, I examined the A&E 4NCP results (with all other EMM allocators and the full requested revenue requirement preserved) if 1% of the ratebase and 2% of the net expenses were reallocated away from the combined Residential, SGS, and Lighting classes, and allocated to the LGS and LPS classes:



Q. Which of these scenarios is most plausible?

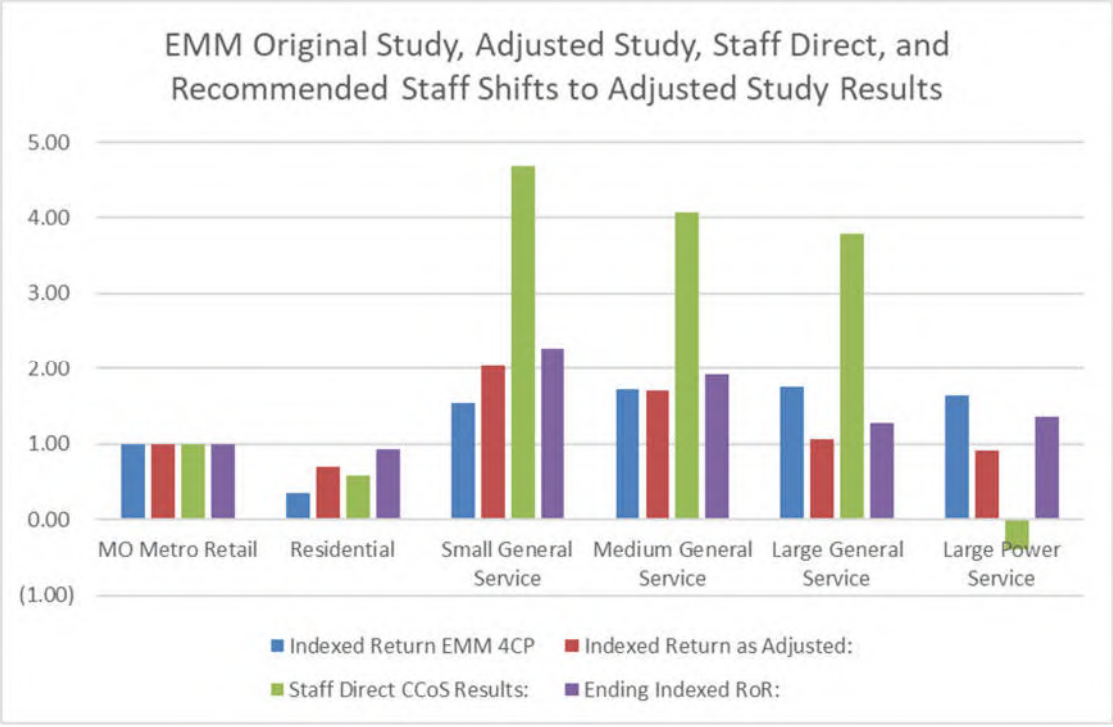
A. The final scenario is the best estimate under the circumstances of this case. The 1% reduction to ratebase is a conservative adjustment to account for the distribution, transmission, and substation customer-specific infrastructure issue, as well as the failure of the A&E allocator to acknowledge the existence of the integrated energy market. The first 1% of expense adjustment conservatively accounts for the expenses that followed the misallocated plant. The second expense adjustment conservatively accounts for the misallocation of net fuel, purchased power, and energy sale costs.

Q. How to you interpret these results?

A. I interpret these results as indicative that the Residential class undercontributes across a range of scenarios, the SGS class over-contributes across a range of scenarios, and under the most likely scenarios, the LPS class undercontributes.

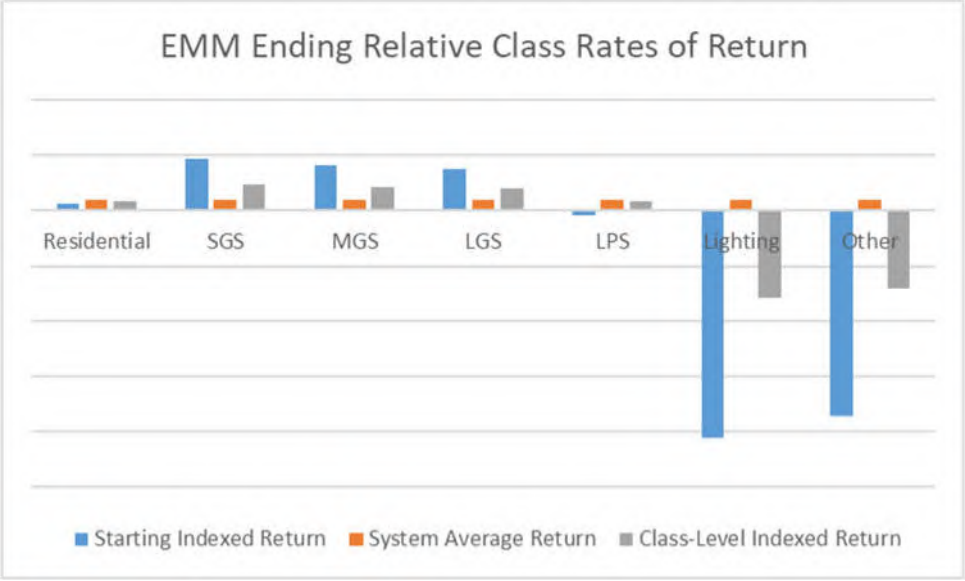
Q. Could you compare these results with your direct-filed results and your recommended revenue requirement shifts?

A. Yes, with the Lighting and CCN/Other classes omitted so the scale is readable.



Q. Does comparing these results cause you to modify your direct EMM revenue allocation recommendations?

A. No. While neither my Adjusted EMM study nor my study are ideal, they are overall consistent in indicating that the Residential, LPS, Lighting, and CCN/Other classes are undercontributing to revenue requirement. For convenience, my direct-filed study results and the results of my recommended revenue responsibility shifts are reproduced below:



MECG Testimony

Q. In general, what does Kaviti Maini on behalf of MECG recommend concerning revenue allocations for EMM?

A. Ms. Maini appears to recommend that, assuming a rate increase occurs in this case, customers in the Residential, Lighting, and CCN classes receive a larger-than-system-average increase, while the SGS, MGS, LGS, and LPS classes receive a smaller-than-system-average increase.

Q. Did Ms. Maini file a CCOS study reflective of MECG's revenue requirement recommendations contained in the Direct Testimony of MECG witness Greg Meyer?

A. No. In essence, Mr. Meyer's testimony is indicative that Ms. Maini's testimony adopting the EMM revenue requirement is unreasonable.

Q. Did Ms. Maini perform an independent CCOS Study for the EMM case?

A. No. At page 25, Ms. Maini provides the following exchange:

> Q. DID YOU USE THE COMPANY'S COSS MODEL TO CALCULATE THE RESULTS USING THE A&E 4NCP ALLOCATOR?
>
> A. Yes, I did. I only changed the Company's A&E allocator in the Company's COSS model from the A&E 4CP to A&E 4NCP and did not find it necessary to make any other changes.

Q. Do Ms. Maini's EMM CCOS study results acknowledge the significant presence of LGS and LPS customers served at secondary voltage?

A. It does not.

Q. Does Ms. Maini's EMM CCOS study results acknowledge the failure of EMM to properly classify distribution assets, substation assets, and transmission assets that would not have been installed but-for facilitation of service to unique customers served at primary, substation, and transmission voltage?

A. It does not.

Q. Does use of any A&E allocator and flat energy allocator acknowledge the existence of the integrated energy market in which EMM participates?

A. No, Ms. Maini's modestly-adjusted EMM study suffers from the same defects as the EMM study described above. These defects tend to over-allocate net revenue requirement to the residential, SGS, and lighting classes, and under-allocate net revenue

requirement to the LPS and LGS classes, with the net impact on the MGS class being more difficult to ascertain.

Q. Given their basis in the deficient EMM study, do Ms. Maini's recommendations warrant further discussion?

A. No.

MIEC Testimony

Q. Who does Mr. Brubaker appear on behalf of in File No. ER-2022-0129?

A. The affidavit accompanying Mr. Brubaker's testimony states "I am a consultant with Brubaker & Associates, Inc., having its principal place of business at 16690 Swingley Ridge Road, Suite 140, Chesterfield, Missouri 63017. We have been retained by the Missouri Industrial Energy Consumers in this proceeding on their behalf."

Q. What is Mr. Brubaker's recommendation on class cost of service and revenue allocation?

A. Mr. Brubaker endorses the EMM CCOS fully. In a change from his past testimonies, he presents his recommendations on the basis of the total requested EMM increase, not on a revenue neutral basis. He recommends that the Residential and CCN classes be increased the full amount requested by EMM, with other classes absorbing any reductions to the full EMM request that may be ordered by the Commission.

Q. Would the EMM CCOS bear the same results if the revenue requirement recommendations of MECG are adopted?

A. No. Mr. Brubaker's adoption of the EMM CCOS is an adoption of the EMM revenue requirement. Mr. Meyer, a witness for MECG, states in the affidavit to his direct testimony that he is "a consultant with Brubaker & Associates, Inc., having its principal place

of business at 16690 Swingley Ridge Road, Suite 140, Chesterfield, Missouri 63017. We have been retained by Midwest Energy Consumers Group in this proceeding on their behalf." Mr. Meyer filed testimony identifying that EMM revenue requirement as unreasonable weeks before Mr. Brubaker's testimony was filed in this case.

Q. Did Mr. Brubaker file testimony in the EMW docket?

A. No. His testimony is filed only in EMM. However, this testimony makes vague allusions to its applicability in the EMW docket.

Q. Did Mr. Meyer address the EMM and EMW revenue requirements?

A. Yes. Among other things, Mr. Meyer recommends reducing the EMM- and EMW-direct filed revenue requirements. In essence, Mr. Meyer's testimony is indicative that Mr. Brubaker's testimony adopting the EMM and EMW revenue requirements is unreasonable.

Q. Given their basis in the deficient EMM study, do Mr. Brubaker's recommendations warrant further discussion?

A. No.

EMW

Evergy Testimony

Q. Is the EMW CCOS study reliable?

A. No. The defects described above with reference to EMM are applicable to EMW as well. These defects tend to over-allocate net revenue requirement to the residential, SGS, and lighting classes, and under-allocate net revenue requirement to the LPS and LGS classes.

Q. Given their basis in the deficient EMW study, do Ms. Miller's recommendations warrant further discussion?

A. No.

MECG Testimony

Q. In general, what is your response to the testimony and recommendations of Kavita Maini on behalf of MECG concerning revenue allocations for EMW?

A. While I disagree with certain aspects of her testimony, her overall recommendation appears to be that, assuming a rate increase occurs in this case, customers in the Residential, Lighting, and CCN classes receive a larger-than-system-average increase, while the SGS, LGS, and LPS classes receive a smaller-than-system-average increase. This is largely consistent with my own recommendation, through actual increases will vary based on the specific level of revenue increase ordered.[2]

Q. To the extent the level of her recommended increases is based on her minor modifications to the EMW study, are those recommendations reasonable?

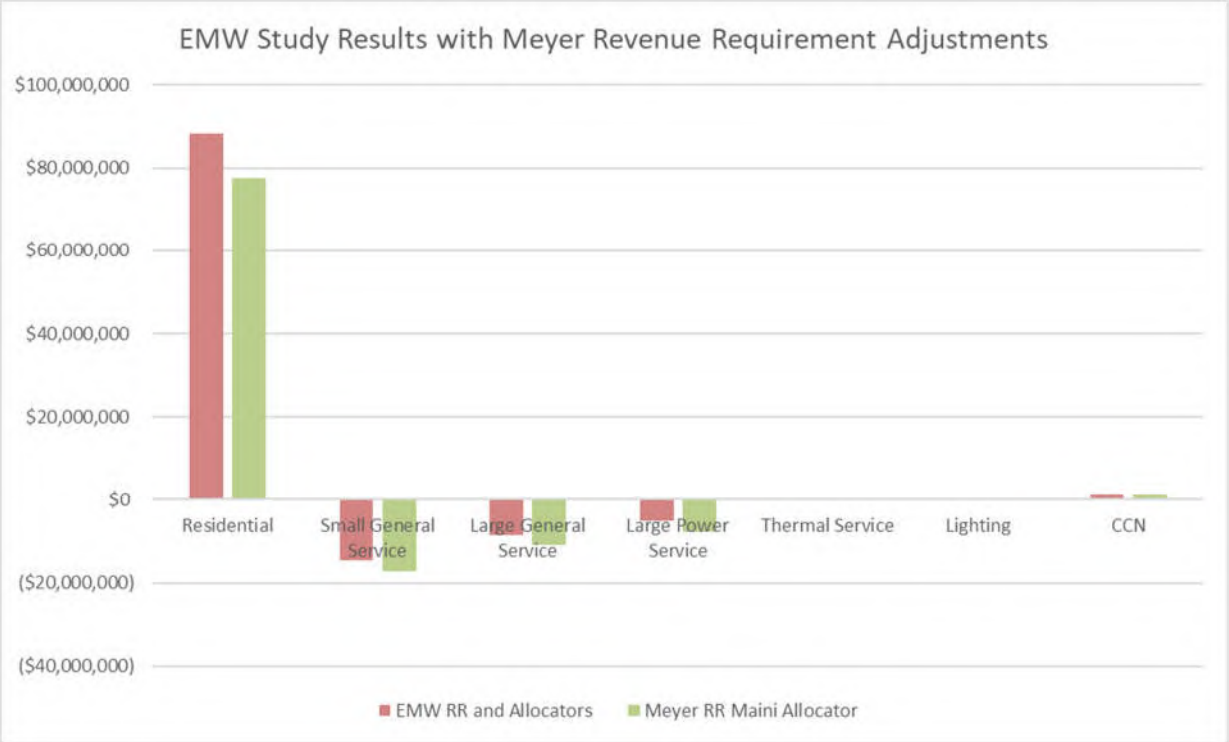
A. No, the scale of her recommendations are not reasonable.

Q. Did you attempt at a very high level to incorporate Mr. Meyer's revenue requirement adjustment and Ms. Maini's 4NCP allocator revision into the EMW revenue requirement?

A. Yes. The following results illustrate EMW's study results, and the EMW study modified to the 4NCP allocator, with a rate base reduction of $102.9 million related to Sibley, as discussed by Mr. Meyer at page 11, a net $6.8 million decrease to production depreciation expense, as discussed by Mr. Meyer at page 15, and a $1.75 million reduction to labor expense, as discussed by Mr. Meyer at page 35. Note, this does not attempt to incorporate Mr. Meyer's

[2] The process described at pages 31-32 for adjusting the required revenue requirement for application to ordered revenue is not entirely clear or understandable to Staff at this time.

adjustment to property tax expense or any other adjustment, and reflects the EMM-requested RoR and tax treatments:



RESPONSE TO RATE SCHEDULES AND RATE DESIGN

Residential Rate Schedules

Residential Service Availability Provision, Residential Other Use Consolidation, and Line Extension Modification (EMM & EMW)

Q. How has Evergy proposed to accommodate the elimination of the Residential "Other Use," rate schedule currently tariffed as sheet PSC Mo. No. 1, Sheet No. 146.3 for EMW, and PSC Mo. No. 7, Sheet No. 6 for EMM?

A. The Other Use schedule applicability provided that "This schedule is available to residential customers who do not qualify under any other residential rate. Customers qualifying for this rate will generally be those with well pumps, barns, machine sheds, detached

garages and home workshops, whose meter is not connected to a single or multiple occupancy dwelling unit. This rate schedule cannot be used for any commercial or industrial customer."

Evergy has modified the Residential Service rate schedule (EMM PSC Mo No 7 Sheet No 5, and EMW PSC Mo. No. 1, Sheet No. 146 to include availability to "residential customers that have dwelling unit(s) each having separate kitchen facilities, sleeping facilities, living facilities and permanent provisions for sanitation. This rate schedule is restricted to residential electric service used principally for domestic purposes in customer's household, home, detached garage on the same premise as customer's home, or place of dwelling for the maintenance or improvement of customer's quality of life. Service to customers in rural areas may also use electric service in farm buildings for ordinary farm use providing that such buildings are adjacent to the customer's dwelling unit. However, this schedule is not applicable for crop irrigation, commercial dairies, hatcheries, feed lots, feed mills or any other commercial enterprise."

Q. Does the new Residential Service language appear to incorporate all customers currently subject to the Residential Other Use rate schedule?

A. No. In addition to introducing potential disputes as to the meaning of "rural areas," "ordinary farm use" and "adjacent to the customer's dwelling unit," it also appears to exclude customers with well pumps or those with outbuildings that formerly qualified for the Residential Other Use rate schedule, but are not physically located in "rural areas," or are not "adjacent to the customer's dwelling unit," or for which the use is something other than "ordinary farm use." "Home workshops" to which the Residential Other Use rate schedule formerly applied, as well as any other disqualified use, would apparently now be subject to the Small General Service Rate Schedule.

Q. Did any Evergy witness provide testimony to support the restrictions on Residential Service Availability in terms of the new restrictions to "dwelling unit(s) each having separate kitchen facilities, sleeping facilities, living facilities and permanent provisions for sanitation?"

A. No. The testimony of Marisol Miller addresses the elimination of the Residential Other Use rate and briefly states at page 10 (EMW filing), "This will require modification of the tariff language to allow for this change. Those proposed changes are reflected in the tariffs supporting this rate case filing."

Q. Is Staff opposed to restricting the availability of Residential Service to "dwelling unit(s) each having separate kitchen facilities, sleeping facilities, living facilities and permanent provisions for sanitation?"

A. Staff considers the following factors in evaluating the reasonableness of this newly-requested restriction:

1. The line extension provisions applicable to Residential customers versus SGS customers,
2. The customer protections available to Residential customers versus SGS customers under Rule 13,
3. Other programs and potential assistance available to Residential customers versus SGS customers.

Ultimately, Staff recognizes that some of the most vulnerable customers may be those located in existing sub-standard housing, but that other ratepayers should not bear the risk of absorbing the cost of extending service facilities to new structures that may not provide revenues sufficient to cover the cost of those facilities, particularly with the rising popularity of "tiny homes."

Q. What is the expected bill impact of shifting a customer from a residential schedule to the SGS schedule?

A. While this analysis will depend on the actual usage of a customer, in general the SGS charges are higher, particularly for a customer with a peak demand exceeding 25 kW.

Q. How many customers will be excluded from Residential Service under Evergy's proposed definition?

A. In response to Data Request No. 0479 for ER-2022-0130 and No. 0487 in ER-2022-0129, Evergy indicates that it believes no customers will be impacted by this language change. However, Staff is concerned that certain residential customers, specifically those housed in accommodations lacking permanent sanitation and the other listed amenities, will literally not comply with Evergy's requested tariff language. Staff possesses no independent knowledge of the number of customers who may be impacted by Evergy's requested language change.

Q. Ms. Miller at page 16 of the EMM version of her testimony discusses transitioning multiple occupancy residential buildings off of the residential tariff, does Staff support this transition?

A. The transitioning of dormitories, nursing homes, and other multiple occupancy buildings with residential purposes to SGS or MGS is not unreasonable. However, the Commission recently ordered that Empire District Electric Company allow these customers to take service on residential rates following a customer complaint.

Q. What tariff changes does Staff recommend on this issue?

A. Staff recommends the following tariff changes:

1. Eliminate the existing Residential Other Use rate schedules,

2. Revise Evergy's proposed Residential Service Rate Schedule to read, in totality:[3]

> For secondary electric service to a single-occupancy private residence and individually-metered, multiple occupancy residential dwellings for ordinary domestic and farm use, including but not limited to well pumps, barns, machine sheds, detached garages and home workshops. This schedule is not applicable for crop irrigation, commercial dairies, hatcheries, feed lots, feed mills or any other commercial enterprise, or for dormitories, nursing homes, or other multiple occupancy structures or customers.
>
> For billing purposes, usage from separately metered installations (prior to July 1, 1996) will be combined by the Company and treated as a single meter.
>
> Temporary or seasonal service will not be supplied under this schedule.
>
> This schedule is available for three-phase electric service for residential customers being served residential three-phase prior to the effective date of this revision or, at the Company's discretion, for residential customers requesting ordinary domestic use residential three-phase service subsequent to the effective date of this revision. The Customer shall bear all costs related to provision of three-phase service greater than the costs associated with providing normal, single-phase residential service.

3. Revise the Residential Single Family facilities extension policy at 7.11 B at EMW sheet PSC Mo No 1 Sheet No. R-53, and the related EMW sheet to include the following new provision:

(a) Any dwelling, domestic well, or other structure not having separate kitchen facilities, sleeping facilities, living facilities and permanent provisions for sanitation shall be subject to the provisions of part D. Commercial or Industrial.

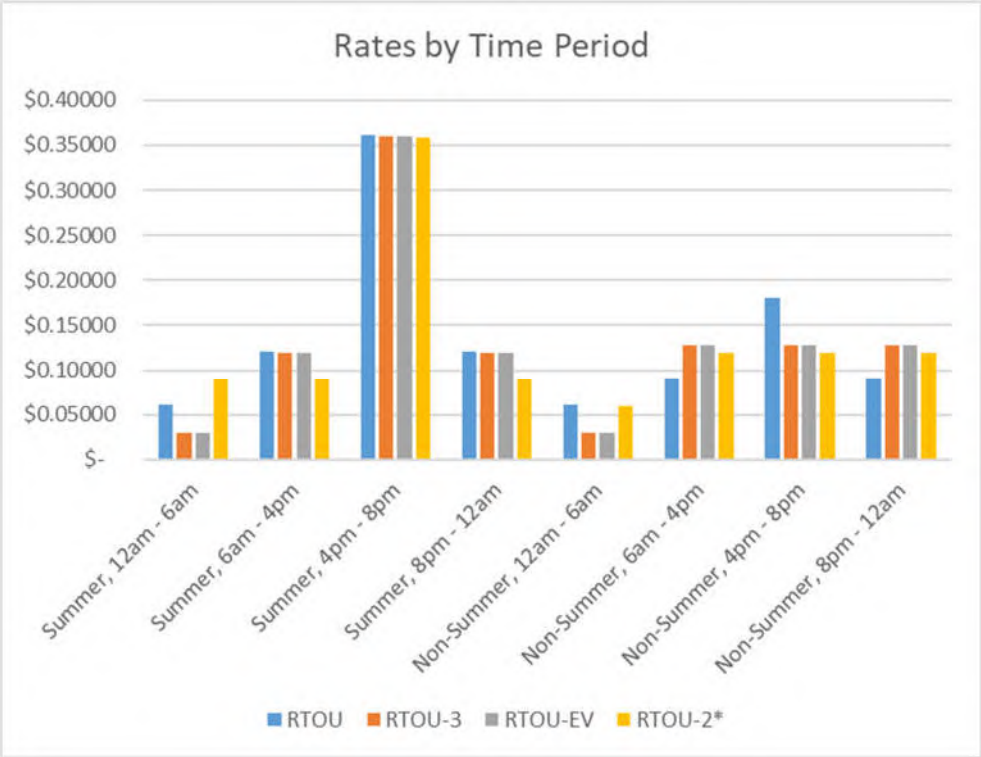
[3] This recommended language reflects deletion of "Single-phase electric service through a single or separately metered circuit for space heating purposes in the residence. Single metered electric space heating equipment shall be of a size and design sufficient to heat the entire residence. Electric space heating equipment may be supplemented by wood burning fireplaces, wood burning stoves, active or passive solar heating, and used in conjunction with fossil fuels where the combination of energy sources results in a net economic benefit to the customer. Electric space heating equipment shall be permanently installed and thermostatically controlled. In addition to the electric space heating equipment, only permanently installed all-electric single-phase equipment used to cool or air condition the same space which is electrically heated may be connected to the separately metered circuit, with the exception noted in Rate Section B below," as this language is superfluous consistent with Staff's recommendation to consolidate the Space Heating rates with the General Use rates.

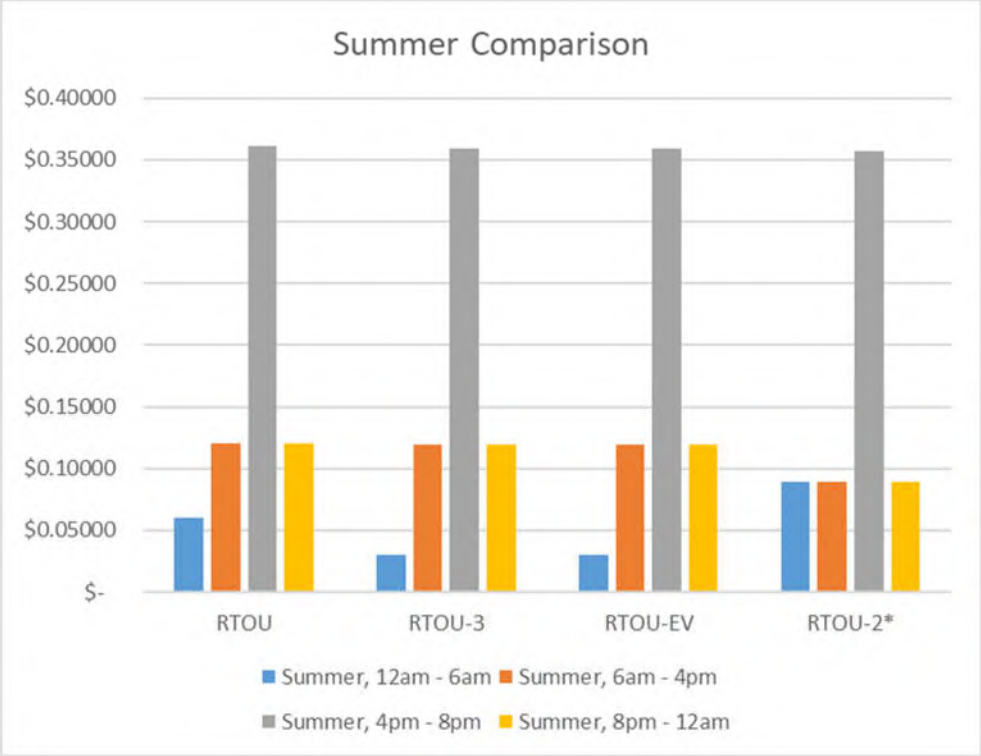
Optional Time-Based Residential Rate Schedules

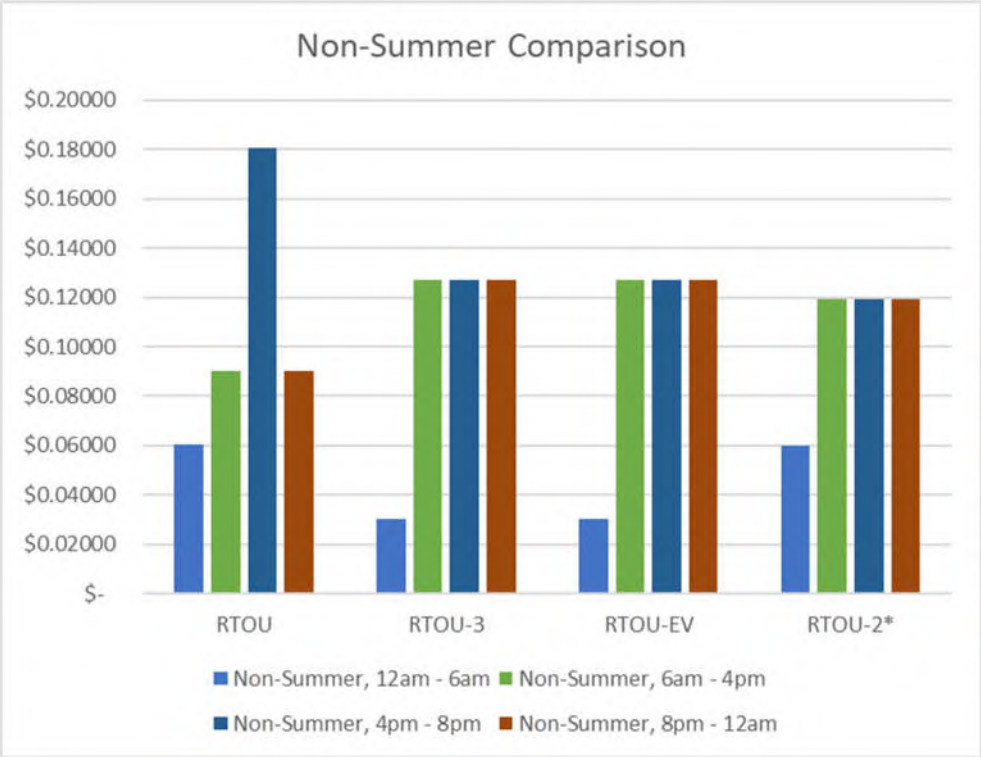
Q. Could you provide an overview of the time-based rate designs proposed by Evergy?

A. Yes. Using the proposed EMM rates as illustrative, the weekday rates proposed under each EMM rate schedule are summarized in the table below, NOTE, the rate schedule for RTOU-2 contains an apparent error in that the "Peak" and "Off-Peak" rates provided for the Non-Summer billing months appear to be mislabeled, and are apparently intended as the "Off-Peak" and "Super Off-Peak," rates, respectively:

Utility:	**EMM**	**EMM**	**EMM**	**EMM**
Schedule Name:	Residential Time of Use	Residential High Differential Time of Use	Separately Metered Electric Vehicle Time of Use	Residential Time of Use – Two Period
Rate Code:	**RTOU**	**RTOU-3**	**RTOU-EV**	**RTOU-2***
Starting Sheet No.:	7	7B	7D	7F
	RTOU	RTOU-3	RTOU-EV	RTOU-2*
Summer, 12am - 6am	$ 0.06019	$ 0.02997	$ 0.02997	$ 0.08953
Summer, 6am - 4pm	$ 0.12037	$ 0.11988	$ 0.11988	$ 0.08953
Summer, 4pm - 8pm	$ 0.36112	$ 0.35964	$ 0.35964	$ 0.35770
Summer, 8pm - 12am	$ 0.12037	$ 0.11988	$ 0.11988	$ 0.08953
Non-Summer, 12am - 6am	$ 0.06019	$ 0.02994	$ 0.02994	$ 0.05962
Non-Summer, 6am - 4pm	$ 0.09028	$ 0.12725	$ 0.12725	$ 0.11923
Non-Summer, 4pm - 8pm	$ 0.18056	$ 0.12725	$ 0.12725	$ 0.11923
Non-Summer, 8pm - 12am	$ 0.09028	$ 0.12725	$ 0.12725	$ 0.11923


Rates by Time Period
$0.40000
$0.35000
$0.30000
$0.25000
$0.20000
$0.15000
$0.10000
$0.05000
$-
Summer, 12am - 6am
Summer, 6am - 4pm
Summer, 4pm - 8pm
Summer, 8pm - 12am
Non-Summer, 12am - 6am
Non-Summer, 6am - 4pm
Non-Summer, 4pm - 8pm
Non-Summer, 8pm - 12am
RTOU
RTOU-3
RTOU-EV
RTOU-2*


Summer Comparison
$0.40000
$0.35000
$0.30000
$0.25000
$0.20000
$0.15000
$0.10000
$0.05000
$-
RTOU
RTOU-3
RTOU-EV
RTOU-2*
Summer, 12am - 6am
Summer, 6am - 4pm
Summer, 4pm - 8pm
Summer, 8pm - 12am



Wholesale Energy Costs Adjusted to Secondary Voltage and Short Term Allocated Cost Avoidance

Q. What is the recently-experienced cost of wholesale energy, at secondary voltage, for EMM, for each of the time periods covered by the proposed rate?

A. The average DA-LMP is provided below:

	Super Off-Peak	Off-Peak	Peak
Summer:	$ 0.01360	$ 0.02836	$ 0.04625
Non-Summer:	$ 0.01378	$ 0.02812	$ 0.03100

The period-to-period DA-LMP differentials are provided below:

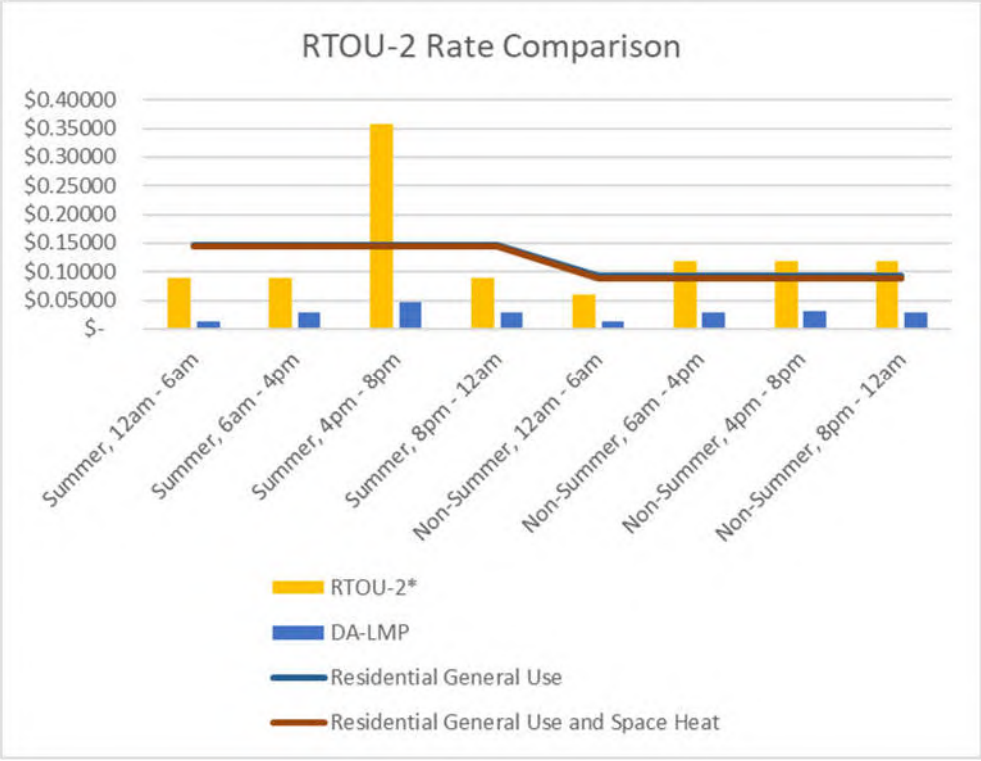
	Off-Peak Discount	On-Peak Premium	Maximum Range
Summer:	$ (0.014)	$ 0.017	$ 0.031
Non-Summer:	$ (0.014)	$ 0.003	$ 0.016

Q. Do the rate differentials Evergy has designed for opt-in time-based rates exceed the cost-based differentials that exist in the average DA-LMP for each period?

A. Yes.

Q. How did Evergy design the differentials in the proposed time-based rate designs?

A. Evergy designed these rates by assuming participants will operate as statistically "average" residential customers. However, Evergy's stated goal of time-based rates is that participating customers will deviate from typical consumption patterns. As an example, examine the relationship between the proposed "RTOU-2" rate, and the average experienced energy charge dollar-per-kWh for residential customers today:



To put it simply, the gap from the yellow bar to the blue and red lines for "Summer, 4pm-8pm" is so much bigger than the gap between the blue bar and the blue and red

lines for the other summer time periods, that it not reasonable to expect a participating customer will make up enough revenue during the high-price time to make up the bill savings during the low-price time. This is because a reasonable customer would not choose to participate unless that customer either (1) already used less-than-typical energy during the summer 4-8 period, (2) already used more-than-typical energy outside of that period, (3) expected to reduce their usage to less-than-typical levels during that time period, or (4) expected to increase their usage to more-than-typical levels outside of that time period.

Q. Is not the purpose of time-based rates giving customers the ability to avoid paying a full allocation of revenue requirement?

A. I believe some policy makers may view short-term absolute bill reductions as a goal of time-based rates. However, for a regulated utility, those short-term bill reductions will be incorporated into a future rate case as reduced billing determinants, and the rates will be factored up to negate the bill reductions that exceeded avoided revenue requirement. As described in my CCOS Direct testimony, the only revenue requirement that can reasonably be expected to be avoided is that associated with energy acquisition at wholesale, which does vary by the time of consumption. In any case, non-participating ratepayers should not bear any cost in the form of avoided revenues or otherwise from these non-cost-based optional rate schedules.

Q. If any of Evergy's proposed time-based schedules are promulgated, how should rates be adjusted to accomplish the awarded revenue requirement?

A. This adjustment process may be very difficult. Care must be taken that rates – particularly the Super Off Peak rate – meet or exceed the average cost of wholesale energy adjusted to secondary voltage for the indicated period. However, because Evergy designed

these rates in conjunction with a residential customer charge increase and a significant residential class revenue requirement increase, it may not be practical to scale the energy charges to fit the awarded revenue requirement. In general, Staff recommends rejection of Evergy's designs of residential time-based rates, and if this recommendation is incorporated, the question of appropriate scaling is moot.

Q. For residential customers, the Extension of Electric Facilities Tariff, EMM sheet 1.30 et seq. and the related EMW sheet include a construction allowance formula that relies on an estimate of "estimated margin." Estimate margin is defined as "The Estimated Margin will be determined by first multiplying the effective rates for each customer class by the estimated incremental usage – and then subtracting 1) applicable margin allocation for network and infrastructure support costs; and 2) incremental power and energy supply costs." This construction allowance formula is necessary in determining any non-refundable construction charge in connection with any non-basic extension requests. Should EMM and EMW consider the specific residential rate schedule on which service will be sought in determining the applicable non-refundable construction charge associated with any non-basic extension requests?

A. Yes. For example, if the "RTOU-EV" rate schedule is promulgated and an additional meter and/or service infrastructure upgrade is necessary, it would be reasonable to conclude that the estimated margin associated with that service will be very close to zero, and that the customer would bear the full (or nearly full) cost of that distribution infrastructure as a non-refundable construction charge.

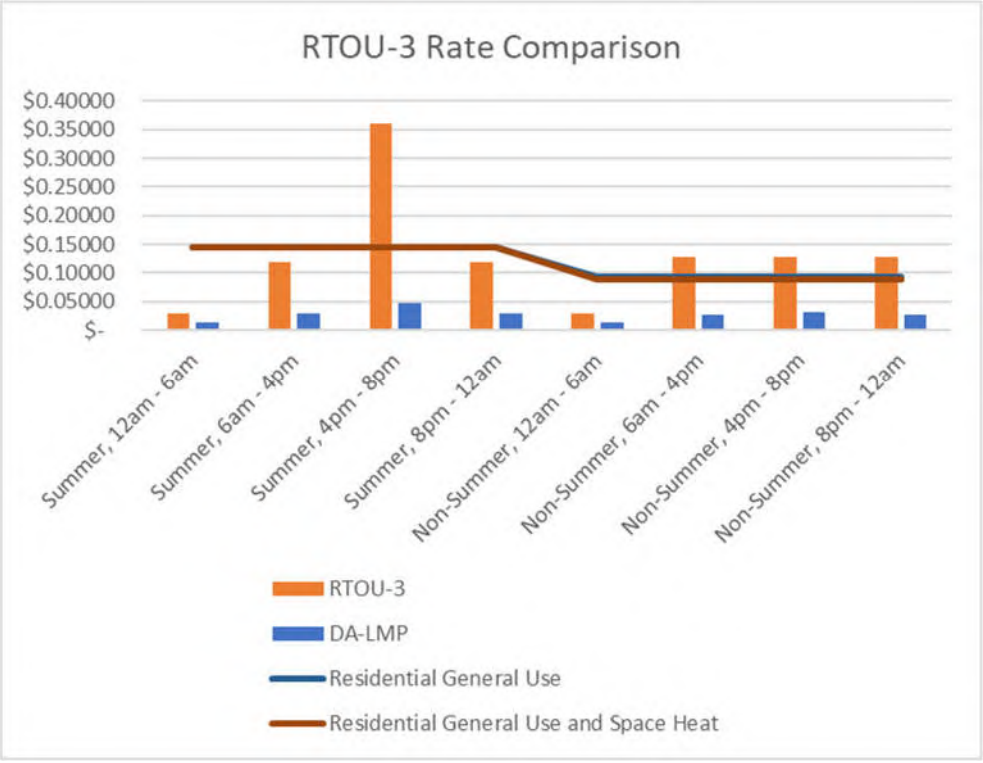
Residential High Differential Time of Use RTOU-3 Rate Schedule

Q. Have you reviewed the newly-proposed tariff, Residential High Differential Time of Use RTOU -3 Mo PSC No 1, Sheet No. 166 for EMW, and "Original Sheet No 7B" for EMM, proposed for service on and after April 1, 2023, and do you recommend its promulgation?

A. Yes, I have reviewed the newly-proposed tariff, and no, I do not recommend its promulgation.

Q. Could you compare the wholesale cost of energy at secondary to the rate values proposed for the RTOU-3 rate schedule, and the average rate experienced for a customer consuming 1,500 kWh of energy per month on the non-time-based rate schedules proposed by EMM?

A. Yes. These values are illustrated below:



Q. What does this comparison indicate?

A. This comparison indicates that the energy sold during summer months during the "Super Off-Peak" time period is not expected to be sold at any margin. This comparison further illustrates that energy sold during the summer "On-Peak" period, is sold at an unreasonably large margin. Other than the non-summer "Super Off-Peak" period, other rates are more or less comparable to the residential general use rate.

Q. Is the non-summer rate design reasonable?

A. No. Relative to the existing residential rate structures, the non-summer design significantly discounts energy consumption between the hours of 12 am to 6 am, but does not include any real premium for energy consumed outside of that time, particularly for customers who may use less energy than the 1,500 kWh/month reflected in the example.

Q. What costs and expenses would be avoided for a given kWh of energy shifted from consumption on a summer afternoon at 4:01 pm to that same afternoon at 3:59 pm?

A. On average, DA LMP savings of $0.0148 would be expected. If the energy were shifted from the hour at which a monthly or annual system peak was experienced, greater savings potential is possible.

Q. Is it reasonable to expect that energy will be shifted from the hour at which a monthly or annual system peak is experienced?

A. No. As discussed below, Evergy's ToU EM&V did not indicate that coincident demands were reduced by the studied ToU rate. If a peak was weather driven, it is not unreasonable for customers participating in a ToU rate structure to decide that the same weather conditions that have driven other customers to consume energy in the hour of a system peak make it worthwhile for them to consume energy at that time.

Separately Metered EV Time of Use RTOU-EV Rate Schedule

Q. Have you reviewed the newly-proposed tariff, Separately Metered EV Time of Use RTOU-EV, proposed for service on and after April 1, 2023?

A. Yes. Essentially, this rate schedule appears to make available the rates designed as RTOU-3 for a separate meter in residences with "customers with electric vehicle charging at the residence connected through a separately metered circuit."

Q. What is unique about energy consumed by "customers with electric vehicle charging at the residence connected through a separately metered circuit?"

A. Nothing. Excluding potential consideration of reactive demand requirements, the end use of energy consumed does not impact the cost to provide a given kWh of energy at a given point in time.

Q. As drafted, is energy supplied pursuant to this rate schedule restricted to the use of charging electric vehicles?

A. No. The availability and applicability sections do not actually specify that the rate schedule is for the separately-metered circuit to which electric vehicle charging occurs, or a clearer restriction, such as "the separate meter shall be connected to a panel dedicated to the supply of energy to electrical vehicle charging devices including any on-board chargers." Staff recommends insertion of this requirement, if the schedule is promulgated.

Q. Is service on the schedule available to customers engaged in parallel generation or net metering?

A. No, Evergy proposes that this second-meter service would not be available to customers who operate parallel generation or net metering through a separate meter served on a separate residential schedule. This restriction is unreasonable, and Staff recommends its

removal, if the schedule is promulgated. However, it may be reasonable to include a provision restricting the use of the service to charge batteries for discharge through the meter associated with parallel generation or net metering.

Q. Is $3.25 a reasonable customer charge for a second meter in the context of this case?

A. No. Using the Staff's direct revenue requirement and direct-recommended RoR for EMM, and reviewing only those components directly related to meters, a customer charge of $4.11 is produced. A more reasonable customer charge for a second meter would be in the range of $4.25 - $5.00.

Q. Does Staff recommend promulgation of this schedule?

A. No. While Staff would be open to discussion of a comprehensive well-designed rate schedule for residential EV charging comparable to that developed for customers of Liberty-Empire in File No. No. ET-2020-0390 this design is not reasonable, as discussed above concerning its companion schedule with identical energy rates, R-TOU-3.

Residential Time of Use – Two Period RTOU-2 Rate Schedule (EMM Only

Q. Have you reviewed the newly-proposed tariff, Residential Time of Use – Two Period RTOU-2 EMM proposed sheet 7G, and do you recommend its promulgation?

A. Yes, I have reviewed the newly-proposed tariff, and no, I do not recommend its promulgation.

Q. Is it clear whether the EMW version was intentionally omitted or omitted as an oversight?

A. No.

Q. Is it your expectation that the rate applicable to the non-summer 12:00 am to 6:00 am time period was intended to be half of the rate applicable to other periods, as opposed to twice the rate applicable to other periods, as indicated in the proposed tariff?

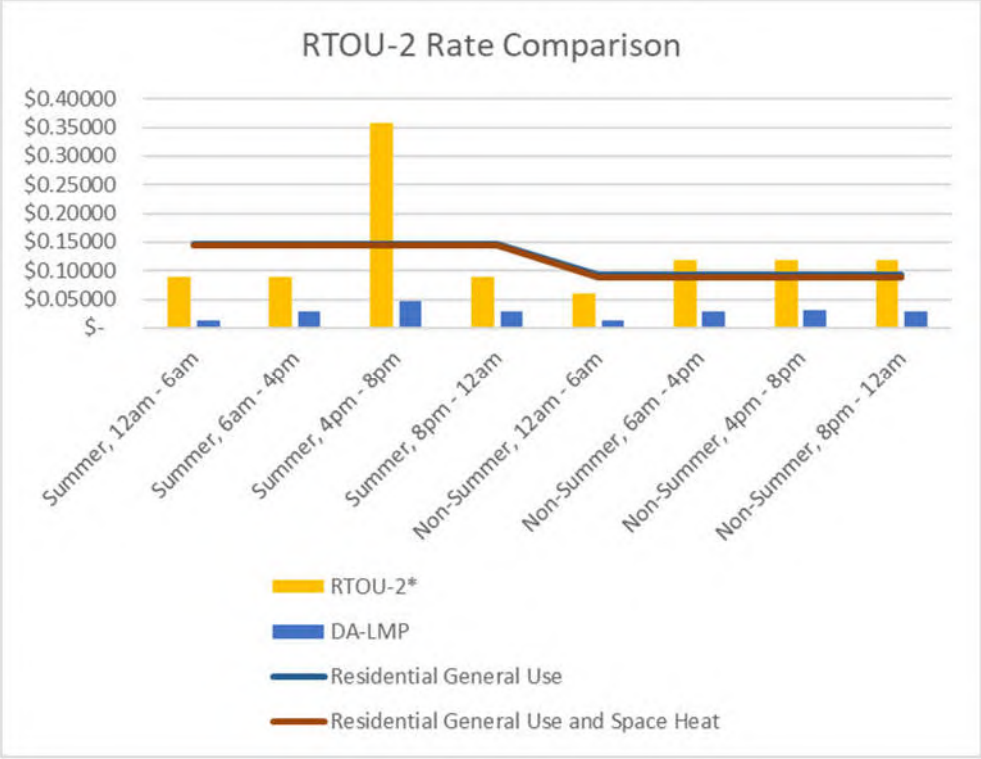
A. Yes.

Q. If the rate applicable to the non-summer 12:00 am to 6:00 am time period is twice the rate applicable to other periods, as indicated in the proposed tariff, is that design facially unreasonable necessitating rejection?

A. Yes.

Q. In general, is this rate structure and rate design reasonable?

A. In general, this rate design is less extreme than others, but appears to exceed the differential levels that are cost justified due to energy price difference between time periods. Further, as will be discussed in greater detail below, the derivation of this design will produce customer bills that fail to meet fully allocated costs, given the self-selection of participants.



Q. What is the summer rate differential?

A. The summer rate differential between peak and on-peak is $0.2682 per kWh. This is in excess of the approximate 6 cent differential between super-off peak and peak DA-LMP prices, and well in excess of the approximate 1.8 cent differential I have identified for peak and on-peak. This disparity, combined with self-selection, result in undercontributions to fully allocated costs by participating customers.

Q. Is it best practice to promulgate this rate?

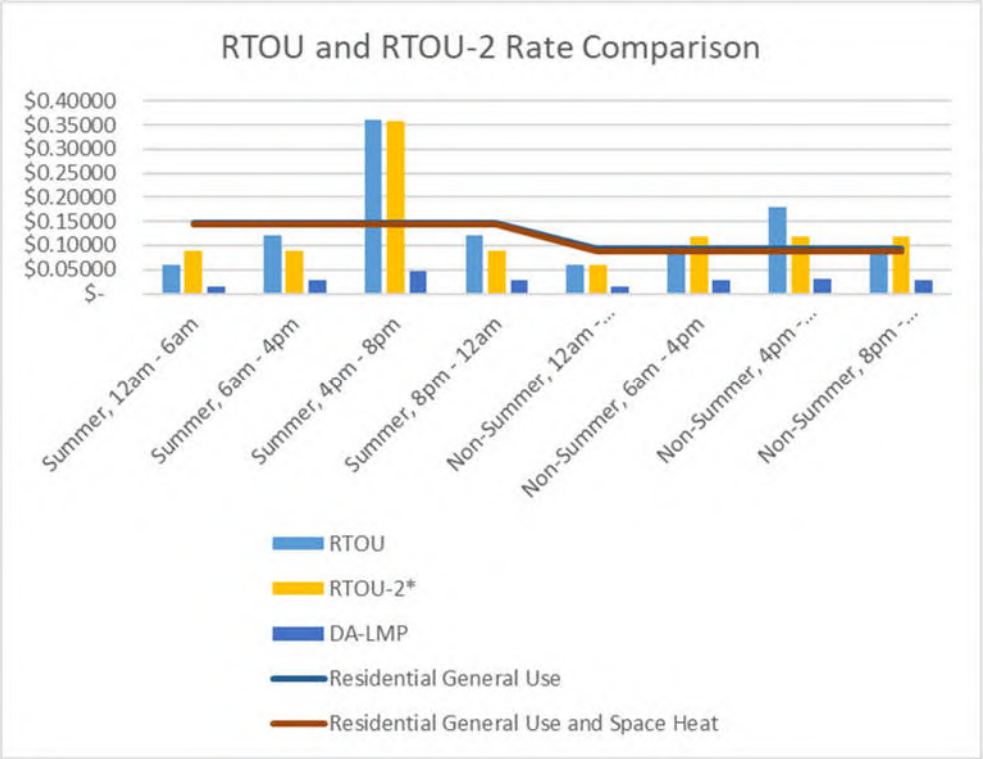
A. No. This rate is less objectionable than the other optional rate proposals Evergy has included in this case, but is still not cost-based. Staff recommends rejection, but if the Commission desires continuation of a time-based rate that exceeds cost-based justification, this design is the most reasonable to promulgate. However, if a well-designed separately-metered EV charging rate is not implemented, this RTOU-2 design is not unreasonable for use as a rate required of participants in the Residential EV rebate programs.

Other Residential Rate Schedules

Residential Time of Use "RTOU" Rate Schedule

Q. Is the RTOU rate design more reasonable or less reasonable than the RTOU-2 rate design?

A. The RTOU rate design is les reasonable than the RTOU-2 design. During summer months, the RTOU design incorporates a 6 cent, (50%) price differential between the Super Off-Peak and Off-Peak hours. However, the cost-based difference between these time periods is less than 1.4 cents. The On-Peak price is slightly higher than that of the RTOU-2 design, which exacerbates the revenue recovery issues discussed above.



Q. Is the non-summer RTOU design reasonable?

A. No. Using the time periods chosen by Evergy, the average off-peak and on-peak prices for wholesale energy during non-summer months are virtually identical. However, Evergy imposes an On-Peak premium of 9 cents, which is at a 12 cent premium to the Super Off-Peak rate.

Residential General Use Rate Codes on Residential Service Rate Schedule

Q. Did Evergy take the opportunity in this case to lessen the declines in its Residential General Use winter block design?

A. No. While Staff recommends the consolidations and design indicated in my direct CCOS testimony, in the absence of approval of my Direct recommendations it would be reasonable to lessen the winter decline in place for Residential General Use customers. Evergy has not demonstrated that this decline is cost-based.

Residential Space Heating Rate Codes on Residential Service Rate Schedule

Q. Did Evergy take the opportunity in this case to lessen the declines in its Residential space heating winter block design?

A. No. While Staff recommends the consolidations and design indicated in my direct CCOS testimony, in the absence of approval of my Direct recommendations it would be reasonable to lessen the winter decline in place for Residential Space Heating customers. Evergy has not demonstrated that this decline is cost-based.

Q. Did Evergy take the opportunity in this case to align summer rate designs between its General Use and Space Heating rate codes?

A. No. While Staff recommends the consolidations and design indicated in my direct CCOS testimony, in the absence of approval of my Direct recommendations it would be reasonable to align the summer rates for all residential customers.

Non-Residential Rate Schedules

Q. To the extent the Commission does not order Staff's recommended consolidations of rate codes, do you agree with Ms. Miller's discussion of freezing rate codes?

A. Yes. To the extent end-use rate codes are not being eliminated in this case, freezing them to new customers is a reasonable interim step. Note, it will be necessary to include tariff language indicating what specifically is meant by "frozen" as in the past EMM has interpreted similar language to mean that a customer at a new location who is on a frozen rate at another location can participate in the frozen rate at the new location, AND that a location that has been on a frozen rate can remain on the rate even if the customer identity at that location changes entirely.

Q. Do you oppose Ms. Miller's recommended change to the Schools and Churches billing provision?

A. No. Consistent with Staff's position to eliminate end-use rates, special use billing provisions should also be eliminated.

MECG Testimony Concerning Rate Modernization

Q. What is Ms. Maini's "Feedback Regarding Future Changes?"

A. At page 7, she provides the following approach as applicable to both LPS and LGS rate structures:

- Shift fixed costs from energy charges to demand charges but do not change the energy charge differentials.
- Introduce an on-peak provision whereby the maximum demand set in the specified on peak hours is the billing demand for the month.
- Evaluate a time differentiated on and off-peak energy rate to recognize the cost differentials and provide better pricing signals than a flat energy rate.
- Set up a working group of interested parties to evaluate these alternatives and assess rate impacts.
- Gather consensus on the steps and introduce to be introduced in the future.

Ms. Maini elaborates on this discussion at pages 38-39.

Q. Are any elements of this approach unreasonable?

A. Yes. Taken on its own, the recommendation to "do not change the energy charge differentials" is not consistent with a cost-based approach to rate design. It is imperative that energy sold at retail by the utility meet or exceed the incremental cost of energy acquired at wholesale by the utility. While it is not reasonable to attempt to exactly match the cost of energy in each of the 8,760 hours of the year, it is important to set rates that are generally covering the marginal cost of the energy acquired on behalf of the consuming customer. This concept is consistent with implementation of time differentiated on and off-peak energy rates

to recognize the cost differentials and provide better pricing signals than a flat energy rate, or a blocked rate.

MECG Testimony Concerning LGS and LPS Rate Design

Q. In the current case, do you agree with Ms. Maini's recommendation to recognize a differential in the wither energy charges?

A. Yes. The winter energy charges should be adjusted by voltage on a revenue neutral basis, so that the substation voltage charges are relatively lower, the secondary voltage charges are relatively higher, and the primary and transmission charges are reasonably aligned, respectively, between.

Q. Do you agree with Ms. Maini's recommended allocation of the increases for the LGS and LPS classes within each class?

A. No. Ms. Maini seeks to shift revenue responsibility to demand charges and away from energy charges. However, as described in my direct testimony, because Evergy has been unable or unwilling to provide adequate information concerning the distribution system to enable a reasonable classification of the system, it is not reasonable to rely heavily on CCOS results of any party in this case. Further, the A&E allocators used by all parties in this case fail to acknowledge the existence of the integrated energy market, or the timing of energy consumption. For these reasons, the CCOS results are simply not precise enough to use as a basis for rate design in any real detail.

Q. What should a facilities charge recover?

A. While analysists can and will disagree on whether the facilities charge should recover some portion of revenue requirement associated with the distribution and/or

transmission networks, a straightforward approach is that the facilities charge should recover the revenue requirement associated with plant that would not exist but-for the customer.

TOU EM&V, RATE CASE COMMITMENTS, AND RATE MODERNIZATION

ToU EM&V

Q. Evergy witness Charles A. Caisley at page 22 states:

> Evergy executed on all of its commitments from the Rate Design S&A as it pertains to TOU and completed both an interim and final evaluation, measurement and verification ("EM&V") reports through an independent third-party. The EM&V findings further reinforced that the TOU offer fulfilled the objectives of offering choice and increasing customer satisfaction, reducing system coincident peak demand, and aligning pricing structure with cost causation. Our research has also indicated that customers are averse to mandatory TOU rates – 50% TOU participants in research that we conducted indicated that they would be less satisfied with Evergy if TOU was a mandatory rate.

Are these assertions reasonably accurate?

A. No. It is not reasonable to conclude that the EM&V was independent. The EM&V did not demonstrate a reduction in system coincident peak demand. As I discussed in my CCOS Direct testimony, the ToU offer did not align price structure with cost causation. The research Mr. Caisley references indicated that customers are averse to high-differential mandatory ToU is not useful for drawing conclusions about customer preferences concerning rate designs that are not highly-differentiated, nor is it relevant to establishment of just and reasonable rate structures and rate designs.

Q. Why do you conclude that the EM&V was not independent?

A. During the 1-21-2022 presentation of the Evergy ToU EM&V Report, the consultant for Guidehouse stated that Guidehouse had provided a draft of the EM&V Report to

Evergy, and that Evergy had supplied comments and notes to that Report.[4] Evergy personnel on the call denied that they had influenced any language in the Report, and the Guidehouse personnel clarified that Evergy had supplied comments and notes.

Q. Why do you conclude that the EM&V Report does not provide an analysis of the impact of ToU on the literal annual or monthly system peaks? [5]

[4] Staff Data Request Question:0237: During the 1-21-2022 presentation of the Evergy ToU EM&V Report, the consultant for Guidehouse stated that Guidehouse had provided a draft of the EM&V Report to Evergy, and that Evergy had supplied comments and notes to that Report. Please provide the initial and any subsequent drafts of the EM&V Report provided by Guidehouse. (1) Does Evergy deny that Guidehouse's representative made these statements during the presentation? (2) Please provide a copy of the feedback provided from Evergy to Guidehouse.
OBJECTION: The Company objects to the Data Requests to the extent they seek documents or information protected by the attorney client privilege, the attorney work product doctrine, or any other applicable privileges or doctrines. Any inadvertent disclosure of such privileged documents or information shall not be deemed to be a waiver by the Company of the attorney-client privilege, work product doctrine, or other applicable privileges or doctrines. Additionally, the Company objects to the Data Requests as overly broad, unduly burdensome and not reasonably calculated to lead to the discovery of admissible evidence and not relevant or material to the subject matter of this proceeding.
Response: Absent complete recollection of comments made during the 1/21/2022 call, Evergy does not deny that Guidehouse stated that Guidehouse had provided a draft of the EM&V Report to Evergy, and that Evergy had supplied comments and notes to that draft report.

[5] Question:0238: During the 1-21-2022 presentation of the Evergy ToU EM&V Report, the consultant for Guidehouse stated that (a) Guidehouse had not provided nor the calculated the impact of ToU on the literal annual or monthly system peaks, and (b) that the values presented in the EM&V Report in Figures 23 and 24 on page 30 and Figures 25 and 26 on page 31 referred to Guidehouse's estimate of the change in usage in kWh per Hour, as opposed to the change in usage per kW. (1) Please confirm each of these understandings, and (2) please explain why Evergy did not request inclusion in the EM&V of the impact of ToU in the hour of monthly and annual system peak.
Response: 1. "Please confirm each of these understandings" a. Confirmed: Guidehouse did not isolate an estimated impact for the single hour in which system demand was at its annual peak and did not isolate an estimated impact for each individual monthly peak hour. Instead, Guidehouse estimated the average impact – in summer, and in winter – of the TOU pilot across all hours in which system demand was at its monthly peak. These averages include the actual hour of the annual as well as monthly system peaks. b. The values presented in Figures 23 and 25 (TOU period impacts) are the estimated average hourly energy impacts, by TOU period. An average kWh (energy) per hour impact in a given period is mathematically equivalent to an average kW (demand) impact in the same period.
The values presented in Figures 24 and 26 are the average observed energy consumption in each hour of the day, by season, for participants and non-participants. 2. "Please explain why Evergy did not request inclusion in the EM&V of the impact of ToU in the hour of monthly and annual system peak" Guidehouse's response to Evergy's RFP proposed to estimate the average impact of the piloted TOU rates on average monthly system peak demand, consistent with its approach in prior analyses in other jurisdictions. Evergy relied on Guidehouse as the subject matter experts to conduct the TOU analysis, consistent with their approach in other jurisdictions, and to determine what impacts and findings were appropriate to include in the report.

A. During the 1-21-2022 presentation of the Evergy ToU EM&V Report, the consultant for Guidehouse stated that (a) Guidehouse had not provided nor the calculated the impact of ToU on the literal annual or monthly system peaks, and (b) that the values presented in the EM&V Report in Figures 23 and 24 on page 30 and Figures 25 and 26 on page 31 referred to Guidehouse's estimate of the change in usage in kWh per Hour, as opposed to a change indicating a reduction in system coincident peak demand.

Q. What is usage in kWh per Hour?

A. As Guidehouse was careful to clarify during the 1-22-2022 presentation, in this context, "kWh per Hour" means total kWh during four hours per day for four months, divided by the number of hours in the defined "on peak" period, over the course of four defined summer months.

Q. Is this metric useful for determining a change in system coincident peak demand?

A. No.

Q. Could you provide an example of what the EM&V "kWh per Hour" metric demonstrates?

A. Yes. Hourly demand, measured in kilowatts is analogous to speed measured in miles per hour (MPH). As an example, consider a two hour commute for 100 miles, one way, daily. On Mondays, Tuesdays, Wednesdays, and Thursdays, you drive 50 miles each hour, morning and evening. On Fridays you drive 50 miles each hour during the morning commute, but on Friday evenings you drive 99 miles in the first hour of the evening commute, but peek out the final mile at one MPH, taking a full hour to complete. Under the EM&V description, your top speed in "miles per hour, per hour" would be 50 mph.

Q. If a customer on a ToU rate made the decision to run their air conditioning at full blast on a hot summer afternoon, is Staff implying that the customer's decision was improper?

A. Absolutely not.

Q. If a customer on a ToU rate moves their laundry and shower times to 9:00 pm or later, precools their home from noon to 3 to reduce air conditioning load, and still turns on their air conditioning to full blast at 6 pm on the hottest day of the year, is Staff implying that the customer's decision was improper?

A. Absolutely not.

Q. If a customer on a ToU rate moves their laundry and shower times to 9:00 pm or later, precools their home from noon to 3 to reduce air conditioning load, and turns on their air conditioning to full blast at 6 pm on the hottest day of the year, is that customer reducing their contribution to peak demand if the system peak occurs at 6 pm?

A. Possibly. Factors to evaluate include whether that customer would have been doing laundry or showering at 6 pm, or whether the peak would have occurred at 4 pm if the ToU customer hadn't precooled. However, averaging that customer's load over those four hours will not answer those questions. Moreover, averaging that customer's load over those four hours with that customers load over all other evenings in the month – some of which may have been very low system peak demand days – will not answer those questions.

Prior Stipulation Commitments

Q. Do you agree with Ms. Winslow's and Mr. Lutz's characterizations of satisfaction of prior stipulations and orders?

A. No. While I will discuss a specific area of disagreement with each below because it is germane to an ongoing area of significant concerns, in the interest of a more productive relationship going forward, I will not specifically respond to most of Mr. Lutz's and Ms. Winslow's discussions.

Q. Do you agree with the portions of the Rate Modernization plan discussed by Mr. Lutz at page 19 et seq of the EMM version of his testimony?

A. No. Staff's opposition to these specific proposals is discussed elsewhere in Staff's testimony, and additional discussion of the Subscription Pilot is provided by Contessa King.

Q. In his EMM direct testimony at page 13, under the heading "Data," Mr. Lutz states:

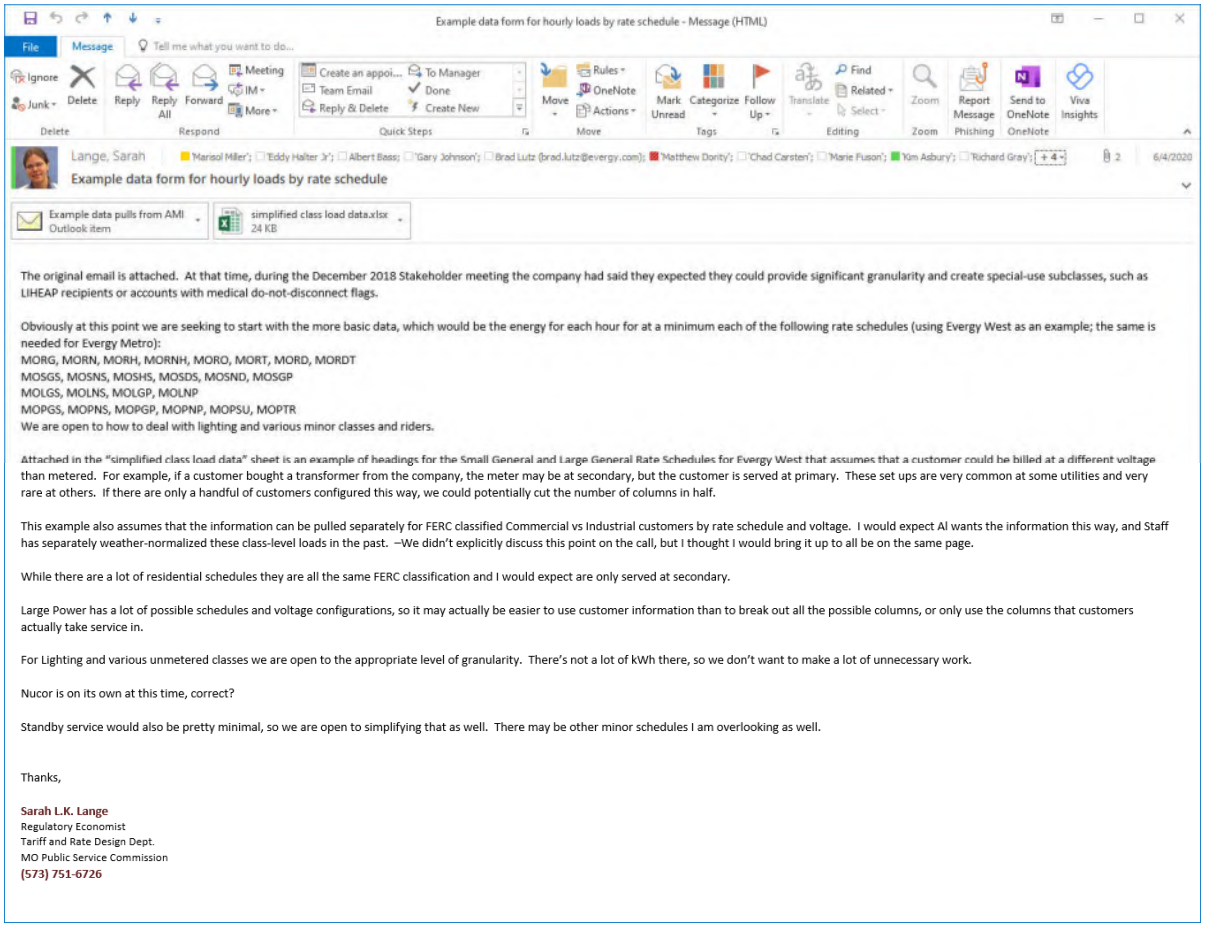
> The Company had several discussions with Staff on this commitment. The first discussion was in the TOU stakeholder meeting held in December 2018 when Staff expressed interest in early discussion around this commitment. Staff followed up with an email including examples of the kind of data they might be looking for with the admission that they were not aware of what was possible. Follow up emails from Staff indicated that the initial request had been revised and "simplified" to include the retention of three years of every individual customer's 15-minute interval data configured to be further aggregated with extensive billing characteristics/needs previously communicated. The request was not just to retain, but to provide data for external use by Staff.

Have you ever, at any time, under any circumstance, requested "three years of every individual customer's 15-minute interval data configured to be further aggregated with extensive billing characteristics/needs."

A. Absolutely not.

Q. Have you ever requested "simplified class load data" from Evergy?

A. Yes. My email of June 4, 2020 is reproduced below:



Example data form for hourly loads by rate schedule - Message (HTML)

File | Message | Tell me what you want to do...

Ignore | Junk | Delete | Reply | Reply All | Forward | Meeting | IM | More | Create an appoi... | Team Email | Reply & Delete | To Manager | Done | Create New | Move | Rules | OneNote | Actions | Mark Unread | Categorize | Follow Up | Translate | Find | Related | Select | Zoom | Report Message | Send to OneNote | Viva Insights

Delete | Respond | Quick Steps | Move | Tags | Editing | Zoom | Phishing | OneNote

Lange, Sarah

'Marisol Miller'; 'Eddy Halter Jr'; 'Albert Bass; 'Gary Johnson'; 'Brad Lutz (brad.lutz@evergy.com); 'Matthew Dority'; 'Chad Carsten'; 'Marie Fuson'; 'Kim Asbury'; 'Richard Gray'; + 4

6/4/2020

Example data form for hourly loads by rate schedule

Example data pulls from AMI
Outlook item

simplified class load data.xlsx
24 KB

The original email is attached. At that time, during the December 2018 Stakeholder meeting the company had said they expected they could provide significant granularity and create special-use subclasses, such as LIHEAP recipients or accounts with medical do-not-disconnect flags.

Obviously at this point we are seeking to start with the more basic data, which would be the energy for each hour for at a minimum each of the following rate schedules (using Evergy West as an example; the same is needed for Evergy Metro):
MORG, MORN, MORH, MORNH, MORO, MORT, MORD, MORDT
MOSGS, MOSNS, MOSHS, MOSDS, MOSND, MOSGP
MOLGS, MOLNS, MOLGP, MOLNP
MOPGS, MOPNS, MOPGP, MOPNP, MOPSU, MOPTR
We are open to how to deal with lighting and various minor classes and riders.

Attached in the "simplified class load data" sheet is an example of headings for the Small General and Large General Rate Schedules for Evergy West that assumes that a customer could be billed at a different voltage than metered. For example, if a customer bought a transformer from the company, the meter may be at secondary, but the customer is served at primary. These set ups are very common at some utilities and very rare at others. If there are only a handful of customers configured this way, we could potentially cut the number of columns in half.

This example also assumes that the information can be pulled separately for FERC classified Commercial vs Industrial customers by rate schedule and voltage. I would expect Al wants the information this way, and Staff has separately weather-normalized these class-level loads in the past. –We didn't explicitly discuss this point on the call, but I thought I would bring it up to all be on the same page.

While there are a lot of residential schedules they are all the same FERC classification and I would expect are only served at secondary.

Large Power has a lot of possible schedules and voltage configurations, so it may actually be easier to use customer information than to break out all the possible columns, or only use the columns that customers actually take service in.

For Lighting and various unmetered classes we are open to the appropriate level of granularity. There's not a lot of kWh there, so we don't want to make a lot of unnecessary work.

Nucor is on its own at this time, correct?

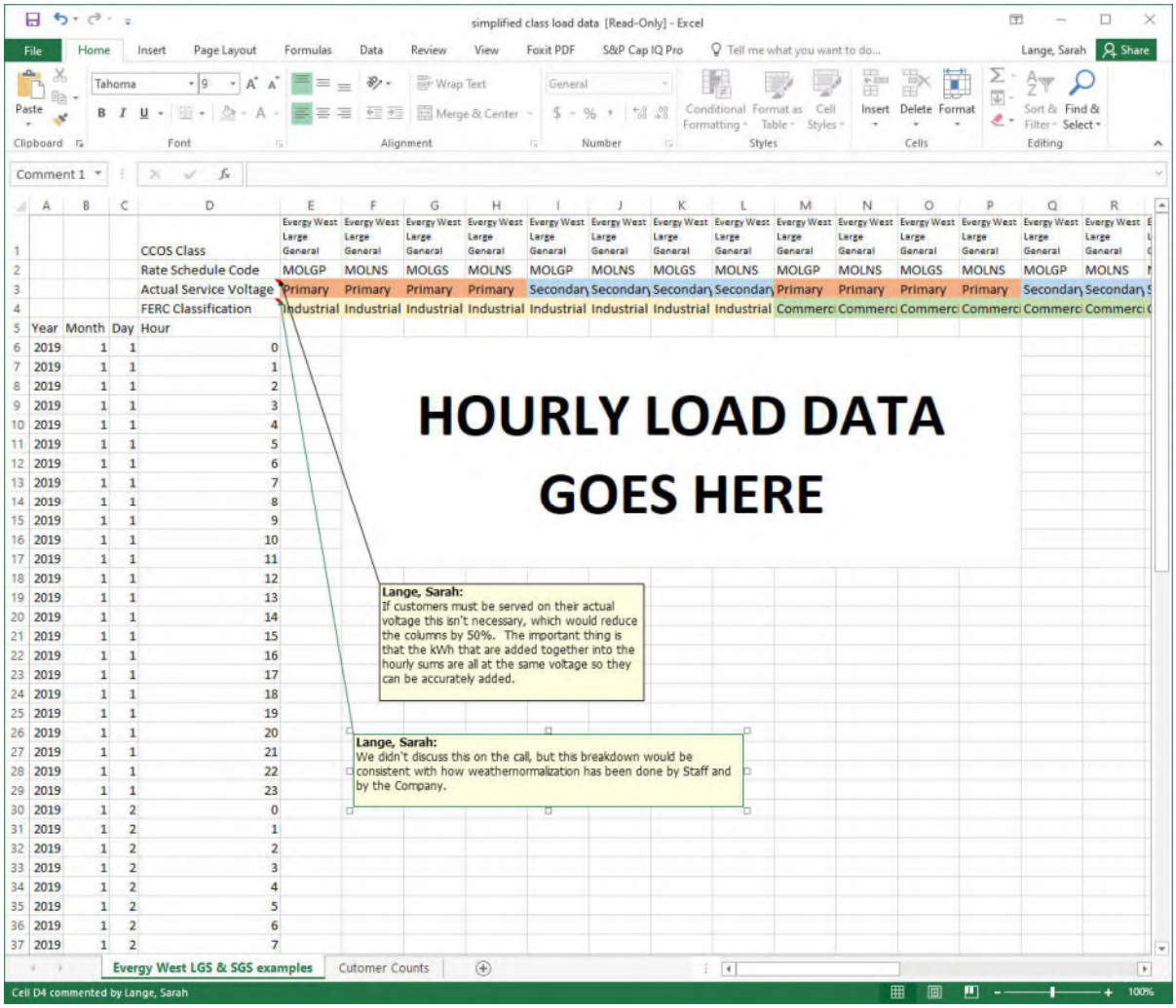
Standby service would also be pretty minimal, so we are open to simplifying that as well. There may be other minor schedules I am overlooking as well.

Thanks,

Sarah L.K. Lange
Regulatory Economist
Tariff and Rate Design Dept.
MO Public Service Commission
(573) 751-6726

Screenshots of the "simplified class load data" spreadsheet is provided below:

continued on next page



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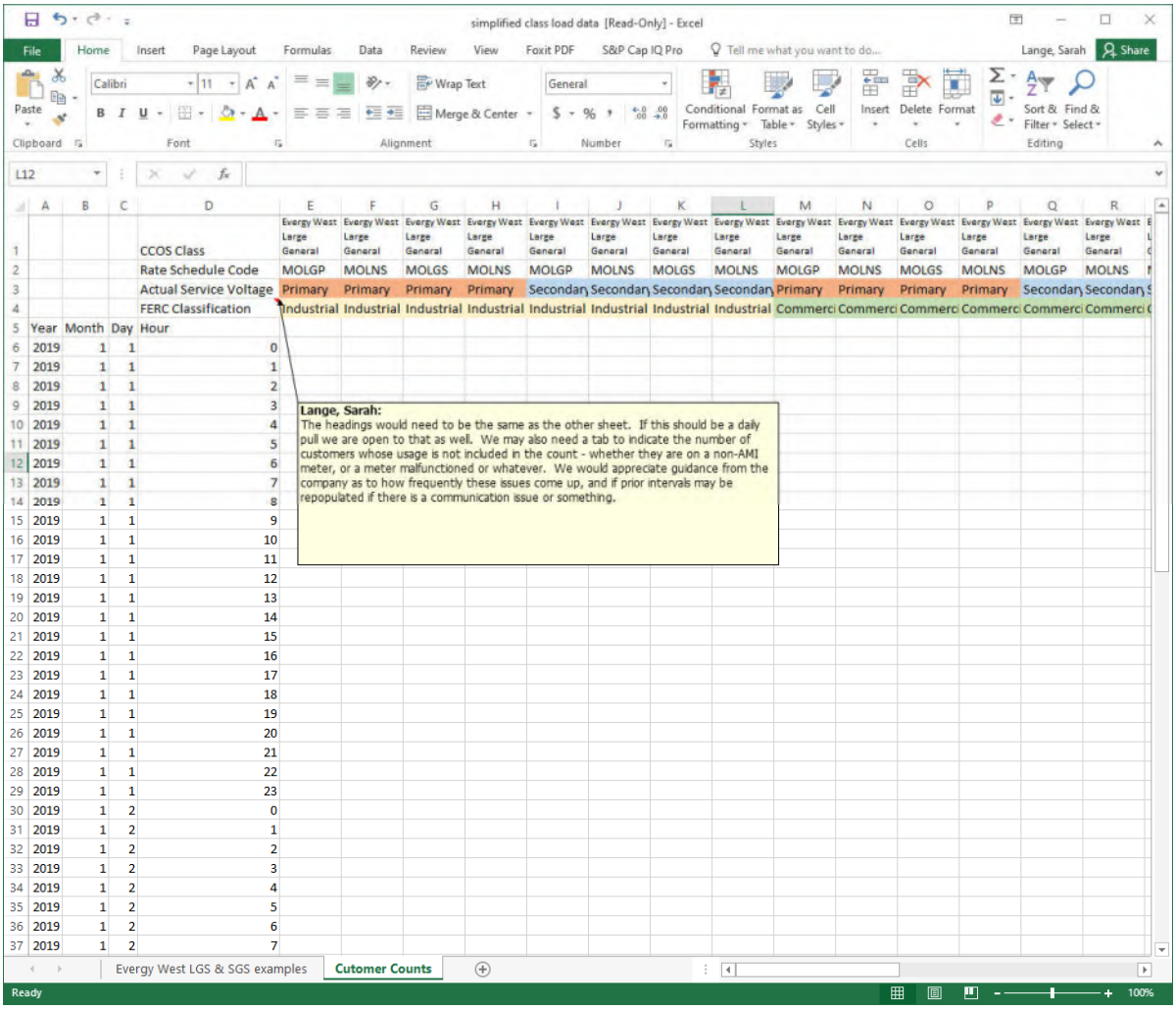


Q. What are each of the columns labeled on each sheet?

A. These columns indicate the class, the rate code, the voltage level, and the service type, for which information is sought.

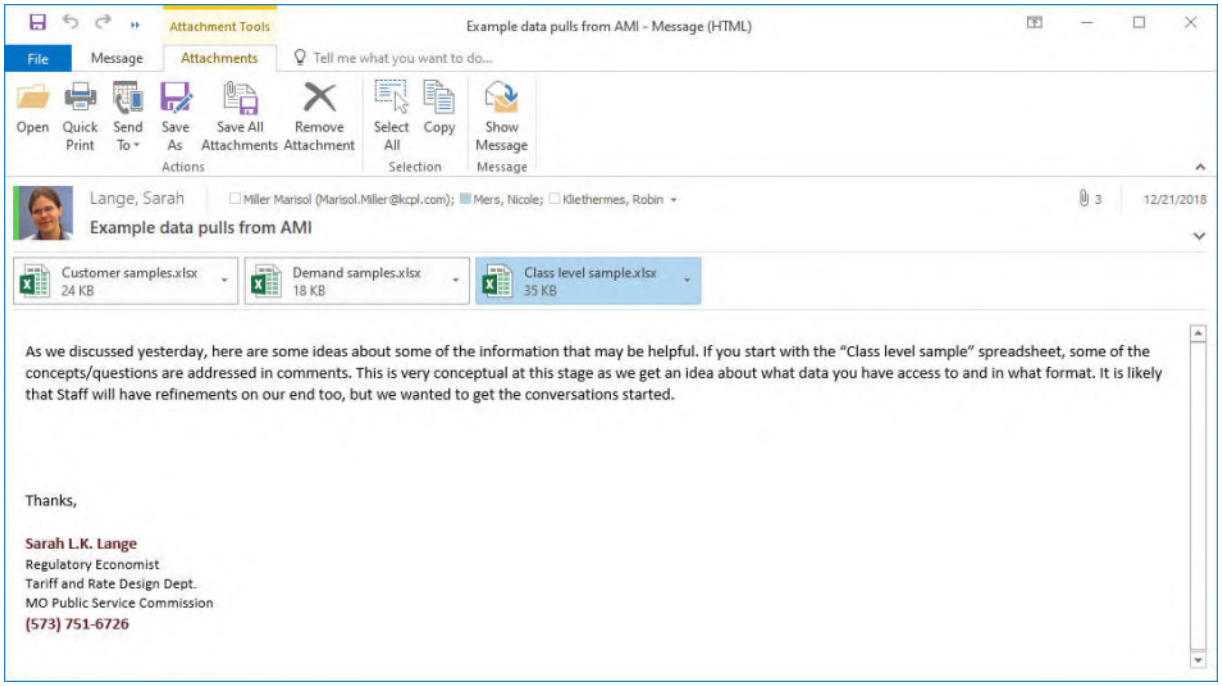
CCOS Class	Evergy West Large General	Evergy West Large General	Evergy West Large General	Evergy West Large General	Evergy West Large General	Evergy West Large General	Evergy West Large General	Evergy West Large General	Evergy West Large General	Evergy West Large General	Evergy West Large General	Evergy West Large General	Evergy West Large General	Evergy West Large General	Evergy West Large General	Evergy West Large General
Rate Schedule Code	MOLGP	MOLNS	MOLGS	MOLNS	MOLGP	MOLNS	MOLGS	MOLNS	MOLGP	MOLNS	MOLGS	MOLNS	MOLGP	MOLNS	MOLGS	MOLNS
Actual Service Voltage	Primary	Primary	Primary	Primary	Secondary	Secondary	Secondary	Secondary	Primary	Primary	Primary	Primary	Secondary	Secondary	Secondary	Secondary
FERC Classification	Industrial	Industrial	Industrial	Industrial	Industrial	Industrial	Industrial	Industrial	Commercial	Commercial	Commercial	Commercial	Commercial	Commercial	Commercial	Commercial

CCOS Class	Evergy West Small General	Evergy West Small General	Evergy West Small General	Evergy West Small General	Evergy West Small General	Evergy West Small General	Evergy West Small General	Evergy West Small General	Evergy West Small General	Evergy West Small General	Evergy West Small General	Evergy West Small General
Rate Schedule Code	MOSGS	MOSNS	SOSHS	MOSDS	MOSND	MOSGP	MOSGS	MOSNS	SOSHS	MOSDS	MOSND	MOSGP
Actual Service Voltage	Primary	Primary	Primary	Primary	Primary	Primary	Secondary	Secondary	Secondary	Secondary	Secondary	Secondary
FERC Classification	Industrial	Industrial	Industrial	Industrial	Industrial	Industrial	Industrial	Industrial	Industrial	Industrial	Industrial	Industrial

CCOS Class	Evergy West Small General	Evergy West Small General	Evergy West Small General	Evergy West Small General	Evergy West Small General	Evergy West Small General	Evergy West Small General	Evergy West Small General	Evergy West Small General	Evergy West Small General	Evergy West Small General	Evergy West Small General
Rate Schedule Code	MOSGS	MOSNS	SOSHS	MOSDS	MOSND	MOSGP	MOSGS	MOSNS	SOSHS	MOSDS	MOSND	MOSGP
Actual Service Voltage	Primary	Primary	Primary	Primary	Primary	Primary	Secondary	Secondary	Secondary	Secondary	Secondary	Secondary
FERC Classification	Commercial	Commercial	Commercial	Commercial	Commercial	Commercial	Commercial	Commercial	Commercial	Commercial	Commercial	Commercial

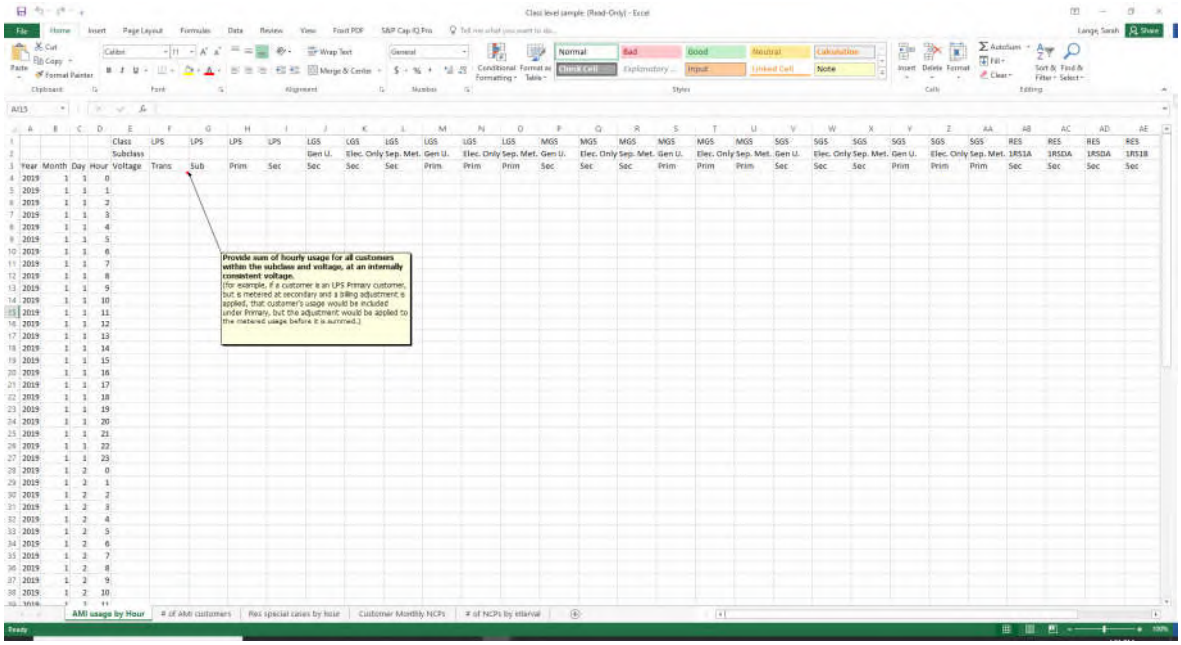
Q. What is the attached email?

A. The email attached is reproduced below. It is from December 2018, and it is in response to a phone call that had occurred between myself, my supervisor at the time, Robin Kliethermes, and Marisol Miller, on behalf of KCPL and GMO.



Q. Could you provide screenshots of the "Class Level Sample" spreadsheet?

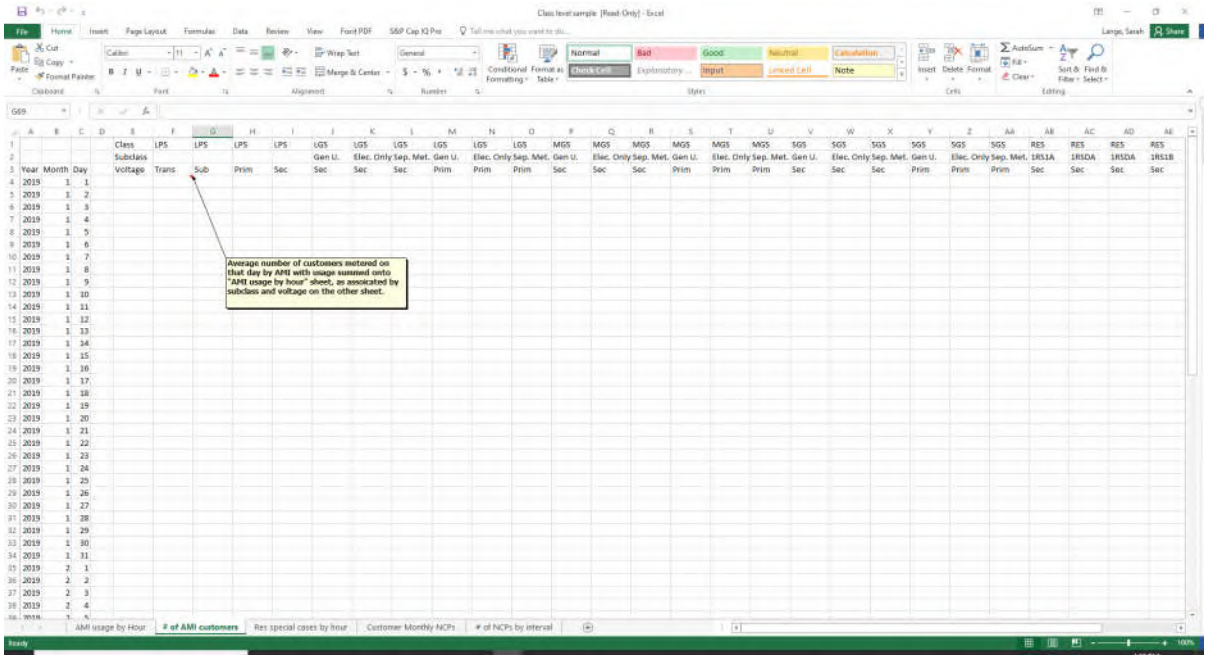
A. Yes. The note content on each sheet is also provided for ease of reading:



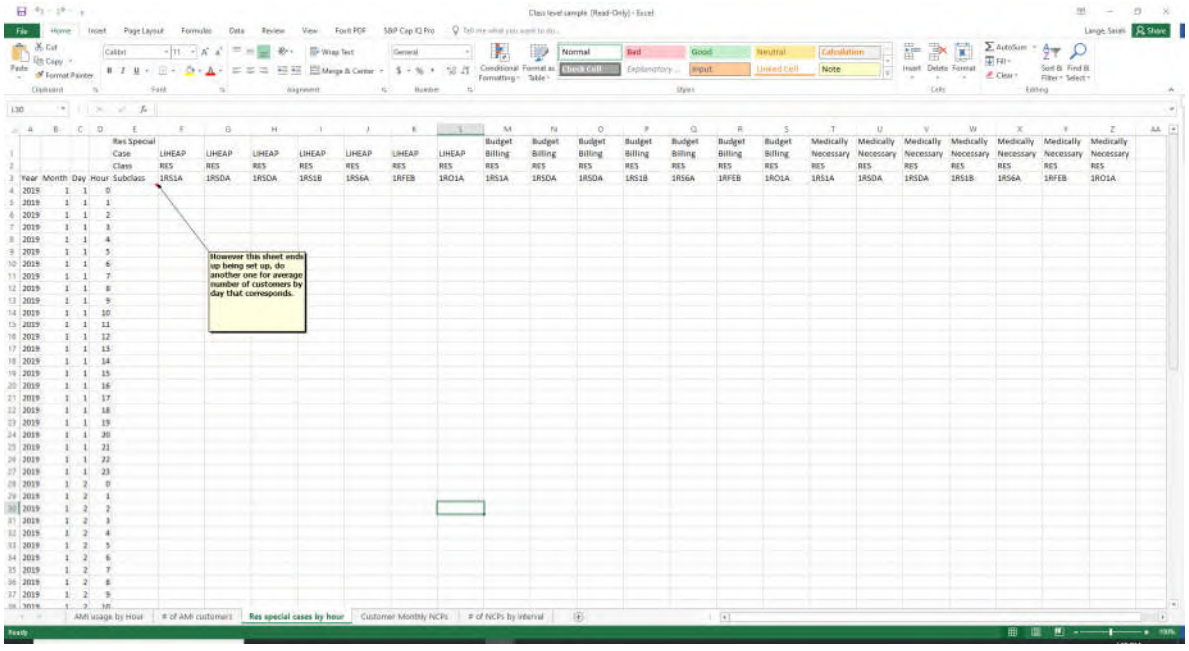
AMI Usage by Hour note: **Provide sum of hourly usage for all customers within the subclass and voltage, at an internally consistent voltage.**

(for example, if a customer is an LPS Primary customer, but is metered at secondary and a billing adjustment is applied, that customer's usage would be included under Primary, but the adjustment would be applied to the metered usage before it is summed.)

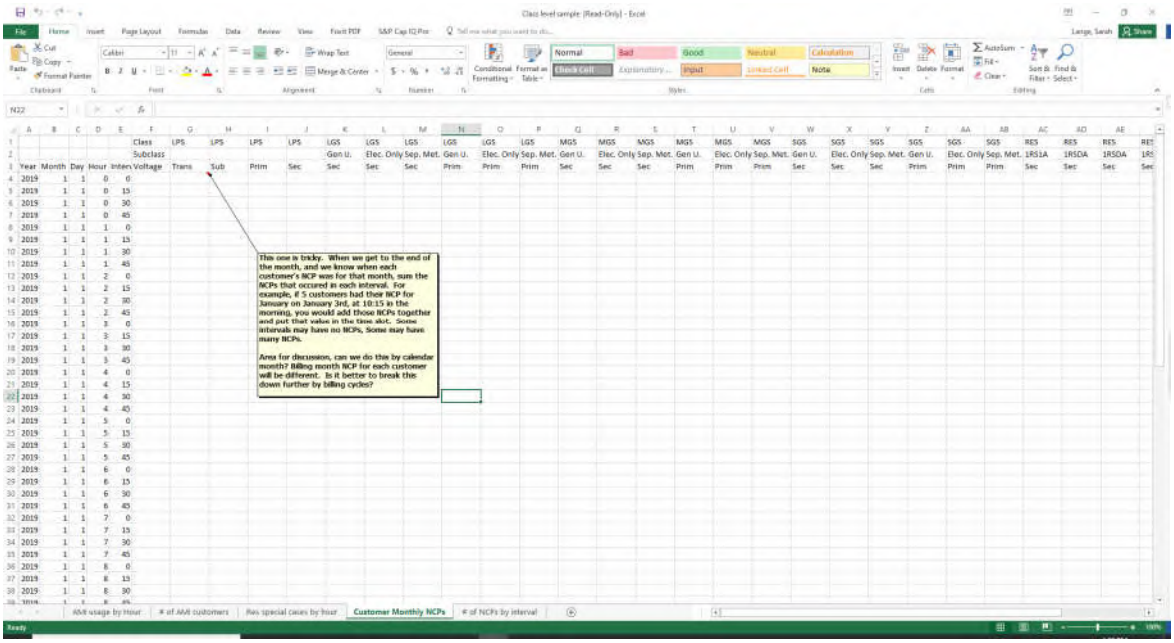
continued on next page



# of AMI customers note: **Average number of customers metered on that day by AMI with usage summed onto "AMI usage by hour" sheet, as associated by subclass and voltage on the other sheet.**

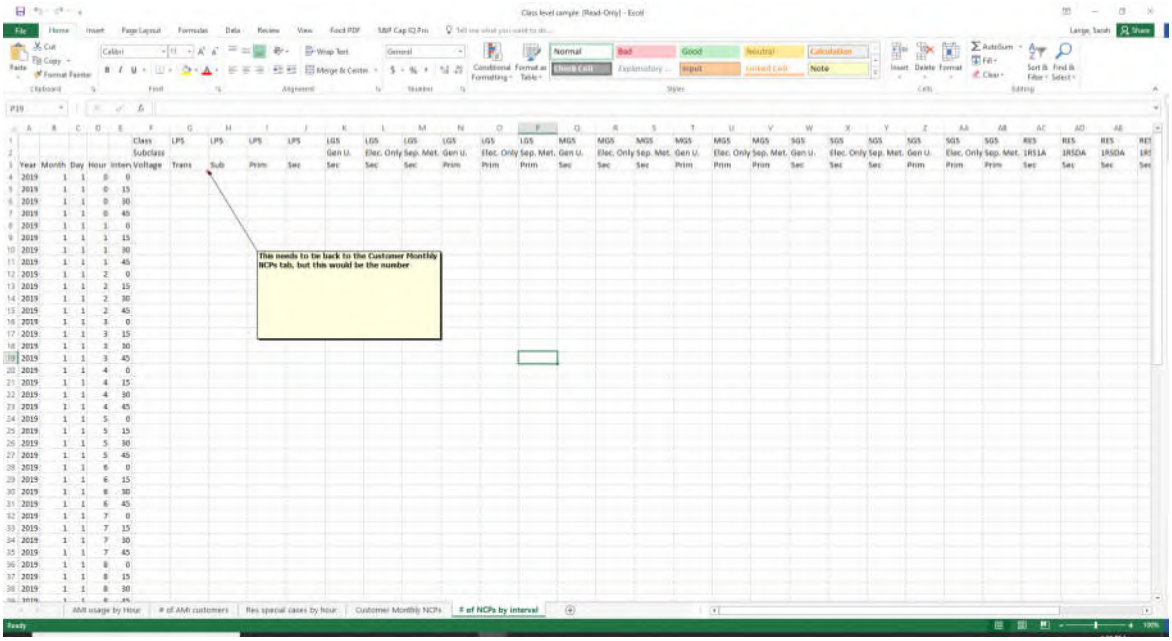


Res special cases by hour note: **However this sheet ends up being set up, do another one for average number of customers by day that corresponds.**



Customer Monthly NCPs note: **This one is tricky. When we get to the end of the month, and we know when each customer's NCP was for that month, sum the NCPs that occurred in each interval. For example, if 5 customers had their NCP for January on January 3rd, at 10:15 in the morning, you would add those NCPs together and put that value in the time slot. Some intervals may have no NCPs, Some may have many NCPs.**

Area for discussion, can we do this by calendar month? Billing month NCP for each customer will be different. Is it better to break this down further by billing cycles?



# of NCPs by Interval note: **This needs to tie back to the Customer Monthly NCPs tab, but this would be the number**

Q. Are the contents of the other attachments to that email available in this case?

A. Yes, pdfs of sheets of additional spreadsheets are attached as Schedule SLKL-r1.

Q. At any point, have you requested an Evergy utility provide 15 minute interval data for each individual customer to Staff?

A. No. Even in discussing development of demand charge which may ultimately be built on 15 minute interval data, I have made clear that Staff does not want and cannot process the quantity of data that would be associated with 15 minute, or even hourly, interval data for all individual customers.

Q. Are you aware of other Staff members having discussions with one or more Evergy employees that may have temporarily confused this situation?

A. Yes. I became aware in early 2019 that a Staff employee, Michael L. Rush, had participated in one or more discussions and exchanged emails related to acquisition of interval data. While confusion associated with this spurious request was persistent, I clarified with Mr. Lutz and Ms. Miller, as did my supervisor at the time, Ms. Robin Kliethermes, that Mr. Rush was not involved in the underlying Stipulation negotiations, and that he was not representing accurately Staff's requests and abilities.

Q. The "simplified" data you describe above is still quite complicated, can't it be made simpler?

A. Evergy and other utilities have provided hourly class loads by commercial and industrial delineation for decades, as the weather response may differ between these customer types established by FERC reporting requirements. Within and across rate classes, it is necessary to know the voltage at which customers are served so that the various classes can be aggregated at a consistent voltage. Neither of these aspects are new or unusual. The new aspect is breaking out classes by rate codes. While Staff is interested in consolidating rate codes, at this time, those codes are not consolidated, and different rates are charged for different customers within a class. In order to evaluate impact of code consolidation on customers and on revenue, and to explore the cost-responsibility of existing codes, rate code level hourly information is necessary.

Q. Is the information you describe here consistent with the information Evergy states it used in this case?

A. Yes. In the Direct testimony of Al Bass, on page 5, he states:

> Q: Describe how the Cost-of-Service class hourly load data was procured from AMI.
>
> A: Metered hourly kwh was extracted for each rate code for the period July 1, 2019 through June 30, 2021. The customer counts for the hourly kwh were adjusted each

> month for any customers without interval capable meters by multiplying the rate code hourly kwh by a factor of ((billed customer count – AMI customer count) / AMI customer count). This is similar to the approach used to scale hourly load research sampled KWH to represent the entire class. The two different processes for producing class hourly loads are summarized in the following statements: (a) The Company's load research data utilized a small (up to 10% for Large customer classes, lower than 1% for Residential customer classes), but statistically significant stratified sample of each customer class load scaled up to the total number of class customers. (b) The Company's AMI hourly load data utilizes a convenience sample of load for all customers with interval capable meters in each class (80+% for each class during the test year) scaled up to the total number of class customers.

The class level information I requested is the information Mr. Bass described in this testimony.

Further, at page 37 of the EMM version of his testimony, Mr. Lutz states, as a benefit of AMI, that "Load Analysis – Evergy has transitioned away from statistical Load Research and is now utilizing AMI data aggregation for Load Analysis. In load research, daily and hourly rate class profiles are developed through designing and deploying customer samples, collecting, managing, and validating customer sample hourly load data, and applying statistical-based sample expansion methods. Under data aggregation the Company compiles the load information using data query and management techniques from the entire customer data set. Once in place and going forward, the data aggregation process is significantly less complex, requires less time to generate class load profiles, and is less costly than load research."

Q. Why do you require individual customer sample information?

A. I would like individual customer sample information to provide more detailed customer impact information than I was able to include in my Direct Testimony. Also, as described below, this information and the other information described in my Direct testimony are intrinsic towards improving the rate structures and designs of EMM and EMW.

Rate Modernization Plan

Q. Has Staff prepared and disseminated its recommended plan for improving the relationship of cost-causation and revenue responsibility and improving transparency in electric billing?

A. Yes. In the Staff Report on Distributed Energy Resources, filed April 5, 2018, in File No. EW 2017-0245, concerning residential and utility-wide rate design, Staff recommended the following:

> Initial steps to be taken during or prior to applicable rate cases:
> a. Residential Rate Design:
> i. Improve customer education regarding cost composition and energy cost differences over time of day and season.
> ii. Review rates on an unbundled basis, with potential to provide tariffed rates on an unbundled basis.
> iii. Implement a Low-differential TOU rate design related only to energy price difference or existing rate design blocks, with relatively long on-peak periods.
> iv. Study determinants for an on-peak demand charge.
>
> * * *
>
> c. Utility-wide
> i. Study bifurcating Fuel and Purchased Power costs into the TOU time periods for recovery of differences through bifurcated FACs.
> ii. Study distribution of DER on existing system.
> iii. Identify locations on the distribution and transmission systems where DER may be an alternative to expansion or replacement of the system.
> iv. Develop strategies to encourage strategic placement and deployment of DER to reduce overall system investment needs and operation expenses, including transmission congestion including study of locational rate designs and location-dependent compensation schemes.
> v. Study located DER scenarios as part of Chapter 22 planning consistent with Staff's recommendations contained in Section VII. Changes to IRP process or Chapter 22.
> vi. Study energy cost distribution and system utilization to find opportunities for efficient utilization and pricing – for example, some utilities experience significant winter night and evening usage – to refine time periods applicable to time of use rates and develop super on-peak or super off-peak rates.
>
> Phase 2 (approximately 2025 time frame, will vary by utility and rate case timing):

a. Residential:
i. Continued and increased customer education regarding cost composition and energy cost differences over time of day and season.
ii. Increase TOU differential to recover some generation capacity costs on-peak.
iii. Incorporate super on-peak and super off-peak TOU elements, which may vary by season.
iv. Implement a 12 month demand charge for recovery associated with local distribution facilities.

* * *

c. Utility-wide
i. Study distribution locational pricing determinants for locational rate designs; study location-dependent compensation schemes.
ii. Revenue Decoupling.
iii. Based on outcomes of studies of beneficial DER location, locate DER or incent the location of DER using reasonably designed compensation designs.

Anticipated goals (approximately 2030 time frame, will vary by utility and rate case timing):
a. Residential:
i. Continued and increased customer education regarding cost composition and energy cost differences over time of day and season.
ii. Implement on-peak demand charge to nearly fully recover generation capacity costs on peak, not already included in on-peak and super on-peak elements.
iii. Consider and implement, if appropriate, distribution locational rates or rate elements.

* * *

c. Utility-wide
i. Study distribution locational pricing determinants.
ii. Based on outcomes of studies of beneficial DER location, locate DER or incent the location of DER using reasonably designed compensation designs.

The information described in the emails and specifically requested in my Direct Testimony in this case is necessary to develop the rate structures and designs outlined above.

Q. This Staff plan from 2017 appears, facially, largely consistent with Evergy's proposed "Rate Modernization Plan," is it?

A. Evergy's plan appears focused on building earnings opportunities for Evergy, under the guise of providing customers with choices. Staff's plan will frankly reduce customer options, but improve the alignment of revenue recovery with cost causation.

To the extent the Rate Modernization Plan is consistent with Staff's recommended steps, I support it. To the extent it seeks to profit off of a captive customer base by artificially benefiting those who select into a plan while shifting costs to other customers, I do not support it.

Q. Do you agree with various characterizations that customers want choices in how to pay their bill, like may be possible to some extent with unregulated industries such as entertainment streaming services?

A. I will not profess to know what customers want, or to assume that what customers want supersede this Commission's obligations to set just and reasonable rates. I would analogize the sort of well-designed rate described by Staff above to a-la-cart pricing. Customers will provide revenues directly proportionate to contributions to capacity requirements at each level on the basis of each customer's usage, not as a member of a more-or-less arbitrary class. Customers will provide revenues directly proportionate to the local customer-specific facilities they require, and customers will provide revenue to cover the wholesale cost of the energy obtained by the utility on their behalf. If, for policy reasons, transfers between customers of the actual cost of providing each of these elements is desired or required to ensure universal access to electric service, or to create or sustain the viability of certain economic activities, or to promote electrification of HVAC or transportation, those transfers can and should be transparent to all customers and policymakers.

Q. Do you have any overall feedback on rate modernization and the studies referenced by Ms. Miller?

A. Yes. The most reasonable path forward from Staff's perspective is:

1. adoption of voltage and infrastructure specific customer and facility charges for non-residential customers that vary with the customer's actual infrastructure and annual (or triennial) NCP, without regard to customer class,
2. transitioning of demand charges to the highest usage in a pre-established on-peak period, such as 6 am – 10 pm
3. adoption of time-based energy rates without an hours use structure.

If these steps are taken, it may be necessary or appropriate to transition customers to rate codes denominated as "commercial" and "industrial" based on FERC Form 1 usage of those terms, but separate rates for each class will be superfluous and no longer necessary or appropriate.

These steps are not apparently inconsistent with Ms. Miller's Table 6 at page 25, summarizing the "Future Changes to the Hours Use Rate Structure," except that my expectation is that a well-designed rate element for a customer served on SGS primary is the same as a customer served on LPS primary, thus negating the need for class distinctions. Under this approach, there is no need for "bright lines,"

Staff is not prioritizing alignment of rate structures or rate designs with customers of Evergy Kansas Metro, or Evergy Kansas Central.

RATE OF RETURN REVENUE RISK

Q. At pages 63 – 64, Evergy witness Ms. Bulkley opines that "the Company faces increased volumetric risk associated with the residential rate class," are these assertions reasonable?

A. I am not an expert on RoE. However, given Evergy's raising of these issues, I have reviewed available data concerning Evergy's exposure to volumetric risk associated with the existing and proposed inclining block designs. Additionally, staff expert/witness Francisco Del Pozo has aggregated data to provide greater context to the summarized proxy group data presented by Ms. Bulkley.

Q. Have you reviewed Evergy's exposure to revenue risk associated with the current and recommended inclining block designs?

A. Yes. In the table below I provide the exposure associated Evergy Metro's 1RS1A rate code, which currently has an incline of approximately 1.4 cents for energy billed to a given customer in a given month in excess of 1,000 kWh, using usage data for the 2021 calendar year. I also calculate the exposure under Staff's recommended 1 cent incline for all residential customers, by rate schedule and in the aggregate. This results in a net decrease in Evergy's Metro's revenue exposure of approximately $55 thousand. Both the existing and recommended exposure, being in the neighborhood of $2.2 million, are approximately 0.257% of the staff-recommended $866 million total EMM revenue requirement.

Revenue exposure of sales in excess of 1,000 kWh per customer per summer month		
Existing EMM 1RS1A 1.4 cent	$ 2,281,093	
1RS1A Staff-recommended 1 cent	$ 1,623,553	
1RS6A Staff-recommended 1 cent	$ 530,954	$ 2,225,408
1RS2A Staff-recommended 1 cent	$ 70,900	
		$ 55,685

Revenue exposure of sales in excess of 1,000 kWh per customer per summer month		
Existing EMW MORG etc 0.99 cent	$	2,084,201
Staff-recommended 1 cent incline	$	3,396,646
	$	(1,312,445)

For EMW, although Staff's recommended incline designs result in increasing EMW's exposure by $1.3 million, the total exposure is less than 0.45% of EMW's $757.8 million Staff-recommended total EMW revenue requirement.

Q. Does Evergy have the ability to mitigate all exposure to weather-related revenue risk?

A. Yes. However, Evergy chose to not pursue a Weather and Conservation adjustment mechanism, which has been available to it for several years.

Q. Does Ms. Bulkley discuss the Evergy FAC in this assessment of volumetric risk?

A. No. Ms. Bulkley's discussion fails to acknowledge how the FAC destroys the relationship between increased energy costs and increased energy sales. In a month when people are buying more energy at retail due to increased air conditioning load, we are likely to see above-normal energy prices at wholesale. Without an FAC, in a month when energy is on average more expensive, the marginal cost to the utility of the energy to support each additional sale of a kWh consumes more and more of the revenue the utility receives for each kWh sold to customers under flat block designs. Or, if an inclining block rate design is used, that incline is available to preserve the margin on more expensive energy purchased in months with more intense air-conditioning load requirements. Without an FAC, even though the utility sells more energy in a hotter than average year, the utility is also expending more money to purchase each kWh to resell – or running less economically efficient units if they aren't operating in a market.

Contrast that to the situation with an FAC. The energy cost per kWh still rises as more kWh are required, but the energy cost recovery is essentially locked in by that FAC base.

Q. What testimony does the Evergy rate design witness offer concerning correlating revenue recovery with summer energy usage?

A. In her EMM at page 8 Ms. Miller states "The Company is a summer peaking utility and believes that price signals should emphasize the summer period as the "peak" and should reflect that acknowledgement through price signals offered through higher pricing in the summer." Transferring revenue recovery to the customer charge is inconsistent with this price signal that Ms. Miller believes should emphasize the "peak."

Further, at page 16 Ms. Miller describes the Company's request to move multiple occupancy residential customers off of the residential rates. These customers, though small in number, likely represent a significant amount of the usage over 1,000 kWh per month. In fact, for EMM, Ms. Miller represents that 5 such customers have average usage in excess of 80,000 kWh annually.

PISA RATE CAPS

Q. What class-level revenue requirement and rate design modifications are necessary to address any triggering of statutory rate caps in these cases?

A. Staff will address any necessary modifications to its direct-filed position in its true-up filing, to the extent it is able to do so.

CONCLUSION

Q. Are you confident that you or another Staff member has addressed all requested tariff changes, new programs, and other assertions in the direct testimonies of other parties in this case?

A. No. By sheer volume it is likely that aspects have been left unaddressed. To the extent Staff has not recommended adoption of a given requested change, program, or other assertion, Staff recommends rejection of such.

Q. Does this conclude your rebuttal testimony?

A. Yes it does.

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Evergy Metro, Inc. d/b/a Evergy Missouri Metro's Request for Authority to Implement a General Rate Increase for Electric Service	))))	Case No. ER-2022-0129
In the Matter of Evergy Missouri West, Inc. d/b/a Evergy Missouri West's Request for Authority to Implement a General Rate Increase for Electric Service	))))	Case No. ER-2022-0130

AFFIDAVIT OF SARAH L.K. LANGE

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

COMES NOW SARAH L.K. LANGE and on her oath declares that she is of sound mind and lawful age; that she contributed to the foregoing *Rebuttal Testimony of Sarah L.K. Lange*; and that the same is true and correct according to her best knowledge and belief.

Further the Affiant sayeth not.

Sarah L.K. Lange
SARAH L.K. LANGE

JURAT

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this 12th day of July, 2022.

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: April 04, 2025
Commission Number: 12412070

D Suzie Mankin
Notary Public

				Class	LGS									
				Subclass	Gen U.									
Year	Month	Day	Hour	Voltage	Sec	AMI Count	Customer 1	Customer 2	Customer 3	Customer 4	Customer 5	Customer 6	Customer 7	Customer 8
2019	1	1	0											
2019	1	1	1											
2019	1	1	2											
2019	1	1	3											
2019	1	1	4											
2019	1	1	5											
2019	1	1	6											
2019	1	1	7											
2019	1	1	8											
2019	1	1	9											
2019	1	1	10											
2019	1	1	11											
2019	1	1	12											
2019	1	1	13											
2019	1	1	14											
2019	1	1	15											
2019	1	1	16											
2019	1	1	17											
2019	1	1	18											
2019	1	1	19											
2019	1	1	20											
2019	1	1	21											
2019	1	1	22											
2019	1	1	23											
2019	1	2	0											
2019	1	2	1											
2019	1	2	2											
2019	1	2	3											
2019	1	2	4											
2019	1	2	5											
2019	1	2	6											
2019	1	2	7											
2019	1	2	8											
2019	1	2	9											
2019	1	2	10											
2019	1	2	11											
2019	1	2	12											
2019	1	2	13											
2019	1	2	14											
2019	1	2	15											
2019	1	2	16											
2019	1	2	17											
2019	1	2	18											
2019	1	2	19											
2019	1	2	20											

For subclasses by voltage with less than 100 customers, provide hourly usage for each customer, at an internally consistent voltage.
(for example, if a customer is an LPS Primary customer, but is metered at secondary and a billing adjustment is applied, that customer's usage would be included under Primary, but the adjustment would be applied to the metered usage.)

	Class	LPS	LPS	LPS	LPS	LGS	LGS
	Subclass					Gen U.	Elec. Only
	Voltage	Trans	Sub	Prim	Sec	Sec	Sec
Customer numbers:							
Start	Stop						
6:00 AM	8:00 PM						
7:00 AM	8:00 PM						
8:00 AM	8:00 PM						
9:00 AM	8:00 PM						
10:00 AM	8:00 PM						
11:00 AM	8:00 PM						
12:00 PM	8:00 PM						
1:00 PM	8:00 PM						
2:00 PM	8:00 PM						
3:00 PM	8:00 PM						
4:00 PM	8:00 PM						
5:00 PM	8:00 PM						
6:00 PM	8:00 PM						
6:00 AM	7:00 PM						
7:00 AM	7:00 PM						
8:00 AM	7:00 PM						
9:00 AM	7:00 PM						
10:00 AM	7:00 PM						
11:00 AM	7:00 PM						
12:00 PM	7:00 PM						
1:00 PM	7:00 PM						
2:00 PM	7:00 PM						

Average number of AMI metered customers for subject month.

Sum of CP demands for the month that occurred for that subclass/voltage, for the time period identified in columns A&B.

Develop a definition for CP demand. Conceptually, the highest 15 minute demand a customer exhibits in a month during "on peak" times.
-Need to confirm whether this should be 5 minute, 15 minute, or 1 hour.
-Need to establish times of day to record, and whether to include weekends etc.

LGS Sep. Met. Sec	LGS Gen U. Prim	LGS Elec. Only Prim	LGS Sep. Met. Prim	MGS Gen U. Sec	MGS Elec. Only Sec	MGS Sep. Met. Sec	MGS Gen U. Prim	MGS Elec. Only Prim

MGS	SGS	SGS	SGS	SGS	SGS	SGS	RES	RES
Sep. Met.	Gen U.	Elec. Only	Sep. Met.	Gen U.	Elec. Only	Sep. Met.	1RS1A	1RSDA
Prim	Sec	Sec	Sec	Prim	Prim	Prim	Sec	Sec

RES 1RSDA Sec	RES 1RS1B Sec	RES 1RS6A Sec	RES 1RFEB Sec	RES 1RO1A Sec	RES etc Sec	Res special use cases…

				Class	Res									
				Subclass	Gen U.									
Year	Month	Day	Hour	Voltage	Sec	AMI Count	Customer 1	Customer 2	Customer 3	Customer 4	Customer 5	Customer 6	Customer 7	Customer 8
2019	1	1	0											
2019	1	1	1											
2019	1	1	2											
2019	1	1	3											
2019	1	1	4											
2019	1	1	5											
2019	1	1	6											
2019	1	1	7											
2019	1	1	8											
2019	1	1	9											
2019	1	1	10											
2019	1	1	11											
2019	1	1	12											
2019	1	1	13											
2019	1	1	14											
2019	1	1	15											
2019	1	1	16											
2019	1	1	17											
2019	1	1	18											
2019	1	1	19											
2019	1	1	20											
2019	1	1	21											
2019	1	1	22											
2019	1	1	23											
2019	1	2	0											
2019	1	2	1											
2019	1	2	2											
2019	1	2	3											
2019	1	2	4											
2019	1	2	5											
2019	1	2	6											
2019	1	2	7											
2019	1	2	8											
2019	1	2	9											
2019	1	2	10											
2019	1	2	11											
2019	1	2	12											
2019	1	2	13											
2019	1	2	14											
2019	1	2	15											
2019	1	2	16											
2019	1	2	17											
2019	1	2	18											
2019	1	2	19											
2019	1	2	20											

For subclasses by voltage with more than 100 customers, provide hourly usage for some number of random customers, held the same across all months to the extent possible.

Need to discuss if 100 is the right number, especially to account for customers coming and going, may be useful to build something around existing customer segmentation data.

				Class	Res									
				Subclass	Gen U.									
Year	Month	Day	Hour	Voltage	Sec	AMI Count	Customer 1	Customer 2	Customer 3	Customer 4	Customer 5	Customer 6	Customer 7	Customer 8
2019	1	1	0											
2019	1	1	1											
2019	1	1	2											
2019	1	1	3											
2019	1	1	4											
2019	1	1	5											
2019	1	1	6											
2019	1	1	7											
2019	1	1	8											
2019	1	1	9											
2019	1	1	10											
2019	1	1	11											
2019	1	1	12											
2019	1	1	13											
2019	1	1	14											
2019	1	1	15											
2019	1	1	16											
2019	1	1	17											
2019	1	1	18											
2019	1	1	19											
2019	1	1	20											
2019	1	1	21											
2019	1	1	22											
2019	1	1	23											
2019	1	2	0											
2019	1	2	1											
2019	1	2	2											
2019	1	2	3											
2019	1	2	4											
2019	1	2	5											
2019	1	2	6											
2019	1	2	7											
2019	1	2	8											
2019	1	2	9											
2019	1	2	10											
2019	1	2	11											
2019	1	2	12											
2019	1	2	13											
2019	1	2	14											
2019	1	2	15											
2019	1	2	16											
2019	1	2	17											
2019	1	2	18											
2019	1	2	19											
2019	1	2	20											

Similar to discussion in the other workbook, break it down by subclass and special case, and get sample customers that fit in those categories.