*Exhibit No.:*
*Issues:* *EDRs, Line Extension Report*
*Witness:* *Sarah L.K.Lange*
*Sponsoring Party:* *MoPSC Staff*
*Type of Exhibit:* *Surrebuttal Testimony*
*Case Nos.:* *ER-2018-0145 and ER-2018-0146*
*Date Testimony Prepared:* *September 4, 2018*

# MISSOURI PUBLIC SERVICE COMMISSION

## COMMISSION STAFF DIVISION

## TARIFF/RATE DESIGN DEPARTMENT

## SURREBUTTAL TESTIMONY

## OF

## SARAH L.K. LANGE

## KANSAS CITY POWER & LIGHT COMPANY
## CASE NO. ER-2018-0145

## AND

## KCP&L GREATER MISSOURI OPERATIONS COMPANY
## CASE NO. ER-2018-0146

*Jefferson City, Missouri*
*September 2018*

**** Denotes Confidential Information ****

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Q. Are you the same Sarah L.K. Lange who contributed to Staff's Cost of Service Report, Staff's Report on Class Cost of Service and Rate Design ("CCOS Report"), and filed Rate Design Rebuttal testimony?

A. Yes.

Q. What is the purpose of your Surrebuttal Testimony?

A. I will address the following issues:

(1) Staff's Response to the Commission's August 8, 2018, order concerning Line Extensions;

(2) Issues raised concerning Time of Use rates;

(3) Issues raised concerning Class Cost of Service and intraclass revenue responsibility shifts;

(4) Issues raised concerning non-residential rate design;

(5) Brad Lutz Revenue Requirement ("RR") Rebuttal concerning "stub period" rate design;

(6) Staff's true-up adjustment to revenues for EDRs, and respond to Joe Fangman Revenue Requirement ("RR") Rebuttal and Rate Design ("RD") Rebuttal concerning the companies' administration of the EDR program and proposed revisions to the EDR tariff;

(7) Issues raised by Brad Lutz and Tim Rush concerning Staff's recommended make ready EV tariff design and rate schedule.

## I. AUGUST 8 ORDER CONCERNING LINE EXTENSIONS

Q. What was Staff directed to review in the Commission's August 8 Order Directing Filing?

A. The Order directed Staff to; (1) address how KCPL's current line extension policy (P.S.C. MO. No 2 Original Sheet 1.30D-H) is more beneficial to customers than the one used by Ameren Missouri (See Mo. P.S.C. Schedule No. 6 Original Sheets 116-122, Section K), and (2) provide information as to how KCP&L's and GMO's current line extension policies are compatible with MEEIA, specifically their heat pump rebate programs.

Q. Generally, how do the KCPL and GMO line extension policies operate?

A. The KCPL and GMO policies operate identically, but the tariff citations differ by utility.

Beginning on sheet 1.30, KCPL's tariff outlines that, in general, an applicant seeking service will be responsible for the cost of the system extension that exceed, as applicable,

(1) the free basic extension described in 9.02 (B), or

(2) the Construction Allowance that is determined to be economically justifiable pursuant to the calculation provided in 9.02(C), which examines the relationship of the estimated revenue to be generated by the new customer (net of the cost of the energy the new customer will consume) to the carrying costs of the new plant dedicated to that customer.

The portion of the cost of the system extension for which the applicant is responsible is defined as the "Construction Charges," under provision 9.02(D). Construction Charges may be refundable, such as in the scenario where a developer seeks to have service extended throughout a new subdivision, but homes are built and inhabited over the course of several years, pursuant to 9.02.D.2.

Sheets 1.30D – 1.30H include descriptions of some of the more detailed steps of this project, such as 9.04(B)'s description of the "Open Extension Period", which refines the process laid out in 9.02.D.2. Sheets 1.30G and 1.30H provide additional detail for the application of the Construction Allowance formula to residential subdivisions in provision 9.11(B)2.(b), and to multifamily structures in provision 9.11(C). In short, under the KCPL and GMO approach the expected net revenue impact of a system addition is compared to the expected revenue requirement impact of the addition.

Q. How does this differ from Ameren Missouri's sheets 116 et seq,?

A. Ameren Missouri's sheets 116 et seq, provision K of General Rules and Regulations Section III., Distribution System Extensions specifically concerns underground extensions. On sheet 117 Provision K.3., "Residential Subdivision Extensions" provides for the additional costs or in-kind contributions to plant associated with an underground distribution system as opposed to a standard overhead distribution system. Ameren Missouri sheet 113, provision F of General Rules and Regulations Section III., Distribution System Extensions, "Overhead Extensions to Residential Subdivisions" provides the basic framework of financial responsibility in provision F.1. "Single Family Residences," stating:

> Company will provide single-phase overhead electric service consisting of meters, services, transformation capacity and all additional facilities required for the distribution of electricity, through and within the boundaries of a residential subdivision for which permanent electric service has been requested by customer/developer to two or more residential buildings, at no cost to the customer/developer, excluding subdivisions covered by the Large Lot Subdivision provisions outlined below. Company will also provide additional distribution facilities of up to 150 feet per subdivision lot, as required, to extend its existing distribution system to the boundaries of the subdivision site, at no cost to customer/developer. For any permanent electric distribution extension facilities to or within the subdivision, in excess of the aforementioned allowances, customer/developer shall make a deposit in advance of construction, based upon the Company's then

> current standard construction charges for such facilities, which deposit may be refundable in whole or in part. Semi-annually thereafter, Company will compare its standard overhead distribution cost per lot with the annual net revenue per lot estimated to be received from the additional homes within the subdivision having been connected with electric service and permanently occupied for residential dwelling purposes, after receiving notification of such connections from customer/developer. Any estimated annual net revenue per lot, from homes added during each review period, in excess of Company's standard per lot overhead costs shall be refunded, without interest, to customer/developer up to the total amount of the advance deposit actually made by customer/developer. Such refunds will be made at semi-annual intervals from the date the deposit was received by Company, with any amounts remaining unrefunded after five years being retained by Company and credited to the Company's appropriate plant account.

Sheets 117-118 Provision K.3.c., "Options of Applicant" provide

> At the request of applicant, Company will, on a per lot or per dwelling unit basis, estimate its distribution system extension cost within the subdivision and annual net revenue, exclusive of gross receipts taxes, anticipated to be received from such homes or dwelling units connected within the subdivision. Such extension costs shall include all materials provided by Company for applicant's installation and all costs incurred by Company in the installation of its distribution system within the subdivision. Any estimated annual net revenue in excess of the subdivision extension costs specified herein may be utilized to offset any additional charges normally paid by applicant under Section III….

In short, the approach in the Ameren Missouri line extension tariff compares the "annual net revenue, exclusive of gross receipts taxes, anticipated to be received" to the "costs incurred by Company in the installation of its distribution system within the subdivision," that exceed the results of its comparison of "its standard overhead distribution cost per lot with the annual net revenue per lot estimated to be received from the additional homes within the subdivision," with the potential for contributions made by the developer to cover the revenue shortfall to be refunded as houses become occupied, or as a partial refund of the contributed conduit system, as applicable.

Q. Is the KCPL approach "more beneficial to customers than the one used by Ameren?"

A. In general, yes. The KCPL and GMO model compares the estimate of on-going revenues **net** of the cost of energy to the estimated on-going revenue requirement of the new distribution system to be installed. The Ameren model compares an estimate of single-year **gross** revenues including the cost of energy to the total cost of the distribution extension net of any applicable free allowance.[1] The KCPL/GMO approach compares the elements that are most relevant to gauging the impact on future rates of adding infrastructure to support a new customer, while the Ameren Missouri approach compares the elements that are more relevant to the utility's profit.

Q. Could you provide an example?

A. Yes. A simplified comparison is shown below to illustrate which amounts are relevant under each calculation. If the comparison of revenue to cost indicates that the applicable revenue exceeds the applicable cost, no contribution is required:

| | Example 1 | | Example 2 | |
|---|---|---|---|---|
| | KCPL/GMO | Ameren | KCPL/GMO | Ameren |
| Cost of distribution facilities in excess of free allowance: | $ 1,000 | **$ 1,000** | $ 1,500 | **$ 1,500** |
| Carrying cost of new distribution facilities: | **$ 200** | | **$ 300** | |
| Estimated annual energy requirements of new customer: | 12,000 | 12,000 | 12,000 | 12,000 |
| Estimated annual rate revenue of new customer: | $ 1,200 | **$ 1,200** | $ 1,200 | **$ 1,200** |
| Estimated annual cost of energy for new customer: | $ 300 | | $ 300 | |
| Estimated annual net revenue of new customer: | **$ 900** | | **$ 900** | |
| Comparison: | $ 900 | $ 1,200 | $ 900 | $ 1,200 |
| | $ 200 | $ 1,000 | $ 300 | $ 1,500 |
| **Customer contribution:** | **$0.00** | **$0.00** | **$0.00** | **$ 300** |

Q. Does this general difference between the two approaches predetermine exactly how the construction costs should be calculated, what should be included in the free

[1] This distinction is somewhat difficult to observe in the isolated tariff provisions specified; however, Ameren Missouri tariff sheet 98, provision B.19. of General Rules and Regulations Section I., General Provisions, defines Net Revenue as "Revenue received or to be received from customer for electric service provided by Company, exclusive of all sales or revenue related taxes."

allowance, whether developers should be responsible for conduit installation, or the methods for estimating the rate revenues associated with newly constructed homes?

A. No. While it is important to include those details in the tariff under either approach, neither the Ameren Missouri approach to these details nor the KCPL and GMO approach to these details is necessarily more compatible or less compatible with the net versus gross revenue approach.

Q. Aside from the net revenue versus gross revenue approach, does Staff have an opinion on how other elements of the line extension tariff provisions of KCPL and GMO are "more beneficial to customer than the one used by Ameren"?

A. Generally, no. The specifics of the refunding provisions, for example, are slightly different, but neither provision in isolation is inherently better or worse than the other for customers.

Q. How do the current KCPL and GMO current line extension policies provide rebates for heat pumps?

A. The existing KCPL and GMO processes of estimating the energy to be consumed and the revenue to be produced by a new customer rely on assumptions of the load required by specific end-uses, such as space heating with an electric heat pump, in order to estimate the net revenue caused by new construction. In short, the KCPL and GMO implementation of the line extension policies assumes that a home that has electric space heating for its primary heating end-use will produce more net revenue than a home that does not have electric space heating for its primary heating end-use, and so a lower up-front contribution would typically be required under the Construction Allowance calculation.

Q. Could you provide an example of how the upfront costs and eventual refunds would differ for a development based on the heating sources of the homes being constructed?

A. Yes. For example, a developer building 10 gas heated houses would be required to pay an upfront cost of $1,550 per home ($950 refundable and $600 non-refundable). As the homes are built, the developer can apply for a $950 refund for each home built. In contrast, if a developer is building ten electric space heated homes, the developer would be required to pay an upfront cost of $200 per home, and as the homes are built the developer can apply for a refund of the $200 when the home is built and the existence of the electric heating is confirmed. If for some reason the customer failed to install electric heat as planned, an additional payment of $600 for that home would be required under KCPL's and GMO's internal procedures. This would put the home back on equal footing with the terms applicable for a gas heating home.

Q. Is this understanding consistent with KCPL's and GMO's tariff provisions?

A. Yes. Provided below is Staff's Data Request and the Company's response which is applicable to provisions included in the tariffs of both KCPL and GMO:

> Please refer to GMO tariff R-50, provision 7.04, part B, stating "The Construction Charges may be refundable in part, or in their entirety, to the original Applicant during the Open Extension Period. The Facilities Extension Agreement, to be executed by Applicant and Company, shall outline the applicable refund mechanism as related to the performance required by Applicant. In no event shall refunds aggregate an amount greater than the Construction Charges. Refundable Construction Charges shall not accrue interest. No interest in any potential refunds may be assigned. Applicant shall be responsible for notifying Company within six (6) months' time of qualifying permanent loads connected to Company's system. On a periodic basis, Company shall make the applicable refund(s) as specified in the Facilities Extension Agreement. No refunds will be made for performance after the Open Extension Period."
> -Please refer to GMO tariff R-53, provision 7.11, part B, subpart (2), subpart (b) stating "Subdivision Projects: Projects defined as including five (5) or more residential dwellings. The Nonrefundable Construction Charge is calculated based on a per lot basis and is determined by subtracting the applicable standard Construction Allowance from the standard Estimated

Construction Costs. Applicant will also be responsible for all Estimated Construction Costs related to the cost of connecting the subdivision project to Company's existing and adequate distribution facilities when the length is greater than 100 feet. Applicant will pay these costs to Company as a Nonrefundable Construction Charge."
-Please refer to GMO tariff R-53, provision 7.11, part B, subpart (2), subpart (c) stating "Construction Allowance is set equal to the cost of facilities provided free of charge plus standard adders, determined from the feasibility model, based on the electric end-use and project type committed to by Applicant."

With reference to the tariff provisions above, please describe fully (including operable spreadsheets or forms if available) how heat pumps versus non-heat pump end use equipment is treated in the feasibility model referred to in GMO tariff R-53, provision 7.11, part B, subpart (2), subpart (c). Include, as available, how the revenue value associated with each HVAC end use equipment is (1) estimated for a single residence, (2) estimated for a subdivision, and (3) refunded to the developer over time. Please provide various scenarios of the refunding process, timing, and amounts refunded.

Response:

Company line extension processes are built around the concept of comparing Construction Charges to a Construction Allowance. As noted in the data request question, the Construction Allowance is inclusive of "electric end-use." It is in this determination of end-use that the value of heat pumps and electric heating are addressed. The Company recognizes that homes the use electricity for heating use more energy, particularly in the non-summer months and produce more annual revenue than homes without electric heating. Heat pumps are highly efficient and have become a common option for those choosing to deploy electric heating in their home or business.

In defining the Residential Feasibility Model (attached), this fact is represented in the assumptions supporting the calculation.

The revenue value associated with HVAC end use equipment is determined periodically, generally annually, by estimating the typical revenue associated with a single home. This value is then standardized and applied to all similarly situated instances and

> utilized to determine both the Construction Allowance and to represent the refund amount[.]
> Concerning the refunding process, the Open Extension Period (defined as five years) is maintained by the Company, but it is incumbent on the Customer/Developer to request the refund. As such, the timing of refund requests vary greatly. The current refundable amounts for subdivision projects are $950 per home for non-heat pump and $200 per home for heat pump and all electric homes.
>
> Processes for non-residential customers are similar, however there is a specific Feasibility Model used. Non-residential extensions are generally more specific to the individual project so standardized charges within the Construction Allowance determination are less prevalent.
>
> Prepared by Brad Lutz

Q. Is the treatment of residential heat pumps as an end use measure in the context of KCPL's and GMO's current line extension policies compatible with KCPL's and GMO's current MEEIA programs?

A. There is no conflict between the current line extension policies and the current MEEIA programs. The current KCPL and GMO MEEIA programs do not offer HVAC rebates for new construction.[2] Unless someone constructs a residence with electric space heating, and within five years uses a MEEIA rebate to move to more efficient electric space heating, there is no mismatch between the KCPL and GMO line extension implementation and the current MEEIA cycle. If someone were to take advantage of a MEEIA rebate during the period used to estimate net margin, then the Construction Allowance would be overestimated, all else being equal. Within the context of the estimates used in the Feasibility Model and the level of assumptions made in estimating the net margin under the Construction Allowance, it is not likely that the impact of a potential space heating upgrade

[2] The HVAC portion of KCPL's and GMO's MEEIA Cycle 2 is a part of the Whole House Efficiency Program, which is intended to encourage whole house improvements to existing homes by promoting home energy audits and comprehensive retrofit services.

would be more material than, for example, a family member moving in or out of the residence.

Q. If a new construction HVAC program is implemented in a future MEEIA cycle, would it be reasonable to adjust the assumptions in the feasibility model for the more efficient electric space heating end use?

A. While Staff understands the administrative ease of assuming that all forms of electric space heat produce essentially the same amount of net revenue, it would not be unreasonable to further refine the end-use energy consumption assumptions relied upon under the residential feasibility model.

If, for example, KCPL or GMO knew that a particular home was participating in a MEEIA program to install electric space heating equipment that was of above-average efficiency, it would be reasonable to adjust down the level of net revenues assumed under the feasibility model for that home to generate as a product of the electric space heating end use.

## II. TIME OF USE RATES

Q. Has Staff continued to refine its rate recommendation and identify ways to mitigate customer impacts?

A. Yes. As will be discussed below, Staff recommends the following time-differentiated rate design, subject to changes in class revenue requirements and residential customer charges:

| Revenue Neutral ToU Rates | | |
|---|---|---|
| **GMO** | Res. Peak | Res. Off |
| Summer | $ 0.12231 | $0.11690 |
| NonSummer | $ 0.10185 | $0.06363 |
| | $ - | $ - |
| **KCPL** | Res. Peak | Res. Off |
| Summer | $ 0.14096 | $0.13343 |
| NonSummer | $ 0.11597 | $0.07140 |

Also, Staff offers the following possible approach to ToU rate implementation, allowing additional time for customer education, and allowing an opportunity to compare customer responsiveness to opt-in versus opt-out time-differentiated rates:

| | Effective Date of Rates until Summer 2019 Billing Months | Summer | Non-Summer Going Forward |
|---|---|---|---|
| **KCPL General Use and Single Meter Space Heating** | Modifed Non-Summer rates consistent with Staff CCoS Report, Appendix 2, Schedule SLKL-d3. | Mandatory ToU for all customers with AMI meters; for customers without AMI meters rates consistent with Staff CCoS Report, Appendix 2, Schedule SLKL-d3. | Default ToU with opt-out to Modified Non-Summer rates. |
| **KCPL Other Space Heating** | | | Default Modified Non-Summer Rates, with Opt-in ToU, shadow billing provided. |
| **GMO** | | | Default Modified Non-Summer Rates, with Opt-in ToU, shadow billing provided. |

Q. KCPL and GMO criticize Staff's recommendation to move residential rate recovery to mandatory ToU rates as lacking an objective, is this criticism accurate?

A. No. The objective of Staff's ToU rate recommendation is to reasonably recover the revenue requirements established in these rate cases. The design has the further benefit of serving as a foundation upon which future time-differentiated rate elements may be added.[3]

Q. Is the goal of Staff's recommended rates for these cases to cause customers to shift their usage away from on-peak hours and to off-peak hours?

A. No. The goal of Staff's recommended rates for these cases is to reasonably recover the revenue requirements established in these rate cases.

[3] For example, in future cases, it is likely that Staff will recommend implementation of (1) an additional summer on-peak charge priced consistent with pricing signals associated with RTO capacity costs or production capacity costs, for example, an additional approximate $0.02-5 / kWh during summer afternoon hours of approximately 2:00 pm – 6:00 pm; and (2) an additional spring/fall (and possibly summer) super-off-peak charge associated with times of very low energy prices and capacity costs, for example, a discount of approximately $0.02-5 / kWh during shoulder months during approximately the hours of 11:00 pm – 5:00 am. Rate elements to encourage pre-cooling thermal storage during the summer mornings, or system-coincident demand charges to recover capacity costs associated with summer afternoons are also possibilities that, while ideal from a pure cost-recovery perspective, cannot be expected to be understandable to customers at this time.

Q. Will Staff's recommended rates reflect cost causation more reasonably, or less reasonably, than KCPL's and GMO's existing residential rate designs?

A. Staff's time-differentiated rates will more reasonably reflect cost-causation than either declining non-summer rates or inclining summer rates. Examples and illustrations comparing the price signals of the designs are provided later in this testimony.

Q. If the goal is to ultimately put into place time-varied rate designs for all customers, which of the following options is better suited to meeting that goal within the next decade?

Option A: Implementing optional ToU rates with an aggressive pricing differential for a small percentage of customers; or

Option B: Implementing ToU rates with a low or moderate pricing differential for many or all customers.

A. Option B is a better path forward to introduce all customers to time-differentiated rates. Option A is likely to attract customers that will benefit from the aggressive rate design; i.e., customers that would see a bill reduction without major changes to their usage will be more likely to self-select to participate under Option A. Because of this, Option A will provide little, if any, information about how customers who do not self-select based on existing or intended usage patterns will behave on ToU rates.

Option B is likely to cause little bill impact for most customers. However, to the extent it does shift revenue recovery toward customers with heavy day time usage, and away from customers with heavy night time usage, the changes the customer experiences in its bill will be consistent with the bill impacts that would result from a more aggressive time-differentiated rate structure.

Therefore, given the options in this case between learning how a subset of customers *might* behave, and educating many or all customers on how costs are caused, so that

customers can chose to modify their behavior (or bear revenue responsibility for costs caused by unmodified behavior), Staff recommends the latter.

Q. What timeframe do KCPL and GMO propose for implementing ToU rates for all residential customers?

A. As Staff understands KCPL's and GMO's plans, ToU pilots may be implemented through a 2019 MEEIA program. An evaluation would occur and a proposal may be developed based on that evaluation. Additional pilots may be undertaken. The utilities have provided no other proposal regarding the timeframe for implementation, concrete or otherwise. On advice of counsel, Staff suggests that the Commission should also be mindful that if KCPL and GMO elect to utilize plant in service accounting (PISA) under RSMo. 393.1400, enacted through Senate Bill 564, the Companies would not be eligible for a general rate proceeding until December 2021 under the provisions of RSMo. 393.1655, further delaying potential implementation of more aggressive ToU.

Q. Could you summarize KCPL's and GMO's testimony concerning ToU rates?

A. Tim Rush (RD Rebuttal pages 3-4), Kim Winslow (RD Rebuttal pages 1-15x), and Marisol Miller (RD Rebuttal pages 6-11), generally testify that aggressively priced ToU will cause severe customer impacts and severe revenue shortfalls.

However, Kim Winslow (RD Rebuttal pages 15-18), and Marisol Miller (RD Rebuttal pages 12-13), then generally testify that Staff's recommended ToU design is not priced aggressively enough to impact customers.

Q. Do these witnesses address the plans for customer education associated with their proposed ToU MEEIA pilot ToU rates, or with the plans to transition the ToU MEEIA pilot rates to permanent rates?

A. No. Mr. Ives, in his RD Rebuttal testimony at page 7, states that "just because a customer has an AMI meter does not mean that they have the information needed to make beneficial use of TOU rates. That is why the Company is proposing a pilot program so that it can roll out the educational programing to provide a better opportunity for customers to understand how to best make use of TOU rates." Kim Winslow testifies extensively on the need to market to customers to cause enrollment on aggressively-priced opt-in ToU rates. No KCPL or GMO witness addresses how the utilities would propose to educate customers to understand ToU rates that would be implemented in the next 4 – 10 months as an outcome of this case, nor how those pilot rates may transitioned to permanent rates.

Q. What is your response to these comments?

A. Staff's intent at this time is not that time of use cause significant customer response driven by significant customer impact. Rather, Staff's proposal is to place proper price signals to better correlate cost causation and rate recovery.

Staff's low-differential ToU rates are not designed to cause customers to change behavior at this time. While under these ToU rates customers would benefit from changing behavior, that benefit is purposely minimal to avoid causing more substantial customer impacts as customers begin to learn the concept of time-differentiated rates. This *ToU training wheel* approach does not require customers to have access to a great deal of additional information to "make beneficial use of ToU rates," as stated by Mr. Ives. During this training wheel period of low-differential ToU rates, the "beneficial use" for customers is (1) learning that time-differentiated rates exist, and (2) that customers using relatively more expensive energy pay slightly more than customers using relatively inexpensive energy.

Q. In discussing the revenue concerns with ToU rates, aggressive or otherwise, did any KCPL or GMO witness discuss the availability of the statutory Revenue Stabilization Mechanism (Section 386.266.3[4])?

A. No.

Q. Have KCPL, GMO, or other parties provided input as to the actual values (rates) to use for the rates applicable to each time period (off-peak and on-peak) for each utility?

A. No. However, Staff has continued to refine its recommendations. KCPL and GMO witness Marisol Miller presented testimony at pages 10 – 11 of her RD Rebuttal indicating that she did not understand that Staff's direct-recommended rate design included a shift in seasonal revenue recovery in addition to the ToU structural change. Given Ms. Miller's confusion, Staff has revisited the recommendation to shift seasonal revenue responsibility, which served to reduce summer season rates. Without the reduction of Summer Season rates, Staff recommends moderating the on-peak/off-peak differential applicable to summer billing months. The revised rate design is provided below:

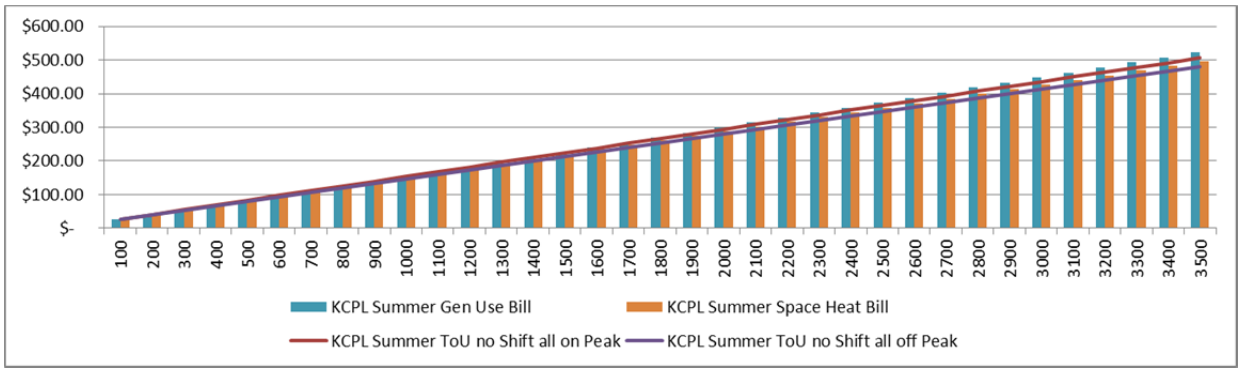
| Revenue Neutral ToU Rates | | |
|---|---|---|
| **GMO** | Res. Peak | Res. Off |
| Summer | $ 0.12231 | $0.11690 |
| NonSummer | $ 0.10185 | $0.06363 |
| | $ - | $ - |
| **KCPL** | Res. Peak | Res. Off |
| Summer | $ 0.14096 | $0.13343 |
| NonSummer | $ 0.11597 | $0.07140 |

Q. Parties have alleged that Staff's rate design will cause significant customer impacts. What impacts will Staff's recommended rate design cause on bills?

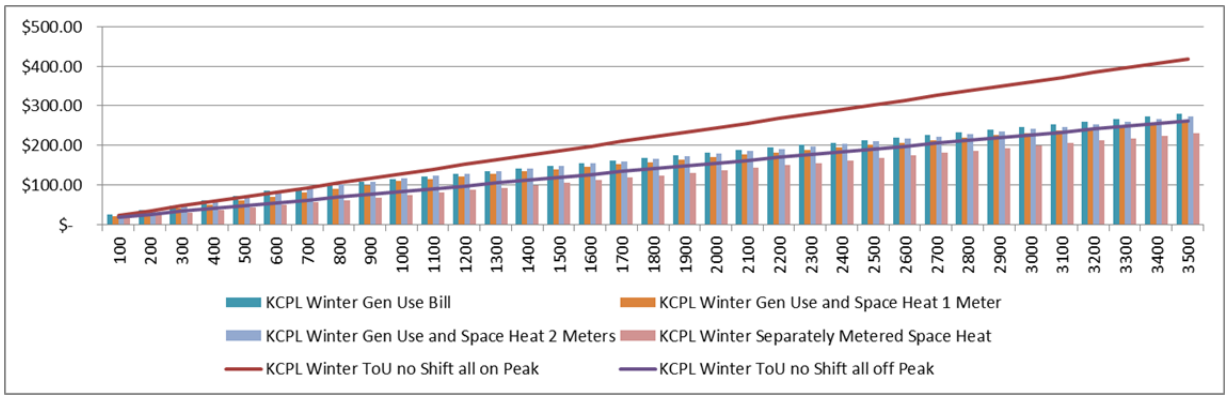
[4] Passed by the General Assembly, signed by the Governor and effective August 28, 2018 - Senate Bill 564.

A. Two items need to be considered in providing bill impacts: (1) the time of day a customer uses energy, and (2) the existing service schedule a customer has been billed under. The lines in the graphs below represent the absolute extremes possible under a ToU bill, where all usage occurs either on-peak or off-peak, as indicated. The bars in the graphs below indicate the existing disparity in customer bills based on the rate schedule under which customers currently take service.[5]

**KCPL Summer**

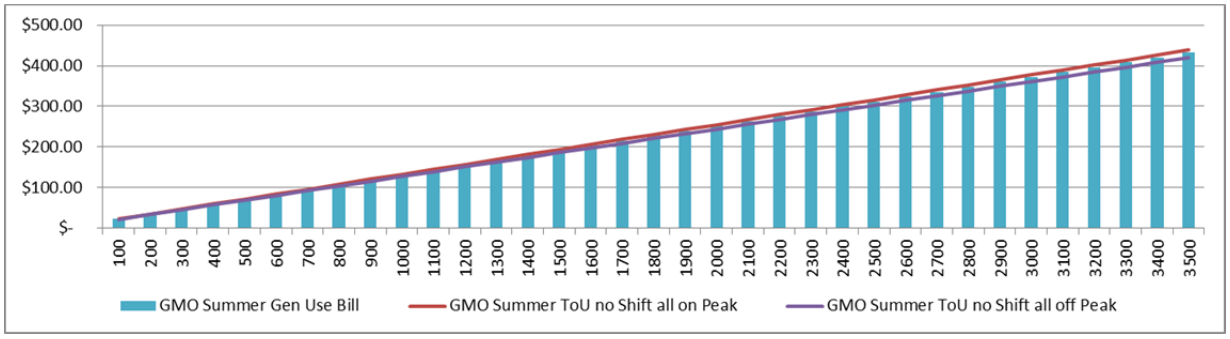



**KCPL Winter**

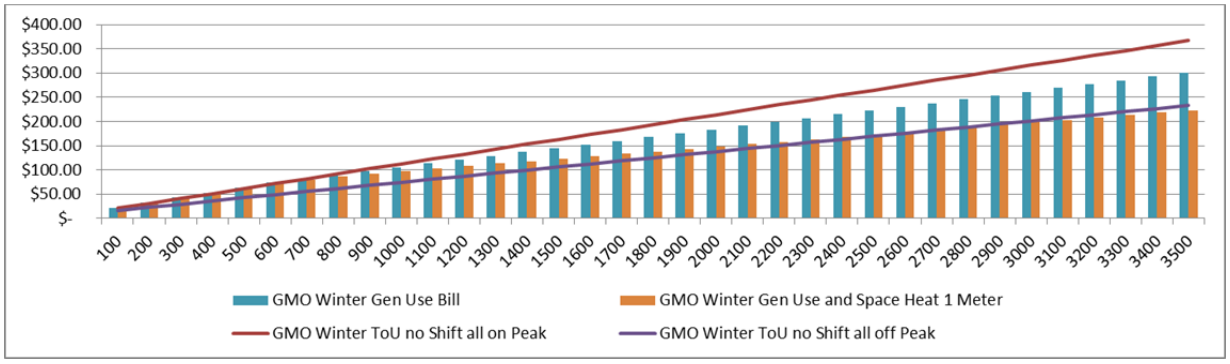



[5] The customer impact caused by adopting summer inclining block rates for KCPL is illustrated in the first graph, as it is the difference between the Summer General Use bill and the Summer Space Heating Bill for the same level of usage.

## GMO Summer




## GMO Winter




A summary of the dollar values indicated above is provided below:

| kWh: | 100 | 400 | 700 | 1,000 | 1,300 | 1,600 | 1,900 | 2,200 | 2,500 |
|---|---|---|---|---|---|---|---|---|---|
| KCPL Summer ToU no Shift all on Peak | $ 26.72 | $ 69.00 | $ 111.29 | $ 153.58 | $ 195.86 | $ 238.15 | $ 280.44 | $ 322.72 | $ 365.01 |
| KCPL Summer ToU no Shift all off Peak | $ 25.96 | $ 65.99 | $ 106.02 | $ 146.05 | $ 186.08 | $ 226.11 | $ 266.14 | $ 306.17 | $ 346.20 |
| KCPL Summer Gen Use Bill | $ 25.45 | $ 63.94 | $ 104.52 | $ 149.26 | $ 194.01 | $ 238.76 | $ 283.51 | $ 328.26 | $ 373.00 |
| KCPL Summer Space Heat Bill | $ 26.43 | $ 67.84 | $ 109.26 | $ 150.68 | $ 192.10 | $ 233.52 | $ 274.93 | $ 316.35 | $ 357.77 |
| | | | | | | | | | |
| KCPL Winter ToU no Shift all on Peak | $ 24.22 | $ 59.01 | $ 93.80 | $ 128.59 | $ 163.38 | $ 198.17 | $ 232.96 | $ 267.75 | $ 302.54 |
| KCPL Winter ToU no Shift all off Peak | $ 19.76 | $ 41.18 | $ 62.60 | $ 84.02 | $ 105.44 | $ 126.86 | $ 148.28 | $ 169.70 | $ 191.12 |
| KCPL Winter Gen Use Bill | $ 24.85 | $ 61.54 | $ 93.40 | $ 115.59 | $ 135.27 | $ 154.96 | $ 174.64 | $ 194.32 | $ 214.01 |
| KCPL Winter Gen Use and Space Heat 1 Meter | $ 22.32 | $ 51.43 | $ 80.54 | $ 109.65 | $ 127.94 | $ 146.24 | $ 164.53 | $ 182.83 | $ 201.12 |
| KCPL Winter Gen Use and Space Heat 2 Meters | $ 25.03 | $ 62.27 | $ 94.53 | $ 116.86 | $ 135.51 | $ 154.17 | $ 172.83 | $ 191.48 | $ 210.14 |
| KCPL Winter Separately Metered Space Heat | $ 18.86 | $ 37.58 | $ 56.29 | $ 75.01 | $ 93.73 | $ 112.44 | $ 131.16 | $ 149.88 | $ 168.60 |
| | | | | | | | | | |
| GMO Summer ToU no Shift all on Peak | $ 22.66 | $ 59.35 | $ 96.05 | $ 132.74 | $ 169.43 | $ 206.12 | $ 242.81 | $ 279.51 | $ 316.20 |
| GMO Summer ToU no Shift all off Peak | $ 22.12 | $ 57.19 | $ 92.26 | $ 127.33 | $ 162.40 | $ 197.47 | $ 232.54 | $ 267.61 | $ 302.68 |
| GMO Summer Gen Use Bill | $ 22.48 | $ 58.63 | $ 94.78 | $ 130.93 | $ 167.08 | $ 203.23 | $ 239.38 | $ 275.53 | $ 311.68 |
| | | | | | | | | | |
| GMO Winter ToU no Shift all on Peak | $ 20.62 | $ 51.17 | $ 81.73 | $ 112.28 | $ 142.84 | $ 173.39 | $ 203.95 | $ 234.50 | $ 265.06 |
| GMO Winter ToU no Shift all off Peak | $ 16.79 | $ 35.88 | $ 54.97 | $ 74.06 | $ 93.15 | $ 112.24 | $ 131.33 | $ 150.41 | $ 169.50 |
| GMO Winter Gen Use Bill | $ 21.06 | $ 52.93 | $ 81.98 | $ 105.38 | $ 128.78 | $ 152.18 | $ 175.58 | $ 198.98 | $ 222.38 |
| GMO Winter Gen Use and Space Heat 1 Meter | $ 21.06 | $ 52.93 | $ 80.22 | $ 98.32 | $ 113.29 | $ 128.27 | $ 143.24 | $ 158.21 | $ 173.19 |

Q. Do you agree with Ms. Miller's testimony at page 9 of her RD Rebuttal stating, "I disagree with utilization of averages for purposes of determining customer bill impacts and believe that such an approach fails to recognize the diversity of customers within the class and their individual impacts."

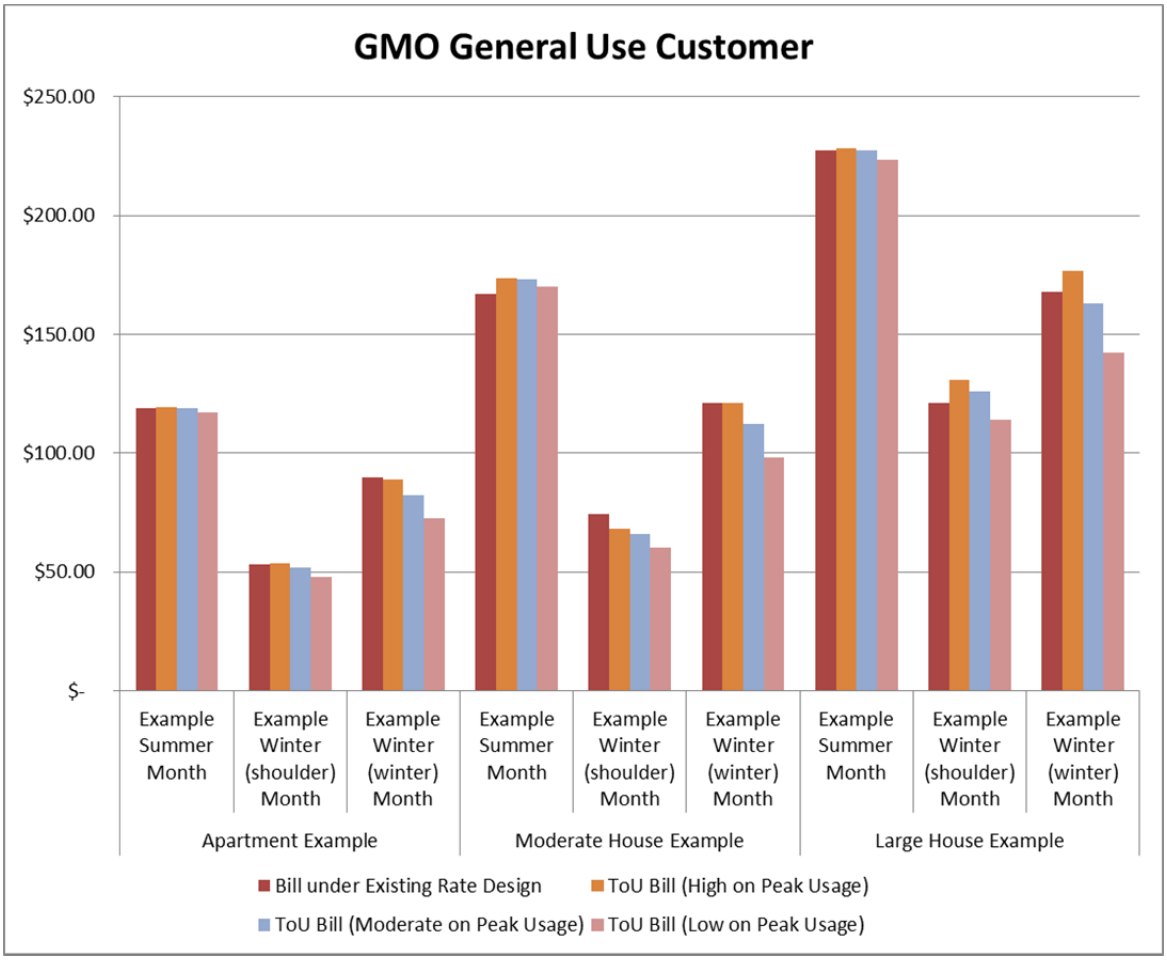
A. Yes, absolutely. I was quite confused by this testimony in that Staff did not advocate for the utilization of averages for purposes of determining customer bill impacts because it fails to recognize the diversity of customers within the class and their individual impacts. The inability to rely on averages underlays Staff's presentation of possible customer impacts in the "Customer Impacts and Complications to Customer Impact Mitigation" section of the Staff CCOS Report.

Q. In response to Ms. Miller's testimony and concerns raised by Mr. Hyman, have you prepared sample annual bill impacts?

A. Yes. Provided below are a series of example residential customers indicating a range of possible usages, on peak percentages, bill impacts by dollar, and bill impacts by percentage.

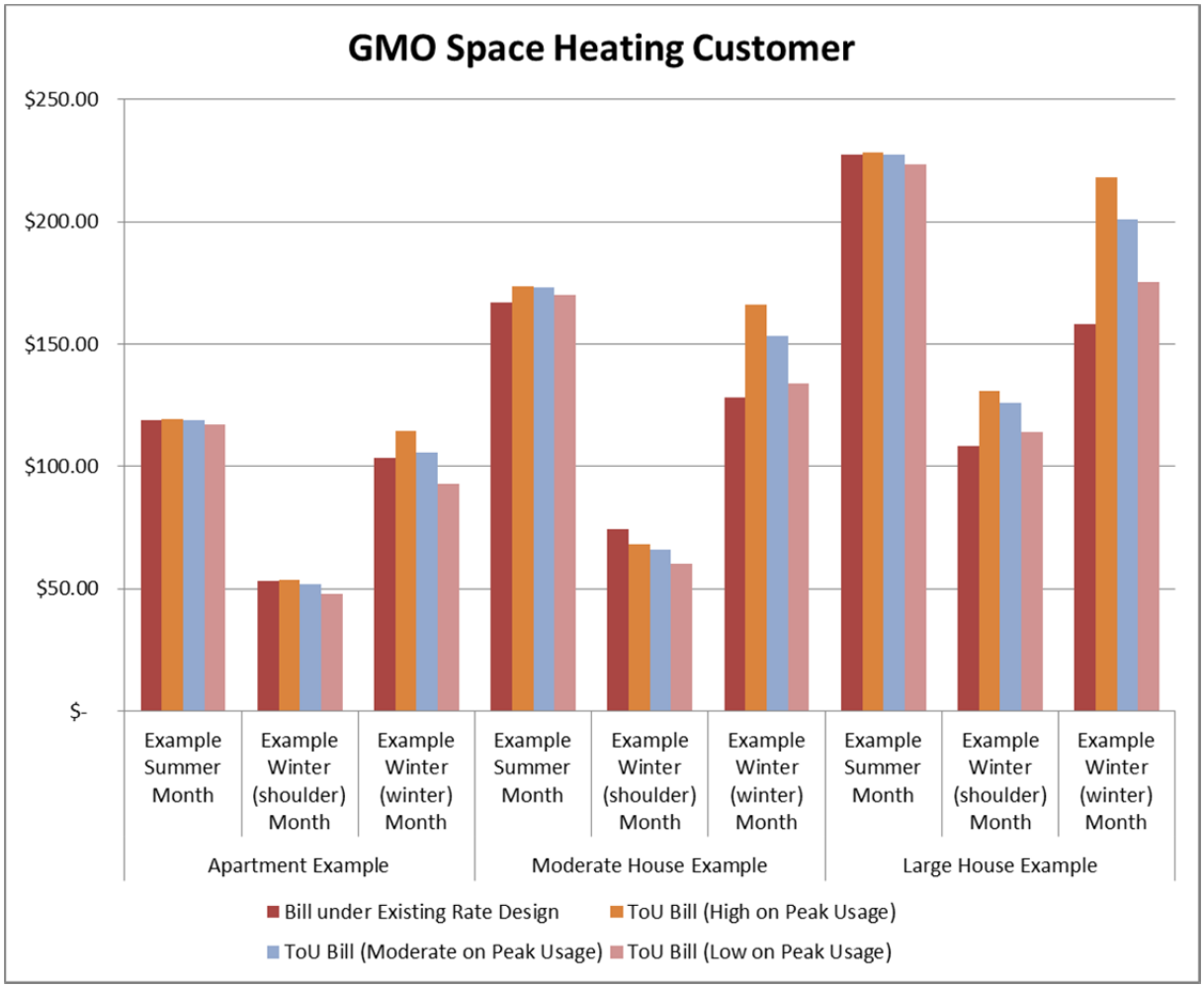
**GMO General Use Customer Example Impacts**

| | Apartment Example | | | | Moderate House Example | | | | Large House Example | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Example Summer Month | Example Winter (shoulder) Month | Example Winter (winter) Month | Annual | Example Summer Month | Example Winter (shoulder) Month | Example Winter (winter) Month | Annual | Example Summer Month | Example Winter (shoulder) Month | Example Winter (winter) Month | Annual |
| **GMO General Use Customer** | 900 | 450 | 850 | 8,800 | 1350 | 600 | 1200 | 12,600 | 1800 | 1250 | 1800 | 19,400 |
| Bill under Existing Rate Design | $ 118.88 | $ 52.93 | $ 89.78 | 1,046 | $ 167.08 | $ 74.18 | $ 120.98 | 1,449 | $ 227.33 | $ 120.98 | $ 167.78 | 2,064 |
| % on peak (High) | 75% | 85% | 75% | 77% | 75% | 85% | 75% | 77% | 75% | 85% | 75% | 77% |
| % on peak (Moderate) | 67% | 75% | 55% | 66% | 67% | 75% | 55% | 66% | 67% | 75% | 55% | 66% |
| % on peak (Low) | 25% | 50% | 25% | 35% | 25% | 50% | 25% | 35% | 25% | 50% | 25% | 35% |
| ToU Bill (High on Peak Usage) | $ 119.29 | $ 53.68 | $ 88.88 | $ 1,047 | $ 173.72 | $ 68.10 | $ 121.18 | $ 1,452 | $ 228.15 | $ 130.58 | $ 176.56 | $ 2,141 |
| ToU Bill (Moderate on Peak Usage) | $ 118.90 | $ 51.96 | $ 82.38 | $ 1,013 | $ 173.14 | $ 65.81 | $ 112.01 | $ 1,404 | $ 227.37 | $ 125.80 | $ 162.80 | $ 2,064 |
| ToU Bill (Low on Peak Usage) | $ 116.86 | $ 47.66 | $ 72.64 | $ 949 | $ 170.07 | $ 60.07 | $ 98.25 | $ 1,314 | $ 223.28 | $ 113.86 | $ 142.16 | $ 1,917 |
| $ Difference(High on Peak Usage) | $ 0.41 | $ 0.75 | $ (0.90) | $ 1 | $ 6.64 | $ (6.08) | $ 0.20 | $ 3 | $ 0.82 | $ 9.60 | $ 8.78 | $ 77 |
| $ Difference (Moderate on Peak Usage) | $ 0.02 | $ (0.97) | $ (7.40) | $ (33) | $ 6.06 | $ (8.37) | $ (8.97) | $ (45) | $ 0.04 | $ 4.82 | $ (4.98) | $ (0) |
| $ Difference (Low on Peak Usage) | $ (2.02) | $ (5.27) | $ (17.14) | $ (98) | $ 2.99 | $ (14.11) | $ (22.73) | $ (135) | $ (4.05) | $ (7.12) | $ (25.62) | $ (147) |
| % Difference(High on Peak Usage) | 0% | 1% | -1% | 0% | 4% | -8% | 0% | 0% | 0% | 8% | 5% | 4% |
| %Difference (Moderate on Peak Usage) | 0% | -2% | -8% | -3% | 4% | -11% | -7% | -3% | 0% | 4% | -3% | 0% |
| % Difference (Low on Peak Usage) | -2% | -10% | -19% | -9% | 2% | -19% | -19% | -9% | -2% | -6% | -15% | -7% |



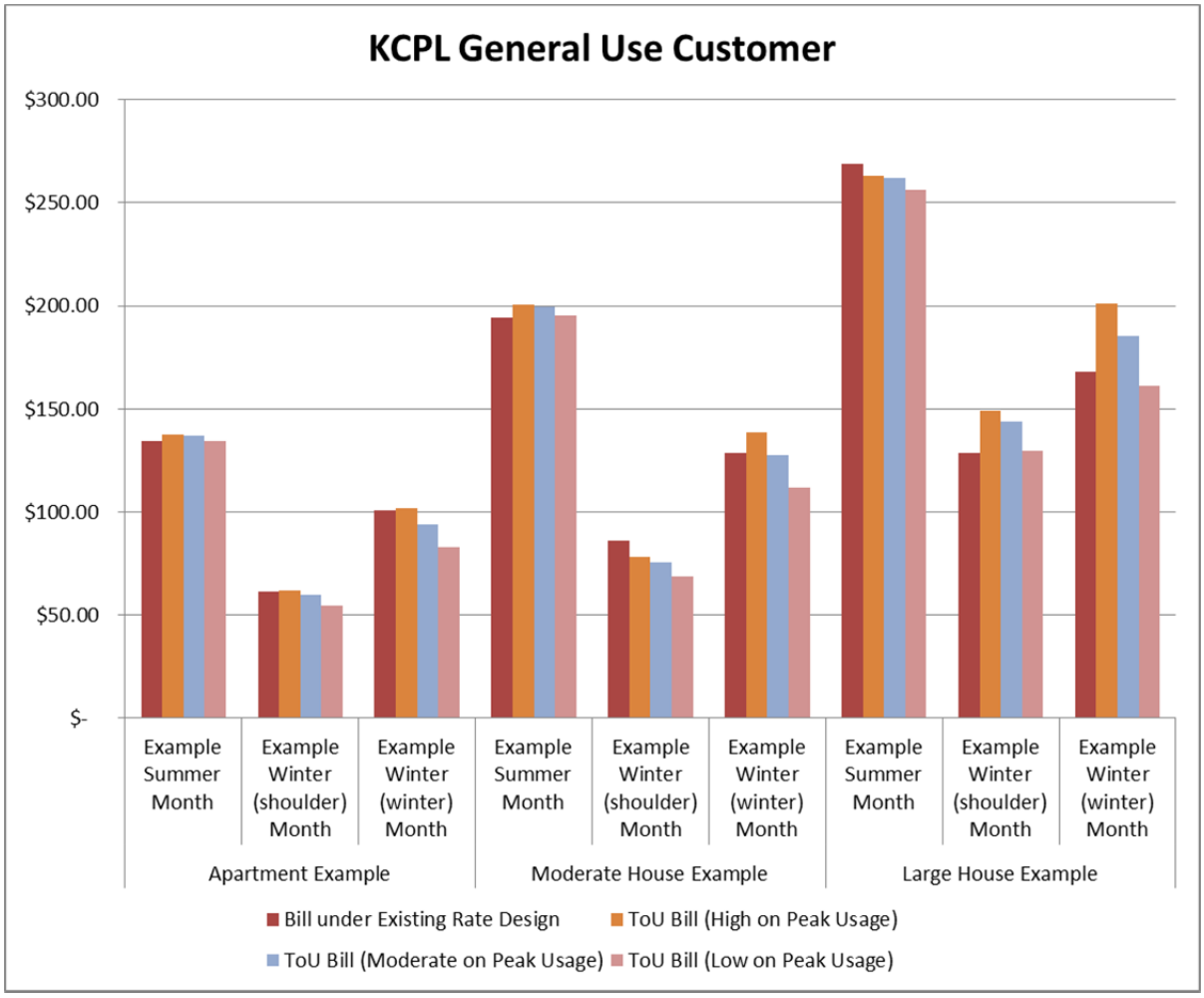

## GMO Space Heating Customer Example Impacts

| | Apartment Example | | | | Moderate House Example | | | | Large House Example | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Example Summer Month | Example Winter (shoulder) Month | Example Winter (winter) Month | Annual | Example Summer Month | Example Winter (shoulder) Month | Example Winter (winter) Month | Annual | Example Summer Month | Example Winter (shoulder) Month | Example Winter (winter) Month | Annual |
| **GMO Space Heating Customer** | 900 | 450 | **1125** | 9,900 | 1350 | 600 | **1688** | 14,550 | 1800 | 1250 | **2250** | 21,200 |
| Bill under Existing Rate Design | $ 118.88 | $ 52.93 | $ 103.31 | 1,100 | $ 167.08 | $ 74.18 | $ 128.27 | 1,478 | $ 227.33 | $ 108.30 | $ 158.21 | 1,975 |
| % on peak (High) | 75% | 85% | 75% | 77% | 75% | 85% | 75% | 77% | 75% | 85% | 75% | 77% |
| % on peak (Moderate) | 67% | 75% | 55% | 66% | 67% | 75% | 55% | 66% | 67% | 75% | 55% | 66% |
| % on peak (Low) | 25% | 50% | 25% | 35% | 25% | 50% | 25% | 35% | 25% | 50% | 25% | 35% |
| ToU Bill (High on Peak Usage) | $ 119.29 | $ 53.68 | $ 114.26 | $ 1,149 | $ 173.72 | $ 68.10 | $ 166.18 | $ 1,632 | $ 228.15 | $ 130.58 | $ 218.09 | $ 2,307 |
| ToU Bill (Moderate on Peak Usage) | $ 118.90 | $ 51.96 | $ 105.66 | $ 1,106 | $ 173.14 | $ 65.81 | $ 153.28 | $ 1,569 | $ 227.37 | $ 125.80 | $ 200.89 | $ 2,216 |
| ToU Bill (Low on Peak Usage) | $ 116.86 | $ 47.66 | $ 92.76 | $ 1,029 | $ 170.07 | $ 60.07 | $ 133.93 | $ 1,456 | $ 223.28 | $ 113.86 | $ 175.10 | $ 2,049 |
| $ Difference(High on Peak Usage) | $ 0.41 | $ 0.75 | $ 10.95 | $ 48 | $ 6.64 | $ (6.08) | $ 37.91 | $ 154 | $ 0.82 | $ 22.27 | $ 59.88 | $ 332 |
| $ Difference (Moderate on Peak Usage) | $ 0.02 | $ (0.97) | $ 2.35 | $ 6 | $ 6.06 | $ (8.37) | $ 25.01 | $ 91 | $ 0.04 | $ 17.50 | $ 42.68 | $ 241 |
| $ Difference (Low on Peak Usage) | $ (2.02) | $ (5.27) | $ (10.55) | $ (71) | $ 2.99 | $ (14.11) | $ 5.66 | $ (22) | $ (4.05) | $ 5.55 | $ 16.88 | $ 74 |
| % Difference(High on Peak Usage) | 0% | 1% | 11% | 4% | 4% | -8% | 30% | 10% | 0% | 21% | 38% | 17% |
| %Difference (Moderate on Peak Usage) | 0% | -2% | 2% | 1% | 4% | -11% | 20% | 6% | 0% | 16% | 27% | 12% |
| % Difference (Low on Peak Usage) | -2% | -10% | -10% | -6% | 2% | -19% | 4% | -1% | -2% | 5% | 11% | 4% |



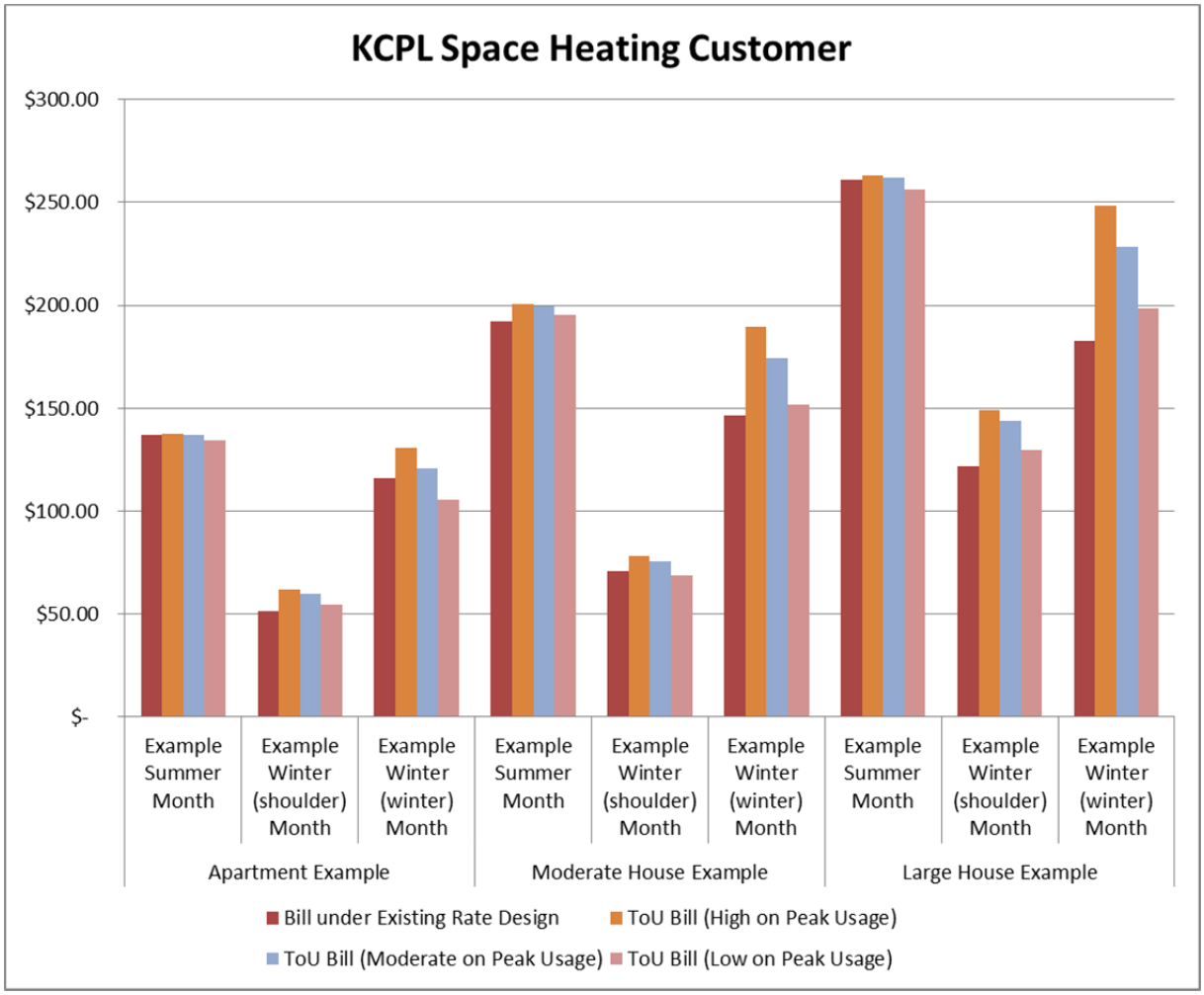

## KCPL General Use Customer Example Impacts

| | Apartment Example | | | | Moderate House Example | | | | Large House Example | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Example Summer Month | Example Winter (shoulder) Month | Example Winter (winter) Month | Annual | Example Summer Month | Example Winter (shoulder) Month | Example Winter (winter) Month | Annual | Example Summer Month | Example Winter (shoulder) Month | Example Winter (winter) Month | Annual |
| **KCPL General Use Customer** | 900 | 450 | 850 | 8,800 | 1350 | 600 | 1200 | 12,600 | 1800 | 1250 | 1800 | 19,400 |
| Bill under Existing Rate Design | $ 134.35 | $ 61.54 | $ 100.80 | 1,187 | $ 194.01 | $ 86.01 | $ 128.71 | 1,635 | $ 268.59 | $ 128.71 | $ 168.08 | 2,262 |
| % on peak (High) | 75% | 85% | 75% | 77% | 75% | 85% | 75% | 77% | 75% | 85% | 75% | 77% |
| % on peak (Moderate) | 67% | 75% | 55% | 66% | 67% | 75% | 55% | 66% | 67% | 75% | 55% | 66% |
| % on peak (Low) | 25% | 50% | 25% | 35% | 25% | 50% | 25% | 35% | 25% | 50% | 25% | 35% |
| ToU Bill (High on Peak Usage) | $ 137.79 | $ 61.80 | $ 101.72 | $ 1,205 | $ 200.37 | $ 78.19 | $ 138.41 | $ 1,668 | $ 262.95 | $ 149.22 | $ 201.31 | $ 2,454 |
| ToU Bill (Moderate on Peak Usage) | $ 137.25 | $ 59.79 | $ 94.14 | $ 1,165 | $ 199.56 | $ 75.52 | $ 127.71 | $ 1,611 | $ 261.87 | $ 143.65 | $ 185.26 | $ 2,363 |
| ToU Bill (Low on Peak Usage) | $ 134.40 | $ 54.78 | $ 82.78 | $ 1,088 | $ 195.29 | $ 68.83 | $ 111.67 | $ 1,503 | $ 256.18 | $ 129.72 | $ 161.20 | $ 2,188 |
| $ Difference(High on Peak Usage) | $ 3.44 | $ 0.25 | $ 0.92 | $ 18 | $ 6.36 | $ (7.82) | $ 9.70 | $ 33 | $ (5.64) | $ 20.51 | $ 33.23 | $ 192 |
| $ Difference (Moderate on Peak Usage) | $ 2.90 | $ (1.75) | $ (6.65) | $ (22) | $ 5.55 | $ (10.49) | $ (1.00) | $ (24) | $ (6.72) | $ 14.94 | $ 17.18 | $ 102 |
| $ Difference (Low on Peak Usage) | $ 0.05 | $ (6.77) | $ (18.02) | $ (99) | $ 1.28 | $ (17.18) | $ (17.04) | $ (132) | $ (12.41) | $ 1.01 | $ (6.88) | $ (73) |
| % Difference(High on Peak Usage) | 3% | 0% | 1% | 2% | 3% | -9% | 8% | 2% | -2% | 16% | 20% | 9% |
| %Difference (Moderate on Peak Usage) | 2% | -3% | -7% | -2% | 3% | -12% | -1% | -1% | -3% | 12% | 10% | 4% |
| % Difference (Low on Peak Usage) | 0% | -11% | -18% | -8% | 1% | -20% | -13% | -8% | -5% | 1% | -4% | -3% |




## KCPL Space Heating Customer Example Impacts

| | Apartment Example | | | | Moderate House Example | | | | Large House Example | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Example Summer Month | Example Winter (shoulder) Month | Example Winter (winter) Month | Annual | Example Summer Month | Example Winter (shoulder) Month | Example Winter (winter) Month | Annual | Example Summer Month | Example Winter (shoulder) Month | Example Winter (winter) Month | Annual |
| **KCPL 1 Meter Space Heating Customer** | 900 | 450 | **1125** | 9,900 | 1350 | 600 | **1688** | 14,550 | 1800 | 1250 | **2250** | 21,200 |
| Bill under Existing Rate Design | $ 136.87 | $ 51.43 | $ 115.75 | 1,216 | $ 192.10 | $ 70.84 | $ 146.24 | 1,637 | $ 261.13 | $ 121.85 | $ 182.83 | 2,263 |
| % on peak (High) | 75% | 85% | 75% | 77% | 75% | 85% | 75% | 77% | 75% | 85% | 75% | 77% |
| % on peak (Moderate) | 67% | 75% | 55% | 66% | 67% | 75% | 55% | 66% | 67% | 75% | 55% | 66% |
| % on peak (Low) | 25% | 50% | 25% | 35% | 25% | 50% | 25% | 35% | 25% | 50% | 25% | 35% |
| ToU Bill (High on Peak Usage) | $ 137.79 | $ 61.80 | $ 130.55 | $ 1,321 | $ 200.37 | $ 78.19 | $ 189.51 | $ 1,872 | $ 262.95 | $ 149.22 | $ 248.48 | $ 2,643 |
| ToU Bill (Moderate on Peak Usage) | $ 137.25 | $ 59.79 | $ 120.52 | $ 1,270 | $ 199.56 | $ 75.52 | $ 174.47 | $ 1,798 | $ 261.87 | $ 143.65 | $ 228.42 | $ 2,536 |
| ToU Bill (Low on Peak Usage) | $ 134.40 | $ 54.78 | $ 105.48 | $ 1,179 | $ 195.29 | $ 68.83 | $ 151.91 | $ 1,664 | $ 256.18 | $ 129.72 | $ 198.34 | $ 2,337 |
| $ Difference(High on Peak Usage) | $ 0.91 | $ 10.36 | $ 14.80 | $ 104 | $ 8.27 | $ 7.35 | $ 43.27 | $ 236 | $ 1.83 | $ 27.38 | $ 65.65 | $ 379 |
| $ Difference (Moderate on Peak Usage) | $ 0.37 | $ 8.36 | $ 4.77 | $ 54 | $ 7.46 | $ 4.68 | $ 28.23 | $ 161 | $ 0.74 | $ 21.81 | $ 45.60 | $ 273 |
| $ Difference (Low on Peak Usage) | $ (2.47) | $ 3.35 | $ (10.27) | $ (38) | $ 3.19 | $ (2.01) | $ 5.67 | $ 27 | $ (4.95) | $ 7.88 | $ 15.51 | $ 74 |
| % Difference(High on Peak Usage) | 1% | 20% | 13% | 9% | 4% | 10% | 30% | 14% | 1% | 22% | 36% | 17% |
| %Difference (Moderate on Peak Usage) | 0% | 16% | 4% | 4% | 4% | 7% | 19% | 10% | 0% | 18% | 25% | 12% |
| % Difference (Low on Peak Usage) | -2% | 7% | -9% | -3% | 2% | -3% | 4% | 2% | -2% | 6% | 8% | 3% |




Q. How do low differential time-differentiated rates more reasonably reflect cost-causation than either declining non-summer rates or inclining summer rates?

A. Even with the moderate customer impacts indicated above, low differential rates relate price signals consistent with the magnitude of existing price signals to the **time of day the energy is used**, as opposed to the **point in the month when a customer has exceeded some set level of energy usage**. This is better aligned with principles of cost causation, as it more accurately reflects what a utility pays for energy through the SPP integrated market,[6] and also how a utility's capacity needs are determined, both on a system

[6] SPP IM energy prices vary throughout the day and not on a month to month basis.

level and local level. For example, assume a KCPL General Service residential customer uses approximately 1,800 kWh in a particular month. Under the low differential ToU recommendation, that customer will have access to a price signal every day that reflects the relatively higher cost of energy during daytime, when demand is high, versus the relatively lower cost of energy during nighttime hours, when wind is blowing. As demonstrated in the CCOS Report beginning at page 25, that price signal is consistent with cost causation. Under the existing rate design, that customer would receive the price signal that each kWh consumed until late in the evening on the 10th day of the billing cycle has the same cost; and that each kWh consumed after the 10th day of the billing cycle has an incrementally higher cost that will remain constant for the rest of the month. The graphics below provide the energy portion of the customers' bill as of each hour of the month, and indicate the rate applicable to each hour of the month.

**Time of Day Pricing Example, KCPL Summer Rates**

| | Relative Higher Rate Applicable | | | | | | | | | | | | Relative Lower Rate Applicable | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Summer ToU Bill | | | | | | | | | | | | | | | | | | | | | | | |
| Day \ Hour (Row\Column) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 1 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 5 | 6 | 7 | 7 | 7 | 8 | 8 |
| 2 | 8 | 8 | 8 | 8 | 8 | 9 | 10 | 10 | 10 | 10 | 10 | 10 | 11 | 11 | 11 | 11 | 12 | 13 | 14 | 15 | 15 | 15 | 16 | 16 |
| 3 | 16 | 16 | 16 | 16 | 16 | 17 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 19 | 19 | 19 | 20 | 21 | 22 | 23 | 23 | 23 | 24 | 24 |
| 4 | 24 | 24 | 24 | 24 | 24 | 25 | 25 | 26 | 26 | 26 | 26 | 26 | 26 | 27 | 27 | 27 | 28 | 28 | 28 | 29 | 29 | 29 | 30 | 30 |
| 5 | 30 | 30 | 30 | 30 | 30 | 31 | 32 | 32 | 32 | 32 | 32 | 32 | 33 | 33 | 34 | 35 | 35 | 36 | 37 | 38 | 38 | 38 | 39 | 39 |
| 6 | 39 | 39 | 39 | 39 | 39 | 40 | 40 | 41 | 41 | 42 | 42 | 42 | 43 | 44 | 44 | 45 | 46 | 47 | 47 | 48 | 49 | 49 | 50 | 50 |
| 7 | 50 | 50 | 50 | 50 | 50 | 51 | 51 | 51 | 51 | 52 | 52 | 53 | 53 | 54 | 55 | 55 | 56 | 57 | 58 | 58 | 59 | 59 | 60 | 60 |
| 8 | 60 | 60 | 60 | 60 | 60 | 61 | 62 | 62 | 62 | 62 | 62 | 62 | 63 | 63 | 63 | 63 | 64 | 65 | 66 | 67 | 67 | 67 | 68 | 68 |
| 9 | 68 | 68 | 68 | 68 | 68 | 69 | 70 | 70 | 70 | 70 | 70 | 70 | 71 | 71 | 71 | 71 | 72 | 73 | 74 | 75 | 75 | 75 | 76 | 76 |
| 10 | 76 | 76 | 76 | 76 | 76 | 77 | 78 | 78 | 78 | 78 | 78 | 78 | 78 | 79 | 79 | 79 | 80 | 81 | 82 | 82 | 83 | 83 | 84 | 84 |
| 11 | 84 | 84 | 84 | 84 | 84 | 85 | 85 | 86 | 86 | 86 | 86 | 86 | 86 | 87 | 87 | 87 | 88 | 88 | 88 | 89 | 89 | 89 | 90 | 90 |
| 12 | 90 | 90 | 90 | 90 | 90 | 91 | 92 | 92 | 92 | 92 | 92 | 92 | 93 | 93 | 94 | 95 | 95 | 96 | 97 | 98 | 98 | 98 | 99 | 99 |
| 13 | 99 | 99 | 99 | 99 | 99 | 100 | 100 | 101 | 101 | 101 | 102 | 102 | 103 | 104 | 104 | 105 | 106 | 107 | 107 | 108 | 109 | 109 | 110 | 110 |
| 14 | 110 | 110 | 110 | 110 | 110 | 111 | 111 | 111 | 111 | 112 | 112 | 113 | 113 | 114 | 115 | 115 | 116 | 117 | 118 | 118 | 119 | 119 | 120 | 120 |
| 15 | 120 | 120 | 120 | 120 | 120 | 121 | 122 | 122 | 122 | 122 | 122 | 122 | 123 | 123 | 123 | 123 | 124 | 125 | 126 | 127 | 127 | 127 | 128 | 128 |
| 16 | 128 | 128 | 128 | 128 | 128 | 129 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 131 | 131 | 131 | 132 | 133 | 134 | 135 | 135 | 135 | 136 | 136 |
| 17 | 136 | 136 | 136 | 136 | 136 | 137 | 137 | 138 | 138 | 138 | 138 | 138 | 138 | 139 | 139 | 139 | 140 | 141 | 142 | 142 | 143 | 143 | 144 | 144 |
| 18 | 144 | 144 | 144 | 144 | 144 | 145 | 145 | 146 | 146 | 146 | 146 | 146 | 146 | 147 | 147 | 147 | 148 | 148 | 148 | 149 | 149 | 149 | 150 | 150 |
| 19 | 150 | 150 | 150 | 150 | 150 | 151 | 152 | 152 | 152 | 152 | 152 | 152 | 152 | 153 | 154 | 155 | 155 | 156 | 157 | 158 | 158 | 158 | 159 | 159 |
| 20 | 159 | 159 | 159 | 159 | 159 | 160 | 160 | 161 | 161 | 161 | 162 | 162 | 163 | 164 | 164 | 165 | 166 | 167 | 167 | 168 | 169 | 169 | 170 | 170 |
| 21 | 170 | 170 | 170 | 170 | 170 | 171 | 171 | 171 | 171 | 172 | 172 | 173 | 173 | 174 | 175 | 175 | 176 | 177 | 178 | 178 | 179 | 179 | 180 | 180 |
| 22 | 180 | 180 | 180 | 180 | 180 | 181 | 182 | 182 | 182 | 182 | 182 | 182 | 183 | 183 | 183 | 183 | 184 | 185 | 186 | 187 | 187 | 187 | 188 | 188 |
| 23 | 188 | 188 | 188 | 188 | 188 | 189 | 190 | 190 | 190 | 190 | 190 | 190 | 190 | 191 | 191 | 191 | 192 | 193 | 194 | 194 | 195 | 195 | 196 | 196 |
| 24 | 196 | 196 | 196 | 196 | 196 | 197 | 197 | 198 | 198 | 198 | 198 | 198 | 198 | 199 | 199 | 199 | 200 | 201 | 202 | 202 | 203 | 203 | 204 | 204 |
| 25 | 204 | 204 | 204 | 204 | 204 | 205 | 205 | 206 | 206 | 206 | 206 | 206 | 206 | 207 | 207 | 207 | 208 | 208 | 208 | 209 | 209 | 209 | 210 | 210 |
| 26 | 210 | 210 | 210 | 210 | 210 | 211 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 213 | 214 | 214 | 215 | 216 | 217 | 218 | 218 | 218 | 219 | 219 |
| 27 | 219 | 219 | 219 | 219 | 219 | 220 | 220 | 221 | 221 | 221 | 222 | 222 | 223 | 224 | 224 | 225 | 226 | 226 | 227 | 228 | 229 | 229 | 230 | 230 |
| 28 | 230 | 230 | 230 | 230 | 230 | 230 | 231 | 231 | 231 | 232 | 232 | 233 | 233 | 234 | 234 | 235 | 236 | 237 | 237 | 238 | 239 | 239 | 240 | 240 |
| 29 | 240 | 240 | 240 | 240 | 240 | 241 | 242 | 242 | 242 | 242 | 242 | 242 | 243 | 243 | 243 | 243 | 244 | 245 | 246 | 247 | 247 | 247 | 248 | 248 |
| 30 | 248 | 248 | 248 | 248 | 248 | 249 | 250 | 250 | 250 | 250 | 250 | 250 | 250 | 251 | 251 | 251 | 252 | 253 | 254 | 254 | 255 | 255 | 256 | 256 |

| | Relative Higher Rate Applicable | | | | | | | | | | | | Relative Lower Rate Applicable | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Summer General Use Bill | | | | | | | | | | | | | | | | | | | | | | | |
| Day \ Hour (Row\Column) | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 4 | 5 | 5 | 6 | 7 | 7 | 7 | 7 |
| 2 | 7 | 8 | 8 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 9 | 10 | 10 | 10 | 10 | 11 | 11 | 12 | 13 | 13 | 14 | 14 | 15 | 15 |
| 3 | 15 | 15 | 15 | 15 | 15 | 16 | 16 | 16 | 17 | 17 | 17 | 17 | 17 | 17 | 18 | 18 | 19 | 19 | 20 | 21 | 21 | 22 | 22 | 22 |
| 4 | 22 | 22 | 22 | 22 | 23 | 23 | 24 | 24 | 24 | 24 | 24 | 24 | 25 | 25 | 25 | 25 | 26 | 26 | 26 | 27 | 27 | 27 | 28 | 28 |
| 5 | 28 | 28 | 28 | 28 | 28 | 29 | 29 | 30 | 30 | 30 | 30 | 30 | 30 | 31 | 31 | 32 | 33 | 33 | 34 | 35 | 35 | 36 | 36 | 36 |
| 6 | 36 | 36 | 36 | 36 | 37 | 37 | 37 | 38 | 38 | 38 | 39 | 39 | 40 | 40 | 41 | 42 | 42 | 43 | 44 | 45 | 45 | 46 | 46 | 46 |
| 7 | 46 | 46 | 46 | 46 | 47 | 47 | 47 | 47 | 47 | 48 | 48 | 49 | 49 | 50 | 50 | 51 | 52 | 52 | 53 | 54 | 54 | 55 | 55 | 55 |
| 8 | 56 | 56 | 56 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 58 | 58 | 59 | 59 | 60 | 61 | 62 | 62 | 62 | 63 | 63 |
| 9 | 63 | 63 | 63 | 63 | 63 | 64 | 64 | 65 | 65 | 65 | 65 | 65 | 65 | 66 | 66 | 66 | 67 | 68 | 68 | 69 | 69 | 70 | 70 | 70 |
| 10 | 70 | 70 | 70 | 70 | 71 | 71 | 72 | 72 | 72 | 72 | 72 | 72 | 73 | 73 | 73 | 73 | 74 | 75 | 76 | 76 | 77 | 77 | 77 | 78 |
| 11 | 78 | 78 | 78 | 78 | 78 | 79 | 80 | 80 | 80 | 80 | 80 | 80 | 81 | 81 | 81 | 81 | 82 | 82 | 82 | 83 | 83 | 84 | 84 | 84 |
| 12 | 84 | 84 | 85 | 85 | 85 | 86 | 86 | 86 | 86 | 86 | 87 | 87 | 87 | 88 | 89 | 89 | 90 | 91 | 92 | 93 | 93 | 93 | 94 | 94 |
| 13 | 94 | 94 | 94 | 94 | 95 | 95 | 96 | 96 | 96 | 97 | 97 | 98 | 98 | 99 | 100 | 101 | 101 | 102 | 103 | 104 | 104 | 105 | 105 | 106 |
| 14 | 106 | 106 | 106 | 106 | 106 | 106 | 106 | 107 | 107 | 108 | 108 | 109 | 109 | 110 | 111 | 111 | 112 | 113 | 114 | 115 | 115 | 116 | 116 | 116 |
| 15 | 117 | 117 | 117 | 117 | 117 | 118 | 118 | 119 | 119 | 119 | 119 | 119 | 119 | 120 | 120 | 120 | 121 | 122 | 123 | 124 | 124 | 124 | 125 | 125 |
| 16 | 125 | 125 | 125 | 125 | 126 | 126 | 127 | 127 | 127 | 127 | 127 | 128 | 128 | 128 | 128 | 129 | 130 | 130 | 131 | 132 | 133 | 133 | 133 | 134 |
| 17 | 134 | 134 | 134 | 134 | 134 | 135 | 135 | 136 | 136 | 136 | 136 | 136 | 136 | 137 | 137 | 137 | 138 | 139 | 140 | 141 | 141 | 142 | 142 | 142 |
| 18 | 142 | 142 | 142 | 142 | 143 | 143 | 144 | 144 | 144 | 144 | 145 | 145 | 145 | 145 | 146 | 146 | 146 | 147 | 147 | 147 | 148 | 148 | 149 | 149 |
| 19 | 149 | 149 | 149 | 149 | 149 | 150 | 151 | 151 | 151 | 151 | 151 | 151 | 152 | 152 | 153 | 154 | 154 | 155 | 156 | 157 | 158 | 158 | 158 | 158 |
| 20 | 159 | 159 | 159 | 159 | 159 | 159 | 160 | 160 | 161 | 161 | 162 | 162 | 163 | 164 | 164 | 165 | 166 | 167 | 167 | 168 | 169 | 169 | 170 | 170 |
| 21 | 170 | 170 | 170 | 170 | 171 | 171 | 171 | 171 | 172 | 172 | 173 | 173 | 174 | 174 | 175 | 176 | 177 | 177 | 178 | 179 | 180 | 180 | 181 | 181 |
| 22 | 181 | 181 | 181 | 181 | 181 | 182 | 183 | 183 | 183 | 183 | 183 | 184 | 184 | 184 | 184 | 185 | 186 | 186 | 187 | 188 | 189 | 189 | 189 | 189 |
| 23 | 190 | 190 | 190 | 190 | 190 | 191 | 191 | 192 | 192 | 192 | 192 | 192 | 192 | 193 | 193 | 193 | 194 | 195 | 196 | 197 | 197 | 197 | 198 | 198 |
| 24 | 198 | 198 | 198 | 198 | 199 | 199 | 200 | 200 | 200 | 200 | 200 | 201 | 201 | 201 | 201 | 202 | 203 | 203 | 204 | 205 | 206 | 206 | 206 | 207 |
| 25 | 207 | 207 | 207 | 207 | 207 | 208 | 208 | 209 | 209 | 209 | 209 | 209 | 209 | 210 | 210 | 210 | 211 | 211 | 211 | 212 | 212 | 213 | 213 | 213 |
| 26 | 213 | 213 | 213 | 214 | 214 | 214 | 215 | 215 | 215 | 215 | 216 | 216 | 216 | 217 | 218 | 218 | 219 | 220 | 221 | 221 | 222 | 222 | 223 | 223 |
| 27 | 223 | 223 | 223 | 223 | 223 | 224 | 225 | 225 | 225 | 226 | 226 | 227 | 227 | 228 | 229 | 229 | 230 | 231 | 232 | 233 | 233 | 234 | 234 | 235 |
| 28 | 235 | 235 | 235 | 235 | 235 | 235 | 235 | 236 | 236 | 237 | 237 | 238 | 238 | 239 | 240 | 240 | 241 | 242 | 243 | 244 | 244 | 245 | 245 | 245 |
| 29 | 246 | 246 | 246 | 246 | 246 | 247 | 247 | 247 | 248 | 248 | 248 | 248 | 248 | 249 | 249 | 249 | 250 | 251 | 252 | 253 | 253 | 253 | 254 | 254 |
| 30 | 254 | 254 | 254 | 254 | 254 | 255 | 256 | 256 | 256 | 256 | 256 | 257 | 257 | 257 | 257 | 258 | 259 | 259 | 260 | 261 | 262 | 262 | 262 | 263 |

Similarly, for a winter month with usage of approximately 2,500 kWh, the graphics below provide the energy portion of the customers' bill as of each hour of the month, and indicate the rate applicable to each hour of the month.

*Continued on next page.*

## Time of Day Pricing Example, KCPL Winter Rates

| | Relative Higher Rate Applicable | | | | | | | | | | | | Relative Lower Rate Applicable | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Winter ToU Bill | | | | | | | | | | | | | | | | | | | | | | | |
| Day \ Hour (Row\Column) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 1 | 0 | 1 | 1 | 2 | 2 | 2 | 3 | 4 | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 6 | 7 | 7 | 8 | 9 | 10 | 10 | 11 |
| 2 | 11 | 12 | 12 | 12 | 13 | 13 | 14 | 14 | 15 | 15 | 15 | 15 | 15 | 16 | 16 | 16 | 16 | 17 | 18 | 19 | 20 | 20 | 21 | 21 |
| 3 | 22 | 22 | 23 | 23 | 23 | 23 | 24 | 25 | 25 | 25 | 26 | 26 | 26 | 26 | 27 | 27 | 27 | 28 | 29 | 29 | 30 | 31 | 32 | 32 |
| 4 | 32 | 33 | 33 | 34 | 34 | 34 | 35 | 36 | 36 | 36 | 36 | 37 | 37 | 37 | 37 | 37 | 38 | 38 | 38 | 38 | 39 | 40 | 40 | 41 |
| 5 | 41 | 41 | 42 | 42 | 42 | 43 | 43 | 44 | 44 | 45 | 45 | 45 | 45 | 46 | 47 | 47 | 48 | 49 | 50 | 51 | 51 | 52 | 53 | 53 |
| 6 | 54 | 54 | 54 | 55 | 55 | 55 | 56 | 56 | 57 | 58 | 58 | 59 | 60 | 60 | 61 | 62 | 62 | 63 | 64 | 65 | 66 | 66 | 67 | 67 |
| 7 | 68 | 68 | 69 | 69 | 69 | 70 | 70 | 71 | 71 | 72 | 73 | 73 | 74 | 75 | 75 | 76 | 77 | 78 | 78 | 79 | 80 | 81 | 81 | 81 |
| 8 | 82 | 82 | 83 | 83 | 83 | 84 | 84 | 85 | 85 | 86 | 86 | 86 | 86 | 86 | 87 | 87 | 87 | 88 | 89 | 90 | 90 | 91 | 92 | 92 |
| 9 | 93 | 93 | 93 | 94 | 94 | 94 | 95 | 96 | 96 | 96 | 97 | 97 | 97 | 97 | 97 | 97 | 98 | 99 | 99 | 100 | 101 | 102 | 102 | 103 |
| 10 | 103 | 104 | 104 | 104 | 105 | 105 | 106 | 106 | 107 | 107 | 107 | 107 | 108 | 108 | 108 | 108 | 109 | 109 | 110 | 111 | 112 | 112 | 113 | 113 |
| 11 | 114 | 114 | 115 | 115 | 115 | 116 | 116 | 117 | 117 | 118 | 118 | 118 | 118 | 118 | 119 | 119 | 119 | 119 | 119 | 120 | 120 | 121 | 122 | 122 |
| 12 | 123 | 123 | 123 | 124 | 124 | 124 | 125 | 126 | 126 | 126 | 126 | 127 | 127 | 128 | 128 | 129 | 130 | 130 | 131 | 132 | 133 | 134 | 134 | 135 |
| 13 | 135 | 135 | 136 | 136 | 136 | 137 | 137 | 138 | 139 | 139 | 140 | 141 | 141 | 142 | 143 | 143 | 144 | 145 | 146 | 146 | 147 | 148 | 148 | 149 |
| 14 | 149 | 150 | 150 | 150 | 151 | 151 | 151 | 152 | 153 | 153 | 154 | 155 | 156 | 156 | 157 | 158 | 158 | 159 | 160 | 161 | 162 | 162 | 162 | 163 |
| 15 | 163 | 164 | 164 | 164 | 165 | 165 | 166 | 167 | 167 | 167 | 167 | 168 | 168 | 168 | 168 | 168 | 169 | 169 | 170 | 171 | 172 | 173 | 173 | 174 |
| 16 | 174 | 175 | 175 | 175 | 175 | 176 | 177 | 177 | 178 | 178 | 178 | 178 | 178 | 179 | 179 | 179 | 179 | 180 | 181 | 182 | 183 | 183 | 184 | 184 |
| 17 | 185 | 185 | 186 | 186 | 186 | 186 | 187 | 188 | 188 | 188 | 189 | 189 | 189 | 189 | 189 | 190 | 190 | 191 | 192 | 192 | 193 | 194 | 194 | 195 |
| 18 | 195 | 196 | 196 | 197 | 197 | 197 | 198 | 199 | 199 | 199 | 199 | 200 | 200 | 200 | 200 | 200 | 200 | 201 | 201 | 201 | 202 | 202 | 203 | 204 |
| 19 | 204 | 204 | 205 | 205 | 205 | 206 | 206 | 207 | 207 | 208 | 208 | 208 | 208 | 209 | 210 | 210 | 211 | 212 | 213 | 214 | 214 | 215 | 216 | 216 |
| 20 | 217 | 217 | 217 | 218 | 218 | 218 | 219 | 219 | 220 | 221 | 221 | 222 | 223 | 223 | 224 | 225 | 225 | 226 | 227 | 228 | 229 | 229 | 230 | 230 |
| 21 | 231 | 231 | 231 | 232 | 232 | 233 | 233 | 234 | 234 | 235 | 236 | 236 | 237 | 238 | 238 | 239 | 240 | 241 | 241 | 242 | 243 | 243 | 244 | 244 |
| 22 | 245 | 245 | 246 | 246 | 246 | 247 | 247 | 248 | 248 | 249 | 249 | 249 | 249 | 249 | 250 | 250 | 250 | 251 | 252 | 253 | 253 | 254 | 255 | 255 |
| 23 | 256 | 256 | 256 | 257 | 257 | 257 | 258 | 259 | 259 | 259 | 260 | 260 | 260 | 260 | 260 | 260 | 261 | 262 | 262 | 263 | 264 | 265 | 265 | 266 |
| 24 | 266 | 267 | 267 | 267 | 268 | 268 | 269 | 269 | 270 | 270 | 270 | 270 | 271 | 271 | 271 | 271 | 272 | 272 | 273 | 274 | 275 | 275 | 276 | 276 |
| 25 | 277 | 277 | 278 | 278 | 278 | 279 | 279 | 280 | 280 | 281 | 281 | 281 | 281 | 281 | 282 | 282 | 282 | 282 | 282 | 282 | 283 | 284 | 285 | 285 |
| 26 | 285 | 286 | 286 | 287 | 287 | 287 | 288 | 289 | 289 | 289 | 289 | 290 | 290 | 291 | 291 | 292 | 293 | 293 | 294 | 295 | 296 | 296 | 297 | 298 |
| 27 | 298 | 298 | 299 | 299 | 299 | 300 | 300 | 301 | 302 | 302 | 303 | 304 | 304 | 305 | 306 | 306 | 307 | 308 | 309 | 309 | 310 | 311 | 311 | 312 |
| 28 | 312 | 313 | 313 | 313 | 314 | 314 | 314 | 315 | 316 | 316 | 317 | 318 | 318 | 319 | 320 | 321 | 321 | 322 | 323 | 324 | 325 | 325 | 325 | 326 |
| 29 | 326 | 327 | 327 | 327 | 328 | 328 | 329 | 330 | 330 | 330 | 330 | 331 | 331 | 331 | 331 | 331 | 332 | 332 | 333 | 334 | 335 | 336 | 336 | 337 |
| 30 | 337 | 337 | 338 | 338 | 338 | 339 | 339 | 340 | 341 | 341 | 341 | 341 | 341 | 342 | 342 | 342 | 342 | 343 | 344 | 345 | 346 | 346 | 347 | 347 |

| | Relative Higher Rate Applicable | | | | | | | | Relative Middle Rate Applicable | | | | | | | | | Relative Lower Rate Applicable | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Winter General Use Bill | | | | | | | | | | | | | | | | | | | | | | | | |
| Day \ Hour (Row\Column) | | | | | | | | | | | | | | | | | | | | | | | | | |
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| 3 | 17 | 17 | 17 | 18 | 18 | 18 | 19 | 19 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 21 | 21 | 22 | 22 | 23 | 23 | 24 | 24 | 25 |
| 4 | 25 | 25 | 26 | 26 | 26 | 26 | 27 | 28 | 28 | 28 | 28 | 28 | 28 | 29 | 29 | 29 | 29 | 29 | 29 | 29 | 30 | 31 | 31 | 31 |
| 5 | 32 | 32 | 32 | 33 | 33 | 33 | 34 | 34 | 34 | 35 | 35 | 35 | 35 | 36 | 36 | 37 | 37 | 38 | 38 | 39 | 40 | 40 | 41 | 41 |
| 6 | 41 | 42 | 42 | 42 | 42 | 43 | 43 | 44 | 44 | 45 | 45 | 46 | 46 | 47 | 47 | 48 | 48 | 49 | 49 | 50 | 51 | 51 | 52 | 52 |
| 7 | 52 | 53 | 53 | 53 | 53 | 54 | 54 | 55 | 55 | 56 | 56 | 57 | 57 | 58 | 58 | 59 | 59 | 60 | 60 | 61 | 62 | 62 | 62 | 63 |
| 8 | 63 | 63 | 64 | 64 | 64 | 64 | 65 | 65 | 65 | 65 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 67 | 67 | 68 | 68 | 68 | 69 | 69 |
| 9 | 69 | 70 | 70 | 70 | 70 | 70 | 71 | 71 | 71 | 71 | 72 | 72 | 72 | 72 | 72 | 72 | 72 | 73 | 73 | 74 | 74 | 74 | 75 | 75 |
| 10 | 75 | 76 | 76 | 76 | 76 | 76 | 77 | 77 | 77 | 77 | 78 | 78 | 78 | 78 | 78 | 78 | 78 | 79 | 79 | 80 | 80 | 81 | 81 | 81 |
| 11 | 81 | 82 | 82 | 82 | 82 | 82 | 83 | 83 | 83 | 84 | 84 | 84 | 84 | 84 | 84 | 84 | 84 | 84 | 84 | 85 | 85 | 85 | 86 | 86 |
| 12 | 86 | 87 | 87 | 87 | 87 | 87 | 88 | 88 | 88 | 88 | 89 | 89 | 89 | 89 | 90 | 90 | 90 | 91 | 91 | 92 | 92 | 92 | 93 | 93 |
| 13 | 93 | 94 | 94 | 94 | 94 | 94 | 95 | 95 | 95 | 96 | 96 | 96 | 97 | 97 | 98 | 98 | 98 | 99 | 99 | 100 | 100 | 101 | 101 | 101 |
| 14 | 101 | 102 | 102 | 102 | 102 | 102 | 103 | 103 | 103 | 104 | 104 | 105 | 105 | 105 | 106 | 106 | 106 | 107 | 107 | 108 | 108 | 108 | 109 | 109 |
| 15 | 109 | 110 | 110 | 110 | 110 | 110 | 111 | 111 | 111 | 111 | 112 | 112 | 112 | 112 | 112 | 112 | 112 | 113 | 113 | 114 | 114 | 114 | 115 | 115 |
| 16 | 115 | 116 | 116 | 116 | 116 | 116 | 117 | 117 | 117 | 117 | 118 | 118 | 118 | 118 | 118 | 118 | 118 | 119 | 119 | 120 | 120 | 121 | 121 | 121 |
| 17 | 121 | 122 | 122 | 122 | 122 | 122 | 123 | 123 | 123 | 124 | 124 | 124 | 124 | 124 | 124 | 124 | 124 | 125 | 125 | 126 | 126 | 127 | 127 | 127 |
| 18 | 127 | 128 | 128 | 128 | 128 | 128 | 129 | 129 | 129 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 131 | 131 | 131 | 131 | 132 | 132 |
| 19 | 132 | 133 | 133 | 133 | 133 | 133 | 134 | 134 | 134 | 134 | 135 | 135 | 135 | 135 | 136 | 136 | 136 | 137 | 137 | 138 | 138 | 139 | 139 | 139 |
| 20 | 139 | 140 | 140 | 140 | 140 | 140 | 141 | 141 | 141 | 142 | 142 | 143 | 143 | 143 | 144 | 144 | 144 | 145 | 145 | 146 | 146 | 147 | 147 | 147 |
| 21 | 147 | 148 | 148 | 148 | 148 | 148 | 149 | 149 | 149 | 150 | 150 | 151 | 151 | 151 | 152 | 152 | 152 | 153 | 153 | 154 | 154 | 155 | 155 | 155 |
| 22 | 155 | 156 | 156 | 156 | 156 | 156 | 157 | 157 | 157 | 158 | 158 | 158 | 158 | 158 | 158 | 158 | 158 | 159 | 159 | 160 | 160 | 161 | 161 | 161 |
| 23 | 161 | 162 | 162 | 162 | 162 | 162 | 163 | 163 | 163 | 164 | 164 | 164 | 164 | 164 | 164 | 164 | 164 | 165 | 165 | 166 | 166 | 167 | 167 | 167 |
| 24 | 167 | 168 | 168 | 168 | 168 | 168 | 169 | 169 | 169 | 170 | 170 | 170 | 170 | 170 | 170 | 170 | 170 | 171 | 171 | 172 | 172 | 173 | 173 | 173 |
| 25 | 174 | 174 | 174 | 174 | 174 | 174 | 175 | 175 | 176 | 176 | 176 | 176 | 176 | 176 | 176 | 176 | 176 | 176 | 177 | 177 | 177 | 178 | 178 | 178 |
| 26 | 178 | 179 | 179 | 179 | 179 | 179 | 180 | 180 | 180 | 181 | 181 | 181 | 181 | 181 | 182 | 182 | 182 | 183 | 183 | 184 | 184 | 185 | 185 | 185 |
| 27 | 185 | 186 | 186 | 186 | 186 | 187 | 187 | 187 | 187 | 188 | 188 | 189 | 189 | 189 | 190 | 190 | 190 | 191 | 191 | 192 | 192 | 193 | 193 | 193 |
| 28 | 193 | 194 | 194 | 194 | 194 | 195 | 195 | 195 | 196 | 196 | 196 | 197 | 197 | 197 | 198 | 198 | 199 | 199 | 199 | 200 | 200 | 201 | 201 | 201 |
| 29 | 201 | 202 | 202 | 202 | 202 | 202 | 203 | 203 | 203 | 204 | 204 | 204 | 204 | 204 | 204 | 204 | 204 | 205 | 205 | 206 | 206 | 207 | 207 | 207 |
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Q. Under the existing KCPL rate design, is the same price signal sent every month?

A. As it is likely perceived by a customer, no it is not. For example, if a customer purchases an EV and begins charging at home, that additional usage will make the customer's bill get more expensive per kWh more quickly for four months of the year, while it will make the customer's bill get less expensive per kWh more quickly eight months of the year.[7]

Q. Will Staff's recommended rate design in these rate cases fully address disparities in granular cost causation and recovery within the residential class?

A. No. However, Staff's recommended rate design provides a foundation that is more consistent with cost causation than existing rates, upon which features can be built to better capture cost causation and to incent behavior to minimize future costs.

Q. Have you reviewed Dr. Marke's testimony at page 18 of his RD Rebuttal stating that "an opt-out provision should be made available to ratepayers to at least provide some sense of choice and control over how their electric service is provided"?

A. Yes, I have reviewed that comment. I am somewhat puzzled in that from a customer control standpoint, a mandatory ToU rate provides customers as much, if not more, control than is occasioned by the current rate designs. However, if Dr. Marke's goal is to increase – not maintain – customer choice, the comment is understandable.

Q. Has Staff continued to identify ways to mitigate customer impacts?

A. Yes. In addition to the elimination of the seasonal revenue shift and lessening of the summer differential described above, Staff offers the following possible approach, subject to changes in class revenue requirements and residential customer charges:

[7] GMO's current summer rate design is flat, so the pricing signal is that every kWh consumed is of the same cost and value.

| | Effective Date of Rates until Summer 2019 Billing Months | Summer | Non-Summer Going Forward |
|---|---|---|---|
| **KCPL General Use and Single Meter Space Heating** | Modifed Non-Summer rates consistent with Staff CCoS Report, Appendix 2, Schedule SLKL-d3. | Mandatory ToU for all customers with AMI meters; for customers without AMI meters rates consistent with Staff CCoS Report, Appendix 2, Schedule SLKL-d3. | Default ToU with opt-out to Modified Non-Summer rates. |
| **KCPL Other Space Heating** | | | Default Modified Non-Summer Rates, with Opt-in ToU, shadow billing provided. |
| **GMO** | | | Default Modified Non-Summer Rates, with Opt-in ToU, shadow billing provided. |

Q. Is this approach consistent with Staff's recommendations in the Staff Report on Distributed Energy Resources, filed April 5, 2018, in File No. EW-2017-0245?

A. Yes.

Q. In the context of the Commission's workshops in File No. EW 2017-0245, the Commission's Report and Order in Case No. ER-2016-0285 at pages 12-13 and 56-57, as well as the Commissioner's questions and comments during the hearing in that case, and the commitment concerning ToU Rates GMO made at pages 10 – 11 of the Commission-Approved Stipulation resolving Case No. ER-2016-0156, what steps should KCPL and GMO have been taking during and prior to this case?

A. KCPL and GMO should have been preparing both internal processes and external communications to facilitate a smooth transition for customers to time-differentiated rates.

## III. CLASS COST OF SERVICE

Q. What concerns does Ms. Miller present at pages 3-4 of her RD Rebuttal?

A. Ms. Miller states KCPL's disagreement with Staff's recommended revenue shifts. She states four bases for this concern, (1) disagreement with reliance on the d-BIP

method of production allocation; (2) disagreement with Staff's revenue calculations; (3) "Staff recommends four different proposals for revenue shifts and are all proposed under the assumption that the cases will result in an overall decrease"; and (4) "Staff recommends no revenue shifts should the case result in a rate increase."

Q. Does Ms. Miller indicate why Staff's use of actual revenues ending October 31, 2017, is inappropriate as compared to KCPL's use of actual revenues ending June 30, 2017?

A. No. While this is a basis for possible differences in results between KCPL's study and Staff's study, this timing difference improves the reliability of Staff's study relative to the Company's, rather than lessens its reliability.

Q. Concerning the interplay between bases of disagreement items 3 and 4, is Ms. Miller's testimony internally consistent?

A. No. In the very next sentence of her statement referenced above, Ms. Miller states "With this understanding of Staff's proposal, the Company believes that with an expected rate increase, as outlined in our Direct Filing, the revenue shifts recommended by the Company offer a more reasonable proposal that acknowledges the likelihood of rate switchers, as well as, providing shifts that recognize each class's overall rate of return as outlined in our CCOS."

Q. If – in the event of an overall rate increase – Staff recommends no changes to interclass responsibility, and Staff recommends that any increase to the non-residential classes be implemented as a ToU rider in the same way and same amount for all classes, is there any way that Staff's recommendation could result in rate switching in the event of an overall rate increase?

A. No, there is no way that equally raising rates across classes can cause rate switching.

Q. Has Mr. Brubaker raised any concern against Staff's d-BIP study that he has not raised in the other cases where the Commission has ultimately relied on Staff's d-BIP study?

A. No, he has not.

Q. Does Staff allocate KCPL's investment in baseload plants on energy, as Mr. Brubaker asserts?

A. No. Staff calculated an allocator to apply to all production plant and all production plant reserves based on the relative **dollar-weighted** cost of capacity for each class, and an allocator based on the relative **dollar-weighted** cost of energy for each class.

Q. If you were to calculate the allocator in the manner Mr. Brubaker describes, what would be the resulting allocator?

A. Although Staff does not support this allocator calculation, if I were to develop an allocator by separately allocating the plant types as Mr. Brubaker alleges the allocator was calculated, the resulting allocators and an estimate of the impact to the allocated class revenue requirements are provided below:

| | Residential | Small General Service | Medium General Service | Large General Service | LPS | Lighting |
|---|---|---|---|---|---|---|
| **Brubaker's Calculation:** | **33.1%** | **5.3%** | **14.9%** | **24.5%** | **21.3%** | **0.9%** |
| Staff DBIP: | 35.1% | 5.4% | 14 9% | 24.1% | 19.7% | 0.8% |
| Difference: | -2.0% | -0.1% | 0 0% | 0.5% | 1.6% | 0.1% |
| Approximate difference in $ allocated: | **$ (36,288,967)** | **$ (1,603,695)** | **$ (694,191)** | **$ 8,349,126** | **$ 28,444,548** | **$ 1,793,179** |

Q. In Mr. Brubaker's discussion of Staff's calculation of the O&M allocator, does he address the initial capacity-based step of Staff's calculation?

A. No, he ignores this step in presenting his argument that O&M should be allocated based on capacity.

Q. In contrast to Mr. Brubaker's erroneous assertion that Staff allocates O&M on energy, does Mr. Lutz appear to believe that Staff allocates O&M on capacity?

A. Yes. Mr. Lutz at page 7 of his RD Rebuttal states that, "Staff took the unconventional approach of using the DBIP method to also allocate production O&M and fuel costs…." Staff develops four separate allocators as part of its DBIP production allocation, to reflect the separate but interrelated allocations of Production Capacity, Production Energy, Production Fuel in Storage, and Production O&M. Staff has used these separate allocators in each case where it has presented a detailed BIP production allocation study, including those cases in which the Commission ultimately relied upon that study.

Q. Mr. Lutz recommends including renewables as base plant, have you prepared an estimate of incorporating this recommendation?

A. Staff has looked at how best to incorporate non-dispatchable renewables into its DBIP calculations. Since an inherent premise of the DBIP is that base plants are used to serve load before intermediate plants are called upon, and that both base and intermediate capacity are used to meet peak load, it is difficult to incorporate a reasonable capacity value for renewables that are not dispatchable. An estimate of the very minimal differences between Staff's method and a method incorporating KCPL's renewables into the base capacity valuation as suggested by Mr. Lutz is provided below:

| | Residential | Small General Service | Medium General Service | Large General Service | LPS | Lighting |
|---|---|---|---|---|---|---|
| **Lutz's Calculation:** | **34.96%** | **5.43%** | **14.95%** | **24.09%** | **19.78%** | **0.80%** |
| Staff DBIP: | 35.1% | 5.4% | 14.9% | 24.1% | 19.7% | 0.8% |
| Difference: | -0.1% | 0.0% | 0.0% | 0.0% | 0.1% | 0.0% |
| Approximate difference in $ allocated: | **$ (1,680,450)** | **$ (70,726)** | **$ (20,037)** | **$ 399,314** | **$ 1,290,449** | **$ 81,449** |

Q. Does Mr. Lutz raise additional concerns or suggestions with Staff's DBIP production capacity allocator calculation?

A. Yes. Among other things, at page 4 of his RD Rebuttal, Mr. Lutz suggests creation of a literal capacity stack to be allocated. This approach suggested by Mr. Lutz is similar to how Mr. Brubaker incorrectly alleges Staff allocates base capacity costs. Also, at page 5 of his RD Rebuttal, Mr. Lutz suggests using the lowest (non-zero) level of energy usage of each class for sizing the base demand of each customer class. While Staff suggests its DBIP allocations as provided in its direct CCOS Report are the most reasonable allocations presented in this case, it will continue to explore applications in future cases that more directly address renewable energy resources, the literal resource stack of each utility, and the minimum demand concept.

Q. Has Staff looked at use of the minimum demand concept in the past?

A. Yes. Staff has reviewed various approaches to establishing the DBIP determinants, including class minimum demand. In general, the result of the minimum demand approach was an increase in the relationship of the resulting capacity allocator to the relative levels of class energy consumption. This is the criticism Mr. Brubaker attempts to assert in each of the cases in which Staff has performed a DBIP allocation calculation. Notably, in contradiction to Mr. Brubaker's general assertions, at page 4 of his RD Rebuttal testimony, Mr. Lutz states "Further comparison would show that past BIP allocations performed by the Company tended to be more closely aligned with energy allocations. The Staff DBIP method, based on the comparison table offered on page 17 of the Staff CCOS Report, indicates a closer alignment with demand allocations. This does not comport with the normal view of the BIP allocation result."

Q. How do KCPL and GMO respond to Staff's recommendation at page 48 of the CCOS Report that "prior to the next rate design or general rate case, KCPL and GMO each study the seasonal nature of demands on the transmission and distribution systems, as well as the seasonal nature of the costs of capacity and energy to serve load. Specifically, Staff recommends the utilities consider dividing the current 'winter' season, which consists of all non-summer months, into winter and shoulder seasons."?

A. At page 22 of her RD Rebuttal Ms. Miller asserts that there is no need to perform these studies because a GMO study was presented in this case.

Q. Does performing a GMO study in this case negate the need for Staff's recommended study?

A. No. The shortcomings of the GMO study were described in my RD Rebuttal testimony. However, even if the GMO study was reliable, no such study has been done for KCPL. The ability to subdivide the "Winter" season into a peak winter season and two shoulder seasons could be used to develop ToU rates designed to meaningfully reflect cost causation and influence customer behavior in future rate designs. Moreover, load conditions do change, especially as customers increase their reliance on electric space heating measures that could move one or both utilities to a dual peaking load pattern.

Q. Do KCPL and GMO agree to Staff's recommendation "that KCPL and GMO begin to study and/or retain determinants associated with the creation of a coincident peak demand charge for all classes? For example, the highest 15 minute level of usage at any time between 12:01 pm and 6:00 pm on weekdays during the months of June – September."

A. In part. Ms. Miller, at page 22 of her RD Rebuttal, does not commit to undertaking this analysis *prior to* the next general rate case for each utility. However, this

information is needed as part of a case in order to develop billing determinants that incorporate a coincident peak demand charge.

Q. How do KCPL and GMO respond to Staff's recommendation that "KCPL and GMO develop the record necessary to assign facility extensions to the classes in which customers take service"?

A. At pages 22-23 of Ms. Miller's RD Rebuttal, she essentially says that since the utilities chose not to allocate these offsets to rate base to the classes based on the actual contribution of each class, there is no need to retain the information that would be necessary for another party to make that allocation. She goes on to state that "Since new load serves to provide some benefit to all customers, sharing of costs between all customers is reasonable and appropriate" The logical extension of Ms. Miller's argument is to allocate all T&D on the energy allocator.

## IV. NONRESIDENTIAL RATES

Q. What concern does Mr. Hyman state at page 13 of his RD Rebuttal testimony?

A. Mr. Hyman states that concerns about customer impact "are broadly applicable to the small businesses and others served under SGS rates. The potential impacts on businesses are particularly problematic from an economic development perspective, since businesses need certainty about critical inputs such as electricity. Such impacts would be compounded by their pairing with rate increases."

Q. What is Staff's recommendation for implementing ToU rates for the SGS classes in this case?

A. As recommended in its CCOS Report "If a class-level increase is ordered for any non-residential class for either KCPL or GMO, Staff recommends that such increase be applied as an additional charge to kWh sold between the hours of 8:00 am and 6:00 pm, on

non-holiday weekdays. This will result, on average, in a relative shift of revenue recovery back from the energy charge variation based on customer NCP in a manner consistent with cost-causation."

Q. Is this design similar to the residential ToU design that Mr. Hyman addresses elsewhere in his testimony?

A. Not really. Even under an increase scenario, SGS customers would primarily be billed as they have been billed. Only the very small amounts of increases contemplated in these cases would be subject to a time-based determination. Based on experience with the hours-use rate design in place for many SGS customers, I would expect it is much easier for customers to understand that there is an additional charge for energy used between the hours of 8:00 am and 6:00 pm, on non-holiday weekdays, than it is to understand how a small demand spike at any point during the month can cause energy to be billed at a higher rate than the customer is used to experiencing.

Q. What concern does Ms. Miller raise at page 19 of her RD Rebuttal concerning Staff's non-residential rate design recommendation?

A. Ms. Miller states that "The Company continues to believe that this case supports a rate increase, as outlined in our Direct Filing. Since the Staff proposal does not fully account for this outcome, we assert that our proposed rate design is most appropriate." Inexplicably, this statement immediately follows a block quote of Staff's recommendation which explicitly states the recommendation for applying increases to class revenue requirements.

Q. Other than this inapplicable concern, do KCPL and GMO raise any other objection to Staff's non-residential rate design recommendations?

A. Yes. Continuing on pages 19-20 of Ms. Miller's RD Rebuttal, Ms. Miller states "The Company would also like to express significant concerns with the third recommendation regarding the desire to apply an additional charge to specific hours in the day. This change would require additional configuration of the non-residential rate as time of day elements are not currently part of the rate. This recommendation would add complexity to the rate implementation and may be difficult, if not impossible to achieve given the limited time normally provided at the end of the case for implementing the new rates."

Q. Does Staff object to the company requiring additional time to implement any awarded rate increase?

A. Within reason, no.

## V. STUB PERIOD RATE DESIGN

Q. What does Mr. Lutz propose in his RR Rebuttal testimony concerning the return of the cost savings from the Tax Cut and Jobs Act ("TCJA") "Stub Period"?

A. Mr. Lutz proposes to allocate the stub period savings amount between the classes based on the retail revenues for the classes as defined by the revenue summaries supporting the final rates approved in these cases.

Q. Is Staff opposed to the use of class retail revenue to allocate the stub amount?

A. Yes. A more reasonable allocation method would be class retail revenue less the product of class energy and the FAC base. While Mr. Lutz's statement at page 2 of his RR Rebuttal is true that his recommended allocation "is more reasonable than a sales- based approach given the more direct relationship between the revenues and the level of income taxes included in cost of service of the Company," the relationship of revenues net of energy cost is even more directly related to the level of income taxes included in cost of service.

Q. Once allocated between the classes, what process does Mr. Lutz recommend to allocate the stub period savings amount to the individual customers within those classes?

A. He proposes to then rely on an unrelated stipulation agreed to by certain parties to Case No. EM-2018-0012, the application for approval for merger of Great Plains Energy Incorporated with Westar Energy, Inc. to issue a one-time credit to customers within each class.

KCPL – Missouri:
Residential: Divided equally among the customer class by customer account
Small Gen SVC: Divided equally among the customer class by customer account
Med. Gen SVC: Divided equally among the customer class by customer account
Large Gen SVC: Based on each customer's energy usage within the customer class
Large Power: Based on each customer's energy usage within the customer class
MO Lighting: Divided equally among the customer class by customer account

Greater Missouri Operations:
Residential: Divided equally among the customer class by customer account
SGS: Divided equally among the customer class by customer account
LGS: Based on each customer's energy usage within the customer class
LPS: Based on each customer's energy usage within the customer class
Lighting: Divided equally among the customer class by customer account
Thermal: Divided equally among the customer class by customer account
TOD: Divided equally among the customer class by customer account

Q. What is a more reasonable intraclass allocation?

A. The allocation should relate more closely to the collection of tax from customers during the stub period. A more reasonable allocation is to base each customer's refund on the customer's bill during the stub period within each class, minus the product of that customer's energy usage and the FAC base.

Q. Is Staff opposed to the use of a one-time credit to return the stub amount to customers instead of an ongoing rate element?

A. Staff is not opposed to either a one-time credit approach or an ongoing rate element approach.

## VI. ECONOMIC DEVELOPMENT RIDER

Q. Did parties address Staff's Economic Development Rider ("EDR") revenue requirement impact calculation or EDR tariff design recommendation?

A. Yes. Geoff Marke filed RR Rebuttal testimony on behalf of OPC, and Joe Fangman filed Revenue Requirement Rebuttal ("RR Rebuttal") and Rate Design Rebuttal ("RD Rebuttal") on behalf of KCPL and GMO.

Q. What is the impact to the revenue requirement of each utility that Mr. Fangman quantifies related to KCPL and GMO EDR discounts?

A. Mr. Fangman does not present a quantification of revenue requirement impact and provides no workpapers.

Q. Did Staff provide a recommendation in its Cost of Service Report (CoS Report) concerning information that KCPL and GMO should provide in rebuttal to address the serious concerns Staff observed with respect to the utilities' administration of their EDR tariffs?

A. Yes. At Page 58 of the Cost of Service Report Staff stated that:

> Staff recommends that KCPL and GMO conduct a thorough review of the compliance of customers receiving an EDR discount with the applicable contract and tariff. As part of rebuttal testimony KCPL and GMO should provide a report on the review of the continued qualification of each customer pursuant to the EDR tariff terms, including, but not limited to the following:
>
> 1. Ensuring that the local, regional, or state governmental economic development incentives that are provided as qualification under the Availability provisions of tariff sheet 32E are actually awarded and accepted. Many of the EDR documents provided to the Commission include only an offer letter from a governmental economic development agency and there is no indication that the incentives were ultimately accepted and that conditions associated with the receipt of such incentives have been met and maintained.
>
> 2. Ensuring that an annual load factor of 55% or greater has been maintained in years three through five of service under the

> EDR, as applicable, pursuant to tariff sheet 32E, Applicability Paragraph 1.
>
> 3. Review whether any load shifting has occurred in the case of expansion customers, pursuant to tariff sheet 32G, Incentive Provision Paragraph 2. If any shifting has occurred, metering arrangements must be made to exclude shifted amounts from the metered amount subject to the EDR discount.
>
> 4. In the case of retention customers, review documentation provided regarding the availability of a viable alternative electric supply option, pursuant to tariff sheet 32F, and the Termination provisions of tariff sheet 32H.
>
> As part of the report, KCPL and GMO should present documentation confirming the continued eligibility of each EDR customer under each item provided above. Pursuant to this review, customers not meeting continued eligibility requirements to receive the EDR discounts should be removed from the EDR calculation. At this time, Staff has not excluded customers related to continued qualification to receive EDR discounts. Staff will continue to review and monitor the EDR customer program and may make further recommendations in this case or future cases.

Q. Did KCPL and GMO file such a Report?

A. Generally, no. The limited extent of their examination into this matter is documented in Mr. Fangman's RR Rebuttal testimony.

Q. Did KCPL and GMO otherwise conduct a thorough review of the compliance of customers receiving an EDR discount with the applicable contract and tariff, and provide as part of rebuttal testimony a report on the review of the continued qualification of each customer pursuant to the EDR tariff terms?

A. At page 10 of Mr. Fangman's RR Rebuttal testimony he states that a review was conducted for the period of October 2016 to November 2017. He states that two customers who were receiving discounts were found not to be in compliance, but then equivocates that one of those customers is in compliance after all, through a different set of qualifications that has not, to date, been documented in a manner made available to Staff and the Commission.

Q. What form of state or local economic development incentive was relied upon to initially qualify this customer?

A. The materials provided in response to Staff DR 121.1 in Case No. ER-2018-0146 do not indicate the type of state or local economic development incentive GMO initially relied upon.[8] Attached as Confidential Schedule SLKL-s1 are the materials GMO represents to be the EDR contract, approval forms, and all supporting documentation for this EDR discount.[9]

Q. Is Mr. Fangman's statement that a letter inquiring as to the availability of an EDR discount was considered "adequate to meet the retention criteria" concerning?

A. Yes. The existing EDR tariff is clear that "In the case of retention of an existing Customer, as a condition for service under this Rider, Customer must furnish to Company such documentation (e.g., Influencing factors and a comparison of the rates and other economic development incentives) as deemed necessary by Company to verify the availability of a viable electric supply option outside of KCP&L's service territory and Customer's intent to select this viable electric supply option. Customer must also furnish an affidavit stating Customer's intent to select this viable electric supply option unless it is able to receive service under this Rider." A plain reading of this provision requires an affidavit stating the customer's intent to select a different viable electric supply option unless it is able to receive service under the GMO EDR. A letter inquiring as to the availability of an EDR is not an affidavit and does not fill that requirement. GMO's insistence that this requirement has

[8] As noted in Staff's Cost of Service Report at page 63, not only does the GMO documentation of this customer lack indication that the customer received a state or local economic development incentive, there also is not an executed affidavit indicating the customer's intent to select an alternative site unless it receives the EDR discount, as required for a "retention" customer.
[9] Staff has not manipulated the visual quality of this file, which it received electronically.

been met for this customer is misplaced and concerning given the level of utility discretion in the administration of this program.

Q. Is the requirement of an affidavit a mere formality?

A. No. The purpose of the EDR is not to discount large customers, it is to directly cause, through economic incentives, a large customer to locate or remain in the utility foot print. While there is always a risk that a "freerider" will misrepresent their need for the EDR, the affidavit provides a sworn statement that a customer makes as to the circumstances surrounding eligibility for the incentive.

Q. If the utility had kept records in accordance with its tariff and exercised greater care in administering the EDRs, would the absence of an affidavit have likely been noticed by GMO prior to Staff raising it as an issue in this rate case?

A. If the tariff procedures had been followed, the absence of the required affidavit would have been observed when the contract was approved by Kimberly Winslow on August 22, 2016.

Q. In administering this EDR, did GMO require the customer to furnish any documentation (e.g. Influencing factors and a comparison of the rates and other economic development incentives) to verify the availability of a viable electric supply option outside of GMO's service territory and Customer's intent to select this viable electric supply option?

A. No.

Q. In reviewing all EDR documents submitted by KCPL and GMO since the 2013 tariff revision, have you observed any documentation that the utilities have required or obtained in this regard?

A. No.

Q. In light of Staff's stated concern that many of the EDR documents provided to the Commission include only an offer letter from a governmental economic development agency, and there is no indication that the incentives were ultimately accepted and that conditions associated with the receipt of such incentives have been met and maintained, as part of KCPL's and GMO's rebuttal filings, has Mr. Fangman provided documentation that the governmental economic development incentives that are provided as qualification under the Availability provisions of tariff sheet 32E are actually awarded and accepted??

A. No. Mr. Fangman's RR Rebuttal does state that one of the customers Staff cited as having **no** initial state or local incentive even mentioned in its contract documentation that customer ultimately did not receive the state or local incentive GMO had contemplated but not documented. Mr. Fangman also states his belief, which Staff shares, that the government incentive requirement is an important aspect of EDR qualification. However, Mr. Fangman provides no documentation concerning the receipt of any other customer's assumed outside governmental economic development incentive.

Q. Do Mr. Fangman's explanations concerning the customers identified in his RR Rebuttal adequately address the concerns raised by Staff in its CoS Report?

A. No.

Q. Has Staff made further data requests in an attempt to obtain this information?

A. Yes. The responses to these data requests are discussed below.

Q. Do Mr. Fangman's explanations of specific customer metering arrangements result in changes to Staff's quantification of revenue requirement impact of KCPL's and GMO's EDRs?

A. Yes. Staff will include EDR discounts for KCPL accounts ** _____ ** and ** _____ ** with provided billing information, to the extent inclusion is otherwise

supported. Staff will include ** _____ _____ ** under its new rate designation; however, because KCPL cannot provide evidence that an economic development incentive has been received, both accounts will be excluded from revenue impact. Staff did not exclude accounts ** _____ ** and ** _____ ** and appreciates the information concerning these accounts provided on page 9 of Mr. Fangman's RR Rebuttal, which Staff notes is not consistent with the information provided with the contract concerning these accounts.

Q. Is the explanation KCPL provides concerning the purported ramp-up of ** _____ ** a reasonable explanation of the delay in implementing the EDR for the account adjusted by Staff?

A. No. It is not a reasonable explanation in that the account adjusted by Staff was running at or above the ** _____ ** level since approximately ** _____ . ** An illustration of the usage and demand, by billing period, that KCPL has made available to Staff for the ** _____ ** account is provided below:

**Customer Loading Graph**

**

**

Q. Have you calculated for true-up a normalized level of revenue forgone by both KCPL and GMO, by class, due to discounts provided under the EDR and Urban Core tariffs?

A. Yes. Those values are provided below.

Q. Based on the Response to DR 122.2, file "q0122.2s3_conf_ gmo and kcpl edr billing determinates may_june 2018.xlsx" provided 7/13/2018, how many customers or accounts receive EDR discounts by utility, in June 2018?

A. In this DR Response, the Company provided billing determinants for 15 Account IDs including 26 SAIDs for GMO, and 19 Account IDs and SAIDs for KCPL, including Urban Core discounts.

Q. Based on the Response to DR 122.6, file "q0122.6_conf_kcpl_gmo question 2.xls" provided 8/27/2018, how many customers or accounts receive EDR discounts by utility, in June 2018?

A. In this DR Response, the Company provided determinants for 24 Account IDs including 34 SAIDs for GMO, and 14 Account IDs and SAIDs for KCPL including Urban Core discounts.

Q. Based on the Response to DR 122.6, file "q0122.6_conf_edr customers load fctr.xls" provided 8/27/2018, how many customers or accounts receive EDR discounts by utility, in June 2018?

A. In this DR Response, the Company provided incomplete billing information for 25 Account IDs including 38 SAIDs for GMO, and 24 Account IDs and SAIDs for KCPL including Urban Core discounts.

Q. In response to Staff's request that KCPL and GMO provide documentation of actual receipt of state, local, or regional economic development incentives by customers

receiving EDR discounts, for how many customers did KCPL and GMO provide some level of documentation?

A. The written response to DR 122.6 in File No. ER-2018-0145 lists 10 customers as having information provided in separate files, the spreadsheet provided in response to DR 122.6 in File No. ER-2018-0145 lists 11 customers as having information provided in separate files, and the actual files provided include information for 10 customers, although it appears that one of the customers is a different customer.

Q. Do the KCPL documents provide documentation of actual receipt of state, local, or regional economic development incentives by customers receiving EDR discounts?

A. Documentation for one customer, (** _____ **) does provide evidence that an incentive was received. Another customer, ** _____ **, shows that an incentive was received in 2011 for an expired EDR, but shows no evidence of the receipt of an incentive associated with the 2016-2017 timeframe for which a further EDR is claimed. Documentation for a third customer (** _____ **) shows a commitment to provide the specious incentive discussed in Staff's CoS Report. Finally, documentation for a fourth customer (** __ **) alludes to the provision of an incentive in 2011, but the letter refers to itself alternatively as an "Approval" and as an "Offer," and explicitly states, "…** _____
_____
_____
_____
_____ ** "

The other documents provided explicitly state that further approvals are required. Most include a signed provision stating, "I understand that signing this acceptance to the terms of the proposals is not an application for the program(s) listed in this proposal. It is the Company's responsibility to submit the required application and receive approval before jobs are created or investment is made to qualify for program benefits. ”

Q. Do the GMO documents provide documentation of actual receipt of state, local, or regional economic development incentives by customers receiving EDR discounts?

A. GMO provided documentation for ** _____ . ** GMO provided documentation of the initial receipt of economic incentives for customers ** _____ _____ . ** However, each of these awards included contingent provisions, and no evidence was supplied that either the conditions were met or that the incentives were ultimately issued while the EDR discount was in place. Further evidence was not provided. Additionally, based on the information provided, ** _____ ** is no longer receiving an EDR from GMO.

Summaries of the documentation provided by KCPL and GMO are provided in Confidential Schedule SLKL-s2.

Q. Do you know how many customers, accounts, or customer premises are under an EDR contract with KCPL or GMO for service immediately following June 30, 2018?

A. I do not.

Q. Have you calculated true-up adjustments for KCPL and GMO based on customer bills issued for the period September 30, 2016 – October 1, 2017, with the discounts in place for July 1, 2018, through June 30, 2019, to be reflected in revenue requirements?

A. Yes. Those amounts are provided below, both including and excluding the customers for which KCPL and GMO have been unable to provide evidence that an incentive

was received. Staff recommends including in revenue requirement only those discounts for which evidence exists that an incentive has been received and which are shown in the chart in bold font.

| KCPL | Direct Adjusted for True-up Time Period | Evidence of Incentive Not Provided (Not Urban Core) | Urban Core or Incentives Confirmed |
|---|---|---|---|
| LPS | $ - | | $ - |
| LGS | $ 873,350 | $ 843,009 | **$ 30,341** |
| MGS | $ 140,186 | $ 78,711 | **$ 61,476** |
| SGS | $ 1,555 | | **$ 1,555** |
| | $ 1,015,091 | $ 921,720 | $ 93,372 |

| GMO | Direct Adjusted for True-up Time Period | Evidence of Incentive Not Provided | Incentives Confirmed (including Initial Incentive award) |
|---|---|---|---|
| MOPNS | $ 7,816 | $ 7,816 | |
| MOPGS | $ 132,249 | $ 132,249 | |
| MOLGS | $ 277,057 | $ 46,888 | **$ 230,169** |
| MOLNS | $ - | $ - | |
| MOLGP | $ 13,853 | $ 13,853 | |
| | $ 430,975 | $ 200,806 | $ 230,169 |

Q. What is the response of KCPL and GMO to Staff's recommended revisions to the EDR tariff?

A. Mr. Fangman testifies at page 2 of his RD rebuttal that "Given that the EDR tariff and its related processes are working as intended and providing value, the extensive revision recommended by Staff should be rejected."

Q. Mr. Fangman asserts at page 2 of his RD Rebuttal that his RR Rebuttal has demonstrated that Staff's concerns are "misplaced." Do you agree?

A. No. Mr. Fangman's RR Rebuttal provided what he believes to be explanations of the significant shortcomings of the processes that have been employed under the 2013 EDR by KCPL and GMO. These assertions that there is nothing wrong with how KCPL and GMO have failed to abide by their EDR tariff in initially qualifying candidates for EDR treatment or

in their complete failure to review continued compliance with the EDR as provided for in the Termination provisions of the existing EDR, are indicative of the need for enhanced oversight and cast doubt on the ability of KCPL and GMO to administer these programs in accordance with their existing tariffs.

Q. Mr. Fangman recommends making the EDR available to customers on the Medium General Service rate for KCPL, what is Staff's response?

A. Mr. Fangman correctly states that while GMO does not have an MGS rate, KCPL does. Staff did not intend to exclude the MGS rate schedule from the KCPL version of the EDR.

Q. Mr. Fangman objects to Staff's recommendation that the EDR not be made available for service to a facility that was the subject of an EDR or Special contract in the prior twelve months, do you agree with his concerns?

A. No. First, Mr. Fangman suggests that "customer" would be a more reasonable term than "facility" for drafting this provision, but Staff's intent is to (1) capture revenues from a given facility that may change hands or corporate identification over time, and (2) limit the ability of a facility that shuts down for periodic retooling under the same ownership to be treated as a "new" facility under the EDR as opposed to qualification as a "retention" customer.

For example, if a particular location could simply change from "ABC Inc." to "ABC Inc. d/b/a ABC Co." then Staff's recommended provision would be rendered meaningless. Further, the provision is intended to address the situation where a facility may change hands as various businesses evolve over the years, without that facility ever paying a full electric bill. Moreover, the twelve month limitation is not onerous, and is not inconsistent with a period for retooling that may occur if a facility legitimately changes hands.

Staff is, however, sensitive to the scenario Mr. Fangman raises where a customer expands an existing facility that would, on the merits of the expansion, qualify for an expansion EDR. Staff recommends Availability paragraph 6 of the exemplar tariff provided in Appendix 2 to the Staff CoS Report be revised to state as follows:

> 6. Service under this Rider is limited to customers taking service on the Medium General Service [added to KCPL version only], Large General Service, and Large Power Service Rate Schedules. Service under this Rider is not available to:
>
> a. Any facility currently taking service under a special contract;
>
> b. Any facility that took service under a special contract or pursuant to an economic development rider at any time during the 12 months preceding the date of the submitted Application, except that separately metered or separately measured load associated with an expanded facility may be eligible to participate under a separate EDR contract if all other qualifications are met for that load.

Q. Mr. Fangman recommends expansion of the definition of "off-peak" usage as a qualification for the EDR, is this reasonable?

A. Generally, yes. Staff does not object to reflecting seasonality and weekend usage in the determination of off-peak. Staff looks forward to incorporating a clear and objective measure of this criterion into Availability subparagraph 7.b. upon the provision of such wording from KCPL and GMO.

Q. To what formula does Mr. Fangman refer at page 5 of his RD Rebuttal Testimony in his concern that Staff's recommendation is too complicated and would lead to misapplication?

A. Subparagraph 7.c. of the Availability provision sets out that a facility that does not otherwise meet the demand and load factor requirements for EDR qualification can qualify for an EDR if it "is reasonably projected to create 100 or more new permanent full-time jobs or for facilities employing 50-99 existing permanent full-time jobs, a

100 percent increase in existing permanent full-time jobs at that facility; and Capital investment of $5 million or more." However, if the spending ultimately falls short of the $5 million value or if the number of permanent full-time jobs is less than would satisfy the applicable job creation criteria, Staff has recommended the formula provided below to prorate the applicable discount to the level of actual expenditure and job creation.

CD x ((CS/CP)/2 + (JC/JP)/2) = AD

Where,

| | | |
|---|---|---|
| CD | = | Contractual Discount Amount |
| JP | = | 100 Jobs or 100% increase in Existing Jobs |
| CP | = | $5,000,000 in capital spending |
| JC | = | Number of Permanent Full Time Jobs Created, or Percent Increase in Number of Full Time Jobs, as applicable |
| CS | = | Actual capital spending |
| AD | = | Actual Discount Amount |

Staff is not opposed to Mr. Fangman's request to discontinue the EDR as opposed to apply a proration for the last two contract years, but notes that Mr. Fangman's concern that the Company would misapply this calculation is troubling.

Q. Is Staff open to revision of the requirements triggered by the setting of a permanent meter to some other clear and objective demarcation?

A. Yes. Staff looks forward to incorporating a reasonable revision to this language in the exemplar tariff upon the provision of such wording from KCPL and GMO.

Q. Is Staff open to revision of the requirements triggered by the receipt of an application for a Retention EDR to some other clear and objective demarcation?

A. Yes. Staff looks forward to incorporating a reasonable revision to this language in the exemplar tariff upon the provision of such wording from KCPL and GMO.

Q. Mr. Fangman objects to Staff's recommendation that the contractual discount cannot be greater than 25% in contract years 3-5. Could you provide an illustration of the need for this or a similar limitation?

A. Yes. The 2013 revision provided for the flexibility to alter the application of the discount percentages over the course of five years so long as the sum of the percentages did not exceed 100% total and did not exceed 30% in any single year. Through the application of the EDR since the revision, Staff has observed two problems with this design.

First, the stated purpose of the EDR is not to maximize the overall profitability of participating customers, but "to encourage industrial and commercial business development in Missouri and retain existing load where possible…." As an example, use of the EDR to reduce the expenses incurred by infant or expanding industries suits this purpose; allowing the customer to minimize its bill in the years it should be weaning off the subsidy does not meet the purpose of the EDR.

Second, unless the facility is failing economically, one would expect its load to remain stable or grow over time, not to shrink. Allowing a disproportionate discount to the latter years of the EDR results in a significantly lower realization of revenues from that customer. This relationship is provided in a series of simple examples below:

**Scenario 1**

Customer with constant load and tariff-specified progression of discounts results in 80% bill realization:

| Contract Year: | 1 | 2 | 3 | 4 | 5 | Total |
|---|---|---|---|---|---|---|
| Discount Schedule: | 30% | 25% | 20% | 15% | 10% | 100% |
| Non-Discounted Bill: | $100 | $100 | $100 | $100 | $100 | $ 500 |
| Discount: | $30 | $25 | $20 | $15 | $10 | $ 100 |
| Percent of Bill Ultimately Paid: | 70% | 75% | 80% | 85% | 90% | 80% |

**Scenario 2**

Customer with growing load with tariff-specified progression of discounts results in greater than 80% bill realization:

| Contract Year: | 1 | 2 | 3 | 4 | 5 | Total |
|---|---|---|---|---|---|---|
| Discount Schedule: | 30% | 25% | 20% | 15% | 10% | 100% |
| Non-Discounted Bill: | $100 | $125 | $156 | $195 | $244 | $ 821 |
| Discount: | $30 | $31 | $31 | $29 | $24 | $ 146 |
| Percent of Bill Ultimately Paid: | 70% | 75% | 80% | 85% | 90% | 82% |

**Scenario 3**

Customer with growing load with increasing progression of discounts results in less than 80% bill realization:

| Contract Year: | 1 | 2 | 3 | 4 | 5 | Total |
|---|---|---|---|---|---|---|
| Discount Schedule: | 10% | 15% | 20% | 25% | 30% | 100% |
| Non-Discounted Bill: | $100 | $125 | $156 | $195 | $244 | $ 821 |
| Discount: | $10 | $19 | $31 | $49 | $73 | $ 182 |
| Percent of Bill Ultimately Paid: | 90% | 85% | 80% | 75% | 70% | 78% |

| Contract Year: | 1 | 2 | 3 | 4 | 5 | Total |
|---|---|---|---|---|---|---|
| Discount Schedule: | 0% | 10% | 30% | 30% | 30% | 100% |
| Non-Discounted Bill: | $100 | $125 | $156 | $195 | $244 | $ 821 |
| Discount: | $0 | $13 | $47 | $59 | $73 | $ 191 |
| Percent of Bill Ultimately Paid: | 100% | 90% | 70% | 70% | 70% | 77% |

While the percentage differences indicated under Scenario 3 may seem small, when applied to hundreds of thousands of dollars, the associated revenue can become impactful to revenue requirements and ongoing rates for non-participating customers. Further, the impact to the revenue net of the cost of energy is double or greater the impact shown above for most classes. Given the utilities' discretion involved, it is possible that the utilities may align these discounts with rate case timing to maximize utility benefit to the detriment of nonparticipating ratepayers.

Q. At page 8 of his RD Rebuttal Mr. Fangman asserts that the existing termination language that states "Failure of the Customer to meet any of the applicability criteria of this Rider, used to qualify the customer for acceptance on the Rider shall lead to termination of service under this Rider[]" is simple and direct. Do you agree?

A. In part, yes. Prior to my review of the manner in which KCPL and GMO administer the EDR programs and prior to my review of Mr. Fangman's RR Rebuttal, I would have agreed this language was simple and direct. However, based on responses to Staff Data Requests in ER-2018-0146, and the general state of the KCPL and GMO EDR program as described in Staff's CoS Report, it appears that this simple and direct provision has not been followed. Thus, more prescriptive language is necessary and appropriate.

In regard to clarifying Staff's proposed termination provisions, Staff looks forward to incorporating a reasonable revision to this language in the exemplar tariff upon the provision of such wording from KCPL and GMO.

Q. At page 9, Mr. Fangman asserts that he disagrees with Staff's recommendation for a filing requirement to include an affidavit of all reviews submitted by the Company, and states that, "The current EDR tariff includes provisions for submitting the EDR contract and supporting documentation to the Energy Unit of the Commission Staff. No evidence has been offered to indicate that this provision of the tariff is not working as intended or has not been complied with by the Company." Is this statement accurate?

A. No. First, Mr. Fangman presents this statement as an answer to concerns regarding submittal of the results of internal KCPL and GMO reviews of customer compliance with the EDR. There is no provision in the current tariff for the submittal of these reviews, and it is clear that KCPL and GMO are not performing these reviews. Second, there was ample evidence presented in Staff's CoS Report and exacerbated in Mr. Fangman's

RR Rebuttal that the internal review process is not working and that the process is not being complied with by the Companies. As stated above, KCPL and GMO have not been performing internal reviews of customer compliance with the EDR, which is the subject of the affidavit provision Mr. Fangman references in the question.

With respect to the submittal process Mr. Fangman references in the answer, there have been problems encountered with the provision "[s]ervice under this Rider shall be evidenced by a contract between the Customer and the Company, which shall be submitted along with supporting documentation to the Commission, Commission Staff in the Energy Unit and the Office of Public Counsel." The internal documentation that KCPL and GMO provided in response to Staff's DR concerns only the initial application review and initial contract. This documentation has not only been incomplete or not in compliance with the tariff requirements as described in Staff's CoS Report, but has included such highly problematic issues as indicating KCPL as the utility for a customer that is actually a GMO customer, and vice versa. This particular problem is difficult for Staff to identify, but should be much more clear to utility personnel administering the programs.[10]

Q. Are there additional objections Mr. Fangman raises to Staff's recommendations concerning submittal of the results of internal KCPL and GMO reviews of customer compliance with the EDR?

A. Yes. Mr. Fangman states that requiring an affidavit to accompany the submittal of the internal review is beyond the normal practice of this Commission. This is generally inaccurate in that most submittals I am aware of are required to be accompanied by

[10] Further, in April of 2017 Staff became aware that KCPL and GMO had entered into approximately 14 EDRs sent to a no-longer operating Staff email address over several years, rather than submitted as a BEDR into EFIS where the submitted information is made available to the Commission, Commission Staff, and the Office of Public Counsel. Staff is not certain that all EDRs currently claimed by KCPL and GMO under the 2013 tariff have been submitted into EFIS as a BEDR.

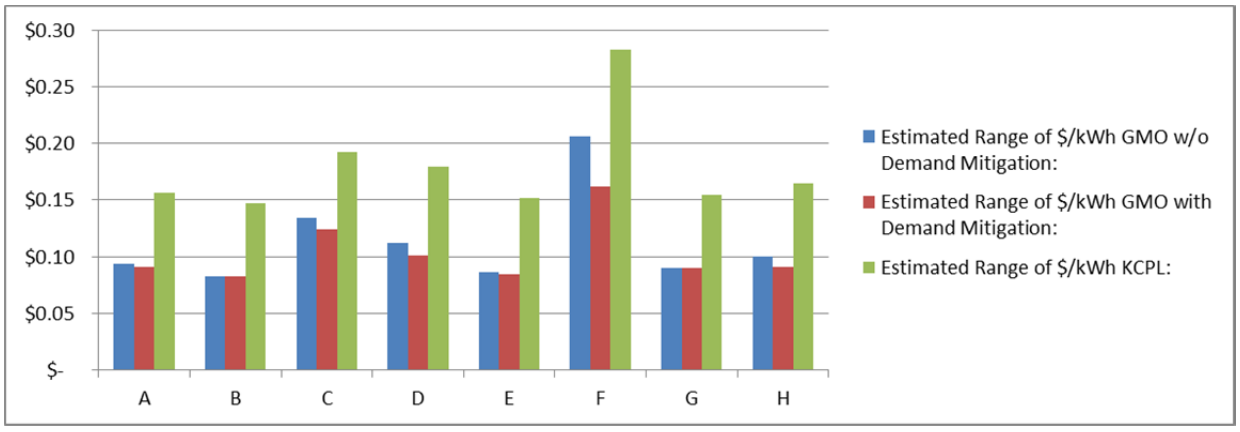
an affidavit. Under Staff's recommendation each utility would be required to submit a single annual filing under affidavit, which is not a particularly onerous requirement to be placed on the utility. An additional submittal and affidavit would be required if a participating customer becomes subject to the termination provisions. If such an additional submittal is warranted by the triggering of the termination provisions, Staff suggests that timeliness of the Commission's, Staff's, and OPC's notice of the potential termination of a customer from the EDR program is a reasonable cause for a company employee to execute an affidavit.

## VII. EV MAKE READY TARIFF AND RATE DESIGN

Q. Mr. Rush describes an error in Staff's worksheet related to the development of its separately-metered EV charging equipment rate, have you addressed this error?

A. Yes. I inadvertently left out a variable to relate the range of hypothetical charges per day to a monthly level. The recalculated range of $/kWh experienced under the existing and demand-mitigated SGS rates are provided below:

| Charging Scenario: | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|
| Estimated Range of $/kWh GMO w/o Demand Mitigation: | $ 0.09 | $ 0.08 | $ 0.13 | $ 0.11 | $ 0.09 | $ 0.21 | $ 0.09 | $ 0.10 |
| Estimated Range of $/kWh GMO with | $ 0.09 | $ 0.08 | $ 0.12 | $ 0.10 | $ 0.08 | $ 0.16 | $ 0.09 | $ 0.09 |
| Estimated Range of $/kWh KCPL: | $ 0.16 | $ 0.15 | $ 0.19 | $ 0.18 | $ 0.15 | $ 0.28 | $ 0.15 | $ 0.16 |




Q. What are Staff's updated separately-metered EV charging equipment rates, with this error corrected?

A. As corrected, and on a revenue neutral basis to current SGS rates for each utility, those rates are provided below:

| | Corrected Direct | | |
|---|---|---|---|
| | **GMO** | **KCPL** | |
| Base Customer Charge: | 10.00 | 10.00 | $/Month |
| Facilities Charge: | 0.5564 | 0.3632 | $/kW |
| On-Peak (as defined in Residential Tariff): | $ 0.09 | $ 0.16 | $/kWh |
| Off-Peak (as defined in Residential Tariff): | $ 0.08 | $ 0.15 | $/kWh |

Q. Mr. Hyman at page 20 – 21 of his RD Rebuttal discusses his general opposition to the inclusion of the demand-based facilities charge in Staff's recommended separately-metered EV charging rates. Could you provide a comparison of what Staff's rate calculation would be with and without Staff's recommended facilities charge?

A. Yes. For each utility, Staff's recommended facilities charge is designed so that customers exerting less than 25kW of system demand pay less than the otherwise applicable customer charge. Eliminating the facilities charge would simply revert the customer charge back to each utility's otherwise applicable SGS customer charge. These alternative rate structures are provided below:[11]

| | Corrected Direct | | | Alternative | | |
|---|---|---|---|---|---|---|
| | **GMO** | **KCPL** | | **GMO** | **KCPL** | |
| Base Customer Charge: | 10.00 | 10.00 | $/Month | 23.91 | 19.08 | $/Month |
| Facilities Charge: | 0.5564 | 0.3632 | $/kW | - | - | $/kW |
| On-Peak (as defined in Residential Tariff): | $ 0.09 | $ 0.16 | $/kWh | $ 0.09 | $ 0.16 | $/kWh |
| Off-Peak (as defined in Residential Tariff): | $ 0.08 | $ 0.15 | $/kWh | $ 0.08 | $ 0.15 | $/kWh |

Q. At page 20 of his RD Rebuttal, Mr. Hyman generally recommends that EV charging that is subsidized by ratepayers through a make-ready model target areas on the distribution system with adequate hosting capacity and be located to serve unserved or

[11] Subject to applicable FAC, RESRAM, DSIM, and other riders as applicable.

underserved markets such as "inner cities, rural areas, low-income areas, multifamily dwellings, and highway corridors," are these reasonable recommendations?

A. Yes. These recommendations are consistent with the public policy goals Staff would anticipate the Commission would want to prioritize.

Q. Mr. Rush, at page 8 of his RD Rebuttal states that "The Company has nearly 1,000 charging stations in the field, but none of these charging stations would qualify under Staff's proposal and Staff has not identified how these existing charging stations would be treated under its proposal. This is untenable." Is this statement accurate?

A. It is accurate that the company-owned charging would not qualify for Staff's recommended rates for third party charging equipment that is separately metered and meets other relevant qualifications. It is not accurate that Staff's direct proposal did not address how KCPL and GMO should bill themselves for the existing charging station usage. Usage from company-owned charging stations should be billed at the otherwise applicable general services rate, most likely SGS.

Q. In the event the Commission includes company-owned charging stations in rate base, has Staff developed a rate recommendation for the rate at which KCPL and GMO should bill themselves for the charging station facilities and the usage of those facilities?

A. Yes. This recommendation is addressed in the Surrebuttal Testimony of Robin Kliethermes.

Q. Does this conclude your Surrebuttal Testimony?

A. Yes.

**BEFORE THE PUBLIC SERVICE COMMISSION**

**OF THE STATE OF MISSOURI**

| | | |
|---|---|---|
| In the Matter of Kansas City Power & Light Company's Request for Authority to Implement a General Rate Increase for Electric Service | ) ) ) ) | Case No. ER-2018-0145 |
| | | and |
| In the Matter of KCP&L Greater Missouri Operations Company's Request for Authority to Implement a General Rate Increase for Electric Service | ) ) ) ) | Case No. ER-2018-0146 |

**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 *Surrebuttal* and *True-Up Direct Testimony* 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 31st day of August 2018.

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: December 12, 2020
Commission Number: 12412070

D Suzie Mankin
Notary Public

**SCHEDULE SLKL-s1**

**AND**

**SCHEDULE SLKL-s2**

**HAVE BEEN DEEMED**

**CONFIDENTIAL**

**IN THEIR ENTIRETY**