Exhibit No.:

Issue(s): Clean Charge Network/

Community Solar/

Low Income Community Solar/

Green Tariff/

PAY AS YOU SAVE®/
Low Income Weatherization/
Economic Relief Pilot Program/
Economic Development Rider/
Customer Information System

and Customer Care and Billing

Witness/Type of Exhibit: Marke/Rebuttal Sponsoring Party: Public Counsel Case No.: ER-2018-0145 and ER-2018-0146

REBUTTAL TESTIMONY

OF

GEOFF MARKE

Submitted on Behalf of the Office of the Public Counsel

KANSAS CITY POWER & LIGHT COMPANY and KCP&L GREATER MISSOURI OPERATIONS COMPANY

Case No. ER-2018-0145 and ER-2018-0146

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 |) File No. ER-2018-0145) |
|---|--|
| In the Matter of KCP&L Greater Missouri Operations Company's Request for Authority to Implement a General Rate Increase for Electric Service |) File No. ER-2018-0146) |
| <u>AFFIDAVIT</u> | OF GEOFF MARKE |
| STATE OF MISSOURI)) ss COUNTY OF COLE) | |
| Geoff Marke, of lawful age and being t | first duly sworn, deposes and states: |
| My name is Geoff Marke. I an Counsel. | n a Regulatory Economist for the Office of the Public |
| 2. Attached hereto and made a part | hereof for all purposes is my rebuttal testimony. |
| 3. I hereby swear and affirm that i true and correct to the best of my | my statements contained in the attached testimony are knowledge and belief. Geoff Marke Chief Economist |
| | |

Subscribed and sworn to me this 27^{th} day of July 2018.

MOTARY SEAL ST

JERENE A. BUCKMAN
My Commission Expires
August 23, 2021
Cole County
Commission #13754037

Jerene A. Buckman Notary Public

My commission expires August 23, 2021.

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REBUTTAL TESTIMONY

OF

GEOFF MARKE

KANSAS CITY POWER & LIGHT COMPANY CASE NO. ER-2018-0145 & ER-2018-0146

| 1 | I. | INTRODUCTION |
|----|----|--|
| 2 | Q. | Please state your name, title, and business address. |
| 3 | A. | Geoffrey Marke, PhD, Chief Economist, Office of the Public Counsel ("OPC"), P.O. Box |
| 4 | | 2230, Jefferson City, Missouri 65102. |
| 5 | Q. | Are you the same Geoff Marke who filed direct testimony in Case Nos. ER-2018-0145 |
| 6 | | and ER-2018-0146? |
| 7 | A. | I am. |
| 8 | Q. | What is the purpose of your rebuttal testimony? |
| 9 | Α. | I respond to the direct testimony of other parties regarding: |
| 10 | | • Clean Charge Network ("CCN") |
| 11 | | Kansas City Power & Light Company and KCPL Greater Missouri Operations |
| 12 | | Company ("KCPL/GMO" or "Company") witness Charles A. Caisley |
| 13 | | Community Solar |
| 14 | | KCPL/GMO witness Bradley D. Lutz |
| 15 | | Low Income Community Solar |
| 16 | | Renew Missouri Advocates witness Philip Fracica |
| 17 | | Green Tariff |
| 18 | | KCPL/GMO witness Bradley D. Lutz |
| 19 | | • Pay As You Save® ("PAYS®") |
| 20 | | Renew Missouri Advocates witness Philip Fracica |
| 21 | | • Low Income Weatherization ("LIWAP") |
| 22 | | Missouri Division of Energy ("DE") witness Sharlet E. Kroll |
| 23 | | Missouri Public Service Commission Staff ("Staff") witness Kory Boustead |

Rebuttal Testimony of
Geoff Marke
Case No. ER-2018-0145
& ER-2018-0146

• Econo
• Econo

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- Economic Relief Pilot Program ("ERPP")
 - Staff witness Contessa King
- Economic Development Rider ("EDP")
 - Staff witness Sarah L.K. Lange
- Customer Information System ("CIS") and Customer Care and Billing ("CCB")
 - KCPL/GMO witnesses Charles A. Caisley and Forrest Archibald

II. CLEAN CHARGE NETWORK

Q. Please summarize KCPL/GMO's request.

A. KCPL and GMO witness Mr. Caisley is requesting that the Commission "reconsider" its position on the unrecoverable capital and O&M costs related to its Clean Charge Network ("CCN").

Q. What is OPC's position?

A. Consistent with the Commission's ruling in ER-2016-0285, OPC recommends the continued removal of these costs as the Commission has already ruled it has no statutory authority to regulate the CCN operations.

Both ratepayers and drivers are best served by a competitive market for EV charging services rather than by a regulated monopoly. The best ways for KCPL and GMO's *regulated* services to enable the promotion of EV adoption by emphasizing its essential services, primarily through offering time-of-use ("TOU") rates on an opt-in basis that encourages charging during low-cost, off-peak hours (this specific recommendation and its benefits will be discussed at length in my rebuttal rate design testimony).

The Commission has already rejected KCPL and GMO's proposal to recover EV charging station costs "above the line" and there has been no change in circumstances to warrant a different decision. The Commission should continue to leave deployment of EV charging infrastructure to non-regulated services and importantly, to existing and future free-market competition; thereby reducing the risk of future stranded utility assets and costs.

Q. What do you mean by stranded assets?

A. Stranded assets are assets that have suffered from unanticipated or premature write-downs, devaluations, or conversion to liabilities. There is no question EV charging is a developing technology. EV charging stations can become stranded assets when new technologies are introduced and nimble companies out-compete incumbent utilities. Regulated electric utilities are then exposed to the risk of having stranded assets on their books. Failure to account for changing technologies may result in ratepayers funding assets that are outdated and are no longer useful by or useful to customers.

Q. Would KCPL and GMO's current CCN investments be considered stranded assets?

A. No, not for ratepayers because of the Commission's Order in ER-2016-0285. It may be too soon to know if the Companies' 929 charging stations will prove to be a stranded investment for shareholders, however, the early returns are not encouraging.

According to the response to OPC DR-2032, from 2010 to 2017 there were 905,455 conventional vehicles (non-electric) registered in the KCPL-KS, KCPL-MO and KCPL-GMO service territories.¹ During that same time span only 2,789 EVs were registered in total (or .03%), with only 972 in KCPL-MO and 434 in the GMO service territory.²

Furthermore, according to OPC DR-2034, there have been a total of 2,092 "unique drivers" who have used the CCN through 2017. This means that, at least, more than 700 of the registered EV drivers who reside in the three KCPL service territories have never utilized the CCN.³ For perspective, there are 1,862 available charging ports on the Clean Charge Network, or roughly 1 charging port for each of the 2092 unique EV drivers who have *ever* used the CCN.

¹ See GM-1 which includes a selected summary from the Excel spreadsheet titled EPRI-201801-KCPL_All.XLSX from the Company's response to OPC DR-2032.

² See GM-2 which includes sheet1 from the Excel spreadsheet titled EV in operation talbe.xlsx from the Company's response to OPC DR-2032.

³ See GM-3.

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III. COMMUNITY SOLAR

account number 910000.

to bear those costs.

with the CCN?

Q. Please summarize KCPL/GMO's request.

A. KCPL and GMO (and KCPL-KS in the concurrent KCC rate case) are proposing a 5 MW community solar subscriber program for all interested customers (except those on Unmetered, Lighting, Net-Metered, or Time-of-Use ("TOU") Services).

It is also important to note that up until 2018 using the CCN charging stations was entirely

free. 4 Moving forward, drivers will have to pay for charging service, at least at the 749 non-

host paid sites. Equally important, the vast majority of these charging stations are also not "fast

charging" but instead "Level 2" models that take 4-5 hours to fully charge an EV with a 100-

mile battery.⁵ The likelihood of generating enough revenues to cover the cost of the capital

(and O&M) investments will be a challenge. Thankfully, and correctly, ratepayers do not have

Do you have any final recommendations regarding the requested cost recovery associated

Yes, according to OPC DR-2026, ratepayers are currently being charged \$250,000 per year for

marketing, outreach, adoption and education. OPC does not believe it is reasonable or prudent

to charge ratepayers for marketing or other activities supporting a nonregulated service. As

such, OPC recommends that the Commission disallow costs associated with EV marketing in

Q. What is OPC's primary position on this proposal?

A. OPC's primary recommendation is for KCPL and GMO to withdraw their proposal and submit it in a separate docket immediately following this case, or, better yet, as part of its CCN

⁴ ER-2018-0145 & ER-2018-0146 Direct Testimony of Charles A. Caisley p. 5, 11-12.

⁵ Chargepoint (2018) Level up your EV charging knowledge. https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/

⁶ See GM-4.

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application (if it is ultimately built in Missouri) when KCPL/GMO have more information on the project.

Why has OPC taken this position? Q.

- A. The volume of issues in this rate case has crowded out the necessary dialogue and discovery needed to approve a community solar project. To provide an example of one of the many issues that have complicated this proposal, Company witness Lutz has recommended that any residential customer receiving service under the Company's proposed TOU pilot rate be ineligible for the community solar program. Alternatively, Staff, has recommended that all customers be subject to a TOU rate design. If both recommendations were accepted there would be no residential customer eligible to participate in the community solar program.
- Q. Does OPC have any secondary recommendations or concerns it would like to bring to the Commissions attention?
- A. Yes, OPC recommends that any community solar program include the \$4 million solar investment required by SB 564 and included in §393.1665.2 RSMo which states:

An electrical corporation with less than one million but more than two-hundred thousand Missouri electric customers shall invest in the aggregate no less than four million dollars in utility-owned solar facilities located in Missouri or in an adjacent state during the period between the effective date of this section and December 31, 2023. (emphasis added)

First, ensuring that the costs associated with the community solar project(s) include a carveout specifically for a utility-owned solar at \$4 million for KCPL and \$4 million for GMO should help lower the overall costs of the generating facility and presumably allow the subscription terms to be more favorable for interested ratepayers.

Second, and consistent with OPC's recommendation that KCPL and GMO consolidate services in its next rate case, OPC recommends that only one site be selected for the Missouriside of its operations. This recommendation differs from Staff's which recommended separate facilities and offerings for KCPL and GMO. It also differs from the Company request to select

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one utility-scale project site that would encompass both its Missouri and Kansas operations. OPC's recommendation provides a reasonable compromise by capturing a degree of cost savings (through economies of scale) and regulatory certainty (by excluding its Kansas affiliates).

Third, OPC rejects KCPL and GMO's recommendation that any unsubscribed solar costs be flowed through their fuel adjustment clauses ("FAC"). Permitting KCPL and GMO to recover non-fuel costs through the FAC would create a perverse incentive to overbuild and be indifferent to the subscription status of participants. Furthermore, nonparticipants would no longer "be held harmless." This is unacceptable. OPC recommends that this risk be borne by shareholders. If KCPL and GMO truly believe that the cost will be less than market prices, its shareholders will make money off the non-subscribed portion. If it is greater than market price, the shareholders absorb the extra cost. If shareholders aren't willing to take the risk, the nonparticipating ratepayer should not either.

Fourth, the size of the solar unit should not exceed 1MW-AC. In contrast, KCPL and GMO have proposed to size a 5 MW-AC unit. Perhaps KCPL and GMO will be able to expand to a larger size in the future; however, at this point, there are no operational community solar programs by an IOU in Missouri. Recognizing there is a legitimate risk that subscribers may not materialize or that subscribers will "fall off" the service raises the potential for unnecessary cost shifting to nonparticipants. Public Counsel recommends a measured approach. KCPL and GMO should be required to demonstrate full subscription at 1MW for a minimum of three years before additional solar subscriptions are offered.

Finally, OPC would want KCPL and GMO to adopt recommendations similar to those agreed to by stakeholders in Ameren Missouri's EA-2016-0207 case including more detail regarding marketing and administrative costs as well as quarterly reporting requirements and Frequently Answered Question ("FAQs") write-up on its website including sample questions such as:

• Who is eligible?

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- What does it cost?
- Do I own the panel?
- How much solar can I subscribe to?
- Where will the subscription solar be located?
- How big is the subscription solar?
- Will this make my rates go up (non-subscriber)?
- Is my payment for the solar eligible for a tax deduction/credit?
- What is the minimum participation period?
- What if I want to reduce/increase my shares?
- What happens if I drop off or move?
- What happens if I pass away?
- How is my bill calculated?
- How will this appear on my bill?
- How much can I expect my bill to increase?
- Will my bill be subject to additional increases in the future?
- Is it possible the cost of my bill will decrease as a result of my participation?
- What if the cost of solar decreases over the next twenty-years? Will my cost decrease?
- What is the fixed portion of my bill? Will it be the same every month if I participate?
- What are the surcharges on my bill? Will they be the same every month if I participate?
- Do I own the renewable energy credit (RECs) for my portion of this solar project?
- Does participation in this program qualify me as a net metering or co-generation customer?
- Can I still participate in this program if I am currently a net metering or cogeneration customer?

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- Is the renewable energy I support through the Subscription Solar program delivered directly to my residence?
- Is there a calculator or spreadsheet I can use to help me determine my future expense?
- Am I eligible for the federal tax rebate known as the Investment Tax Credit?
- Who gets to claim the environmental benefits of this project?
- What if the system is sold out and I want to participate?
- How long will the community solar be in service?
- What panels, inverters, and racking systems are being used in the array?
- How do I enroll?

The details on all of the aforementioned points are better addressed in a separate docket following the conclusion of this rate case.

IV. LOW INCOME COMMUNITY SOLAR

Q. Please summarize Renew Missouri's recommendation.

A. In general, Renew witness, Mr. Fracica recommends that KCPL and GMO pursue a low income community solar program. He references two different models utilized by a Missouri municipality (Columbia Water and Light) and a Colorado rural cooperative (Poudre Valley). The latter example was able to apply federal LIHEAP dollars towards its capital costs. Mr. Fracicia concludes his testimony by suggesting that existing KCPL/GMO energy assistance expenditures could provide a stream of money that could be utilized to support a low income community solar program.

Q. What is OPC's position?

Presently, OPC cannot support Renew Missouri's recommendations as they lack the necessary detail for implementation and do not appear to be fiscally prudent. To understand OPC's position, consider that LIHEAP funds fall under the purview of the Missouri Department of Social Services ("MDSS") not the Missouri Public Service Commission, KCPL, or GMO.

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9 10 MDSS has to apply to the federal government for LIHEAP funds with a detailed plan on how the funds will be spent and allocated. LIHEAP is not a block grant from which funds can be redirected midstream. MDSS would need to specifically request to allocate LIHEAP funds for solar in its application and then the plan would still need approval by the US Department of Health and Human Services.

Table 1 and 2 provides a breakdown of KCPL and GMO's operating revenue, LIHEAP assistance, and charitable dollar energy assistance by year from 2009 to 2017 as filed in the utilities annual reports to the Commission.

<u>Table 1: KCPL Annual Operating Revenue, LIHEAP and Charitable Dollars for Energy Assistance 2009 – 2017 per Annual Reports filed with the Commission</u>

| Year | 1 1 | | Charitable | LIHEAP + | |
|--------------|---------------|-------------|-------------|-------------|--|
| | Revenue | | Dollars | Charity | |
| 2009 | \$590,116,227 | \$1,374,256 | \$3,662,847 | \$5,037,103 | |
| 2010 | \$683,677,205 | \$1,136,158 | \$4,467,708 | \$5,603,866 | |
| 2011 | \$707,338,468 | \$1,742,431 | \$3,467,325 | \$5,209,756 | |
| 2012 | \$712,042,842 | \$1,893,909 | \$4,368,128 | \$6,262,037 | |
| 2013 | \$758,243,587 | \$1,272,042 | \$2,382,881 | \$3,654,923 | |
| 2014 | \$769,402,230 | \$2,179,383 | \$1,925,395 | \$4,104,778 | |
| 2015 | \$809,815,149 | \$3,158,287 | \$899,607 | \$4,057,894 | |
| 2016 | \$911,550,848 | \$505,244 | \$3,080,633 | \$3,585,877 | |
| 2017 | \$934,997,557 | \$463,478 | \$3,173,943 | \$3,637,421 | |
| % change | + 58% | - 66% | - 13% | - 28% | |
| 2009 to 2017 | + 38% | - 00% | - 13% | - 28% | |

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<u>Table 2: GMO Annual Operating Revenue, LIHEAP and Charitable Dollars for Energy Assistance 2009 – 2017 per Annual Reports filed with the Commission</u>

| Year | Operating | LIHEAP | Charitable | LIHEAP + |
|--------------|---------------|-------------|-------------|-------------|
| | Revenue | | Dollars | Charity |
| 2009 | \$637,768,024 | \$1,736,814 | \$2,577,947 | \$4,314,761 |
| 2010 | \$715,488,233 | \$1,239,696 | \$3,242,856 | \$4,482,552 |
| 2011 | \$740,866,123 | \$1,420,479 | \$2,298,891 | \$3,719,370 |
| 2012 | \$744,995,457 | \$1,312,246 | \$2,332,685 | \$3,644,931 |
| 2013 | \$784,658,425 | \$1,099,824 | \$1,910,326 | \$3,010,150 |
| 2014 | \$824,287,143 | \$1,312,246 | \$2,799,129 | \$4,111,375 |
| 2015 | \$762,669,983 | \$3,312,360 | \$786,532 | \$4,098,892 |
| 2016 | \$774,373,864 | \$718,391 | \$2,306,010 | \$3,024,401 |
| 2017 | \$791,456,537 | \$722,375 | \$2,432,296 | \$3,154,671 |
| % change | + 24% | - 58% | - 6% | - 27% |
| 2009 to 2017 | . = 170 | 2070 | 3 70 | |

Q. What should the Commission note from the tables above?

A. First, that LIHEAP dollars allocated to both KCPL and GMO have decreased 66% and 58% respectively from 2009 to 2017. Second, that funding for both LIHEAP and charitable dollars (ratepayer and shareholder) fluctuates considerably in any given year. Third, the annual amount of energy assistance funding available in a given year is relatively small. Taking some or all of those funds and redirecting it towards a long-term solar investment would fall well short of covering the costs to procure such an asset and no doubt negatively impact those low income families who require such assistance. And finally, operating revenue from tariffed services has increased considerably over this same period which has resulted in increased electric bills for ratepayers and a greater energy burden on those least able to bear it. ⁷

Putting aside the complexity inherent in designing an appropriate and equitable low income community solar program,⁸ OPC cannot support Renew Missouri's recommendation to

⁷ The Commission should also be aware that, at least for 2018, the Missouri Legislature ceased funding the "Utilicare Stabilization Fund" from general revenue.

⁸ For example, how is low income defined? Which low income customers are selected? How much of this service is subsidized? How long are the terms of the contract? Do customers need to have and maintain a certain credit score? What happens if the subscriber is no longer considered low income in later years? Etc...

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subsidize a community solar project with dwindling and highly volatile energy assistance funding to low income households in the face of rising electricity bills for all customers.

V. GREEN TARIFF

Q. What are KCPL and GMO requesting by their Green Tariff?

KCPL, here and in Kansas before the Kansas Corporation Commission, and GMO are proposing to dedicate energy from a 100-200 MW renewable energy Power Purchase Agreement ("PPA") to interested non-residential customers (except those on Unmetered, Lighting, Net-Metered, or Time-of-Use ("TOU") Services) who want to promote construction of new renewable energy and attribute part of their energy consumption to that newly built renewable energy.

Q. What is OPC's position?

A. OPC's primary recommendation is for KCPL and GMO to withdraw their proposal and submit it in a separate docket immediately following this case, or after they have more information on the project. Similar to the aforementioned community solar program, the volume of issues in this rate case has crowded out the necessary dialogue and discovery needed to evaluate and make recommendations about an appropriate Green Tariff project.

OPC offers up for the Commission's consideration the following recommendations. First, and consistent with OPC's recommendation that KCPL and GMO consolidate services in a joint next rate case, OPC recommends that only one site be selected for the Missouri-side of the joint KCPL/GMO operations. This recommendation differs from Staff who recommends separate facilities and offerings for KCPL and GMO. It also differs from the request from the Company who wanted to select one utility-scale project site which would encompass KCPL-KS, KCPL-MO, and GMO operations. OPC's recommendation provides a reasonable compromise by capturing a degree of cost savings (through economies of scale) and regulatory certainty (by excluding its Kansas operations).

Second, OPC rejects KCPL and GMO's recommendation that any unsubscribed green tariff costs be flowed through their fuel adjustment clauses ("FAC"). The same argument made earlier regarding the proposed community solar program applies here as well. If shareholders aren't willing to take the risk, then nonparticipating ratepayer should not either.

Finally, OPC requests that KCPL and GMO make commitments similar to those Ameren Missouri did in its Green Tariff, Case No. ET-2018-0063, which, among other things, included providing more detail regarding marketing and administrative costs, sharing of undersubscription risks between shareholders and ratepayers, and publishing a Frequently Answered Question ("FAQs") write-up on its website.

The details on all of the aforementioned points would better be addressed in a separate docket following the conclusion of this rate case.

VI. PAY AS YOU SAVE®

Q. Please summarize Renew Missouri's recommendation.

A. Mr. Fracica provides an overview of the PAYS® on-bill financing ("OBF") tariff model emphasizing that the PAYS® model is particularly appealing to low-income customers and renters and should perfectly complement the new CIS and CCB systems that KCPL/GMO has invested in. Mr. Fracica also notes that the recently completed, independent third-party, The Empire District Electric PAYS® Feasibility Study (Doc. No. ER-2016-0023) concluded that the PAYS® program would be a cost-effective option for Empire and its ratepayers. Mr. Fracica ultimately recommends that, "The Company in this case should take steps to explore an OBF feasibility study."

Q. What is OPC's position?

OPC generally agrees with Renew on the potential ability of a PAYS® program to enable low income customers and renters to better control their electric bill. These two demographics are glaringly underrepresented in terms of KCPL/GMO MEEIA participation and are unable to

⁹ ER-2018-0146 Direct Testimony of Philip Fracica p 15, 8-9.

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"opt out" of having to shoulder the increasingly growing MEEIA surcharge costs unlike certain commercial and industrial customers. OPC does not object to exploring a future PAYS® program in a MEEIA application but notes that Mr. Fracia's recommendation to the Commission is not necessary as the Commission has already ordered KCPL to conduct an analysis for its next MEEIA application. As stated in the Report and Order in Doc No. ER-2016-0213:

The Commission orders KCPL to consider whether to incorporate PACE and PAYS programs in its next Missouri Energy Efficiency Investment Act ("MEEIA") filing.¹⁰

OPC understands that KCPL/GMO plans to file a MEEIA 3 application by the end of the summer. Presumably, KCPL will comply with the Commission's explicit orders and the results of the PAYS[®] investigation will be included in the application which should make Renew Missouri's request unnecessary.

VII. LOW INCOME WEATHERIZATION

Q. Please summarize DE's recommendations.

A. Mrs. Kroll makes three recommendations to the Commission: 1.) to maintain LIWAP funding at the current funding level of \$573,888 for KCPL and \$500,000 for GMO with any unspent funds to be rolled forward into future program years; 2.) to convene a joint advisory group of interested stakeholders on weatherization policy; and 3.) to order the new advisory board to consider the policy of voluntary customer contribution check-off box on customer's bills.

Q. Please summarize Staff's recommendations.

A. Mrs. Boustead also recommends that the funding levels remain the same (although Staff puts forward a \$400,000 annual amount compared to DE's \$500,000 annual amount). Mrs. Boustead also recommends that KCPL and GMO "work closely with the applicable

¹⁰ ER-2016-0285 Report and Order p. 14.

¹¹ It is OPC's understanding that \$400,000 is the agreed-to annual amount with a potential additional \$100,000 available if the annual budget is exceeded. However, further clarification from Staff and DE may be warranted.

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Community Action Agencies to address any process barriers to getting the funds fully expended within the IEW program year."¹²

Q. What is OPC's position?

A. OPC supports maintaining the terms and the annual weatherization amounts set from the previous rate cases. Regarding the recommendations made to convene a joint advisory group (DE) or ordering the KCPL/GMO to work closely with sponsored CAA's (Staff), OPC believes that both of these recommendations are largely already being addressed as a result of the "Merger Commitments and Conditions" listed within the Corporate Social Responsibility section of the Stipulation and Agreement entered into in Case No. EM-2018-0012 which states:

KCP&L and GMO commit to an annual in-person meeting with each of the local Community Action Agencies for the next five years at Holdco's headquarters in Kansas City, Missouri, with extended invitations to (at least) the Commission Staff and OPC to discuss progress to date including Strengths, Weaknesses, Opportunities and Threats to KCP&L's and GMO's low-income population.¹³

In light of DE's interest, OPC recommends that KCPL and GMO extend an invitation to DE and (or any other relevant stakeholders) who would like to participate in the annual in person meeting with the local Community Action Agencies in the Missouri KCPL and GMO service territories.

VIII. ECONOMIC RELIEF PILOT PROGRAM

Q. What are Staff, KCPL and GMO requesting?

- A. Staff, KCPL and GMO are requesting that the ERPP design and funding amount remain the same. Staff further recommends that a third-party evaluation occur before the next rate case(s).
- Q. Does OPC support the proposed funding level?

¹² Staff Cost of Service Report: p. 130, 1-2.

¹³ See also EM-2018-0012, Item No. 48, Stipulation and Agreement, Exhibit B, p. 3

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24 2.5 OPC is encouraged that the number of participants for both KCPL and GMO has increased. The 2018 participations numbers for approximately half of 2018 have already surpassed the 2017 numbers by 37% (1,495 to 1,964) for KCPL and 109% (919 to 1,920) for GMO.¹⁴ These are remarkable increases and represent a categorical departure from previous years, especially when one considers that these numbers only encompass the first six months of 2018.

OPC was highly critical of KCPL's inability to properly expend funding for this program despite the apparent need in its last rate case (ER-2016-0285). In addition to the lack of publicity for the program and the inaccurate information listed, OPC cited a featured story widely shown throughout the Kansas City news in which power was shut-off for Ms. Kari White, a grandmother responsible for caring for her four-year-old granddaughter, Lee-Anna, who is blind, deaf, and diagnosed with cerebral palsy. Ms. White had contacted KCPL to explain her situation and even had the hospital fax a letter on the family's behalf. Lee-Anna's tragic situation was made all the worst given that funding for the ERRP remained unspent yearafter-year. 15

Clearly, those funds are being spent now and OPC supports both the Staff and KCPL and GMO's recommendations to maintain funding at the current levels.

Does OPC support a third-party evaluation? Q.

Possibly. OPC can see merit in such evaluation, especially considering that the two utilities A. have historically underspent available funds; however, given the relatively small amount of annual funding for this program OPC is hesitant to spend any more than a few thousand dollars. As an alternative, OPC recommends that the Salvation Army (who is responsible for the distribution of the ERPP funds) be invited to the aforementioned annual low-income stakeholder meeting later this year at KCPL's headquarters so it may provide primary feedback on the program and its design with other relevant stakeholders. This would appear to be a more prudent use of ratepayer dollars than allocating additional costs to a third-party consultant who

 $^{^{14}}$ See also ER-2018-0145 and ER-2018-0146 Staff Cost of Service Report p. 127. 15 See ER-2016-0285 Surrebuttal Testimony of Geoff Mark p. 4, 11 to p. 8, 22.

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would conduct interviews and elicit feedback that would be similar or identical to the conversations that will presumably take place at the annual low income meeting.

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IX. ECONOMIC DEVELOPMENT RIDER

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What is Staff's position? Q.

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- Pages 57-64 of Staff's Cost of Service Reports include examples of Staff excluding Economic A. Development Rider revenues for customers where:
 - Documentation of the EDR was not provided;
 - A review of documentation provided indicated that the customer did not qualify for the EDR or continued receipt of the EDR; and
 - The form of the EDR provided was improper.

Staff recommended that KCPL and GMO conduct a review of their customers to ensure compliance regarding the terms of their EDR tariffs and report the findings as part of their rebuttal testimony. Staff witness Sarah Lange also specifically recommended that KCPL and GMO's rebuttal testimony include, at a minimum, information:

- 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.
- 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.

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4. In the case of retention customers, review documentation provided regarding the availability of a viable electric supply option, pursuant to tariff sheet 32F, and the Termination provisions of tariff sheet 32H.¹⁶

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Q. What is OPC's position?

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A. OPC fully supports Staff's recommendations and is interested in seeing what KCPL and GMO file in rebuttal testimony.

Given both the apparent lack of utility administrative oversight and the increased level of economic development opportunities for the subsidization of certain commercial and industrial customers in light of SB 564, OPC further recommends that the Commission order both KCPL and GMO to file annual, publically-available reports that demonstrate that approved subsidies (cost-shifting incentives) are actually providing and maintaining the outcomes under the agreed-to terms in which they were approved. Such transparency is good for many reasons. Some examples include:

- It holds subsidized companies accountable for the discounts received;
- Allows competing companies an opportunity to scrutinize each other's deals as well as small businesses the opportunity to examine the deals given to big businesses;
- Provides ratepayers, the Commission, and elected leaders the opportunity to decide for themselves if the increased cost shifting justifies the espoused benefits;
- Enables interested stakeholders and the public at large an opportunity to match up subsidized companies with campaign finance and lobbying data;
- Aids local governments in examining the geographic distribution of discounts and relevant regional impact; and
- Produces a transparent record for future policy consideration.

¹⁶ ER-2018-0145 & ER-2018-0146 Staff Report: Cost of Service p. 58

At a minimum, such reporting should include each and every EDR participant, the terms entered into, positive affirmation on the status of meeting said terms based on verified empirical data, and the estimated impact on the community of the participant.

Company witnesses Charles A. Caisley and Forrest Archibald provide largely complementary

IX. CUSTOMER INFORMATION SYSTEM AND CUSTOMER CARE AND BILLING

Q. Please summarize KCPL and GMO's testimony on these topics?

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testimony that includes a narrative description of the procurement, implementation, and expected outputs to be achieved with a fully functioning Customer Information System ("CIS") and Customer Care and Billing ("CCB") system in place.

Q. What is OPC's position?

Presently, the CIS/CCB systems are not fully operational and the costs associated with it are not finalized. It is OPC's understanding that true-up will provide an opportunity for accurate numbers and further review. That being said, OPC is both disappointed and concerned with the poor planning and inappropriate prioritization of KCPL and GMO's combined AMI, CIS and CCB deployment.

Simply put, *the* value proposition for AMI deployment and the accompanying CIS/CCB capital investments is the ability to offer dynamic pricing. Absent that deliverable, such large capital investments have to be considered imprudent. OPC is at a loss as to what value 15 minute interval data is if electricity is not priced on a time-of-use basis. As it stands, ratepayers will be paying hundreds of millions of dollars to have the opportunity to get what appears to be an excess variety of bill notification alerts (see GM-5).

For reference, other Commissions have rejected utility AMI deployment plans due to the uncertainty surrounding the benefits. For example, the Massachusetts Department of Public Utilities recently rejected National Grid, Eversource Energy and Fitchburg Gas and Electric Light Company's AMI deployment modernization plan stating:

The evidence in these cases revealed weaknesses in their business case for advancing metering functionality presented by each company and, therefore, we declined to preauthorize any customer-facing investments at this time. The Department weighed the significant costs associated with full achievement of advanced metering functionality using advanced metering infrastructure against the considerable uncertainty regarding benefits from reduced demand, capacity savings, and customer participation in time varying rates or other forms of dynamic pricing. We determined that the benefits of a full deployment of advanced metering functionality do not currently justify the costs. ¹⁷

KCPL and GMO have had several years now to execute its business case which should have included the deployment of AMI meters, the implementation a CIS and CBB system *and* the education and roll-out of TOU rate design. All three need to be executed to produce optimal advanced metering functionality. Previous Commission Orders have stressed the importance and need for KCPL and GMO to proactively roll out TOU rates. For example,

The Non-Unanimous Stipulation and Agreement in ER-2016-0285 states:

GMO will include in its direct filing in its next rate case or rate design case a study of TOU rates for GMO including TOU residential and SGS rates, critical peak rates, Electric Vehicle TOU rates for stand-alone charging stations, TOU rates applicable to Electric Vehicle charging associated with an existing account, Real Time Pricing, Peak Time Rebates, and other rate types which could encourage load shifting/efficiency. GMO will propose rates based on this study no later than its next rate case or rate design case.¹⁸

¹⁷ See also The Commonwealth of Massachusetts, Department of Public Utilities Commission Order: DPU15-120, 15-121, 15-122 on 5/10/18

¹⁸ ER-2016-0156 Non-Unanimous Stipulation and Agreement p. 10-11.

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The Commission's Report and Order from ER-2016-0285 states:

Time of use rates (also known as demand response rates), better reflect cost causation than the current rate design and would create beneficial incentives for customers to reduce usage during system peak times. KCPL has smart meters installed for over 90 percent of its customers, yet does not have tariffs in place that would allow customers to benefit from demand response rates those meters would allow. Many other utilities already offer time-differentiated rates to residential customers. . . . Further, KCPL shall propose time-varying rate offerings for residential customers in its next rate case. ¹⁹

The Commission's Order Establishing Special Contemporary Resource Planning Issues in EO-2017-0074 issued on October 26, 2016 states:

- M. Study feasibility of providing all customers with interval meter data. Review the options available to provide customers with real-time, building level data, sub-meter, line and device level data.
- N. Review plans to make Time of Use rates available to all customers. 20

The Commission has been clear about its desire to implement TOU rates. Offering three pilot programs limited to 3,000 participants and only on the condition that the rates be married to an approved MEEIA filing in which the Company can claim both lost revenue and an earnings opportunity is both inappropriate and imprudent.

OPC is aware of no utility in the US that is able to claim energy efficiency savings through its rate design and introducing these TOU rates in this manner is clearly a work-around of the Commission's previous orders.

¹⁹ ER-2016-0285 Report and Order p. 56-57

²⁰ EO-2017-0074 Order establishing special contemporary resource planning issues. p. 6

Q. Would mandating TOU rates in this case solve this problem?

A. No. Customers have had literally zero education, buy-in, or notification. OPC would be concerned with the impact this could have on ratepayer's bills. KCPL and GMO should have already planned on rolling out TOU rates in this case. Instead they have elected to pass on these obvious benefits (at least until the next rate case, but potentially longer) and use the intermediate time to earn a return on and of an expensive "customer experience" platform. Which begs additional questions, such as why KCPL and GMO have gone to such great lengths to provide personalized messaging, Company branding, and differentiated notification. To be clear, KCPL and GMO operate as natural monopolies and have captive customers. There is very little, if any, branding value when customers have no choice.

Q. Why wouldn't OPC support a more personalized "customer experience?"

A. At some point, making further efforts becomes pointless. This is the law of diminishing marginal utility or "diminishing returns." According to Mr. Caisley:

The Company's current offering includes 26 notification types with 81 variations of those messages, depending on transaction details and customer types. With this initial go-live of the redesigned Customer Self-Service portals and Eloqua, the offering increases to 42 notification types with 238 variations accommodating transaction details and customer type.²²

What is the marginal utility of adding an additional 157 variations of "customer experience" notifications that are largely (or solely) limited to: bill notification, energy efficiency, nefarious scam alerts, and outage information? According to the law of diminishing returns, there are three general principles the Commission and KCPL and GMO should be mindful of:

1.) Not every unit of input will lead to a proportional increase of output;

²¹ OPC will expound more on this point as well as Staff's proposed rate design and the Company's inappropriate request to be rewarded with a MEEIA earnings opportunity for pricing service in rebuttal rate design testimony.

²²ER-2018-0145 & ER-2018-0146 Direct Testimony of Charles A. Caisley p. 28, 19-23

- 2.) At some point, adding more input gives you a decreasing rate of return; and
- 3.) If you continue to add more input despite diminishing returns, you will reach a stage where not only do you not get a positive return for every extra input, but you decrease your overall output. This is known as a negative return.

Restated, the law of diminishing returns suggests adding more frequent notifications through more communication channels could increase the suboptimal behavior it hopes to mitigate. For example, customers may begin to ignore messages and arrearages could increase. OPC is unaware of any cost-benefit study to justify this business model.

Despite the increase in the "Internet of Things," electric service is not new. KCPL and GMO's customers are well versed in paying their electric bill at the end of each month. The past one hundred plus years of industry service attests to this fact.

- Q. Would cutting back on "customer experience" notifications, even in the slightest, greatly impact KCPL and GMO's bottom line?
- A. No, they are a natural monopoly. Customers have literally no cost-effective option but to choose to receive service from KCPL and GMO. If customer satisfaction is a priority for KCPL and GMO, the leading metric has been, and remains, affordable and reliable electric service. Unfortunately, the Company's inability to concurrently plan on TOU education and roll-out with its AMI/CIS/CBB systems means that rates will needlessly increase and large capital investments will remain, in part, not fully operational because of poor organizational planning and timing.
- Q. Does OPC have any recommendations to the Commission regarding this specific issue?
- A. Based off the Company's direct testimony, OPC recommends a disallowance of five years of depreciation expense for its One CIS system on a Missouri-jurisdictional basis. Furthermore, the Commission should weigh these arguments in setting the Company's ROE.

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Does OPC have any other concerns regarding the CIS and CBB testimony? Q.

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A. Yes. OPC made a series of recommendations in its direct testimony regarding the paramount importance of data privacy and customer consent. Parties to this case will no doubt respond to our recommendations in rebuttal. That being said, it is important to highlight at least one key concern from KCPL and GMO's direct testimony that underscore our recommendations.

That is the need for proper safeguards regarding customer privacy especially as it pertains to third-party contractors. In our review of high profile data breaches one of the key variables in assessing vulnerability in a system rested on exposure from third-party contractors. Consider this point in light of Mr. Archibald's testimony which states:

Additionally, the One CIS Solution includes over 100 additional interaction points (interfaces and extensions) between the core system and the ancillary 50 plus edge applications with over 25 external vendor partners (e.g., Bill Print, Credit & Collections, POS ID, etc.) required to provide exceptional customer service.²³

OPC DR-2021 requested a list of the external vendors necessary to provide exceptional customer service, that list is included in Figure 1:

²³ ER-2018-0145 & ER-2018-0146 Direct Testimony of Forrest Archibald p. 12, 17-20.

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Figure 1: 3rd Party vendors contracted for CIS/CBB service²⁴

| 1.) AEG | 16.) | ICF |
|--------------------------|------|------------------------|
| 2.) AllConnect | 17.) | KS LIHEAP |
| 3.) Broadridge | 18.) | Kubra/iFactor |
| 4.) CCS | 19.) | MO LIHEAP |
| 5.) ChargePoint | 20.) | Nexant |
| 6.) ClearResult | 21.) | OPower |
| 7.) CrediWorld | 22.) | Oracle Sales Cloud |
| 8.) DataRaker (Oracle) | 23.) | Wells Fargo Ebox & ACH |
| 9.) Eloqua (SFCG) | 24.) | WEST |
| 10.) Experian | 25.) | Western Union |
| 11.) Federal Reserve | 26.) | VOXAI |
| 12.) FiServe (Checkfree) | | |
| 13.) Hallmark | | |
| 14.) Harris and Harris | | |
| 15.) I2SMS | | |

The Commission should also be mindful that it is reasonable to assume that many (or all) of these vendors likely have sub-contracts with additional vendors. With the advent of interval data and more finite personalized customer information the need to ensure proper procedures and routine inspections is imperative.

Q. Does this conclude your testimony?

A. Yes.

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²⁴ See GM-6.

KCPL

Case Name: 2018 KCPL Rate Case Case Number: ER-2018-0145

Response to Marke Geoff Interrogatories - OPC_20180625
Date of Response: 7/13/2018

Question:2032

Please provide a copy of any all EPRI monthly county level 'new vehicle' registration data and quarterly zip-plus 4 vehicle registration data to develop the vehicles in operation for each of the KCPL service territories and referenced in the direct testimony of Charles A. Caisley p. 11, 18-19 thru p. 12, 1-3.

Response:

EPRI provides the 'new vehicle sales' and 'county vehicle registration' data in summary form in the attached spreadsheets from January 2018.

- Q2032 EPRI-201801-KCPL ALL.xls
- Q2032 EPRI-201801-KCPL GMO.xls
- Q2032 EPRI-201801-KCPL MO.xls
- Q2032_EPRI-201801-KCPL_KS.xls

The attached spreadsheet was used to calculate the summary table of vehicles in operation.

Q2032 EV in operation table.xls

Response provided by Ed Hedges

Attachments:

Q2032 EPRI-201801-KCPL ALL.XLSX

Q2032 EPRI-201801-KCPL GMO.XLSX

Q2032 EPRI-201801-KCPL KS.XLSX

Q2032 EPRI-201801-KCPL MO.XLSX

Q2032 EV in operation table.xlsx

Q2032 Verification.pdf

Plug-in hybrid electric vehicles (PHEVs) Battery electric vehicles (BEVs) Hybrid electric vehicles (HEVs) Conventional vehicles (CVs) and other

| 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|-------|-------|--------|--------|--------|--------|--------|--------|------|
| 0 | 39 | 163 | 198 | 233 | 131 | 262 | 344 | . 27 |
| 0 | 2 | 36 | 104 | 73 | 116 | 301 | 355 | 19 |
| 1776 | 1701 | 2752 | 3409 | 2974 | 2076 | 2582 | 3370 | 186 |
| 85545 | 94119 | 103322 | 110508 | 122825 | 126212 | 127184 | 127160 | 8581 |

KCPL

Case Name: 2018 KCPL Rate Case Case Number: ER-2018-0145

Response to Marke Geoff Interrogatories - OPC_20180625
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- Q2032_EPRI-201801-KCPL MO.xls
- Q2032_EPRI-201801-KCPL KS.xls

The attached spreadsheet was used to calculate the summary table of vehicles in operation.

Q2032_EV in operation table.xls

Response provided by Ed Hedges

Attachments:

Q2032_EPRI-201801-KCPL_ALL.XLSX

Q2032 EPRI-201801-KCPL GMO.XLSX

Q2032_EPRI-201801-KCPL_KS.XLSX

Q2032 EPRI-201801-KCPL MO.XLSX

Q2032 EV in operation table.xlsx

Q2032 Verification.pdf

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|---|---|----|---|---|---|---|--|
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| type | 201412 | 201506 | 201512 | 201606 | 201609 | 201612 | 201703 | 201706 | 201709 | 201712* |
|-------|---------|--------|---------|---------|---------|---------|---------|---------|---------|---------|
| BEV | 245 | 302 | 414 | 531 | 613 | 723 | 934 | 1066 | 1162 | 1244 |
| CV | 2197670 | 0 | 2237976 | 2261213 | 2275691 | 2397083 | 2403202 | 2423202 | 2419858 | |
| HEV | 22613 | 23519 | 24590 | 25499 | 26345 | 26777 | 27384 | 27873 | 28468 | |
| PHEV | 560 | 625 | 725 | 831 | 993 | 1130 | 1238 | 1337 | 1444 | 1545 |
| PEV | 805 | 927 | 1139 | 1362 | 1607 | 1853 | 2172 | 2403 | 2606 | 2789 |
| | 805 | 927 | 1139 | 1362 | 1607 | 1853 | 2172 | 2403 | 2606 | 2789 |
| %phev | 70% | | | | | | | 56% | 55% | 55% |
| %bev | 30% | | | | | | | 44% | 45% | 45% |

Data from Jan 2018 EPRI EV reports 'vio_by_type' tab - This data derived from County vehicle registration data.

* Derived by adding the 2017 Q4 new vehicle sales from the 'by_type' to the Q3 number of vehicle in operation

| type | 201412 | 201506 | 201512 | 201606 | 201609 | 201612 | 201703 | 201706 | 201709 | 201712* |
|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| BEV | 82 | 101 | 142 | 187 | 205 | 244 | 319 | 373 | 395 | 430 |
| CV | 742490 | 0 | 757622 | 767754 | 772826 | 809176 | 811740 | 819725 | 820797 | |
| HEV | 6989 | 7337 | 7628 | 7957 | 8195 | 8370 | 8697 | 8807 | 8987 | |
| PHEV | 183 | 218 | 246 | 290 | 341 | 397 | 438 | 468 | 505 | 542 |
| PEV | 265 | 319 | 388 | 477 | 545 | 641 | 757 | 842 | 900 | 972 |

KCPL-KS

| type | 201412 | 201506 | 201512 | 201606 | 201609 | 201612 | 201703 | 201706 | 201709 | 201712* |
|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| BEV | 132 | 162 | 218 | 271 | 329 | 385 | 490 | 552 | 613 | 650 |
| CV | 848748 | 0 | 866100 | 872197 | 880033 | 931306 | 931600 | 938267 | 935597 | |
| HEV | 11593 | 11954 | 12561 | 12928 | 13416 | 13584 | 13718 | 13996 | 14302 | |
| PHEV | 269 | 284 | 338 | 376 | 466 | 523 | 565 | 624 | 681 | 732 |
| PEV | 401 | 446 | 556 | 647 | 795 | 909 | 1055 | 1176 | 1294 | 1382 |

KCPL-GMO

| type | 201412 | 201506 | 201512 | 201606 | 201609 | 201612 | 201703 | 201706 | 201709 | 201712* |
|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| BEV | 31 | 40 | 54 | 73 | 79 | 94 | 125 | 141 | 153 | 163 |
| CV | 606432 | 0 | 614254 | 621263 | 622832 | 656602 | 659862 | 665210 | 663464 | |
| HEV | 4030 | 4228 | 4401 | 4613 | 4734 | 4822 | 4968 | 5071 | 5179 | |
| PHEV | 109 | 123 | 141 | 165 | 187 | 209 | 234 | 245 | 258 | 271 |
| PEV | 139 | 162 | 195 | 238 | 266 | 304 | 360 | 386 | 411 | 434 |

KCPL

Case Name: 2018 KCPL Rate Case Case Number: ER-2018-0145

Response to Marke Geoff Interrogatories - OPC_20180625 Date of Response: 7/13/2018

Question:2034

Please provide a copy of any and all studies (and/or work papers) utilized to substantiate the statement made in Charles A. Caisley's direct testimony p. 12, 12-17 which states:

a. Yes, in addition to the number of unique drivers using the Clean Charge Network, the number of charge sessions and the energy dispersed are metrics that illustrate the growth in use of the Clean Charge Network. Over the same (3) year period, the number of monthly charge sessions has grown steadily from 513 to 16,162 for a 216% compounded annual growth rate and the energy dispersed monthly has increased from 4,028 kWh to 117,355 kWh (208% compounded annual growth rate).

Response:

The data was generated directly from the ChargePoint system using one of their standard reports. The attached spreadsheet, 'Q2034_CCN Usage Statistics 2015-2017.xls', contains the unique driver, charge sessions, and energy dispensed data as reported by ChargePoint and used to calculate the compounded annual growth rates.

Response provided by: Wendy Marine

Attachments: Q2034_CCN Usage Statistics 2015-2017.xlsx Q2034_Verification.pdf

| Date | Unique Dri No. | of Ports |
|-----------|----------------|----------|
| 1/1/2015 | 86 | 42 |
| 2/1/2015 | 89 | 42 |
| 3/1/2015 | 132 | 112 |
| 4/1/2015 | 166 | 114 |
| 5/1/2015 | 210 | 216 |
| 6/1/2015 | 278 | 266 |
| 7/1/2015 | 312 | 290 |
| 8/1/2015 | 409 | 304 |
| 9/1/2015 | 420 | 340 |
| 10/1/2015 | 449 | 560 |
| 11/1/2015 | 501 | 602 |
| 12/1/2015 | 531 | 664 |
| 1/1/2016 | 540 | 732 |
| 2/1/2016 | 562 | 806 |
| 3/1/2016 | 647 | 910 |
| 4/1/2016 | 693 | 966 |
| 5/1/2016 | 731 | 1022 |
| 6/1/2016 | 806 | 1128 |
| 7/1/2016 | 863 | 1180 |
| 8/1/2016 | 959 | 1260 |
| 9/1/2016 | 1014 | 1288 |
| 10/1/2016 | 1058 | 1344 |
| 11/1/2016 | 1065 | 1376 |
| 12/1/2016 | 1190 | 1472 |
| 1/1/2017 | 1263 | 1552 |
| 2/1/2017 | 1319 | 1632 |
| 3/1/2017 | 1437 | 1662 |
| 4/1/2017 | 1485 | 1694 |
| 5/1/2017 | 1601 | 1726 |
| 6/1/2017 | 1701 | 1748 |
| 7/1/2017 | 1713 | 1760 |
| 8/1/2017 | 1815 | 1810 |
| 9/1/2017 | 1901 | 1836 |
| 10/1/2017 | 1914 | 1860 |
| 11/1/2017 | 1975 | 1860 |
| 12/1/2017 | 2092 | 1862 |

CAGR 190% 249.1836 722.0057 2092

KCPL

Case Name: 2018 KCPL Rate Case Case Number: ER-2018-0145

Response to Marke Geoff Interrogatories - OPC_20180625 Date of Response: 7/13/2018

Question:2026

Referencing the direct testimony of Charles A. Caisley p. 9, please provide the following:

- a. List of every community outreach and marketing activities related to the CCN including, but not limited to, a copy of each brochure, log of telephone calls, telephone contact script, advertising message, website reference and/or political lobbying contact;
- b. A description of the KCPL developed EV driver affinity group including total membership numbers and activities;
- c. Total number of outreach and training contacts with any local car dealerships including the topic of "training;"
- d. List each element of the multi-pronged advertising" approach;
- e. List of any and all EV or EVCS events in the past three years;
- f. A full description of the customer microsite; and
- g. List each item in a-f above and indicate whether costs were charged to shareholders or ratepayers. If ratepayers, list the dollar amount, the account #, and services charged.

Response:

A: While KCP&L hasn't conducted marketing activities related to the Clean Charge Network charging stations, we have conducted marketing and outreach activities related to EV adoptions and education. Below is a general list of those activities:

| Flag bases | 148.97 |
|-----------------------|---------|
| Flags | 772.86 |
| Maker Faire Banner | 54.38 |
| Charging Station Demo | 4960.00 |
| Car graphics | 169.57 |
| Car Graphics | 1379.98 |
| Event Branding | 172.97 |
| Pop Up Banners | 1416.97 |

| Koozies | 1413.08 |
|-------------------------------|----------|
| Shirts | 399.19 |
| USB Chargers | 1281.96 |
| Middle of the Map Festival | 10000.00 |
| Maker Faire | 2500.00 |
| Renewables Conference | 1000.00 |
| Kansas City Star Event | 5562.50 |
| Lunch and Learn | 325.09 |
| Shirts | 1816.59 |
| Boulevardia Sponsorship | 10000.00 |
| Driver Event | 1510.00 |
| Promotional Products | 15487.89 |
| Driver Event | 572.87 |
| Drive Electric Week Event | 149.80 |
| Business Wire | 1542.25 |
| Facebook ads | 119.53 |
| Facebook ads | 5.77 |
| Facebook ads | 119.66 |
| Facebook ads | 115.06 |
| Facebook ads | 340.28 |
| Facebook ads | 476.87 |
| Facebook ads | 206.13 |
| Digital Ads | 17762.06 |
| Digital Ads | 1912.50 |
| Digital Ads | 750.00 |
| Digital Ads | 6680.59 |
| Digital Ads | 1000.00 |
| GREENABILITY Ad | 780.00 |
| HARVEST GRAPHICS LLC | 604.62 |
| Moo.com printing biz cards | 239.75 |
| Facebook ads | 407.39 |
| May EV event | 2800.00 |
| Driver Event | 455.98 |
| Home Show | 3750.00 |
| Website build | 35000 |
| KCUR ads | 936.00 |
| Kansas City Zoo Event | 4000.00 |
| Cookies for Dealerships | 303.00 |
| PBS Event | 4500.00 |
| Website build | 2635.00 |
| Zoo Event | 5500.00 |
| Electric Car Insider Ride and | |
| Drive | 29400.00 |
| Social ads Jan1- May 18 | 5000.00 |
| Digital Ads | 620.00 |
| Digital Ads | 607.14 |
| Greenability ad | 2340.00 |
| River Market Event | 184.87 |
| Social ads May 19-Jun 13 | 4260.33 |
| EV Driver Event | 1484.86 |

B: Description: A group of area individuals who drive electric cars or are interested in driving

electric vehicles.

Membership Number: 1260

Activities: Events, Newsletters, Facebook Group, Education

\$20,000 a year

C: Contacts: 25

Topics: EV 101, Ways to Charge an EV, EV models

\$8000 a year

D: Events, Social Media, Website, Newsletter, Media Relations, Collateral, Digital ads, Word of Mouth, Kiosks, Blogs

E:

- Greater Kansas City Home Show \$5000
- Get Your Green on at the River Market \$0
- Mo Society of Professional Engineers Conference \$0
- Prairie Village Earth Fair \$0
- Art of the Machine River Market \$0
- The Great Car Show \$200
- KC Green Fair \$0
- Jewish Culture Fest
- EV Futures Panel \$5,000
- EV Day at the Zoo \$5,000
- Coffee with Clean Charge \$500
- Prairie Village Drive Electric Week
- Electric Car Insider \$29,000
- Posty Cards Employee Event \$700
- MindDrive Festival Non-ratepayer
- Fleet Managers Meeting \$1,000
- Black and Veatch Drive Electric Week \$0
- KCPT Members Event with the Elders \$4,500
- Announcement/ Press Conference
- Middle of the Map Festival \$10,000
- Boulevardia \$10,000

F: An online site to learn about driving electric and gain information about available EV models and where to find one. Information on costs, charging, car models, EV news and driver profiles. Link: www.cleanchargenetwork.com \$35,000. Cost to develop website.

G: Marketing efforts and costs for the Clean Charge Network have been designed to increase EV adoption, outreach and education and have not been focused on Clean Charge Network stations. These education and outreach costs are charge to ratepayers.

For EV marketing, outreach, adoption and education efforts, KCP&L spends \$250,000 per year. Account number: 910000

Here is an example of our 2018 EV outreach budget plan:

| ltem | Budgeted | |
|-------------------------------|----------|------------|
| Collateral | \$ | 8,000.00 |
| Email | \$ | 1,000.00 |
| Advertising (online & social) | \$ | 60,000.00 |
| Sponsorships & Events | \$ | 50,000.00 |
| Contractor Services | \$ | 98,000.00 |
| Website and Video | \$ | 15,000.00 |
| Dealer Relationships | \$ | 8,000.00 |
| Contingency | \$ | 10,000.00 |
| TOTAL | \$ | 250,000.00 |

Response provided by: Jeffrey Beeson

Attachments:

Q2026 Drive Kit.png

Q2026_DealCharger.jpg

Q2026_Digital Ad 3.jpg

Q2026_Digital Ad 4.jpg

Q2026_Digital Ad 5.jpg

Q2026_Digital ad.jpg

Q2026_Digital Ad6.JPG

Q2026_DigitalAd2.jpg

Q2026_Drive Electric Week PressRelease.docx

Q2026 EVCards.JPG

Q2026_Facebook Ad 4.png

Q2026_Facebook ad.jpg

Q2026_Facebook Ad1.png

Q2026 Facebook Ad2.png

Q2026_Facebook Ad3.png

Q2026_FuturesPanelPressRelease.docx

 $Q2026_PressRelease.docx$

Q2026_Shirt.jpg

Q2026_Verification.pdf

Q2026_website.pdf

Q2026_Verification.pdf

KCPL Case Name: 2018 KCPL Rate Case Case Number: ER-2018-0145

Response to Marke Geoff Interrogatories - OPC_20180625 Date of Response: 7/13/2018

Question:2046

Please provide the nine different overall options for telling the Company how customers would like to be communicated with as referenced in the direct testimony of Charles A. Caisley p. 26.

Response:

The preference center in the online portals provides the following options for notifications:

- Bill Ready notifications by email
- Bill Ready notifications by text message
- Bill Reminder notifications by email
 - o Customer can specify days in advance they want the notification
- Bill Reminder notifications by text message
 - o Customer can specify days in advance they want the notification
- Payment notifications by email
- Payment notifications by text message
- Pay by Text text only
- Service changes email only
- Other marketing communications by email

Information provided by: Nikki Johnson

Attachments:

Q2046_Verification.pdf

Page 1 of 1 GM-5

KCPL GMO

Case Name: 2018 GMO Rate Case Case Number: ER-2018-0146

Response to Marke Geoff Interrogatories - OPC_20180625
Date of Response: 7/16/2018

Question:2021

Referencing the direct testimony of Forrest Archibald, p 12, 17-20 please provide a list of:

- a. The over 100 additional interaction points (interfaces and extensions) between the core systems;
- b. The ancillary 50 plus edge applications; and
- c. The over 25 external vendors required to provide customer service as well as the unique service said vendor provides.

Response:

The final delivered solution for One CIS included 52 extensions and 73 interfaces for a total of 125 interaction points between the core systems. An extension is an addition made to the base product to enable and support KCP&L business processes or functionality. An interface is a data exchange between core systems to enable or support business processes or functionality. One CIS utilized naming standards to manage and distinguish between an extension, prefixed with 'ENH' and a three-digit number ('XXX'), and an interface for Customer Care and Billing (CCB), prefixed with 'INT' and a three-digit number ('XXX') and an interface for Customer Self Service Web Portals (CSS), prefixed with 'CSS' and a three-number ('XXX'). Each interface exchanged data between an internal edge application and/or external vendor. Below is the list of the final 125 interaction points, using the naming standard described above, to include the related internal edge application and/or external vendor.

* The external vendors are noted with an asterisk.

| # | Туре | Name/Description | Edge | Edge |
|------|--------|---------------------------------------|----------------------|----------------------|
| | | | Application/External | Application/External |
| | | | Vendor Source | Vendor Target |
| 1 | ENH012 | Postpone or Cancel Severance | N/A | N/A |
| | | Event based on certain Reason | | |
| 2 | ENH025 | Custom Payment Distribution Algorithm | N/A | N/A |
| V-AY | | | | |
| 3 | ENH029 | Validate Credit Refund | N/A | N/A |
| 4 | ENH031 | Create Customer Rebate | N/A | N/A |

| 5 | ENH069 | Field Level Security | N/A | N/A |
|----|--------|--|-------------------------|-----|
| 6 | ENH082 | Auto Delete Partial FAs | ete Partial FAs N/A N/A | |
| 7 | ENH086 | Notification Letter on Service Transfers Or Disconnection | N/A | N/A |
| 8 | ENH099 | Budget Billing Eligibility with Override | N/A | N/A |
| 9 | ENH105 | Contract Validation Alerts on Account Close | N/A | N/A |
| 10 | ENH119 | Cancel Severance Process aged in X days | N/A | N/A |
| 11 | ENH121 | FA Completion Adjustment | N/A | N/A |
| 12 | ENH122 | Automatic Deposit Interest Refund to Overpayment SA | N/A | N/A |
| 13 | ENH124 | Default New Account Info based on Existing Account | N/A | N/A |
| 14 | ENH127 | Billing Information by Service Agreement | N/A | N/A |
| 15 | ENH128 | Annual Base Demand Calculation | N/A | N/A |
| 16 | ENH132 | Net Metering Credit | N/A | N/A |
| 17 | ENH134 | Field Activity Schedule Hold | N/A | N/A |
| 18 | ENH140 | Store Payment Customer Info | N/A | N/A |
| 19 | ENH146 | Automatic Stop for Premise based deposit | N/A | N/A |
| 20 | ENH147 | Deposit Installment | N/A | N/A |
| 21 | ENH150 | Budget Billing Program | N/A | N/A |
| 22 | ENH153 | Default To Do with Current Account Context Info | N/A | N/A |
| 23 | ENH159 | CSR Payment Portal | N/A | N/A |
| 24 | ENH166 | Premise Tree Portal | N/A | N/A |
| 25 | ENH172 | Account Financial History | N/A | N/A |
| 26 | ENH173 | Automated Seasonal Budget | N/A | N/A |
| 27 | ENH175 | Charitable Contribution | N/A | N/A |
| 28 | ENH177 | Dynamic GL Assign | N/A | N/A |
| 29 | ENH178 | Case Transition from FA Complete | N/A | N/A |
| 30 | ENH182 | Cut for Non Pay Identifier | N/A | N/A |
| 31 | ENH183 | Customer Enrolled Program Information | N/A | N/A |
| 32 | ENH184 | Rate Compare | N/A | N/A |
| 33 | ENH185 | Multiple CIS Division and | N/A | N/A |

| | | Account Default | | |
|----|--------|---|--|--------------------|
| 34 | ENH187 | Auto Cancel Late Fees for Cancelled Bseg | Auto Cancel Late Fees for N/A N/A Cancelled Bseg | |
| 35 | ENH189 | | | N/A |
| 36 | ENH191 | Collection Agency Selection | N/A | N/A |
| 37 | ENH194 | Transfer By Distribution Code | N/A | N/A |
| 38 | ENH195 | Manual ToDo and Customer Contact Creation | N/A | N/A |
| 39 | ENH196 | Late Payment Calculation | N/A | N/A |
| 40 | ENH197 | Writeoff by Premise or SA | N/A | N/A |
| 41 | ENH198 | Notification preferences | N/A | N/A |
| 42 | ENH200 | Premise Address Secondary Unit Validation | N/A | N/A |
| 43 | ENH202 | Collection Criteria Algorithm | N/A | N/A |
| 44 | ENH203 | Stepped Service Quantity | N/A | N/A |
| 45 | ENH205 | Check Final Bill Segment | N/A | N/A |
| 46 | ENH207 | Historical Portal | N/A | N/A |
| 47 | ENH209 | Account Autopay Controls | N/A | N/A |
| 48 | ENH210 | Tax Exempt Expiry Letter | N/A | N/A |
| 49 | ENH211 | Dashboard Portals | N/A | N/A |
| 50 | ENH220 | Distribution Code GL | N/A | N/A |
| 51 | ENH221 | Cyclical_Non_Cyc_Usage, Custom SA Sync Filter ,Reinstate Adjustment, Long Bills | N/A | N/A |
| 52 | ENH230 | Good Customer | N/A | N/A |
| 53 | CSS001 | Start Stop Transfer Service | CSS | ССВ |
| 54 | CSS002 | One time and Auto-payments and Budget Billing | CSS | ССВ |
| 55 | CSS003 | Billing Paperless Preference | CSS | ССВ |
| 56 | CSS004 | Search and Manage Accounts Details | CSS | ССВ |
| 57 | CSS005 | User Profile and Authorization Management | CSS | ССВ |
| 58 | CSS006 | Miscellaneous Account Admin Features | CSS | ССВ |
| 59 | CSS008 | View Account and Property Information | CSS | ССВ |
| 60 | CSS010 | View Bills, Bill Inserts and Transactional Data | CSS | CCB Broadridge* |

| 61 | CSS011 | Customer Reports | CCS | CCB MDM |
|----|--------|---|--|-----------------------|
| 62 | CSS013 | View Current Estimated Interactive Bill | ccs | CCB |
| 63 | CSS015 | Opower, Kubra/iFactor and Olameter | CSS | ССВ |
| 64 | CSS016 | Alert Notifications and Self Service Preferences | CSS | CCB Kubra/iFactor* |
| 65 | CSS017 | Contact KCPL Energy Consultant | CSS | ССВ |
| 66 | CSS018 | Public Web Forms | CSS | CCB NMS |
| 67 | CSS023 | AgencyLink Grants | CSS | ССВ |
| 68 | CSS024 | ACH Credit | CSS UMB* | ССВ |
| 69 | CSS025 | Identity Management | CSS | CCB Azure |
| 70 | INT003 | Construction Orders | ССВ | STORMS |
| 71 | INT005 | Geographic Data | AMFM | ССВ |
| 72 | INT007 | Master Data Sync | ССВ | MDM |
| 73 | INT008 | Billing Determinants | ССВ | MDM |
| 74 | INT009 | Replacement Reads | ССВ | MDM |
| 75 | INT010 | Rate Check | ССВ | MDM |
| 76 | INT011 | Service Orders | CCB SOM PCAD | CCB SOM PCAD |
| 77 | INTO12 | Service Investigation Orders | DataRaker* | ССВ |
| 78 | INT012 | Service Investigation Orders | ODM | SOM |
| 79 | INT016 | Cut List and Service Investigation Orders | SOM | NMS |
| 80 | INT018 | Bill Print Extract | ССВ | Broadridge* |
| 81 | INT019 | View Bill Image - View Bill Image | ССВ | Broadridge* |
| 82 | INTO19 | View Bill Image - View Bill Image | ССВ | Eloqua* |
| 83 | INT020 | Bill Summary Management | ССВ | FiServ* |
| 84 | INT022 | Real Time Payments | Western Union* | ССВ |
| 85 | INTO23 | Batch Payments | Creditworld* Harris and Harris* State of MO* UMB* Wells Fargo* | ССВ |
| 86 | INTO24 | Account Information Extract | ССВ | UMB* |

| | | | | Wells Fargo* | |
|-----|--------|---|---|--|--|
| 87 | INT025 | Autopay Extract | ССВ | Western Union* Wells Fargo* Western Union* | |
| 88 | INT026 | | | CCB | |
| 89 | INT027 | State Agency Assistance Grants (LIEAP/LIHEAP) | State of KS* State of MO* | ССВ | |
| 90 | INT029 | Bank Routing Number | Federal Reserve* | ССВ | |
| 91 | INT031 | Collection Agency Referrals | Creditworld* Harris and Harris* | ССВ | |
| 92 | INT032 | C&C Outbound Dialing | ССВ | ccs | |
| 93 | INT034 | Accounts Payable (A/P) | ССВ | PeopleSoft | |
| 94 | INT035 | General Ledger Extract | ССВ | PeopleSoft | |
| 95 | INT036 | Mailing Address Updates | Broadridge* | ССВ | |
| 96 | INT037 | Marketing Data Extract | AEG* ClearResult* ICF* Nexant* Opower* | ССВ | |
| 97 | INT039 | POSID (Customer Verification) | ССВ | Experian* | |
| 98 | INTO41 | IVR (Interactive Voice Response) | Customer IVR VOXAI* vendor provided coding services | ССВ | |
| 99 | INTO42 | CCB to CCB To Eloqua Outbound (1010, 1020, 1030, 10 | ССВ | Oracle Sales Cloud* | |
| 100 | INT043 | AllConnect | ССВ | AllConnect* | |
| 101 | INTO44 | Program Enrollment | ССВ | AEG* Nexant* Opower* | |
| 102 | INTO45 | Eloqua to CCB Inbound (2000 Series) | Eloqua* | ССВ | |
| 103 | INTO46 | Autopay Maintenance | Western Union* | ССВ | |
| 104 | INTO48 | СТІ Рор | Customer IVR VOXAI* vendor provided coding services | CCB/CTIPop | |
| 105 | INTO49 | Document Management | ССВ | NetFYI | |
| 106 | INT050 | Rate Information Extract | ССВ | UIPlanner | |

| 107 | INT056 | Charge Point | ChargePoint* | ССВ | |
|-----|--------|---|--------------|---------------|--|
| 108 | INT057 | Collection letter Extract | ССВ | Broadridge* | |
| 109 | INTO62 | Hallmark Cards | ССВ | Hallmark* | |
| 110 | INT063 | Non-reg Product Enrollment | ClearResult* | ССВ | |
| 111 | INTO65 | MO LIHEAP Customer Usage Extract | ССВ | MO State* | |
| 112 | INTO68 | CCC Letters | ССВ | CCC Letters | |
| 113 | INTO70 | Customer Data Sync (DataRaker) | CCB MDM | DataRaker* | |
| 114 | INTO72 | Bill Cycle Assignment | CCB MDM | MDM CCB | |
| 115 | INT073 | Integration Messaging Controls | Reporting | Reporting | |
| 116 | INT901 | Scheduled Read Download | MDM | Itron FCS | |
| 117 | INT902 | Pickup Order (PCAD Mobile to SOM) | STORMS | MDM | |
| 118 | INT904 | Street and Leased Light Summarized Inventory | STORMS | MDM | |
| 119 | INT906 | Lodestar | MDM | Lodestar | |
| 120 | INT908 | Customer Data Sync | MDM | NMS | |
| 121 | INT909 | Customer Data Sync | MDM | WEST* AMFM | |
| 122 | INT911 | Outage IVR Web Services | WEST* | NMS | |
| 123 | INT912 | OK on Arrival | NMS | WEST* CCB | |
| 124 | INT913 | Service Point Updates from Itron FCS | Itron FCS | MDM | |
| 125 | INT914 | Itron FCS Meter Read Upload changes | MDM | Itron FCS | |

Summary of External Vendors:

| # | External Vendor | Vendor Function |
|---|-----------------|--|
| 1 | AEG | Solar Program Enrollment/Rebates |
| 2 | AllConnect | Confirms start service/assists with other services |
| 3 | Broadridge | Bills/Letters |
| 4 | ccs | Credit & Collection Outbound Dialing |
| 5 | ChargePoint | Electric Vehicle Station Billing |
| 6 | ClearResult | Marketing Product Enrollments (Thermostat, Surge |

| | | Protection, etc) |
|----|-------------------------------------|---|
| 7 | CreditWorld | Collection Agency Referrals/Payments |
| 8 | DataRaker (Oracle) | Revenue Protection Analysis |
| 9 | Eloqua (SFCG) | Customer Notification Preferences (Ebills)/Marketing Communications |
| 10 | Experian | Customer Verification (POSID) |
| 11 | Federal Reserve | Obtain Bank Routing Information |
| 12 | FiServ (Checkfree) | Bill Summary Management/Payments |
| 13 | Hallmark | Hallmark Cards to Customers |
| 14 | Harris and Harris | Collection Agency Referrals/Payments |
| 15 | i2SMS | SMS Customer Notification (Texting) |
| 16 | ICF | Energy Efficiency Programs |
| 17 | KS LIHEAP | State Agency Assistance Grants/Payments |
| 18 | Kubra/iFactor | Outage Map/Customer Outage Notifications |
| 19 | MO LIHEAP | State Agency Assistance Grants/Payments |
| 20 | Nexant | DSM program enrollments (Demand Side Management) |
| 21 | Opower | Customer Energy Profile |
| 22 | Oracle Sales Cloud (SFCG-Motiv) | Customer Relationship Management (CRM) |
| 23 | UMB | Payments |
| 24 | Wells Fargo Ebox Wells Fargo ACH | Payments |
| 25 | WEST | Outage IVR |
| 26 | Western Union | Payments (Real Time/Credit Card) |
| 27 | VOXAI | Customer IVR |

Response provided by: Lois Stark

Attachment: Q2021_Verification.pdf