Exhibit No.: _____
Issue(s): EV Subsidies/EV Charging Stations
Witness/Type of Exhibit: Marke/Rebuttal
Sponsoring Party: Public Counsel
Case No.: ET-2021-0151

REBUTTAL TESTIMONY

OF

GEOFF MARKE

Submitted on Behalf of the Office of the Public Counsel

EVERGY METRO, INC. D/B/A EVERGY MISSOURI METRO AND EVERGY WEST, INC D/B/A EVERGY MISSOURI WEST

CASE NO. ET-2021-0151

** **

Denotes Confidential Information that has been Redacted

August 16, 2021

PUBLIC

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of the Application of Evergy Metro, Inc. d/b/a Evergy Missouri Metro and Evergy Missouri West, Inc. d/b/a Evergy Missouri West for Approval of a Transportation Electrification Portfolio	)))))))	Case No. ET-2021-0151

AFFIDAVIT OF GEOFF MARKE

STATE OF MISSOURI)
) **ss**
COUNTY OF COLE)

Geoff Marke, of lawful age and being first duly sworn, deposes and states:

1. My name is Geoff Marke. I am a Chief Economist for the Office of the Public Counsel.

2. Attached hereto and made a part hereof for all purposes is my rebuttal testimony.

3. I hereby swear and affirm that my statements contained in the attached testimony are true and correct to the best of my knowledge and belief.

Geoff Marke
Chief Economist

Subscribed and sworn to me this 16th day of August 2021.

NOTARY PUBLIC NOTARY SEAL STATE OF MISSOURI

TIFFANY HILDEBRAND
My Commission Expires
August 8, 2023
Cole County
Commission #15637121

Tiffany Hildebrand
Notary Public

My Commission expires August 8, 2023.

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AND EVERGY MISSOURI WEST, INC. D/B/A EVERGY MISSOURI WEST

CASE NO. ET-2021-0151

I. INTRODUCTION

Q. Please state your name, title, and business address.

A. Geoff Marke, PhD, Chief Economist, Office of the Public Counsel (OPC or Public Counsel), P.O. Box 2230, Jefferson City, Missouri 65102.

Q. What are your qualifications and experience?

A. I have been in my present position with OPC since 2014 where I am responsible for economic analysis and policy research in electric, gas, water, and sewer utility operations.

Q. Have you testified previously before the Missouri Public Service Commission?

A. Yes. A listing of the Commission cases in which I have previously filed testimony and/or comments is attached in Schedule GM-1.

Q. What is the purpose of your rebuttal testimony?

The purpose of this testimony is to respond to the direct testimony of Charles A. Caisley and the Evergy Transportation Electrification Portfolio Filing Report ("Report") regarding the Evergy Missouri Metro ("Metro" or collectively "Evergy") and Evergy Missouri West ("West" or collectively "Evergy") proposed tariff and program additions including the following:

- $1M ($650K Metro & $350K West) in rebates to encourage the installation of Level 2 ("L2") charging in existing EV driver homes;
- $87,500 ($31,250 Metro & $56,250 West) in rebates to housing developers to install 240V outlet installation in the construction of new homes;
- $10M ($6.5M Metro & $3.5M West) in rebates to incent installation of commercial EV charging infrastructure including: highway corridor stations, commercial public stations (e.g., stations at a Wal-Mart for customers), commercial employee stations

(e.g., stations at Hallmark headquarters for employees), commercial fleet stations (e.g., stations for company cars), multifamily complexes, and associated line extension costs;

- Optional electric rates that encourage off-peak transit and fleet EV charging;
- $1.6M ($1.1M Metro & $586K West) for customer marketing/education;
- $2.8M ($1.2M Metro & $1.6M West) in subsidies for additional charging stations to build out rate base including: 50 street light EV stations in downtown Kansas City; a speculative rideshare partnership (e.g., w/ Lyft or Uber); further highway corridor expansion in remote commercially unattractive locations; and decisional preapproval to build out an undefined amount of future charging stations moving forward; and
- Evergy requests discretion to divert the aforementioned requested funding amounts between categories.[1]

My silence regarding any issue should not be construed as an endorsement of, agreement with, or consent to Evergy's filed position.

Q. What is your position?

A. I recommend the Commission reject Evergy's proposal.

I believe that any request premised on the use of captive ratepayer funds that results in the needless build-out of rate base for nonessential service that have historically benefited a largely affluent minority of customers should give the Commission pause.

When you consider this application is actually in *addition* to the already sunk and increasingly likely stranded investment of 900+ ratepayer-funded EV charging station infrastructure (that have not produced meaningful EV adoption let alone covered its cost of service) the argument for even further cross-subsidies and build out of non-essential rate base is without merit.

Moreover, the Commission should not view this application in a vacuum but also factor in the following likely federal funding and ratepayer cost considerations in rejecting this proposal:

[1] The aforementioned cost and category breakdowns are my best attempt at what Evergy is proposing. The requested budgets and/or programs are not entirely clear between the proposed tariffs, the filed report, appendixes, and the subsequent supplemental filings. I will edit accordingly in surrebuttal testimony if necessary.

- The estimated $7.5 billion in funding specifically for EV charging infrastructure from the federal government as part of President Biden's infrastructure bill;[2]
- The approximate $8.9 billion (between 2019-2024 in Missouri and Kansas) in planned investment Evergy customers are going to be asked to shoulder in the near-term as a result of "updated" Plant-in-Service Accounting and Sustainability Transformation Plan investments for "essential" services;
- The more than $300 million in purchased fuel costs from Storm Uri for Evergy West; all the while
- Evergy Metro customers in arrearage struggle with an average mean arrearage amount of **_____** (the highest in the state) and the total Evergy Metro residential arrearages amounts have increased by 46% year-over-year from the end of July **_____**; and
- Evergy West customers in arrearage struggle with an average mean arrearage amount of **_____** (the third highest in the state[3]) and the total Evergy West residential arrearage amounts have increased by 30% year-over-year from the end of July **_____**

The combination of excess federal funding, billions in large planned capital investment, hundreds of millions in one-time excess fuel costs from Storm Uri and the large arrearage amounts of Evergy customers relative to every other utility in the state strongly suggests that the prudent and reasonable action for Evergy management would be to withdraw this proposal.

Q. Are you just opposed to EVs?

A. No.

That being said, I do believe that the rational case for accepting EVs has been undermined by unrealistic market forecasts, a disregard for the environmental effects involved in producing

[2] White House (2021) Fact Sheet: Historic Bipartisan Infrastructure Deal. https://www.whitehouse.gov/briefing-room/statements-releases/2021/07/28/fact-sheet-historic-bipartisan-infrastructure-deal/

[3] Average Mean residential arrearage amounts by order of largest arrearage to smallest arrearage by large electric, natural gas and water utility is as follows:* 1.) Evergy Metro $317.45; 2.) Empire District Electric $293.51 (May); 3.) Evergy West $268.28; 4.) Ameren Missouri $132.57; 5.)Spire $114.17; and 6.) Missouri American Water $109.38.*

and operating these vehicles, and the misguided belief that ratepayer subsidies for EV charging stations is anything but a regressive use of funding and an inappropriate response to a perceived market failure of a nonessential service.

Despite those positions, in the past, I have provided alternative recommendations in previous filings before this Commission based on a sharing of risks[4] and, more recently, on staggered deployment of supply (additional EV charging stations) based on actual increases in demand (charging station usage results).[5] Both alternative models at least attempted to maintain a degree of economic efficiency and minimize regulatory inefficiencies. Similar alternative recommendations cannot be made for this application because those recommendations were put forward under the premise that there was not already an existing 900+ EV charging station infrastructure in place.

Admittedly, Evergy's request is not solely about building out rate base with more EV charging stations. It is also about extending direct subsidies to existing EV owners and electricians, funding an ill-defined marketing/education campaign, and proposing "nudges" for optional Time-of-Use ("TOU") rates. All of which I also oppose for similar and additional reasons I will address later in my testimony.

Q. What will your testimony address?

A. My testimony will provide a contextual background on the inherent risks and economic inefficiencies associated with "swimming outside your lane" when it comes to a regulated natural monopoly engaging in non-essential services. I then highlight pending federal initiatives related to electrification of the transportation sector that further nullify the application. I also address Evergy's CCN impact to date, current data on Evergy ratepayer's arrearage amounts and recent regulatory filings that have or will drive up Evergy's cost of

[4] See Marke Rebuttal and supplemental rebuttal testimony in Case No: ET-2020-0390.
[5] To be addressed in an expected unanimous stipulation and agreement to be filed in Case No ET-2020-0259 by the end of the month of August or shortly thereafter.

service. Finally, my testimony will address each of the proposed programs and cost-benefit studies within the portfolio in turn.

II. MARKET FAILURES & PUBLIC UTILITY REGULATION

Q. What is a market failure?

A. Market failure is an economic situation defined by an inefficient distribution of goods and services in the free market. In a market failure, the individual incentives for rational behavior do not lead to rational outcomes for the group. Commonly cited market failures include externalities, monopoly, information asymmetries, and factor immobility (difficult to move labor and capital between different areas of the economy).[6]

Q. Are natural monopolies like an electric utility a market failure?

A. Yes. Regulated electric utilities, or natural monopolies, represent a situation where multi-firm production is more costly than production by a single firm. Regulation occurs when the government believes that the operator, with no competition and left to his own devices, would behave in a way that is contrary to the public interest by operating in a captive market for a product few can refuse.[7]

For utilities, the state supplies the regulatory risk in the absence of market risk—regulation is a proxy for the market.

Q. Can there be regulatory failures?

A. Yes. If the costs of regulation exceed the benefits then the answer is to encourage competition.

Q. Have arguments been put forward that EVs represent a market failure and necessitate government intervention?

A. Yes. The argument for government intervention to promote EVs stems from the premise that EVs do not produce tailpipe emissions compared to the internal-combustion counterparts. The societal benefits associated with the lack of tailpipe emissions exceeds the benefit to the

[6] Boyle, M. (2020) Investopedia "Market Failure" https://www.investopedia.com/terms/m/marketfailure.asp
[7] There are additional arguments for and against natural monopolies including but not limited to economies of scale, lack of substitution, essential services, etc…

individual owner. Despite those societal benefits, consumers have not adopted EVs (roughly 98% internal-combustion to 2% EV sales). To address this issue, the federal government (and many individual state governments) have provided direct subsidies to incentivize the purchase of EVs. Primarily in the form of tax reductions.

Q. Is there an argument against government subsidies for EVs?

A. Yes. First, once subsides are approved they have proven to be difficult to end, which places a strain on finite public finances. Second, EV subsidies are historically regressive, as they have disproportionately gone to high income earning households as seen in Figure 1.

Figure 1: Distributional effects of selected Tax Credits[8]

Table 2: Distributional Effects of Selected Tax Credits

	Percent of Credit Received by Income Category (in thousands)						Concentration Index
	$0–$10	$10–$20	$20–$40	$40–$75	$75–$200	$200+	
Panel A. Clean Energy Tax Credits							
Residential Energy Credits	0%	1%	10%	28%	48%	14%	0.606
Alternative Motor Vehicle Credit	0%	1%	9%	32%	47%	11%	0.584
Plug-in Electric Drive Vehicle Credit	0%	0%	1%	10%	54%	35%	0.801
Panel B. Other Major Tax Credits							
Earned Income Tax Credit	18%	49%	32%	1%	0%	0%	–0.415
Making Work Pay Credit	7%	14%	25%	28%	26%	0%	0.163
Child Tax Credit	2%	13%	31%	31%	23%	0%	0.185
First-time Home Buyer Credit	7%	6%	23%	40%	24%	1%	0.222
Foreign Tax Credit	0%	0%	1%	2%	9%	88%	0.954

Note: This table was constructed by the authors using U.S. Department of the Treasury, Internal Revenue Service, "Statistics of Income, Individual Tax Returns," 2005–2012. The first five income categories are approximate quintiles (18%, 17%, 24%, 21%, 18%), and 3% of tax returns fall in the last category. Residential energy credits includes both the NEPC and the REEPC. The Earned Income Tax Credit, Making Work Pay Credit, Child Tax Credit, and the First-Time Home Buyer Credit are all refundable, while the Foreign Tax Credit is not. See Appendix A for details.

[8] Borenstein, Severin and Davis, Lucas "The Distributional Effects of U.S. Clean Energy Tax Credits" (July 2015) (Published in NBER Tax Policy and the Economy, University of Chicago Press, 30(1): 191-234, 2016) | WP-262 https://haas.berkeley.edu/wp-content/uploads/WP262.pdf

Third, the positive externalities associated with the net reduction in tailpipe emissions needs to be offset by the increased environmental consequences associated with increased emissions from charging with fossil fuel generation, as well as the greater use of toxicity from heavy metals in the both the extraction and disposal process.[9] The point being, we cannot simply imagine ideal, pollution-free machines and then will them into existence or selectively chose what pollution to count and what not to count if environmental benefits are to be quantified. Fourth, roughly two-thirds of the world's cobalt, an essential supply for EV batteries, comes from mining from the Democratic Republic of Congo in which Amnesty International estimates there are more than 40,000 children working.[10] The lack of land and labor markets for cobalt and the conditions surrounding the extraction process in the Congo could at least be considered a market inefficiency.

For our purposes, Evergy is not proposing direct subsidies for EV purchases but much of the rationale for ratepayer subsidization of EV charging stations is premised on the argument that ubiquitous EV charging station infrastructure needs to be present to induce EV market gains. I reject that premise.

Q. Are EV charging stations a market failure?

A. I do not believe so. The argument for government intervention in the EV charging station market is premised on the idea that "range anxiety," that is, a lack of EV charging infrastructure availability in remote locations, is what is preventing the adoption of EV cars. This is despite the fact that an estimated 85% of all EV charging is done at home.[11] Most recently, the US

[9] A wells-to-wheels analysis that considers inputs across the life of the asset is necessary to determine if there is a net environmental benefit at the end of the day. Whether the increased subsidies (costs) is offset by the remaining benefits (net emission benefits from the well-to-wheels analysis) is another issue. I do recognize that recent analysis on this issue tends to favor environmental benefits associate with EV cars "on average." However, the devil is in the details with the crucial factors being both time (when you charge, e.g., charging during peak demand or at 3AM) and place (where you are charging, e.g., in the Ontario with hydropower or Kansas City with fossil fuels).
[10] Dummett, M. (2017) The Dark Side of Electric Cars: Exploitative Labor Practices. Amnesty International https://www.amnesty.org/en/latest/news/2017/09/the-dark-side-of-electric-cars-exploitative-labor-practices/
[11] Blanco. S. (2021) Average EV Owner Drives Half as Many Miles as Other Drivers—Study https://www.caranddriver.com/news/a35498794/ev-owners-low-mileage-study/

Senate's recently approved version of the Infrastructure Investment and Jobs Act allocated an initial investment of $7.5 billion to counter that perceived market failure.

I believe the strongest argument against government intervention in subsidizing EV charging stations centers on locking into an inferior path-dependent technology at the expense of free market solutions. For example, if the federal government mandated slow, Level 2 wired chargers (e.g., Evergy's existing CCN infrastructure) that "crowd outs" superior options or inhibits free market development of cheaper, better options (e.g., wireless charging[12]). It remains to be seen under what conditions future federal funds will be dispersed as it pertains to EV charging stations.

Q. What is the argument for a regulated utility to correct a market failure for a nonessential service such as EV charging stations?

A. Utilities argue that increased load from EVs can put a downward pressure on rates by increasing revenues to cover fixed costs; thus helping all customers in the long run. Utilities further argue that natural monopoly intervention into a non-essential service is necessary because the free market has not supplied the necessary infrastructure to induce the demand needed to increase revenue. Stated differently, the utilities claim that the lack of ubiquitous EV charging infrastructure and the lack of private actors suppling that infrastructure is what is preventing mass adoption of EVs.[13]

Q. Do you agree with these arguments?

A. No. Evergy already has a ubiquitous EV charging infrastructure in place (900+ stations and 1800+ outlets not to mention the many additional private charging stations (Tesla, etc…) in its service territory) and ratepayers have received neither the downward pressure on rates nor mass

[12] Kitman, J.L. (2020) Norwegian Taxis, Wirelessly Charging While They Wait for a Fare. *NY Times* https://www.nytimes.com/2020/08/13/business/jaguar-i-pace-oslo-taxis-charging.html & Pyzyk, K. (2021) Indiana DOT, Purdue developing wireless EV charging for highways. *Snartcitydive* https://www.smartcitiesdive.com/news/indiana-dot-purdue-developing-wireless-ev-charging-for-highways/603774/

[13] Evergy has taken this argument several degrees further in this application by arguing that direct incentives to existing EV drivers, housing developers and marketing efforts that strongly suggest that EV drivers voluntarily charge their cars during non-peak hours are also necessary for funding.

adoption of registered EVs they were promised as compensation for this existing infrastructure buildout. Evergy's CCN investments suggest that ubiquitous EV charging stations are not strongly correlated with EV adoption.

Q. Do you have any empirical data to support that?

A. Yes. Table 1 represents registered battery and plug-in EVs by county in which Evergy Metro and West operate:

Table 1: Breakdown of registered battery and plug-in EVs by Evergy operating county as of end of October 2020:[14]

County	Battery	Plug-in	County	Battery	Plug-in
Andrew	4	-	Holt	-	-
Atchison	3	-	Jackson	859	51
Benton	2	-	Johnson	23	5
Buchanan	19	5	Lafayette	12	1
Carroll	2	-	Livingston	3	2
Cass	83	4	Nodaway	7	1
Chariton	-	-	Pettis	6	2
Clay	25	21	Platte	195	8
Clinton	10	-	Randolph	5	2
Dade	2	-	Ray	6	1
DeKalb	3	-	Saline	7	-
Gentry	1	-	St. Clair	5	-
Grundy	1	-	Vernon	3	-
Henry	4	-	Worth	1	-

1,291 (Battery) + 103 (Plug-in) = 1,394

To be clear there are more EV charging ports (1,800+) then there are registered EV cars (1,394 as of October 2020) in Evergy's service territory.

[14] Data supplied by the Missouri Department of Revenue. I will attempt to update these numbers for surrebuttal testimony if necessary. These numbers are supported by EV registration metrics reported by the US Department of Energy for the end of calendar year 2020 which reported Missouri total EV registrations at 6,740. See also: https://afdc.energy.gov/data/10962

Q. How do these numbers compare to Ameren Missouri that did not use ratepayer funds to put up 900+ EV charging stations in its service territory?

A. Evergy's numbers do not compare well. The combined areas of St. Louis County, St. Louis City and St. Charles County have 3,681 registered battery and plug-in EVs or 2,287 more EVs than Evergy's entire service territory. Stated differently, these three areas serve as a reasonable control that nullifies Evergy's experiment with ratepayer funding.

Q. Do you have any theories why there are almost three times the amount of registered EVs in those three Ameren Missouri counties/city than the entire Evergy Metro and West footprint?

A. The most obvious one that comes to mind would be the price of electricity. Ameren Missouri is much more affordable than either Evergy Metro or West. I cannot help but believe that customers will think twice about investing in an electric vehicle if their electric bills are already cost prohibitive (or becoming more so).

Q. Are there other arguments why Evergy should not be doubling down on building out more EV charging stations?

A. Yes. To state the obvious, if the federal government ultimately extends subsidies for EV charging stations to the State of Missouri there is no compelling argument for further duplicative infrastructure as continuing to invest in EV charging stations on top of EV charging stations will result in diminishing returns.

The Commission should also be mindful that regulating one market failure (natural monopolies) should not be license to correct another perceived market failure (EV charging stations) for a separate non-essential service. Markets will thrive best where there is both the perception and the reality of a level playing field, and that is best accomplished by restricting the ability of regulated utilities from participating. Public utility regulation is supposed to serve as a proxy for market, not as a means to function as a command-and-control economy.

Natural monopolies entering into a competitive market with the backing of captive ratepayer funds will do nothing but inhibit competition and reinforce long-term market failures. The fact

that these are capital investments for non-essential services cannot be stressed enough. Utilities have a perverse incentive to build out rate base under cost-plus regulation, as they will earn a profit if they are allowed to add the ratepayer funded EV charging station investments into their rate base regardless of whether or not said investments generate enough revenues to cover their costs or if they are ever actually used.[15] Today, there are free market actors that put up the capital, provide this service, and accept the risks and rewards accordingly. A subsidized, non-essential rate-base asset disincentives innovation, inhibits private investment, shifts risks to ratepayers, and rewards the utility regardless of the outcome. Such activity would almost assuredly result in regulatory failure and be considered economically inefficient.[16]

Perhaps a few measured charging stations can be rationalized around highway corridors in the past, but it becomes much more difficult (or impossible) to justify additional buildout on top of the 900+ EV stations already in the Evergy Missouri service territories when demand has not materialized by any meaningful metric. This is especially true now that both Volkswagen Trust Funds has announced funding to directly address the remaining highway corridors and the likely aforementioned federal funding from the recent infrastructure bill.[17]

[15] See also the Averch-Johnson effect, which is the tendency of regulated companies to engage in excessive amounts of capital accumulation in order to expand the volume of their profits. Excessive capital accumulation under rate-of-return regulation is informally known as "gold plating." Over-investment (or over-capitalization) has obvious implications for rates paid by consumers and also for the efficiency of resource allocation. Averch, Harvey; Johnson, Leland L. (1962). "Behavior of the Firm Under Regulatory Constraint". American Economic Review. 52 (5): 1052–1069. JSTOR 1812181

[16] Economic Efficiency is the condition whereby a society gets the highest social welfare from its scarce resources. Economic efficiency implies an economic state in which every resource is optimally allocated to serve each individual or entity in the best way while minimizing waste and inefficiency. When you have built out 900 EV charging stations that have not induced adoption, have not covered their cost of service, and are increasingly likely to be obsolete technology, you do not double down with more investment especially when the federal government is going to invest in the technology separate and apart from your actions. Doing so would result in an economic inefficient managerial decision with the social welfare of everyone being worse off (with the notable exception of the utility shareholders who will earn a return on the increased non-essential rate base) as a result.

[17] Evergy is receiving funding for at least one site in Concordia. Missouri Department of Natural Resources (2021) Volkswagen Trust Funds. https://dnr.mo.gov/env/apcp/vw/index.html see also: Daily Journal (2021) DNR to fund charging stations. Jan. 19. https://dailyjournalonline.com/news/state-and-regional/dnr-to-fund-charging-stations/article_4498ff22-a55c-5e11-95bd-96cd9007142a.html

Q. Do you have a sense of how much funding for EV charging stations will be allocated to Missouri in the near-future?

A. Yes. The US Senate passed a roughly $1 trillion infrastructure package August 10, 2021, advancing a central piece of President Biden's economic agenda that would amount to one of the most substantial federal investments in roads, bridges, rail and EV charging stations in decades. As of this writing, there is still some uncertainty as it pertains to a possible reconciliation bill with the US House, but there is clearly a strong momentum for a substantial investment in the near future.

Missouri was given a preview of its likely allocation of the Infrastructure Investment and Jobs Act several days ago. As it pertains to EV charging station funds in Missouri, the White House stated:

> Under the Infrastructure Investment and Jobs Act, **Missouri would expect to receive $99 million over five years** to support the expansion of an EV charging network in the state.[18] Missouri will also have the opportunity to apply for [an additional] $2.5 billion in grant funding dedicated to EV charging in the bill.[19] (emphasis added)

Q. Is there a compelling public policy argument to move ahead with further EV investment before federal funding is secure?

A. No. To be clear, I do not think there is a compelling argument to move ahead with the Company's proposal even if the federal funding never comes to fruition. Again, there are already 900+ EV charging stations in the Evergy service territory and the demand has not come to date (more on this later), let alone all of the other reasons I have already stated. Nevertheless, even the most pro-EV advocate can recognize the need to exercise managerial prudency and see how things play out at the federal level first before investing further in EV charging stations on top of existing EV charging stations.

[18] These values are estimates and may change based on updated factor data each fiscal year
[19] https://www.whitehouse.gov/wp-content/uploads/2021/08/MISSOURI_Infrastructure-Investment-and-Jobs-Act-State-Fact-Sheet.pdf

Q. Are there countervailing policy and/or economic arguments beyond the uncertainty of federal funding *and* the fact that there are already 900+ EV charging stations being underutilized to suggest the Company should withdraw its application?

A. Yes. In Case No: EU-2020-0350 (Evergy COVID-19 AAO), OPC proposed that Evergy include an arrearage matching program similar to Ameren Missouri, Spire, and Missouri American Water to help struggling customers during the COVID-19 pandemic. The Company rejected this proposal. Mr. Caisley stated:

> We have continued to lead in development of alternative payment arrangement plans, including being one of only a handful of investor-owned utilities in the United States that offered payment programs offering bill credits for customers who made payment arrangements during the pandemic. These actions in combination with our aggressive customer communication and outreach, has reduced residential arrearages below pre-COVID-19 levels by the end of August.

Fast forward approximately one-year and the amount of customers in arrearages have increased at alarming levels along both total and average dollar amounts as seen in Table 2.

Table 2: Evergy Metro and Evergy West Residential Arrearage data July 2019 and July 2020**

**

I find it difficult to justify asking ratepayers to fund approximately $15 million in non-essential services when Evergy management wouldn't concede to a modest portion of its profits to help offset arrearage amounts for its struggling customers like Ameren Missouri, Spire, and Missouri American Water did during COVID-19.[20] The fact that Evergy's arrearage numbers are arguably the worst in the state underscores that there are other pressing priorities that need to be addressed.

Q. Are there any unexpected additional cost increases Evergy customers are going to be asked to absorb?

A. Yes. Evergy West "pass through" fuel costs exceed $300 million from Winter Storm Uri. It also is important to point out that Evergy management has announced an orders of magnitude increase in capital expense over the next couple of years as a result of enabling legislation for Plant-in-Service Accounting and as a result of the Elliott Management induced Sustainability Transformation Plan ("STP") that includes $8.9 billion in investment through 2024. At a minimum, Evergy is making it awfully difficult for prospective buyers to choose EVs if they perceive their electric bills are approaching double digit increases in the near future.

Q. Your testimony has focused primarily on EV charging stations so far. Is that the only problem Evergy is trying to solve for in this application?

A. It is not the only problem the application is trying to solve. It is true that Evergy wants to expand its CCN infrastructure by requesting decisional preapproval to build out further investment; however, the bulk of the application is centered on attempting to modify charging habits through direct subsidies to various customers including: existing EV drivers, home developers, and commercial customers as well as marketing and optional TOU rates.[21] Stated differently, the bulk of the explicit requested budget in this application would not result in an increase to rate base but would be a pass-through expense funded by captive customers.[22]

[20] It should not be lost that a matching arrearage program would have been funds that would have gone right back to the Company.
[21] $2.8 million is requested for "specific" CCN build out in this case.
[22] Positive affirmation of the decisional preapproval to continue building out the CCN notwithstanding which would result in many more dollars and increased build-out of rate base with non-essential capital investments.

Q. Is there some other policy lever available to the Commission besides direct subsidies or marketing that would encourage charging during off-peak hours?

A. The most direct and influential incentive to customers is provided by pricing the service appropriately with TOU rates. Efficient energy consumption requires that prices charged to consumers reflect the social cost of producing and delivering energy. The most clear-cut and efficient way to induce energy consumers to charge at socially desirable levels comes from correct pricing. Most industries rely exclusively on prices to achieve optimal levels of consumption. Consequently, the Commission should place primary importance on eliminating pricing distortions and creating easily understood and transparent price signals to ratepayers.

Q. Isn't the Company proposing TOU rates in this case?

A. They are proposing the inclusion of an optional commercial TOU rate outside of a rate case. The Company points to the fact that there are existing pilot TOU rates that customers could elect to go onto if they are so inclined. Putting aside the legality of changing rates outside of a rate case, it is important to note that the Company has no plans to require EV customers to be charged under TOU rates. Evergy's preferred method is to continue to spend their ratepayers' money on marketing and direct incentives that hopes to nudge customers into "doing the right thing," without providing any real incentive (via either carrot or stick) to compel actual action.

Q. Do you support that proposed approach?

A. No. Consider for a moment that Evergy's customers have been paying a return on and return of hundreds of millions of dollars in capital investments in a state-of-the-art customer information system and Advanced Metering Infrastructure ("AMI") but effectively getting none of the espoused benefits (e.g., TOU rates) to date and Evergy wants to keep it that way. The most obvious and cost-effective method to induce benefits to all customers is by utilizing the already invested AMI hardware/software to charge customers for increasing peak demand if they elect to charge during those high demand hours. Coincidently, increase peak demand is highly correlated with increase fossil fuel usage (i.e., expensive peaker plants being fired up to meet demand). The answer is not, "let's give more subsidies to those customers who are driving up peak demand in the hope that they will change their charging habits."

V. EVERGY'S PROPOSED PORTFOLIO

Level 2 Home Installation for Existing EV Drivers

Q. Please describe Evergy's Residential Customer EV Outlet Rebate.

A. Evergy proposes a targeted budget of $1 million for its Residential Customer EV Outlet Rebate, which incentivizes the installation of a 240V outlet at residential locations to enable L2 EV charging. Customers are eligible for one rebate per residence to cover 50% of the installation cost, up to $500 per outlet, to install a dedicated 240V circuit (40A or greater, including a NEMA 14-50 outlet). These are rebates to existing EV drivers to allow them to charge their EVs quicker. It is believed that the incentive will be an opportunity to educate customers on the existence of TOU rates and/or encourage these customers to charge at off-peak hours.

Q. Do you agree with this proposal and premise?

A. No. A more direct efficient response would be to price EV drivers more for on-peak usage and less for off-peak. This could easily be accomplished in Evergy's next rate case and at no additional costs. Just giving up to $500 to existing EV drivers to get a more powerful charger without any repercussions or conditions if they elect to charge during on-peak hours will result in cost increases to all customers from both the direct subsidy and the increased energy costs during peak demand.

Housing Developer Subsidies

Q. Please describe Evergy's Housing Developer proposal.

A. Evergy proposes a targeted budget of $87,500 for a Residential Developer EV Outlet Rebate of up to $250 per home to incentivize developers to pre-wire new homes with adequate circuit capacity to accommodate L2 EV charging by future residents. The Residential Developer EV Outlet Rebate is designed to incentivize the installation of a dedicated 240V circuit (40A or greater, including a NEMA 14-50 outlet) to enable L2 EV charging. By targeting new homes, Evergy hopes to ensure that homes are pre-wired for EV charging, which will save customers the cost of upgrading later.

Q. Do you agree with this proposal and premise?

A. No. Ratepayers should not be subsidizing electricians working on new homes to install something that they might already be planning to install based on the mere *possibility* that some prospective owner of the home might get an EV at some point in the future. If Evergy feels strongly about the building codes and standards within its service territory it should be an issue they should address with the local government and construction contractors. Captive ratepayers' cost of service should not be extended as a conduit to solve problems outside "the cost of service" let alone problems deemed unnecessary by local governments and housing developers. Moreover, there is an extremely high chance that the money spent on this endeavor will *never* be used to charge an EV as there is no requirement whatsoever that the outlet be used for that purpose or that the proposed homeowner even own an electric vehicle.

Commercial Rebates

Q. Please describe Evergy's Commercial Rebates proposal.

A. Evergy is proposing a targeted budget of $10 million to provide rebates of various amounts to commercial customers including destination such as workplaces, fleet-parking sites, public destinations such as retail sites, multi-family dwellings, and along highway corridors. Figure 2 provides a reprint of the Evergy's proposed commercial EV rebates by site.

Figures 2: Reprint of Evergy's Proposed Commercial EV rebates by site

Site Type	L2 Ports	DCFC Units	Maximum Rebate per Site
Highway	2	2	$45,000
Non-Highway Public	6	2	$55,000
Fleet/Workplace	10	2*	$65,000
Multi-Family	10	0	$25,000

*DCFC is eligible for rebates only in cases where the equipment serves fleet operations.

Importantly, Evergy proposes to utilize Evergy's line extension allowance to offset additional costs for participants.

Q. Do you agree with this proposal and premise?

A. No. First, there are already 900+ EV charging stations in Evergy's service territory not to mention the additional private EV charging stations not funded by ratepayers (and any future EV charging stations that may materialize from federal funding). Allocating a targeted budget of $10 million for further commercial build out will cannibalize the existing public sites and most certainly be utilized by free riders (i.e., commercial customers who would purchase an EV charging station regardless of the rebate). I also have additional concerns about double cost recovery surrounding Evergy's purported complementary line extension subsidy; however, additional discovery is necessary to confirm that this is a valid concern.

Q. What do you mean when you say that "further commercial build out will cannibalize the existing public sites"?

A. There are already more EV ports than registered EV cars in Evergy's service territory. After you factor in that approximately 85% of charging is done at home and that the cost of electricity will most assuredly increase in the near future it is difficult to see how the existing CCN infrastructure will ever cover its cost. Adding additional and/or faster EV charging stations on top of the already abundant supply will merely further insure that the original CCN infrastructure will be stranded. It is merely doubling down on throwing good money at bad investments.

Q. Can you provide an example of the free rider problem you mention?

A. If a Company makes a green pledge to utilize an EV fleet they will invest in EV chargers at their workplace regardless of whether or not Evergy provides ratepayers subsidies.

Q. Are there any ways that the free rider problem might be addressed?

A. If the Commission approves any part of the Commercial electrification section of the application I would highly recommend that, at a minimum, the rebate incentive amounts should also be capped on a percentage basis to not exceed 20% of the total costs for a charger station.

A 20% discount should be enough enticement for customers who are "on the fence" and minimize the impact of the inevitable free riders that will take advantage of the offer.

Electric Transit Service Rate

Q. Please describe the Electric Transit Service Rate proposal.

A. Evergy proposes two new optional rates including the Electric Transit Service ("ETS") pilot rate option for transit bus fleet customers. The rate is designed to increase EV adoption in this vehicle segment and support transit customers. The ETS rate is a two-period TOU rate with a 12-hour off-peak period (6 p.m. to 6 a.m.) that aligns with typical transit fleet depot charging patterns. The rate removes the demand charge, while retaining a small local facility demand charge to incentivize managed charging.

Additionally, Evergy proposes a new Business EV Charging Service ("BEVCS") pilot rate option for commercial customers to increase EV adoption, meet workplace employee and fleet EV charging needs, support public EVSP networks, and maximize grid benefits of EV charging load at commercial locations. The BEVCS tariff is a TOU rate with three time periods designed to address commercial rate challenges for commercial customers and encourage workplace and fleet charging during off-peak times when system costs and grid utilization are lower

Q. Do you agree with this proposal and premise?

A. I support the use of cost based rates; however, my understanding is that there are legal concerns regarding the question of whether new rates can be introduced outside of a rate case. As such, I believe the proper venue for this proposal is in Evergy's next rate case.

Customer Marketing/Education

Q. Please describe Evergy's Customer Marketing/Education proposal.

A. Evergy proposes a targeted budget of $1.6M for customer marketing/education to help stimulate the EV market and inform customers about those benefits and available

incentives, as well as educate customers about managing charging to save money and reduce the potential for negative grid impacts.

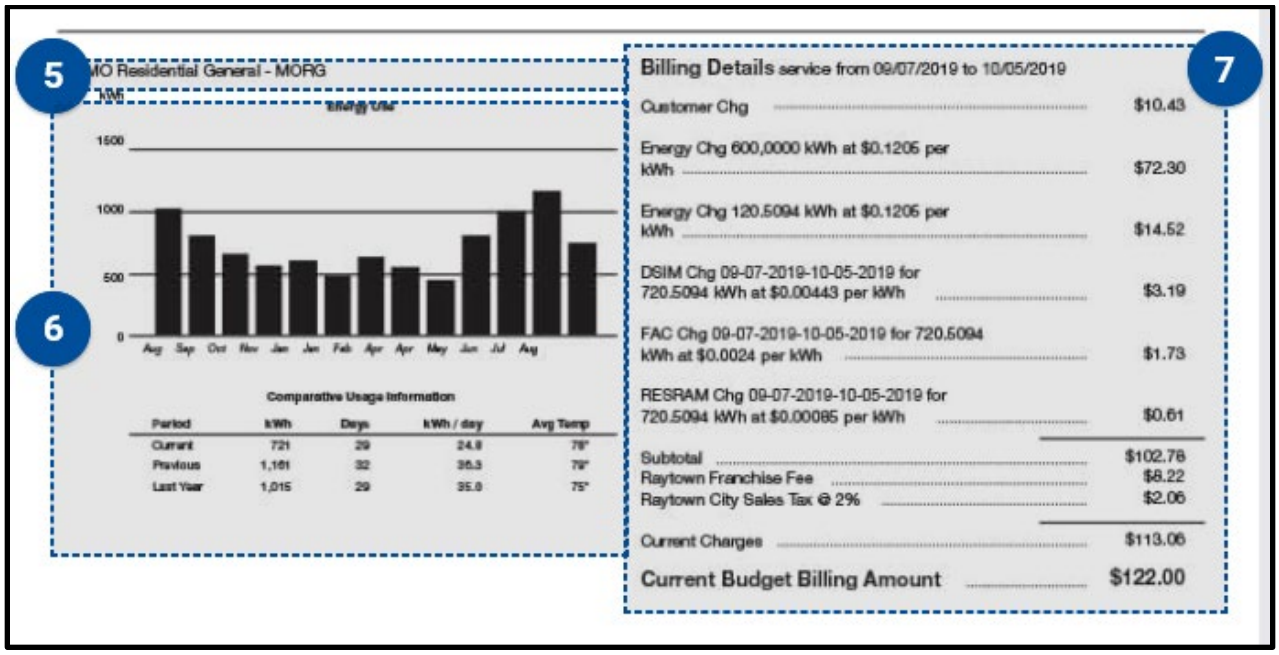
Q. Do you agree with this proposal and premise?

A. The current proposal lacks detail. As such, I cannot support the proposal. I am also skeptical of expending a targeted budget of $1.6M on "education" when pricing electricity appropriately and transparently should accomplish the task. Case in point, the liquid-motor-fuels market in the U.S. is one of the most price-competitive markets in the world. As seen in Figure 3, prices can be seen on big signs from a distance, and drivers aggressively go out of their way to seek savings of just a few cents a gallon.

Figure 3: Example of Price-Competitive Marketing in the liquid-motor-fuels market

Contrast that with Evergy's electric bill as seen in Figure 4.

Figure 4: Example of an Evergy utility bill



I would argue that the lack of clear, transparent, and understandable price signals for the cost of service has historically been in the utilities' best interest; however, it is now an impediment to EV adoption. If Evergy is serious about encouraging EV adoption they need a renewed emphasis not only on correct pricing but affordable, transparent, and easily seen pricing to make the case that EV ownership is cost competitive with internal combustion vehicles. I do not see that level of focus in this proposal.

Clean Charge Network Expansion

Q. Please describe Evergy's Clean Charge Network Expansion proposal.

A. Evergy proposes that the Commission grant decisional prudence to accelerate further capital investment in its CCN infrastructure as well as a targeted budget of $2.8M for non-commercially viable highway corridor expansion, a DOE streetlight grant in the city of Kansas City, and a series of DCFC stations for potential future partnerships with private rideshare companies (e.g., Uber and Lyft).

Q. Do you agree with this proposal and premise?

A. I may be willing to endorse reasonable cost expenditures for make-ready infrastructure and installation expenses for charging equipment related to the US Department of Energy's grant to the Metropolitan Energy Center and the City of Kansas City for a pilot streetlight-charging program in the city's right of way. I would consider this at least potentially reasonable, despite the fact that such a program will most certainly cannibalize existing CCN infrastructure, due exclusively to the unique nature of the pilot and the fact that costs will largely be covered (presumably) by the grant. Presently, it is not entirely clear how much funding is being requested for this specific feature in the Company's application. As such, I reserve the right to amend this recommendation accordingly.

I do not support decisional prudence for further build-out of the CCN for remote highway corridors, exclusive Uber sites, or additional rate base build-out of non-essential services for reasons articulated throughout this testimony.

To address the Uber/Lyft proposal specifically, I would posit that this is merely an excuse to increase the number of fast charging stations in the metro area it can rate base. This will merely cannibalize the existing CCN infrastructure and needlessly increase rates at a time when too many customers are struggling to make ends meet. There is no stated agreement with Uber, Lyft or any other service it is merely aspirational with no repercussions if the revenues do not materialize.

Q. Throughout this section you have said "targeted budgets." Does Evergy not have hard caps on its programs?

A. No. Evergy wants the ability to divert funds interchangeably between programs at its discretion.

Q. What is your position on the proposed budget flexibility?

A. I am against this proposal in total (with the possible exception of the streetlight program). My thoughts on an application with a suite of programs and a fungible budget is largely negative. Effectively, what Evergy is asking for is a $15 million dollar check from ratepayers to spend

on EV infrastructure, however they see fit. I would reject such flexibility, as it gives literally no incentive for the utility to follow-through with their proposals and could easily be directed at suboptimal actions.

Q. Does this conclude your testimony?

A. Yes.