

**COST OF SERVICE AND RATE DESIGN
RESPONSIVE TESTIMONY OF MONTELLE CLARK
ON BEHALF OF THE OKLAHOMA SUSTAINABILITY NETWORK
CAUSE NO. PUD 202100164**

I. INTRODUCTION

1
2 **Q. Please state your name and position with the Oklahoma Sustainability**
3 **Network (OSN).**

4 A. My name is Montelle Clark, and I am the Energy Policy Director of OSN.
5

6 **Q. On whose behalf are you providing testimony?**

7 A. I am providing testimony for OSN.
8

9 **Q. Please describe the Oklahoma Sustainability Network.**

10 A. OSN is a 501(c)(3) nonprofit, founded in 1999, that strives to connect and educate
11 the people of Oklahoma concerning the many aspects of sustainability, and to
12 contribute practical ideas linking a prosperous economy with a healthy
13 environment and thriving communities. Our board of directors includes members
14 with expertise ranging from environmental economics, medical science, and public
15 policy, to public relations, transportation, and air quality policies and issues. OSN's
16 newest board member is Mr. Eddie Terrill, former director of the Air Quality Division
17 at the Oklahoma Department of Environmental Quality¹
18

19 **Q. Describe your responsibilities as the Energy Policy Director of OSN.**

20 A. I've been a member of the OSN board of directors and served as OSN's Energy
21 Policy Director since 2007. In that capacity I have directed all of OSN's participation
22 in Corporation Commission rulemakings, utility demand side management
23 applications, rate cases, environmental compliance plans, renewable energy and
24 grid modernization proposals, OCC Inquiries, and Integrated Resource Planning.

¹ <http://www.oksustainability.org/>

1 **Q. What other policy activities are you engaged in as OSN's Energy Policy**
2 **Director?**

3 A. I contributed to the development of the Oklahoma First Energy Plan in 2011 under
4 Secretary of Energy Michael Ming and from 2016 through 2018, I also participated
5 in Secretary Michael Teague's Distributed Generation Policy Group. In 2008, I was
6 appointed by Governor Brad Henry to the Air Quality Council at DEQ, where I
7 represented the general public on rulemakings for the Clean Air Act. I was
8 reappointed to the Council by Governor Mary Fallin in 2012 and served a full 7-
9 year term.

10

11 **Q. Please describe your professional background as it relates to your work for**
12 **OSN.**

13 A. Prior to my position with OSN, my knowledge of energy policy was derived from
14 years of public engagement on air quality issues. Since joining OSN, I have
15 attended numerous webinars and conferences on energy policy and air quality
16 from groups like the Regulatory Assistance Project (RAP), Environmental
17 Protection Agency (EPA), and the American Council for an Energy-Efficient
18 Economy (ACEEE) and I've reviewed many publications and research papers from
19 these groups and others in order to inform OSN's activities in the Oklahoma
20 regulatory arena. OSN relies on my knowledge of the Commission and demand-
21 side management (DSM) efforts in Oklahoma and around the country. I note that
22 while I don't have specific academic qualifications, I have spent the last 15 years
23 highly engaged in contributing to and helping shape policy and programs for
24 demand-side management in Oklahoma.

25

26 **Q. What is your history of engagement on behalf of OSN with DSM programs in**
27 **Oklahoma?**

28 A. I participated in the original Demand Programs rulemaking in 2008 and again in
29 the 2013 rulemaking update, and OSN has been a party in each of OG&E's
30 Demand Portfolio proposals. I have attended every OG&E stakeholder meeting
31 since they were first launched and have closely reviewed every annual Evaluation,

1 Measurement & Verification (EM&V) report. I also review the Demand Programs
2 offered by PSO, ONG, and CenterPoint. In addition, I monitor best practices and
3 innovations in program design and implementation, review industry reports, and
4 maintain frequent communication with efficiency program experts across the
5 country.

6
7 A list of my engagements and efforts as Energy Policy Director of OSN is provided
8 in Exhibit OSN MC-1.

9
10 **Q. Have you testified before the Oklahoma Corporation Commission before?**

11 A. Yes. I filed testimony in Cause No. PUD 2021-121.

12
13 **Q. Did any party in that matter object to your qualifications?**

14 A No, they did not.

15
16 **Q. Do you ask that the Commission accept you as an expert regarding policy
17 and program development as it relates to the testimony you are providing in
18 this matter?**

19 A Respectfully, I do.

20
21 **Q. What is OSN's interest in this case?**

22 A. OSN is interested in all the elements of this case, but I am offering testimony and
23 recommendations on three specific areas: 1) the proposed increase in OG&E's
24 monthly customer charge for residential customers; 2) the proposed grid
25 enhancement investments; 3) and the proposed tariff for residential EV charging
26 in the context of broader EV policies and goals.

1 using less than 6,362 kWh annually.⁴ I'll note that at my own 3-bedroom house in
 2 Tulsa, with two people working from home, we use about 6,000 kWh annually. Low
 3 usage customers might be living in small apartments, or they might be particularly
 4 thrifty or efficient, but it seems unreasonable to charge them the same monthly fee
 5 as customers living in much larger homes with much higher consumption and a
 6 much larger burden on the power grid. I would also point out that low usage
 7 customers often are low-income, or seniors, or even folks who are doing their best
 8 to conserve energy to reduce their environmental impact - a goal that OSN
 9 believes should be encouraged.

10
 11 **Q. Is there information from OG&E that demonstrates the inequities of**
 12 **increasing the fixed monthly charge?**

13 A. When you review OG&Es response to Data Request OSN 1-2, you can see that
 14 10% of customers that represent the lowest usage will receive a 23.61% rate
 15 increase, the 10% of customers with the highest usage only receive a 5.32%
 16 increase, as compared to OG&E's average residential percentage of 9.49%.⁵

17
 18 See the table below provided by OG&E in response to data request OSN 1-2.

19

Standard Residential						
kWh Group	Customer Count	Range (Annual Energy kWh)	kWh	Average kWh	Revenue Change Percentage	
1	51,818	Less than 5,290 kWh	175,845,518	3,394	23.61%	
2	51,815	Between 5,290 kWh and 7,102 kWh	323,999,454	6,253	15.56%	
3	51,794	Between 7,102 kWh and 8,536 kWh	405,433,009	7,828	13.24%	
4	51,828	Between 8,536 kWh and 9,922 kWh	478,228,535	9,227	11.76%	
5	51,836	Between 9,922 kWh and 11,387 kWh	551,630,674	10,642	10.66%	
6	51,824	Between 11,387 kWh and 13,083 kWh	632,801,436	12,211	9.73%	
7	51,806	Between 13,083 kWh and 15,189 kWh	729,985,187	14,091	8.88%	
8	51,837	Between 15,189 kWh and 18,151 kWh	858,798,999	16,567	8.03%	
9	51,821	Between 18,151 kWh and 23,247 kWh	1,057,876,940	20,414	7.05%	
10	51,820	Greater than 23,247 kWh	1,647,786,276	31,798	5.32%	
Total	518,199		6,862,386,028	13,243	9.49%	

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⁴ Ibid.
⁵ OG&E Response to Data Request OSN 1-2.

1 **Q. Is OG&E proposing any type of relief mechanism for low-income customers?**

2 A. OG&E currently offers a Low-Income Assistance Program (“LIAP”), which includes
3 a fixed \$10 per month bill offset. OG&E indicated in response to Data Request
4 OSN 1-3 that it doesn’t plan to raise this offset. OG&E’s response also showed
5 that the number of customers participating in the LIAP program increased by more
6 than 22% from 2019 to 2021. OG&E’s proposal to reflect its rate increase almost
7 fully within the fixed charge means that the current \$10.00 bill offset is essentially
8 eliminated for these low-income customers.

9

10 **Q. Have other Commissions looked at this issue of higher monthly charges?**

11 A. The Missouri Public Service Commission looked at higher mandatory fixed
12 charges in 2015. In their rejection of a utility request for increased monthly
13 charges, they made the following point about customer interests:

14

15 There are strong public policy considerations in favor of not
16 increasing the customer charges. Residential customers should
17 have as much control over the amount of their bills as possible so
18 that they can reduce their monthly expenses by using less power,
19 either for economic reasons or because of a general desire to
20 conserve energy. Leaving the monthly charge where it is gives the
21 customer more control.⁶

22

23 The National Association of State Utility Consumer Advocates (NASUCA),
24 representing forty states, also looked at higher mandatory charges and they
25 adopted a resolution that includes the following guidance:

26

27 NASUCA urges state public service commissions to reject gas and
28 electric utility rate design proposals that seek to substantially
29 increase the percentage of revenues recovered through the flat,
30 monthly customer charges on residential customer utility bills –
31 proposals that disproportionately and inequitably increase the rates
32 of low usage customers, a group that often includes low income,
33 elderly and minority customers, throughout the United States.

⁶ Report and Order, File No. ER-2014-0258, 4/29/2015, p. 76.

https://www.efis.psc.mo.gov/mpsc/commoncomponents/view_itemno_details.asp?caseno=ER-2014-0258&attach_id=2015025958

1 **Q. What do you recommend regarding OG&E's request to increase the fixed**
2 **monthly charge?**

3 A. Because putting more and more of utility costs in the monthly customer charge is
4 contrary to demand-side investment that customers are making, is inequitable to
5 low usage customers, and reduces customer bill control, I recommend the
6 Commission reject OG&E's request to increase its monthly customer charge from
7 \$13.00 to \$22.00.

8
9 **III. GRID ENHANCEMENT MECHANISM ("GEM") AND PROJECTS**

10
11 **Q. What is OSN's interest in OG&E's proposed Grid Enhancement Mechanism?**

12 A. OSN first evaluated OG&E's proposed grid projects in Cause No. PUD 202000021.
13 OSN filed a Statement of Position in that case, actively participated in settlement
14 negotiations, and signed the Joint Stipulation and Settlement Agreement. The
15 recommendations that OSN made at that time are still applicable to OG&E's
16 ongoing grid enhancement project. At a fundamental level, OSN recommended
17 that OG&E should consider sustainability as one of its core objectives in guiding
18 its future investments, including projects that facilitate the deployment and
19 accommodation of distributed energy systems, and the expansion of electric
20 vehicle charging. Sustainability is listed as one of the primary components of the
21 Department of Energy's (DOE) Grid Modernization Initiative (GMI). The DOE's
22 "Grid Modernization Multi-Year Program Plan" includes the following statement:
23 "A modern grid must have increased sustainability through additional clean energy
24 and energy-efficient resources."

25
26 OSN also recommended that OG&E should partner with stakeholders on priorities
27 and future investments in the grid by establishing an ongoing stakeholder review
28 process, with reporting on metrics that measure the performance across the
29 benefit categories identified in the Company's proposal. OSN also proposed
30 additional metrics, including items like the number of workplace and residential
31 electric vehicle charging stations added, average time for interconnection of

1 distributed generation, number of grid-connected distributed generation
2 installations, and more.

3
4 **Q. Did OG&E implement a stakeholder review process?**

5 A. OG&E held a single, one-hour meeting in February of 2021 and OG&E presented
6 updates on their projects. The meeting was too short for many questions, so OSN
7 submitted questions in writing after the meeting. Unfortunately, those questions
8 went unanswered until March of 2022, when OG&E responded to OSN's discovery
9 questions, though not all. OG&E conducted another stakeholder meeting on
10 March 30th of 2022. At that meeting and in direct discussion with OSN, OG&E
11 agreed that future meetings should be held at least twice per year, should be
12 scheduled for at least 90 minutes, and that stakeholder questions should be
13 answered promptly.

14
15 **Q. What is OSN's goal for these stakeholder meetings?**

16 A. Grid Modernization projects can be highly technical and unfamiliar for customers
17 and other stakeholders, even including parties to these cases. OSN hopes that
18 the stakeholder meetings will help inform the planning and goals of municipalities,
19 government agencies - including air quality and transportation administrators - and
20 other customers. OSN also hopes that ideas and recommendations from these
21 same groups will inform OG&E's development of plans for future grid enhancement
22 investments.

23
24 **Q. Does OG&E currently engage customers and stakeholders to provide input
25 on updates to the Company's grid investment plans?**

26 A. OSN asked about that in a Data Request in Cause No. PUD 202000021. OG&E
27 stated that, "The Company's proposal includes submitting the Annual Investment
28 Plan to PUD for review prior to commencing work."⁷ So apparently the stakeholder
29 process proposed by OSN is the only organized mechanism for anyone other than

⁷ OG&E Response to Data Request OSN 2-4(c).

1 PUD to ask questions and share requests and recommendations for the
2 investment plans.

3
4 **Q. Did OSN have any recommendations on critical facilities for the Grid
5 Enhancement projects?**

6 A. Yes. OSN recommended that OG&E should prioritize the resiliency of critical
7 facilities by developing DER investment pilots or demonstration projects. Critical
8 facilities would include, for example, hospitals, fire departments, water treatment
9 plants, community centers, police stations, and schools. Many of those customers
10 might not be aware that they don't have to be completely dependent during an
11 outage on backup diesel generators that are not always reliable, and which provide
12 no other value outside of emergency situations.

13
14 **Q. Does OG&E recognize the importance of critical facilities?**

15 A. Yes. In response to Data Request AG-37-2, OG&E stated, "As critical customers
16 are a separate customer classification, a value needs to be assigned for the
17 interruption cost. The adjective "critical" implies the value should be greater than
18 the general customer classification. It was assumed that the appropriate value is
19 3 times the value of small C&I customers."

20
21 **Q. Did OSN have any other recommendations for the Grid Enhancement
22 projects?**

23 A. Yes. OSN recommended that OG&E assess how the implementation of IEEE
24 Standard 1547-2018 could be included in system planning to take advantage of
25 advanced (or "smart") inverter functionalities and assist the Company in
26 economically managing dynamic conditions of the distribution system. Smart
27 inverters have the potential to defer investments in the distribution system. OSN
28 noted that the National Association of Utility Regulatory Commissioners has
29 recommended that state commissioners "convene proceedings that engage

1 stakeholders soon; utilize existing research and experience and make evidence-
2 based decisions to adopt the current IEEE 1547.”⁸

3
4 OSN also recommended that OG&E provide customers with timely, actionable
5 energy usage data, including the implementation of Green Button “Connect My
6 Data” (CMD) capability.⁹

7
8 **Q. What is your overall recommendation regarding OG&E’s Grid Enhancement**
9 **going forward?**

10 A. For improvements to OG&E’s Grid Enhancement, I recommend that OG&E: (1)
11 include sustainability as one of its core objectives in guiding its future investments;
12 (2) partner with stakeholders on priorities and future investments in the grid that
13 maximize customer options for managing their energy, as described in more detail
14 in this testimony; (3) provide progress reports on the Company’s Enhancement
15 Plan to interested stakeholders at bi-annual meetings before additional
16 investments are made; and (4) develop and report on metrics that measure the
17 performance across the benefit categories, including those metrics proposed by
18 OSN.

⁸ The National Association of Regulatory Commissioners (NARUC) adopted a resolution on February 12, 2020 to implement The Institute of Electrical and Electronics Engineers (IEEE) Standard 1547-2018 for Interconnection and Interoperability of Distributed Energy Resources with Associated Electric Power Systems Interfaces (IEEE Std 1547-2018). The resolution recognized the standard as “a voluntary, nationally applicable standard that will transform how DERs interact with and function on the electric distribution system”. The resolution also stated the standard is “technology neutral and specifies the performance and functional technical capability requirements needed to ensure technically sound interconnections” and requires DERs to be “capable of performing specific grid support functions related to voltage, frequency, communications, and controls to ensure that increasing levels of DERs are reliable at both the distribution and bulk power system levels and can be visible to grid operators.” <https://pubs.naruc.org/pub/E86EF74B-155D-0A36-3138-B1A08D20E52B>

⁹ Green Button Connect My Data (CMD) is the energy-industry standard for enabling easy access to, and secure sharing of, utility-customer energy- and water-usage data. <https://www.greenbuttonalliance.org/about-cmd>

1 **IV. ELECTRIC VEHICLE TARIFFS AND RELATED POLICY GOALS**

2
3 **A. Background on Electric Vehicles Tariffs**

4
5 **Q. What is OSN’s interest in OG&E’s proposed Electric Vehicle tariff for**
6 **residential customers?**

7 A. OSN has been following the progress of electric vehicle (“EV”) technologies and
8 policies for years and we are one of the founding members of the Oklahoma EV
9 Coalition, as is OG&E. OSN’s interest is based on our knowledge of the many
10 benefits that EVs can bring to Oklahoma, especially through emissions reductions
11 and reduced operating costs. The public health benefits of clean air are widely
12 recognized, but OSN notes that Oklahoma’s largest metro areas are at significant
13 risk of ozone non-attainment – a potentially costly designation. A major new study
14 from the Association of Central Oklahoma Governments (ACOG) shows that a
15 violation of federal air quality standards could cost the Central Oklahoma region
16 as much as \$9.6-\$15.2 billion over a 20-30 year period (or \$341-\$542 million per
17 year, averaged) and would bring significant new federal regulatory requirements.¹⁰
18 ACOG’s study also reports that Oklahoma City area ozone levels have been
19 hovering at maximum allowable levels.¹¹

20
21 **Q. Do electric vehicles produce fewer ozone-forming emissions than gasoline**
22 **or diesel-fueled vehicles?**

23 A. Yes. Multiple studies have confirmed the reduced emissions of electric vehicles,
24 even if those EVs aren’t being charged from the cleanest sources. A recent study
25 from Northwestern University provides one example: "Across scenarios, we found
26 the more cars that transitioned to electric power, the better for summertime ozone
27 levels."¹² With the Southwest Power Pool adding new renewable generating

¹⁰ “Association of Central Oklahoma Government’s Cost of Nonattainment Study for the Oklahoma City Area” – ACOG, March 2022. <https://www.acogok.org/wp-content/uploads/2022/03/ACOG-Cost-of-Nonattainment-Study-2022.pdf>

¹¹ Ibid, p 2, Figure 1.

¹² Northwestern University. "Electric vehicle adoption improves air quality and climate outlook: Ozone pollution reduced even when electricity is produced by combustion sources." ScienceDaily. ScienceDaily, 12 April 2019. www.sciencedaily.com/releases/2019/04/190412122912.htm.

1 sources every year, the emission reduction benefits associated with electric
2 vehicles will accumulate.

3
4 While electrification for light-duty vehicles, including cars and SUVs and pickup
5 trucks, would bring significant air quality benefits, not to mention reductions of
6 carbon emissions, the Electric Power Research Institute (EPRI) notes that the
7 greatest potential air quality improvements with Electric Vehicles come from
8 replacing diesel trucks and older vehicles: "Medium-duty, heavy-duty, and
9 especially non-road emissions are significantly higher on a per-vehicle/energy
10 basis. Electrification can provide large benefits here because even though new
11 vehicles in these classes are often cleaner than the existing fleet, they are still
12 relatively high-emitting."¹³

13
14 OSN also notes that EVs produce less urban heat and less noise pollution than
15 vehicles powered by internal combustion engines.

16
17 **Q. Are there electric versions of medium and heavy-duty vehicles?**

18 A. We're still in the early stages of alternative fuels for heavy-duty vehicles, including
19 alternatives for diesel-powered Class 8 rigs for long-haul trucking of freight, but
20 there are multiple electric options available now for regional and local deployment
21 of medium-duty trucks. A recent report on zero-emission trucks identified over 145
22 different medium-duty models available today from over 30 manufacturers.¹⁴

23
24 **Q. Have any of these freight delivery vehicles been tested for practical
25 deployment?**

26 A. Yes. The North American Council for Freight Efficiency recently conducted a
27 demonstration project - they called it "Run On Less" - and they utilized
28 instrumented tests and a variety of in-service fleet vehicles in multiple regions
29 across the US and Canada. The vehicles made their regular deliveries over a

¹³ EPRI Report - Electric Transportation, "Environmental Impact of Electric Vehicles" - May 2018.

¹⁴ "Zeroing in on Zero-Emission Trucks" - U.S. ZET Inventory Report, January 2022, p 2.

https://calstart.org/wp-content/uploads/2022/02/ZIO-ZETs-Report_Updated-Final-II.pdf

1 three-week period. Collected data showed that four market segments of electric
2 freight delivery vehicles have reached a level of maturity and "acceptable total cost
3 of ownership" for fleet deployment:

- 4 • vans and step vans;
- 5 • medium-duty box trucks;
- 6 • terminal tractors; and
- 7 • heavy-duty regional haul tractors.

8
9 The study included a number of interesting conclusions and noted that, "Fleets
10 may not always have a receptive contact at utilities with respect to electrifying their
11 fleets."¹⁵

12
13 **Q. Are there electric vehicle options for small business and small package**
14 **deliveries?**

15 A. For local freight delivery, sometimes called "last mile delivery," perhaps the most
16 significant new EV is the Ford E-Transit cargo van. The Transit van is a very
17 popular choice for smaller, local deliveries, and Ford is now building an electric
18 version at their Kansas City plant. Ford announced recently that they have already
19 received orders for 10,000 of these vans from commercial customers, including
20 Walmart.¹⁶

21
22 There are also various electric options for transit buses and school buses, and
23 there are electrified versions of farm tractors, construction equipment, forklifts, and
24 more. It's becoming difficult to keep up with all the new models.

¹⁵ North American Council for Freight Efficiency, "Run On Less" - January 2022
Report: <https://nacfe.org/wp-content/uploads/edd/2022/01/RoL-Electric-Report-FINAL.pdf>
Website: <https://nacfe.org/run-on-less-electric-report/>

¹⁶ "Ford delivers its first all-electric vehicle made in Kansas City and demand is soaring" -
https://www.kansascity.com/news/business/article258150253.html#storylink=mainstage_card

1 There are even multiple options for electric passenger trains. The Tulsa Zoo is in
2 the process of replacing their train with an electric version. The project is supported
3 by a grant from INCOG.¹⁷
4

5 **Q. Aren't these electric models more expensive than their gasoline or diesel**
6 **counterparts?**

7 A. Yes, the purchase prices can be somewhat higher. The gasoline version of the
8 Ford Transit, for example, starts at \$40,000, while the E-Transit starts at \$45,000,
9 but that higher capital cost can be quickly recovered through reduced fueling costs.
10

11 **Q. Are electric vehicles reaching significant sales levels in Oklahoma?**

12 A. Sales of light-duty vehicles are still modest, but they appear to be rising quickly.
13 In response to OSN 1-9, OG&E provided data showing that Oklahoma now has
14 7,362 registered EVs, with an annual growth rate that exceeds 50 percent. Atlas
15 Public Policy reported that Oklahoma had the highest growth in EV market share
16 of any state in 2021, with much of that growth happening in the 4th quarter.¹⁸ At
17 the national level, electric vehicle sales rose 76 percent in the first quarter of 2022,
18 and this increase took place even while overall sales of new cars and trucks were
19 down 15.7 percent for the quarter.¹⁹
20

21 In the Commission's 2020 Notice of Inquiry (Cause No. PUD 202000083), which
22 included EV policy, INCOG's Tulsa Area Clean Cities coalition commented that,
23 "Widespread adoption of electric vehicles from all vehicle classes will likely happen
24 faster than many regulators currently anticipate."²⁰

¹⁷ EPRI, *Efficient Electrification* - "Tulsa Zoo's Newest Exhibit: An Electric Train" - March 2022.

<https://publicdownload.epri.com/PublicAttachmentDownload.svc/AttachmentId=77935>

¹⁸ Atlas Public Policy, "The State EV Olympics" - EV Hub report, 2/22/2022.

https://www.atlasevhub.com/weekly_digest/the-state-ev-olympics/

¹⁹ Kelley Blue Book, *Electrified Light-Vehicle Sales Report* — Q1 2022.

<https://www.coxautoinc.com/wp-content/uploads/2022/04/Q1-2022-Kelley-Blue-Book-Electrified-Light-Vehicle-Sales-Report-04-20-2022-.pdf>

²⁰ Comments from Tulsa Area Clean Cities, p 2 - <https://imaging.occ.ok.gov/AP/CaseFiles/occ30372390.pdf>

1 **B. OG&E's Proposed Electric Vehicle Time of Use Tariff (EV TOU)**
2

3 **Q. Is OG&E proposing a new rate option for certain customers with electric**
4 **vehicles (EV)?**

5 A. Yes. The Company recognizes that the number of electric vehicles (EV) in
6 Oklahoma is increasing and the proposal for an EV charging rate is described on
7 page 27 of Mr. Wai's Direct Testimony, with the tariff included in MFR Schedule N.
8 In this case, OG&E is proposing a limited residential customer time of use (TOU)
9 offering that increases certain off-peak and winter season rates while providing a
10 "super" off-peak rate to encourage electric vehicle (EV) charging from 11:00 pm to
11 6:00 am. The proposed new EV TOU tariff is attached to my testimony as Exhibit
12 OSN-MC-2.
13

14 **Q. Why are Electric Vehicle Time of Use (EV TOU) rates being adopted around**
15 **the country?**

16 A. As described above, there continues to be strong growth in sales of EVs in
17 Oklahoma and nationwide. In response to Data Request OSN 1-9, OG&E stated
18 that recent sales figures, combined with customer survey results, confirm their
19 concern that EVs will add strain to the distribution system. Forecasts are that EVs
20 in the U.S. will reach over 20 million in 2030 with an energy consumption of 93
21 TWh.²¹ This provides a new demand on the electric system, along with a new
22 source of revenue, that when properly managed can provide benefits to the entire
23 electric system. Specifically, providing rates that can be used to encourage
24 overnight charging has been found to minimize distribution system impacts and
25 avoids additional infrastructure investment.²² By adopting a properly designed
26 TOU rate for EV owners and shifting charging to "super" off-peak hours, impacts
27 to the system can be minimized while providing additional electric sales over which
28 to spread utility costs.²³ This means that even customers who don't plan to

²¹ *Residential Electric Vehicle Rates That Work – Attributes that Increase Enrollment*, Smart Electric Power Alliance, Nov. 2019, p. 8. <https://sepapower.org/resource/residential-electric-vehicle-time-varying-rates-that-work-attributes-that-increase-enrollment/>

²² *Ibid.*, p 8.

²³ *Making Electric Vehicles Work for Utility Customers*, Synapse Energy Economics, Nov. 23, 2019, p. 1.

1 purchase an EV could see benefits from EV adoption and charging. The Kansas
2 Corporation Commission evaluated this benefit recently in approving an Evergy
3 electric vehicle plan. The Commission staff stated in a news release that, "Long-
4 term, electric vehicle charging has the potential to reduce costs for all customers
5 by spreading the utility's fixed costs among more users."²⁴
6

7 **Q. Why is it important for customers that OG&E manage EV growth with a broad**
8 **array of EV TOU tariffs?**

9 A. A 2019 study by Boston Consulting Group concluded that utilities could reduce by
10 70 percent the costs of grid upgrades over the next decade by shifting to
11 "optimized" charging.²⁵ If utilities do not actively engage these segments of EV
12 growth, there will be unnecessary pressure on electric costs and the distribution
13 system.
14

15 **Q. Can you explain why EV TOU rates that encourage overnight charging are**
16 **beneficial for all customers, not just those with electric vehicles?**

17 A. As described above, this new electric load from EVs provides an opportunity for
18 increased usage over which to spread all system costs, thereby lowering costs for
19 all customers. In addition, this new load can be served when the system load is at
20 its lowest – overnight. By offering a properly designed EV TOU rate, this new load
21 can be passively managed to charge during the overnight hours, which then limits
22 the need for new distribution or other infrastructure to support this new load.²⁶ This
23 characteristic leads to increased usage without the need for increased investment,
24 thereby lowering per kWh costs to all customers.²⁷

²⁴ Kansas Corporation Commission, "KCC approves agreement with Evergy on electric vehicle programs" - 12/6/2021.
https://kcc.ks.gov/index.php?option=com_content&view=article&id=559:news-12-06-21&catid=39:2021-news-releases&Itemid=828

²⁵ The Costs of Revving Up the Grid for Electric Vehicles - Boston Consulting Group, 2019.
<https://www.bcg.com/publications/2019/costs-revving-up-the-grid-for-electric-vehicles>

²⁶ *Residential Electric Vehicle Rates That Work – Attributes that Increase Enrollment*, p. 8.

²⁷ *Id.*, pp. ii, 6-8.

1 A recent report from Synapse Energy Economics, Inc., stated it this way:

2
3 Under well designed policies, greater electrification can decrease
4 per-kWh costs. Optimized EV charging can use excess capacity on
5 the electric system more efficiently by spreading fixed costs of the
6 existing system over a larger volume of electricity sales and exerting
7 downward pressure on rates. High levels of adoption, in absence of
8 utility and policy planning, however, could require additional power
9 sector investments.

10 *Residential Electric Vehicle Rates That Work – Attributes that Increase*
11 *Enrollment*, Smart Eclectic Power Alliance, Nov. 2019, pp. ii-iii (emphasis
12 added).
13

14 **Q. The Synapse Energy comments mention the possibility of additional power**
15 **sector investments. Can you explain that risk?**

16 A. That's referring to unmanaged charging, or charging that occurs coincident with
17 peak load, which could force the utility to upgrade the distribution grid - including
18 new transformers, substations, and extra line capacity - and possibly even develop
19 additional generation and transmission,
20

21 **Q. What initial observations do you have about OG&E's proposed EV TOU rate**
22 **offering?**

23 A. It is step in the right direction for OG&E to add an EV TOU tariff. I note that the
24 proposal does not require customers to install second meters, which is consistent
25 with good EV policy.
26

27 However, OG&E's proposed EV TOU appears to be overly restrictive and would
28 limit the success of passive EV charging management which could be detrimental
29 to OG&E customers and the system. The tariff proposed by OG&E is artificially
30 limited to 2,000 *residential* customers, and it ignores EV opportunities for general
31 service and commercial customers, along with EV school buses.
32

33 Also, I note that while offering a "super" off-peak rate (essentially overnight), the
34 tariff then increases the price of electricity during off-peak times and during the

1 winter season to these customers' normal use of electricity.

2
3 In Public Service Company of Oklahoma's (PSO) last rate case this Commission
4 approved not only a residential EV TOU rate, but also EV TOU rates for General
5 Service and Commercial Fleets. See Exhibit OSN-MC-3.²⁸ It is important to note
6 that all these EV TOU tariffs for PSO were unopposed and are currently in place
7 for PSO customers.²⁹ OSN would like to see OG&E's EV TOU offering expanded
8 and modified to be more consistent with best practices and EV tariffs previously
9 approved by this Commission.

10
11 **Q. Is there significant benefit to a "super" off-peak rate like OG&E is proposing**
12 **versus the use of generic TOU rates for EV owners?**

13 A. Absolutely. For example, OG&E currently has multiple TOU rates available to its
14 various customer classes. However, these tariffs do not provide a specific rate to
15 encourage overnight EV charging. Studies have shown that having a super off-
16 peak rate dedicated to EV charging increases participation, has better customer
17 understanding, and most importantly, these EV owners are more likely to charge
18 during this super off-peak period than those EV owners with only a generic TOU
19 rate option.³⁰ Xcel Energy's Pilot tariff in Minnesota, for example, offers time-of-
20 use EV charging rates for participating customers. The first report on the program
21 showed that approximately 96 percent of customers' charging occurred during off-
22 peak times. The report also shows very high customer satisfaction with the
23 program.³¹

²⁸ See Exhibit OSN MC-2 for PSO's current EV tariffs approved in Cause No. PUD 2021-55.

²⁹ Final Order, Cause No. PUD 2021-55 (Dec. 28, 2021).

³⁰ *Residential Electric Vehicle Rates That Work – Attributes that Increase Enrollment*, pp. 11-12.

³¹ Xcel Electric Vehicle Tariff Report, 2019.

<https://www.edockets.state.mn.us/EFiling/edockets/searchDocuments.do?method=showPoup&documentId=%7bA0BF0F6B-0000-C016-839D-F8267E380A28%7d&documentTitle=20195-153306-01>

1 **Q. Could you please describe your recommendations regarding the proposed**
2 **EV TOU tariff?**

3 A. When reviewing the brief testimony and the proposed tariff, there are three areas
4 that should be addressed so that OG&E's offering is more robust and more in line
5 with best practices. In addition, these changes would also make the offering
6 consistent with EV offerings previously approved by the Commission.

7 1. The EV TOU rate should not be limited to 2,000 residential customers.

8 2. The EV TOU rate should not be limited solely to residential customers
9 but should include TOU options for other customer classes such as
10 General Service, commercial fleet EVs, and EV school buses.

11 3. The increase in off-peak and winter season rates for EV TOU customers
12 should be carefully reviewed – especially for potential impact on low-
13 usage EV customers. EV TOU customers should not be penalized for
14 ongoing, normal energy usage during the same off-peak and winter
15 season rates as other TOU customers.
16

17 **1. There should be no limit or cap to the number of participants to the proposed**
18 **residential EV-TOU tariff.**

19 **Q. Your first concern relates to OG&E's cap of residential enrollment at 2,000**
20 **customers. Have you found any basis that would support OG&E's 2,000 cap**
21 **on enrollment for OG&E's residential EV TOU?**

22 A. No, I have not. OG&E has provided no substantive study or information that would
23 support a limit. OG&E states that it wants to limit the offering so it can better
24 understand the interest and impact before a wider roll-out.³² However, these new
25 EV TOU customers will be paying for their normal consumption during regular
26 hours as they always have – except they are adding new off-peak load by charging
27 their EV overnight when system usage is low. This does not indicate that there
28 would be concern over any negative revenue impact to OG&E if enrollment is
29 higher than 2,000 customers.

³² OG&E Response to Data Request OSN 1-6.

1 **Q. Beyond there being no basis for limiting enrollment, what additional**
2 **comments do you have regarding the negative impacts if enrollment is**
3 **limited?**

4 A. By not allowing enrollment beyond 2,000 customers, OG&E leaves these
5 additional customers without incentive to charge EVs overnight, thereby potentially
6 putting additional strain on the system during higher peak hours, which could be
7 more costly to EV owners and other customers on the system.

8
9 **Q. Are any utilities in Oklahoma offering EV TOU rate structures consistent with**
10 **your recommendations?**

11 A. Yes. As mentioned previously, PSO has EV TOU tariffs in place for residential,
12 general service, and commercial fleet customers. PSO's residential EV TOU rate
13 adds a "super" off-peak rate for 11:00 pm to 6:00 am to its current TOU rates and
14 does not cap the number of customers that can enroll. In addition, PSO provides
15 an EV TOU for commercial and industrial customers, either under its general
16 service EV TOU or its Commercial Electric Vehicle Fleet (CEVF) tariff. None of
17 PSO's EV tariffs cap the number of customers that can enroll and all PSO tariffs
18 provide lower super off-peak rates to encourage overnight charging during times
19 of low system usage.³³

20
21 **Q. Did PSO claim any need to have a cap on residential enrollment in EV TOU?**

22 A. No, PSO did not. I have reviewed various reports and studies regarding the
23 development and application of EV rates, and I have not seen any studies that
24 indicate there is any benefit to artificially capping participation. In fact, to the
25 contrary, studies show that moving electric consumption for charging EVs to a
26 period of low system usage (overnight) has significant benefits to all customers.³⁴

³³ See Exhibit OSN MC-2.

³⁴ Residential Electric Vehicle Rates That Work – Attributes that Increase Enrollment, pp. 6-8.

1 **Q. What is your recommendation regarding OG&E's cap of 2,000 participants**
2 **on the proposed residential EV-TOU tariff?**

3 A. I recommend OG&E strike this participant limitation in the tariff. Moreover, PSO did
4 not see any need to cap participation in a tariff the Commission recently approved,
5 OG&E has failed to provide any support for including the 2,000-customer cap, and
6 the cap is detrimental to encouraging overnight EV charging.

7
8
9 **2. OG&E should expand its EV-TOU rates to include other customer classes**
10 **including rates for general service, commercial fleet customers and EV**
11 **school buses.**

12
13 **Q. As you describe above, OG&E is only proposing a limited residential EV TOU**
14 **rate, correct?**

15 A. Yes. This is contrary to the direction other utilities are heading by offering EV TOU
16 rates across all major customer classes. Based on the growth of EVs in all
17 segments, it is important that Oklahoma utilities monitor, respond, and properly
18 manage important segments of EV growth.

19
20 **Q. How can this limitation be remedied?**

21 A. It would be beneficial for OG&E and its customers for OG&E to include EV TOU
22 rates for general service, commercial fleets, and schools.

23
24 **Q. Does OG&E recognize the growth and corporate goals of electrifying**
25 **commercial fleets?**

26 A. Yes, and OG&E itself plans to replace its light-duty vehicles with EVs by 2030 and
27 has made the following announcement.

28
29

OG&E is committed to environmental stewardship. It is increasing its
30 fleet electrification to reduce its company vehicle emissions 60
31 percent by 2030. The utility is accomplishing this goal by replacing

1 traditional vehicles with electric models to reduce carbon emissions,
2 and it is replacing all light-duty vehicles (LDVs) with EVs by 2030.³⁵
3

4 **Q. Can you give the Commission some examples of expanding commercial**
5 **fleets?**

6 A. Amazon, for example, has ordered 100,000 electric delivery vans from Midwest-
7 based manufacturer Rivian that it expects to be in service by 2023. Amazon has
8 also announced that they will purchase thousands of electric Ram ProMaster vans
9 from Stellantis (formerly Chrysler), rolling out in 2023. UPS has ordered 1,000
10 electric vans, and Walmart has ordered 5,000 electric-powered vans from General
11 Motors' BrightDrop subsidiary. FedEx has also ordered 2,500 of BrightDrop's
12 vans.³⁶
13

14 **Q. Are there local examples of commercial fleet EVs and investment in**
15 **Oklahoma that demonstrate the importance of EVs to Oklahoma?**

16 A. In addition to OG&E's announcement, Tulsa Transit purchased four new electric
17 buses last year. These are full-sized, 40-foot models with 200 miles of range.
18

19 On the EV manufacturing side, state policy is supportive of EVs. Canoo, an EV
20 design and manufacturing firm, announced in 2021 that it was locating its
21 manufacturing facility outside of Tulsa, supported by potentially \$15 million of
22 incentive funds from the state.³⁷ Canoo CEO Tony Aquila announced that the state
23 also agreed to purchase up to 1,000 of Canoo's electric vehicles.³⁸
24

25 In April 2022, the Oklahoma Governor and legislature worked on a significant

³⁵ [OG&E Hosts Electric Vehicle Ride & Drive Event \(gcs-web.com\)](https://www.ogae.com/news/ogae-hosts-electric-vehicle-ride-drive-event)

³⁶ GM Press Release, "BrightDrop Announces Walmart as New EV Customer and Expands Collaboration with FedEx at CES" - 1/5/2022.

<https://media.gm.com/media/us/en/gm/home.detail.html/content/Pages/news/us/en/2022/jan/ces/0105-brightdrop.html>

³⁷ <https://investors.canoo.com/news-presentations/press-releases/detail/61/milestone-met-canoo-selects-oklahoma-for-owned>

³⁸ The Frontier, "Oklahoma gives electric vehicle manufacturer \$15 million from state's 'Quick Action Closing Fund'" - 2/28/2022.

<https://www.readfrontier.org/stories/oklahoma-gives-electric-vehicle-manufacturer-15-million-from-states-quick-action-closing-fund/>

1 economic package to attract a large EV battery manufacturer to Oklahoma, which
2 is reported as being Panasonic Corp. Reports also indicated that if Oklahoma is
3 selected for the location, it will be the largest manufacturing facility investment ever
4 in Oklahoma.³⁹

5
6 Oklahoma has also launched the Automotive Accelerator Program, a partnership
7 with the Department of Commerce, Oklahoma Manufacturing Alliance, and
8 Oklahoma Center for the Advancement of Science and Technology (OCAST) to
9 develop an EV strategy for recruiting the automotive sector. The program has a
10 targeted marketing campaign aimed at major companies in the EV supply chain.

11
12 At the local government level, Central Oklahoma and Tulsa Clean Cities Coalitions
13 (sponsored by ACOG and INCOG, respectively) support the growth of electric
14 vehicle charging in workplaces by participating in DOE-funded Equitable Mobility
15 Powering Opportunities for Workplace Electrification Readiness, or EMPOWER,
16 initiative. They will engage with employers in the region to explore opportunities
17 for workplace charging programs and installations.⁴⁰

18
19 The City of Oklahoma City's Sustainability plan, titled **adaptokc**, identifies a
20 primary goal of reducing transportation emissions and the plan specifically includes
21 support for electric vehicles as one of the identified initiatives.⁴¹ The **adaptokc**
22 plan points out that, "our transportation costs are higher due in part to the
23 significant average household VMT (21,327 per year). Changes to household
24 expenditure on fuel could help reduce those household transportation costs given
25 the price difference of gasoline and electricity."⁴²

³⁹ The Oklahoman, "\$700M incentive plan to lure multibillion company awaits approval from Gov. Kevin Stitt" - 4/22/2022
<https://www.oklahoman.com/story/news/2022/04/22/oklahoma-bill-create-700-m-business-incentive-goes-kevinstitt/7371338001/>

⁴⁰ "DOE funds EMPOWER Workplace Charging project" 12/3/2021.

<https://www.tncleanfuels.org/2021/12/03/doe-funds-empower-workplace-charging-project/>

⁴¹ City of Oklahoma City, "adaptokc – adapting for a healthy future" – unanimously adopted 6/11/2020, p 110.

<https://www.okc.gov/departments/planning/what-we-do/plans-studies/adaptokc>

⁴² Ibid, p 105.

1 **Q. Do EVs offer any benefits for rural drivers?**

2 A. Yes, potentially. Actually, the fuel savings benefits might even be greater for rural
3 drivers in small towns and rural counties. They often must drive further to work
4 and shop and for medical care. Eric Pollard, the air quality and Clean Cities
5 coordinator at the Association of Central Oklahoma Governments, noted recently
6 that the average urban Oklahoma City area driver commutes about 34 miles per
7 day, and rural drivers around the region drive between 30-50 miles per day.⁴³ It's
8 also worth noting that in many cases rural drivers might be more likely to have
9 access to off-street parking for low-cost home charging, compared to urban
10 drivers.

11
12 **Q: Another important segment for EVs is school buses. Can you describe the
13 move to electric school buses?**

14 A. Electric school buses offer up a host of benefits and are a primary area of interest
15 for OSN. Most school buses are powered by diesel engines, and diesel emissions
16 are particularly unhealthy for young, developing lungs and brains. Diesel engines,
17 especially older diesel engines, emit high levels of particulate matter, a noxious
18 pollutant which is associated with multiple serious health effects.⁴⁴ Diesel engines
19 also emit large amounts of nitrogen oxides (NOx) - an ozone precursor - and the
20 EPA states that, "Diesel exhaust from these buses has a negative impact on human
21 health, especially for children who have a faster breathing rate than adults and
22 whose lungs are not yet fully developed."⁴⁵

23
24 Beyond these significant health benefits, OSN calculates that the fuel savings from
25 an electric bus would be eye-opening. An average new diesel bus uses about 8
26 mpg – older buses can use more – whereas an electric version of the same size

⁴³ KOSU, "The road to electric: Oklahoma navigates transition to embracing electric vehicles" - 3/3/2022.
<https://www.kosu.org/show/stateimpact-oklahoma/2022-03-03/the-road-to-electric-oklahoma-navigates-transition-to-embracing-electric-vehicles>

⁴⁴ EPA, *Health and Environmental Effects of Particulate Matter (PM)* - <https://www.epa.gov/pm-pollution/health-and-environmental-effects-particulate-matter-pm>

⁴⁵ EPA, *Reducing Diesel Emissions from School Buses* - <https://www.epa.gov/dera/reducing-diesel-emissions-school-buses>. See also, "How electric buses reduce toxic exposure for kids" - E&E News, 4/13/2022.
<https://www.eenews.net/articles/how-electric-buses-reduce-toxic-exposure-for-kids/>

1 bus uses 1.5 kWh per mile, or 12 kWh to travel the same 8-mile distance. The
2 current average price for diesel fuel in Oklahoma is \$4.79,⁴⁶ but if we use
3 \$0.039/kWh as a possible off-peak energy charge for an electric bus, 12 kWh
4 would cost only forty-seven cents (\$0.47),⁴⁷ In other words, the fuel charge for
5 operating an electric school bus could be 90% lower than the cost of burning diesel.
6 For school districts with tight operating budgets, that savings could be crucial.

7
8 Also interesting is that electric buses have the possibility to be utilized as grid
9 assets. School buses typically are parked in the evening peak hours and with the
10 right infrastructure, their large batteries, some of which can exceed 300 kWh, can
11 be used as a potential grid resource through Vehicle-to-Grid (or V2G) technology.

12
13 Vehicle-to-grid (V2G) capability uses electric vehicles to act as batteries with the
14 capability of bi-directional flow of energy that can supply electricity to the grid when
15 called upon by the utility. V2G allows vehicles to inject power back into the grid
16 when needed and can provide frequency response and capacity to the utility.

17
18 **Q. Is V2G technology currently available for electric school buses?**

19 **A.** Yes. In fact, one of the premier electric school bus manufacturers in North America,
20 IC Bus, has their assembly plant located in northeast Oklahoma, where they
21 produce state-of-the-art electric school buses with V2G technology.⁴⁸ This is
22 another exciting segment of the EV industry developing in Oklahoma.

⁴⁶ AAA State Gas Price Averages, accessed on 4/27/2022 - <https://gasprices.aaa.com/state-gas-price-averages/>

⁴⁷ \$0.039/kWh is the energy charge approved for PSO in their Commercial Electric Vehicle Fleet tariff.
<https://www.psoklahoma.com/lib/docs/ratesandtariffs/Oklahoma/PSO%20Electric%20Vehicle%20Rate%20Schedules%20Feb%202022.pdf>

⁴⁸ <https://news.navistar.com/2020-05-28-City-of-Tulsa-IC-Bus-Announce-New-20-Year-Agreement-For-Bus-Manufacturing-Plant> and <https://www.icbus.com/electric>.

1 **Q. Aren't electric school buses more expensive to purchase than their diesel or**
2 **gasoline versions?**

3 A. Yes, they are more expensive, but there are significant grant opportunities or
4 rebates available to defray that purchase cost, and those grant funds can also be
5 applied to the associated charging infrastructure. Heavener Public Schools, in
6 southeast Oklahoma, has already been approved for one of these grants.⁴⁹ The
7 Oklahoma Department of Environmental Quality (ODEQ) is currently offering grant
8 funding for the replacement of diesel school buses with electric versions. And then
9 there is the Infrastructure Investment and Jobs Act, commonly referred to as the
10 Bipartisan Infrastructure Bill, which includes \$5 billion for the Clean School Bus
11 Program, along with \$500 million for "Grants for Energy Efficiency and Renewable
12 Energy Improvements at Public School Facilities." These grants can be used for
13 the purchase or lease of electric school buses and for EV charging infrastructure
14 installation.⁵⁰

15
16 **Q. Please describe some other electric school bus programs.**

17 A. One innovative example is Dominion Energy's "Electric School Buses," which aims
18 to explore how it can provide capacity and reliability for the electric grid while also
19 improving air quality and the health of children and communities. The program
20 currently has fifty electric school buses on the road.⁵¹ Montgomery County in
21 Maryland last year approved a project for 326 EV school buses.⁵² They are even
22 running an electric school bus, successfully, in the cold temperatures of Alaska.⁵³

⁴⁹ EPA Awards Rebates Totaling \$17 Million to Fund Clean School Buses that Reduce Diesel Emissions and Protect Children's Health - 3/7/2022.

<https://www.epa.gov/newsreleases/epa-awards-rebates-totaling-17-million-fund-clean-school-buses-reduce-diesel-emissions>

⁵⁰ Infrastructure Investment and Jobs Act, pp 148 and 183.

https://www.whitehouse.gov/wp-content/uploads/2022/01/BUILDING-A-BETTER-AMERICA_FINAL.pdf

⁵¹ "Electric School Buses" - Dominion Energy; 3/30/2022. The program will treat the buses as a grid asset.

<https://www.dominionenergy.com/our-stories/electric-school-buses>

⁵² Bloomberg, "Biggest Electric Bus Deal in U.S. Approved in Maryland" - 2/23/2021.

<https://www.bloomberg.com/news/articles/2021-02-24/biggest-electric-school-bus-deal-in-u-s-approved-in-maryland?srnd=green>

⁵³ Electrek, "Here's how Alaska's only electric school bus is performing in temps as low as -40F" - 11/19/2021.

<https://electrek.co/2021/11/19/heres-how-alaskas-only-electric-school-bus-is-performing-in-temps-as-low-as-40f/>

1 **Q. What is your recommendation regarding the expansion across classes of EV**
2 **TOU tariff availability?**

3 A. OG&E's EV TOU tariff should not be limited to residential customers. OG&E should
4 develop and offer EV TOU tariffs across other customers classes, including
5 general service, commercial fleet, and EV school buses.
6
7

8 **3. OG&E should not raise the off-peak and winter season TOU rates for**
9 **customers that enroll in the EV-TOU tariff.**

10
11 **Q. Explain how OG&E designed the rates for the residential EV-TOU tariff it is**
12 **proposing?**

13 A. While the EV TOU rate adds a "super" off-peak rate for usage occurring between
14 11:00 pm to 6:00 am, OG&E then raises both the summer season off-peak hours
15 rate and contains a higher rate for the "all other hours" of the winter season
16 compared to the standard TOU rates. See Exhibit OSN-MC-4 for OG&E's
17 residential TOU tariff.
18

19 **Q. How did OG&E explain why it wants to raise rates for these other time**
20 **periods for potential EV TOU customers?**

21 A. While OG&E first states that its objective is to "mirror the Residential TOU rate with
22 the additional of a super off-peak window", the Company then goes on to state that
23 it needs to raise the rates for normal electric usage to make up for the lower super
24 off-peak rate.⁵⁴
25

26 **Q. Should residential customers that select the EV TOU rate be penalized with**
27 **higher rates for electric usage during other hours?**

28 A. Customers with EVs that are encouraged to add this new load to charge overnight
29 are unlikely to have changes in other normal electric usage in their homes. The
30 important goal is to make sure they are not charging EVs during peak hours. OSN

⁵⁴ OG&E Response to Data Request OSN 1-6(d).

1 is concerned that potential EV customers could be confused by the off-setting rates
2 and that EV drivers might not see much actual benefit to overnight charging,
3 depending on their charging profile and their other energy consumption patterns.
4 OG&E has included a "Best Bill Provision" in the tariff, but OSN notes that the
5 SEPA report cited previously included the admonition that, "Approximately 50% of
6 respondents indicated they would need a savings of \$100 or more per year to
7 persuade them to enroll in a TOU rate."⁵⁵

8
9 **Q. What is your recommendation regarding the EV TOU rate design?**

10 A. I recommend that without further information that the Commission reject the rate
11 increase to the off-peak and winter rates to customers that enroll in the EV TOU
12 tariff.

13
14 **C. Need for a Comprehensive Transportation Electrification Plan**

15
16 **Q. Looking beyond the development of EV tariffs, do you have additional
17 recommendations on EV polices or projects?**

18 A. With the rapid growth of EV adoption and the potential impacts and opportunities
19 for the grid, utilities across the country are developing and proposing transportation
20 electrification plans and pilot projects, and OSN recommends that OG&E should
21 launch a similar process. At the recent OG&E Grid Enhancement stakeholder
22 meeting, held on March 30th, OG&E's presentation included a list of five
23 components of a draft Electric Vehicle Strategy:

- 24 1. Infrastructure Planning
- 25 2. Technology Evaluation and Demonstration
- 26 3. Pricing Designs
- 27 4. Customer Education
- 28 5. Policy Opportunities

29

⁵⁵ "Residential Electric Vehicle Rates That Work" - SEPA, 2019, p 25.

1 In subsequent communications between OSN and OG&E, OG&E has added two
2 more important components to their strategy:

- 3 • Collaboration
- 4 • Market Research

5
6 These seven elements are an excellent framework for developing a
7 comprehensive transportation electrification plan. In support of that Collaboration
8 element, OSN recommends that OG&E's transportation electrification plan should
9 include the following programs or pilot projects:

- 10 • Single-family housing program
- 11 • Multifamily housing program
- 12 • Fleet Charging program
- 13 • Municipal Transit Charging Infrastructure program
- 14 • Workplace Charging program
- 15 • Electric School Buses program
- 16 • Off-road Pilot project, including tractors, construction equipment,
17 landscaping gear
- 18 • Customer Education and Marketing Program
- 19 • Marketing budget

20
21 **Q. Why are you recommending a marketing budget?**

22 A. I'll provide one example. In 2019 the Smart Electric Power Alliance worked with
23 The Brattle Group on a survey of U.S. utilities that had an EV rate in-place for at
24 least one year. The survey found that a marketing budget produced a 3x increase
25 in enrollment.⁵⁶ The study results also reported that, "Of survey respondents that
26 didn't enroll in an available rate, it was largely due to their lack of awareness of the
27 rate and the related potential for savings."⁵⁷

⁵⁶ SEPA, *Residential Electric Vehicle Rates That Work*, 2019, p 5. <https://sepapower.org/resource/residential-electric-vehicle-time-varying-rates-that-work-attributes-that-increase-enrollment/>

⁵⁷ Ibid, p. 6.

1 **Q. Are there any examples of utility transportation electrification plans that you**
2 **consider exemplary?**

3 A. I wouldn't highlight one plan, but there are several plans with interesting elements
4 worth reviewing, including Xcel Energy's "Home Charging Service" in New Mexico,
5 Xcel's Fleet Advisory Service and rebates in Colorado, and also their multifamily
6 program. Public Service of New Mexico has an interesting Mass Transit
7 Infrastructure Program. For Electric School Buses, I've previously mentioned the
8 Dominion Energy project in Virginia, but I would also add NV Energy's V2G pilot in
9 Nevada. I noted earlier the EVERGY Kansas EV pilot. I would also review El Paso
10 Electric's plan.

11
12 **Q. Do you have a recommendation for OG&E's process of developing a**
13 **transportation electrification plan?**

14 A. For utilizing the Collaboration component of OG&E's strategy, I recommend that
15 OG&E share any draft plans with the Oklahoma EV Coalition for review and
16 feedback. I also recommend consultation with the Central Oklahoma Clean Cities
17 office and the Tulsa Clean Cities office. OSN, obviously, would be a supportive
18 participant.

19
20 **V. SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS**

21
22 **Q. Please summarize your overall recommendations?**

23 A. I recommend the Commission reject OG&E's request to increase its monthly
24 customer charge from \$13.00 to \$22.00.

25
26 For improvements to OG&E's Grid Enhancement, I recommend that OG&E: (1)
27 include sustainability as one of its core objectives in guiding its future investments;
28 (2) partner with stakeholders on priorities and future investments in the grid that
29 maximize customer options for managing their energy, as described in more detail
30 in this testimony; (3) provide progress reports on the Company's Enhancement
31 Plan to interested stakeholders at bi-annual meetings before additional

1 investments are made; and (4) develop and report on metrics that measure the
2 performance across the benefit categories, including those metrics proposed by
3 OSN.

4
5 As to OG&E's proposed EV TOU proposal, I recommend that the residential tariff
6 should not be limited to 2,000 customers; should include EV tariffs for customer
7 classes such as General Service, commercial fleet EVs, and EV school buses; and
8 there should not be increases to the off-peak and winter season rates for EV TOU
9 customers.

10 To produce a comprehensive Transportation Electrification Plan, I recommend that
11 OG&E should develop programs for the following categories:

- 12 • Single-family housing program
- 13 • Multifamily housing program
- 14 • Fleet Charging program
- 15 • Municipal Transit Charging Infrastructure program
- 16 • Workplace Charging program
- 17 • Electric School Buses program
- 18 • Off-road Pilot project, including tractors, construction equipment,
19 landscaping gear
- 20 • Customer Education and Marketing Program
- 21 • Marketing budget

22
23 OG&E should share any draft plans with the Oklahoma EV Coalition for review and
24 feedback. I also recommend consultation with the Central Oklahoma Clean Cities
25 office and the Tulsa Clean Cities office. OSN, obviously, would be a supportive
26 participant.

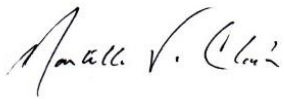
27 **Q. Does this conclude your responsive testimony?**

28 **A.** Yes, it does.

EXHIBIT LIST

- 1
- 2
- 3 Exhibit OSN-MC-1 Montelle Clark, Energy Policy Director, OSN, List of
- 4 Engagements
- 5
- 6 Exhibit OSN-MC-2 OG&E Proposed NEW EV TOU Tariff
- 7
- 8 Exhibit OSN-MC-3 PSO EV Tariffs
- 9
- 10 Exhibit OSN-MC-4 OG&E Residential TOU (with proposed rate updates)

I state, under penalty of perjury under the laws of Oklahoma, that the foregoing is true and correct to the best of my knowledge and belief.



Montelle Clark