# 21-05002

## Public Utilities Commission of Nevada
## Electronic Filing
## Submitted: 1/7/2022 12:32:29 PM

Reference: 4cba158f-eea9-40f2-a1b9-b30a64fdf8f7

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**BEFORE THE PUBLIC UTILITIES COMMISSION OF NEVADA**

| | | |
|---|---|---|
| Investigation regarding long-term planning for natural gas utility service in Nevada | ) ) ) | Docket No. 21-05002 |

**REPLY COMMENTS OF THE CONSERVATION ADVOCATES**

## 1. Introduction

Western Resource Advocates ("WRA"), the Natural Resources Defense Council, Sierra Club, the Nevada Conservation League, The Nevada Chapter of the American Institute of Architects, and Defend our Desert (collectively, the "Conservation Advocates") submit these reply comments in response to the September 24, 2021, Procedural Order issued by the Public Utilities Commission of Nevada ("Commission") in Docket No. 21-05002. In these reply comments, the Conservation Advocates respond to the initial comments of Southwest Gas ("SWG") and NV Energy in this Phase of the Investigation.

These reply comments address three issues with SWG's comments and two concerns not previously addressed in our comments in the other phases. First, we address inaccuracies in the costs of electrification presented by SWG in their initial Phase III comments. Second, we address SWG's assertion that consumers do not receive incentives to use gas. Third, we address SWG's arguments for system expansion. Fourth, we answer a question that was not put forth by the Commission in the Procedural Order; that is, do other policies discourage electrification or encourage expansion of gas service? Lastly, we address the concerns presented by SWG and NV Energy regarding a dearth of studies conducted related to this proceeding.

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**2. SWG's Comments misrepresent the costs of electrification.**

SWG's initial comments in Phase 3 claim that:

> An all-in approach on PDE [policy driven electrification] exposes Nevada to substantial risks including, but not limited to, upward pressure on electric utility prices due to the significant investment necessary to secure incremental generation and grid upgrades, decreased energy reliability, and increased GHG [greenhouse gas] emissions due to the likely need to rely even more on natural gas power generation assets.[1]

SWG does not support its claim that electrification will put upward pressure on electric utility prices. Evolved Energy, Gridlab, NRDC, and Sierra Club's 2020 study found that decarbonization of Nevada's electric sector to meet climate targets can be achieved with little change in electricity rates.[2] While some investment in incremental generation and grid upgrades will likely be needed, electrification can result in improved utilization of existing assets, particularly if time-of-use ("TOU") rates and/or other programs to encourage energy use management are encouraged or required.

Staff's Phase 2 reply comments expressed concern that increased electricity consumption consistent with an electrification-led approach to emission reduction could require substantial and potentially costly investments in Nevada's electric grid. Planning for winter heating electrification has not yet been undertaken by the state' electric utilities, so we cannot know the costs or timing for certain. However, initial analysis indicates that the state likely has many years to prepare for the day (if it comes at all) when winter loads drive up distribution costs. In southern Nevada, the grid is built to handle very high summer peaks. The southern NV Energy system had a load factor of just 42 percent in 2020, with a peak load of almost 6 GW, an annual average load

[1] SWG Phase 3 Comments submitted December 17, 2021, p. 5.

[2] Evolved Energy, Gridlab, NRDC, and Sierra Club 2020. Pathways and Policies to Achieve Nevada's Climate Goals: An Emissions, Equity, and Economic Analysis.

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of about 2.5 GW, and winter peaks also around 2.5 GW.[3] Given that distribution assets have a greater capacity to carry energy when it is cold, it is likely that the southern NV Energy system would require almost no additional investment to meet winter peaks. NV Energy spent over $217 million on distribution capital assets in this area in 2020;[4] planning ahead to design these assets to meet an increased load over the course of the next several decades would be unlikely to add substantial costs. In northern Nevada, the story is somewhat different, but still there is substantial room for the existing system to increase utilization (and thus lower rates) prior to the need for new assets to meet winter loads. The northern portion of the NV Energy system has a load factor of 65 percent.[5] In this area, winter peak loads today are less than 1,500 MW while summer peaks reach over 1,900 MW.[6] NV Energy invested almost $85 million in this distribution system in this area in 2020; again, planning for electrification and directing this investment toward building a grid designed to meet expected future loads is unlikely to create unreasonable additional costs. Electrification can lower rates even if some investment is required, as long as utilization rises faster than costs.

As noted in our Phase 2 comments, SWG's claim that GHG emissions will increase as a result of electrification is based on a flawed premise.[7] SWG incorrectly assumes that additional load from electrification would be served by gas-fired generation. Yet given the low cost of renewable resources and the requirements of the Renewable Portfolio Standard and other state goals discussed more fully in our prior comments, renewable resources will continue to displace gas-

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[3] Nevada Power Company, d/b/a NV Energy, *FERC Financial Report FERC Form No. 1: Annual Report of Major Electric Utilities, Licensees and Others and Supplemental Form 3-Q: Quarterly Financial Report*, filed April 2021 for the year 2020.
[4] *Ibid.*
[5] Sierra Pacific Power Company d/b/a NV Energy, *FERC Financial Report FERC Form No. 1: Annual Report of Major Electric Utilities, Licensees and Others and Supplemental Form 3-Q: Quarterly Financial Report*, filed April 2021 for the year 2020.
[6] *Ibid.*
[7] Conservation Advocates Phase 2 Reply Comments submitted December 10, 2021, p. 2-3.

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fired generation over time.[8] Also, even if new gas plants are deployed to meet increased load, electrification can improve the efficiency of overall energy consumption with currently available technologies that are likely to improve in efficiency as time goes on.

Costs of new electric appliances

While SWG provided a table of the cost of installing new appliances, it is not clear if some of the cost estimates are for electric appliances. Thus, SWG's cost estimates do not allow a direct comparison between the costs of electric and gas appliances. For example, SWG provides cost estimates for standard tank and tankless water heaters, but the data source provided by SWG does not specify whether those costs are for electric or gas appliances.[9] In addition, it is important to account for the cost of air conditioning along with the cost of a gas furnace when assessing the cost of a heat pump, because a heat pump provides both heating and cooling.

Operational costs of electric appliances

SWG referenced its own energy bill impact analysis for Las Vegas[10] and the energy bill impact analysis done by NV Energy[11]. These analyses lack several critical assumptions that make it challenging to verify the reasonableness of these analyses. For example, SWG did not provide key assumptions about the performance of electric and gas appliances (e.g., coefficient of performance for heat pumps, annualized fuel utilization efficiency or AFUE for gas furnace, etc.) or energy requirements by end-use for its own analysis. In addition, SWG did not provide any citation for this analysis and provided only the following in footnote 18:

> Southwest Gas conducted the analysis in March 2018, using natural gas rates of $0.60303 per therm and electric rates of $0.10427 per kWh. Additionally,

[8] See, *e.g*,. Conservation Advocates Phase 1 Comments submitted October 22, 2021, p. 2-3.
[9] This source provided by SWG is available on the homeadvisor.com website: https://bit.ly/3q3L4Ea
[10] SWG Phase 3 Comments, *supra* fn. 1, p. 8-9.
[11] *Id*. at p. 9-10.

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> for the purposes of the analysis, Southwest Gas assumed standard efficiencies, standard customer usages, and local climate data for an average year.

Further, the purported NV Energy bill analysis does not show any energy bill analysis, instead showing electrical capacity and annual kWh consumption by end-use and fails to incorporate gas consumption data.[12,13] SWG's referenced source does not contain any of the cited analysis presented in SWG's comments.

Despite the lack of the key assumptions, we attempted to assess the cost estimates developed by SWG for space heating, water heating, and cooking below. Overall, we conclude that SWG's cost estimates for electricity end-uses are overestimated and its estimates for gas end-uses are underestimated.

*Space heating*

A 2018 study by the Southwest Energy Efficiency Project ("SWEEP") titled "Benefits of Heat Pumps for Homes in the Southwest," referenced in our Phase 3 comments, provides detailed assumptions and analyses of the economics of heat pumps relative to gas options.[14] The study provides lifetime energy costs using a 5 percent discount rate. We converted the lifetime energy costs to annual energy costs using the same discount rate in the following table and compared the costs with the estimates by SWG. We found that SWG overestimated electric heating costs by 12 percent and underestimated natural gas heating costs by 23 percent relative to SWEEP's estimates. In sum, SWG overstated the total energy bill savings estimate for gas space heating relative to the SWEEP study by 80 percent, as shown in the table below. The SWEEP study shows that the annual operating costs of heating electrification is still more expensive. However, as we discuss below in this section, we expect that elimination of gas fixed charges with full

[12] *Id.* at p. 8-9.
[13] The reference "Household Appliance Guide, NV Energy" is available at: https://bit.ly/31BAc7b
[14] SWEEP, "Benefits of Heat Pumps for Homes in the Southwest" (2018), available at: https://bit.ly/3JNDC89

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electrification, time of use rates, or avoided carbon costs, or a combination of these factors make heating electrification a more affordable option than using fossil gas heating systems.

**Table 1. Comparison of SWEEP and Corrected SWG Estimates of Annual Costs of Space Conditioning Options**

| | Estimated Annual Costs of Electricity | Estimated Annual Costs of Natural Gas | Cost Difference | Notes |
|---|---|---|---|---|
| SWG[15] | $356 | $163 | $193 | |
| SWEEP 2018[16] | $318 | $211 | $107 | Using a 5% discount rate in the study |
| Difference | 12% | -23% | 80% | |

*Water heating*

SWG estimated that electric water heating costs $168 per year more than gas. In contrast, the SWEEP 2018 study estimated that the lifetime cost of a heat pump water heater exceeds that for a gas water heater by $644 in Las Vegas, in present value over the lifetime of 12 years. This translates into approximately $73 per year using the study's discount rate (5 percent).

*Cooking*

SWG estimated that annual operating costs of cooking appliances are $196 for electric and just $28 for gas. Based on the gas rate of $0.60303 per therm provided by SWG, we estimated that the total gas consumption for cooking is 46 therms.[17] We assessed the reasonableness of SWG's electric operating cost estimate of $196 by converting the 46 therms to electricity using appropriate appliance efficiency ratings. A summary of this analysis is presented in Table 2. We concluded that electric consumption is about 512 kWh using the difference in efficiency between gas stove (32 percent) and induction cooking (85 percent). This level of electric consumption

[15] SWG Phase 3 Comments, *supra* fn. 1, p. 9.
[16] SWEEP study, *supra* fn. 14., Table 5a.
[17] $28 (annual gas costs) / $0.60303 (gas rate per therm) = $46 (therms).

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results in just $53 per year based on the electric rate of $0.10427, as proposed by SWG. This means that SWG's cost estimate for electric cooking is overestimated by 270 percent.

**Table 2. Review of SWG estimate of annual operating costs.**

| Variable | Value | Notes |
|---|---|---|
| Gas annual costs ($) | $28[18] | |
| Gas usage (therm) | 46 | Calculated based on $0.60303 per therm per SWG Footnote 18[19] |
| Gas usage (MBtu) | 4,643 | Conversion from therm to MBtu |
| Electricity usage (kWh) | 512 | Conversion from MBtu to electric usage based on 32% efficiency for gas and 85% efficiency for induction cooking |
| Electric annual costs ($) | 53 | calculated based on $0.10427 per kWh per SWG Footnote 18[20] |
| Gas cooking efficiency | 32% | Frontier Energy (2019)[21] |
| Induction cooking efficiency | 85% | Frontier Energy (2019)[22] |

SWG referenced a study titled "Cost and Other Implications of Electrification Policies on Residential Construction," by Home Innovation Research Labs.[23] This study analyzed operating and installed costs of HVAC and water heating options for new homes and presents the results for an electric house and a mixed-fuel house. The results from this study are not directly applicable to Nevada and are otherwise misleading for a number of reasons. First, all the cities included in the study for bill impact analyses are located in other states – locational comparisons must be reviewed carefully even when locations with similar climate conditions are used because energy bills are substantially affected by electric and gas rates, which can widely differ by state.

[18] SWG Phase 3 Comments, *supra* fn. 1, p. 9.
[19] *Id.*
[20] *Id.*
[21] Frontier Energy, *Residential Cooktop Performance and Energy Comparison Study* (2019), available at https://bit.ly/3n3Ycas
[22] *Id.*
[23] SWG Phase 3 Comments, *supra* fn. 1, p. 10-11.

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Secondly, the study results are only applicable to new construction homes in other states (i.e. for 2018 IECC and 2021 IECC building codes). This is an important point because energy consumption for new homes is much lower than consumption for existing buildings. Finally, and most importantly, it is misleading to present the operating costs for an all-electric new home and a mixed-fuel new home without considering the impacts of gas monthly fixed charges, also known as customer charges. To conduct the right comparison, the monthly gas fixed charges need to be added to the operating cost of gas appliances for customers living in mixed-fuel homes whereas customers in all-electric homes do not pay the gas fixed charges or gas connection costs.

The SWEEP 2018 study referenced in our Phase 3 comments provided comparisons of energy costs for space and water heating for all-electric, new homes and for mixed fuel, new homes in Reno and Las Vegas. Table 3 shows the net present value of lifetime operating costs for space heating and cooling. The SWEEP 2018 study included all the gas fixed costs in its analysis of HVAC. The results in the table below show that the lifetime operating costs of efficient electric space heating and cooling are $1,019 lower for new homes in Reno and $2,155 in Las Vegas.[24] While this analysis is not perfect because the fixed charges also need to be spread over other gas end-uses, this analysis indicates the critical impact of including fixed charges.

**Table 3. Net present value of lifetime operating costs for space heating and cooling**

| | Space Heating Costs | Cooling Costs | Total Operating Costs |
|---|---|---|---|
| **Reno – New Homes** | | | |
| Ducted heat pump | $5,007 | $982 | $5,989 |
| AC and gas furnace | $5,711 | $1,297 | $7,008 |
| Difference | $704 | $315 | $1,019 |
| **Las Vegas – New Homes** | | | |
| Ducted heat pump | $2,276 | $2,859 | $5,135 |
| AC and gas furnace | $3,512 | $3,778 | $7,290 |
| Difference | $1,236 | $919 | $2,155 |

[24] SWEEP 2018 Study, *supra* fn. 14, Table 5a, p. 17.

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Lastly, SWG's discussion on operating cost estimates omits critical factors that affect the operating costs significantly. One critical factor is TOU rates. TOU rates tend to reduce the operating cost of electric space heating because winter rates are typically lower than the base rate. For example, in Las Vegas, the winter rate for a single family under NV Energy's TOU rate is 6 cents/kWh, which is 40 percent less than the base rate. In Reno, the winter rate is 6 cents/kWh or 33 percent less than the base rate in all hours except 5 to 9 pm, during which the rate is 12 percent less than the base rate.[25] Another important factor is the avoided cost of carbon. SWEEP's 2018 study estimated that the lifetime values of avoided carbon dioxide ("CO2") for heat pumps relative to gas heating options are $260 in Las Vegas and $520 in Reno, assuming $20 per ton of CO2.[26] The use of a more comprehensive social cost of carbon will increase the carbon benefits substantially for electric heat pumps. For example, the state of Colorado now requires utilities to use at least $68 per ton of CO2 when evaluating the economics of demand-side programs.[27] If Nevada utilities and regulators use this level of social cost of carbon, the use of heat pumps for space and water heating would be much more valuable in avoiding CO2 than estimated by the SWEEP 2018 study, which will make heat pumps more societally cost-effective to operate than gas heating appliances even in retrofit situations.

Retrofit costs

SWG's comments mostly provided the total installed costs of electric appliances and electric infrastructure upgrade costs in buildings and included only one chart from one study that provided a comparison of the total costs between electric and gas appliances. Our review of end-use specific total installed costs based on several data sources as provided in our Phase 3

[25] NV Energy, *Standard Residential Time-of-Use Rates*, available at: https://bit.ly/3zIhLdF.
[26] SWEEP 2018 Study, supra fn. 14, Table B-10, p. 46.
[27] DiChristopher., T., "Seeking emissions cuts, Colo. Regulators propose major gas utility rule changes" (2021) S&P Global. Available at: https://bit.ly/3q4KBSd

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comments reveal the following for residential retrofits: (a) the total installed cost of an electric heat pump system tends to cost less than the total installed cost of installing a gas furnace + central air-conditioning; (b) heat pump water heaters are typically substantially more expensive than gas storage water heaters, but they are substantially less expensive than gas tankless water heaters; and (c) electric induction cooking equipment is similar to, but slightly more expensive than gas cooking equipment.

SWG also erroneously assumed that every house needs to spend a large amount of money on electric system upgrades. The major cost of electric infrastructure upgrades comes from upgrading an electrical panel from a low amperage (e.g., 60 amp or 100 amp) to higher amperage (e.g. 200 amp) to accommodate additional electricity loads from electrification. As we discussed in our Phase 3 comments and included below, not all homes need to make electric system upgrades to accommodate electrification:

> [R]ecently-built homes may avoid these costs, as new homes have a high electrical capacity. These costs can also be avoided by using low amp appliances. For example, several manufacturers have developed and are currently testing 120 Volt, 15 amp plug-in HPWHs that do not require any electrical upgrades that may be introduced as early as 2022. Also note that not all costs will be attributable solely to building electrification. Consumers who adopt electric vehicles may choose to upgrade their electric service to charge them more quickly and incur increased costs independent of building electrification. Even if the initial driver to upgrade electric service was building electrification, these costs will be complimentary to electric vehicle adoption, and vice versa.[28]

**3. Current rules distort market signals to consumers on the true cost of gas connections**

SWG suggests that customers' choice of natural gas is not influenced by special incentives or policies. For example, SWG states:

[28] Conservation Advocates Phase 3 comments, page 8.

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> There are no special incentives being offered by homebuilders or Southwest Gas to encourage them to use natural gas. Nor are there building codes or ordinances that require new homes to be built with natural gas service. The customers are choosing natural gas because it is the fuel source they prefer.[29]

Yet existing gas policy effectively subsidizes new consumers by providing an allowance to cover the cost of connection. Rule 9 line extension allowances are based on anticipated gas sales for new customers.[30] Such sales may not materialize for several reasons. First, the performance of electric appliances will continue to improve and/or their costs will continue to decline, further tipping consumer economics in favor of electrification. Second, the cost of gas service will increase as electrification continues and fewer customers are left to cover the cost of the gas system, encouraging these new gas customers to depart the gas system service as they are able. Third, current or future policies at the state or federal level may discourage continued gas use.[31]

**3. Future system extensions are neither consistent with state policy nor are in the economic interests of Nevada's ratepayers.**

SWG argues that expansions of the gas system should be allowed going forward. In support of its position, SWG argues that Nevada will lose economic activity if future gas system expansions are no longer allowed:

> If the expansion of the natural gas system is no longer permitted to occur, the state will undoubtedly miss out on potential economic development and diversification projects. Conversely, policies that facilitate the expansion of natural gas service boost the Nevada economy and make the state competitive and attractive to businesses growing and/or relocating their operations.[32]

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[29] SWG Phase 3 Comments, *supra* fn. 1, p. 15.

[30] Sierra Pacific Power Company dba NV Energy, *Rule No. 9: Gas Main Extensions. Tariff Gas No. 1*, available at https://bit.ly/34pp0LT

[31] For example, proposed changes to federal regulations on the extraction and transportation processes could increase gas costs. (U.S. EPA, EPA Proposes New Source Performance Standards Updates, Emissions Guidelines to Reduce Methane and Other Harmful Pollution from the Oil and Natural Gas Industry. November 2, 2021. Available at https://bit.ly/3ni5msx.)

[32] SWG Phase 3 Comments, *supra* fn.1, p. 16.

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Further, SWG assumes that neighboring jurisdictions will not put up barriers to expanding gas use. Yet states in the region are taking action in this regard. California recently passed updates to the state's building codes that include a number of features to discourage new gas connections. For example, once the code goes into effect in January 2023, most new homes and buildings will be required to have at least one highly efficient space heating or water heating heat pump or face higher energy efficiency requirements.[33] Aside from state-wide policy, over 50 cities in California have passed bans or severe restrictions on gas for new construction.[34] For example, cities like San Diego are phasing out gas connections in building construction starting in 2023.

Colorado is taking a multi-pronged approach towards decarbonization. SB21-264 requires gas distribution utilities to file "clean heat" plans to meet certain GHG emission reduction targets for 2025 and 2030, and SB21-246 requires electric investor-owned utilities to develop and implement beneficial electrification plans every three years. HB21-1286 requires owners of certain existing large buildings to report on their building's energy use annually and to meet building performance requirements regarding emission reductions for 2025 and 2030. HB21-128 directs the Colorado Public Utilities Commission to establish energy savings targets for gas utility efficiency programs and to update the methodology to evaluate program costs and benefits. This includes using a value for avoided GHG emissions, currently set at $68/ton for CO2 and $1756/ton for methane.

Further, gas system expansions increase the cost to attain Nevada's decarbonization targets. Expansions also puts the state on a path to increased stranded cost risks.

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[33] NRDC, "California Passes Nation's First Building Code that Establishes Pollution-free Electric Heat Pumps as Baseline Technology; Leads Transition Off of Fossil Fuels in New Homes." August 11, 2021. Available at https://on.nrdc.org/3q2z1XV

[34] Gough, Matt. "California's Cities Lead the Way to a Gas-Free Future." *sierraclub.org*. Updated December 13, 2021. Available at: https://bit.ly/3f4gvbn

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**5. Other policies may discourage electrification or encourage expansion of gas service.**

The Commission should take a hard look at whether and how existing policies on both the gas and electric sides affect customer choices and should endeavor to remove or adjust mechanisms that favor gas to better support electrification. Such a review should consider, at a minimum, extension and new connection policies, ratemaking, and utility incentives.

While there are likely other policies that should be reviewed, two in particular merit special consideration in this regard: gas revenue decoupling and cost burden for electric system upgrades to serve increased load. A revenue decoupling mechanism breaks the link between a utility's energy sales and the revenue it collects to recover its fixed costs of providing service. Decoupling generally reduces incentives for load building and mitigates the utility's resistance to reduced sales resulting from partial electrification. However, decoupling based on a fixed average revenue per customer creates perverse incentives and unintended consequences. This decoupling design, currently in place for single family residential, multi-family residential and general service rate classes under SWG's General Revenues Adjustment mechanism,[35] encourages the utility to expand the system to serve additional customers in order to increase overall revenue. It may also lead the gas utility to resist customer disconnection from the gas system. If decoupling is retained for any gas utility, the Commission should investigate how these incentives can be removed, e.g., by eliminating the per-customer factor as a revenue determinant.

Policies that pose a barrier to electrification exist on the electric side, too. Customers who choose to electrify loads may be faced with the obligation to pay a portion of the cost of electric

[35] Southwest Gas Corporation 2020 Nevada General Rate Case Application Docket No. 20-02023, Prepared Direct Testimony of Timothy S. Lyons, Vol. 28, p. 27-28.

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system upgrades under NV Energy's Rule No. 9. Under this rule, a project triggering the need for a modification to an existing distribution facility to accommodate a net increase in demand or energy may be responsible for the cost of the upgrade, less an allowance.[36] This risk is a powerful disincentive for customers seeking to electrify, and results in potential unfairness where particular customers are asked to pay the lumpy costs of shared assets that are required to meet state policy goals. In addition to working at cross purposes with Nevada's decarbonization targets, burdening such customers with system upgrade costs may not make economic sense. The increase in sales from electrification will contribute toward the utility's fixed costs. Also, electrification coupled with mechanisms to encourage load management, such as TOU rates, can improve utilization of the system, reducing costs for all customers. This rule should be revised to remove the disincentive to electrify, e.g., by socializing the cost of an upgrade that is triggered by a small increase in load. Further, distribution system planning processes should consider electrification in an integrated way, so that individual customers are not subject to the risk of liability for such upgrade costs.

**6. If the Commission views studies and information submitted in these comments as insufficient, the Commission should contract with an independent third party to examine how a transition away from gas may impact SWG and NV Energy's gas and/or electric systems.**

In its Phase 3 comments, NV Energy stated that "NV Energy has not conducted a study by which it could identify a point at which its gas system would potentially become operationally and financially unviable."[37] Similarly, SWG stated in its Phase 3 comments that it found it "difficult to envision a scenario where there is such a significant reduction in natural gas usage

[36] See Sierra Pacific Power Company dba NV Energy, *Electric Tariff No. 1, Rule No. 9, Alteration of Existing Facilities*. Available at https://bit.ly/3G8CMk3
[37] NV Energy Phase 3 Comments submitted December 17, 2021, p. 5

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that the system becomes operationally or financially unviable."[38] Yet based on the current technologies and TOU rate designs, electrification may be the least-cost option to reduce GHG emissions in line with Nevada Revised Statutes 445B.380. Using the metrics proposed by the Conservation Advocates, the Commission may want to commission studies for Nevada's gas systems to determine when these specific systems may no longer be viable.[39] Such a study could also examine specific actions that the utilities may take to limit the impact on customers who remain on the gas system after other customers transition off.

SWG stated in its Phase 2 comments that "there have been no studies that examine exactly what modifications to the Nevada electric grid would be necessary to successfully implement PDE."[40] Similarly, in its Phase 2 reply comments, NV Energy states that it "believes that careful study is necessary to determine the impact that any policy-driven natural gas electrification would have on the electric utility before embarking on such a course."[41] NV Energy also stated that "[a]ny study of the impacts of electrification on generation resources would require an initial assessment of the amount of electrification mandated and the ensuing load increase and altered load shape."[42] The Conservation Advocates believe that the information submitted in this investigation to date is extensive and should answer many questions that the Commission may have on electrification. However, we support the Commission in additional studies by independent evaluators to examine the impact of electrification on energy, capacity, distribution upgrades, and peak capacity costs as part of this investigation.

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[38] *Supra* at fn. 1, p. 22.
[39] Conservation Advocates Phase 3 Comments, *supra* fn. 28, p. 15.
[40] Southwest Gas Phase 2 comments submitted November 19, 2021, p. 8/17.
[41] NV Energy Phase 2 Reply comments submitted December 10, 2021, p. 2.
[42] NV Energy Phase 2 comments submitted November 19, 2021, p. 4.

DATED January 7, 2021.

Respectfully submitted,

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CERTIFICATE OF MAILING

Docket No. 21-05002

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DATED January 7, 2021.

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