Concept Paper 4: Minimum Requirements, Evaluation Criteria and Metrics for Alternative Ratemaking in Nevada

Nevada Alternative Ratemaking Proceeding
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Table of Contents

SECTION I: INTRODUCTION AND OVERVIEW

Senate Bill (SB) 300 requires the Public Utilities Commission of Nevada (PUCN) to adopt regulations governing electric utility applications for approval of an alternative ratemaking plan. As part of the facilitated process that began in April 2020, stakeholders have had multiple opportunities to provide input on priority goals and outcomes for Nevada, the state of the existing regulatory structure in Nevada, and alternative ratemaking options. As noted in prior concept papers, the PUCN ultimately plans to use the input it has received throughout this stakeholder engagement process to develop a straw proposal, solicit additional, formal comments, and draft alternative ratemaking regulations.

To further advance stakeholder and PUCN consideration of alternative ratemaking regulation design ahead of the straw proposal, this concept paper:

- Clarifies potential limitations to the existing ratemaking framework in Nevada based on stakeholder input from the first three facilitated workshops and subsequent comment periods;
- Outlines core components that the PUCN will require to be included in any alternative ratemaking plan proposed by an electric utility or intervener in order to make an informed decision on the proposed plan;
- Explores how PUCN determinations related to the scope of its alternative ratemaking regulations and application of its evaluation criteria might influence what alternative ratemaking plans are considered in practice; and
- Examines the potential types of metrics that might be considered in Nevada in the future, based on stakeholder and PUCN input, as well as offering examples of metrics adopted in other states for reference and discussion.

This is the final concept paper in the facilitated stakeholder engagement portion of the PUCN's alternative ratemaking proceeding. It will be followed by a facilitated workshop scheduled for December 2-3 and a last round of written stakeholder comments. As noted above, additional work is yet to be done in this proceeding outside of the facilitated stakeholder engagement process.

SECTION II: CONSIDERATIONS FOR ENHANCING NEVADA'S EXISTING RATEMAKING FRAMEWORK

Concept Paper 2 described an existing ratemaking framework in Nevada largely founded in cost-of-service (COS) regulation based on historical costs. Over time, statutory and regulatory actions have introduced mechanisms that modify or add elements to this traditional COS approach, including various existing alternative ratemaking mechanisms.

This stakeholder engagement process has been an opportunity to define goals and outcomes more carefully and to assess whether the existing set of regulatory mechanisms could be improved to further advance the goals and outcomes. Ideally the regulatory mechanisms implemented should align utility choices and customer options with desired goals and outcomes.

Stakeholder regulatory assessments, summarized in Concept Paper 3 and discussed in Workshop 3, identified that further regulatory reform could assist advancement of certain priority outcomes. Concept Paper 3 summarized areas for further attention by outcome, and Workshop 3 provided stakeholders with an opportunity to discuss hypothetical regulatory reforms to address some of these areas for attention. The attendant discussion has developed areas of opportunity where alternative ratemaking mechanisms may be used to enhance specific goals and outcomes.[1]

This section summarizes the areas for potential enhancement of Nevada's current regulatory structure. The areas described are a synopsis of participant comments and positions as developed through the stakeholder-driven process. The items discussed do not represent a finding or position by the PUCN on the specific topics or existing regulatory structure. In addition, these areas for discussion do not necessarily represent consensus among the participants regarding potential enhancements to or limitations of the existing regulatory framework. Individual stakeholder responses may be viewed on the PUCN website in Docket No. 19-06008.

Achieving Balance for Capital Projects

An important consideration is how to achieve the correct balance between utility capital expenditures, system efficiency, and third-party capital projects. In achieving the right balance for capital projects, regulators often refer to utility capital bias, which can be defined as excess investment in utility-built capital projects, and underinvestment in operational improvements or third-party and consumer-financed projects that obviate the need for utility capital investment. Looking at the appropriate balance for capital projects is important in the context of the working goals and outcomes of this proceeding because over-dependence on utility capital investment may make achieving the goals and outcomes more expensive than necessary. While regulations counteract the capital bias in part by evaluating resource alternatives, including proposed resource procurements in an IRP or a Distributed Resource Plan (DRP), the appropriate capital balance could be addressed in a more systematic manner with performance incentive mechanisms and shared savings mechanisms.

[1] It also is possible that outcomes may be achieved via incremental improvements to the existing regulatory structure, including using the current suite of alternative ratemaking mechanisms that exist under Nevada law. Some stakeholder groups have provided responses agreeing in effect to this or that the existing regulatory structure is presently sufficient. These incremental improvements to the existing regulatory structure could occur independently of alternative ratemaking or in conjunction with it. This concept paper explores whether and how an electric utility that files an alternative ratemaking plan must demonstrate why alternative ratemaking is the best solution to achieve identified outcomes in comparison to the existing Nevada regulatory structure.

Throughput Incentive

The throughput incentive reflects a utility's incentive to increase revenues and earnings by selling more electricity. While Nevada has a lost revenue adjustment mechanism to compensate for lost earnings through energy efficiency programs, the utility has no incentive to otherwise reduce sales. Full decoupling could mitigate the throughput incentive and make the utility indifferent to a loss of sales that may result from economically efficient investment.

As detailed in Concept Paper 3, some stakeholders have argued that distributed energy resources (DERs) that reduce sales are not compensated for under the existing framework, which creates an incentive for the utility to limit DERs. Stakeholders have argued that If aggregated DERs are a least-cost solution to meeting needs, underinvestment in DERs and DER programs will lead to costs for all customers that are higher than necessary. On the other hand, the utility will tend to over-invest in load growth by supporting electrification of transport and buildings because it will enable more sales.

EV Infrastructure Buildout

Pilot programs currently drive electric vehicle (EV) infrastructure buildout in Nevada. No plan yet exists to convert these short-term pilots into long-term infrastructure programs past 2025. However, meeting state goals for EV adoption may require EV infrastructure buildout that induces private investment where possible and considers public utility investment. Alternative ratemaking may serve as a means for consideration of these types of investments.

Specific consideration of a full buildout of EV infrastructure in the context of low- and moderate-income communities and other underserved areas within utility service territories could also be expanded in the context of alternative ratemaking. Existing IRP and DRP processes could encompass systematic consideration of a full EV infrastructure build-out.

GHG Emissions

It is Nevada public policy to meet aggressive greenhouse gas (GHG) emission reduction goals. Policies and regulations that induce significant electricity-sector reductions to GHG emissions are therefore essential. GHG emissions in the power sector affect the ability of the state to meet its goals in two ways. First, reducing GHG emissions in the power sector contributes directly to reducing an important source of GHG emissions economy-wide. Second, electrification of the transportation and buildings sectors contributes to GHG emission reductions in proportion with the GHG emissions per kWh produced in Nevada.

Cost effectively meeting GHG emissions goals requires pricing that aligns newly electrified loads with low-cost time periods. It also requires investments in resources that induce GHG reductions at least cost. The IRP and DRP, accompanied by competitive procurement on the supply and demand side (including utility ownership of renewable energy facilities pursuant to Nevada Revised Statutes (NRS) 704.753) have the potential to generate least cost, GHG-target attaining investment. However, the regulations as currently structured do not emphasize GHG emission reduction policy goals. Restructuring regulations to specifically address Nevada's GHG emissions goals, as well as consideration of performance incentive mechanisms or shared savings mechanisms, may help align utility incentives with least cost, GHG-reducing portfolios.

Peak Load Reduction, Net Peak Load Reduction and the Value of Flexible Loads

Electricity demand is most costly to serve during times when electricity load peaks and when electricity load net of variable energy peaks. Reducing consumption and increasing customer-sited supply at these times can keep electricity costs low for all customers by obviating the need for incremental generation investment. Inducing customer behavior that supports peak load and net peak load reduction depends on pricing and flexible customer load adoption. Flexible customer load adoption includes customer-sited storage as well as technologies that support flexible customer loads.

While pricing is addressed in general rate cases, peak load mitigation is considered in the demand side management plans filed in existing IRPs, and flexible load is part of the DRP evaluation processes, an examination separate from certain pilot projects has not been undertaken to understand the potential benefits of flexible load or other load management processes that address net peak load and other grid stress conditions. In particular, full consideration of the need for local flexible ramping and voltage support capabilities may be warranted. For example, performance incentive mechanisms and pricing that reflects system conditions could support adoption and optimal use of storage and flexible loads, which in turn can further reduce peak load and net peak load to ensure that reliability is protected at least cost and that local resources are fully compensated for the capabilities they provide to the utility.

Customer Retention

Larger commercial and industrial customers can choose to become distribution service-only customers through the process set forth in NRS Chapter 704B. If impact fees and partial service tariffs applied to exiting customers do not cover costs incurred to ensure reliable and policy compliant service, a cost shift will occur. If impact fees and distribution tariffs fully cover these costs, then full service customers should be indifferent to whether large customers exit or remain as full service customers.

In addition to the exit process set forth in NRS Chapter 704B, special tariffs have been developed to address specific large customer retention goals. Continued development of a consistent approach to customer retention with alternative ratemaking (including consideration of tariffs such as subscription pricing) could support least cost, reliable service for all ratepayers, while taking into account the unique benefits that high load factors customers bring to the system as a whole. Such an approach should, at a minimum, require no harm to remaining customers, and an examination of whether a tariff (such as a subscription-based rate tariff) accounts for net benefits for the remaining customers.

Regulatory Efficiency

Regulatory efficiency improvements are desirable if they produce lower costs and reduce administrative burden for all parties – including the utilities, interveners like the consumer advocate and the Staff of the PUCN, and the PUCN itself. Regulatory efficiency improvements also implicitly require that reliability is protected and that there are no compromises to equitable opportunities for stakeholder review and engagement. Some parties argue that a multi-year rate plan (MYRP) that extends the review of rates from the current three-year term to something

longer than three years could improve regulatory efficiency. Other parties express concern that less frequent review will imply a less careful review and that some or all ratepayers will be harmed if due diligence is compromised. Some parties also stress that as costs for the utility go down, less frequent rate cases would not result in correspondingly lower rates.

As a compromise position, some stakeholders have suggested a longer rate case cycle accompanied by appropriate interim reviews to protect against ratepayer harm. Extending the duration between full rate cases would be an improvement in regulatory efficiency if it reduces the administrative burden of all or most parties, while appropriately protecting ratepayers by capturing lower utility costs and ensuring no compromises on the opportunity for interim review.

Improved Grid Utilization to Reduce Costs & Support Reliable Clean Energy

Certain grid modernization investments on the distribution system or on the bulk electric system support improved grid utilization. Some grid modernization investments on the distribution system in combination with improved distribution tariffs can support the use of emerging technologies to enhance grid reliability. Some grid modernization investments on the transmission system can improve visibility on the bulk electric system and expand transmission available for delivering intermittent and dispatchable resources.

Current IRP, DRP, and rate case processes allow for the consideration of investments and operational changes to improve grid utilization. Alternative ratemaking can explore whether greater utilization of existing assets can advance the goal of reducing costs and more efficiently achieving public policy goals. One example where current regulation allows for increased use of existing assets is the non-wires alternative evaluation process in the DRP. There may be an opportunity to hone grid utilization through performance incentive mechanisms and ensuring a level playing field between system utilization improvements through non-wires alternatives and system expansion investments.

SECTION III: CORE COMPONENTS OF ALTERNATIVE RATEMAKING PLANS

NRS 704.7621(1), as part of Senate Bill (SB) 300, enables an electric utility to "apply to the Commission to establish an alternative ratemaking plan." This section identifies four components that are necessary for inclusion in such a plan and examines the minimum filing requirements needed to meaningfully address each component. These four components (summarized in Figure 1) are based on the directives included in SB 300 and stakeholder input during this process thus far. This breakdown is intended to help ensure that a utility provides the information the PUCN needs to make a well-informed decision when assessing a utility alternative ratemaking proposal. The four components are as follows:

- Describing the plan and outcomes targeted
- Assessing the plan's benefits vs. status quo ratemaking
- Outlining a process for implementation
- Demonstrating satisfaction of the evaluation criteria

Figure 1: Core Alternative Ratemaking Plan Components and Minimum Requirements

CORE PLAN COMPONENTS	MINIMUM FILING REQUIREMENTS
Describing the plan and outcomes targeted	▪ Describe proposed mechanisms ▪ Identify outcomes targeted and discuss relevant context ▪ Specify applicable time period
Assessing the plan's benefits vs. status quo ratemaking	▪ Explain benefits from plan compared to the status quo ▪ Provide supporting quantitative and/or qualitative analysis and discussion, including COS study
Outlining a process for implementation	▪ Explain how plan will be incorporated into existing ratemaking ▪ Outline process for educating customers ▪ Address records and information requirements
Demonstrating satisfaction of the evaluation criteria	▪ Confirm fulfillment of the evaluation criteria ▪ Provide supporting data, analysis, and discussion

Describing the Plan and Outcomes Targeted

The first essential component of a utility alternative ratemaking plan is its design: the "what" of the plan. The PUCN will need to have a description of the alternative ratemaking mechanism(s) the utility is proposing, how they would work, the outcomes being targeted, and the time period during which they would remain in place.[2] The working goals and outcomes developed in this process and introduced in Concept Paper 3 provide a central organizing framework for ensuring consistency across utility plans (Table 1).

Table 1: Working Goals and Outcomes for Nevada Alternative Ratemaking

Goal	Outcome(s)
Promote Just and Reasonable Rates	• *Affordability* • *Regulatory Efficiency*
Enrich Customer Experience	• *Customer Satisfaction and Engagement* • *Reliability and Resiliency*
Enhance Utility Performance and Operations	• *DER Utilization & Effectiveness* • *Cost Control* • *System Flexibility* • *Safety*
Advance State Environmental Policy	• *GHG Reduction* • *Energy Efficiency and Clean Energy Deployment* • *EV Infrastructure Deployment*

Assessing the Plan's Benefits vs. Status Quo Ratemaking

The second essential component of a utility alternative ratemaking plan is a detailed assessment of the benefits of the proposed plan compared to status quo ratemaking in Nevada for the targeted outcomes. This component provides the analysis that supports the "why" of the plan: the rationale behind the plan, including anticipated benefits relative to the status quo for the outcomes targeted. The utility should include both a high-level summary of this assessment and supporting analysis. This assessment should include qualitative and quantitative analysis, where practicable, that compares expected achievement of the targeted outcomes under a business-as-usual (existing regulatory structure) case and under the proposed alternative ratemaking plan. Where applicable, the assessment should identify any deficiencies in existing ratemaking practices related to utility achievement of those outcomes, and clearly explain how the proposed alternative ratemaking mechanisms will address those deficiencies.

A high-level discussion of current trends associated with the targeted outcomes will be critical for supporting the plan's rationale and evaluating expected benefits. For example, if the utility highlights just and reasonable rates as a targeted outcome, the PUCN may benefit from a discussion of current rates for different customer classes, how those rates have changed over

[2] Pursuant to NRS 704.7621(5)(b), an alternative ratemaking plan may include a term or condition waiving the requirement that the electric utility file a general rate case every three years, as required by NRS 704.110. Depreciation studies must be filed every six years and can be approved or rejected separately from or in parallel to the general rate case (Nevada Administrative Code 703.276).

time, factors that have caused or contributed to those changes, and what the expected trends would be under the status quo versus under an alternative ratemaking plan.

As a number of stakeholders have proposed, benchmarking NV Energy performance to that of utilities in other states may offer a helpful way for the utility to demonstrate that change is needed. For example, the utility could compare its historical performance on EV infrastructure buildout to that of utilities that share key characteristics (e.g., customer base, geography, weather, etc.) as justification for proposing an alternative ratemaking mechanism.

Outlining a Process for Implementation

The third essential component of a utility alternative ratemaking plan is the process by which the proposed plan would be implemented – the "how" of the plan. This discussion needs to explain how the proposed mechanisms would be incorporated into Nevada's ratemaking framework – including whether and on what timeline any *existing* ratemaking mechanism would be replaced or modified. To the extent it isn't already addressed in the plan description, a utility's implementation outline should also address how any proposed mechanisms would work together, any possible tensions between them, and any design elements needed to resolve those tensions. Other relevant implementation details, such as off-ramps that would trigger the discontinuation of the alternative ratemaking plan, and proposed review and evaluation procedures, should be included as well.

Pursuant to SB 300, the utility is also required to provide a "process" for educating customers about the mechanisms included in the proposed alternative ratemaking plan.[3] While the statute does not specify what must be included in such a process, it will likely need to address customer education session types, frequency, outreach strategy, and timing of sessions relative to the filing of an alternative ratemaking plan. For example, Staff suggests in its comments that the utility be required to maintain educational materials on its website and distribute such materials to its consumer representatives and the PUCN's complaint resolution division. It further suggests that the BCP should lead customer education efforts to the customers it represents.

Finally, SB 300 requires the PUCN to establish requirements for an electric utility with an alternative ratemaking plan to keep any information and records that the utility would have been required to submit to the Commission as part of a general rate case.[4] This requirement ensures the continuation of record keeping that would normally have occurred as part of a general rate case. Accordingly, the plan's discussion of implementation should address the filing or maintenance of certain information or records.

Demonstrating Satisfaction of the Evaluation Criteria

The purpose of the evaluation criteria is to help the PUCN: (a) judge if the plan should be adopted, and (b) ensure the plan does not result in unintended consequences. Traditional criteria to assess utility investments generally apply concepts like least-cost planning, just and reasonable rates, and prudent investment. The nine criteria outlined in SB 300 and dialogue among participants in this process demonstrate that while those traditional criteria remain necessary, they may not be sufficient in light of modern policy goals and opportunities afforded

[3] NRS 704.762(1)(d).

[4] NRS 704.762(1)(e).

by changing technology. While traditional evaluation criteria remain essential and will continue to provide the foundation of all ratemaking reviews, additional criteria are needed to consider whether ratemaking is fully meeting the goals and objectives set by legislation and the PUCN.

While the PUCN has yet to formally establish evaluation criteria as part of this alternative ratemaking process, the criteria below offer a working set for further discussion. Additional evaluation criteria, including criteria raised in Workshop 3 not listed below, may be evaluated in the future. In the discussion below, this concept paper notes where more significant stakeholder comment was provided. While multiple stakeholders signaled support for the nine criteria included in SB 300, few stakeholders explicitly addressed each of the criteria noted below in their comments. Additional stakeholder input is welcome on these and other criteria.

Table 2: Alternative Ratemaking Evaluation Criteria Summary

Evaluation Criteria	Details
Evaluation Criterion 1	Aligns an economically viable utility model with state public policy goals, including reduction of GHG emissions.
Evaluation Criterion 2	Provides for just and reasonable rates that are comparable to rates established pursuant to NRS 704.110.
Evaluation Criterion 3	Enables electric service options that provide value to some customers – including customer-sited renewables – without imposing incremental net costs on others.
Evaluation Criterion 4	Fosters statewide improvements to the economic and operational efficiency of the electrical grid.
Evaluation Criterion 5	Furthers the public interest including, without limitation, the promotion of safe, economic, efficient and reliable electric service to all customers of the electric utility.
Evaluation Criterion 6	Enhances the resilience and security of the electrical grid while addressing concerns regarding customer privacy.
Evaluation Criterion 7	Ensures that customers of an electric utility benefit from lower regulatory administrative costs where appropriate.
Evaluation Criterion 8	Facilitates the research and development of innovative electric utility services and options to benefit customers.
Evaluation Criterion 9	Balances the interests of customers and shareholders by providing for services that customers want while preserving reasonable shareholder value.
Evaluation Criterion 10	Ensures low- and moderate- income customer interests are holistically considered and that their economic interests are meaningfully addressed.

The following discussion proposes a description or purpose for the evaluation criteria and offers examples of data or analysis that would help the PUCN and stakeholders verify if a utility plan satisfies each criterion. These examples are meant to provide a foundation for discussion.

Evaluation Criterion 1: Aligns an economically viable utility model with state public policy goals, including reduction of GHG emissions.

Purpose: This criterion is meant to assess how a utility alternative ratemaking plan supports state policy goals and expected impacts to the utility's financial integrity. This criterion is similar to the first evaluation criterion suggested in SB 300. It differs in that it explicitly clarifies that GHG emission reductions are considered among policy goals in Nevada. Satisfaction of this criterion would need to address both alignment with state policy goals *and* the utility's business model.

Several stakeholders argue that this is a critical criterion. AEE contends that this criterion should be given greater weight than others because "alignment will foster the most cost-effective outcomes." AARP similarly argues that this criterion is one of two "most comprehensive and fundamental" criteria (the other being Evaluation Criteria 2). Similarly, Vote Solar asserts that implementing incentives via alternative ratemaking that better comport with achievement of state policy goals is the "higher" purpose of SB 300.

Examples of supporting data or analysis:

- Qualitative and/or quantitative analysis showing that the proposed plan encourages achievement of one or more state environmental, regulatory, or economic policy goals
- Estimate of utility GHG emissions reduced from the plan compared to projected utility GHG emissions
- Discussion of how the plan encourages least cost resource selection by mitigating the throughput incentive or addressing capital bias
- Financial analysis projecting the plan's impact on the utility's business model over a reasonable time period

Evaluation Criterion 2: Provides for just and reasonable rates that are comparable to rates established pursuant to NRS 704.110.

Purpose: This criterion will assess how a utility alternative ratemaking plan is likely to impact existing rates. This criterion is identical to the second evaluation criterion included in SB 300. Importantly, the term "comparable" as used here could be interpreted in several ways and may need clarification: does satisfaction of this criteria require the filing of a rate case in parallel, or is the standard for comparability less stringent?

Gaming Group asserts that this is the most important criterion and that it should be given priority during evaluation of an alternative ratemaking plan. AEE highlights that this criterion is non-negotiable, as it core to the PUCN's mission. Staff suggests that this criterion is consistent with the suggestion in SB 300 that the utility provide analysis comparing rates and revenues under the plan and a general rate application. By contrast, Vote Solar contends that this criterion should be given lower priority than others because it may be difficult to "value the counterfactual" if an alternative ratemaking plan is successful.

Some stakeholders have also suggested that this criterion should be modified to include provision of "stable rates across all rate classes." Others, including Conservation Advocates, have countered that the concept of "rate stability" is too unclear to evaluate and that this criterion should remain focused on just and reasonable rates. Vote Solar argues that if the reference to

rate stability is included, the phrase “that are comparable to rates established pursuant to NRS 704.110” should be deleted.

Examples of supporting data or analysis:

- An evaluation of the rates and revenues expected to result from the plan compared to those anticipated from a general rate application[5]
- Qualitative and/or quantitative discussion of how risk to customers and utilities would or would not change under the plan compared to the status quo
- Discussion of the rate impacts from similar mechanisms employed in other jurisdictions – including how the context and design in those cases differ from the utility’s proposed plan
- Embedded cost-of-service studies and marginal cost-of-service studies[6]

Evaluation Criterion 3: Enables electric service options that provide value to some customers – including customer-sited renewables – without imposing incremental net costs on others.

Purpose: This criterion is meant to assess if an alternative ratemaking plan would result in discrimination against, or impose undue costs on, certain customers or customer classes. This criterion is similar to the third criterion suggested in SB 300. As with the previous criterion, the standard for satisfying this criterion may need further clarification. For example, a plan or mechanism could satisfy this criterion by simply demonstrating benefits to some customers while showing no harm to others. Other considerations include whether a hold-harmless attribute for non-participating customers would be needed or if a loss of a benefit to non-participating customers should be considered.

Examples of supporting data or analysis:

- Quantitative and/or qualitative analysis of the costs and benefits of any service options enabled by the plan on all customers and/or different customer classes

Evaluation Criterion 4: Fosters statewide improvements to the economic and operational efficiency of the electrical grid.

Purpose: This criterion will determine if a utility alternative ratemaking plan promotes economic and operational efficiency of the grid. This criteria is identical to the fourth criterion included in SB 300. Notably, the use of “and” (rather than “or”) and “statewide” may complicate satisfaction of this criteria.

Examples of supporting data or analysis:

- Cost-benefit analysis to demonstrate economic or operational improvements

[5] NRS 704.762(1)(f)(2) authorizes the PUCN to require an electric utility to include analysis estimating and comparing (a) rates and revenues that would be charged under its alternative ratemaking plan and (b) those that would be charged pursuant to NRS. 704.110 – if it deems it practicable.

[6] NRS 704.762(1)(f)(1) authorizes the PUCN to require an electric utility to include one or more cost-of-service studies in its alternative ratemaking plan application, if it deems it practicable.

Evaluation Criterion 5: Furthers the public interest including, without limitation, the promotion of safe, economic, efficient and reliable electric service to all customers of the electric utility.

Purpose: This criterion will assess if an alternative ratemaking plan promotes the public interest – defined as including "safe, economic, efficient, and reliable service" to all customers. This criterion is identical to the fifth criterion included in SB 300. Notably, while other criteria discussed in this section focus on specific areas for evaluation, as written, this criterion serves more as a "catch all" provision. As currently written, its breadth may make it be less informative than others discussed in this section. Moreover, economic and operational efficiency are also addressed in Criterion 4. A more narrowly construed criterion (or set of criteria) focused on safety and reliability might ultimately be more helpful to the PUCN for evaluating utility plans.

Examples of supporting data or analysis:

- Quantitative and/or qualitative analysis demonstrating how the plan promotes safety, reliability, and/or economic and efficient electric service to all customers
- Cost-benefit analysis demonstrating how alternative ratemaking enhances efficiency and reliability as compared to traditional ratemaking

Evaluation Criterion 6: Enhances the resilience and security of the electrical grid while addressing concerns regarding customer privacy.

Purpose: This criterion is meant to assess how a plan advances grid resilience and security, identify related customer privacy concerns, and ensure those concerns are addressed. This criterion is identical to the sixth criterion included in SB 300. Notably, as written, it considers whether a plan "enhances" resilience and security and also addresses privacy concerns. Given that many alternative ratemaking mechanisms – for example, decoupling – may not influence grid security, resilience or customer privacy directly, it may be appropriate to replace "enhances" with a verb that is closer to those used in the other criteria, like "safeguards." Moreover, it is somewhat unclear whether "security" means physical security, cybersecurity, or both.

Examples of supporting data or analysis:

- Identification of expected impacts from the plan on grid resilience and/or cybersecurity
- Explanation of how the plan would interact with the Natural Disaster Protection Plan
- Discussion of ways in which the plan may affect customer privacy
- Identification of any planned measures to alleviate or eliminate any negative effects

Evaluation Criterion 7: Ensures that customers of an electric utility benefit from lower regulatory administrative costs where appropriate.

Purpose: This criterion will ensure that alternative ratemaking plans take regulatory administrative costs into account. In some cases, the alternative ratemaking plan may have the goal of reducing those costs; in others, costs may increase but the alternative ratemaking mechanism may nevertheless be appropriate for other reasons. This criteria is identical to the seventh criterion included in SB 300.

Staff, Conservation Advocates, and Vote Solar support this criteria but assert that an increase in administrative burden should not be sufficient grounds to reject a utility alternative ratemaking plan. For its part, Vote Solar contends that while some consideration of administrative burden is

important, any increased administrative costs from alternative ratemaking in the near term are likely to be minor. AEE, AARP, and BCP also support this criterion generally. NV Energy agrees that this criterion should be included, noting that consideration should be given to the amount of effort required to implement and maintain any alternative ratemaking mechanism.

Examples of supporting data or analysis:

- Qualitative and/or quantitative analysis of the regulatory administrative costs and benefits of an alternative ratemaking plan compared to those under status quo ratemaking, as well as a short- and long-term assessment of costs and benefits to ensure that short term costs do not outweigh long-term benefits
- Analysis of the relationship of the plan to other existing mechanisms and identification of any efficiencies or inefficiencies of how the mechanisms will operate in tandem
- Identification of benefits of an alternative ratemaking plan that may outweigh additional regulatory administrative costs

Evaluation Criterion 8: Facilitates the research and development of innovative electric utility services and options to benefit customers.

Purpose: This criterion assesses how the plan would produce greater PUCN, utility and stakeholder experience with innovative utility services and options that benefit customers. This criterion is identical to the eighth criterion included in SB 300. As written, this criterion is likely to be particularly applicable to alternative ratemaking mechanisms like the regulatory sandbox described in Concept Paper 3, or pilot programs designed to test innovative concepts.

Examples of supporting data or analysis:

- Identification and explanation of innovative concepts being researched or developed – including why they are innovative and how they would benefit customers
- Discussion of data or experience sought and how it would be used
- A cost-benefit analysis of why the customer-specific options are beneficial to the system as a whole

Evaluation Criterion 9: Balances the interests of customers and shareholders by providing for services that customers want while preserving reasonable shareholder value.

Purpose: This criterion is meant to ensure that the introduction of services in an alternative ratemaking plan (a) correspond to customer preferences and (b) do not deprive shareholders of the opportunity to earn a reasonable return. This criterion is identical to the ninth criterion included in SB 300. Accordingly, satisfying this criteria requires a utility plan to provide context on both customer preferences and shareholder interests under status quo ratemaking. For example, if a utility demonstrates that customers desire more DER and energy efficiency (EE) programs, it could then explain how its plan (e.g., via decoupling) would better provide for deployment of such programs by removing a financial disincentive to such investments.

AEE reiterates that this criterion forms part of the basis of Nevada law, and notes that alternative ratemaking seeks to realign the utility interests to make the utility a meaningful partner in meeting state goals. Vote Solar notes that this criterion is important but that it is intrinsic to regulation and not specific to any particular regulatory regime. NV Energy points to this criterion as support for different alternative ratemaking mechanisms.

Examples of supporting data or analysis:

- Identification of services in the plan that respond to customer preferences
- Data demonstrating customer desire for the services proposed in the plan
- Qualitative and/or quantitative analysis demonstrating how customer and shareholder interests – including costs, earnings, and risks – are balanced in the plan

Evaluation Criterion 10: Ensures low- and moderate- income customer interests are holistically considered and that their economic interests are meaningfully addressed.

Purpose: This criteria was not included in SB 300. Rather, it emerged as a potential addition from dialogue and comments in this process. This criterion highlights the need for utilities to take the interests of low- and moderate- income (LMI) customers into account when designing an alternative ratemaking plan.

NV Energy notes that it does not track customers' income and asserts that it should not be required to do so. It noted that any rate schedules based on income should be evaluated by a third party. Several commenters, however, note the importance of considering the impact of alternative ratemaking plans on low- and moderate- income customers. Staff emphasizes that the PUCN should not allow alternative ratemaking for large customers or EV-related alternative ratemaking mechanisms to shift costs to LMI customers. AEE supports addition of this criterion, noting that additional detail regarding the benefits or challenges that LMI customers may experience will help to ensure that all customers can benefit from well-designed alternative ratemaking mechanisms. Vote Solar supports inclusion of this criterion, stating that the standard should be "an improvement in the consideration of LMI interest through regulation of public service corporations." Conservation Advocates and AARP also support this criterion.

Examples of supporting data or analysis

- Identification of quantifiable and non-quantifiable benefits from the plan to LMI customers
- Identification of incremental costs or risks from the plan to LMI customers
- Quantitative analysis estimating the net benefits to LMI customers

SECTION IV: KEY QUESTIONS FOR PUTTING ALTERNATIVE RATEMAKING REGULATIONS INTO PRACTICE

While SB 300 includes multiple requirements and considerations for the PUCN when adopting its alternative ratemaking regulations, it gives the PUCN significant discretion regarding how to apply various components of the statute in regulations. For example, the language effectively leaves it to the PUCN to determine the scope of alternative ratemaking plans by instructing it to determine if any alternative ratemaking mechanisms should be explicitly included or prohibited. Similarly, the legislation does not specify the method that the PUCN should employ when using its evaluation criteria to judge a utility's alternative ratemaking plan.

To assist the PUCN in developing, and stakeholders in responding to, the planned straw proposal, this section discusses variations on how the "core components" explored in Section III of this paper could be applied to regulations in practice. We focus on three key issue areas that will influence the shape of the regulations that the PUCN must develop: (a) scope of the regulations (b) application of the evaluation criteria, and (c) periodic review and modification of any adopted alternative ratemaking plan.

Scope of the Regulations

The PUCN will need to make several determinations related to scope in its alternative ratemaking regulations. First, it will need to decide whether to place any limits on the alternative ratemaking mechanisms that a utility can propose in an alternative ratemaking plan. Next, it will need to determine whether a utility may propose a new alternative ratemaking mechanism or change an existing mechanism outside of an alternative ratemaking plan.

1. Are there any limits on the alternative ratemaking mechanisms that a utility can propose in an alternative ratemaking plan?

Pursuant to NRS 704.762(1)(a), the PUCN must determine whether its regulations will explicitly allow for or limit certain alternative ratemaking mechanisms. An alternative approach is for the PUCN's regulations to allow consideration of any alternative ratemaking mechanism proposed without limitation. There are advantages and drawbacks to each variation.

Explicitly including a fixed set of alternative ratemaking mechanisms may offer some predictability for the utility and stakeholders – insofar as they know what to focus on or expect. Worded too narrowly, however, rules that create a fixed set of eligible mechanisms may limit solutions considered to those currently seen as feasible or desirable.

Similarly, explicitly prohibiting certain alternative ratemaking mechanisms limits the PUCN's ability to adapt quickly in the event that economic or policy circumstances make currently undesirable alternative ratemaking mechanisms more desirable. Moreover, since a utility alternative ratemaking plan will need to demonstrate that it offers benefits compared to the status quo and satisfies adopted evaluation criteria, the basis for excluding any mechanisms discussed in Concept Paper 3 is unclear and runs the risk of being needlessly prescriptive. For example, while Gaming Group argues in its comments that proposal of a MYRP should be excluded on the basis that no stakeholder has demonstrated it will address a deficiency in Nevada's current ratemaking framework, imposing such a restriction in regulation at this stage seems premature.

Consideration of each proposed mechanism without specific limitations (other than the mechanism includes the minimum filing requirements and satisfies the evaluation criteria) offers a more adaptable approach by allowing for changing circumstances over time. This approach would be consistent with calls from several stakeholders that the PUCN's regulations allow for a broad range of proposals.

2. Can a utility propose a new alternative ratemaking mechanism or change an existing alternative ratemaking mechanism outside of an alternative ratemaking plan?

There are two dimensions to this question. The first relates to venue. Is a new alternative ratemaking proceeding needed to address utility alternative ratemaking plans? If so, the PUCN may wish to require that all utility new alternative ratemaking proposals be filed in a special, dedicated alternative ratemaking proceeding. This would likely need to include any new special tariff agreements, in addition to other eligible alternative ratemaking mechanisms as outlined in PUCN regulations. Staff appears to support such an approach. Its comments recommend that the PUCN's regulations require customer retention proposals or agreements to be filed in a single alternative ratemaking docket. Staff notes that customer retention filings and large customer tariffs are currently addressed in separate dockets and indicates that consolidation would enhance regulatory efficiency by enabling the PUCN to evaluate such proposals holistically and in one place.

A second variation could require the utility to file alternative ratemaking plans as part of its existing integrated resource planning (IRP) or general rate case processes. The key benefit of this approach, as BCP highlights in its comments, is that it may offer administrative efficiency benefits because a new unique proceeding would not be needed. A potential drawback, on the other hand, would be the amount of incremental work required for already-extensive utility filings (in addition to the incremental work required to review these filings). Moreover, some mechanisms may be more appropriate for consideration in an IRP and others more conducive to consideration in a GRC.

A third variation could allow the utility to file for alternative ratemaking treatment in any relevant individual proceeding. Several stakeholders, including ChargePoint and NV Energy, support this approach on the basis that this is consistent with the intent of SB 300 to "create a flexible and nimble regulatory environment necessary to develop a modern, reliable and efficient electric grid."[7] While this variation would offer significant flexibility, NRS 704.7621(1)(a) and (b) states that the utility may apply to establish "*an alternative ratemaking plan* which sets forth the *alternative rate-making mechanisms* to be used to establish rates during the time period covered by the plan." (emphasis added). This section could be argued to state that all alternative ratemaking mechanisms used to establish rates be set in an alternative ratemaking plan. Moreover, the language of SB 300 may indicate the Nevada Legislature's intent was that comprehensive planning for Nevada's energy future needs to be conducted holistically as part of the alternative ratemaking plans filed pursuant to SB 300. Just as the PUCN is considering developing a set of metrics to track utility performance against priority outcomes all in one place, it may be practical and efficient to consolidate consideration of all alternative ratemaking mechanism into a single proceeding. This approach would also offer increased transparency to stakeholders who may not be aware of, or have the resources to track, alternative ratemaking proposals in multiple different proceedings.

[7] NPC and SPPC comments, p. 20.

A fourth variation, proposed by Vote Solar, would involve the PUCN identifying a "destination" for an alternative ratemaking model in Nevada, then launching a series of dockets to transition the utility to that model. This variation would provide helpful direction to the utility and stakeholders regarding the PUCN's desired regulatory model in Nevada, and facilitate the development of a step-by-step plan to realize that vision.

The second dimension to this question relates to eligibility. It asks if *existing* alternative ratemaking mechanisms – like the current earnings sharing mechanism (ESM) or special tariffs – would solely be permitted to be taken up in a utility's alternative ratemaking plan in the future, or if these mechanisms could continue to be addressed in a more piecemeal fashion across multiple individual proceedings. As discussed further below, the answer to this aspect of the question influences how the evaluation criteria are applied in practice.

Application of the Evaluation Criteria

Related to scope, the PUCN will need to select an approach for applying its evaluation criteria to a utility's alternative ratemaking plan. Specifically, it will need to determine whether evaluation criteria (and minimum filing requirements) apply only to new alternative ratemaking proposals, or to existing alternative ratemaking mechanisms as well. It must also address whether a utility's alternative ratemaking plan must satisfy all criteria, regardless of the mechanisms proposed, and/or whether certain criteria have a higher priority when the PUCN is evaluating a utility's alternative ratemaking plan. Given possible tensions between the criteria identified in Section III, the PUCN will also need to address how evaluation criteria should be balanced when they are in tension with each other.

1. ***Do evaluation criteria apply only to new alternative ratemaking proposals, or to existing alternative ratemaking mechanisms as well?***

If evaluation criteria apply to only new alternative ratemaking mechanisms, existing alternative ratemaking mechanisms (as outlined in Concept Paper 2) would continue to be evaluated according to current practice and would not be considered under the alternative ratemaking framework adopted in PUCN regulations. By exempting existing alternative ratemaking mechanisms from the new regulations, this would effectively create multiple standards against which alternative ratemaking is evaluated in Nevada. This could be justifiable given that these mechanisms have been in use in Nevada, and current statutes and/or regulations may already contemplate how those mechanisms are evaluated..

By contrast, if evaluation criteria were applied to new alternative ratemaking mechanisms *and* changes to existing mechanisms, the ESM, special tariffs and other alternative ratemaking mechanisms currently in place would likely need to be evaluated according to the adopted evaluation criteria in this proceeding – which could necessitate these mechanisms ultimately being re-evaluated under this new set of criteria. The PUCN would have to carefully consider what, if any, procedural hurdles may exist regarding modifications to existing mechanisms already approved in other dockets.

2. ***Must a utility alternative ratemaking plan satisfy all evaluation criteria, regardless of the mechanisms proposed? What threshold(s) must be met? Should certain criteria have a higher priority when the PUCN is evaluating a utility's alternative ratemaking plan? How should evaluation criteria be balanced when they are in tension with each other?***

There are two basic approaches to applying evaluation criteria: a checklist and a scoring approach. Multiple variations are possible within these approaches.

A comprehensive checklist variation, for example, would require a utility alternative ratemaking plan to demonstrate that it satisfies *each* of the evaluation criteria in order to be adopted. The chief advantage of this approach is that it helps ensure consistency in PUCN decision making and supports a holistic assessment of utility proposals. Conservation Advocates supports this general approach. However, as other stakeholders note, different alternative ratemaking mechanisms may not satisfy each criterion – which may result in rules that are overly restrictive. NV Energy, for instance, highlights that taken separately, the individual alternative ratemaking mechanisms described in Concept Paper 2 would not satisfy all of the evaluation criteria.

A second, more flexible checklist variation would apply evaluation criteria selectively on a case-by-case basis, according to the mechanism or mechanisms proposed. In their comments responding to the questions in Procedural Order 10, multiple stakeholders, including Staff, suggested different evaluation criteria that could be applied to specific mechanisms. This variation could be applied holistically if the PUCN determined that, on the whole, a plan must address all criteria – but that not all individual mechanisms must satisfy each criteria. For example, a proposed MYRP would satisfy some of the criteria, performance incentive mechanisms (PIMs) would satisfy others, but as a whole the plan would need to address all criteria. This approach is analogous to the utility's Demand Side Management plan, in which not every program must be cost-effective, but the overall plan must be.[8]

A third checklist variation follows AEE's suggestion of a "do no harm" approach, in which utility alternative ratemaking plans must satisfy at least one evaluation criterion without adversely affecting the others. This approach could possibly allow for more targeted utility proposals, without sacrificing "holistic" PUCN consideration of the evaluation criteria. In its comments, Vote Solar proposes a similar concept; arguing the utility should be required to estimate the impact of its proposed alternative ratemaking plan on each of the criteria in SB 300, but the PUCN should not automatically reject an application that fails to have an impact in each area described by criteria. Instead, Vote Solar suggests that the PUCN reserve its discretion to accept or reject an application based on the degree to which the proposal comports with the state's energy goals. It argues that some criteria should be prioritized based on (a) their intrinsic importance, and (b) their susceptibility to being influenced by choice of regulatory method.

A scoring approach also provides several different variations to choose from. A first variation would calculate individual scores reflecting how well the plan does against each evaluation criterion. When summed, the total plan score would help the PUCN in determining whether the plan should be adopted.

A second scoring variation would prioritize some evaluation criteria over others. In this variation, pre-set weights could be assigned to each criterion to ensure that total scores are properly balanced in line with PUCN priorities. NV Energy and Gaming Group appear to support this

[8] NRS 704.7836(6)

general approach; they argue that some criteria should potentially have a higher priority than others, and that this decision should be made on a case-by-case basis. Others, however, including Conservation Advocates, oppose weighting the criteria.

Review and Modification of Adopted Plans

The PUCN will need a process in place to review the impacts of any adopted alternative ratemaking plan and assess whether they should be continued, modified, or eliminated. As, multiple stakeholders note in their comments, specific off-ramps and backstops depend on the type of alternative ratemaking mechanisms adopted. For example, as NV Energy notes, an "offramp" for a MYRP might involve an overearning/underearning threshold that triggers reversion to a general rate case. Such an offramp would not necessarily be applicable to other mechanisms, like a PIM.

The diversity of mechanisms available underscores that periodic informational updates to the PUCN regarding the status and performance of a utility plan will be needed. Staff, for instance, suggests that the utility be required to submit an annual filing addressing: (a) if the alternative ratemaking plan is "successful," according to agreed-upon metrics for performance, (b) whether implementation of the plan remains feasible, and (c) whether the plan is achieving its intended goals. It further suggests that the utility could make this filing in its Deferred Energy Accounting Adjustment application.

SECTION V: METRICS

Electric utilities in Nevada track and file a number of metrics with the PUCN each year in conjunction with various regulatory filings. The PUCN provided some examples of these metrics as part of the discussion in facilitated Workshop 2 (see Appendix A). The PUCN intends to establish and track additional metrics to evaluate utility performance under existing traditional ratemaking mechanisms and measure progress of goals and outcomes. These metrics may also be used to set a baseline for the purpose of developing metrics for future alternative ratemaking mechanisms. This section reviews the description of each working outcome and classifies metrics proposed by stakeholders according to key aspects of this description.[9] The PUCN has also added metrics that it may have an interest in tracking as refinements or in addition to the stakeholder metrics already proposed.

This section also identifies some preliminary strengths, weaknesses and synergies between the proposed metrics, and offers examples of how other jurisdictions – including California, Hawaii, Illinois, Minnesota, New York, Rhode Island and Ontario – have addressed metrics.

Establishing metrics, methodologies, and performance targets can be a lengthy process. While this section focuses on the results of other states' metric discussions, rather than the process of development of metrics in Nevada at this time, we offer several general observations that may be helpful for the PUCN and stakeholders to consider going forward:

- As multiple stakeholders in this process have highlighted, clear design principles can support the development of metrics.
- A clear understanding of data that already exists and data that will need to be compiled or collected can help support prioritization of near-term and longer-term metric development.[10]
- An organizing framework like the working goals and outcomes discussed in this process is helpful, as some metrics may apply to more than one outcome. For example, metrics related to utility financials metrics may apply to affordability and cost control.
- Establishing metrics, identifying the methodologies underlying those metrics, and implementing those methodologies may require a multi-step process.

In this proceeding, stakeholders have expressed interest in identifying impacts to LMI communities across all relevant working goals and outcomes, rather than establishing a separate outcome. Several metrics adopted by other jurisdictions may meet this objective, though it will be necessary to evaluate if additional metrics can support tracking of LMI impacts.

[9] Some of the metrics proposed by stakeholders in this section exist in Nevada currently and may require limited modification to update and implement for alternative ratemaking.

[10] The PUCN already tracks some of the data or metrics that this section discusses. The PUCN intends to issue a procedural order that will seek to clarify what data NV Energy is already tracking, where that data is available, whether the PUCN has access to the data already (i.e., the data is already filed in another docket at the PUCN), whether the data is confidential or publicly available, and what data still needs to be tracked.

Affordability

In this process Affordability has been defined as the ability of customers to afford electric service, with consideration for rate levels and stability, nondiscriminatory treatment across customer classes, and the extent to which rates reflect the utility's COS. Thus far, stakeholders have identified 10 potential metrics for this outcome that reflect each of these considerations.

Table 3: Proposed Affordability Metrics

Considerations	Proposed Metrics
Ability of customers to afford electric service	• Number of disconnections for non-payment • Participation in low-income customer programs, including Low Income Solar Energy Program, energy efficiency and conservation programs, and expanded solar access • Share of customer income spent on electricity by income level
Rate levels and stability	• Utility rates compared to other similarly situated utilities (similar weather, number of customers, etc.)
Nondiscriminatory treatment across customer classes	• Bill impacts of energy efficiency and DER programs for participants and non-participants *Additional metrics for consideration:* • Rate design impacts, including potential interclass subsidies • Bill impacts of special tariffs/subscription rates for participants and non-participants
Extent to which rates reflect the utility's COS	• COS and revenue by customer class • Corporate debt ratings and other indices of cost of capital • Actual, experienced return on equity • Amount of bad debt

The metrics that stakeholders have proposed for tracking Affordability vary widely. Certain metrics may be more straightforward than others to track. For example, tracking the number of disconnections for non-payment is a straightforward metric. However this metric on its own is insufficient to provide a representative picture of customers' ability to pay for service over time. For example, if the utility has suspended disconnections during the pandemic, as NV Energy has, this metric may not provide the PUCN with informative data. By contrast, the share of customer income spent on electricity by income level provides a more direct outcome-based measurement of customers' ability to pay. However, limited access to customer income data may require the use of complex modeling in order to calculate this metric.

Benchmarking Nevada utility rates to the rates of similarly situated utilities would offer a *relative* measure of utility rate levels and stability. This metric could be informative to the PUCN, provided there are sufficient "similarly situated" utilities to provide a basis for comparison. Importantly, however, this metric (as currently written) would not provide additional insight to the PUCN regarding rate levels and stability *as* experienced by customers in Nevada.

Other potential metrics include rate design impacts such as interclass subsidies and bill impacts of special tariffs for participants and non-participants. While the analysis behind these metrics would be informative regarding nondiscriminatory treatment across customer classes, these

could be potentially challenging to implement because the calculations and assumptions that would be needed could be quite complex.

Sample metrics from other jurisdictions:

The **Minnesota PUC** employs four metrics that track the ability of customers to afford electric service. The Minnesota PUC opted to not include an affordability metric specific to equity, stating that affordability is a key indicator of equity more broadly and the metrics below combined with various other equity metrics provide a holistic picture of utility performance regarding equity.[11] The four adopted affordability metrics are:[12]

- Average rates by customer classes
- Average monthly bills
- Total arrearages
- Total number of disconnections

The **California PUC** defines affordability as "the degree to which a representative household is able to pay for an essential utility service, given its socioeconomic status."[13] Consistent with this definition, the California PUC recently adopted three metrics focused on the "relative affordability" of electricity, gas, water and communications services in the state:[14]

- The hours at minimum wage required to pay for essential utility services
- The vulnerability index of various communities in California
- The ratio of essential utility service charges to non-disposable household income

The **Hawaii PUC** requires utilities to track two key financial performance metrics that relate to Affordability metrics proposed by stakeholders in this process:[15]

- Return on common equity (book and ratemaking)
- Credit ratings issued by three ratings agencies

The **Ontario Energy Board,** similarly, requires utilities to track metrics aligned with financial performance. Several of these align with the metrics proposed by stakeholders, including: [16]

- Liquidity: current ratio
- Leverage: total debt-to-equity ratio
- Profitability: the comparison between deemed return on equity (included in rates) and achieved regulated return on equity

[11] *Order Establishing Performance Metrics*, Minnesota PUC, Docket No. 17-401, p. 5 (September 18, 2019). https://www.edockets.state.mn.us/EFiling/edockets/searchDocuments.do?method=showPoup&documentId={0082456D-0000-CA1F-9241-23A4FFF7C2FB}&documentTitle=20199-155917-01.

[12] *Id.*, p. 12.

[13] *Decision Adopting Metrics and Methodologies for Assessing the Relative Affordability of Utility Service*, Docket 18-07-006, p. 10 (July 22, 2020) https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M344/K049/344049206.PDF.

[14] *Id.*, p. 10-15.

[15] *Order No. 37201 Approving the Release of Performance Metrics*, Hawaii PUC, Docket No., 2013-0141, p. 6 (March 11, 2015). https://dms.puc.hawaii.gov/dms/DocumentViewer?pid=A1001001A15C12A92431G90153.

[16] *Scorecard – Performance Measure Descriptions,* Ontario Energy Board, p. 8 https://www.oeb.ca/sites/default/files/uploads/Scorecard_Performance_Measure_Descriptions.pdf.

The **Rhode Island PUC** has adopted several metrics related to affordability for low-income customers for National Grid: [17]

- Increased stability of service through increased enrollment in low-income discount: the number of customers enrolled in a low-income rate
- Reduction of uncollectible debt: customer enrollment in the company's "Arrearage Management Plan." The purpose of this metrics is to maintain service to low-income customers and mitigate the expansion of uncollectible debt

Regulatory Efficiency

In this proceeding, the definition of Regulatory Efficiency relates to administrative burden for the PUCN, utilities, and other stakeholder groups – including the frequency of rate cases. Stakeholders have identified four metrics relating to administrative burden that raise questions about whether this outcome lends itself to the establishment of performance metrics – or if Regulatory Efficiency needs to be reconsidered in a different context or venue.

Table 4: Proposed Regulatory Efficiency Metrics

Considerations	Proposed Metrics
Administrative burden for the PUCN, utilities and other stakeholder groups	• Rate case frequency • Frequency of stipulated cases • Assessment of whether regulatory procedures achieve their objectives • Efficient conveyance of COS reductions

Each of these proposed metrics would need further detail before they could be considered for adoption. For example, it is unclear what data the utility would need to track to capture if regulatory procedures are able to achieve their objectives. Similarly, some proposed metrics may not be meaningful because, for example, the driver of a stipulation may be unrelated to consideration of administrative burden. Apart from "efficient conveyance of COS reductions", it is unclear how the PUCN would use these metrics to encourage improved utility performance.

Sample metrics from other jurisdictions:

Our limited review did not identify other jurisdictions that track Regulatory Efficiency metrics. In part, we believe that this is because most states with performance metrics have focused on metrics that help illuminate utility performance – rather than the performance of the regulator or regulatory processes.

Customer Satisfaction and Engagement

In this proceeding, Customer Satisfaction and Engagement has been defined as including the quality of customer service (as perceived by customers), the diversity and quality of utility offerings to customers, and the degree of customer engagement in utility programs. Thus far, stakeholders have identified six metrics for this outcome that reflect each of these considerations.

[17] *Report and Order,* Rhode Island PUC, Docket No, 4770, p. 29-31 (May 5, 2020), http://www.ripuc.ri.gov/eventsactions/docket/4770-4780-NGrid-Ord23823%20(5-5-20).pdf. See also: Appendix A, p. 74.

Table 5: Proposed Customer Satisfaction and Engagement Metrics

Considerations	Proposed Metrics
Quality of customer service as achieved by customers	• Customer satisfaction surveys • Quantity of customer complaints • Adequacy of supply, especially during peak usage
Diversity and quality of utility offerings to customers	• Adoption of diverse customer tariff options • Rate transparency to customers
Degree of customer engagement in utility programs	• Non-standard rate participation

While some of these proposed metrics appear straightforward in how they would be quantified and how they support Customer Satisfaction and Engagement, others would require additional clarification and discussion. Two of the metrics for customer service, "customer satisfaction surveys" and "quantity of customer complaints", for example, represent clear metrics with precedent in Nevada and other jurisdictions. Different metrics may be able to more fully capture the other two considerations identified. For example, "non-standard rate participation" might provide visibility into one aspect of customer engagement.

Several jurisdictions track metrics that measure Customer Satisfaction and Engagement across three general categories: (1) customer satisfaction surveys, (2) billing accuracy, and (3) the time to achieve various service elements. The design of these metrics vary by jurisdiction and are indicative of different priorities. For example, states have taken different approaches in considering who to engage and for what reason.

Given stakeholder interest in equity – particularly around LMI customers – the PUCN could also consider adding an equity lens to their Customer Satisfaction and Engagement metrics. One way to do this would be to collect data around quality of service by geography, income or other relevant benchmarks.

Sample metrics from other jurisdictions:

The **Ontario Energy Board** tracks "service quality" and customer satisfaction separately**.** Unlike other jurisdictions discussed, it does not track metrics regarding customer behavior (e.g. tariff adoption). Instead, its metrics emphasize the timeliness of service provided, including both the promptness of responses and minimizing repeated contact. Metrics include:[18]

- Service quality:
  - New residential services connected on time: percentage of services connected within five business days)
  - Scheduled appointments met on time: percentage of distributor arrivals within 4 hour scheduled window (morning, afternoon, evening)
  - Telephone calls answered on time (percentage of calls answered within 30 seconds of receiving the call or having the call transferred)
- Customer satisfaction:

[18] *Scorecard – Performance Measure Descriptions*, Ontario Energy Board, p. 1-2.

- First contact resolution: utilities report on ability to satisfy customer's needs the first time the utility is contacted; different tools are used to measure
- Billing accuracy: percentage of accurate bills, on an annual basis by distributor
- Customer satisfaction survey results: distributors are required to report metrics and can select tools to gather results (e.g. perception surveys, focus groups, etc.)

The **Hawaii PUC** also employs metrics focused on customer service rather than engagement. The Hawaii PUC uses a customer transaction survey, calculates the percentage of calls answered within 30 seconds, and tracks billing accuracy: [19]

- Customer complaints: (1) number of informal complaints (2) number of formal complaints (3) number of escalated executive complaints
- Orders and appointments: days between request and actual date of service for (1) start service (2) stop service (3) meter re-read orders

The **Illinois Commerce Commission** requires the utility to report on their level of engagement with groups who have historically been excluded from the energy sector. Specifically:[20]

- Capital expenditures paid to minority-owned and women-owned business enterprises (MWBE) annually

The **Minnesota PUC** has directed Xcel Energy to collaborate with interested stakeholders to develop a "Workforce and Community Development Impact" metric for adoption.[21]

Reliability and Resilience

In this proceeding, this outcome has been defined as the Reliability and Resilience of the utility's system, including its ability to consistently provide adequate service to customers and its ability to prepare and plan for, recover from, or more successfully adapt to actual or potential adverse events. Stakeholders in Nevada have identified three Reliability metrics and three Resilience-specific metrics.

[19] *Order No. 37201 Approving the Release of Performance Metrics*, Hawaii PUC, Docket No., 2013-0141, p. 6 (March 11, 2015). https://dms.puc.hawaii.gov/dms/DocumentViewer?pid=A1001001A15C12A92431G90153.

[20] *Commonwealth Edison Company's Multi-Year Performance Metrics Annual Report*, p. 17, (April 16, 2020) https://www.icc.illinois.gov/downloads/public/2020%20Multi-Year%20Performance%20Metrics%20Annual%20Report%20Revised.pdf.

[21] *Order Establishing Performance Metrics*, Minnesota PUC, Docket No. 17-401, p. 13 (September 18, 2019).

Table 6: Proposed Reliability and Resilience Metrics

Considerations	Proposed Metrics
Ability to consistently provide adequate service to customers	• SAIFI • SAIDI • CAIDI
Ability to prepare and plan for, recover from, or more successfully adapt to actual or potentially adverse events	• Quantity of distributed resources available to respond to resilience events • Compliance with Natural Disaster Protection Plan (NDPP) mandates • Time to recover from service disruptions due to resiliency events *Additional metrics to consider*: • Amount of load voluntarily reduced under emergency conditions

Stakeholders proposed three traditional reliability metrics, all of which Nevada already tracks. For resilience, stakeholders proposed a mix of metrics. The two of these metrics look at system readiness, though the quantity of DER available may be better tracked under other outcomes. The third proposed resilience metric tracks recovery time post-event. The PUCN may want to consider the level of influence that factors external to a utility's control may have in the recovery time, and if that should be accounted for in this metric. There may be other metrics that would better inform investment decisions for resilient infrastructure and systems. It would be important to consider the availability and accessibility of data for these metrics and ensure they would be valuable to track.

Sample metrics from other jurisdictions:

The **Minnesota PUC** employs multiple reliability metrics that have been proposed in this process, along with others that have not yet been discussed – like Customers Experiencing Multiple Interruptions (CEMI). Notably, in its 2019 order establishing performance metrics, the PUC directed the utility to propose methods for tracking several future metrics, including:[22]

- Momentary Average Interruption Frequency Index (MAIFI)
- Locational reliability
- Power quality metric
- Equity: tracking reliability by geography, income and other relevant benchmarks

DER Utilization & Effectiveness

In this proceeding, DER Utilization & Effectiveness has been defined as (1) the pace of DER integration within the utility's service territory and (2) maximizing associated benefits (e.g., system flexibility, load following, demand-side management and customer choice). DERs could include distributed generation and storage, EVs and/or EV charging infrastructure. Stakeholders identified four metrics relating to the outcome of DER utilization and effectiveness. One

[22] *Order Establishing Performance Metrics*, Minnesota PUC, Docket No. 17-401, p. 12 (September 18, 2019). https://www.edockets.state.mn.us/EFiling/edockets/searchDocuments.do?method=showPoup&documentId={0082456D-0000-CA1F-9241-23A4FFF7C2FB}&documentTitle=20199-155917-01.

stakeholder added that metrics should gather data to optimize use of all available resources, regardless of ownership or scale.

Table 7: Proposed DER Utilization & Effectiveness Metrics

Considerations	Proposed Metrics
Pace of DER integration within the utility's service territory	• DER interconnection time • DER utilization
Maximizing associated benefits	• Peak demand over time • TOU rate utilization *Additional metrics for consideration:* • Implementation of IEEE 1547-2018

One of the metrics proposed by stakeholders, "DER interconnection time", is straightforward and may capture relevant information for this outcome. "DER utilization," while similarly straightforward, would require further definition of what exactly is being measured (i.e., MW of assets deployed). More targeted metrics may be helpful for capturing benefits associated with specific technology types. Stakeholders may also wish to consider whether and how LMI customers should be considered in the context of DER Utilization & Effectiveness.

Sample metrics from other jurisdictions:

The **Rhode Island PUC** has approved the tracking of multiple metrics focused on DERs for National Grid:[23]

- DG Interconnection: time to interconnection service agreement (ISA) by review track (simplified, expedited without supplemental review, and standard)
- DG Interconnection: number of business days from executed ISA to distribution system modification, by interconnection category
- Energy storage: incremental installed energy storage capacity

The **New York PSC's** metric for DER utilization explicitly includes multiple DER technologies: [24]

- Sum of produced, consumed or discharged MWh from community solar, rooftop solar, battery storage, ice storage and wind power systems for *incremental* systems (i.e. new to the rate year), annualized.

The **Hawaii PUC** employs three metrics related to DER utilization that are focused on effectively integrate emerging technologies into the grid and describes. One metric tracks energy storage directly, while the other two track associated benefits:[25]

[23] *Report and Order,* Rhode Island PUC, Docket No, 4770, p. 29-31 (May 5, 2020), http://www.ripuc.ri.gov/eventsactions/docket/4770-4780-NGrid-Ord23823%20(5-5-20).pdf. See also: Appendix A, p. 69-75.

[24] *Order Adopting Terms of Joint Proposal and Establishing Electric and Gas Rate Plans*, New York PSC, Docket No, 17-E-0238, p. 70 (March 5, 2018) http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId=%7B5CD14472-802C-4E01-9165-1A15C6B6E279%7D.

[25] *Order No. 37201 Approving the Release of Performance Metrics*, Hawaii PUC, Docket No., 2013-0141, p. 6 (March 11, 2015). https://dms.puc.hawaii.gov/dms/DocumentViewer?pid=A1001001A15C12A92431G90153.

- Storage adoption: the total power of energy storage assets (MW)
- DR Programs: total amount of capacity (MW) at the customer level that has been enrolled in current DER programs (residential & commercial sectors) and utilization metrics including the number of events and event duration
- TOU rates: total number of active contracts, for non-electric vehicle customers[26]

Cost Control

In this proceeding, this outcome has been defined as utility's efficiency in addressing its costs, including operating expenses and grid investments. Stakeholders in Nevada have identified five potential metrics or topics to measure related to the outcome of Cost Control.

Table 8: Proposed Cost Control Metrics

Considerations	Proposed Metrics
System utilization	• Optimized use of transmission assets • Optimized use of energy resources • Non-wires alternatives utilization • Infrastructure expenditure deferrals
Utility financials	• Corporate debt ratings and other utility financial metrics

Three of the metrics proposed above focus on how the system is utilized. These would require more clarity on what specifically would be quantified and measured. In particular, optimized use would need to be defined and quantified. The proposed metric for utility financials overlaps with other outcomes and was discussed in the context of Affordability.

The metrics that other jurisdictions have adopted related to Cost Control focus on efficiency of specific system assets. While in aggregate, these metrics may not comprehensively capture Cost Control, they provide a sample of quantitative metrics to consider.

Sample metrics from other jurisdictions:

The **Rhode Island PUC** uses a system efficiency PIM for National Grid focused on peak demand reduction:[27]

- System efficiency: incremental annual MW capacity savings relative to the company's forecast. The metric is intended to reflect avoided capacity coincident with the ISO New England peak hour. Eligible resources include demand response, behind-the-meter solar and storage in excess of forecast levels, and non-wires solutions expected to influence system peak (unless they are already incentivized through a different mechanism).

The **Ontario Energy Board** employs metrics that track total cost, regardless of asset type:[28]

[26] *Id.*

[27] *Report and Order,* Rhode Island PUC, Docket No, 4770, p. 29-31 (May 5, 2020), http://www.ripuc.ri.gov/eventsactions/docket/4770-4780-NGrid-Ord23823%20(5-5-20).pdf. See also: Appendix A, p. 67-68.

[28] *Scorecard – Performance Measure Descriptions,* Ontario Energy Board, p. 8 https://www.oeb.ca/sites/default/files/uploads/Scorecard_Performance_Measure_Descriptions.pdf.

- Total cost per customer (the sum of a distributer's capital costs and operating, maintenance and administrative expenses costs divided by the total number of customers served)
- Total cost per kilometer of line (the sum of a distributer's capital costs and Operation, Maintenance and Administration (OM&A) costs divided by the total number of kilometers of line that the distributer operates)

The OEB also reports on efficiency for each utility, which rates the significance of the difference between a utility's predicted costs and the actual costs on a scale of 1-5.

System Flexibility

In this proceeding, this outcome has been defined as achieving the grid flexibility needed to integrate higher penetrations of solar, wind, storage and DERs, with a focus on efficient balancing of supply and demand. Stakeholders in Nevada have identified three metrics for System Flexibility.

Table 9: Proposed System Flexibility Metrics

Considerations	Proposed Metrics
Flexibility that supports integrating higher solar, wind, storage and DER penetrations	• Ramp rates • Renewable energy curtailment
Efficient balancing of supply and demand	• Load factor

The metrics proposed by stakeholders regarding System Flexibility focus on enabling increased penetration of solar, wind, storage and DER and balancing supply and demand efficiently. Tracking ramp rates (or range) may be helpful for understanding the ability of utility assets to follow changes in net load due to increased renewables penetration. Load factor, by contrast, offers a measure of how "peaky" the system is by examining the ratio of average demand to peak demand.[29]

Notably, there is potential overlap between metrics for this outcome and those for Energy Efficiency and Clean Energy Deployment – insofar as metrics dealing with demand response could fall under both.

Sample metrics from other jurisdictions:

The **Hawaii PUC** employs a metric to track renewable energy curtailment that estimates the amount of energy that would have been available from renewable energy resources if that energy had been accepted onto the grid. In other words, this metrics estimates the theoretical

[29] *Assessment of Load Factor as a System Efficiency Earning Adjustment Mechanism*, Brattle Group, p. 5 (February 10, 2017). http://files.brattle.com/files/13775_assessment_of_load_factor_as_a_system_efficiency_earning_adjustment_mechanism.pdf

production potential from renewable resources and compares that value to the energy that was accepted onto the grid. The metric track curtailments for any reason.[30]

The **Minnesota PUC** has employed metrics focused on "cost-effective alignment of generation and load" that focus on demand response (DR) capacity, usage, and system impact: [31]

- Demand response capacity available (MWh)
- Demand response capacity called (MW / MWh per year)
- Integration of customer loads with utility supply:
    - Amount of DR that shapes customer load profiles (through price response, time-varying rates, behavior campaigns)
    - Amount of DR that shifts energy consumption from times of high demand to times when there is a surplus of renewable generation.
    - Amount of DR that sheds load that can be curtailed to provide peak capacity and supports the system in contingency events

Safety

In this proceeding, the definition of Safety relates to the health and safety of utility employees and contractors, and the impacts of utility property and activities on the health and safety of the public. Stakeholders have identified three potential metrics for this outcome.

Table 10: Proposed Safety Metrics

Considerations	Proposed Metrics
Safety of utility employees and contractors	• OSHA recordable incidents • OSHA requirements
Impacts of utility property and activities on the health and safety of the public	• Average time to respond to customer safety call

Two of the metrics proposed by stakeholders consider the safety of utility employees and contractors, although "OSHA requirements" would require further clarification of what specifically is being measured. Consistent with the discussion above, a metric regarding call response time may be better included under Customer Satisfaction and Engagement.

As it considers metrics for Safety, stakeholders and the PUCN may wish to further explore health and safety challenges that are unique to Nevada – and tailor metrics accordingly. For instance, California has developed metrics that respond specifically to the risk of wildfires, including an "Electric Overhead Conductor Index" metric that targets preventative maintenance.

[30] *Order No. 37201 Approving the Release of Performance Metrics*, Hawaii PUC, Docket No., 2013-0141, p. 6 (March 11, 2015). https://dms.puc.hawaii.gov/dms/DocumentViewer?pid=A1001001A15C12A92431G90153.

[31] *Order Establishing Performance Metrics*, Minnesota PUC, Docket No. 17-401, p. 10-12 (September 18, 2019). https://www.edockets.state.mn.us/EFiling/edockets/searchDocuments.do?method=showPoup&documentId={0082456D-0000-CA1F-9241-23A4FFF7C2FB}&documentTitle=20199-155917-01

Sample metrics from other jurisdictions:

The **Hawaii PUC** employs three safety metrics. Two consider incidents related to utility employees, while a third considers events that affect public safety. These metrics include: [32]

- Total case incident rate: [the number of OSHA recordable cases] multiplied by [work-hours per year] multiplied by [number of employees] divided by [the total number of productive hours for the year]
- Lost time rate: (the hours lost when an employee is unable to work due to a work-related injury or illness)
- Number of public safety incidents

The **California PUC** employs multiple safety metrics that address employee and environmental safety. Some must be reported by all IOUs, while others are specific to certain utilities. These metrics include:[33]

- Transmission and distribution overhead wires down: number of instances where an electric transmission or primary distribution conductor is broken and falls from its intended position to rest on the ground or a foreign object
- Fire ignitions: the number of powerline-involved fire incidents annually reportable to the CPUC
- Employee Serious Injuries and Fatalities (Employee-SIF)
- Employee Days Away, Restricted and Transfer (DART)

GHG Reductions

In this proceeding, this outcome has been defined as GHG emission reductions within the utility's service area, and the expansion of innovative customer products that support GHG Reductions. Stakeholders in Nevada identified two metrics for the former and have yet to identify any metrics for the latter.

Table 11: Proposed GHG Reductions Metrics

Considerations	Proposed Metrics
GHG emission reductions within the utility's service area	• CO_2 emissions from utility-owned generation assets, PPAs and purchased power (e.g., tons of CO_2/MW or MWh) • Carbon intensity (emissions per MWh)
The expansion of innovative customer products that support GHG reductions	• [No metrics have been identified to date]

[32] *Key Performance Metrics, Safety*, Hawaiian Electric (last accessed November 18, 2020). https://www.hawaiianelectric.com/about-us/key-performance-metrics/safety

[33] *2020 Performance Metrics Report*, Southern California Edison, p. 2, (April 1, 2020). https://www.cpuc.ca.gov/uploadedFiles/CPUCWebsite/Content/Safety/Risk_Assessment/SPM/A1505002%20et%20al%20SCE%202020%20Safety%20Performance%20Metrics%20Report.pdf

The metrics proposed by Nevada stakeholders are relatively straightforward and overlap with those used in other jurisdictions (see below). Additional discussion may be needed to clarify input assumptions and identify the best data sources for tracking emissions over time, however. In particular, it will be important to determine if the metrics are tracking marginal or average emissions and whether emissions will be tracked on an annual, monthly, or other timescale in order to understand how utility performance is evolving over time.

The second consideration related to innovative customer products could potentially be eliminated, because the creation of an innovative customer product that supports GHG reductions would be tracked (and potentially incentivized) by tracking GHG reductions overall. In other words, these two considerations could be viewed as somewhat duplicative.

Sample metrics from other jurisdictions

The **Minnesota** PUC has approved six metrics for "Environmental Performance," two of which directly overlap with those identified by stakeholders in Nevada.[34]

- Total carbon emissions by (1) utility-owned facilities and PPAs and (2) all sources
- Carbon intensity (emissions per MWh) by (1) utility-owned facilities and PPAs and (2) all sources
- Total criteria pollutant emissions
- Criteria pollutant emission intensity (criteria pollutant emissions per MWh)
- CO_2 emissions avoided by electrification of transportation
- CO_2 emissions avoided by electrification of buildings, agriculture, and other sectors

The **Rhode Island PUC** employs a metric tracking GHG reductions attributable to EV adoption in the state. This metric is described under EV Infrastructure Deployment.[35]

Energy Efficiency and Clean Energy Deployment

In this proceeding, this outcome is defined as the utility's progress toward state environmental policy goals, with an emphasis on cost-effective achievement and optimization of utility-owned and third-party resources. Stakeholders in Nevada have identified four metrics under the goal of energy efficiency and clean energy deployment.

[34] *Order Establishing Performance Metrics*, Minnesota PUC, Docket No. 17-401, https://www.edockets.state.mn.us/EFiling/edockets/searchDocuments.do?method=eDocketsResult&userType=public&docketNumber=401&docketYear=17#{0082456D-0000-CA1F-9241-23A4FFF7C2FB}); p. 13

[35] *Report and Order*, Rhode Island PUC, Docket No. 4770, p. 29-31, http://www.ripuc.ri.gov/eventsactions/docket/4770-NGrid-PIM%20Midyear%20Report%20(9-3-19).pdf.

Table 12: Proposed Energy Efficiency and Clean Energy Deployment Metrics

Considerations	Proposed Metrics
Assess utility progress toward state environmental policy goals	• Renewable energy levels meeting or exceeding state goals • Energy efficiency levels meeting or exceeding state goals • Demand response levels meeting or exceeding state goals
Optimization of utility-owned and third-party resources	• New renewable energy deployed on mine land and brownfields

Stakeholders' proposed metrics focus on tracking alignment towards state environmental policy goals, which could be reported as percentage of achievement or total levels of renewable energy, energy efficiency and demand response. One proposed metric considers optimization in a broader context than just the energy system, encouraging deployment on specific land developments.

Sample metrics from other jurisdictions:

In addition to renewable energy curtailment (addressed above in relation to System Flexibility) the **Hawaii PUC** employs two metrics focused on renewable energy deployment. The first examines renewable energy sales relative to total energy sales, while the second looks at total utility-scale and customer-sited renewable energy generation:[36]

- Percent of sales from renewable energy
- Total net generation of renewables including and not including customer-sited systems

The **Ontario Energy Board** employs metrics addressing "Public Policy and Responsiveness." One of these metrics focuses on net cumulative energy savings.[37]

The **New York PSC** employs an energy efficiency metric focused on "deeper lifetime energy efficiency savings." In this context, deeper EE is defined as "measures that are typically more technically challenging, require more lead time, have longer effective useful lives (EULs) and/or are more expensive for customer to undertake and utilities to implement, but have longer and greater payback." The PSC tracks deeper EE savings for LMI and non-LMI communities.[38]

[36] *Order No. 37201 Approving the Release of Performance Metrics*, Hawaii PUC, Docket No., 2013-0141, p. 6 (March 11, 2015). https://dms.puc.hawaii.gov/dms/DocumentViewer?pid=A1001001A15C12A92431G90153. *See also Key Performance Metrics, Renewable Energy*, Hawaiian Electric (last accessed Nov. 18, 2020). https://www.hawaiianelectric.com/about-us/key-performance-metrics/renewable-energy.

[37] *Custom Performance Report (Reporting Year: 2019)*, Ontario Energy Board (last accessed November 18, 2020). https://www.oeb.ca/_html/performance/report_builder_display.php?reportyear=2019&custom=on

[38] *Order Adopting Terms of Joint Proposal and Establishing Electric and Gas Rate Plan*, New York PSC, Docket No, 19-0065, p. 70 http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={7B06921C-6160-4FFD-B10F-1C1D03F16AEE}. See also: *Joint Proposal*, New York PSC, Case No. 19-G-0065, Appendix 23, p. 5 (October 16, 2019). http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={8DFF975D-C514-41C8-8E31-82C33318D898}

EV Infrastructure Deployment

In this proceeding, this outcome has been defined as the pace and competitiveness of EV Deployment within a utility's service territory – with a focus on balancing utility and public benefits. Stakeholders in Nevada have identified eight potential metrics that relate to EV Deployment. Several metrics relate to charging infrastructure deployment and usage, one relates to equitable access to charging, and two relate to integration of EV charging with the electric system.

Table 13: Proposed EV Infrastructure Deployment Metrics

Considerations	Proposed Metrics
Pace of EV deployment	• EV charger deployment • Incremental EV sales within a utility's service territory • EV charger usage • EV charging increases beyond baseline
Competitiveness of EV infrastructure market	• Number of new unique site hosts installing stations through the utility's incentive programs
Other	• Equitable access to charging services • Share of smart and networked EV charging infrastructure within utility service territory • EV load moved to off peak

Not all of these proposed metrics are entirely within the utility's control, although several of them are influenceable by utility actions such as their program and tariff offerings. A combination of several of the proposed metrics could provide the PUCN and stakeholders with robust information about how the development of the EV market is going in Nevada. For example, a metric tracking charger deployment could be paired with a metric tracking off-peak EV charging to determine if new EV charging is occurring at times of day that are not adding to system peak. Some of the proposed metrics will need additional clarification as to what would be tracked and quantified, for example, "equitable access to charging services" is stated more as a policy goal rather than a quantified metric. Also, the development of a robust baseline of data would likely be needed in order to track changes over time for metrics such as EV charging usage.

Other states that have considered or implemented tracking metrics related to EVs have grappled with a few key issues: (1) What is the appropriate baseline or "business as usual" case against which to track progress going forward? Is there already existing data on projected EV adoption? (2) What aspects of EV deployment do utilities have some degree of control over or have the ability to directly influence? It may be difficult to assign responsibility to utilities for consumer choices to purchase EVs, for example. (3) Are there metrics or other requirements that ought to be put in place to ensure that utilities encourage EV drivers to charge during off-peak times?

Sample metrics from other jurisdictions

The **Rhode Island PUC** has adopted multiple metrics related to the electrification of transportation in the state:[39]

- Consumer EVs: incremental avoided tons of CO_2 from EVs above company forecast
- Light duty government and commercial fleet electrification: incremental of government and commercial light-duty fleet EVs in the state, reported on an annual basis
- Utilization of EV charging infrastructure in low-income areas: utilization rates at all EV supply equipment (EVSE) sites installed as part of the utility's Charging Station Demonstration Program
- Activation of EV charging sites for apartment buildings and disadvantaged communities: in-service date for make-ready work and charging stations installed in both site categories

The **New York PSC** employs metrics that consider beneficial electrification more broadly. These metrics target heat pump and EV technologies including battery EVs, plugin hybrid EVs, electric transit buses and medium and heavy-duty EVs and are defined as: [40]

- Total lifetime CO_2 emissions reductions provided by annual incremental beneficial electrification technologies in a given rate year

The **California PUC** established reporting metrics for San Diego Gas and Electric specifically addressing its EV pilot programs.[41] These metrics include:

- Amount of interest in siting EV installations at multi-unit dwellings and workplaces
- Number of EV site installations that were approved for deployment
- Number of EV site installations and EV charging stations that SDG&E as deployed under the approved vehicle-grid program
- Rate option that site hosts have chosen
- Usage rates at EV site installations and charging stations
- Timing patterns of EV charging and degree to which these times correlate to low rates
- Program funds spent during the quarter and cumulative amount spent

[39] *Report and Order,* Rhode Island PUC, Docket No, 4770, p. 29-31 (May 5, 2020), http://www.ripuc.ri.gov/eventsactions/docket/4770-4780-NGrid-Ord23823%20(5-5-20).pdf. See also: Appendix A, p. 67-68.

[40] *Order Adopting Terms of Joint Proposal and Establishing Electric and Gas Rate Plans*, New York PSC, Docket No, 17-E-0238, p. 72 (March 5, 2018) http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId=%7B5CD14472-802C-4E01-9165-1A15C6B6E279%7D.

[41] *Decision Regarding Underlying Vehicle Grid Integration Application and Motion to Adopt Settlement Agreement,* California PUC, Application 14-04-014, p. 140-141 (January 28, 2016). http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M158/K241/158241020.PDF

SECTION VI: NEXT STEPS

This is the final concept paper in the facilitated portion of the PUCN's alternative ratemaking proceeding. Workshop 4, scheduled for December 2-3, will challenge stakeholders to consider and discuss how different responses to the key questions outlined in this paper may influence the PUCN's alternative ratemaking regulations.

In preparation for Workshop 4, we encourage stakeholders to build upon the discussion provided in this paper and in stakeholder comments by considering the opportunities and risks associated with different responses to the questions below. Consideration of these factors will help stakeholders establish, sharpen, or update their positions on how the PUCN should approach its alternative ratemaking regulations.

For convenience, key questions identified in Section IV are summarized below:

Scope of the Regulations

- Should there be any limits on the alternative ratemaking mechanisms that a utility can propose in an alternative ratemaking plan?
- Should a utility be allowed to propose a new alternative ratemaking mechanism or change an existing alternative ratemaking mechanism outside of an alternative ratemaking plan?

Application of the Evaluation Criteria

- Should the evaluation criteria apply only to new alternative ratemaking proposals or should they apply to existing alternative ratemaking mechanisms as well?
- Must a utility alternative ratemaking plan satisfy all evaluation criteria, regardless of the mechanisms proposed? Should a checklist or scoring approach be used? What threshold(s) must be met to satisfy the evaluation criteria?

Finally, stakeholders are encouraged to identify any questions not addressed in this paper regarding how alternative ratemaking regulations could be applied in practice.

Workshop 4 will be followed by a final round of written stakeholder comments. Informed by these comments and the broader discussion from this facilitated process, the PUCN intends to issue a straw proposal to solicit input on various types of alternative ratemaking plans in February 2021. After receiving feedback on the straw proposal, the PUCN will propose alternative ratemaking regulations as required by SB 300.

APPENDIX A: DATA SOURCES FOR STAKEHOLDER REFERENCE

As noted in Section V, the PUCN provided some examples of existing metrics used in Nevada ahead of facilitated Workshop 2, which focused on the state's existing regulatory structure. The table below describes these metrics and provides corresponding references to Attachments 1-8, which the PUCN filed as Exhibit A alongside this paper.

Table 1: Data Sources for Stakeholder Reference in Docket No. 19-06008

Data Type	Data Description	Source
NPC and SPPC Clean Energy Programs Annual Plan	Prospective annual proposals and prior year results for programs authorized pursuant to NRS 701B, including rooftop solar, low income solar, energy storage and electric vehicle infrastructure. Program year is July 1 – June 30. Cost recovery rates are set in the respective annual Deferred Energy Accounting Adjustment filing and comprise the renewable energy program rate (REPR) on customer bills	Filed annually on or before February 1. Most recent filing made in Docket No. 20-01040. Executive Summary and select tables attached as Attachment 1.
NPC and SPPC Annual Service Quality and Metrics Report	Summarizes data related to customer service and satisfaction, (including Flex-Pay), reliability (CAIDI, SAIFI, SAIDI, etc.) and safety (OSHA, etc.). Reporting period is prior calendar year.	Filed annually on or before April 1. Most recent filing made in Docket No. 20-04001. Overview and Table of Contents attached in Attachment 2.
NPC and SPPC Portfolio Standard Annual Report	Details NPC and SPPC compliance with annual RPS and projected future compliance. Reporting period is prior calendar year.	Filed annually on or before April 15. Most recent filing made in Docket No. 20-04018. Introduction, Executive Summary and select tables attached as Attachment 3.
NPC and SPPC Annual Demand Side Management Update Report	Results of PUCN-approved energy efficiency and conservation programs after measurement and verification process, including proposed updates for upcoming program year. DSM program year is calendar year. Cost recovery and "lost revenue" rates are set in the annual Deferred Energy Accounting Adjustment filing and comprise the EE rate on customer bills.	Filed annually on or before July 1, for non-IRP years, otherwise included in IRP with next action plan period budget. Most recent filing made in Docket No. 20-07004. Overview and select tables attached as Attachment 4.

Data Type	Data Description	Source
Quarterly Earned & Authorized ROE and ROR for NPC and SPPC	This dataset provides financial information, including operating expenses, net income, rate base, and earned and authorized ROR and ROEs for NPC and SPPC on a rolling 12-month basis from 2014-2020.	Filed quarterly with PUCN. PUCN policy staff compiled this data from NVE quarterly filings in Docket Nos. 13-07021, 19-08001 and 20-01011. See attached spreadsheet, Attachment 5.
Earnings Sharing Mechanism Results	The mechanism was put in place by the PUCN in calendar 2018 for NPC and calendar 2020 for SPPC. Requires the utilities to “share” in revenues 50/50 with ratepayers when earned rate of return exceeds 9.70%.	Calculation is filed in annual Deferred Energy Accounting Adjustment filed on or before March 1. We have results of the earnings sharing mechanism for NPC for two years: see Docket No. 19-03001 at Exhibit M, which is attached at Attachment 6A; and Docket No. 20-02026 at Exhibit M, which is attached as Attachment 6B.
Residential Customer Bill History	Single family residential average monthly rates for NPC and SPPC for the last 15 years.	PUCN policy staff compiled this data from NVE quarterly filings in various dockets. See attached spreadsheet Attachment 7A for SPPC and Attachment 7B for NPC.
Nevada Dynamic Pricing Trial Report	Dynamic Pricing Trial conducted as a requirement of NPC and SPPC receipt of Department of Energy (DOE) Smart Grid Investment Grant pursuant to the American Recovery and Reinvestment Act. Two-year program to test TOU rates, with education and technology treatment options, in both service territories. This trial concluded February 28, 2015.	Reported to DOE under NV Energy DOE Project Number DE-OE0000205. Executive Summary attached as Attachment 8 and full report available on request.