

**STATE OF NORTH CAROLINA  
UTILITIES COMMISSION  
RALEIGH  
DOCKET NO. E-100 Sub 178**

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of	)	REPLY COMMENTS AND
Rulemaking Proceeding to Implement	)	RELATED PROPOSED RULES
Performance-Based Regulation of	)	OF THE
Electric Utilities	)	ATTORNEY GENERAL'S OFFICE

The North Carolina Attorney General's Office (AGO) respectfully submits these reply comments and related proposed rules on the implementation of performance-based regulation (PBR), as authorized in N.C.G.S. § 62-133.16.

I. BACKGROUND AND INTRODUCTION

This proceeding is one of the steps the Commission is undertaking to implement House Bill 951,<sup>1</sup> and addresses fundamental new State regulatory policies that affect electric utilities in North Carolina. In other proceedings, the Commission has begun the process for developing a plan to reduce carbon dioxide emissions from North Carolina power plants.<sup>2</sup> Here, the Commission considers comments and related proposed rules for the development of alternative ratemaking mechanisms to implement performance based regulation.<sup>3</sup>

As some parties noted in initial comments, the alternative ratemaking scheme established in HB 951 is described as performance-based regulation, but some specifics in the statute are not akin to PBR mechanisms that have been

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<sup>1</sup> The Governor signed into law House Bill 951 (S.L. 2021-165) on October 13, 2021.

<sup>2</sup> See Section 1 of S.L. 2021-165 and Docket Nos. E-100, Sub 179, E-2, Sub 1283, and E-7, Sub 1259. Another proceeding is also underway to adopt rules to implement securitization of early retirement of subcritical coal-fired generating facilities. See Section 5 of S.L. 2021-165 and Docket No. E-100, Sub 177.

<sup>3</sup> See Section 4 of S.L. 2021-165 and Docket Nos. E-100, Sub 179, E-2, Sub 1283, and E-7, Sub 1259.

adopted successfully in other states.<sup>4</sup> Further, the Commission faces accelerated timelines to develop rules for PBR and to develop the plan for addressing the new carbon policy. The Commission will need to take an active role in this rulemaking and in the development of the carbon plan to succeed in achieving multiple, important policy goals. Ongoing review and response may be required as we gain more experience with these new goals.

The AGO's reply comments<sup>5</sup> make three main recommendations, as summarized here:

First, the major policies adopted in HB 951 should work together so that the mechanisms authorized in Performance Based Ratemaking are used to help advance the carbon policy. Achieving significant carbon emission reductions while preserving reliable, safe, affordable service will require effective coordination between the carbon plan and PBR plans will aid in achieving the carbon policy successfully.<sup>6</sup> See the discussion in Part II below and refer to the related proposed rules in the Appendix.

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<sup>4</sup> See the discussion of provisions that could lead to unfavorable results for ratepayers in initial comments filed by North Carolina Justice Center, et al. at 1-20 and in the Synapse Report on behalf of CUCA at 1-2.

<sup>5</sup> Expert assistance was provided to the AGO in this filing by Matt McDonnell, Managing Director, US Consulting at Strategen, who brings strong utilities commission experience and practical regulatory expertise to this PBR rulemaking proceeding. Mr. McDonnell worked as counsel to the Hawaii Public Utilities Commission, where he led that commission's investigation into performance-based regulation and helped to design a regulatory process approach that won broad support from local stakeholders. He has since spent time at Navigant (n/k/a Guidhouse) where, among other efforts pertaining to regulatory innovation, he authored a report for the Edison Electric Institute that provides in-depth analysis of alternative regulatory mechanisms available to regulators.<sup>5</sup> Now, at Strategen, Mr. McDonnell continues to build on past research and experience, working with a wide-array of clients to advance regulatory frameworks and performance-based approaches. In recognition of this experience and expertise, the National Association of Regulatory Utility Commissioners (NARUC) has asked Mr. McDonnell to serve as a "PBR expert" to help educate and inform various state utility commissions on PBR frameworks and opportunities.

<sup>6</sup> These reply comments focus for the most part on how the PBR rule will be put to best use in meeting critical North Carolina state policies for Duke Energy Carolinas and Duke Energy

Second, thoughtful planning will be required to establish policy goals for the PBR plan, and these need to be considered in separate proceedings that are not buried by the complex factors litigated in rate cases. Public Staff proposes a separate procedure for adopting policy goals, metrics and incentives, and the AGO agrees. In addition, the AGO recommends expanding the review of goals and other structures that guide performance-based regulation on an ongoing basis. See the discussion in Part III below and related proposed rules.

Third, thoughtful planning will be required to identify optimal investment projects for the PBR plan, and these also need to be considered in separate proceedings that are not buried by the complex factors litigated in rate cases. To that end, the AGO recommends that specific proposals for investment projects should be identified in a separate process, *e.g.*, as part of the Carbon Plan and Integrated Resource Plans. See the discussion in Part IV below and related proposed rules.

In addition to these three main recommendations, the AGO makes specific recommendations responsive to other points addressed in the initial comments and rules proposed by other parties. Many of these additional recommendations relate to important protections for consumers as these new policies are implemented. See Part V below and related proposed rules.

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Progress, affecting well over 3 million North Carolina retail customers. The carbon policy does not apply to Dominion Energy North Carolina and its 120,000 North Carolina retail customers, and although Dominion will not need to show that a PBR proposal advances the North Carolina carbon plan, it will still have the burden to show that the proposal should be adopted because it would result in just and reasonable rates, would be in the public interest, and would meet criteria in the statute and rules, including those described in N.C.G.S. § 62-133.16(d)(1), and the considerations about whether the plan promotes clean, efficient, reliable service at affordable rates as identified in N.C.G.S. § 62-133.16(d)(2).

II. PBR MECHANISMS SHOULD BE USED AS TOOLS TO ADVANCE THE PLAN THAT IS BEING DEVELOPED FOR MEETING THE CARBON REDUCTION POLICY.

The AGO recommends adding specific provisions in the PBR rules to prioritize performance-based ratemaking proposals that are optimal in timing and generation and resource mix for advancement of the carbon plan and effective for integrated resource planning purposes.

The Commission's new authority to allow alternative ratemaking through approval and modification of PBR applications was enacted in HB 951 together with the new carbon policy. Under the carbon policy, the Commission is required to take all reasonable steps to achieve carbon dioxide emission reductions at North Carolina power plants: 70% reduction by 2030 compared to 2005 emissions, and carbon neutrality by 2050. Also, the carbon policy requires, among other things, that the Commission 1) ensure undiminished grid reliability and adequacy, and 2) determine the optimal timing and generation and resource-mix to achieve the least cost path to compliance consistent with the emission reduction goal.

The PBR provisions, which are codified as N.C.G.S. § 62-133.16, add a package of new alternative ratemaking mechanisms including 1) performance incentives, 2) multiyear rate planning, 3) earnings sharing, and, 4) decoupling for residential customers. These mechanisms provide tools to implement larger State policy goals, particularly the carbon policy, and should not be employed merely as a means for utilities to address regulatory lag.

Duke described this relationship between the carbon policy and PBR in the background discussion provided in its initial comments.<sup>7</sup> Duke's comments recognized that PBR and the carbon policy were reviewed as complimentary items in the development of the Clean Energy Plan and the resulting North Carolina Energy Regulatory Process.<sup>8</sup> Duke posited that the new PBR regulatory approach will "better position the Companies to meet the State's policy goals and customer expectations while keeping the system affordable, reliable and resilient..."<sup>9</sup>

It will be important to coordinate PBR multi-year rate plans with the plan developed to achieve the carbon policy, but such coordination may be stymied if Duke's initial PBR applications are filed too soon after the PBR rule is adopted or if the applications do not sync with carbon plan steps. The Public Staff's proposal in its reply comments to delay the date when Duke may file a PBR application until after the carbon plan is developed responds to this concern. Otherwise, the timing of when these rules will be adopted and when the carbon plans will be developed could be problematic, since the PBR rule must be adopted by February 10, 2022, and the initial carbon plan will not be developed until later in 2022. If the first PBR plans are not well coordinated with the carbon plan, they could delay more effective PBR projects and goals until the next three-year plans take effect.<sup>10</sup> Given the complex determinations that must be made in a general rate case, and the added factors for a PBR application, the Commission will be required to assert its authority and exercise its considerable

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<sup>7</sup> Duke Initial Comments at 3-4.

<sup>8</sup> *Id* at 3.

<sup>9</sup> *Id* at 4.

<sup>10</sup> See NCSEA's Initial Comments at 3-4.

discretion to bring together the multiple threads for a good outcome.

The Commission has broad discretion about how it carries out the new responsibilities and should not hesitate to use its discretion to implement these policies successfully to protect customers, to incentivize good utility performance, and to modify utility proposals so that the most effective approaches are adopted. The Commission's discretion to determine optimal timing and generation and resource-mix to achieve the least cost path for meeting the carbon policy is specifically recognized in HB 951.<sup>11</sup> To that end, the Commission must set clear policies, encourage transparent proposals, and actively direct implementation. By encouraging collaboration among stakeholders and considering alternative proposals for projects and goals recommended by parties alongside utility proposals, the Commission will promote more effective PBR plans.

To address these recommendations, the attached proposed modifications to the PBR rule expand the description of the purpose of PBR to reflect the priority on proposals that advance the carbon policy (see AGO Appendix item # 1) and add filing requirements for that purpose (see AGO Appendix items # 8 and # 10. )

III. A SEPARATE PROCEEDING IS NEEDED TO REVIEW AND FASHION POLICY GOALS.

The AGO supports the Public Staff's proposal in the PBR rules to convene a separate proceeding for the purpose of establishing policy goals. Clearly established policy goals and outcomes should be at the heart of a well-designed framework for performance based ratemaking. Under the framework

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<sup>11</sup> House Bill 951 (S.L. 2021-165) Section 1(4).

recommended by the AGO, performance incentive mechanisms (PIMs) would reflect but one element of a broader PBR regulatory framework that, at its core, should encourage exemplary utility performance and better align utility financial incentives with customer interests. Consistent with best practices and lessons learned from other leading jurisdictions, including Hawaii, Minnesota, and Nevada, along with the vision outlined by HB 951,<sup>12</sup> the Commission should work with parties and stakeholders to establish a goals-outcomes framework that can serve as an analytical lens that will help the Commission to: 1) evaluate a utility's PBR application, including whether it appears able to advance those policy goals and regulatory outcomes deemed most valuable to the State and its utility customers; 2) shape and inform a utility's proposed Performance Incentive Mechanisms (PIMs) consistent with HB 951's requirement that each PIM target a clearly defined policy goal; and 3) assess a utility's performance over the life of an approved PBR plan to determine whether the PBR plan has adequately delivered achievement against the Commission-established goals and outcomes.

A. The Need For A Separate Proceeding To Establish Goals And Outcomes.

Given the role policy goals and regulatory outcomes play as the foundation for a well-designed PBR framework, a separate proceeding should be established to set policy goals and regulatory outcomes against which utility performance can be measured. The rulemaking timeline set forth by HB 951 provides insufficient time and space for the Commission and parties alike to thoughtfully surface and establish policy parameters that guide and inform the

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<sup>12</sup> See, e.g., EEI Report on Alternative Regulatory Mechanisms at 12-17, 21-30, A-2.

implementation of PBR in a manner consistent with the public interest. Likewise, the timeline triggered once a utility submits a PBR application is insufficient to develop effective goals and outcomes while simultaneously evaluating proposed capital investments, and making the critical design decisions required in proposed alternative regulatory mechanisms. Hence, the AGO recommends that the Commission open a separate docketed proceeding to solicit party input and establish a clear set of policy goals and outcomes to govern PBR in North Carolina.

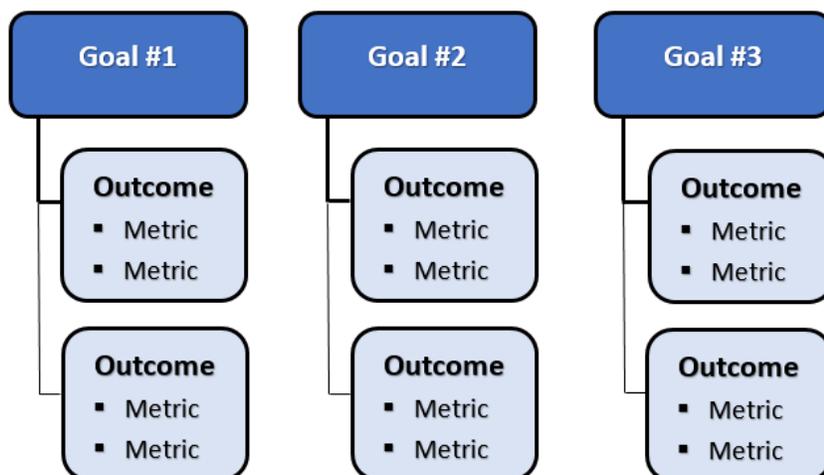
B. Importance Of A Goals-Outcomes Framework.

The AGO suggests that the Commission establish a goals-outcomes hierarchy that can be used as a framework for analysis of a utility's PBR Application prior to approval and for evaluation of a utility's performance during the life of a PBR plan. This two-level hierarchy begins with identifying broad regulatory goals, which inform desired regulatory outcomes. As outlined below, the goals-outcomes hierarchy, in turn, informs possible performance metrics along a pathway toward a PIM or Scorecard<sup>13</sup> development. This organization is visualized in the figure below.

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<sup>13</sup> When a metric is paired with performance targets, benchmarks, or peer comparisons it becomes a scorecard. Typically, a scorecard makes use of clear visuals so that interested persons can easily understand performance and how it compares to targets or to comparable utilities or other regions.

Figure 1 Goals-Outcomes Hierarchical Framework



This organization helps to transform broad policy goals, which are, by nature, high-level, into more specific regulatory outcomes. This two-level hierarchical approach provides a lens through which to evaluate whether the proposed PBR application is sufficiently tailored to achieve desired regulatory outcomes in the public interest. This same Goals-Outcomes framework can also be used to analyze a utility's performance under a PBR plan, either during or after the fact, by examining whether activities furthered achievement of priority regulatory outcomes, as measured by attendant performance metrics. The process involves three steps:

*Step 1: Articulate policy goals.*

The first step of this process would be to identify and articulate regulatory policy goals that the State, and by extension the Commission, wishes to achieve. These policy goals should be broadly defined while still providing sufficient certainty and flexibility.

Regulatory policy goals should be responsive to the fundamental reasons for utility regulation, which are necessarily informed by a utility's core obligations

of service. In other words, utilities are obligated to meet certain goals that are important to regulators. These high-level goals form the top portion of the foundational goals-outcomes hierarchy.

This important first step in establishing a Goals-Outcomes framework will allow the Commission and parties to give holistic consideration to the fundamental goals of regulation and then to affirmatively declare the policy goals to inform PBR in North Carolina. After this step, the next task would be to identify the desired regulatory outcomes.

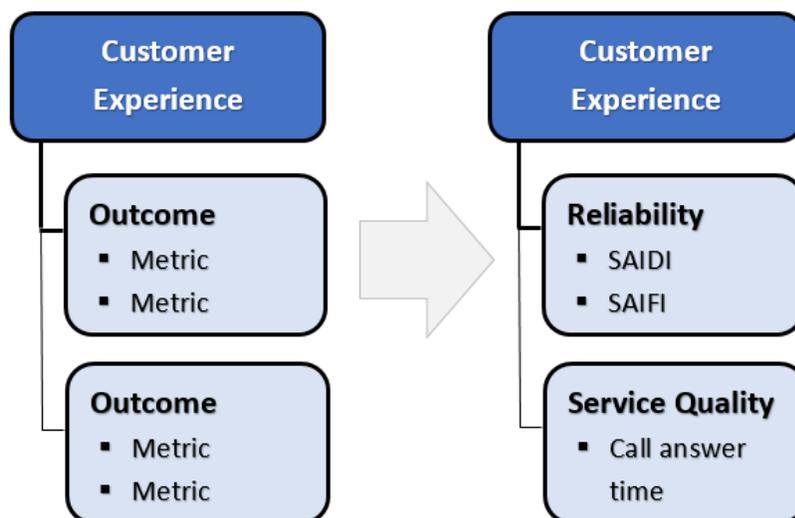
*Step 2: Identify desired regulatory outcomes.*

Once the policy goals have been identified, the AGO suggests that the next step should be a determination of the desired outcomes of utility service. Outcomes describe how utility services affect ratepayers and society. These outcomes add specificity to the broader, overarching policy goals.

Identifying desired outcomes inherently requires an assessment of the existing regulatory structure and the incentives that are bound up in it. This can lead to deep insights into the core motivations of utilities. In particular, this assessment can identify functions that a utility should perform at a high level, and those that it may find difficult to accomplish. For example, a utility under cost-of-service regulation is incentivized to cut costs between rate cases. In general, an incentive to contain costs is beneficial. But utilities may be incentivized to cut costs in areas such as service quality and reliability, which would be harmful to customers. To avoid this harm, many regulators have identified service quality and reliability as desirable outcomes of regulation. Figure 2 below illustrates the relationship between these outcomes and the broader policy goal of improving

the customer experience.

Figure 2. Goals-Outcomes Hierarchy; Customer Experience



Service quality and reliability are well-established regulatory outcomes, but there are a number of other outcomes that may also be considered in a Commission-initiated separate docketed proceeding. Regulators across jurisdictions are beginning to focus attention on new aspects of utility performance, such as overall system efficiency, use per customer, customer engagement, network support services, market transformation, and carbon reduction.<sup>14</sup> Many of these emergent regulatory outcomes are highlighted in HB 951 and codified in G.S. 62-133.16(d)(2). The foundational goals-outcomes hierarchy is designed to accommodate these emerging and innovative regulatory outcomes, as they are compatible with the broader regulatory goals established in the previous step. For example, customer engagement is an outcome related to the policy goal of improving the customer experience.

<sup>14</sup> See, e.g., In re Public Utilities Commission, Instituting a Proceeding to Investigate Performance-Based Regulation, Docket No. 2018-0088, Decision and Order No. 36326, filed May 23, 2019.

Step 3: *Outline possible performance metrics.*

This next step within the Goals-Outcomes hierarchy continues the transformation of broad policy goals into desired regulatory outcomes, and finally into ways of measuring utility performance. If an outcome describes the topic of regulatory interest, then a metric is the way to measure a utility's performance in achieving that particular outcome. A metric is simply a standard of measurement that can allow regulators to determine how well a utility is performing in an area of interest. A metric should be quantifiable and verifiable, when possible, as well as consistent with State energy policies.

Metrics are grouped according to the corresponding regulatory outcome. For example, call answer time and customer complaints are traditional performance metrics related to the regulatory outcome of service quality. Similarly, traditional metrics like SAIDI and SAIFI<sup>15</sup> are used to measure performance of the desired outcome of reliability. See Figure 2 above for a visualization of this concept.

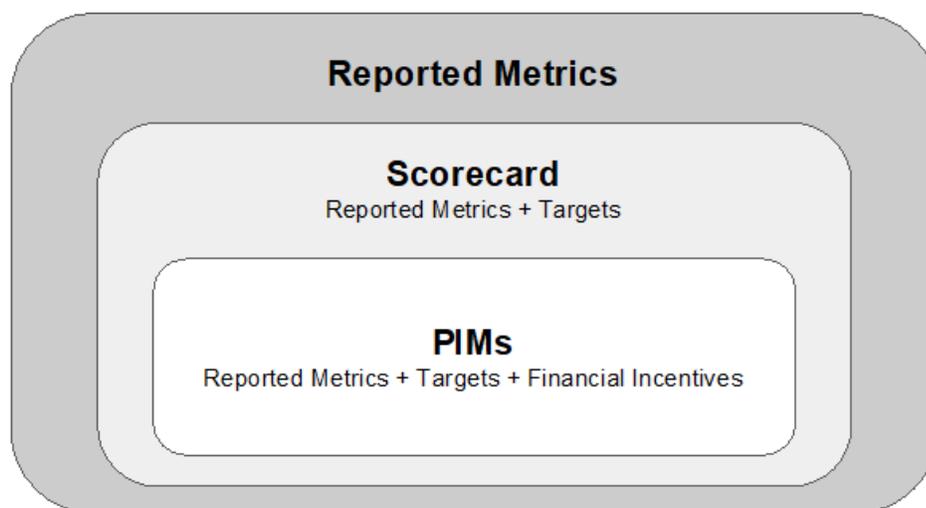
There are numerous performance metrics available to measure more traditional aspects of utility service, like service quality and reliability. Performance metrics related to emerging regulatory outcomes, such as grid modernization, DER adoption, and environmental issues exist, but are still developing in many cases. Notwithstanding their emergent nature, such metrics will likely be important to consider when evaluating proposed utility PBR applications and performance.

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<sup>15</sup> SAIDI and SAIFI are reliability indicators for electric utilities. SAIDI measures the average outage duration per customer and SAIFI measures the number (frequency) of interruptions per customer.

Metrics can be used in several ways that help track progress against outcomes and encourage exemplary utility performance. These can be broken down according to three primary applications: (1) reporting requirement; (2) scorecard; and (3) performance incentive mechanism (PIM), as illustrated in the following diagram.

*Figure 3. Application of Metrics*



At a minimum, a metric can serve as a helpful reporting requirement, meaning that the data reflected by the unit of measurement is tracked and published to illuminate progress towards a prioritized outcome and, in turn, toward the attendant policy goal. The simple act of tracking and reporting metrics can incentivize utilities toward stronger performance by using transparency as a regulatory tool. Reporting standalone metrics can also be useful to inform ongoing assessments of performance under existing utility PBR plans, and serve as the foundation for developing scorecards or PIMs – the other applications detailed below.

When a metric is paired with performance targets, benchmarks, or peer comparisons, it becomes a scorecard. Typically, a scorecard makes use of clear

visuals so that interested persons can easily understand performance and how it compares to targets or to comparable utilities or other regions. Like a reported metric, a public-facing scorecard reports utility performance information in a central location and presents the data in a meaningfully contextualized and transparent manner. Scorecards allow regulators as well as other stakeholders to quickly review and digest utility performance across a number of outcomes and metrics. A scorecard should be readily accessible and featured prominently on the utility, Commission, or other website. As with reported metrics, the information provided in scorecards should be clear, concise, comprehensive, and up to date.

By adding a target or appropriate benchmark to a reported metric, scorecards can encourage better achievement of regulatory outcomes than through reported metrics alone. Moreover, for areas of focus that are innovative in nature or where the data to be measured is uncertain, scorecards (comprised of a metric plus a performance target) can help to build a historic baseline of data related to a specific metric and allow further evaluation before attaching a financial incentive on the path to developing a metric into a PIM.

A PIM is a metric paired with a performance target and a financial incentive. PIMs provide financial motivation for utilities to improve performance toward established outcomes, or to discourage underperformance. Through the use of a financial award or penalty, a PIM can more strongly promote achievement of a prioritized outcome than a scorecard or reported metric. Consistent with guidance in HB951, targets established for PIMs should be clearly tied to state policy goals and regulatory outcomes and should balance the

costs of achieving the target with the potential benefits to ratepayers.

The net effect of the goals-outcome hierarchy coupled with attendant, well-crafted metrics is a foundational framework that the Commission can establish to inform how it and parties evaluate a utility’s PBR application on the front end and assess the efficacy of a utility’s performance under a PBR plan after the fact.

The three-part table below illustrates what such a foundational framework could look like for North Carolina.

*Table 1. Illustrative Goals-Outcomes Foundational Framework*

Goal	Outcome	Prospective Metrics for Further Focus
Enhance Customer Experience	Affordability	-Average annual bill, by class -Average annual bill as % of income, by class -Number of disconnections, by month and class
	Reliability	-SAIDI; SAIFI; CAIDI; MAIFI; Call Center response time
	Interconnection Experience	-Time to interconnect to network, by DER and IPP -Cost to interconnect to network, by DER and IPP -Results of developer satisfaction survey, by DER and IPP -Public-facing DER interconnection dashboard
	Customer Engagement	-DR: % participation, by class -PV: % customer adoption, by class -CBRE: % participation, by class -Storage: % participation, by class -TOU: % participation, by class -TOU: % of all customers participating -Customer access to hourly or sub-hourly data -Third-party service access to customer data -Variety, quality, accessibility of customer data available

Goal	Outcome	Prospective Metrics for Further Focus
Improve Utility Performance	Cost Control	<ul style="list-style-type: none"> <li>-Total energy costs per customer and per MWh</li> <li>-Total capacity costs per customer and per MW</li> <li>-Generation assets per customer and per MW</li> <li>-Transmission assets per customer, per mile and per MWh</li> <li>-Distribution assets per customer, per mile, and per MWh</li> <li>-O&amp;M cost per customer and per MWh</li> <li>-Customer service cost per customer and per MWh</li> </ul>
	DER Asset Effectiveness	<ul style="list-style-type: none"> <li>-DR: Annual max MW reduction as % of load, by class</li> <li>-DR: MW enrolled as % load, by class</li> <li>-PV: MWh generated as % of sales, by class</li> <li>-PV: MW installed as % load, by class</li> <li>-Storage: MWh installed energy capacity as % sales, by class</li> <li>-Storage: MW installed capacity as % load, by class</li> <li>-NWS: MW as % of (peak) load</li> <li>-NWS: % customers participating</li> <li>-NWS: savings per year</li> <li>-% grid supporting services provided by DER vs. traditional</li> </ul>

Goal	Outcome	Prospective Metrics for Further Focus
Advance Societal Outcomes	Customer Equity	<ul style="list-style-type: none"> <li>-Average annual bill as % of income by LMI</li> <li>-% LMI customers participating in DR, PV, Storage, or TOU</li> </ul>
	GHG Reduction	<ul style="list-style-type: none"> <li>-Carbon Intensity: CO2e/MWh; CO2e/MW; CO2e/customer</li> <li>-Carbon intensity: sector-wide CO2e</li> <li>-System-wide fossil fuel generation (MWh per fuel type)</li> </ul>
	Electrification of Transportation	<ul style="list-style-type: none"> <li>-Number of EVs added per year</li> <li>-% of EVs in DR programs</li> <li>-% of EVs on TOU rates</li> <li>-Number of charging stations, by type</li> </ul>
	Capital Formation	<ul style="list-style-type: none"> <li>-Ratemaking return on common equity</li> <li>-Utility credit ratings</li> <li>-Utility earnings per share</li> <li>-Building permit value of DER deployed by island</li> <li>-Value of IPP contracts by island</li> <li>-Value of DR service contracts by island</li> </ul>
	Resilience	<ul style="list-style-type: none"> <li>-SAIDI, SAIFI, CAIDI response time on black sky days</li> <li>-MW of fast ramping resources</li> <li>-Microgrids: MW as % load, by class</li> <li>-Microgrids: % customers served, by class</li> <li>-Microgrids: % of critical customers served</li> </ul>

C. A Separate Proceeding Should Also Inform Design Criteria And Guiding Principles To Inform Alternative Regulatory Mechanisms.

In addition to establishing the Goals-Outcomes foundation outlined above, the AGO recommends that the Commission utilize a separate docketed proceeding to further outline and articulate guiding principles and criteria to inform alternative regulatory mechanism design within a utility’s PBR application.

Although HB951 has predetermined several elements when it comes to alternative regulatory mechanisms to be included in a utility’s PBR application,

there are numerous alternative regulatory mechanism design decisions that will need to be made in the process of developing a PBR application for Commission review. Each design decision reflects a policy determination that can materially impact customers. Adequately assessing and vetting the myriad design decisions bound up in alternative regulatory mechanism design is complex. If attempted while simultaneously evaluating all of the other aspects of a base rate case and a PBR application in the confines of a 300-day rate case timeline, important issues will likely fall by the wayside. Customers may be harmed as a result.

The Commission and parties are simply at a structural disadvantage if they are required to evaluate all potential design decisions at the same time that proposed capital investments and other aspects of a PBR application are under scrutiny. Having to assess and modify structurally deficient alternative regulatory mechanisms in the context of a PBR application review, that is, a 300-day window, will strain the resources of the Commission, Public Staff, and parties alike. A more prudent approach would be for the Commission to, prior to submission, proactively establish guiding principles and design criteria that are consistent with the aforementioned goals-outcomes framework that can help inform a utility how its prospective PBR application will be viewed by the Commission. Such an approach would enhance regulatory certainty and help specify the application review criteria to be applied.

To incorporate this recommendation into the PBR Rule, the AGO recommends expanding the provisions that describe the Adoption of Policy Goals for PBR (see AGO Appendix item # 2), and adding related filing requirements (see AGO Appendix item # 12).

IV. THE COMMISSION SHOULD ENSURE THAT CAPITAL INVESTMENT PLANS ARE PRELIMINARILY REVIEWED IN CONJUNCTION WITH THE IRP AND CARBON PLANNING PROCESS PRIOR TO A UTILITY'S PBR APPLICATION SUBMITTAL.

A utility's PBR plan and MYRP cycle should be synced and harmonized with a stakeholder-informed, integrated planning process. This is particularly true, as noted above, given the carbon plan requirements and the need to ensure efficient movement toward that carbon reduction goal. Even after development of a carbon plan pursuant to HB951, there will be a going-forward need to ensure that IRP proceedings are rationally linked to capital investments proposed in a utility's MYRP, as part of a PBR application.

Moreover, there is a strong need for the Commission and parties to have an opportunity to review proposed capital investments in advance of a utility's PBR application and proposed MYRP. A review of proposed capital investment projects, across generation, transmission, and distribution, that are expected to be included in a subsequent MYRP, will allow parties and the Commission to understand the broader strategic context in which these specific investments are placed and allow for evaluation and vetting of these investments prior to the 300-day clock beginning to run in a formal PBR application filing. Stated simply, the 300-day timeline governing the PBR application review and approval process will be far too brief to unpack all elements of a utility's PBR application – it is invariably too complex. Parties and the Commission need time to review and consider an investment plan to fully understand it and its implications for customers and the broader environment alike.

Accordingly, the AGO recommends the Commission direct utilities to

submit, in conjunction with their requisite IRP and Carbon Plan filings, a detailed capital investment plan for those projects that would be eligible and authorized for inclusion in a subsequent PBR application and proposed MYRP. See AGO Appendix item # 3. )

V. ADDITIONAL RECOMMENDATIONS IN RESPONSE TO POINTS MADE BY OTHER PARTIES IN INITIAL COMMENTS AND PROPOSED RULES.

The comments in this part respond to some specific points in proposed rules submitted by other parties.

A. Rates And Mechanisms Established In The PBR Plan Are Time-Limited.

The AGO does not agree that the rate increase established for the final year (Year 3) of a multiyear rate plan should be allowed to continue in effect if a new PBR plan has not been approved by the Commission at the end of the MYRP period. <sup>16</sup> G.S.62-133.16(f) limits a PBR plan to a period of not more than 36 months. It should not be assumed that rate increases based on forecasts for specific projects authorized in a MYRP justify ongoing rates at that level, particularly given the shorter lives of assets likely to be included as projects. Duke's initial comments noted that utilities are shifting away from building large power plants, and that PBR is appropriate as utilities make smaller and more frequent investments such as for grid improvements and for enabling distributed energy resources.<sup>17</sup> Thus, at the end of the 36 months, the rate increases allowed in the PBR plan do not support ongoing rate increases. The rate in Year

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<sup>16</sup> Public Staff's initial proposed rules in Appendix A, Rule R8-\_\_(n) would continue the MYRP rates in effect following the expiration of a MYRP until further order of the Commission.

<sup>17</sup> Duke Initial comments at 4.

3 is no longer authorized as part of a PBR plan after the plan period ends, and the base rates established through G.S.62-133 should take effect unless another plan has been authorized to take effect. All PBR mechanisms should terminate. Only the review and true up to adjust rates for riders relating back to the PBR period should be allowed. This recommendation is reflected in AGO Appendix item # 14.

Along the same lines, the AGO recommends modifying the provision proposed in Appendix A to the Public Staff's initial rules<sup>18</sup> that applies if the Commission concludes that the utility's earnings fell below the authorized return. See AGO Appendix item # 13.

B. The 4% Cap In The MYRP Is A Ceiling.

The multi-year rate plan mechanism allows rate increases during the PBR plan based on forecasts of investment costs and estimates of in-service dates.<sup>19</sup> Misuse of this mechanism will accelerate rate increases without justification, and Commission scrutiny will be critical to minimize and mitigate rate increases and address affordability. The cap is a ceiling, and the statute does not set a floor on the revenue increase that may be allowed. The Commission should modify proposals to pare them down as much as possible.

Further, the Commission should apply the 4% cap on increases so that it cannot be exceeded for any particular customer class. For example, a 5% or 6% increase for residential customers should not be allowed even if the overall increase meets the 4% cap.

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<sup>18</sup> See Public Staff Appendix A, proposed Rule R8-\_\_(j)(5)f.

<sup>19</sup> See N.C.G.S. § 62-133.16(e)(1)a.

This recommendation is reflected in AGO Appendix item # 9.

C. Decoupling.

The AGO has several recommendations related to the decoupling mechanism.

1. Reduced Risk.

At a high level, we note that the decoupling mechanism structure outlined by the statute is very favorable to the utility at the expense of customers. For example, decoupling only applies to the residential class, and the utility continues to have a strong incentive to sell energy (throughput) and capacity to its bigger customers, which undermines the intention to “break the link between an electric public utility’s revenue and the level of consumption” through adoption of decoupling.<sup>20</sup> Additionally, eliminating EV sales from the mechanism directly conflicts with the purpose of decoupling and only provides financial upside to the utility.<sup>21</sup> These design characteristics conspire to lower risk for the utility and improve its financial stability and outlook. Accordingly, the return on equity will need to be closely examined and likely be lowered to reflect the new risk profile of a utility under a PBR plan.<sup>22</sup>

2. NLR Adjustment.

When the decoupling mechanism takes effect for residential customers, there is no justification to continue to include incentives that recover “net lost revenues” through the Demand-Side Management/Energy Efficiency (EE/DSM) rider. Decoupling is an alternative way to protect the utility from reductions in

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<sup>20</sup> See the definition in N.C.G.S. § 62-133.16(a)(2) and the description of the mechanism in (c)(2).

<sup>21</sup> *Id.*

<sup>22</sup> See N.C.G.S. § 62-133.16(c)

revenues that occur as consumption is reduced in EE/DSM measures. The net lost revenues incentives collected through the EE/DSM rider should be eliminated for residential customers when the decoupling mechanism takes effect. Duke's proposed rule recognizes the need for an adjustment.<sup>23</sup>

The AGO recommends simply eliminating the collection of net lost revenues from residential customers through the DSM/EE rider while decoupling is effective to avoid ambiguity about what adjustment might apply if the adjustment for decoupling is different than the adjustment based on net lost revenues in particular review years.

This recommendation is reflected in AGO Appendix item # 6.

### 3. EV Adjustment.

Public Staff proposed Rule (e)(1)(f)(i) (Appendix A, page 5) requires the utility to submit "a method for distinguishing kWh sales associated with EVs and the residential class as a whole and provide an explanation of how those EV sales will be treated." The AGO opposes any proposal that would exclude consumption from the calculations for the decoupling mechanism based on *an estimate* of EV-related consumption. The statute allows the following narrow exception: "The electric public utility may exclude rate schedules or riders for electric vehicle charging. . . ." <sup>24</sup> We recommend omitting Rule (e)(1)(f)(i) entirely or using language that strictly limits a decoupling adjustment for EV.

This recommendation is reflected in AGO Appendix item # 5.

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<sup>23</sup> See Duke's proposed Rule R1-17(m)(5)(b).

<sup>24</sup> See N.C.G.S. § 62-133.16(c)(2).

#### 4. Fuel Costs.

Public Staff proposed Rule (e)(1)(a) (Appendix A, page 5) requires the utility to file the applicable residential rate schedules “and riders” eligible to be affected by the decoupling. However, the statute is very specific and does not mention that adjustments for changes in fuel costs may be reflected in the targets established in the PBR case.<sup>25</sup> Decoupling shifts considerable risk from the utility to residential customers and the Commission would shift some risk back to the utility by fixing the fuel costs over the three-year period. Not allowing fuel adjustments during the multi-year rate plan would also encourage the utility to rely on resources that have more predictable energy costs.

#### 5. Revising The Base Monthly Charge.

The AGO supports the North Carolina Justice Center’s suggestion that - when decoupling is implemented - rates should be designed to either shift cost recovery from the base charge to usage charges or to lower the charge for the initial block of usage.<sup>26</sup> Lowering the base monthly charge encourages energy efficiency and helps keep service more affordable by giving customers more control on reducing their cost. This recommendation is reflected in AGO Appendix item # 7.

#### D. The Technical Conference.

HB951 requires the Commission to adopt parameters in the PBR rule for a 60 day technical conference process to be conducted prior to a submission of any PBR application. The process must include one or more public meetings at

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<sup>25</sup> *Id.*

<sup>26</sup> See the initial comments of the North Carolina Justice Center, et al. at 14.

which the utility presents information about projected transmission and distribution expenditures for comment and feedback from interested parties. See G.S. 62-133.16(j)(3). Otherwise, the purpose for the technical conference is not specified, and there is no indication that the intent is to narrow the Commission's oversight of PBR proposals or proposals to carry out the carbon plan or integrated resource planning processes. The technical conference should not displace a thorough review of utility proposals that are submitted in the PBR application, and should cross-reference where the proposals appear in the utility's carbon and integrated resource plan.

Further, in order to provide a meaningful opportunity for comment and feedback about the presentation, the AGO recommends that the rule require the utility to pre-file a power-point or other document that will be presented well in advance of the public meetings.

This recommendation is reflected in AGO Appendix item # 4.

E. Notice.

The AGO recommends a clarification to Public Staff proposed Rule R8-\_\_\_(f)(3) on Appendix A pages 13-14 so that the notice to customers states both what PBR adds to the utility's revenue requirement and what the total proposed revenue increases (base plus PBR increments) are for years 1, 2, and 3.

Further, the notice should state the impact that the increases for years 1, 2, and 3 will have on average residential customer bills (both the PBR addition and the total including the base rate increase plus the proposed step increases in the PBR for years 1, 2, and 3.)

This recommendation is reflected in AGO Appendix item # 11.

F. Commission Review Of A PBR Prior To Its Expiration.

The AGO supports the Public Staff's proposed rule in subpart (m) regarding the review of a PBR by the Commission prior to its expiration. (See Public Staff Appendix page 22). Duke's proposed rule on this point does not track the statute. (See Duke (6)(b).) The Statute allows review "with good cause," and, upon motion of the Commission or petition by the Public Staff, the Commission "may examine the reasonableness of an electric public utility's rates under a plan, conduct periodic reviews with opportunities for public hearings and comments from interested parties, and initiate a proceeding to adjust base rates or PIMs *as necessary*." N.C.G.S. § 62-133.16(e) (emphasis added).

Performance-based regulation is new and the Commission's authority to address concerns that may arise should not be narrower than the statute allows.

G. No Order In 300 Days.

Duke proposes that the PBR rule require deferral of requested rates plus carrying costs if it takes longer than 300 days for the Commission to decide the PBR application. (See Duke (6)(d).) This proposal should be rejected, as there is no statutory provision that authorizes such a deferral. Duke may request temporary rates, and it may place rates into effect after the deadline for a decision passes. Further, Duke has not shown the need to address this concern in a rule rather than by motion should extenuating circumstances arise. Duke is protected by the provision that allows rates to take effect after 300 days, and once the Commission establishes rates, customers may petition for refund of the excess charged in the interim pursuant to N.C.G.S. § 62-132.

## VI. CONCLUSION

The AGO respectfully recommends the following:

1. PBR rules should prioritize performance-based ratemaking proposals that are optimal in timing and generation and resource mix for advancement of the carbon plan and effective for integrated resource planning purposes.
2. A separate proceeding should be convened for the purpose of establishing clear policy goals and outcomes.
3. Capital investment plans should be preliminarily reviewed in conjunction with the IRP and carbon planning process prior to a utility's submission of its PBR application.
4. The AGO's other recommendations from Part IV above be reflected in the PBR Rules.

Respectfully submitted, this the 17<sup>th</sup> day of December, 2021.

/s/ Margaret A. Force  
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CERTIFICATE OF SERVICE

The undersigned certifies that she has served a copy of the foregoing REPLY COMMENTS AND RELATED PROPOSED RULES OF THE ATTORNEY GENERAL'S OFFICE upon the parties of record in this proceeding by email, this the 17<sup>th</sup> day of December, 2021.

/s/  
Margaret A. Force  
Special Deputy Attorney General

Rule R8-\_\_\_\_\_. PERFORMANCE BASED RATEMAKING.

AGO item # 1 (See page 1 in Appendix A to Public Staff Initial Comments):

- (a) Purpose. – The purpose of this rule is to establish procedures and guidelines for the implementation of performance-based regulation of electric public utilities consistent with N.C. Gen. Stat. § 62-133.16. Priority will be given to performance-based ratemaking proposals that are optimal in timing and generation and resource-mix for advancement of the utility’s carbon plan and effective for integrated resource planning purposes.

AGO item # 2 (See page 3 in Appendix A to Public Staff Initial Comments):

(c) Adoption of Policy Goals for PBR

- (1) By April 1, 2022, and no later than every three years thereafter, interested parties may propose policy goals and regulatory outcomes in a generic docket initiated by the Commission ~~for the purpose of setting policy goals that PIMs proposed in a MYRP may target~~ to inform Commission and party evaluation of utility PBR plans. The Commission shall adopt a list of goals and outcomes that PBR Applications should seek to achieve.
- (2) ~~Each proposed policy goal must be clearly defined, be measurable with a defined performance metric or set of metrics, entail a desired outcome, and be solely or primarily within the electric public utility's control. The proposed policy goal should indicate how it would address operational efficiency, cost savings, or reliability of electric service beyond that which is already required by State or federal law or regulation, including standards the Commission has established by order prior to and independent of a PBR application. The Goals and outcomes should be consistent with one or more of the criteria set forth in HB 951, in addition to other criteria deemed appropriate by the Commission.~~
- (3) ~~Each recommended policy goal shall be accompanied by:~~  
a. ~~A clear statement defining and explaining the policy goal;~~

- ~~b. an explanation as to why the goal is appropriate;~~
  - ~~c. suggested metrics for measuring success in achieving the goal;~~
  - ~~d. a timeline to achieve the policy goal. Any policy goal extending beyond one year must also include incremental annual achievement targets; and~~
  - ~~e. supporting analyses, workpapers, modeling, and any other information needed to provide reasonable justification for implementing the policy goal.~~
- (4) Upon a showing of good cause by any party, or upon the Commission's own motion, policy goals may be reviewed at any time. Upon notice and hearing, the Commission may consider and adopt modifications to the list adopted pursuant to subsection (c)(1). Proceedings to modify the list adopted pursuant to subsection (c)(1) may be initiated by the Commission or via a petition filed with the Commission.
- (5) The Commission shall publish the approved list of goals and outcomes pursuant to subsection (c)(1) on its website.
- (6) The list of goals and outcomes that are in place at the time of approval of a PBR Application remain in effect for the duration of that plan unless otherwise ordered by the Commission.

AGO item # 3:

new (c1) Authorization of Investments for PBR

The electric public utility must demonstrate that investment projects proposed for authorization during the multi-year-rate plan advance the optimal timing and generation and resource-mix for achieving the least cost path to compliance with authorized carbon reduction goals and integrated resource plans.

- (1) For each proposed capital spending project, the PBR project plan shall reference and explain how the project ties to the utility's IRP and Carbon Plan and the optimal timing for the project in light of the overall IRP and Carbon Plan. Projects that advance a utility's Carbon Plan will be given priority.
  
- (2) As part of the initial Carbon Plan proposal filed May 16, 2022 for Duke Carolinas and Duke Progress, and as part of the Integrated Resource Plans filed by all electric public utilities hereafter, an investment project plan shall be included that describes planned investments over five or more years and provides the following:
  - a. A detailed description of all discrete and identifiable capital spending projects that may be proposed for authorization as part of a multi-year rate plan and dates when projects are expected to be placed into service;
  
  - b. A brief description of the capital spending projects and completion dates for projects the electric public utility plans to complete during the years following the multi-year rate plan period;
  
  - c. An explanation of the reason that the proposed timing and resource selection is optimal.
  
- (3) Interested parties may comment on the utility proposals and submit alternative investment project proposals both as part of the Carbon Plan development and IRP processes and as part of the PBR rate case.

AGO item # 4 (See page 4 in Appendix A to Public Staff Initial Comments):

(d) Technical Conference

- (3) At least 60 days prior to the public meeting(s) ~~At the public meeting(s),~~ the electric public utility shall pre-file a presentation that includes the following information regarding projected transmission and distribution expenditures:

AGO item # 5 (See page 4 in Appendix A to Public Staff Initial Comments):

(e) PBR Application

(e)(1)f. Electric Vehicle (EV) Sales and Rates

- i. ~~A method for distinguishing kWh sales associated with EVs and the residential class as a whole and an explanation of how those EV sales will be treated.~~

AGO item # 6:

- new (e)(1)g. The proposed method for revising the recovery mechanism for Energy Efficiency/Demand-Side Management cost recovery to eliminate the recovery of “net loss revenues” from residential customers effective when the decoupling mechanism takes effect.

AGO item # 7:

- new (e)(1)h. The utility’s proposals for reducing the base charge and shifting costs to usage charges or lowering the charge for the initial block of usage.

AGO item # 8 (See page 8 in Appendix A to Public Staff Initial Comments):

- (e)(2)l. Projected costs (including the ranges and degrees of precision of the costs) and related workpapers associated with the proposed known and measurable set of Capital Spending Projects for each rate year of the MYRP, including:

A detailed statement explaining why the Capital Spending Project proposal is optimal in its timing and resource selection to advance the utility's carbon plan and effective for resource planning purposes. The statement should reference where the Capital Spending Project proposal is identified in the utility's carbon and integrated resource plans.

AGO item # 9 (See page 10 in Appendix A to Public Staff Initial Comments):

new (e)(2)t. A 4% cap on revenue increases during a multi-year rate plan shall apply overall and for each rate class.

AGO item # 10 (See page 10 in Appendix A to Public Staff Initial Comments):

(e)(3). Shall file, as part of its PBR Application, testimony and exhibits that include:

a. An analysis of the impact of the proposed MYRP, that demonstrates that it would, if approved:

Advance the utility's carbon plan and integrated resource plan and be optimal in the timing and resource selections. The discussion should describe the coordination between the proposals in the MYRP and the carbon and integrated resource plans.

AGO item # 11(See page 13 in Appendix A to Public Staff Initial Comments):

(r) Procedure upon the filing of a general rate case that includes a PBR application

(f)(3) An electric public utility shall provide notice of the pending PBR application to the same extent as provided in G.S. § 62-134(a). The notice shall include the following statement:

### Performance Based Regulation

This filing also includes a request for approval of a Performance Based Regulation (PBR) application pursuant to G.S. § 62-133.16 and Commission Rule R8-. Specifically, the application includes (1) a Multiyear Rate Plan, which would allow the Company to collect base rates for a multiyear period no greater than 36 months; (2) an Earnings Sharing Mechanism that would require a refund to customers of surplus earnings over a certain threshold over the multiyear period; (3)

a Decoupling Ratemaking Mechanism that would allow the Company to refund or collect amounts based on any difference between actual and projected

residential customer revenues; and (4) one or more Performance Incentive Mechanisms that would penalize or reward the Company based on its achievement of Commission approved policy goals. [if the PBR

application contains other alternative regulatory mechanisms, the notice must include a short, plain statement explaining those proposed mechanism(s)].

In this PBR application, the Company has requested that the Commission allow it to recover additional total service revenues of \$ \_\_\_\_\_ in year one, \$ \_\_\_\_\_ in year two, and \$ \_\_\_\_\_ in year three. Together with the request to increase base rates, the total proposed increase in revenues would be \$ \_\_\_\_\_ in year one, \$ \_\_\_\_\_ in year two, and \$ \_\_\_\_\_ in year three. If the

PBR application is approved, the average monthly electric bill for a typical residential customer (based upon monthly electric usage of kWh/kW) would ~~be~~ rise to \$ \_\_\_\_\_ in year one, \$ \_\_\_\_\_ in yeartwo, and \$ \_\_\_\_\_ in year three for the PBR amounts, and the total increase to the average monthly electric bill including the increase to base rates plus the PBR increase would be \$ \_\_\_\_\_ in year one, \$ \_\_\_\_\_ in year two, and \$ \_\_\_\_\_ in year three.

AGO item # 12 (See page 15 in Appendix A to Public Staff Initial Comments):

new (h1) On review of a PBR application, the Commission will evaluate for each proposed alternative regulatory mechanism and alternative ratemaking plan, whether the utility has demonstrated that it:

- (1) Delivers exceptional electric utility performance across Commission-established policy goals and regulatory outcomes, as measured by attendant metrics;
- (2) Aligns an economically viable utility model with state public policy including reduction of greenhouse gas emissions;
- (3) Provides for just and reasonable rates that are comparable to rates established pursuant to G.S. 62-133;
- (4) Enables electric service options that provide value to customers without imposing incremental net costs to customers;
- (5) Fosters statewide improvements to the economic and operational efficiency of the electrical grid;
- (6) Furtheres the public interest, including, without limitation, the promotion of safe, economic, efficient, and reliable electric service to all customers of the electric utility;
- (7) Enhances the resilience and security of the electrical grid while addressing concerns regarding customer privacy;
- (8) Strikes a balance of risk sharing between customers and the electric utility that recognizes the electric utility's enhanced position to manage said risks in a manner aligned with the public interest;
- (9) Facilitates the research and development of innovative electric utility services and options to benefit customers;
- (10) Ensures low income household interest and historically underserved communities' interests are meaningfully considered and that their economic interests are addressed.

AGO item # 13 (See page 20 in Appendix A to Public Staff Initial Comments):

(j)(5)f. If the Commission concludes that the utility's earnings fell below the low-end of the band of authorized returns established by the Commission, and the utility provided notice of its intent to file a general rate case pursuant to subsection (j)(2)i of this section, ~~following the current year of the MYRP,~~ rates will continue at the level set for the current MYRP rate year established in the PBR pending the earlier of the end of the 36 month MYRP or pending the outcome of the next general rate case.

AGO item # 14 (See page 22 in Appendix A to Public Staff Initial Comments):

(n) Rates following Expiration of PBR Ratemaking Mechanisms – At Following the expiration of the multiyear plan period, the PBR increments shall cease and base rates established pursuant to G.S. 62-133 shall be placed in effect ~~the rates for the current MYRP rate year shall remain in effect~~ until further order of the Commission.

# Matthew McDonnell

## Managing Director of US Consulting

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### Education

**JD, James E. Rogers College of Law**  
University of Arizona, 2011

**BA, Finance**  
Michigan State University, 2006

### Work Experience

#### Managing Director of US Consulting

Strategen / Tucson, AZ / 2020 - Present

- + Regulatory attorney and policy innovation subject matter expert leading Strategen US Consulting practice.
- + Supports private- and public-sector clients across emergent areas of electric grid transformation including energy storage, power system planning, rate design, grid modernization, DERs, and the development of new utility business models (PBR). Leverages prior experience as a state regulator to deliver valuable insights to clients.

#### Associate Director

Navigant Consulting, Energy Practice / Honolulu, HI / 2019 - 2020

- + Supported electric utilities, energy companies, and regulators across numerous domains, including energy storage, power system planning, rate design, grid modernization, distributed energy resources, and development of new regulatory and business models.

#### Commission Counsel

Hawaii Public Utility Commission / Honolulu, HI / 2015 - 2019

- + Led or supported numerous efforts involving power system planning, grid modernization, renewables integration, distributed energy resources, demand response, electrification of transportation, and performance-based regulation (PBR).
- + Served prominent role in Hawaii's groundbreaking PBR docket.
- + Led team through process design, workshop facilitation, and execution of docket.
- + Supported various innovative programs that earned Hawaiian Electric Companies SEPA's 2018 Utility of the Year.

#### Senior Regulatory and Policy Analyst

Economic and Human Dimension Research Associates / Tucson, AZ / 2011– 2015

- + Provided clients financial and policy analysis pertaining to the energy industry.

# Matthew McDonnell

## Managing Director of US Consulting

### Selection of Relevant Experience

#### District of Columbia Office of the People's Council

Consumer-centric deep decarbonization strategy / 2021 – Present

- + Matt is leading Strategen's engagement with the DC OPC to co-develop several decarbonization scenarios informed by the local context and stakeholder input. Strategen is also providing a multi-sectoral analysis to highlight the cost effectiveness of different deep decarbonization pathways for the District.

#### Hawaii Public Utilities Commission

Community solar program design and analysis / 2020 – Present

- + As a leading architect of the Community-Based Renewable Energy Program for the State of Hawaii, Matt advises and supports the HPUC in its efforts to design and implement a robust community solar program to meet the unique needs of Hawaii's island grids.

#### Sacramento Municipal Utility District

Virtual net metering tariff design and analysis / 2020 – Present

- + Matt supported SMUD in outlining a VNEM tariff framework and constructed a financial model to evaluate the customer value proposition for the proposed tariff as well as a comparative look at other California IOUs' VNEM program offerings.

#### Pacific Northwest National Laboratory

Planning considerations for energy storage in resilience applications / 2020

- + Matt served as a co-author on a report with PNNL that, among other elements, identified key resilience themes impacting high-renewables grids and outlined four common principles shared by successfully deployed resilience projects: (1) resilience benefits are hyperlocal; (2) project feasibility is achieved by providing grid services; (3) local value drives each project; and (4) energy storage is a key enabling technology in resilience applications.

#### Energy Systems Integration Group

An open networks project for the United States to facilitate reliable, efficient integration of DERs into the Electric Power System / 2021 – Present

- + Matt is leading a consortium of subject matter experts to assess the DER integration issues across a variety of jurisdictions in the US, evaluate lessons learned from the UK and Australia Open Networks approaches to determine what may be applicable to the US, convene sustained discussions among relevant stakeholders on DER integration approaches, and develop consensus recommendations on how to maximize the potential of DERs in US power systems and wholesale markets.

#### Connecticut Public Utilities Regulatory Authority

Innovation pilots framework (regulatory sandbox) / 2020 – Present

- + Matt is leading a team to design and implement a regulatory framework and process that can create space for innovation and facilitate deployment of a wide array of innovative technology applications and customer programs.

# Matthew McDonnell

## Managing Director of US Consulting

### Publications

Electricity Regulation for a Customer Centric Future. Report prepared by Guidehouse for Edison Electric Institute. 2020.

JB Twitchell, SF Newman, RS O'Neil, MT McDonnell. 2020. Planning Considerations for Energy Storage in Resilience Applications - Outcomes from the NELHA Energy Storage Conference's Policy and Regulatory Workshop. PNNL-29738, Pacific Northwest National Laboratory, Richland, WA

John A. "Skip" Laitner, Benoit Lebot, Matthew McDonnell, and Meagan Weiland. 2018. Smart Policies and Programs as Critical Drivers for Greater Energy Efficiency Investments. Analytical Manuscript prepared for International Partnership for Energy Efficiency Cooperation (IPEEC).

John A. "Skip" Laitner, Matthew McDonnell, and Ryan Keller. 2015. ICT-Enabled Intelligent Efficiency. Report prepared for Digital Energy and Sustainability Solutions Campaign (DESC).

### Presentations

Matthew McDonnell (2019). AEE 2nd Annual Public Utility Commissioners Forum. Invited as an expert to speak on distribution system planning and performance-based regulation.

Matthew McDonnell (2019). NARUC Annual Meeting, San Antonio. Invited to present on a panel moderated by NRRI, Susie Mora of Exelon, and Commissioner Abigail Anthony of Rhode Island, entitled "Performance-Based Regulation: Helping to Enable a Customer-centric Future."

Matthew McDonnell (2019). GridFWD. Invited to moderate a panel with representatives from Avista, Uplight, and Hawaiian Electric, entitled "Innovation and Regulation."

Matthew McDonnell (2019). Hawaii Energy Conference. Invited to moderate panel with Hawaii Governor David Ige, California PUC President Michael Picker, Hawaii Commissioner Jennifer Potter, and Rhode Island Commissioner Abigail Anthony, entitled "Moving Away from Convention: Innovations in Regulatory Policy."

Matthew McDonnell (2018). Maui Energy Conference. Invited to moderate panel entitled "Regulating Carbon: The Best Solutions."

# Matthew McDonnell

Managing Director of US Consulting

## Leadership and Committee Experience

### U.S. Dept. of Energy, Grid Modernization Lab Consortium

IEEE 2030.5 Ecosystem Steering Committee Member / 2018 – 2019

- + Pursuant to GMLC multi-year research plan to accelerate modernization efforts pertaining to information and communications interoperability, invited to develop roadmaps that advance ease of integration of IEEE 2030.5.

### Smart Electric Power Association (SEPA)

Transactive Energy Working Group Member / 2018-2019

- + The Transactive Energy Working Group develops tools and techniques that advance the understanding and application of transactive energy concepts to enable high penetrations of DER that are supported by intelligent economic market structures, standards, and regulations within the electric sector. Key objectives include integration of DER with an emphasis on distribution-level operations and integration of behind-the-meter customer DER (including demand flexibility); coordination of resources to improve system efficiency; providing grid ancillary services including ramping and balancing; and management of congestion.

### U.S. Dept. of Energy, National Renewable Energy Laboratory, Solar Energy Innovation Network (SEIN)

NARUC Advisory Committee Member / 2018 – 2019

- + Participated as Advisory Committee member on NARUC's SEIN project with PJM Interconnection and Converge Strategies LLC to examine potential for new opportunities for solar energy to make our energy supply both more environmentally friendly and more resilient to natural disasters, cyber and physical attacks, and other emerging threats. In particular, the project looked at the resilience benefits of solar plus storage from a regulatory and markets perspective.

### NARUC – Jamaica Office of Utilities Regulation

NARUC Coordinator, Distributed Generation Working Group / 2018 – 2019

- + Participated as NARUC member expert to lead Distributed Generation working group, which discuss and peer review documents via email, hold webinars and conference calls on pertinent topics and other activities as relevant.