

**Question:** How do we better align utility incentives with desired clean-energy outcomes while protecting ratepayers and maintaining the financial health of utilities?

**Nature of the Policy Tension in NC:** Utilities are under a legal mandate to provide adequate, reliable and economical utility service. At the same time, utilities must comply with state clean-energy mandates in the Renewable Energy and Energy Efficiency Portfolio Standard (REPS) and H589 Competitive Energy Solutions for NC. Utilities also must comply with environmental mandates such as the Clean Smokestacks Act. The state also has environmental policy objectives, such as to cut carbon emissions pursuant to EO 80. The October 2018 special report on global warming by the Intergovernmental Panel on Climate Change states that limiting global warming to 1.5 degrees Celsius above pre-industrial levels would substantially reduce its destructive impacts, and that to do so global net human-caused emissions of carbon dioxide (CO<sub>2</sub>) would need to fall by about 45 percent from 2010 levels by 2030, reaching “net zero” around 2050. There is a tension between utilities’ incentives and statutory mandate, protecting ratepayers, and clean-energy objectives.

The following matrix identifies elements of the current utility business model that may inhibit progress toward EO 80 and clean energy goals, as well as corresponding potential tools to foster clean energy. The group agrees that the design of any tool affects how and whether it supports clean energy deployment, utilities’ financial health, and ratepayers. In other words, the “how” matters. The tools identified are not mutually exclusive. The tools will interact and affect one another’s performance, and the efficacy of any single tool can be either strengthened or weakened by other tools implemented, further adding to the importance of how the tools are constructed and implemented. These tools have been used and/or discussed in other jurisdictions and could be explored more in a stakeholder process here. However, due to regional differences, what has worked in another state might not work here; no tool is ready to copy from another jurisdiction and simply “plug and play.” The actor tasked with establishing any given tool could vary, and some tools might require more than one actor. The tools are not listed in ranked order. The UBM Group recognizes that utilities are opposed to full-scale retail-choice deregulation and does not address it here.

We recommend convening a broad stakeholder group to explore these issues and tools further, and produce a comprehensive plan that clearly defines targets and aligns utility incentives and mandates in order to meet them. The group identifies the tools listed below as worthy of further investigation, but the list is not exhaustive, and inclusion of a tool here does not imply endorsement by the individuals or organizations that participated in this working group discussion.<sup>1</sup>

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<sup>1</sup> While the UBM group was unable to achieve unanimity on all points, elements, and tools addressed in this memo, the utility participants recognize that this small group discussion about balancing clean energy outcomes with customer (or member) protections and maintaining the financial health of utilities - including IOU, cooperative and municipal utilities - has been a valuable one and they look forward to continuing this conversation to find areas of alignment among stakeholders. North Carolina’s Electric Cooperatives (NCEC) welcome the opportunity to continue working with all stakeholders to develop energy solutions that benefit our state’s citizens and communities, including the rural communities served by North Carolina’s 26 electric cooperatives. Going forward, NCEC is committed to balancing affordability, reliability, and the following three values: (1) Creating a low-carbon emissions environment for our state and its citizens through sustainability and continued investment in low- and zero-emissions resources; (2) integrating technology that makes distribution grids more resilient, robust and flexible for an energy future that includes consumers’ participation through demand response programs and new energy resources distributed across the grid; and (3) improving efficiency of the overall energy sector by electrifying processes formerly powered by fossil fuels, with electric vehicles being a primary example of this type of beneficial electrification.

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<b>Element</b>	<b>Tool</b>
Utilities must maintain their financial health.	Amend Chapter 62 of the N.C. General Statutes to allow NCUC to consider additional objectives such as carbon reduction. Chapter 62 is where the rules governing utilities appear in statutes.
Absence of carbon reduction requirement or price signal outside of EO 80.	Pass a new law, like a Clean Smokestacks 2.0, that would establish a carbon reduction requirement or price signal, e.g., cap and trade or carbon tax or clean energy standard (e.g., zero-emission credits (ZECs)). It should include a clear definition of “clean energy” (e.g., whether to include nuclear, biomass, large hydro, geothermal, renewable natural gas (e.g., from swine facilities, landfills and wastewater treatment plants)).
Better align consumer incentives with clean energy deployment goals	Use innovative rate design to encourage customer behavior that helps achieve clean energy goals, such as “clean peak” generation and storage deployment. E.g., rates that incorporate value of distributed energy resources (VDER), time-varying rates, electric vehicle (EV) rates.
Recovery of most costs (including most fixed costs) through per-kilowatt-hour sales results in incentive to sell more electricity regardless of carbon intensity (the “throughput incentive”).	<p>Performance-Based Ratemaking (PBR) (potentially including but not limited to multi-year rate plans (MYRP), and performance incentive mechanisms (PIMs))</p> <p>Calculator to measure carbon intensity of grid power</p> <p>Beneficial electrification. E.g., more electric-vehicle supply equipment (EVSE), potentially via a Low-Carbon Fuel Standard (LCFS); electric water heaters; heat pumps; etc.</p> <p>Revenue decoupling</p> <p>Shared savings mechanisms for energy efficiency and demand-side management</p>
IOU ratemaking is backward-looking rather than forward-looking. Traditional cost-of-service, “rate-base, rate-of return” ratemaking results was designed to support large investments in utility-owned infrastructure (the phenomenon of “capital	<p>Alternative cost recovery/ratemaking tools such as PBR (potentially including but not limited to MYRP, PIMs)</p> <p>Revenue decoupling</p>

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<p>bias”) and results in an incentive to do so.</p>	<p>Shared savings mechanisms</p> <p>New procurement models. E.g., green tariffs (already exploring with Green Source Advantage (GSA)), competitive solicitations (already exploring with Competitive Procurement of Renewable Energy (CPRE) program), aggregating DERs to provide services (e.g., bring your own device (e.g., batteries, thermostat))—there is tension re who aggregates, utilities or 3<sup>rd</sup> parties.</p>
<p>Recovery of large capital investments through general rate cases may result in less timely cost recovery than desired by the utility (“regulatory lag”)</p>	<p>PBR (potentially including but not limited to MYRP, PIMs, formula rates)</p>
<p>Inability to recover costs of accelerated retirement of utility assets that are carbon-intensive and more costly for rate-payers</p>	<p>Securitization</p> <p>Accelerated depreciation</p> <p>Just-transition funds (considering both job loss and tax base)</p> <p>Retirement-linked green bonds (IOUs already have this option)</p>

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