



# NARUC Regulators' Roundtable on Adapting Infrastructure Planning to Decarbonization Goals

*December 2021 – April 2022 Convenings | July 2022 Summary*

## OVERVIEW

In November of 2021, the National Association of Regulatory Utility Commissioners (NARUC) convened a Regulators' Roundtable series to share information on adapting infrastructure planning to meet decarbonization goals. An increasing number of state legislatures are directing public utility commissions (PUCs) to implement regulations supporting the decarbonization of all energy infrastructure under their jurisdiction. For many years, commissions have been working with electric utilities and stakeholders to chart paths towards state targets for renewable electricity and greenhouse gas reductions. With emerging legislation directing PUCs to explicitly consider the carbon impacts from liquid and gaseous fuels for heating and other uses, this is a challenging new area for commissions to navigate and an opportunity for members to learn from one another.

To guide the sessions, NARUC adopted several objectives for the roundtable series prior to the first convening.

1. Explore the potential impacts of emerging state decarbonization policies on utility infrastructure planning;
2. Assess the scope of challenges faced by utility regulators in overseeing ratepayer investments in utility infrastructure to reduce the risk of conflict with long-term decarbonization goals and the potential for stranded assets; and
3. Facilitate peer-sharing among state utility regulators regarding commission processes, information needs, and strategies.

## *Method & Audience*

The Regulators' Roundtable was planned as a series of virtual peer-sharing sessions exclusively for NARUC commissioners and supporting staff, facilitated by the NARUC Center for Partnerships & Innovation (CPI). NARUC staff identified participants through research on state decarbonization policies and discussions with state members. NARUC CPI staff drafted anonymized summaries from each session and developed this overarching summary at the conclusion of the series.

## *Timeline and Activities*

NARUC convened three peer sharing sessions as part of the roundtable in December 2021, March 2022, and April 2022. The first session focused on defining the challenge of adapting infrastructure planning to meet decarbonization goals. The second session identified data and stakeholder engagement needs for these planning efforts. The third session explored potential paths forward and how success might be measured. Each of these meetings is summarized in greater detail in the following sections.

**SESSION #1, DECEMBER 2021: DEFINING THE CHALLENGE**

*How might state decarbonization policies impact the energy sector – particularly for liquid and gaseous fuels? What are emerging decarbonization-related responsibilities or requirements for state public utility commissions?*

Decarbonization targets tend to originate from state statute. Generally, these statutes have both interim and final deadlines, with varying baseline years. In states where legislatures did not come to an agreement on a decarbonization statute, some governors have issued executive orders establishing decarbonization targets. The scope of these decarbonization efforts differs by state, with many states reporting statutory economy-wide decarbonization targets which impact all sectors.

Commission participants reported that electric utility decarbonization has been an ongoing effort for years. More recently, statutes have focused on the natural gas and/or transportation sectors, which provides a new set of challenges and uncertainties for commissions. A few statutes ordered commissions and/or utilities to join Regional Transmission Organizations (RTOs) by a specified deadline to facilitate decarbonization goals, and impacted commissions have started exploring options to comply with these statutes.

Many commissions discussed differences in electric and natural gas utility regulation as well as challenges working with risk-averse regulated utilities. Electric utility decarbonization is generally seen as less challenging than decarbonization in other sectors due to widely available, cost-competitive renewable energy and energy storage technologies. Decarbonization technologies for the natural gas, transportation, and industrial sectors are less mature than electric technologies. Further, natural gas utilities tend to have fewer regulatory long-term planning processes in place compared to electric utilities. Some states voiced an expectation that future statutes would include requirements for natural gas utilities to file long-term resource plans similar to integrated resource plans filed by electric utilities.

One issue discussed by the roundtable group was the challenge stranded assets pose in planning processes. Commissions see their role in planning as clearly conveying the risk of stranded assets to utilities. Utilities can in turn minimize losses by planning ahead and considering financial and technological strategies to mitigate costs. While decarbonization targets may have several decades into the future, commissions want to initiate conversations with utilities and bring stakeholders to the table today to reduce potential financial risks to ratepayers down the road.

Commissions generally see two paths forward for economy-wide decarbonization:

- a. continued long-term use of liquid and gaseous fuels with gradual introduction and eventual universal use of low-carbon options that leverage existing infrastructure, or
- b. a gradual decline in the use of carbon-intensive fuels as fuel-dependent end uses are electrified.

In the former case, natural gas infrastructure will be used and useful over the long term; in the latter, it will not. Commissions need to develop clarity on which path to pursue so that they can make public interest decisions related to investments in natural gas infrastructure today (e.g., connections to new customers, safety-related inspections and repairs, and pipeline modernization and replacement programs).

*Are commissions facing or anticipating the need to adapt regulatory decision-making processes to align with state decarbonization policies? What processes and proceedings are affected/involved?*

Several commissions have opened fact-finding investigations on decarbonization goals or the future of natural gas service. Fact-finding investigations both improve information available to the commission and highlight areas of uncertainty or disagreement among stakeholders without the formality of a litigated or adjudicated proceeding. While some commissions have received mandates from their state to open these investigations, other commissions opened investigations to highlight for policymakers that regulators are unsure how to proceed or need statutory direction to act.

Commissions have a variety of different approaches to addressing infrastructure planning efforts and decarbonization goals. Some commissions are required by statute to produce a report to the legislature on pathways for achieving greenhouse gas (GHG) reductions. Some commissions have revisited or plan to reexamine natural gas line extension policies, rethinking how new gas service is paid for by ratepayers. Many commissions reported that they expected to review utility plans for beneficial electrification, clean heat, or other decarbonization processes in the coming year. Some commissions were unsure what types of new plans they should be requesting from utilities to meet decarbonization goals beyond what is already required under commission rules.

In some states, commissions reported participating in cross-cutting activities across state governments. Commissions reported participation (but not necessarily leadership) on initiatives implemented to reach statutory decarbonization goals. These initiatives included emissions cap-and-trade programs, air quality goals, transportation electrification infrastructure, and building emissions reduction programs. State environmental, air quality, public health, and energy offices were named as frequent lead agencies and collaborators in these processes.

*What resources or assistance would be helpful for commissions as they work toward decarbonization goals?*

**Commission and consultant staff to expand commission bandwidth**

All participants reported feeling short-staffed and concerned about their commission's ability to meet the requirements being placed on them in these investigatory, path-setting, and decision-making roles. Commissions felt that technical assistance (e.g., from U.S. Department of Energy / National Laboratories) was valuable generally, but insufficient for these types of proceedings, and preferred long-term, dedicated expertise from added commission or consultant staff. Some commissions were provided with additional resources as part of decarbonization statutes, while others had to request support from legislatures. Commissions had either already experienced or expected difficulty managing the added workload of decarbonization-related proceedings with existing responsibilities.

**Stakeholder engagement support**

Commissions had varying experiences with public involvement in fact-finding investigations or other proceedings related to decarbonization. Many commissions did not get as much public engagement as they had hoped for in earlier proceedings and felt that the public viewed these proceedings as opaque and not designed for broad participation. Other states received more stakeholder input, which was helpful to commissions in understanding perceptions and facts around decarbonization pathways.

### **Clarity on pathway costs and benefits**

Commissions reported a need for assistance in understanding the costs and economic development / equity implications of electrification technologies and non-pipeline alternatives. Commissions see themselves as being able to provide an important forum for sharing transparent data on costs and benefits of various technologies and decarbonization approaches to stakeholders.

### **Roadmaps for protecting LMI ratepayers**

Commissions expressed apprehension about costs to low- and moderate-income (LMI) ratepayers as decarbonization pathways evolve. Commissions also highlighted the need to avoid shifting natural gas infrastructure costs onto LMI ratepayers if high-income ratepayers move away from natural gas service in favor of electrification. In this scenario, LMI ratepayers may be unable to transition to electrification without additional incentives / assistance and may face higher natural gas rates or bills if they continue to receive natural gas service.

### **Better data to forecast future energy demand**

Several commissions mentioned a need to understand current demand for electricity, natural gas, and other fuels and how these demands are expected to change – and shift between energy sources – in the future. This need for greater understanding is particularly important as electrification in the heating, transportation, and industrial sectors grows.

### **Platforms for states to share experiences and lessons learned**

Commissions expect to experiment with different decarbonization approaches. Mistakes and surprises are expected to occur. Commissions expressed interest in an ongoing forum to candidly share both successes and missteps with peers in other states and disseminate state reports on pathways to decarbonization, standards to define and consider non-pipeline alternatives, gas line extension policy changes, and other resources. NARUC will explore other avenues for state exchanges in the future, particularly as more states pass decarbonization statutes.

## **SESSION #2, FEBRUARY-MARCH 2022: DATA NEEDS AND STAKEHOLDER ENGAGEMENT**

*What data or analysis does the commission need to support decision-making? How will the commission access relevant information?*

Commissions emphasized the importance of understanding sources of carbon emissions in their states as a first step. In many states, the transportation and / or buildings sectors have surpassed electric power in terms of emissions, underscoring the role of other state agencies in reducing emissions. Participants also noted a need to understand the pace of technological innovation and the costs and capabilities of emerging technologies in order to determine the lowest cost decarbonization options and allocate costs in a just and reasonable manner.

Roundtable participants also expressed interest in improving their knowledge of available in-state resources to aid with decarbonization. These resources could include information such as: a recovered

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methane inventory, assessments of water resources to support hydrogen production, and maps of renewable natural gas sources accounting for proximity to natural gas infrastructure.

As mentioned during the first roundtable session, natural gas distribution utilities operate under a variety of planning rules, with only a few states having detailed, long-term gas planning processes in place. In states where such rules are currently being designed, or in commissions attempting to standardize data collection and reporting practices across multiple utilities, commissioners are asking for information such as:

- system-level and local data on expected future gas demand for electric power generation and other sectors;
- assets currently in rate base and their depreciation timelines;
- proposals to purchase additional gas infrastructure;
- granular reporting on specific segments of the natural gas system to identify areas where gas service could permanently cease, or energy efficiency measures would be cost-effective; and
- an inventory of leak-prone and aging pipeline sections in which utilities are currently or should be prioritizing infrastructure replacement.

As states pass decarbonization statutes and some municipalities enact bans on new natural gas hookups, commissioners are interested in whether and how utilities are planning for the impacts of these policies on future load. Some commissioners noted a lack of combined electric-gas modeling or planning, which provides an incomplete view of the role of electrification in decarbonization. Several commissions are reexamining gas line extension policies as a strategy to reduce the risk of stranded assets as states move towards decarbonization goals. Generally, costs to extend the gas network are socialized among all customers; however, many stakeholders are interested in exploring the possibility of shifting the risk of new gas infrastructure to customers receiving that service, utility investors, or some combination of these two groups.

While pipeline safety is a core priority for commissions, pipeline safety staff are generally occupied with existing inspection and enforcement duties and are unable to advise commissioners or staff on the role of gas infrastructure in decarbonization. Several commissioners highlighted a need for increased engineering / analytical staff to make recommendations on decarbonization and infrastructure planning.

Finally, some states have requirements for site-specific approvals, including environmental review, for electric infrastructure projects over a certain size. At least one commission is considering adopting a similar rule for gas infrastructure in excess of a certain size or cost, though participants were not aware of any other states including such requirements in gas planning processes.

*Who should be involved in the commission's processes? How could commission activities be structured to engage different perspectives productively? How might the commission approach these stakeholders?*

Commissions noted a wide range of stakeholders participating in recent decarbonization plans, including environmental justice advocates, low-income customers, and other groups. Some states have noticed coalitions of stakeholder groups collaborating by pooling their resources to ensure a stronger voice in regulatory processes.

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Commissioners emphasized that many stakeholders, particularly those who have not historically participated in commission processes, need resources to participate effectively. Merely being in the room is insufficient for stakeholders to provide meaningful input during proceedings. Commissioners recognize that they have limited knowledge of these stakeholders' views on how decarbonization should proceed and need to create opportunities to hear directly from these communities. One commission shared that they are hosting a "gas 101" webinar so that groups who have not historically participated in commission processes can understand the basics of gas regulation and the commission's role.

Finally, commissions noted a widespread sense of exhaustion among many stakeholder groups as the U.S. enters the third year of the COVID-19 pandemic. Some commissions felt that they were competing for the attention of community-based organizations that are better situated to reach disadvantaged communities.

*How do commissions prevent decarbonization actions from exacerbating inequities – in other words, how can commissions prevent harm to low-income consumers, or even correct historic inequities?*

Commissioners noted that customers with limited means to electrify or reduce emissions tend to lack the resources to have a voice in how the state sets and achieves decarbonization goals. Numerous commissioners recommended the use of intervenor compensation funding to facilitate the participation of disadvantaged customers in proceedings; some also recommended the use of subsidies, special rates, and grants to mitigate the costs of decarbonization for these customers. Certain commissions with active intervenor compensation programs recognized that these programs are often underfunded or underutilized, with some commissioners expressing interest in the use of technical assistance grants to enable community groups to engage more substantively in commission processes.

A few of the participants noted that they have statutory language directing the commission to consider the needs of historically disadvantaged communities or define and incorporate equity into regulatory decision-making. Even in states without explicit legislative direction, commissions recognized a need to avoid disproportionate rate impacts on LMI communities. Commissioners offered the practice of automatically translating dockets into Spanish or other commonly spoken non-English languages as a successful way to involve new stakeholders in decision-making. Many states already offer translation upon request but removing the burden of making an advance request was cited as a helpful strategy to non-English-speaking communities.

In addition to LMI and disadvantaged communities, commissions also identified the gas industry workforce as a stakeholder that may require assistance to substantively participate in regulatory processes. Commissioners added that disadvantaged communities are not uniform; noting the need to hear from representatives of tribal, urban, and rural communities.

### **SESSION #3, APRIL-MAY 2022: PATHS FORWARD**

*What are the most common challenges / uncertainties faced by utility regulators in choosing among the possible courses of action? What models can we look to better understand how this might play out?*

Working group members viewed affordability as an important factor in future infrastructure planning and are particularly concerned that cost recovery may inordinately impact LMI customers.

Commissions cited what they perceive as an imperative from policymakers and many stakeholders to move quickly and flexibly but cautioned that regulatory oversight is critical to mitigate potential downsides of long-term decarbonization. These downsides could potentially include substantial rate increases, intensified inequities, decreased reliability, and a “death spiral” akin to early anxieties about the impacts of distributed energy resources on the electric system and the transition to competition in broadband service for the communications system.

Another area of uncertainty is that stakeholders can hold entrenched positions on the continued use of gas infrastructure versus complete electrification. Utilities in some states—particularly gas-only utilities—are reluctant to model beneficial electrification as a pathway that would replace some or all natural gas service or compete with investments in low-carbon fuels, efficiency, and other efforts to sustain gas service as states move to decarbonize.

As a result, commission participants highlighted the need for more granular, nuanced, and localized data on current and projected demand for energy to determine where customers might cost-effectively electrify and where continued investment in gas infrastructure might be prudent. Regulators recognize that complete electrification may not be in the public interest to reach decarbonization goals. Identifying the tipping point price of natural gas that will push different customers to electrify their gas loads would be helpful for commissions to define and encourage beneficial electrification that does not strain the electricity system or burden LMI ratepayers. Likewise, more information is needed from regulated utilities to identify where to incentivize electrification or expand the electric grid and, where to invest in gas infrastructure to accommodate current and future demand. One commission reported using the existing electric integrated resource planning process to require utilities to undertake selective building decarbonization pilot programs and strategic natural gas pruning.

*Are there some initial “no-regrets” steps commissions can take to begin preparing for decarbonization?*

Several commissions expressed the importance of clearly establishing short- and long-term expectations for regulated utilities. Commissions emphasized the need for a “managed transition” in which regulators and utilities have a shared understanding of goals, pathways, and responsibilities. Some states are in the process of writing rules for long-term planning and expect to further refine requirements after a first round of utility responses are submitted.

Commissions are also considering financial tools to send appropriate signals to regulated utilities about the recoverable lifetime of investments in gas infrastructure. Some regulators stated that continuing to analyze costs and benefits without accounting for decarbonization goals exposes customers to risks of overpaying or service quality degradation, as well as opening states to the possibility of failing to achieve decarbonization goals.

In states that expect to see growth in demand for natural gas, commissions noted the potential for conflicts between market demand and decarbonization goals, as achieving targets will require some combination of increased commodity costs and decreased throughput for fossil fuels. A small handful of states are considering modifications to gas line extension policies to manage future load growth and more accurately reflect the lifetime of investments in the gas system given decarbonization goals. Other

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states are requiring certificates of public convenience and necessity (CPCN) or non-pipeline alternative analyses for new investments in gas infrastructure. Other commissions have started to take inventory of existing programs and tariffs to assess whether they are aligned with decarbonization goals.

Commissions are not the only decision-makers involved with infrastructure planning and participants recognized that helpful ideas and data may come from other state agencies. Some commissions advocated for a broader, inter-agency roadmap to improve collaboration across state government. Decarbonization statutes, however, generally lack this type of imperative for interagency collaboration, and instead require commissions to undertake particular actions.

Finally, commissions look at infrastructure planning as an ongoing process in which they can take incremental steps towards better outcomes. This process starts by understanding how natural gas investment decisions are currently made and then identifying incongruities with decarbonization goals. Regulators generally accept that they will not have all the data they might want, but the timing of decarbonization goals requires first steps to be taken in the short term and then improved upon based on stakeholder input, technological advances, and future insights through an iterative process.

The following NARUC resources were identified as useful to answering some commission questions throughout the roundtable series:

- State Approaches to Intervenor Compensation: <https://pubs.naruc.org/pub/B0D6B1D8-1866-DAAC-99FB-0923FA35ED1E> (Reviews six active programs, two programs in development, and eight programs that have not been recently used)
- Public Utility Commission Stakeholder Engagement: A Decision-Making Framework: <https://pubs.naruc.org/pub/7A519871-155D-0A36-3117-96A8D0ECB5DA>
- Public Utilities Commissions and Consumer Advocates: Protecting the Public Interest: <https://pubs.naruc.org/pub/21475F72-1866-DAAC-99FB-1E3EE0593D06>
- NARUC and NRRI have translated some recorded learning modules and training courses into Spanish, available on NARUC's YouTube channel: <https://www.youtube.com/c/narucmedia>