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RI Department of Environmental Management  
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To Whom It May Concern:

Acadia Center commends the Rhode Island Department of Environmental Management (RI DEM) for offering continued transparency and opportunity for stakeholder input in benchmarking progress towards the 2021 Act on Climate. We support the methodology improvements to further align Rhode Island's greenhouse gas inventory with national and international reporting guidelines and provide a more direct comparison across 30 years of data.

### **Proposed GHG Accounting Updates**

#### **Global Warming Potential Updates**

We agree that updating the value of Global Warming Potentials (GWPs) in the 1990 baseline and the entire timeseries to align with the IPCC Fifth Assessment Report (AR5) follows best practice by incorporating contemporary climate science. While the 100-year GWP offers consistency in reporting, Acadia Center recommends that RI DEM also report emissions using 20-year GWP. Acadia Center acknowledges that there is an additional investment of staff time needed to report on both timeframes, but these additional efforts will be valuable and warranted. Reporting carbon dioxide equivalent (CO<sub>2</sub>e) emissions both on a 20-year and 100-year timeframe provides clearer perspective to policy makers by highlighting both short-term and long-term climate impacts. There is no “right answer” with regard to the use of a 100-year vs. 20-year GWP – there are tradeoffs to both approaches, highlighting the benefit of reporting on both timeframes. This is why New York State has adopted an approach to report emissions on both timeframes<sup>1</sup> and why leading experts continue to emphasize the value of dual-timeframe reporting.<sup>2</sup>

#### **LULUCF Methodology Updates**

We similarly agree to the addition of Land Use, Land Use Change, and Forestry (LULUCF) subsectors in the proposed revised LULUCF methodology. Acadia Center looks forward to reviewing the updated methodology, data inputs, and data sources used to calculate both the revised LULUCF baseline and LULUCF negative emissions in subsequent inventory years.

#### **Additional Topics for Future Consideration**

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<sup>1</sup> New York State Department of Environmental Conservation, “Statewide Greenhouse Gas Emissions Report”  
<https://www.dec.ny.gov/energy/99223.html>

<sup>2</sup> Fesenfeld, L.P., Schmidt, T.S. & Schrode, A. Climate policy for short- and long-lived pollutants. *Nature Clim Change* **8**, 933–936 (2018). <https://doi.org/10.1038/s41558-018-0328-1>

## Lifecycle Accounting of Biofuels

There is a high degree of uncertainty surrounding lifecycle emissions from biofuels. Currently, the RI GHG Inventory considers biogenic emissions from biofuels as scope 3, thus not impacting reported state-level emissions. This assumption – which treats all forms of biofuels identically from a GHG accounting perspective – is not appropriate for properly weighing the GHG impacts of decarbonization strategies that rely heavily on biofuels. Perhaps most critically, the lifecycle GHG impacts of using biogas to produce and transmit RNG versus the counterfactual of using biogas on site (electricity generation, combined heat and power generation, liquid fuel production) should be taken into consideration when considering lifecycle GHG emissions from RNG.

While, historically, the issue has not received significant attention in state GHG inventory accounting, it will increasingly become an area of interest as states both implement policies requiring blending of biofuels (as Rhode Island has done by increasing the percentage of biofuel included in heating oil to be a B50 blend by July 2030) and as states consider the future of the gas distribution system and the potential role of biomethane in decarbonizing that system, as Rhode Island is currently doing in Docket No. 22-01-NG Investigation Into the Future of the Regulated Gas Distribution System.

While accurate lifecycle accounting on biofuels is not an easy nut to crack, it is critical that Rhode Island continue to closely follow developments at both the state and national levels related to biofuels accounting and continue to actively seek out eventual adoption of a lifecycle accounting structure that helps inform decision making at the state level regarding responsible use of biofuels. The current GHG accounting structure for biofuels used by the state is simply not capable of informing rational decisions about the appropriate use of biofuels as a decarbonization strategy to reach state GHG reduction goals.

## Methane Leaks from the Gas Distribution System and “Behind-the-meter”

There is a high degree of uncertainty surrounding the level of methane leaks from the gas distribution system. There is a large, unexplained, disconnect between the percent of unaccounted for gas in Rhode Island (3.61% in 2020) and the level of estimated main and service leaks in the gas system used to inform the state’s GHG Inventory (0.71%).<sup>3</sup> The approach of only quantifying main and service leaks also ignores behind-the-meter gas leaks which may be significant based on literature review. Additionally, a long-term study by Harvard scientists found six times more methane leaking into the air in the Boston metro region from the gas system than reported according to the EPA methodology used in the Massachusetts GHG Inventory<sup>4</sup> (this methodology is also used in the Rhode Island GHG Inventory). The study estimated that the metro region within a 28-mile radius of the Boston city center was estimated to have a 4.7% gas leak rate from “well pad to urban consumer” and the study observed no changes to the level of methane emissions in the Boston area over 8 years despite significant efforts to slow the rate of leaks from the gas system.

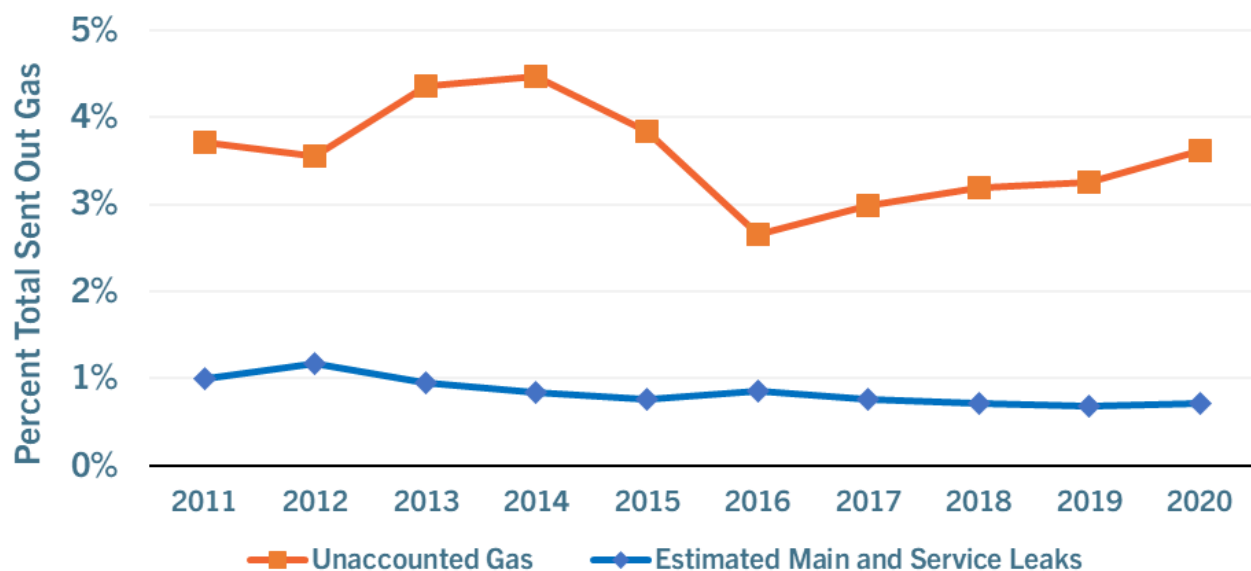
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<sup>3</sup> Docket No. 5210 - The Narragansett Electric Co. d/b/a National Grid's FY 2023 Gas Infrastructure, Safety And Reliability (ISR) Plan (filed 12/17/2021): National Grid Response to PUC Data Request Set 3 (2/23/22) Attachment PUC 3-22-11 (page 59 of PDF). <https://ripuc.ri.gov/sites/g/files/xkgbur841/files/eventsactions/docket/5210-NGrid-ISR-FY2023-Responses-to-PUC-Set-3%28PUC-2-23-22%29.pdf>

<sup>4</sup> Sargent, et al, 2021. “Majority of US urban natural gas emission unaccounted for in inventories.” <https://www.pnas.org/doi/10.1073/pnas.2105804118>

From 2016-2020, Rhode Island decreased the amount of unprotected steel gas mains by 24.0% and decreased the miles of cast iron steel gas mains 12.6%, yet the level of unaccounted for gas in Rhode Island over that same time period has risen every year – from 2.65% in 2016 to 3.61% in 2020.<sup>5</sup> Similar to the issue of lifecycle accounting for biofuels, there is no “easy fix” currently available, but that should not reduce the level of urgency in addressing this GHG accounting uncertainty. Rhode Island should be actively monitoring the evolving field of methane leak measurement and, when applicable, looking to incorporate the new, emerging methodologies for quantification of methane leakage into the state’s GHG inventory. Active collaboration with other states and federal agencies will be critical.

**Figure 1: Rhode Island's Gas Leak Estimates vs. Total Unaccounted for Gas**



Source: RIPUC Docket No. 5210 FY 2023

### Communicating Uncertainty in GHG Inventory Reporting

Historically, the Rhode Island GHG inventory has not placed heavy emphasis on communicating the level of uncertainty surrounding reported GHG emissions, either at the sector-specific level or in aggregate. Communicating uncertainty in data is challenging, and we understand that challenge at Acadia Center. Simultaneously, it’s imperative that policy makers skimming through the executive summary of the most recent GHG Inventory understand that the level of confidence in reporting GHG emissions in certain sectors of the economy is *significantly*

<sup>5</sup> Docket No. 5210 - The Narragansett Electric Co. d/b/a National Grid’s FY 2023 Gas Infrastructure, Safety And Reliability (ISR) Plan (filed 12/17/2021): National Grid Response to PUC Data Request Set 3 (2/23/22) Attachments PUC 3-22-8 through 3-22-11 (pages 56-59 of PDF). <https://ripuc.ri.gov/sites/g/files/xkgbur841/files/eventsactions/docket/5210-NGrid-ISR-FY2023-Responses-to-PUC-Set-3%28PUC-2-23-22%29.pdf>

*lower* than the level of confidence in reporting GHG emissions in other sectors. It's imperative that the GHG accounting experts at DEM accurately convey this in reporting.

Certain sectors or components of the GHG Inventory, including methane leaks for the gas distribution system, land-use, land-use change, and forestry (LULUCF), and emissions associated with biofuels, are simply inherently reliant on lower quality data than other components of the inventory, resulting in significantly less confidence in the reported GHG emissions totals as it pertains to those particular sectors/components. A simple table describing the level of uncertainty (even at a qualitative level) for each sector/component of the state's GHG inventory would be instrumental in succinctly conveying this uncertainty.

This uncertainty matters – if the state is currently underestimating methane leaks from the gas distributions by a factor of, for example, 5x and more accurate methane leak accounting methodologies become available in 5 years that shed light on this historic underreporting, it could significantly compromise the ability of the state to achieve its GHG emissions reduction goals. Policymakers should be made aware of this potential scenario well in advance of it potentially occurring. Given the level of uncertainty currently present in the state's GHG Inventory, Acadia Center highly recommends that the state heir on the side of caution by seeking to “overshoot” the established 2030 GHG emissions reduction target to guard against the risk posed by future GHG accounting updates.

Thank you for the opportunity to provide feedback.

Sincerely,

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