May 3, 2021

VIA ELECTRONIC DELIVERY

Honorable Michelle Phillips
Secretary
State of New York Public Service Commission
Three Empire State Plaza
Albany, NY 12223-1350

Re: Case #20-G-0131 - Proceeding on Motion of the Commission in Regard to Gas Planning Procedures

Dear Secretary Phillips:

Please find attached for filing comments by Pace Energy and Climate Center on Staff's Gas Planning Proposal Whitepaper filed in the aforementioned proceeding.

Pace looks forward to continuing to work with other stakeholders in this proceeding to align New York's gas policy and planning with the state's climate and energy goals.

Respectfully submitted,

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Enclosures

Case No. 20-G-0131, Proceeding on Motion of the Commission in Regard to Gas Planning Procedures

PACE ENERGY AND CLIMATE CENTER

COMMENTS ON THE NEW YORK DEPARTMENT OF PUBLIC SERVICE STAFF GAS SYSTEM PLANNING PROPOSAL

May 3, 2021

Introduction

The Order Instituting Proceeding, issued on March 19, 2020, includes a number of critically important issues that New York must address in order to achieve its energy and climate mandates. Pace appreciates the opportunity to work with New York Department of Public Service Staff (hereinafter "Staff") and other stakeholders in this proceeding to align New York's gas policy and planning with the state's climate and energy mandates. A summary of our recommendations in response to Staff's Gas Planning Proposal (hereinafter "Whitepaper") is as follows:

- The Commission should adopt the Zero Net Gas Framework filed in this proceeding by the Pace Energy and Climate Center on July 27, 2020;
- LDCs should be directed to target developers and customers early in the development process to consider non-gas alternatives;
- LDCs should re-examine existing programs that incentive natural gas, to determine how these programs can be repurposed to advance non-pipe alternatives;
- Any new gas infrastructure should be last-resort resource, acceptable only when customer demand cannot be met in any other way, given the economic implications of stranded assets;
- The Commission should initiate a statewide proceeding to develop a Benefit-Cost Analysis Framework for non-gas alternatives; and
- Renewable natural gas should be reserved for difficult to electrify sectors only, and proposals should be carefully scrutinized on a case-by-case basis to ascertain the economic viability of a given project, and to confirm any claimed environmental benefits.

I. Curtailing the growth of natural gas usage is central to achieving the emissions reductions mandated pursuant to the Climate Leadership and Community Protection Act.

Pace recognizes the challenges faced by Staff in reconciling what seems to be two conflicting legal mandates under the New York Public Service Law (PSL) and the Climate Leadership and Community Protection Act (CLCPA). Section 30 of the PSL requires utilities to offer gas, electricity and steam services and declares a customer's right to the continuation of these utility services already received.[1] The obligation to provide service is further elaborated in the so-called 100-foot rule, requiring a utility to provide any customer gas service within 100 feet of a gas main.[2] At the same time, the CLCPA, requires economy-wide greenhouse gas emissions ("GHG") be reduced by 40 percent by the year 2030 and no less than 85% by 2050 from 1990 levels.[3]

While the PSC may be constrained in the ways it can act on the CLCPA due to certain provisions of the PSL that require utilities offer universal gas, this does not mean that the CLCPA can be ignored or be considered anything less than a legal mandate to reduce emissions. As such, Staff is given the heavy task of balancing the state's natural gas policy with the state's climate and energy mandates in creating a gas planning process that reduces emissions without compromising safe and reliable service. Indeed, as Staff notes in the whitepaper "gas utilities must adopt improved planning and operational practices that enable them to meet current customer needs and expectations in a transparent and equitable way, while minimizing infrastructure investments and maintaining safe and reliable service. Planning must be conducted in a manner consistent with the recently enacted CLCPA."

Methane combustion and leakage from the gas system contribute to climate change on a significant scale and thus must decline significantly in order to meet the CLPCA's mandates. According to NYSERDA's Greenhouse Gas Inventory Report, New York's natural gas system accounts for 11% of the methane emissions in the 2018 New York State GHG Inventory, with emissions totally about 2.7 MMtCO2e.[4] Additionally, in 2016, the combustion of gas in New York accounted for 19% of the state's 1990 GHG emissions.[5]

Based on our calculations, to meet CLCPA targets, from a 2020 baseline, gas distribution utilities must, on average, start reducing their emissions by roughly 6 percent per year from 2021 to 2030 to meet the 2030 target of 40 percent reductions against 1990 levels, and must reduce by roughly 3 percent per year to meet the 2050 target of 85 percent reductions against 1990 levels.[6]

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[1] N.Y. Pub. Serv. Law § 30
[2] N.Y. Pub. Serv. Law § 31; 16 NYCRR § 230.2(d).
[3] NYPSC Case 20-G-0131, Proceeding on Motion of the Commission in Regard to Gas Planning Procedures, *Staff Gas System Planning Proposal* (Feb. 12, 2021) [hereinafter *Staff Gas Planning Whitepaper*]
[4] NYSERDA, *New York State Greenhouse Gas Inventory: 1990-2016* (July 2019).
[5] *Id.*
[6] Calculated based on 1990 and 2020 residential gas consumption numbers in New York. Natural Gas Data, U.S. Energy Information Administration, available at: https://www.eia.gov/dnav/ng/hist/n3010ny2a.htm (Accessed March 11, 2021).

In light of the CLCPA, additional gas capacity likely would be used only to meet short-term gas needs and would be retired before the end of its useful life, leaving customers responsible for paying for the infrastructure well beyond the end of its use. Consequently, at minimum, LDCs should be required to net any projected growth in gas demand against corresponding reductions in their service territory. In doing so, the planning process should be conducted with the objective of minimizing any projected growth in gas demand to achieve net zero gas demand, without compromising duty to serve obligations in anticipation that natural gas consumption will eventually need to be phased down under the scoping plan.

To facilitate this goal, the planning process should adopt the Zero Net Gas framework previously filed by the Center on July 27, 2020 (hereinafter "ZNG" or "Framework").[7] Under the Framework, any new gas demand growth must be paired with reductions in existing inefficient gas use through demand-side measures such as energy efficiency, heat pumps and renewable heating technologies such as solar thermal, non-pipe solutions, and demand response programs.[8] The Framework focuses on reducing peak demand as a means of stopping gas infrastructure expansion, as well as reducing total gas usage in order to minimize greenhouse gas emissions. Under this approach, LDCs will be able to achieve measurable and verifiable reductions in emissions, without compromising duty to serve principles. Additionally, utilities can leverage and re-examine existing programs, such as oil-to-gas conversion programs to provide support and incentives to drive customer adoption of alternatives to gas to operationalize netting. Lastly, netting can be used as an opportunity to target low-to -moderate income customers for deployment of energy efficiency, weatherization, and beneficial electrification.

II. <u>LDCs should target developers and customers based on anticipated localized demand growth to determine the feasibility of NPAs.</u>

Pace supports Staff in recognizing the need to integrate demand-side management programs into the gas planning process, "both geographically targeted in the context of replacing avoidable projects in a specific area of the distribution system, and system-wide to reduce overall demand and the need for infrastructure investment."[9] To facilitate in planning, Staff recommends the demand forecast "contain a geographical analysis with enough granularity to clearly identify locations of anticipated localized demand growth."[10] Additionally, the forecast should identify sources of growth as "increased demand from existing customers, increased demand from new customers (residential customers, new commercial/industrial customers), and demand growth from conversions by customers (residential, multi-family, and commercial)."[11]

As part of the planning process, LDCs should be directed to develop programs that leverage this data to reach developers and customers early enough in the development or retrofit process to provide meaningful opportunity to consider alternatives to gas such as efficient electric heat pumps, thereby eliminating the need for new gas load. If new gas use is

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[7] Radina Valova et al., Pace Energy and Climate Center, *Zero Net Gas: A Framework for Managing Gas Demand Reduction as a Pathway to Decarbonizing the Buildings Sector* 63 (2020) [Hereinafter *ZNG Framework*].
[8] *Id.*
[9] *Staff Gas Planning Whitepaper* at 13.
[10] *Id.* at 14
[11] *Id.*

unavoidable, the LDCs should work with developers to ensure that any gas-using technology is as efficient as possible.

III. LDCs should re-examine existing gas incentives to encourage customer adoption of NPAs, thereby facilitating netting under the ZNG framework.

Pace supports and appreciates Staff's directive to "include all reasonable demand management programs, including a no infrastructure alternative, which requires consideration of other approaches to reduce gas demand" including "expanding demand response, electrification and energy efficiency programs using appropriate incentives" where an LDC identifies a gap between forecasted supply and demand.[12] However, the Commission should make clear that gas capacity expansion is the last-resort resource, acceptable only when customer demand cannot be met in any other way. Additionally, following the ZNG framework, where new gas use is unavoidable, any new incremental demand for gas should be paired with corresponding demand reductions elsewhere within the applicable service territory. The primary goal should be to reduce gas peak and particularly the gas design day, which drives infrastructure planning and investments. Netting should prioritize long-term demand side solutions such as the replacement of gas load with beneficial electrification and long-lasting building envelope efficiency and weatherization measures, over temporary or emergency supply side measures. Netting should also prioritize clean energy and efficiency measures for low-to-moderate income customers and disadvantaged communities. Doing so can improve affordability, reduce household energy burdens, and support new clean energy jobs in disadvantages communities.[13]

In absence of legally binding prohibitions against gas, netting must rely on markets and financial incentives to drive customer alternatives to gas. Consequently, the Commission should require LDCs re-examine their programs that promote natural gas, such as oil-to-gas conversion programs and gas advertisements promising savings to customers. Oil-to-gas conversion programs provide incentives to help cover conversion costs that may dissuade customers from transitioning to natural gas and to provide assistance through energy solution specialists who assess costs and educate consumers on savings and regulatory requirements such as permits. These programs should be re-purposed to provide incentives, educational materials, and technical assistance for gas alternatives such as beneficial electrification. Such measures would encourage the adoption of alternatives to gas and help minimize new gas load. Additionally, LDCs should be required to develop promotional materials for NPAs that highlight the environmental and health benefits of efficiency, electrification, and other alternatives to gas.

IV. Investments in gas system infrastructure should be considered only as a last resort, given the economic implications of stranded assets.

As noted in the whitepaper, "traditional gas capital projects and programs involving the construction of new pipelines or the replacement or expansion of existing pipelines may be potentially suitable for an NPA."[14] Pace supports staff's directive for LDCs to assess "whether a

[12] *Id.* at 18.
[13] *ZNG Framework* at 63-65.
[14] *Staff Gas Planning Whitepaper* at 18.

segment of main and associated services can be retired, and an alternative energy approach can supplant renewing the natural gas assets." Doing so will help to limit the risk of creating additional stranded assets, and ultimately reduce costs associated with system repair and maintenance.

Pace estimates New York will experience increasing stranded costs due to natural gas investments of $9.8 billion over 10 years, increasing to almost $16 billion over 15 years if the current business as usual approach is adopted.[15]

New York should learn from other states that have adopted non-pipe alternatives to avoid further investment in gas infrastructure that would worsen a looming stranded costs problem. In response to a series of gas line explosions and fires that occurred in Massachusetts' Merrimack Valley in 2018, the Massachusetts Legislature introduced the "FUTURE Act" (An Act for a Utility Transition to Using Renewable Energy, H.2849, S.1940 (2019)) to accelerate the repair of gas leaks and encourage a conversion to piping renewably-sourced hot and cold water instead of natural gas. One study of the economic effect of the FUTURE Act concluded that it would reduce the cost of gas system repair from $17.1 billion to $6.3 billion, a savings of roughly $10.8 billion over the next 30 years.[16] Another study of district geothermal in Massachusetts similarly found that "more than a quarter of the gas pipes under Massachusetts streets are aging, and must be replaced over the next 20 years," which is expected to cost more than $9 billion.[17]

Under Staff's proposed two-prong screening approach for NPA evaluation, projects that cost two million or more would require a full-scale solicitation of NPA alternative followed by a BCA of potential solutions. Smaller projects would undergo an expedited standardized review approach with a streamlined economic and technical analysis. Pace supports the requirement of a full-scale solicitation as it would "incentivize service providers to develop solutions that are narrowly tailored (in terms of size and cost) to the ultimate need while minimizing adverse impacts on communities and the environment", as well as provide the LDCs with "several options to choose from and its selection process would be transparent to the Commission and interested stakeholders."[18] However, Pace is concerned that the streamlined process may lack transparency and be based on cost assumptions that will ultimately serve as an impediment to NPA deployment. Consequently, Pace recommends that the monetary threshold be lowered, such that more capital projects would undergo a full-scale solicitation of NPA alternatives.

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[15] Pace Energy and Climate Center, *Overcoming Legal and Regulatory Barriers to District Geothermal in New York* (forthcoming 2021).
[16] Joshua R. Castigliego & Liz Stanton, PhD, *Planning for the Future: Massachusetts Cleans Up its Heating*, Policy Brief 1 (June 2020), available at https://aeclinic.org/publicationpages/2020/6/17/planning-for-the-future-massachusetts-cleans-up-its-heating.
[17] HOME ENERGY EFFICIENCY TEAM AND BUROHAPPOLD ENGINEERING, GEOMIRCODISTRICT FEASIBILITY Study 1 (2019), *available at* https://heetma.org/feasibility-study/.
[18] NRDC, *Gas Regulation for a Decarbonized New York: Recommendations for Updating New York Gas Utility Regulation* (Jun. 29, 2020), https://www.synapse-energy.com/sites/default/files/Gas_Regulation_Decarbonized_NY_19-082.pdf.

Furthermore, LDCs have historically co-mingled leaky pipe/maintenance and safety investments along with system expansion and other measures that grow gas demand.[19] LDCs should be required to fully differentiate between investments to fix leaks, prevent leaks, and maintain safety and measures that will increase gas use, prolong dependence on gas, and increase gas infrastructure rate base. Projects that would accomplish the latter, regardless of the monetary threshold, should undergo a full-scale solicitation of NPA alternatives. Additionally, evaluation criteria for NPAs should include their ability to cost-effectively correct reliability issues or address risks in the distribution system without adding to system capacity or unreasonably extending the useful life of infrastructure assets.[20]

Given the economic implications of stranded assets, new investments in gas infrastructure should be considered as a last resort to be employed in instances only where safety necessitates, and where demand cannot be met in any other way. Allowing for new infrastructure not only runs contrary to the state's climate policy, but also is an unreasonable use of ratepayer money given the high costs of stranded assets. Under the Public Service Commission's 2050-time horizon to depreciate gas infrastructure investments, distribution investment that typically have an estimated 60 year useful made today will be retired in half that time. Thus, consumers will pay double for that infrastructure relative to the utility society will receive from it. Each year, that cost increases. Investments made in 2035, will be retired in a quarter of its useful life, essentially paying 4 times. Consequently, where new gas infrastructure is unavoidable, LDCs should also be required to demonstrate how the risks surrounding stranded assets will be mitigated.

V. The Commission should initiate a separate proceeding to establish a comprehensive Gas Benefit-Cost Analysis (BCA) Framework

A robust benefit-cost analysis framework that accounts for the full life cycle of gas emissions and the social and environmental impacts of gas and non-gas alternatives is imperative. To ensure that planning process aligns with the CLCPA, a comprehensive benefit-cost analysis framework should include several features:

- A time horizon that appropriately accounts for the useful lives of gas infrastructure investments, taking into account expected retirement by 2050;
- Projected costs of maintaining and ensuring the safe operation of existing gas infrastructure;
- Environmental impacts of proposed gas investments, including the net costs of greenhouse gas emissions based on the full life-cycle of the gas system, from extraction well to burner tip to retirement of infrastructure;
- Public health and social impacts; and
- Near and longer-term price and supply volatility typically associated with gas.

To that end, Pace appreciates Staff's recommendations that the BCA incorporate a scenario that assumes that the full value of any new gas assets will be depreciated by 2050, estimates of

[19] Direct Testimony of Karl R. Rabago on Behalf of Pace Energy and Climate Center, Case Nos. 19-E-0065 & 19-G-0066, *Proceedings on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Consolidated Edison Company of New York for Gas & Electric Service* (May 24, 2019)
[20] *Id.*

avoidable upstream fixed and variable costs, and avoided distribution costs. However, a gas BCA framework developed through an open, comprehensive, statewide process is still lacking.

While New York utilities have developed their own gas benefit-cost analysis pursuant to rate cases, these frameworks have typically been developed through confidential settlement negotiations, or through proprietary third-party software or data that is subject to restrictions on disclosure. As such, the PSC should institute a proceeding to re-examine the current utility-specific gas BCA frameworks and to ascertain stakeholder input. Through this process, staff, utilities, and other stakeholders will be able to work collaboratively to develop a robust BCA framework that is both transparent and comprehensive, and that considers the full extent of the economic, environmental, and social impacts of traditional and non-traditional infrastructure investments.

The BCA must encompass the broadest scope of analysis, from gas production to the burner tip; take a full societal perspective of costs and benefits, including assessment of the health and environmental justice impacts of gas production, transmission, distribution and use; and fully account for methane emissions released throughout the gas life-cycle.

Notably, methane emissions from leaks occurs throughout the gas supply chain, including extraction, processing, transmission and distribution. A recent study found that the leakage rate in the gas supply chain equaled 2.3%.[21] Since the greater use of gas in the distribution system correlates with greater gas losses throughout the entire supply chain, including greater gas losses upstream, deferring natural gas infrastructure expansion can reduce emissions associated with upstream leakage, as well as the potential for additional leakage associated with incremental infrastructure build out.[22] As such, NPAs have the real and measurable potential to reduce leakage though a reduction in gas demand. To accurately capture the true cost and benefits of different projects, the BCA must be able to character the full environmental impacts of NPAs and traditional pipeline infrastructure, including methane emissions for the full range of the gas system over the lifetime of the investments.[23] Consequently, the BCA should incorporate avoided emissions from leakage throughout the supply chain (production, transmission, and distribution) as a benefit category.

VI. Renewable Natural Gas (RNG) proposals should be carefully scrutinized on a case-by-case basis.

Given the scale, costs, and economic implications of abandoning existing energy infrastructure before the end of its useful life, there is an emerging argument by industry that RNG could be a direct substitute for fossil natural gas and would allow for the continued use of

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[21] Dan Zimmerle, *The U.S. natural gas industry is leaking way more methane than previously thought,* PBS (Jul. 4, 2018) https://www.pbs.org/newshour/science/the-u-s-natural-gas-industry-is-leaking-way-more-methane-than-previously-thought (citing *U.S. Greenhouse Gas Emissions and Sinks: 1990-2016,* EPA (published 2018)).

[22] Case 17-G-0606, Petition of Consolidated Edison Company of New York, Inc. for Approval of the Smart Solutions for Natural Gas Customers Program, *Comments of Earthjustice & Pace Energy and Climate Center* (Jan. 7, 2019).

[23] *Id.*

existing infrastructure (thereby avoiding stranded assets) while also reducing emissions by diverting methane from different feedstocks that would have otherwise been released into the atmosphere.[24] However, while RNG may play some type of role in decarbonizing carbon-intensive industrial processes or heavier categories of transportation, RNG has limited potential to decarbonize the natural gas system due to its limited resource potential, its high costs, and its environmental and human health impacts.[25]

Using the gas industry's own estimates as to the national resource potential of RNG, RNG could only replace 13% of the existing demand for fossil natural gas. Recently, ICF performed a study for the American Gas Association that developed low and high resource potential scenarios of RNG production from nine feedstocks including: landfill gas, animal manure, water resource recovery facilities, food waste, agricultural residues, energy crops, the use of renewable electricity and the non-biogenic fraction of municipal solid waste.[26] These feedstocks were assumed to be processed using one of three production technologies: anaerobic digesters, thermal gasification systems and power-to-gas- in combination with a methanation system.[27] In the low resource potential scenario, ICF estimated that 1,660 tBtu of RNG can be produced annually for pipeline injection by 2040, and 1,910 Btu per year when including the potential for non-biogenic fraction of MSW.[28] In the high-resource potential, ICF estimated that 3,780 tBtu of RNG can be produced annually for pipeline injection. However, according to the Energy Information Administration, in 2019, the United States consumed about 31.01 trillion cubic feet (Tcf) of natural gas, or 31,030 tBtu.[29] Using the ICF's high resource potential scenario, this would mean that RNG would have the potential to replace only 13% of fossil fuel natural gas demand.

In addition to its limited resource potential, the capital and operating costs associated with capturing and processing biogas, as well as the cost of delivering RNG to the end-users pose significant economic barriers to RNG.[30] Studies regarding the costs of RNG production vary widely.[31] The wide range is in part due to differences among the studies in terms of data, methodology, and assumptions.[32] However, costs also vary widely, project to project, on the

[24] Emily Grubert, At Scale, Renewable Natural Gas Systems Could be Climate Intensive: The influence of Methane feedstock and Leakage Rates, Envtl. Research Letters (Aug. 11, 2020).
[25] Sasan Saadat et al., Rhetoric vs. Reality: The Myth of "renewable Natural Gas" for Building decarbonization, Earth Justice & Sierra Club, at 11 (July 2020), https://earthjustice.org/sites/default/files/feature/2020/report-decarb/Report_Building-Decarbonization-2020.pdf.
[26] ICF International Inc., *Renewable Sources of Natural Gas: Supply and Emissions Reduction Assessment*, American Gas Association (Dec. 2019), https://www.gasfoundation.org/wp-content/uploads/2019/12/AGF-2019-RNG-Study-Full-Report-FINAL-12-18-19.pdf [*hereinafter* AGA Report].
[27] *Id*.
[28] *Id*.
[29] *Id*.
[30] Landfill Gas-to-Energy in the U.S. and U.K.: An Analysis of Differing Policy Objectives Regarding Landfill Gas and Accompanying Regulations and Incentives, 23 Geo. Int'l Envtl. L. Rev. 531, 533-535.
[31] National Center for Sustainable Transportation, *The Potential to Build Natural Gas Infrastructure to Accommodate the Future Conversion of Near-Zero Transportation Technology* (Mar. 2017), https://escholarship.org/content/qt2tp3n5pm/qt2tp3n5pm_noSplash_9284d90efb2dcd62f220c81da1f89b58.pdf?t=pszeud
[32] Rebecca Gasper & Tim Searchinger, *The Production and Use of Renewable Natural Gas as a Climate Strategy in the United States* (World Resources Institute Working Paper 2018)

basis of feedstock type, volume of production, infrastructure requirements, and location with respect to the pipeline, among other factors.[33] Demonstrably, a 2016 study estimated a cost range of $7 per million Btu (for large-scale projects) and $25 per million Btu (small-scale projects) for projects upgrading biogas for pipeline injection.[34] ICF reports a range of costs for RNG produced from landfills at $7-19 per MMBtu, from animal manure at $18.4-32.6 per MMBtu, and from wastewater treatment plants at $7.4- 26.1 MMBtu.[35]

The climate benefits of RNG, if any, depend on which feedstocks are being used to produce the fuel, the energy required to produce it, whether the source creates new methane where none or little would have existed, and how much methane is leaked throughout the supply chain.[36] For instance, RNG can lead to a net increase in methane emissions when RNG production utilizes intentionally produced methane, or in other words, methane that would not have otherwise been released into the atmosphere.[37] This is generally an issue with thermal gasification, which breaks down dry organic matter under high heat to produce methane, instead of naturally decomposing to produce carbon dioxide. [38] However, anaerobic digesters may also lead to additional methane as a means to increase total methane production, especially when a primary feedstock is supplemented with other wastes such as food scraps or other agricultural wastes, as is common practice with animal manure and wastewater sludge. [39] Feedstocks that would have captured and combusted the methane as part of applicable management practices (i.e. gas collection systems and flaring at landfills) can also lead to a net increase in emissions.[40]

Importantly, leakage associated with the RNG supply chain may outweigh any claimed RNG climate benefits. Recent evaluations have demonstrated substantial variation among leakage rates in biogas production and upgrading, with average leakage rates ranging from 0.4-14.9%, and sometimes even as high as 40%.[41] Leakage will vary depending on the feedstock, the type equipment being used, upgrading technology, and how the gas is transported. For example, landfill gas collection systems are highly inefficient, with uncontrolled emissions in the range of 15 to 25 percent of biogas produced.[42]. Biogas processing and upgrading may lead to

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https://static1.squarespace.com/static/53a09c47e4b050b5ad5bf4f5/t/5b049d7d03ce646fda48e14f/1527029122737/production-use-renewable-natural-gas-climate-strategy-united-states.pdf [hereinafter WRI Working Paper].
[33] *Id*.
[34] EPA, An Overview of Renewable Natural Gas from Biogas, 456-R-20-001 (July 2020), https://www.epa.gov/sites/production/files/2020-07/documents/lmop_rng_document.pdf.
[35] AGA Report at 52-58.
[36] NRDC, A Pipe Dream of Climate Solution? *The Opportunities and Limits of Biogas and Synthetic Gas to Replace Fossil Gas*, Issue Brief at 2 (July 2020). [Hereinafter NRDC Issue Brief]
[37] Emily Grubert, At Scale, Renewable Natural Gas Systems Could be Climate Intensive: The influence of Methane feedstock and Leakage Rates, Envtl. Research Letters (Aug. 11, 2020).
[38] NRDC Issue Brief at 2.
[39] WRI Working Paper at 16.
[40] *Id*. at 15.
[41] Food & Water Watch, *Renewable Natural Gas: Same Ol' Climate Polluting Methane, Cleaner-Sounding Name*, Fact Sheet (Feb. 2021), https://www.foodandwaterwatch.org/wp-content/uploads/2021/04/2021-RNG-FS.pdf; *see* Tom Cyrs et al., *Renewable Natural Gas as a Climate Strategy: Guidance for State Policymakers* (World Resources Institute Working Paper 2020), https://files.wri.org/d8/s3fs-public/renewable-natural-gas-climate-strategy.pdf.
[42] Tom Cyrs et al., *Renewable Natural Gas as a Climate Strategy: Guidance for State Policymakers* (World Resources Institute Working Paper 2020), https://files.wri.org/d8/s3fs-public/renewable-natural-gas-climate-strategy.pdf.

additional leakage 1-2%.[43] Currently, default leakage rates of 2-5 percent of biogas produced from anaerobic digestion and 2 percent of biogas processed for upgrading are commonly used in life cycle analysis of RNG produced from wet waste.[44] However, if methane leakage rates are higher in reality than what is assumed in applicable emissions analyses, RNG will lead to greater emissions than projected. Consequently, additional data and analysis on leakage specific to RNG production is needed to assess the full climate impacts of RNG.[45]

Recent research has highlighted that RNG from intentionally produced methane, or from methane that would have otherwise been flared, has substantial climate impacts at the current methane leakage levels observed in the existing biogas industry.[46] The analysis shows that RNG from intentionally produced methane will always result in net positive GHG emissions unless total system leakage is zero. Conversely, if RNG production utilizes waste methane that would have been emitted into the atmosphere under current management practices, any system leakage is not a climate stressor and there still may be a climate benefit even when considering leakage rates throughout the supply chain .[47] Unfortunately capturable methane that would lead to a net decrease in emissions is extremely limited, and equates to less than 1% of current gas demand.[48] The remaining RNG would need to derived from intentionally produced methane, or methane that would have otherwise been flared, which poses the risk that any potential emissions reductions will be offset by leakage throughout the RNG supply chain.[49]

Emissions from RNG vary based on the feedstock, production efficiency, upgrading technology, location, and transmission distances. As such, each RNG proposal should be evaluated on a project-by-project basis using a life-cycle emissions accounting approach (LCA) to determine whether a proposed RNG facility would reduce greenhouse gas emissions. LCA allows for a holistic GHG accounting approach that considers all life-cycle aspects from raw resource extraction to final disposal and is used as the basis for state level regulatory programs such as the California Low Carbon Fuel Standard and the Oregon Clean Fuels Program.[50] In performing such analysis, care should be taken to care should be taken to ensure accuracy in assumptions and site-specific data to quantify the full impacts of a specific proposal to avoid exaggeration of potential emissions reductions.[51] (WRI) Multiple analyses under a range of potential leakage rates and other assumptions may assist in determining the GHG reduction potential of a specific proposal. [52]

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[43] *Id.*
[44] *Id.*
[45] *Id.*
[46] Emily Grubert, At Scale, Renewable Natural Gas Systems Could be Climate Intensive: The influence of Methane feedstock and Leakage Rates, Envtl. Research Letters (Aug. 11, 2020).
[47] *Id.*
[48] *Id.*
[49] Sasan Saadat et al., Rhetoric vs. Reality: The Myth of "renewable Natural Gas" for Building decarbonization, Earth Justice & Sierra Club, at 11 (July 2020), https://earthjustice.org/sites/default/files/feature/2020/report-decarb/Report_Building-Decarbonization-2020.pdf.
[50] Tom Cyrs et al., *Renewable Natural Gas as a Climate Strategy: Guidance for State Policymakers* (World Resources Institute Working Paper 2020), https://files.wri.org/d8/s3fs-public/renewable-natural-gas-climate-strategy.pdf.
[51] *Id*.
[52] *Id.*

Given the aforementioned concerns, the Commission should carefully scrutinize RNG proposals. Additionally, it should impose the following requirements for all RNG proposals:

- Each proposal for an RNG project must include an LCA conducted by independent experts demonstrating that the particular project will significantly decrease GHG emissions
- Each proposal for an RNG project must include an economic analysis detailing the projected costs of the RNG
- LDCs must purchase and retire the environmental attributes
- RNG procurement will not be credited towards netting within the ZNG framework

Conclusion

Based on the foregoing reasons, Pace respectfully requests the Commission adopt the Zero Net Gas Framework as the first step forward toward decarbonization, and as a pathway to achieving New York's climate and energy mandates without further investment in gas infrastructure. The Commission should require LDCs to target developers and customers based on anticipated localized demand growth to determine the feasibility of NPAs, and that LDCs should re-examine existing gas incentives to encourage customer adoption of NPAs, thereby facilitating netting under the ZNG framework. The Commission should only allow investments in gas system infrastructure should be considered only as a last resort, given the economic implications of stranded assets. The Commission should initiate a separate proceeding to establish a comprehensive Gas Benefit-Cost Analysis (BCA) Framework, and any RNG proposals should be carefully scrutinized on a case-by-case basis.

Respectfully submitted,

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