KINDER MORGAN INC.

June 14, 2022

Draft Scoping Plan Comments
New York State Energy Research and Development Authority
17 Columbia Circle
Albany, NY 12203-6399

Sent via email to: scopingplan@nyserda.ny.gov

Re: Climate Action Council Draft Scoping Plan

Ladies and Gentlemen:

Kinder Morgan Inc. and Tennessee Gas Pipeline Company L.L.C. (collectively, "Kinder Morgan") appreciates the opportunity to provide the attached comments on the Climate Action Council's Draft Scoping Plan. Should you have any questions for us or wish to discuss these comments further, please contact me at [redacted] or [redacted].

Sincerely,

Michael Pitta
Vice President, Environmental Health & Safety

enclosure

Comments of Kinder Morgan Inc. and Tennessee Gas Pipeline Company L.L.C. on New York State Climate Action Council Draft Scoping Plan

I. Introduction and Executive Summary

Kinder Morgan Inc. and Tennessee Gas Pipeline Company L.L.C. (collectively, "Kinder Morgan" or the "Company") submits these comments for consideration by the New York State Climate Action Council (the "Council") concerning the draft *New York State Climate Action Council Draft Scoping Plan*, dated December 30, 2021 (hereinafter the "Draft Scoping Plan" or DSP), which addresses implementation of New York's 2019 Climate Leadership and Community Protection Act (CLCPA).

As discussed in Section II below, Kinder Morgan is the nation's largest owner of natural gas transportation and storage infrastructure. Approximately 40% of natural gas consumed in the United States moves on Kinder Morgan pipelines. In New York, Kinder Morgan operates approximately 965 miles of natural gas pipelines and related storage and other equipment. As a major natural gas provider in New York State, Kinder Morgan has a keen interest in meeting the greenhouse gas (GHG) emission reduction and renewable energy goals of the CLCPA while ensuring that New York's homes and businesses have a reliable supply of natural gas and electricity. We are submitting these comments concerning the DSP in the hopes of contributing to the dialogue surrounding implementation of the CLCPA and the role of the natural gas transmission industry during the implementation process.

In its discussion of the natural gas system transition issue, the DSP provides:

> The transition away from fossil gas should be carefully managed, phased, and conducted with a focus on just transition principles while maintaining safety and reliability for those who still depend on the energy being delivered. However, the transition should take place as quickly as possible and to the maximum extent possible and include the production, transmission, and distribution components of the system.[1]

Kinder Morgan wholeheartedly agrees with the first part of this statement. Any changes to natural gas infrastructure and operations triggered by implementation of the CLCPA must be conducted to ensure safety and reliability. Unfortunately, the DSP provides no real direction concerning how that goal is to be achieved. This omission is notable in light of the direction to transition "as quickly as possible and to the maximum extent possible."

Natural gas is the primary fuel used to generate electricity and heat homes in New York. Because of its importance to New York's economy, the transition away from natural gas will require careful planning and continuous reassessment. The precise path of the transition will

[1] DSP, p. 266.

depend on a host of unpredictable factors, including the pace of renewable energy project development, technological advances to ensure system reliability, electrification of transportation and buildings, and development of alternative fuels such as hydrogen and renewable natural gas. The path will also depend on the State's ability to navigate the complex web of laws and regulations governing natural gas and coordinate the many agencies and entities responsible for managing the natural gas system.

Unfortunately, while the DSP acknowledges the complexity of the transition process, it offers little direction on how the transition should proceed. The DSP recommends development of:

> a detailed analysis to determine the most equitable and cost-effective strategy for transitioning from fossil gas while maintaining affordable, safe and reliable service. Transitioning and decommissioning substantial portions of the gas system will require significant planning due to the complexity of the system, and the need to coordinate with building electrification while maintaining reliable and safe service.[2]

Rather than provide a basic framework for that analysis as part of the DSP, the Council defers any real discussion of natural gas transition to a later date, declaring that "[t]he Council will work to include in the final Scoping Plan a framework through which agencies can develop a coordinated plan for the orderly downsizing of the gas system."[3]

Given the importance of natural gas to New York's economy and the massive changes to the state's energy system contemplated in the future, the Council must develop a basic framework for managing the changes to the state's natural gas system now. This framework should be governed by the following principles, which are discussed in greater detail in the remainder of these comments.[4]

1. The Council must make its basic framework for the natural gas transition process available for public comment before it is finalized. As previously noted, the DSP contemplates making the framework available for the first time in the final DSP, depriving the natural gas industry and the public of an opportunity to comment on the fundamental decisions that will guide the transition process going forward as part of the basic Scoping Plan review. Until the State takes this basic step, it should refrain from adopting any regulations implementing the natural gas transition process. Going forward, the public must be provided with periodic opportunities to comment as the transition process progresses to ensure it is occurring in the most efficient, cost effective, and climate-friendly way possible without jeopardizing New Yorkers' access to power and heat.

[2] *Id.* p. 267.
[3] *Id.* p. 271.
[4] Citations for key information/arguments included in this Introduction and Executive Summary can be found in the relevant discussions in Section V below.

2. Natural gas transmission, storage and distribution is regulated by numerous federal and state agencies. Interstate natural gas pipelines are governed by the Federal Energy Regulatory Commission (FERC) while intrastate pipelines and distribution lines are regulated by New York State. The framework must clearly articulate the role of each agency in the natural gas transition decision-making process and set forth a basic set of principles governing how the agencies will resolve the complex issues likely to arise during the transition.
3. New York's energy economy is currently dominated by natural gas, which generates alone or with other fuels approximately 62% of its electricity and heats approximately 4.5 million homes. The framework must properly acknowledge the important role of natural gas in New York's economy and factor that consideration into the transition planning process. Failure to take this basic step could result in the State failing properly to recognize the potential difficulties associated with the planned transition or to allow for the necessary transition time.
4. The framework must expressly recognize that natural gas can and should play a role in the generation of electricity through 2040 and beyond. Although the CLCPA calls for 70% renewable electricity generation by 2030 and "emission free" electricity by 2040, the Act expressly authorizes the New York Public Service Commission (PSC or Commission) to modify these natural gas targets if necessary to address safety and reliability concerns. However, the DSP largely ignores this provision and assumes that natural gas will play little, if any, role in New York's long-term electricity future despite studies from the New York Independent System Operator (NYISO) discussed below showing that a massive increase in renewables at the expense of fossil fuel generation could potentially result in significant gaps in electricity service that cannot be met solely through increases in energy storage. To prevent future electricity reliability problems, the framework must directly address the limitations of renewables, assess the short-, medium-, and long-term role of natural gas in an electricity system dominated by renewables, and ensure that the increased reliance on renewables does not result in safety, reliability, and resiliency problems.
5. The framework must acknowledge that the renewable energy targets of the CLCPA may not be practically achievable in the short- and medium-term, and that natural gas is the cleanest and most cost-effective option for generating electricity in the interim. New York faces numerous obstacles to meeting the renewable energy targets of the CLCPA, including public opposition to the siting of renewable energy projects, the large amount of land required to construct such projects, and the sheer volume of new electricity generation required to meet demand associated with the planned electrification of New York's economy. In developing the framework for the natural gas transition process, the State must ensure that its natural gas transmission system remains viable for as long as it is needed.
6. The framework must consider technological and other developments that can potentially reduce or eliminate GHG emissions associated with natural gas-fired electricity generation. Natural gas providers are currently implementing numerous measures to reduce methane emissions from gas transmission, storage, and distribution

activities both voluntarily and in fulfillment of federal and state regulatory requirements. Moreover, natural gas-fired power plants are exploring the potential for carbon dioxide (CO_2) capture and storage. These developments have the potential to significantly decrease GHG emissions and should therefore be considered as the State develops its strategy for transitioning the natural gas system.

7. The framework must ensure continued access to natural gas for building heating and other residential, commercial, and industrial uses. Millions of New York homes and businesses currently heat with natural gas. The DSP calls for the gradual replacement of natural gas-fired boilers with heat pumps, starting with new single-family and other low-rise residential construction. However, current heat pump systems are not well-suited either to the climate of northern/western New York or to high-rise structures. Moreover, the transition will likely cost many billions of dollars, posing a significant burden particularly for low and moderate-income households. The framework must acknowledge the practical and financial limitations of the planned electrification of the building sector and establish mechanisms for ensuring natural gas is available for those who do not have access to and/or cannot afford to install alternative technologies.
8. The reduction in natural gas consumption has the potential to lead to stranded assets—pipelines and other equipment tied to fossil fuels that are no longer able to generate an economic return. The framework must establish basic criteria for deciding whether to abandon natural gas infrastructure and how to address the increased costs to ratepayers associated with underutilized infrastructure. The framework also must outline procedures for coordinating the decision-making process among the numerous involved parties (both government and private). In developing this framework, the State must recognize that it has no authority over the abandonment or use of interstate natural gas pipelines, which are regulated solely by FERC.
9. The framework must acknowledge the potential role of existing natural gas infrastructure in transporting alternative fuels such as renewable natural gas and hydrogen and ensure the preservation of that infrastructure.

Ultimately, Kinder Morgan believes that the review process will show that the best approach to meeting the emission reduction and renewable energy goals of the CLCPA is one that embraces a variety of clean energy alternatives, including natural gas. Consistent with that approach, the State should embrace natural gas electricity generation as a means of ensuring the continuing reliability of New York's electric grid and the use of natural gas to heat New York's homes and businesses at least until alternative technologies offer a solution to the problems posed by the massive buildout of renewable energy sources and the electrification of New York's transportation and building sectors.

II. Who We Are

Kinder Morgan is one of the largest energy infrastructure companies in North America. The Company owns an interest in or operates approximately 83,000 miles of pipelines that transport natural gas, gasoline, crude oil, carbon dioxide (CO_2) and more. Kinder Morgan also owns/operates 141 terminals that store and handle renewable fuels, petroleum products, chemicals, vegetable oils and other products. With respect to natural gas, Kinder Morgan operates approximately 70,000 miles of pipelines, making it the owner/operator of the largest natural gas network in North America. Approximately 40% of the natural gas consumed in the United States is transported via Kinder Morgan pipelines. New York State is served by Kinder Morgan's Tennessee Gas Pipeline, an approximately 11,760-mile pipeline system that transports and stores natural gas supplied from the Northeast section of the United States to end-use demand markets including New York City and Boston in the Northeast, the Louisiana and Texas Gulf Coast, and Mexico. New York is also served by Stagecoach Pipeline & Storage Company, which transports and stores natural gas in New York and Pennsylvania with multiple interconnections to major interstate pipelines.

As a major natural gas transmission and storage company, Kinder Morgan has an interest in how the CLCPA's GHG emission reduction goals are met. The Company is committed to addressing climate change through a program that encourages renewable energy development while maintaining the natural gas infrastructure needed to ensure the safety and reliability of the energy system. Kinder Morgan's commitment to addressing climate change is reflected in the Company's 2020 Environmental, Social, and Governance Report ("2020 ESG Report").[5] Among other things, the 2020 ESG Report quantifies GHG emissions from Kinder Morgan's operations and summarizes its efforts to minimize methane emissions from the Company's operations, which include:

(1) **Participating in the U.S. Environmental Protection Agency's (EPA's) Natural Gas STAR and Methane Challenge programs.** For over a quarter of a century, Kinder Morgan has voluntarily participated in EPA's Natural Gas STAR program, implementing initiatives to reduce methane emissions. Beginning in 2016, the Company became a partner in the Methane Challenge program.

(2) **Helping found the natural gas industry's ONE Future Coalition.** ONE Future is a coalition of members across the natural gas value chain focused on identifying technical and policy solutions for reducing methane emissions associated with natural gas delivery, including limiting energy waste and achieving a cumulative methane emission intensity target (*i.e.*, "leakage" rate) of 1% or less of total natural production across the natural gas value chain by 2025. (For comparison, the natural gas supply chain's methane emission intensity, based on 2012 data, was 1.44% of total natural gas production).

(3) **Supporting the Interstate Natural Gas Association of America (INGAA) 2021 Climate Change Statement**, which commits Kinder Morgan to, among other things, reducing GHG emissions and continuing to implement long-term strategies to lower emissions while working as an industry to reach net zero GHG emissions by 2050.

[5] Kinder Morgan, *2020 Environmental, Social and Governance Report: A Sustainability Accounting Standards Board and Task Force on Climate-related Financial Disclosures Report* (Posted Oct. 21, 2021; Revised Dec. 21, 2021), KMI ESG Report - 2020 Next Gen (kindermorgan.com) (last viewed May 23, 2022).

(4) **Issuing a *Statement on Climate Change*** outlining the Company's commitment to addressing climate change.[6]

(5) **Implementing methane reduction strategies.** To meet its climate change commitments, Kinder Morgan has implemented a host of methane leak detection and emission reduction measures at various locations, which are summarized in the 2020 ESG Report and the Company's Fact Sheet entitled *Our Commitment to Reducing Methane Emissions*.[7] The Company also participates in numerous research and development initiatives to identify methane emission reduction opportunities and technologies. Finally, Kinder Morgan has programs to make energy efficiency improvements in operations and explore low carbon and renewable energy options for powering its operations, including powering equipment at its facilities through solar panels installed on-site.[8]

III. Summary of Key CLCPA Requirements

The CLCPA requires reductions in statewide GHG emissions to 60% of 1990 levels by 2030 and 15% of 1990 levels by 2050.[9] To achieve these goals, the CLCPA requires establishment of a Climate Action Council, which in turn, must convene advisory panels in the following areas: transportation, energy intensive and trade-exposed industries, land use and local government, energy efficiency and housing, power generation, and agriculture and forestry.[10] The Council, after reviewing the recommendations of the advisory panels, is tasked with preparing a Scoping Plan containing recommendations on regulations and other state measures to achieve necessary GHG reductions. After public notice and comment, the Scoping Plan will be finalized and the New York State Department of Environmental Conservation (DEC) must then adopt regulations to ensure compliance with statewide emission reduction limits and assist other state agencies in developing their own regulations, as necessary.[11] In addition, the CLCPA requires DEC to prepare an annual GHG emission report to quantify statewide GHG emissions for purposes of tracking progress toward achieving the goals of the Act.[12]

On the specific issue of electricity generation, the CLCPA establishes renewable energy "targets," which call for at least 70% of statewide electricity to be generated by renewable energy systems by 2030 and for the statewide electrical demand system to be "zero emissions" by 2040.[13] In establishing the program for achieving these targets, the Public Service Commission:

---

[6] The *Kinder Morgan Statement on Climate Change* can be found at: Microsoft Word - Climate Change Statement.docx (kindermorgan.com) (last viewed May 23, 2022).
[7] The Fact Sheet can be found at: Methane Reduction Fact Sheet (4) (kindermorgan.com) (last viewed May 23, 2022).
[8] 2020 ESG Report, pp. 15-29.
[9] New York Environmental Conservation Law (ECL) § 75-0107.1.
[10] *Id.* § 75-0103.7. In addition to the mandatory advisory panels, the Council established an advisory panel to address methane emissions from landfill and other waste sources.
[11] *Id.* § 75-0103.
[12] *Id.* § 75-0105.
[13] New York Public Service Law (PSL) § 66-p.2.

> shall consider and where applicable formulate the program to address impacts of the program on safety and adequate electric service in the state under reasonably foreseeable conditions. The commission may, in designing the program, modify the obligations of jurisdictional load serving entities and/or the targets upon consideration of the factors described in this subdivision.[14]

Thus, in developing a program to achieve the CLCPA renewable energy targets, the PSC must consider safety and reliability concerns and may modify the targets as necessary based on these considerations.

The CLCPA does not address the transition of the natural gas system that must necessarily occur under the Act. In fact, the CLCPA does not mention natural gas beyond a brief reference in conjunction with the required statewide GHG emissions report.[15] The CLCPA thus provides no direction on how the transition of the natural gas industry under the CLCPA should be managed despite the importance of this issue to the successful achievement of the Act's GHG emission and renewable energy goals.

IV. Overview of Natural Gas Industry and its Role in New York's Energy System and Economy

Natural gas plays a crucial role in New York's economy in two ways. First, natural gas is used to fuel power plants that generate electricity. Second, natural gas is supplied directly to customers as fuel for heating and cooking and for other residential, commercial and industrial purposes.

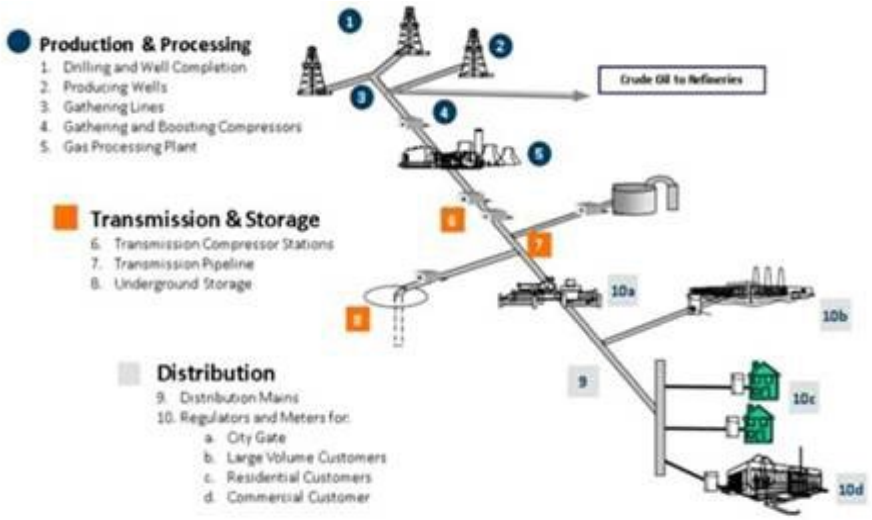
In brief, the natural gas system consists of the following components:

- Gathering pipelines and related equipment: These lines transport gas from production facilities, such as well heads, to a transmission line.
- Interstate transmission pipelines and related equipment: These pipelines transport gas between various processing and storage facilities. Interstate natural gas pipelines are regulated solely by the Federal Energy Regulatory Commission.
- Intrastate transmission lines: These pipelines also transport gas between processing and storage facilities. However, because they are located within a single state, they are regulated by the states and not by FERC.
- Distribution mains and service lines. These smaller lines transport natural gas from transmission pipelines or storage to customers. They are typically operated by local utilities such as Con Edison and National Grid and are regulated by the State.
- Storage. Because natural gas consumption varies significantly by season (and for other reasons), the system is served by almost 400 underground storage facilities across the country.

Below is a basic diagram of the natural gas distribution system.

[14] *Id.*
[15] ECL § 75-0105.2.b.

Figure 1: Basic Diagram of Natural Gas Distribution System



Source: Adapted from the American Gas Association and EPA Natural Gas STAR Program

Currently, the United States' domestic gas pipeline network consists of approximately 300,000 miles of transmission pipelines, 17,500 miles of gathering lines, and 2.2 million miles of distribution mains and service lines. Existing gas pipelines currently transport natural gas to approximately 70 million households, 5.5 million commercial customers, 182,000 factories, and 1,800 power plants in the United States.[16]

V. Comments and Concerns Regarding Council's CLCPA Draft Scoping Plan

A. The Draft Scoping Plan Does Not Specify a Framework for Gas System Transition Comparable to that for Other Sectors, Limiting the Public's Ability to Provide Feedback

Natural gas is currently the backbone of New York's energy economy. In 2021, approximately 62% of New York's electric capacity was provided by facilities using natural gas alone or in combination with other fuels.[17] Approximately 4.5 million New York homes are heated or otherwise served by natural gas;[18] in addition, a significant percentage of the state's businesses rely on natural gas for heating, cooking and other building-related purposes.

---

[16] Erin M. Blanton, et al., Columbia University Center on Global Energy Policy, *Investing in the US Natural Gas Pipeline System to Support Net-Zero Targets*, pp. 23-24 (Apr. 2021) (citation omitted), https://www.energypolicy.columbia.edu/sites/default/files/file-uploads/GasPipelines_CGEP_Report_042221.pdf (last viewed May 23, 2022).

[17] NYISO, *2021 Load and Capacity Data*, Table II-1a (NYISO, 2021), https://www.nyiso.com/documents/20142/2226333/2021-Gold-Book-Final-Public.pdf/b08606d7-db88-c04b-b260-ab35c300ed64 (last viewed May 23, 2022).

[18] American Gas Association, Annual End Users, Table 8-5, Natural Gas Residential End Users by State 2020, 2022 Gas Facts Entire Document.pdf (aga.org) (last viewed May 23, 2022).

Despite the importance of natural gas to New York's economy, the CLCPA does not directly address the gas system transition process. In particular, the CLCPA does not require establishment of an advisory panel to analyze natural gas transition issues (comparable to those for transportation, buildings, electricity, etc.). Instead, natural gas transition is addressed by several different advisory panels in conjunction with their larger mandate. For example, the Energy Efficiency and Housing Advisory Panel's Mitigation Strategy includes Gas System Transition as Initiative #3.[19] In keeping with its building-related mandate, this initiative focuses largely on issues relating to the transition away from natural gas in the building sector, although certain components address broader transition-related concerns. In addition, natural gas system-related transition issues are discussed in relation to power generation. In particular, the Power Generation Advisory Panel Mitigation Strategy Initiative #13 addresses gas infrastructure, transmission, and methane leakage.[20]

The main body of the DSP devotes only 7½ of its 331 pages to the gas system transition process. Following a brief overview, the Draft Scoping Plan identifies the stakeholders, lists the key considerations (transition away from gas, reduce fugitive emissions from gas infrastructure), and discusses the process going forward. Although the DSP includes a few recommendations relating to the transition process, it provides no real framework for transitioning the natural gas system from today (when natural gas is a key component of New York's electricity and energy system) to 2040 (when the CLCPA calls for "emission free" generation), and beyond (when the DSP envisions a limited role for natural gas in certain economic sectors). Instead, the DSP defers presentation of a program for transition of the natural gas system to a later date, declaring that "[t]he Council will work to include in the final Scoping Plan a framework through which agencies can develop a coordinated plan for the orderly downsizing of the gas system."[21]

As envisioned by the CLCPA, the Scoping Plan is intended to "outlin[e] the recommendations for attaining the statewide GHG emissions limits" in accordance with the schedule set forth in the Act.[22] DEC and other agencies are then tasked with developing programs and regulations designed to implement the measures identified in the final Scoping Plan. However, in the case of the natural gas industry, the Council—by its own admission—has not provided a framework on which to comment. It has instead committed only to "work[ing] to include in the final Scoping Plan a framework" for agencies to develop a plan for "the orderly downsizing of the gas system." In effect, the Council has delayed development of a strategy for transitioning the natural gas system until after the close of the public comment period on the DSP. While the delay itself is arguably not problematic, the State cannot take steps to implement the transition process until the Council has developed a framework and made it available for public comment.

In an apparent acknowledgment that the DSP does not adequately address the transition of the natural gas system, the Council has formed a subgroup to study the issue. However, assuming

[19] DSP, pp. A-38 to A-39.
[20] *Id. pp*. A-83 to A-85.
[21] *Id. p*. 271.
[22] ECL § 75-0103.11.

the Scoping Plan is issued later this year as required by the CLCPA, any recommendations by the subgroup will not be available for public comment before the Scoping Plan is finalized.

The Council's approach to addressing natural gas transition issues effectively deprives the natural gas industry and other members of the public the opportunity to review and comment on the Council's initial framework for downsizing the state's natural gas industry/infrastructure as part of the Scoping Plan process. The DSP itself contains little meaningful discussion of natural gas system transition issues, and the subgroup formed to address the issue was convened only *after* the DSP was made available for public comment.

To remedy this problem, we believe that the Council must address the current state of the natural gas transition review process at the time it finalizes the Scoping Plan, including the status of the subgroup's efforts. The Council also must develop a detailed preliminary framework for transitioning the natural gas industry comparable to that provided for other sectors, such as transportation, buildings and electricity generation. This framework must be made available for public comment *before* any regulations or other measures are adopted to implement the initiatives outlined in the framework.

Going forward, this framework should be updated periodically and made available for public comment as measures are implemented under the CLCPA. Natural gas is currently the primary fuel serving New York's power plants and buildings. As a result, it is crucial that the State's plans for transitioning away from natural gas and toward renewables and alternative fuels be thoroughly and continuously vetted to ensure that electricity and heating remain reliable and affordable.

B. The Natural Gas Transition Plan Must Identify the Responsible Agencies, Specify Their Role in the Decision-making Process, and Acknowledge the Limits of New York's Authority Regarding Interstate Pipelines.

Congress enacted the Natural Gas Act (NGA) in 1938, recognizing that a robust natural gas industry is critical to the nation, and that in this respect an individual State's own self-interest sometimes must yield to the national "public interest."[23] This public interest flows from the need for reliable, affordable energy to serve the public's needs. Natural gas provides a critical energy source for electric generation, residential use, and industrial consumption. Because these end uses are often distant from centers of natural gas production, there is a pressing need for infrastructure that can deliver natural gas from its source to the places where it heats homes, fires generators, powers factories, and where it is used as a critical input in the production of many plastics, fertilizers, and other chemicals, for which there is currently no economic substitute.[24]

---

[23] *See* 15 U.S.C. § 717(a).

[24] Interstate natural gas pipelines pass through all of the lower forty-eight states and account for 71% of the natural gas mainline transmission mileage in the United States. U.S. Energy Information Administration, *Interstate Natural Gas Pipeline Segment*, https://www.eia.gov/naturalgas/archive/analysis_publications/ngpipeline/interstate.html (last viewed May 2, 2022). All but six of the lower forty-eight states are served almost entirely by those interstate pipelines. U.S. Energy Information Administration, *U.S. Natural Gas Pipeline Network, 2009*, https://www.eia.gov/naturalgas/archive/analysis_publications/ngpipeline/ngpipelines_map.html (last viewed May 2, 2022). *See also* U.S. Energy Information Administration, *Interstate Natural Gas Supply Dependency*, 2007,

Congress empowered a federal agency—now the Federal Energy Regulatory Commission (FERC)—with "exclusive jurisdiction over the transportation and sale of natural gas in interstate commerce for resale."[25] FERC's principal obligation under the NGA is to "encourage the orderly development of plentiful supplies of . . . natural gas at reasonable prices."[26] FERC regulates all aspects of the construction and operation of interstate natural gas pipelines under the NGA. Section 7 of the NGA authorizes FERC to issue a certificate of public convenience and necessity "to any qualified applicant . . . authorizing the whole or any part of the operation, sale, service, construction, extension, or acquisition covered by the application" if it finds that "the proposed service, sale, operation, construction, extension, or acquisition . . . is or will be required by the present or future public convenience and necessity."[27] To obtain a certificate, the applicant must demonstrate "need"—typically through binding contracts from customers for capacity on the proposed pipeline. These customers may be end users such as schools, stores, hospitals, manufacturers, or power plants, local gas distribution utilities that purchase the gas and then deliver it to local customers, or natural gas producers or marketers. In assessing need, FERC will consider other public benefits such as meeting unserved demand for natural gas, eliminating bottlenecks, reducing costs to customers, and increasing electric reliability.

Once pipeline facilities are constructed, the holders of the FERC certificate maintain "an obligation, deeply embedded in the law, to continue service."[28] This obligation is embodied in 15 U.S.C. § 717f(b) which provides that "[n]o natural-gas company shall abandon all or any portion of its facilities subject to the jurisdiction of the Commission, or any service rendered by means of such facilities, without the permission and approval of the Commission first had and obtained, after due hearing, and a finding by the Commission that the available supply of natural gas is depleted to the extent that the continuance of service is unwarranted or that the present or future public convenience or necessity permit such abandonment." An abandonment within the meaning of this provision "occurs whenever a natural gas company permanently reduces a significant portion of a particular service."[29] A company cannot abandon a pipeline regulated by FERC without FERC's permission.[30] To obtain that permission, the certificate holder must petition FERC to hold an abandonment proceeding under NGA Section 7(b) to determine whether public convenience and necessity justifies continued operation of the pipeline under the terms of the

https://www.eia.gov/naturalgas/archive/analysis_publications/ngpipeline/dependstates_map.html (last viewed May 2, 2022) (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont are at least 85% dependent on the interstate pipeline network for their natural gas supply).

[25] *Schneidewind v. ANR Pipeline Co.*, 485 U.S. 293, 300-01, 108 S. Ct. 1145, 99 L. Ed 2d 316 (1988) (citing *Northern Natural Gas Co. v. State Corp. Comm'n of Kansas,* 372 U.S. 84, 89, 83 S. Ct. 646, 9 L. Ed. 2d 601 (1963)); *see also* 15 U.S.C. § 717(b).

[26] *NAACP v. Federal Power Comm'n*, 425 U.S. 662, 670, 96 S. Ct. 1806, 48 L. Ed. 2d 284 (1976); *accord Myersville Citizens for a Rural Cmty., Inc. v. FERC*, 783 F.3d 1301, 1307 (D.C. Cir. 2015) (citation omitted).

[27] 15 U.S.C. § 717f(e).

[28] *Transcontinental Gas Pipe Line Corp. v. Federal Power Commission,* 488 F.2d 1325, 1328 (D.C. Cir. 1973) (quoting *Michigan Consol. Gas Co. v. Federal Power Commission,* 283 F.2d 204, 214 (D.C. Cir. 1960)).

[29] *Reynolds Metals Co. v. Federal Power Comm'n*, 534 F.2d 379, 384 (D.C. Cir. 1976) (concluding proposed permanent 62% reduction of gas company's obligation to transport large customer's gas amounted to an abandonment of that service).

[30] *United Gas Pipe Line Co. v. Federal Power Commission,* 385 U.S. 83, 87 S. Ct. 265, 270, 17 L. Ed. 2d 181 (1966).

existing certificate. FERC is required to consider the interests of shippers, investors, consumers and the market in determining whether services should continue.[31]

The DSP contemplates a major decrease in New York's natural gas consumption that will likely lead to significant reductions in the amount of gas transported through New York's interstate natural gas pipelines. In developing the framework for this transition, New York State must consider the limits on its authority to compel changes to interstate natural gas transmission activities and consult with representatives of the natural gas industry and FERC before making any changes that could impact the availability, reliability, and safety of New York's natural gas infrastructure.

Moreover, while the Council is arguably charged with establishing the basic framework for the natural gas transition process, successful implementation will require coordination among multiple agencies and entities in addition to FERC, including the New York State Legislature, DEC, the New York State Department of Public Service (DPS), the PSC, the New York State Energy Research and Development Authority (NYSERDA), gas infrastructure and power plant owners, NYISO, and many others. A partial list of key players and their tasks, include:

- New York State Legislature: There are several laws currently in place that may hinder the natural gas transition process, including PSL §30, which declares that the provision of natural gas service is in the public interest, and Transportation Corporation Law Section 12, which requires that natural gas service be supplied on application of a building owner or operator. As the DSP acknowledges these laws "seem to be in conflict with the requirements of the Climate Act" and "must be updated."[32]
- Public Service Commission: The PSC has commenced the Gas Planning Proceeding to develop new planning standards for gas utilities (Case 20-G-0131). This proceeding will require consideration of GHG emission limits and other requirements of the CLCPA as part of the long-term natural gas planning process.
- NYISO. NYISO must conduct periodic reliability needs assessments to determine whether planned changes to New York's energy system—including the significant increase in renewable electricity generation and decrease in natural gas electricity generation—will adversely impact grid reliability.

The framework developed by the Council must clearly articulate the role of each agency in the natural gas transition decision-making process and set forth a basic set of principles governing how the agencies will work together to resolve the complex issues that are likely to arise.

C. The Scoping Plan Understates and Undervalues the Role of Natural Gas in the Electricity Generation Sector During the Transition to Renewables

1. Introduction

[31] *See, e.g., Trunkline Gas Co.*, 94 FERC ¶ 61,381, at 62,420-22 (2001) (discussing the potential impact of abandonment on shippers, investors, consumers, and the relevant markets).
[32] DSP, p. 266.

The CLCPA calls for 70% of statewide electricity to come from renewable energy sources by 2030 and "zero emission" generation by 2040, which the DSP interprets as requiring the phaseout of all fossil fuel-fired and natural gas power plants by that date. At the same time, achieving the CLCPA's GHG emission reduction goals will require a significant expansion in the state's energy generation capacity to address the planned electrification of the building and transportation sectors and other developments. The DSP "anticipates electricity demand growth of 65% to 80% by 2050, dependent on the scale and timing of electrification and whether there are other clean alternatives for the transportation and building sectors."[33] In essence, the DSP calls for a massive buildout of renewable energy generating sources and transmission capacity, combined with a vast expansion of energy storage and currently undiscovered technologies, to achieve the goal of eliminating fossil fuel-fired electricity generation in 18 years.

While Kinder Morgan supports New York's goal of increasing renewable energy and reducing GHG emissions, we believe the best way of achieving that goal is by maintaining a diverse mix of resources that includes natural gas-fired power plants. This strategy—when combined with programs to reduce methane emissions from natural gas transmission, storage, and distribution and, possibly, carbon capture and storage at natural gas-fired power plants—will achieve the goals of the CLCPA while ensuring the safety and reliability of New York's electric grid.

2. Natural Gas Plays a Crucial Role in New York's Electricity Generation System

As shown in Table 1 below, natural gas is and has been a crucial part of New York's electricity generation system.

[33] DSP, p. 151.

Table 1: Comparison of Installed Generating Capacity by Fuel Type in New York State in 2012 and 2021 (in MW)[34]

Generator Fuel	2012 Capacity	Percent	2021 Capacity	Percent	Percent Change
Gas	6,124	15.7%	4,817	12.5%	-2.2%
Oil	3,309	8.5%	2,327	6.0%	-2.5%
Gas & Oil	14,365	36.9%	19,315	49.9%	+13%
Coal	2,370	6.1%	0.0	0%	-6.1%
Nuclear	5,263	13.5%	4,378	11.3%	-2.2%
Pumped Storage	1,407	3.6%	1,407	3.6%	No change
Hydro	4,279	11.1%	4,259	11.0%	-.1%
Wind	1,363	3.5%	1,818	4.7%	+1.2%
Other	422	1.1%	351	.9%	-.2%
Total	38,902		38,671		

In 2021, the percentage of electricity supplied by natural gas and natural gas/oil was 12.5% and 49.9%, respectively, comprising a total of approximately 62.4% of New York's electricity generation. As noted in the DSP, much of this generating capacity is located in the New York City region because demand is highest there and land and other constraints making siting renewable energy facilities in the downstate area difficult.

By comparison, in 2021, only 5.8% of electricity in New York was supplied by wind or "other" sources (consisting primarily of solar) despite numerous initiatives designed to encourage development of renewable energy sources, reduce the state's reliance on electricity generated by combusting fossil fuels, and limit emissions of carbon dioxide and other GHGs. A list of executive, regulatory, legislative, and programmatic initiatives designed to "combat the system risks associated with the impacts of a changing climate" is contained in Chapter 3 of the DSP.[35] Key initiatives focused specifically on electricity generation include, but are not limited to: Regional Greenhouse Gas Initiative (RGGI) (2009) (establishing multi-state GHG emission cap-and-trade program designed to reduce CO_2 emissions from fossil fuel-fired power plants); New York Public Service Law Article 10 (2011) (establishing unified review process for new, repowered or modified major electric generating facilities); New York Reforming the Energy Vision (REV) Initiative (program to identify regulatory, infrastructure, and market-based barriers to realizing the State's energy goals); Clean Energy Standard (imposing mandatory renewable procurement requirements on the State's electric utilities); and Accelerated Renewable Energy Growth and Community Benefit Act of 2020 (replacing Article 10 with expedited process for siting renewable energy projects overseen by the newly created Office of Renewable Energy Siting (ORES)).

[34] NYISO, *2012 Load and Capacity Data*, Table II-1 (Revised May 2016); NYISO, *2021 Load and Capacity Data*, Table II-1a (2021). Microsoft Word - 2012_GoldBook_V3.doc (nyiso.com) and b08606d7-db88-c04b-b260-ab35c300ed64 (nyiso.com) (last viewed May 23, 2022).
[35] DSP, pp. 13-17.

Despite these and numerous other initiatives, achievement of the State's renewable energy electricity generation and GHG emission reduction goals has remained elusive. As noted in Table 1 above, between 2012 and 2021, the percentage of electricity generated from wind and "other" sources (primarily solar) only increased from 4.6% to 5.8%. As set forth in Section V.C.5 below, there are numerous obstacles to significantly increasing renewable energy generation in New York State, none of which are likely to be eliminated or even significantly reduced by the CLCPA. In developing a framework for transitioning the natural gas system, the Council must acknowledge the significant role the fuel currently plays in New York's economy or risk implementing a transition program that is doomed to failure because it lacks a realistic baseline.

3. The CLCPA Contemplates a Role for Natural Gas in Electricity Generation Through 2040 and Beyond

The CLCPA requires the Commission to establish a program to require that:

> "(a) a minimum of seventy percent of the state wide electric generation secured by jurisdictional load serving entities to meet the electrical energy requirements of all end-use customers in New York state in [2030] shall be generated by renewable energy systems;" and (b) that by the year [2040] (collectively, the "targets") the statewide electrical demand system will be zero emissions. In establishing such program, the Commission shall consider and where applicable formulate the program to address impacts of the program on safe and adequate electric service in the state under reasonably foreseeable conditions. The commission may, in designing the program, modify the obligations of the jurisdictional load serving entities and/or the targets upon consideration of the factors described in this subdivision.[36]

As the above text makes clear, the 70% renewable energy by 2030/100% "emission free" by 2040 numbers are "targets" that the Commission may modify to address safety and reliability concerns. Such flexibility is crucial given the ambitious nature of the CLCPA's targets and the technological, economic, and other uncertainties associated with achieving those targets.

Moreover, while the 2030 target calls for the provision of 70% of electricity by "renewable energy systems," the 2040 goal requires that "the statewide electrical demand system will be *zero emissions"* (emphasis added). The reference to "zero emissions" leaves open a range of electricity generation options provided they do not result in the emission of GHGs.

Unfortunately, the DSP does not clearly contemplate a role for natural gas in the state's electric system despite the CLCPA's specific concerns regarding safety and reliability. Although the DSP notes that new or repowered fossil fuel-fired generation facilities may be considered as part of the energy mix if emissions free solutions will not address identified reliability needs or

[36] PSC § 66-p.2.

risks,[37] the Council largely assumes in the DSP that all electricity in the state will be generated from renewables by 2040. For the reasons set forth below, we believe this assumption is both unrealistic and unwise.

4. Natural Gas Generation Will be Necessary for the Foreseeable Future to Ensure System Reliability and Is a Potentially Valuable Component of a Renewable Energy Future

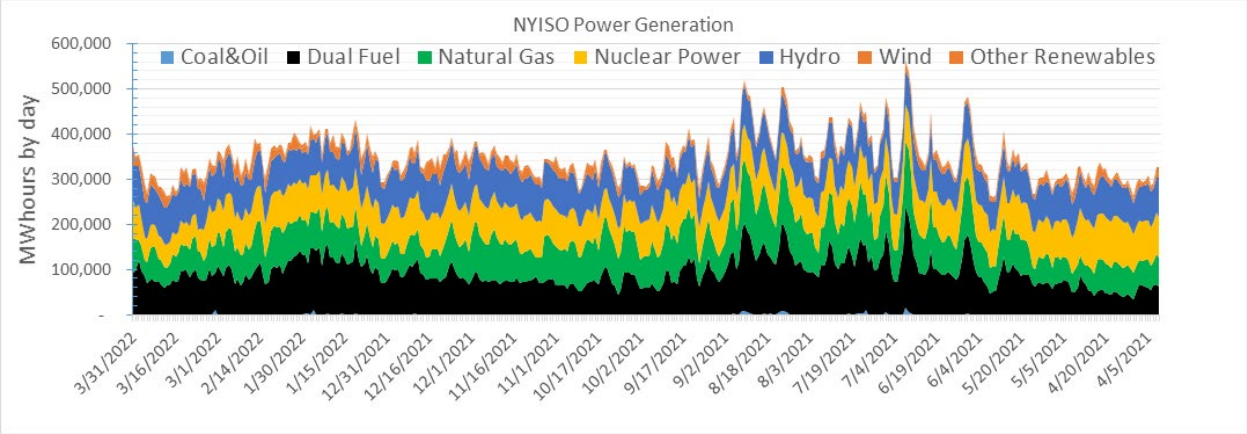
As the Council is well aware, most renewable energy sources produce electricity intermittently. As a result, they have a "low capacity factor," generating electricity at full capacity only a small percentage of the time. The average capacity factors for photovoltaic solar and wind power generation are just 24.6% and 34.6%, respectively.[38] As a result of this limitation, some type of back-up generation source is required for wind and solar-powered sources to ensure a reliable source of electricity.

The power transmission grid is designed to deliver power as it is generated in response to real-time demand. This demand does not always mirror the times when intermittent renewable sources of energy like wind or solar are producing at their peak. Intermittence makes renewable sources poorly suited to maintaining the transmission grid's critical balance.[39] The flexibility of natural gas provides a counterweight to the intermittence of renewables.[40] If left unchecked, the mismatch between supply and demand caused by intermittent generation would result in reduced reliability and potential blackouts. Although advances in energy storage and improvements in transmission will likely play a role in mitigating this issue over time, these expected changes are not a panacea. There will always be a need for both stable base load generation and quick ramping resources to fill unexpected gaps left by intermittent resources to maintain grid reliability.

The figures below illustrate the challenge posed by renewables-only electricity generation. Figure 2 shows the amount of electricity generated during the year in New York by different types of sources (wind, other renewables, natural gas, etc.), while Figures 3 and 4 provide information for wind and other renewables and natural gas, respectively. Figure 5 illustrates the amount of electricity generated by various types of sources during a week.

Figure 2*:* Total Demand Met by Dual Fuel, Natural Gas, Nuclear, Hydro, Wind and Renewables

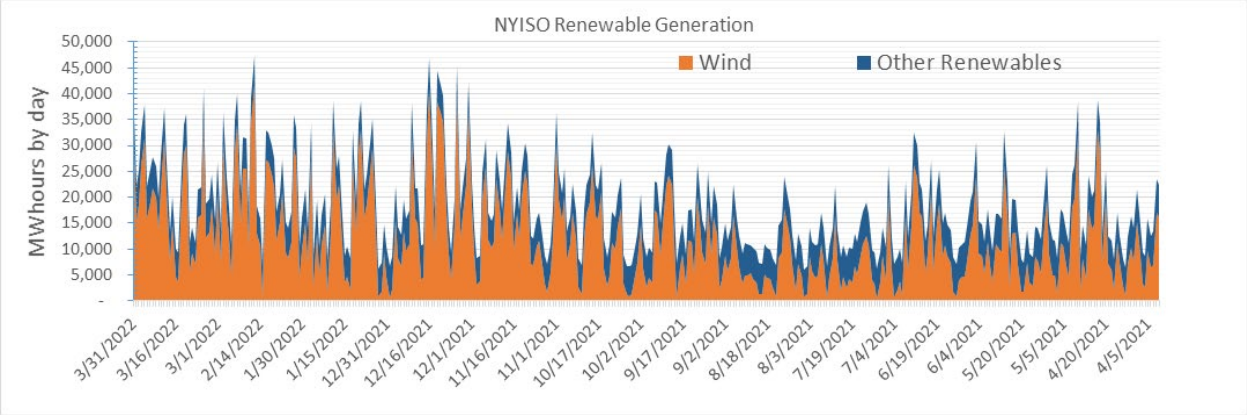
[37] DSP, p. 155.
[38] U.S. Energy Information Administration, Electric Power Monthly, Table 6.07B. Capacity Factors for Utility Scale Generators Primarily Using Non-Fossil Fuels, Electric Power Monthly - U.S. Energy Information Administration (EIA) (last viewed May 24, 2022).
[39] Shakir D. Ahmed et al., *Grid Integration Challenges of Wind Energy: A Review*, 8 IEEE Access 10857, 10859-60 (2020), (PDF) Grid Integration Challenges of Wind Energy: A Review (researchgate.net) (last viewed June 3, 2022).
[40] Even studies that project deep decarbonization recognize the important future role of natural gas. For instance, an Energy Futures Initiatives report geared toward decarbonization in California observed that, "[n]atural gas generation will continue to play a key role in providing California's electric grid with operational flexibility and system reliability, while enabling the growth and integration of intermittent renewables." Ernest J. Moniz et al., Energy Futures Initiative, *Optionality, Flexibility & Innovation: Pathways for Deep Decarbonization in California*, p. xix (2019), https://static1.squarespace.com/static/58ec123cb3db2bd94e057628/t/5ccb4cf87817f7881c4c58e6/1556827401738/FINAL+OFI.pdf (last viewed May 23, 2022).



Source of data: S&P Global Platts / NYISO

Figure 3: Power Demand Met by Wind and Other Renewables

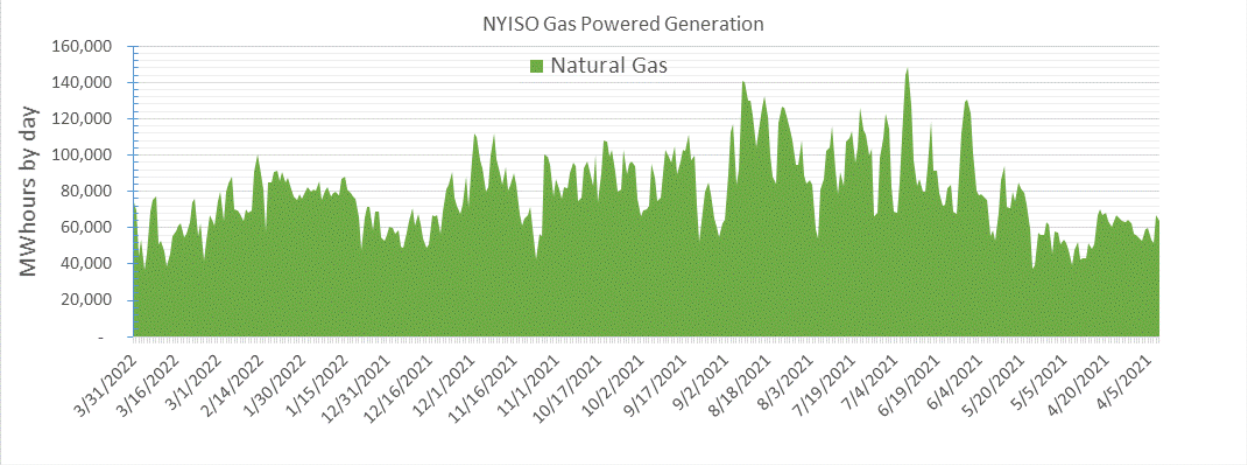
Note: Wind power can and does drop to near zero power output.



Source of data: S&P Global Platts / NYISO

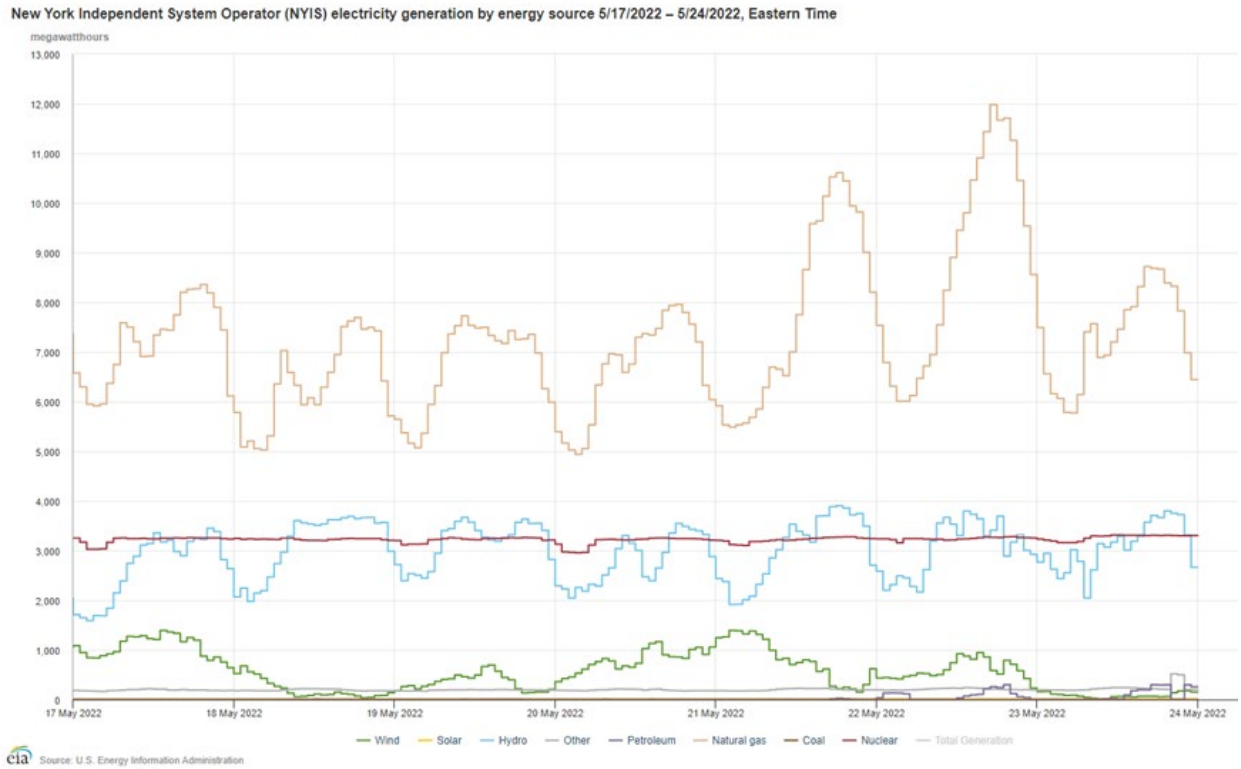
Figure 4: Power Demand Met by Natural Gas

Note: Natural gas supplies power generators 24 hours a day, 7 days a week, and fills in for loss of wind; it is reliable and has never gone to zero.



Source of data: S&P Global Platts/NYISO

Figure 5:



As these charts show, the amount of energy supplied by wind and other renewables varies significantly from hour to hour and from day to day. In the case of wind, the amount of energy

generated at times approaches zero. Natural gas, by comparison, can provide electricity consistently over time. Moreover, modern natural gas-fired power plants can be dispatched quickly (within minutes) as circumstances warrant and, unlike advanced battery systems, can stay online for days, ensuring a steady supply of electricity when conditions for renewable energy generation are unfavorable. These and other features of natural gas generation make it an ideal complement to renewables. A report issued by the Progressive Policy Institute concluded that as the country moves toward decarbonization, "retaining sufficient natural gas generation to backstop wind and solar power would reduce costs and increase reliability compared to a grid that relies entirely on renewables."[41] John Kerry, the United States' Special Presidential Envoy for Climate echoed this sentiment in a recent letter to the Wall Street Journal when he declared that "Natural gas is central to smart and achievable policy to cut greenhouse-gas emissions today. In the near term, that means pairing with renewables to clean up electricity."[42] However, the need for natural gas-fired electricity generation is likely to continue beyond the "near term" and, indeed, beyond the CLCPA's 2040 "emission free" generation deadline.

In anticipation of CLCPA implementation, the NYISO has conducted several studies designed to assess the impact of climate change and the CLCPA's renewable energy and GHG emission goals on New York's electricity generating system. These studies have raised concerns about the impact of the CLCPA on system reliability and resilience. A 2020 study completed for NYISO illustrates the issues posed by the Act. The 2020 NYISO Resilience Study examines four scenarios with the goal of assessing the impact of the CLCPA renewable targets on electric reliability in the state. The study addresses the amount of electricity generated under each scenario assuming a buildout of renewable energy generation and the elimination of fossil fueled generating sources, consistent with the CLCPA. The study includes buildout estimates for different types of energy sources (*e.g.*, land-based wind, offshore wind, grid connected and renewable solar, etc.) and includes a separate category for "dispatchable" sources that are compliant with "emission" requirements (designated as "DE Resource"). The DE Resource conveys the amount of backup electricity needed to cover any circumstances where the other electricity generating sources are insufficient to meet demand. No specific energy resource is identified to meet the DE demand, much of which is currently being supplied by natural gas-fired power plants. Some key conclusions of the report are reproduced below:

---

[41] Clayton Munnings, Progressive Policy Institute, *Memo to President-Elect Biden and Congress: Wind, Solar and Gas: Managing the Risks of America's Clean Energy Transition*, p.3 (Dec. 2020) https://www.progressivepolicy.org/wp-content/uploads/2020/12/PPI-WindSolarGas.pdf (last viewed May 23, 2022). Among other things, the PPI study notes that an all-renewable electric grid requires significant overbuilding to produce sufficient energy during periods when short-term wind or solar output is well below average—by one estimate, requiring installed renewable energy capacity that is three to eight times larger than peak demand. *Id.* p. 6. As noted in a recent study prepared for the NYISO "[F]urther increasing the nameplate capacity of such resources is of limited value, since when output is low, it is low for all similar resources across regions or the whole state." AG Analysis Group, *Climate Change Impact and Resilience Study – Phase II: An Assessment of Climate Impacts on Power System Reliability in New York State*, p. 10 (Sept. 2020) (hereinafter "NYISO 2020 Resilience Study"), https://www.nyiso.com/documents/20142/15125528/02%20Climate%20Change%20Impact%20and%20Resilience%20Study%20Phase%202.pdf/89647ae3-6005-70f5-03c0-d4ed33623ce4 (last viewed May 23, 2022).

[42] Wall Street Journal, *John Kerry Responds on Future of Natural Gas* (Apr. 25, 2022).

- **"The current system is heavily dependent on existing fossil-fueled resources to maintain reliability, and eliminating these resources from the mix will require an unprecedented level of investment in new and replacement infrastructure, and/or the emergence of a zero carbon fuel source for thermal generating resources."[43]** The study notes that the CLCPA calls for the elimination of the natural gas-fired units that are currently "vital to maintain power system reliability throughout the year," and that this transition will occur at the same time the DSP contemplates electrification of other sectors such as transportation and heating.[44] The NYISO report thus acknowledges: the significant role natural gas plays in ensuring reliability; the challenges posed by the planned transition away from natural gas; and the absence of a zero carbon alternative to replace natural gas.
- **"The DE resources needed to balance the system in many months must be significant in capacity, be able to come on line quickly, and be flexible enough to meeting rapid, steep ramping needs."[45]** Even in baseline cases (*i.e.*, before layering in climate disruption events), there are periods of low output when significant DE resources (at times more than 30,000 MW) will be necessary to meet demand. These resources must be quickly dispatchable and able to meet rapid and sustained increases in demand.[46]
- "**Climate disruption scenarios involving storms and/or reductions in renewable resource output (*e.g.*, due to wind lulls) can lead to loss of load occurrences."[47]** The study notes that electrification will transform New York from a summer- to a winter-peaking system and that "loss of load occurrences due to climate disruptions in the winter are deeper and occur across more scenarios than in the summer."[48] In practical terms, this means that the planned electrification of New York's economy may lead to more power outages in the winter, with the attendant risk to public health and the economy.
- **"The variability of meteorological conditions that govern the output from wind and solar resources presents a fundamental challenge to relying on those resources to meet electricity demand."[49]** The study concludes that periods of reduced output from wind and solar resources—in particular, extended "wind lull" events—will pose a significant challenge for New York's energy grid. Even outside the "seven-day climate disruption wind lull period," the study shows that that the system must rely significantly on the DE resource to avoid load losses.[50] In other words, even minor lulls in wind energy generation may create gaps in generation that must be filled by a quickly dispatchable resource.
- **"Battery storage resources help to fill in voids created by reduced output from renewable resources, but periods of reduced renewable generation rapidly deplete battery storage resource capabilities.[51]** While development of a large battery storage network as contemplated by the CLCPA may help avoid loss of load for the immediate

[43] NYISO 2020 Resilience Study, p. 13
[44] *Id.*
[45] *Id.* p. 11.
[46] *Id.* pp. 11-12.
[47] *Id.* p. 9.
[48] *Id.*
[49] *Id.* p. 10.
[50] *Id.*
[51] *Id.* p. 11.

period following sharp declines in renewable output, the "contribution of storage is quickly overwhelmed by the depth of the gap left during periods of time with a drop off in renewable generating output over periods of a day or more."[52] Thus, even with battery storage, there will remain a need for electricity generation sources that can be readily dispatched during extended "lulls" in renewable energy generation.[53] To the extent the State contemplates using batteries to replace natural gas for firming and replacing during lulls, the state will be required both to build massive amounts of battery storage (to provide power during lulls) and to significantly overbuild renewable sources to generate enough power to meet demand and simultaneously charge the batteries.[54]

The flexibility of natural gas makes it the best option to provide fuel for base load and quick-ramping plants to supplement renewable energy production both now and in the future. Through "linepack"— the variable volume of gas contained in the pipe—natural gas pipelines flexibly store energy that can be brought online quickly to account for fluctuations in demand.[55] When necessary, natural gas plants can also be throttled down quickly to meet changing supply or demand profiles. These features make natural gas a critical component of grid reliability. In a broader sense, natural gas also promotes the reliability of the energy system by providing an alternative to electricity for critical functions like heating that is not affected by blackouts or other electric system issues.

---

[52] *Id.*

[53] Additional information about short and long-term reliability issues and the potential impact of the CLCPA renewable energy goals on system reliability can be found in NYISO, *2021-2030 Comprehensive Reliability Plan: A Report from the New York Independent System Operator* (Dec. 2, 2021) (2021 NYISO Comprehensive Reliability Plan), 99a4a589-7a80-13f6-1864-d5a4b698b916 (nyiso.com) (last viewed May 23, 2022).The 2021 NYISO Comprehensive Reliability Plan reached similar conclusions to the 2020 NYISO Resilience Study. "Key takeaways" include the following:

- "The variability of output from wind and solar resources presents a fundamental challenge to reliably meeting electricity demand."
- "Battery storage resources help to fill in voids in renewable resources output, but extended periods rapidly deplete storage capabilities resulting in the need for longer running dispatchable emission-free resources."
- "Significant amounts of dispatchable, emission-free resources are needed to balance renewable intermittency on the system . . . [that] are not commercially available at this time but will be critical to future grid reliability." *Id.* p. 10.

[54] GatesNotes: The Blog of Bill Gates, *For battery storage needs, use: It is surprisingly hard to store energy* (Feb. 22, 2016), www.gatesnotes.com/Energy/It-Is-Surprisingly-Hard-to-Store-Energy (last viewed June 10, 2022); Dan Gearino, Inside Climate News, *100% Renewable Energy Needs Lots of Storage. This Polar Vortex Test Showed How Much* (Feb. 20, 2019), https://insideclimatenews.org/news/20022019/100-percent-renewable-energy-battery-storage-need-worst-case-polar-vortex-wind-solar/ (last viewed June 10, 2022).

[55] *See* Grant Wilson & Paul Rowley, UK Energy Research Centre, *Flexibility in Great Britain's gas networks: analysis of linepack and linepack flexibility using hourly data*, p. 5 (May 2019) (illustrating "the scale of within-day flexibility currently afforded to Britain's energy systems by virtue of having a gaseous energy vector contained in an extensive high-pressure network of pipelines"), UKERC_BN_Linepack_flexibility_DOI_update.pdf (d2e1qxpsswcpgz.cloudfront net) (last viewed June 3, 2022); *see also* Anna Schwele et al., 2019 IEEE Milan PowerTech *Coordination of Power and Natural Gas Systems: Convexification Approaches for Linepack Modeling*, p. 1 (June 2019) ("[A]ccounting for the natural gas network unlocks its inherent flexibility in order to facilitate the integration of renewables and deal with uncertainties and variability from large-scale wind power penetration"), https://www.researchgate net/publication/331599180_Coordination_of_Power_and_Natural_Gas_Systems_Convexification_Approaches_for_Linepack_Modeling (last viewed June 3, 2022).

As a result of its stable characteristics and attractive environmental benefits—natural gas emits fewer pollutants than other fuels with similar stability attributes—rather than diminishing the need for natural gas, the growth of renewable energy should and will increase the demand for natural gas.[56] Together, natural gas and renewables can reduce emissions while maintaining an energy mix that provides reliable generation for end users.[57] However, natural gas can only partner with renewable energy if there is a robust interstate transportation network that allows gas to reach consumers. Kinder Morgan is dedicated to providing both the transportation services and other innovations that support a partnership between renewable energy and natural gas.

The consequences of failing to provide proper backup energy generating capacity are obvious. As noted above, the electrification of New York's economy will transform New York into a winter-peaking system, meaning blackouts are more likely to occur during the cold winter months. The massive power outages in Texas in February 2021 caused by record-low temperatures, snow and ice illustrate the potential public health and economic problems that could be caused by an unreliable winter-peaking electric system.[58] California's rolling blackouts during the regionwide heat wave in 2020 likewise point to the importance of maintaining a reliable system of backup generation that can be tapped when the grid reaches capacity.[59] On May 18, 2022, the North American Electric Reliability Corporation announced that certain parts of North America

[56] The European experience, most notably Germany's energy transition, demonstrates the vital role natural gas can play in a decarbonizing energy mix. Despite rising levels of renewables, gas powered generation in Europe has risen 14% since 2015. Agora Energiewende and Ember, *The European Power Sector in 2020: Up-to-Date Analysis on the Electricity Transition*, p. 14 (2021), https://static.agora-energiewende.de/fileadmin/Projekte/2021/2020_01_EU-Annual-Review_2020/A-EW_202_Report_European-Power-Sector-2020.pdf (last viewed May 23, 2022). Germany has aggressively pursued the expansion of renewables through its *Energiewende* program. This initiative envisions the phase out of nuclear energy and a complete end of coal generation by 2030. Throughout this dramatic shift, Germany's need for natural gas has continued. Jude Clemente, *Germany Proves How Essential Natural Gas is –And the U.S. Must Supply*, Forbes (Mar. 8, 2020), https://www.forbes.com/sites/judeclemente/2020/03/08/germany-proves-how-essential-natural-gas-is--and-the-us-must-supply/?sh=72b9bc412c21 (last viewed May 23, 2022). Analysis of Germany's economy shows a strong positive correlation between natural gas consumption and economic growth. Cosimo Magazzino et al., *A DC2 Algorithm on the Natural Gas Consumption and Economic Growth*, 219 Energy 119586, at 12 (2021). If the United States is to pursue a rapid increase in renewable generation, it should remain mindful of Germany's example, which demonstrates the sustained need for natural gas as renewables grow.

[57] A useful analysis of the environmental and other benefits of an electric system comprised of both renewable and natural gas generation can be found in General Electric, *Accelerated Growth of Renewables and Gas Power Can Rapidly Change the Trajectory of Climate Change* (2020) (hereinafter "2020 GE Study"), https://www.ge.com/news/sites/default/files/2020-12/future_of_energy_whitepaper_final_0.pdf (last viewed May 23, 2022).

[58] A recent editorial in the Albany Times Union newspaper illustrates the challenge posed by the CLCPA. Following a snowstorm that caused 200,000 utility customers to lose power, the editorial noted that while climate change is clearly a concern, "[i]t's entirely fair to ask if green energy like wind, hydro, and solar will provide all the power New Yorkers need around the clock and if not, what other sources of energy will be employed? And when a fairly unspectacular snowfall kills the power for almost 200,000 people, it's fair to ask, too, what the state and utilities will do to ensure that the grid stays up and running in the future." Albany Times Union, *Editorial: A warning in the snow* (Apr. 22, 2022).

[59] In response to concerns about similar energy shortages this year, California entered into contracts with natural gas-fired power plants that were scheduled to retire to ensure system reliability. S&P Global Commodity Insights, Platts Megawatt Daily, Vol. 27, Issue 93 *California governor pitches $5.2B for 5-GW 'reliability reserve' to avert blackouts* (May 16, 2022).

are at "elevated or high risk of energy shortfalls this summer" due to various factors, including predicted above-normal temperatures (resulting in increased demand and stress on existing supply) and existing drought conditions (which have the potential to lead to lower than average output from hydroelectric generators).[60]

In light of these considerations, the framework for transitioning the natural gas system under the CLCPA must: acknowledge that natural gas-fueled power plants are likely to play a role in New York's energy generation system beyond the 2040 target in the Act and identify basic criteria for deciding whether and when to phase-out particular natural gas-fired power plants.

5. The Draft Scoping Plan Largely Ignores the Obstacles to Achieving Renewable-Only Energy Generation by 2040

As discussed in Section V.C.2 above, over the years, New York State has adopted numerous measures designed to encourage development of renewable sources. Despite these efforts, the percentage of electricity generated in New York State from non-hydroelectric renewable sources has increased from only 4.6% in 2012 to 5.8% in 2021. The planned electrification of the economy will necessitate the construction of more electric generation capacity which, per the CLCPA, should be "emission free." However, most of the obstacles that have complicated efforts to increase renewable energy capacity in New York remain.

a. The Growth in Electricity Demand Required by the Electrification of the Building and Transportation Sectors Will Make Achieving Full Decarbonization of the Electricity Sector Very Difficult

Even under the rosiest scenarios, it will be extremely difficult to meet the renewable energy goals of the CLCPA by the statutory targets. The 2020 NYISO Resilience Study, which examined four different scenarios under the CLCPA, estimates that the State will need to construct between 2,576 and 4,674 MW per year of land-based and offshore wind and grid-connected solar between 2020 and 2040 to achieve the goals of the Act. By comparison, the historical nameplate capacity growth rate of renewable energy generation from 2012 to 2020 was only 74.5 MW/year.[61]

As these statistics show, achieving the renewable energy goals of the CLCPA will require a massive increase in renewable energy construction in the State. Unfortunately, the DSP does not present a realistic picture of the scale of development required, nor does it provide a realistic assessment of the likelihood that the state can achieve the renewable energy goals of the CLCPA.

b. Continued Local Opposition to Utility-Scale Renewable Projects and Needed Transmission Facilities is Likely

While most New Yorkers support renewable energy in theory, their enthusiasm often wanes when faced with construction of a large-scale wind or solar project near their homes. As of April 2022, New York's Public Service Commission had approved only 17 large-scale wind and

[60] North American Electric Reliability Corporation, *Announcement: Extreme Weather Heightens Reliability Risks this Summer* (May 18, 2022), May 18 2022 SRA Announcement.pdf (nerc.com) (last viewed May 24, 2022).
[61] 2020 NYISO Resilience Study, p. 14.

solar projects under New York's 2011 Article 10 siting law.[62] This amounts to less than two projects a year over the course of a decade. To address this problem, the Legislature enacted the Accelerated Renewable Energy Growth and Community Benefit Act in 2020 (codified primarily at New York Executive Law § 94-c) to establish an expedited process for reviewing renewable energy projects. Also, the DSP includes a multi-pronged plan to foster community acceptance of renewable projects.[63] However, it remains to be seen whether these initiatives will be enough to overcome local opposition to the extent necessary to achieve the renewable energy targets of the CLCPA. Also, as has been true in the past, individual projects will inevitably encounter environmental or other obstacles that complicate or prevent approval. As the number of projects increases (and the number of acceptable sites inevitably decreases), these obstacles are likely to grow.

c. Achieving the CLCPA's Renewable Energy Targets Requires a Massive Increase in Transmission Capacity

Achieving New York's 2040 renewable energy target will require constructing massive amounts of additional transmission capacity to move electricity from upstate (where there is land available to build new utility-scale renewable energy projects and where the land-based wind resource is located) to downstate (where the electricity is needed). While the DSP includes general recommendations relating to transmission and distribution infrastructure upgrades,[64] the discussion does not address the difficulties associated with constructing new large-scale transmission facilities in New York and elsewhere.[65]

d. Achieving the CLCPA's Renewable Energy Targets Requires Large Amounts of Land Suitable for Renewable Energy Generation

Solar and wind facilities require large amounts of suitable land. A 2013 National Renewable Energy Laboratory (NREL) study examined land use associated with then-existing utility-scale ground-mounted photovoltaic and concentrating solar power facilities and calculated an average capacity weighted average of 7.3 acres/Megawatt alternating current (MWac) for direct land use—defined as the land directly occupied by solar arrays, access roads, and other infrastructure. The average increased to 8.9 acres/MWac when total area—land enclosed by the site boundary—was considered.[66] Although the direct impact of wind projects is arguably smaller on a per megawatt basis, the turbines typically must be located a significant distance apart. Also, while certain activities—such as agriculture—can continue in the presence of a wind turbines, the

---

[62] For a list of renewable energy project applications approved under New York's Article 10 law, see: https://www3.dps ny.gov/W/PSCWeb nsf/All/ED227D547EF2B1B985258221006A32EB?OpenDocument (last viewed May 23, 2022).
[63] DSP, pp. 162-64.
[64] *Id.* pp. 167-69.
[65] Scott Madden Management Consultants, *Transmission in the United States: What Makes Developing Electric Transmission So Hard?* (July 2021), https://www.scottmadden.com/content/uploads/2021/12/ScottMadden_Transmission-in-the-US_72621.pdf (last viewed May 23, 2022).
[66] Sean Ong, et al., *Land-Use Requirements for Solar Power Plants in the United States*, NREL Report No. NREL/TP-6A20-56290, pp. iv-v (June 2013), https://www nrel.gov/docs/fy13osti/56290.pdf (last viewed May 24, 2022).

existence of utility-scale wind projects significantly limits what can be done on the land.[67] Although the CLCPA requires the procurement by the state's load serving entities of at least nine gigawatts of offshore wind electricity by 2032, the planned transition to renewables nevertheless will require the dedication of massive quantities of land to wind and solar projects. As the number of renewable energy projects increases, the amount land suitable for future projects will inevitably decrease. Going forward, the Council must address realistically the potential difficulties associated with acquiring land for renewable energy development.

6. Technological and Other Developments Can Potentially Reduce/Eliminate GHG Emissions Associated with Natural Gas-Fired Electricity Generation

Although natural gas combustion is significantly cleaner than fossil fuels such as oil and coal, opponents object that natural gas is nevertheless a significant source of GHG emissions. These emissions arise from two sources: methane associated with the extraction, transmission, storage and distribution of natural gas and CO_2 emitted during natural gas combustion. However, these emissions can be significantly reduced, if not eliminated, through a combination of regulatory and technological developments.

As the Council is well aware, federal and state governments and industry are taking steps to significantly reduce the GHG emissions associated with natural gas production and distribution. For example, New York State recently enacted 6 NYCRR Part 203, which establishes standards for natural gas extraction, transmission, storage and other activities designed to reduce methane emissions. The applicable requirements include restrictions on venting, compliance with control efficiency standards, equipment retrofitting mandates, and leak detection and repair (LDAR) or alternative techniques, as well as extensive recordkeeping and reporting requirements. At the federal level, in November 2021, EPA proposed updated New Source Performance Standards and Emission Guidelines for the crude oil and natural gas source category that will address methane emissions from both new and existing GHG emission sources covering production, processing, transmission and storage.[68] Also, pipeline operators are required under the "Protecting our Infrastructure of Pipelines and Enhancing Safety Act of 2020" (known as the "PIPES Act of 2020") to update their inspection and maintenance plans to eliminate hazardous leaks and minimize releases of natural gas and revise their plans to address the replacement or remediation of pipeline facilities that are known to leak. These measures are likely to be first of many targeted at reducing GHG emissions associated with natural gas extraction, processing, transmission and storage.

[67] A 2009 NREL study provided data and analysis of the land use associated with modern, large wind power plants (defined as greater than 20 MW) constructed after 2000, examining direct impact (disturbed land due to physical infrastructure development) and total area (land associated with the complete wind plant project). As the study notes, quantifying the total wind plant area is challenging because the project perimeter depends on a host of factors, including terrain, turbine size, current land use, and setback regulations. Paul Denholm et al., *Land-Use Requirements of Modern Wind Power Plants in the United States*, NREL Report No. TREL/TP-6A2-45834 (Aug. 2009), https://www.nrel.gov/docs/fy09osti/45834.pdf (last viewed May 24, 2022). A more recent study estimates that it takes 50,000 acres to produce 1,000 MW of electric capacity from land-based wind and 5,000 acres for a comparable amount of solar. By comparison, a natural gas combined cycle plant requires only 13 acres to produce the same amount of electricity. 2020 GE Study, p. 14.

[68] 86 Fed. Reg. 63110 (Nov. 15, 2021).

With respect to emissions from the power plants themselves, carbon capture, use and storage technologies (CCUS) provide a means of reducing/eliminating GHG emissions from natural gas-fired power plants, enhancing their potential as a backup for renewables. A multi-volume study issued by the American Petroleum Council in 2019 provides a roadmap for the potential deployment of CCUS technologies.[69]

D. The Draft Scoping Plan Understates the Difficulties Associated with Building Electrification and Transitioning Away from Natural Gas

1. Introduction

As noted in the DSP, the buildings sector was the largest source of GHG emissions in New York in 2019, accounting for 32% of emissions.[70] This amount breaks down as follows: 34% combustion of fossil fuels in residential buildings; 19% combustion of fossil fuels in commercial buildings; 33% emissions from imported fuels; and 14% hydrofluorocarbons released from building equipment and foam insulation.[71] To reduce combustion-related emissions, the DSP calls for electrification of the building sector, beginning with a complete prohibition against natural gas heating in new single-family homes/low rise residential buildings to be replaced by heat pumps. Long term, the DSP contemplates a gradual transition away from natural gas in existing single-family homes and other structures (commercial, large multi-family and high-rise buildings). In its "Vision for 2050," the DSP contemplates that "85% of homes and commercial building space statewide should be electrified with energy-efficient heat pumps."[72] While the DSP goes on to identify various sector-specific strategies for achieving the goals—including adopting zero emissions codes and standards and requiring energy benchmarking for buildings—it does not fully acknowledge or address the practical implications of its vision. More specifically, it does not articulate a process for evaluating the impact of its planned electrification initiative on the natural gas system, explain how decisions regarding the planned "downsizing" of the system in response to electrification will be made, or identify how the massive transition will be financed, particularly by low- and middle-income (LMI) households.

2. Electrification of Residential Heating Systems Poses Significant Technical, Financial and Other Challenges

The DSP proposes, among other things, to: prohibit utilities from providing new gas service to existing buildings; require installation of heat pumps in new single-family and low-rise multi-family buildings and, eventually, other structures; and require the gradual electrification of existing buildings (via heat pumps) as existing equipment is retired, with later transition dates for certain types of hard-to-transition buildings.

---

[69] National Petroleum Council, *Meeting the Dual Challenge: A Roadmap to At-Scale Deployment of Carbon Capture, Use, and Storage* (2019), https://dualchallenge.npc.org/ (last viewed May 23, 2022).
[70] DSP, p. 25.
[71] *Id*. p. 119.
[72] *Id*. p. 122.

As a preliminary matter, this strategy presents several technical difficulties. Although cold weather heat pump technology is improving, questions remain about whether the technology is well suited to northern New York's colder temperatures without a backup energy source. Also, the technology is efficient in cold temperatures only if paired with an energy-efficient building envelope.[73] Second, heat pumps have not been employed on a wide scale in high-rise and other large-scale structures.[74] These uncertainties mean New York's "vision" for building electrification hinges on an as yet unproven technological future.

On a broader level, the discussion of building electrification largely ignores the efficiency benefits of directly heating using natural gas versus electrification. Significant energy is lost during the generation and transmission of electricity.[75] As a result, large amounts of additional electricity must be generated relative to direct combustion of natural gas to achieve the same heating benefits.

Moreover, retrofitting existing systems will be expensive, posing a particular burden for LMI homeowners and tenants. The DSP acknowledges this fact, calling for the state to: "scale up direct cash incentives for energy efficiency, electrification, and electrification readiness in residential and commercial buildings."[76] The DSP assesses the relative financial costs and benefits of switching to heat pumps, and concludes that "[d]edicated financial support programs for LMI households, affordable and public housing, and Disadvantaged Communities are essential to enable these households to make and benefit from energy upgrades, with careful attention to impacts on housing and energy affordability."[77] According to the DSP, "[i]t is critical to ensure that the phase out of fossil fuel equipment in buildings does not increase low-income residents' cost of housing, nor create undue energy burden."[78] Although the DSP provides no estimate of the funds necessary to upgrade the heating equipment in LMI households, preliminary estimates indicate that this effort will cost many billions of dollars.[79] Given the many burdens on the State's treasury, we question whether the State will have the funds necessary to help pay for the planned transition. Requiring New York's LMI residents to pay for the new equipment (either directly or as renters) will place an unreasonable burden on those New Yorkers least able to afford it.

---

[73] DSP, p. 120. In particular, heat pumps operate less efficiently the colder it gets, undermining their benefits in cold climates. Molly Rettig, NREL News, *Even in Frigid Temperatures, Air Source Heat Pumps Keep Homes Warm from Alaska Coast to U.S. Mass Market* Mar. 9, 2021), Even in Frigid Temperatures, Air-Source Heat Pumps Keep Homes Warm From Alaska Coast to U.S. Mass Market | News | NREL (last viewed May, 24, 2022).
[74] DSP, p. 127.
[75] Science Direct, *Power Generation Efficiency*, https://www.sciencedirect.com/topics/engineering/power-generation-efficiency#:~:text=The%2010%25%20transmission%20line%20loss%20increases%20the%2040%25,to%20waste%20heat%20in%20the%20total%20energy%20budget.> (last viewed June 10, 2022).
[76] *Id.* p. 134.
[77] *Id.* p. 132.
[78] *Id.*
[79] For example, a written statement by Climate Action Council Member Donna L. DeCarolis, President, National Fuel Gas Distribution Corp., dated December 20, 2021, concluded that it would cost between $10 billion and $25 billion to convert upstate single-family homes in National Fuel's service territory to all electric (heat pump installation and energy efficiency upgrades). *See* https://climate.ny.gov/CAC-Meetings-and-Materials (last viewed May 23, 2022). A significant percentage of these homes are likely occupied by LMI households.

3. The DSP Focuses on Building Electrification to the Exclusion of Other Options for Achieving the CLCPA Goals

The DSP's primary solution to building GHG is electrification—including replacement of boilers with heat pumps, bans on other natural gas-fired appliances, and prohibitions on natural gas service—resulting eventually in the closure of substantial portions of New York's natural gas delivery system. This approach will lead to significant additional costs for consumers and potentially impair energy reliability and resiliency by greatly narrowing available energy options. Kinder Morgan is troubled by this approach for several reasons. First, New York is just beginning to implement the CLCPA. As a result, it is simply too soon to commit to electrification as the means of achieving GHG emission reduction goals in the building sector. Second, the DSP commits to electrification to the exclusion of other alternatives that could potentially achieve similar results at lower cost without sacrificing the flexibility needed to ensure a reliable and resilient energy delivery system.[80] In particular, Kinder Morgan believes that the Scoping Plan should more fully evaluate other options such as use of dual-heat systems in the colder regions of the State, where air source heat pumps are less effective and efficient and development of low and no-carbon technologies such as renewable natural gas and hydrogen that can be transported using the State's existing natural gas infrastructure and made available during winter months when electricity demand is likely to be highest.[81]

E. The Transition Program Outlined by the Draft Scoping Plan Presents a Significant Stranded Assets Threat

Supplying the natural gas currently needed to fuel New York's existing power plants and heat its homes and businesses requires a complex infrastructure comprised of many thousands of miles of inter- and intra-state transmission pipelines and distribution lines as well as related storage and other facilities and equipment. The CLCPA contemplates major changes to New York's energy mix that—if successful—will result in a dramatic decrease in the amount of natural gas consumed in the state. This development, in turn, raises the problem of "how to handle assets tied to fossil fuels that are no longer able to generate an economic return because of changes associated with decarbonizing the economy, commonly referred to as stranded assets."[82]

---

[80] Concerns about committing the State to electrification to the exclusion of other options for reducing GHG emissions associated with buildings may have been, in part, responsible for the New York State Legislature's failure to pass the All Electric Buildings Act (A.8431B/S.6843) during the recent session. The law would have prohibited fossil fuel equipment in newly constructed buildings after December 31, 2023 (July 1, 2027 for building seven stories or more).

[81] As discussed in Section V.F. below, natural gas pipelines can be leveraged in the future to transport other clean energy sources like hydrogen. Paul W. Parfomak, Congressional Research Service, *Pipeline Transportation of Hydrogen: Regulation, Research, and Policy*, p. 8 (Mar. 2, 2021) ("Studies of converting natural gas pipelines to carry hydrogen cite potential economic and development advantages."), https://crsreports.congress.gov/product/pdf/R/R46700 (last viewed June 3, 2022). Hydrogen and natural gas are similar in that they are both gaseous fuels that quickly deliver high-quality heat. To facilitate the future delivery of hydrogen, retrofitting existing natural gas pipelines would be more cost-effective, expedient, and timely than building an entirely new transportation network exclusively for hydrogen.

[82] DSP, pp. 265-66.

With this quote, the DSP acknowledges the stranded asset problem. However, the DSP provides no guidance on how to handle it beyond identifying key stakeholders and noting certain basic concepts (*e.g.*, that "utilities have an obligation to continue to provide safe and reliable service" and that the pace of the transition will depend on how quickly end users adopt alternatives to natural gas).[83]

The stranded asset problem is most obvious in conjunction with the transition of residential and commercial buildings away from natural gas. As homes gradually convert from natural gas to heat pumps, the number of customers on a particular gas distribution line may eventually decrease to the point where supplying natural gas to the remaining customers is no longer cost effective. To address this problem, the DSP recommends that the state "further explore opportunities to convert buildings to heat pumps on a street-by-street or neighborhood-by-neighborhood basis, which could allow decommissioning of gas infrastructure as part of the managed transition of the fossil gas system."[84] This recommendation assumes that New York can, in fact, develop a program to either mandate or encourage decommissioning on a localized basis. It is more likely, however, that electrification will occur gradually as home and business owners either choose to electrify or are compelled to do so by the DSP's recommendation to prohibit the replacement of natural gas systems at the end of their useful life. Unless this transition is properly managed, the gradual reduction in natural gas consumption could create a significant stranded asset problem. Unfortunately, the DSP offers little guidance beyond the recommendation for "community" electrification on how the gradual electrification of buildings should be handled to avoid stranded assets.

More generally, while the DSP recognizes that natural gas may continue to be needed by industrial and other sources in 2030, 2050 and beyond, it does not address the potential impact of the planned downsizing of the natural gas system on these sources. If New York's plan to reduce natural gas consumption in the electricity generation and building sectors is successful, the infrastructure available to supply needed natural gas may be significantly underutilized. This, in turn, may affect the ability of natural gas suppliers to serve the needs of their industrial and other large customers that are scattered throughout the state.

Although not expressed outright, the DSP appears to assume that natural gas infrastructure can simply be abandoned as usage decreases. However, where usage of a particular pipeline/distribution line decreases, it may not be possible to abandon the gas infrastructure because there may be critical infrastructure still dependent upon capacity (*e.g.*, backup power plants, hospitals, industrial users, etc.). Also, while throughput may decline on average, there may still be a significant need for natural gas capacity to quickly ramp up electricity generation during periods of peak usage. Under these very likely scenarios, fewer customers would be paying the cost of supporting the same natural gas infrastructure, resulting in higher energy costs both for the remaining natural gas users and for the public generally, to the extent higher natural gas costs result in higher electricity costs. Under longstanding FERC ratemaking principles, if the amount of contracted capacity on an interstate pipeline were to decline by 50%—and all other factors remain

[83] *Id.* p. 266.
[84] *Id.* p. 135.

constant—the firm transportation rate paid by natural gas users would double. The reduction in natural gas usage thus could place a significant burden on LMIs to the extent they lack the resources needed to electrify their existing homes as contemplated by the DSP, increasing energy prices for those who can least afford it. Industrial users faced with steep increases in natural gas and/or electricity costs could decide to relocate to other states. Going forward, the Council must assess the impact of the natural gas system transition on ratepayers and recommend measures to ensure that gas supplies will be available to them at a reasonable price.

Finally, the scale of the natural gas reductions contemplated by the recommendations in the DSP raise a larger stranded asset concern. Significant decreases in natural gas consumption in the state may threaten the financial viability of the interstate pipelines that supply New York and nearby states. In particular, the only realistic way to transport natural gas from producing regions to New England is through New York. Thus, decisions that significantly impact New York's natural gas market—and the economic viability of its natural gas infrastructure—could have major ripple effects outside the state.

New York has no jurisdiction over interstate pipelines, including the decision whether such lines may be abandoned. Any natural gas transition framework developed to implement the goals of the CLCPA must recognize the limits of New York's authority. In addition, the framework must set forth a process for managing the changes to the natural gas transmission and distribution system to minimize the potential for stranded assets. The framework also must establish basic criteria for deciding how decisions regarding the abandonment of natural gas infrastructure will be made to ensure a supply of natural gas for those who need it at an affordable cost.

F. Natural Gas Infrastructure Must be Preserved to Facilitate Transportation of Alternative Fuels

The scenarios outlined in the DSP each contemplate a role for low-carbon fuels, which could potentially include renewable natural gas, renewable diesel, and green hydrogen for sectors that are difficult to decarbonize, such as high temperature industrial applications and certain types of building heating and non-road transportation (*e.g.*, rail and aviation).[85] Ensuring that these alternative fuels are available means ensuring that the necessary infrastructure is available to transport them. The Council acknowledges this need to some extent in conjunction with the transportation sector when it recommends that "The State should fund incentives for infrastructure for cleaner fuels, such as green hydrogen, where market support is needed."[86] However, the potential role of existing natural gas infrastructure in a low-carbon future is not addressed in a meaningful way in the DSP.

Fossil fuel opponents have raised the concern that investing in pipeline infrastructure will lock fossil fuels into the energy mix for an extended period and thwart efforts to transition to renewables. However, a recent study issued by the Columbia University Center on Global Energy Policy notes that while such concerns are understandable,

[85] *Id.* pp. 69-75.
[86] *Id.* p. 118.

> retrofitting and otherwise improving the existing pipeline system are not a choice between natural gas and electrification or between fossil fuels and zero-carbon fuels. Rather, these investments in existing infrastructure can support a pathway toward wider storage and delivery of cleaner and increasingly low-carbon gases while lowering the overall cost of the transition and ensuring reliability across the energy system.[87]

The precise role alternative fuels are likely to play in New York's energy future is currently unclear. As a result, it is unclear to what extent pipelines will be necessary to transport those fuels. However, given the significant cost of constructing new pipelines, the framework developed by the Council for transitioning the state's natural gas system must include measures to preserve the existing pipeline infrastructure in the likely event that alternative renewable fuels become a more important part of the energy mix in the future.

VI. Conclusion

Although key aspects of the DSP—most notably the recommendations relating to electricity generation and buildings—are premised on a significant reduction in natural gas use, the document does not include even a rough framework for transitioning the natural gas system toward the future contemplated by Legislature when it enacted the CLCPA. This omission is notable given the importance of natural gas to New York's utilities, homeowners, and businesses.

On the specific issue of electricity generation, the CLCPA expressly authorizes the PSC to extend the 2040 "emission free" target date to address electricity safety and reliability concerns. Data supplied by the NYISO and other shows that some type of reliable back up energy supply—a role currently filled by natural gas—will be necessary in an electricity system dominated by renewables. However, despite the obvious benefits of natural gas as a backup for renewables, the Scoping Plan adheres strictly to the CLCPA's 2040 "emission free" electricity target and largely ignores the significant possibility that the 2040 target date will prove unachievable. We urge the Council to revisit this approach and specifically include a role for natural gas in electricity generation for the foreseeable future (2040 and beyond) to ensure that the State achieves the CLCPA GHG emission reduction goals while providing a safe and reliable electric supply.

More generally, the Council must develop a framework to transition the natural gas system that:

- Recognizes both the current importance of natural gas to New York's people and economy and the fact that natural gas is likely to remain a key part of New York's energy system through 2040 and beyond;

[87] Erin M. Blanton, et al., Columbia University Center on Global Energy Policy, *Investing in the US Natural Gas Pipeline System to Support Net-Zero Targets*, p. 6 (Apr. 2021), https://www.energypolicy.columbia.edu/research/report/investing-us-natural-gas-pipeline-system-support-net-zero-targets (last viewed May 24, 2022).

- Acknowledges the practical obstacles to achieving the "emission free" electricity goal of the CLCPA;
- Acknowledges the technological, economic and other difficulties associated with electrifying New York's building sector;
- Protects New York's natural gas infrastructure to ensure a safe and reliable supply of natural gas or, possibly, alternate fuels; and
- Minimizes stranded assets.

In so doing, the State must acknowledge the limits of its authority to interfere with the operation of interstate pipelines, which are regulated solely by FERC, and coordinate with the many public and private entities that are responsible for New York's natural gas system.

Kinder Morgan supports the CLCPA's twin goals of reducing GHG emissions and increasing reliance on renewable energy sources. However, the Company believes that these goals can best be achieved by including natural gas in the energy mix. In developing a framework for transitioning New York's energy system under the Act, we urge the Council to recognize the potential benefits from an economic and climate change perspective of expanding the role of natural gas beyond that called for in the DSP.