

From: JTasse
To: erda.sm.DraftBlueprint
Subject: Comments of Draft Blueprint for Consideration of Advanced Nuclear Technologies
Date: Tuesday, October 8, 2024 11:15:45 AM
Attachments: [Siting New Energy Infrastructure IB \(3\).pdf](#)
[2024-08-26-NYS-Energy-Plan-Draft-Scope.pdf](#)

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To whom it may concern,

The purpose of this email is to provide comments/recommendations on the subject document.

Comments

1) I recommend that the "Blueprint" discuss the relationship or integration of this document to the recently (August 29, 2024) announced kickoff of the State Energy Plan Process. I have attached the draft scope of this effort.

2) I recommend that the document provide a clear understanding of the regulatory agencies responsible for answering many of the questions raised in it. Questions like "How can the State participate in or monitor NRC safety licensing processes for each design that may be built within New York?" or "What process should the State use to engage in siting conversations with stakeholders?" seems to indicate a lack of understanding of the Nuclear Regulatory Commission (NRC) licensing process or the State Environmental Quality Review Act requirements or the role of the Public Service Commission. I have attached the Siting New Energy Infrastructure Brief of the NYS 2009 Energy Plan which does a pretty good job describing the process. The 2015 update to this plan is notable for a lack of discussion of nuclear options.

It should be noted that many of the suggested areas requiring investigation like "What is the nature of and level of development and cost risk that the state can consider in advanced nuclear technology projects?" seems to miss the fact that the answer to this question is extremely design and circumstance specific and is largely a problem that the private sector and the PSC must consider.

3) It is recommended that the Blueprint be reviewed by the Public Service Commission, the DEC, and the NRC for comment and input. See comment #1.

4) The Blueprint (which to me is another word for a plan) should contain the identification of specific action items (or investigative actions) with agency or

personnel assignments, rough order of magnitude timing of actions, and rough costs/funding requirements. Again, integration with the new energy plan is required.

Thank you for your attention to these matters,

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Siting New Energy Infrastructure

Issue Brief

New York State Energy Plan 2009

December 2009

1 Overview

As new infrastructure needs are identified by utilities, private developers and the State for reliability, economic, environmental, or other public policy purposes, it will be necessary to ensure those needs can be met efficiently and effectively. The siting processes described herein provide the mechanisms by which the approvals required to construct this new energy infrastructure may be obtained from applicable State, local and/or federal governmental entities.

The siting of new energy infrastructure facilities often involves applications for various permits, and other required approvals, from governmental entities with different jurisdictional responsibilities. This Issue Brief provides an overview of the legal framework governing the siting review processes for new infrastructure, including electric transmission and generating facilities, natural gas facilities, and oil facilities. In addition, there is a description and summary of some of the significant siting activity that has taken place within recent years.

The Public Service Commission (PSC) has the primary authority under State law for the siting of electric transmission facilities. Recognizing the importance of new electric transmission facilities and the difficulties in siting them, the State adopted Article VII of the Public Service Law (PSL) in 1970. Article VII authorizes the PSC to issue a single certificate as the only approval required under State law for the construction of major electric transmission facilities. However, depending on the particular aspects of a proposed facility, approvals may also be needed under federal law: for example, a permit issued by the U.S. Army Corps of Engineers (USACE) under the federal Clean Water Act (CWA) for certain activities affecting navigable waters, or a determination by the New York Department of State (DOS) that a facility is consistent with coastal zone policies adopted pursuant to the federal Coastal Zone Management Act of 1972 (CZMA). The New York State Department of Environmental Conservation (DEC) also plays a major role in ensuring compliance with the CWA.

While the opportunity to seek all necessary approvals under State law, in a single forum, is an advantage from the electric transmission developers' perspective, one potential limitation of the State's siting statute was the ability of affected communities, particularly those with limited resources, to participate meaningfully in the process. This limitation was addressed through recent amendments to Article VII that provide funding opportunities for intervening parties.

While the State has the primary authority over the siting of electric transmission facilities, the Energy Policy Act of 2005 (EPACT) established, for the first time, a role for the Federal Energy Regulatory Commission (FERC). FERC's role is secondary - that of backstop - to State permitting, and limited to where the State has not acted within one year, or has approved the line within one year but included onerous conditions, and the facilities are proposed to be located within a National Interest Electric Transmission Corridor (NIETC). Several counties in New York have been designated as part of a NIETC by the U.S. Department of Energy (DOE). Legislation pending in Congress contemplates a further expansion of the federal role over the siting of electric transmission facilities.

Approvals for the construction of most types of electric generation facilities, such as natural gas-fired generators, landfill gas recovery facilities, wind turbines, and solid waste combustors, are within the

jurisdiction of State and/or local agencies. These agencies conduct their reviews and make their findings in accordance with the State Environmental Quality Review Act (SEQRA), which typically involves the preparation of an Environmental Impact Statement. Similar to the siting of electric transmission facilities, approvals may be needed under federal law, and some may be issued by appropriate State agencies, such as air permits issued under the Clean Air Act (CAA) by DEC. Nuclear generating facilities require certain approvals by the U.S. Nuclear Regulatory Commission (NRC), while the siting of most hydroelectric generating facilities falls within the jurisdiction of FERC. However, the State often plays a role in these siting processes, such as undertaking a coastal zone Consistency Review and issuing Water Quality Certifications.¹

Because there is currently no single State forum to consider electric generation siting decisions, a coordinated review is required among various State and local governmental entities. Therefore, developers must undertake several different permitting processes. The establishment of a comprehensive electric generation siting statute would simplify the siting process and help ensure meaningful participation by the public. Such a statute may also help attract capital for new generation infrastructure, including wind generating units.

FERC also maintains jurisdiction over the siting of natural gas pipelines used in interstate commerce. FERC undertakes its review pursuant to the National Environmental Policy Act (NEPA), which is analogous to SEQRA, and oversees the preparation of an Environmental Impact Statement. Notwithstanding FERC's authority, certain findings may be required of the State, such as a Water Quality Certification or a coastal zone Consistency Certification. Natural gas pipelines operating in intrastate commerce are certified by the PSC under Article VII of the PSL, which authorizes the issuance of a single certificate as the only approval required under State law. However, despite the issuance of a single State certification, other approvals may be needed under federal law, such as a coastal zone Consistency Certification under the CZMA, or a wetlands permit under the CWA.

In addition, FERC is the agency authorized to approve the construction of natural gas storage facilities and liquefied natural gas (LNG) import terminals. However, a coastal zone Consistency Certification is typically required from DOS for LNG projects if they are located in the State's coastal zone or if they may have reasonably foreseeable effects on the State's coastal resources.

The construction of wells for extracting oil and natural gas supplies is authorized by DEC. DEC also authorizes the construction of major oil storage facilities, and liquefied petroleum gas pipelines. DEC uses SEQRA process to consider the environmental impacts associated with these facilities and guide its decision making. Where new types of infrastructure are anticipated, such as carbon dioxide (CO₂) pipelines used for carbon capture and sequestration, existing siting processes may require modifications.

¹ Under Section 401(a)(1) of the CWA, FERC may not issue a license for a hydroelectric project unless the state water quality certifying agency has issued a water quality certification for the project or has waived certification.

2 Procedures for Siting New Energy Infrastructure

2.1 Electric Transmission Facilities

The transition to competitive electricity markets has brought with it an increased interest in utilization of the transmission system. Moreover, the federal government has sought to implement policies designed to promote the use and modernization of the transmission system by encouraging the construction of new transmission facilities. It is also likely that the State's initiative to promote the development of renewable generation resources, such as wind, will require the siting of new transmission facilities in order to deliver the power associated with those resources. As a result, it is anticipated that there will be a significant interest in the coming years in the siting of new transmission facilities.

2.1.1 Public Service Law Article VII

The State's transmission siting process is contained in PSL Article VII (PSL §§120 et seq., implemented at 16 NYCRR Subpart 85-2 et seq.), which provides the PSC with authority to issue a Certificate of Environmental Compatibility and Public Need (Article VII Certificate) to construct "major" electric transmission facilities, i.e., lines rated 125 kV or more extending more than one mile, or more than 100 kV, but less than 125 kV, extending 10 miles or more.² Article VII is designed to be a one-stop siting process that encompasses the necessary State and local approvals within the Article VII Certificate. However, developers must also obtain any necessary federal authorizations, which could include, for example, a USACE permit under §404 of the CWA for certain activities within certain U.S. waterways.

This process is advantageous from the developers' perspective since it streamlines the siting process. Moreover, the PSC may prevent the application of local laws that are found to be unreasonably restrictive. However, a potential disadvantage of Article VII was the ability of the public to participate meaningfully in the siting process, given a lack of expertise and/or resources. This situation was addressed through recent amendments to Article VII that require applicants to provide funds that may be used by intervening parties for expert witnesses, consultants, and administrative and legal fees.

Developers seeking to construct electric transmission facilities must also work in concert with the interconnection process administered by the New York Independent System Operator, Inc. (NYISO). Although the NYISO's interconnection process is separate from the Article VII siting review, there are certain milestones in the NYISO's interconnection process that may place timing constraints on the siting of transmission facilities. In particular, the PSC's regulations (16 NYCRR §88.4(a)(4)) currently require an applicant to have completed a System Reliability Impact Study required under the NYISO's interconnection approval process. The NYISO's interconnection process seeks to foster accurate and efficient allocation of the costs of facilities needed to reliability interconnect new resources and to avoid

² Article VII of the PSL does not apply to transmission lines located wholly underground in a city with a population in excess of 125,000, or primary transmission lines approved by FERC in connection with a hydroelectric facility. The PSC may also determine that Article VII does not apply to the replacement of existing facilities with like facilities.

the dedication of resources to study projects that are not ready to move forward. As such, the interconnection process is a critical path item for developers under Article VII.

The NYISO has indicated that its entire interconnection process may take anywhere from 27 to 52 months, with most projects taking between 36 and 38 months. Given the significant amount of time involved in the interconnection process, the NYISO has identified various reasons for the length of the process and proposed solutions to expedite this process. Specifically, the NYISO has proposed: (1) clarifying the Interconnection Request form to streamline the process of obtaining required data from developers, (2) modifying base case requirements for Interconnection Feasibility Studies and System Reliability Impact Studies to allow for the increased use of off-the-shelf base cases, (3) eliminating potentially unnecessary analyses, and (4) establishing clear metrics for identifying and removing speculative projects. The NYISO is currently working with its stakeholders to address these proposals and to identify additional modifications that will further improve the interconnection study process.

The improvement of the interconnection process is also critical for the siting of electric generating facilities, such as wind turbines. Of the 120 interconnection requests that the NYISO received between 2005 and 2007, 75 of those, or 62.5 percent, were for wind generation projects. The NYISO is updating a study of the ability of the transmission system to support wind generation, which should assist wind developers in more efficiently siting their projects. The siting of generating facilities is addressed below.

Overview of the Process

Prior to an Article VII application being filed, the PSC encourages applicants to voluntarily communicate with the public and Staff of the Department of Public Service.³ Often, public information meetings are held, at which the public is informed of the applicant's proposals, the Article VII process is explained, general questions are answered, and input from the public is received. The PSC also encourages applicants to communicate with the public during all subsequent phases of the Article VII process.

After a complete application is submitted,⁴ a Prehearing Conference is held before an Administrative Law Judge (ALJ) to discuss procedural matters, set a schedule, and often times define issues to be explored in the hearings. After an opportunity to review the application and conduct discovery, Evidentiary Hearings are held, at which testimony and evidence is presented. Subsequently, the ALJ receives briefs from parties in support of their positions, and a Recommended Decision may be issued proposing the disposition of the case to the PSC. If a Recommended Decision is issued, parties may dispute the ALJ's analysis and recommendations in Briefs on Exceptions, which are followed by an opportunity to submit replies.⁵

Ultimately, the PSC considers the entire record, including public input received throughout the proceeding, and makes a final determination. If the PSC approves a facility, it may issue an Article VII Certificate, subject to conditions the PSC deems appropriate. However, the PSC must first find and determine:

³ The PSC has published a guide on the certification review process for major electric and transmission facilities, entitled *The Certification Review Process for Major Electric and Fuel Gas Transmission Facilities*. http://www.dps.state.ny.us/Article_VII_Process_Guide.pdf

⁴ Applications pursuant to Article VII are exempt from SEQRA under ECL §8-0111(5)(b).

⁵ As an alternative to a contested proceeding, parties may resolve their concerns and issues through stipulations and settlements. Parties entering into settlements typically prepare written statements in support of any settlements. This approach will often expedite the siting process.

- the basis of the need for the facility.
- the nature of the probable environmental impact.
- that the facility represents the minimum adverse environmental impact, considering various alternatives and other pertinent considerations.
- what part, if any, of the line shall be located underground.
- that such facility conforms to a long-range plan for expansion of the electric power grid of the electric systems serving this State and interconnected utility systems, which will serve the interests of electric system economy and reliability.
- that the location of the facility conforms to applicable State and local laws and regulations.⁶
- that the facility will serve the public interest, convenience, and necessity.

In addition to the Article VII Certificate, other major approvals may include a Water Quality Certification by the State pursuant to §401 of the CWA where construction contemplates discharges into navigable waters, a permit from the USACE under §404 of the CWA, and a coastal zone Consistency Certification from DOS pursuant to the CZMA.

Siting Activity

The PSC has reviewed and certified various electric transmission facilities under Article VII within the last few years.⁷ For example, on January 23, 2004, the PSC authorized Neptune Regional Transmission System LLC (Neptune) to construct and operate the New York portion of a 600 MW (500 kV) high-voltage direct-current submarine/underground electric transmission cable extending from Sayreville, New Jersey to the Long Island Power Authority's (LIPA) substation on Newbridge Road in Hempstead, New York. The PSC's approval also included a Water Quality Certification under the CWA, while Neptune also sought a permit from the USACE. The Neptune project was placed in service on June 28, 2007.

A recent Article VII siting proceeding involved the application of New York Regional Interconnection (NYRI) to construct a 400 kV DC transmission line, with a rated power flow of 1,200 MW, extending approximately 190 miles from Marcy, New York to New Windsor, New York. Public and private stakeholders along the proposed route raised concerns with the application. While these concerns were being pursued through evidentiary hearings, NYRI notified the PSC that it was withdrawing its petition for an Article VII Certificate. The withdrawal followed FERC's denial of NYRI's rehearing petition with respect to the NYISO's study processes.⁸

⁶ The PSC may refuse to apply any local ordinance, law, resolution or other action or any regulation issued thereunder or any local standard or requirement which would be otherwise applicable if it finds that as applied to the proposed facility such is unreasonably restrictive in view of the existing technology, or of factors of cost or economics, or of the needs of consumers whether located inside or outside of such municipality.

⁷ A summary table of recent Article VII projects is maintained on the PSC's website. *DPS Article VII Projects*. 2008. http://www.dps.state.ny.us/articlevii_table_electric.pdf

⁸ FERC Docket No. OA08-52-003, *New York Independent System Operator, Inc.*, Order on Rehearing, 126 FERC ¶61, 320 (issued March 31, 2009).

2.1.2 Federal Power Act §216

EPACT amended the Federal Power Act (FPA) by providing FERC with authority over the construction or modification of electric transmission facilities under certain conditions. In particular, to issue a permit, FERC must find that the proposed project:

- is eligible for a construction permit issued by FERC.
- is located in a National Corridor designated by DOE.
- will be used in interstate commerce.
- is in the public interest.
- will significantly reduce transmission congestion and protect and benefit consumers.
- is consistent with sound national energy policy and will enhance energy independence.
- will maximize the use of existing towers or structures, to the extent reasonably and economically possible.⁹

Eligibility for Permitting

The first condition noted above for FERC to issue a siting permit is that a project must be eligible for a construction permit issued by FERC. Eligibility for construction permitting from FERC may apply where a state, such as New York, has siting authority and has “withheld approval for more than one year; or conditioned its approval in such a manner that the project will not significantly reduce transmission congestion or is not economically feasible.”¹⁰ The Fourth Circuit Court of Appeals recently determined in *Piedmont Env. Council v. FERC*¹¹ that a denial of a permit does not equate to withholding approval.

National Corridors

The second condition for FERC to issue a siting permit is that the facility is located in a National Corridor designated by DOE. In order to determine the appropriate designation of National Corridors, EPACT requires the Secretary of Energy to issue a study of transmission congestion and constraints. On August 8, 2006, DOE completed its first study.¹² The 2006 Congestion Study identified constrained transmission paths in the Atlantic coastal area from metropolitan New York southward through northern Virginia.

EPACT also provided that the Secretary of Energy may, based on the congestion study, designate “any geographic area experiencing electric energy transmission capacity constraints or congestion that

⁹ 16 U.S.C. § 824p(b). It should be noted that the required findings for FERC approval are less protective of the environment than required under State law. While no counterpart exists for FERC under either the FPA or NEPA, PSL Article VII requires the PSC to find that a facility represents the minimum adverse environmental impact.

¹⁰ 16 U.S.C. § 824p(b)(1)(C). The one year time frame is determined from the date an application is filed or after the designation of the relevant NIETC, whichever is later.

¹¹ 558 F.3d 304 (4th Cir. 2009).

¹² *National Electric Transmission Congestion Study*, issued August 2006.
http://nietc.anl.gov/documents/docs/Congestion_Study_2006-9MB.pdf

adversely affects consumers” as a NIETC.¹³ Based upon the 2006 Congestion Study, comments thereon, and considerations including economics, reliability, fuel diversity, national energy policy, and national security, the Secretary of Energy designated 47 out of the 62 counties within New York as a NIETC.¹⁴ These designations were effective October 5, 2007, and will remain in effect until October 7, 2019, unless DOE rescinds or renews the designation. Currently, there are legal challenges pending to DOE’s designation of NIETCs within the State.¹⁵

The national congestion study is required to be updated every three years. DOE has completed an updated 2009 Congestion Study, which is currently awaiting release.

Overview of FERC’s Siting Process

FERC has issued regulations, contained at 18 C.F.R. Part 50 et seq., governing the process it will follow when reviewing applications. In general, the process consists of a mandatory pre-application phase, followed by the application, public review and comments, preparation of an Environmental Impact Statement (EIS) under NEPA, and permitting.

Prior to an applicant, or project sponsor, requesting the initiation of a pre-filing process, it is required to meet with FERC staff to explain the proposal. These meetings provide the opportunity for FERC staff to offer suggestions and for the project sponsor to further define its proposed project. Once there is sufficient project definition, the sponsor/applicant submits a request to initiate the pre-filing process. If the request is approved, FERC will issue a notice informing the public of the initiation of the pre-filing process. As part of the pre-filing process, an applicant is required to implement a Project Participation Plan that identifies specific tools and actions to facilitate stakeholder communication and dissemination of public information. During the pre-filing process, FERC staff will review the applicant’s proposal and assist the applicant in the preparation of a complete application.

An application may be filed only after FERC has determined that all necessary information gathering is complete. After the application is filed, FERC staff will conduct a comprehensive project review. A Notice of Intent to prepare an Environmental Assessment (EA) or an EIS will be issued for most major proposals. The Notice of Intent seeks comments from interested parties on the scope of the environmental document.

After the comment period, FERC staff will begin to prepare either an Environmental Assessment or Draft EIS (DEIS) outlining its findings and recommendations. For major proposals, further comments are sought and public meetings may be conducted. These comments are considered and addressed in the

¹³ 16 U.S.C. §824p(a)(2). DOE defines transmission congestion to occur when actual or scheduled flows of electricity across a line or piece of equipment are restricted below desired levels—either by the physical or electrical capacity of the line, or by operational restrictions created and enforced to protect the security and reliability of the grid. The term “transmission constraint” may refer either to a piece of equipment that limits electricity flows in physical terms, or to an operational limit imposed to protect reliability.

¹⁴ 72 Federal Register 193, published October 5, 2007. http://nietc.anl.gov/documents/docs/FR_Notice_of_5_Oct_07.pdf The counties designated as NIETCs include: Albany, Bronx, Broome, Cayuga, Chenango, Clinton, Columbia, Delaware, Dutchess, Erie, Franklin, Fulton, Genesee, Greene, Herkimer, Jefferson, Kings, Lewis, Livingston, Madison, Monroe, Montgomery, Nassau, New York, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Otsego, Putnam, Queens, Rensselaer, Richmond, Rockland, St. Lawrence, Saratoga, Schenectady, Schoharie, Seneca, Suffolk, Sullivan, Ulster, Wayne, Westchester, and Wyoming.

¹⁵ The Wilderness Society v. U.S. Dept of Energy, No. 08-71074 (9th Cir) (challenging DOE’s designation of NIETCs on several bases).

Final EIS (FEIS). After the issuance of an FEIS, FERC will act on the request and either grant or deny the construction permit. FERC must act within one year from the date the application is filed with the Commission.

Permits issued by FERC provide the power of eminent domain, if needed, to obtain the necessary property rights a project developer cannot otherwise obtain. However, a FERC permit does not absolve the applicant from compliance with other federal laws, including obtaining authorizations from other agencies implementing applicable federal environmental laws. For example, a project may also be subject to a coastal zone Consistency Review.

State Compacts

EPACT (16 U.S.C. 824p(i)(4)) specifically allows states to preserve their permitting authority, and to avoid being preempted by FERC by creating interstate compacts. In particular, three or more contiguous states may enter into a compact, subject to approval by Congress, which establishes a regional transmission siting agency to carry out the electric transmission siting responsibilities of the member states. If such a compact were established, FERC would lack authority to issue a transmission permit within any of the member states, unless those members were in disagreement and the Secretary found that the conditions for eligibility for permitting were met.

While this provision of EPACT appears to present a viable alternative to avoiding FERC preemption of state siting decisions, there are several potential drawbacks that would need to be carefully considered. Perhaps most importantly, all of the member states would need to be in agreement to avoid federal preemption. As a result, New York's valid objections to a particular transmission line may still result in preemption by FERC if another member state supports the same line for parochial interests. In the absence of an interstate compact, New York may deny an application based on those objections, and could not be preempted by FERC, so long as the State acts in a timely manner.¹⁶

As noted above, the balance of federal-state jurisdiction over transmission siting is in flux, as FERC has sought broader siting authority in appealing the Fourth Circuit's decision in *Piedmont Environmental Council v. FERC*, and recent legislation introduced in Congress contemplates an expanded federal role over the siting of electric transmission facilities. These events may require revisiting the usefulness of an interstate compact to the State.

2.2 Electric Generating Facilities

The transition to competitive markets has also resulted in increased interest in the siting of new electric generating facilities, as independent generation owners have sought to develop the resources necessary to compete in the marketplace. Furthermore, the State has initiated efforts, namely the Renewable Portfolio Standard, to obtain the types of generation resources that the marketplace may not otherwise support. As these efforts take shape, existing generating facilities are retired, and new load requirements are identified, the siting of generating facilities will take center stage.

¹⁶ In *Piedmont Environmental Council v. FERC*, 558 F.3d 304 (4th Cir. 2009), the Fourth Circuit Court of Appeals held that FERC may not preempt a state's denial of a siting application where the state acts within the one year time period.

In general, the location, type and size of a facility will determine the approvals and permits that are necessary to site a particular generating facility. The siting process will often vary depending on the proposed fuel source that will be used to generate electricity. The primary fuel sources are fossil fuels, such as coal, petroleum, and natural gas, renewables, waste-to-energy, and nuclear.¹⁷

Before a governmental entity may approve an electric generating facility, it will almost always need to undertake an environmental review and analysis of the proposed project.¹⁸ For State and local agencies, the applicable environmental statute is currently SEQRA. As discussed below, certain generation facilities greater than 80 MW were previously reviewed under Article X of the PSL, which expired at the beginning of 2003. For federal agencies, a similar environmental review is performed under NEPA, which is a counterpart of SEQRA. These siting processes are described below.

2.2.1 Fossil Fuels, Renewables, Waste-to-Energy, Nuclear

SEQRA

The purpose of SEQRA, codified in Article 8 of the Environmental Conservation Law (ECL), and its implementing regulations (6 NYCRR Part 617 and 16 NYCRR Part 7), is to incorporate consideration of environmental factors into the existing planning, review and decision making processes of state, regional and local government agencies at the earliest possible time. SEQRA applies to all State or local government agencies, including districts, special boards and authorities, whenever they must approve or fund a privately or publicly sponsored “action.”¹⁹ It also applies whenever an agency directly undertakes an action.

To accomplish the goals of SEQRA, agencies must determine whether the actions they are requested to approve may have a significant impact on the environment. If it is determined that an action may have a significant adverse impact, an EIS must be prepared by the Lead Agency or the applicant. SEQRA requires the sponsoring or approving governmental body to identify and mitigate the significant environmental impacts of the activity it is proposing or permitting.²⁰

Overview of the Process

SEQRA process typically begins with the submission of an Environmental Assessment Form by a project sponsor and the designation of a lead agency for purposes of conducting an environmental review under SEQRA.²¹ If the Lead Agency determines that an action may have a potentially significant adverse

¹⁷ Renewables may include, among other sources, hydroelectric, biomass, landfill gas, agriculture byproducts, geothermal, solar, photovoltaic, and wind. There has been considerable debate regarding whether waste-to-energy facilities should be included in this category. There have been no new coal facilities that have been sited within the State since 1991, and petroleum is generally used as a secondary, or back up fuel, in dual-fuel generating units.

¹⁸ As discussed below, an EIS would not be required under the SEQRA if an agency determines that an electric generating facility would not have a potentially significant adverse impact on the environment.

¹⁹ The types of local actions that trigger the need to comply with the SEQRA are commonly related to local site plan review, zoning changes/variances, or special use permits. Examples of State actions triggering the SEQRA include the issuance of a Water Quality Certification under the CWA and air emissions permits under the CAA.

²⁰ The SEQRA process uses the EIS to examine ways to avoid or reduce adverse environmental impacts related to a proposed action. This includes an analysis of all reasonable alternatives to the action. The SEQRA decision making process encourages communication among government agencies, project sponsors and the general public.

²¹ Upon receipt of an Environmental Assessment Form, an agency may choose to coordinate its SEQRA review with other State or local agencies having jurisdiction over the project.

impact on the environment, an EIS is prepared.²² The Lead Agency, as well as each involved agency that may issue other necessary approvals, must prepare its own written Findings Statement after the FEIS has been filed, but before the agency makes a final decision. SEQRA Findings Statement of each agency must certify that the requirements of SEQRA have been met, and:

- “consider the relevant environmental impacts, facts and conclusions disclosed in the Final EIS.”
- “weigh and balance relevant environmental impacts with relevant social, economic, and other considerations.”
- “provide [the] rationale for the agency’s decision.”
- “certify that the requirements of [6 NYCRR Part 617] have been met.”
- “certify that consistent with social, economic and other essential considerations from among the reasonable alternatives available, the action is one that avoids or minimizes adverse environmental impacts to the maximum extent practicable, and that adverse environmental impacts will be avoided or minimized to the maximum extent practicable by incorporating as conditions to the decision those mitigative measures identified as practicable.”²³

Once the findings are adopted, SEQRA process is completed, and the Lead Agency and involved agencies can begin to approve, approve with conditions, or disapprove the proposed project. No agency involved in the overall action may make a final decision until SEQRA process is completed. It is important to recognize that each involved agency must make its own SEQRA findings, and that one agency may reach a different conclusion than another agency based on the same FEIS. A project developer may seek judicial review of an agency’s determination.

Siting Activity

SEQRA has been used to review various proposals to construct electric generation facilities. A recent example of where a local action triggered a SEQRA review was the application of Marble River, LLC for special use permits to construct a 229 MW wind generating project within the Towns of Clinton and Ellenburgh. The Town Boards acted as Co-Lead Agencies for purposes of undertaking SEQRA review, and based on the Environmental Assessment Form submitted by Marble River, determined that the project could have a significant impact on the environment. Therefore, a Positive Declaration of Environmental Significance was issued, requiring the preparation of a DEIS. In response to comments on the DEIS, a Supplemental DEIS was prepared. Following public hearings on the Supplemental DEIS, an FEIS was circulated to the involved and interested agencies, as well as to the public. On April 21, 2008, the Town Boards issued a positive Findings Statement, and issued special use permits for the project.

SEQRA was similarly used in reviewing the Sheldon Energy LLC 112.5 MW wind generating project in Wyoming County, the Noble Ellenburgh Windpark LLC wind generating project in Clinton County, and the Jordanville Wind LLC 150 MW wind generating project in Herkimer County. The Jordanville Wind project presented an example of where an involved State agency reached a different conclusion than the

²² Applicants who seek project approval or funding may be responsible for preparing an EIS. After a DEIS is prepared and comments have been considered, a FEIS is prepared.

²³ 6 NYCRR §617.11(c) and (d). A positive Findings Statement indicates that the project or action is approvable after consideration of the FEIS and demonstrates that the action chosen is the one that avoids or minimizes adverse environmental impacts to the maximum extent practicable. If the action is not approvable, a negative Findings Statement is prepared, documenting the reasons for the denial. Agencies are required to balance the environmental impacts with social and economic factors when deciding to approve or undertake an action. The Findings Statement of each agency must be filed with all other involved agencies and the applicant at the time they are adopted.

local Lead Agency. In that case, the Town Board of Warren, acting as Lead Agency, approved the construction of a 136 MW project, consisting of 68 turbines sized 400 feet high. However, the PSC, in making its Findings Statement in association with the issuance of a Certificate of Public Convenience and Necessity under PSL §68, determined that the size of the project must be reduced to 49 turbines (a reduction to 98 MW) in order to minimize adverse visual impacts on an historic district, as required under Parks, Recreation and Historic Preservation Law §14.09. Various other wind projects have undergone the siting process and have been constructed. As of February 2009, approximately 1,286 MW of wind generation had been placed in-service throughout the State, while 2,472 MW had been proposed.

SEQRA was also used to review a 350 MW natural gas-fired generating facility in the Town of Brookhaven, Suffolk County (referred to as the Caithness Project). There, the Long Island Power Authority acted as Lead Agency and prepared an EIS, which the Town of Brookhaven relied upon in issuing the necessary local building and other permits to allow construction of the project. Several legal challenges were brought alleging that LIPA failed to comply with SEQRA and that the Town of Brookhaven impermissibly issued permits, although those arguments were ultimately rejected. A related proceeding was also undertaken to site a natural gas pipeline, which was reviewed by FERC under NEPA. The Caithness Project commenced commercial operation in August 2009. Furthermore, SEQRA process was recently completed, and permits were issued, with regard to U.S. Power Generating Company's proposal to add a 100 to 150 MW facility in the Sunset Park area of Brooklyn.

In addition, SEQRA process is currently being utilized to review two proposed gas-fired generation facilities. One of those projects involves NRG Energy, Inc., which has proposed a 1,040 MW project located in the Astoria section of Queens County to replace its existing 600 MW peaking facility, where DEC is acting as Lead Agency. The other project was proposed by Competitive Power Ventures to add a 630 MW facility in the Town of Waywayanda, Orange County, where the Town of Waywayanda Planning Board is acting as Lead Agency.

SEQRA process has also been applied to the review of proposed municipal waste combustors, commonly referred to as waste-to-energy facilities. Ten such facilities currently operate in the State. The most recent permit for a new municipal waste combustor facility was issued by DEC in 1995, for the Onondaga County Resource Recovery facility. In 2007, these facilities processed approximately four million tons of solid waste and produced about two million MWh of electricity.

The next generation of solid waste combustors will likely use advanced thermal, biological, or chemical processes to convert waste into syn-gas (synthesis gas), which can be used to produce electricity. Potential projects on the horizon include the Taylor Gasification facility in Montgomery County, and the Casella thermal-chemical dissociation and catalytic reactor in Ontario County. The Masada project in Middletown, which proposed to convert mixed waste to ethanol, was permitted but never constructed.

The 20 landfill gas-to-energy facilities in New York accounted for approximately 0.4 million MWh of electricity produced in 2007. Four landfills are in advanced planning and/or construction of landfill gas recovery facilities, while several others may be candidates for gas-to-energy facilities. Several developers of landfill gas-to-energy facilities have indicated that the interconnection process is on the critical path for their projects, often delaying development by a year, or more. According to DEC, the interconnection costs have varied widely for such facilities, and have cost as much as \$3 million, or 25 percent, for a \$12 million project.

As applicants seek approval of new electric generation facilities under SEQRA, they should be mindful of policy changes incorporated within the SEQRA process. In particular, DEC has issued a *Guide for Assessing Energy Use and Greenhouse Gas Emissions in an Environmental Impact Statement*, which provides policy guidance on the methods and boundaries for the assessment of energy use, greenhouse gas emissions, and mitigation measures for an EIS.²⁴

Other Required Approvals

A project developer will typically need to obtain various approvals from separate agencies under SEQRA. One such approval is a Certificate of Public Convenience and Necessity (Certificate) under PSL §68, which authorizes the PSC to grant a certification that the construction of electric plant is necessary and convenient for the public service. However, a Certificate is not required in all instances where a developer seeks to site an electric generating facility. In general, a developer will be required to obtain a Certificate where they seek to construct an electric generating facility sized 80 MW or greater and have not previously received a Certificate, or where they have, but seek to construct additional electric plant under a different corporate structure.

Other major approvals that are often triggered in the siting of electric generating facilities are Water Quality Certifications, State Pollutant Discharge Elimination Systems permits and permits to discharge dredged and fill materials under the CWA,²⁵ air emissions permits under the CAA, review by the State Historic Preservation Office under §106 of the National Historic Preservation Act²⁶ or under §14.09 of the New York State Historic Preservation Act,²⁷ or a coastal zone Consistency Certification under the CZMA or Article 42 of the Executive Law. These reviews and permits may significantly impact project implementation schedules.

The CZMA provides that projects and activities which are within the coastal zone, or outside the coastal zone and affect any land or water use or natural resource of the coastal zone, and are directly undertaken, authorized, or financially assisted by federal agencies, shall be carried out in a manner which is consistent with the enforceable policies of approved state coastal management programs. In New York, the enforceable coastal policies are those in the New York Coastal Management Program (CMP), approved Local Waterfront Revitalization Programs (LWRP), regional coastal management programs such as the

²⁴ *Guide for Assessing Energy Use and Greenhouse Gas Emissions in an Environmental Impact Statement*, 2009. http://www.dec.ny.gov/docs/administration_pdf/eisghgpolicy.pdf

²⁵ Section 401 of the CWA covers Water Quality Certifications while Section 404 of the CWA regulates the discharge of dredged, excavated, or fill material in wetlands, streams, rivers, and other U.S. waters. The USACE is the federal agency authorized to issue Section 404 Permits for certain activities conducted in wetlands or other U.S. waters.

²⁶ The National Historic Preservation Act of 1966 (16 U.S.C. 470) created the National Register of Historic Places and established the State Historic Preservation Office to administer the national program at the state level. Any project that involves federal funds, licenses or permits is reviewed in accordance with Section 106, which establishes procedures to be followed by federal agencies whose actions may directly or indirectly have an effect on historic properties and directs those agencies to consult with the State Historic Preservation Office to assess those effects. Therefore, any approvals/permits/funding that are given by a federal agency must also be reviewed by the State Historic Preservation Office.

²⁷ The New York State Historic Preservation Act of 1980 was established as a counterpart to the National Historic Preservation Act. The act created the New York State Register of Historic Places and requires state agencies to consult with the State Historic Preservation Office if it appears that any projects being planned may or will cause any change, beneficial or adverse, in the quality of any historic, architectural, archeological or cultural property that is listed on the State or National Registers of Historic Places, or that is determined to be eligible for listing on the State Register. State agencies are required, to the fullest extent practicable, consistent with other provisions of the law, to avoid or mitigate adverse impacts to such properties, to explore all feasible and prudent alternatives and to give due consideration to feasible and prudent plans that would avoid or mitigate adverse impacts to such property.

Long Island Sound Coastal Management Program (LISCMP), or other special area management plans that have been incorporated into New York's approved CMP.

Likewise, the State Waterfront Revitalization of Coastal Areas and Inland Waterways Act (Article 42, Executive Law) includes provisions to assure consistency of State actions with the policies of the CMP, regional coastal management programs, special area management plans, and with approved LWRPs. At the local government level, cities, towns, or villages with approved LWRPs must enact similar consistency provisions applicable to their decision making. These requirements apply to municipal agency decision making, such as zoning changes, subdivisions, site plans, special use permits, municipal construction projects, and funding activities.

New York's requirements to assure that actions of State agencies are consistent with policies for the State's coastal areas and inland waterways are contained in Article 42 of the State Executive Law, DOS regulations in 19 NYCRR Part 600, and SEQRA regulations in 6 NYCRR Part 617. State agency actions are required to be consistent with State coastal policies in 19 NYCRR Part 600.5, the CMP, the LISCMP, and any State-approved LWRPs. State agencies are also required to follow the federal consistency requirements if they require federal approval of their activity or if the activity involves federal funding. State agency actions that are not consistent with State coastal policies or with an approved LWRP are not to be undertaken.

When a State agency is acting as the Lead Agency, or as an involved agency, for actions involving an EIS pursuant to SEQRA, the EIS must include an identification of applicable coastal policies and an analysis of the action's consistency with those policies. Whether or not an EIS is prepared, a State agency is not authorized to make a final decision regarding an action unless and until the agency has made a written finding that its action is consistent with State coastal policies in 9 NYCRR Part 600 or an approved LWRP.

DOS is responsible for reviewing projects requiring federal authorizations for their consistency with coastal policies.²⁸ Federal consistency regulations require DOS to render a consistency decision within six months from the initiation of its review of a project. It is important for applicants to consult with the DOS and other involved governmental entities as early as possible in project development, to avoid any unexpected inconsistency determinations at a late stage of the process. This early consultation is designed to avoid costly delays or revisions to projects that have been well advanced without full consideration of coastal effects.

The CZMA requires applicants to certify to federal agencies that their proposed activities will comply with, and be undertaken in a manner consistent with, a State's CMP. DOS may concur with a consistency certification, object to a certification, or propose modifications to make a project consistent. Objections are often accompanied by suggested alternatives that are consistent with coastal policies. If DOS objects to the project, the involved federal agency cannot issue the required authorization.

DOS has conducted numerous consistency reviews for energy projects affecting New York's coastal resources. Among these are the Neptune cable, Iroquois Eastchester Extension, Islander East Pipeline,

²⁸ The applicant must submit a Federal Consistency Assessment Form (FCAF) that provides a Consistency Determination. The State will perform a Consistency Review, and if found to be consistent with the enforceable policies and purposes of the State's CMP, will issue a Consistency Certification. Where an LWRP or regional management program is in effect, the agencies' projects and activities must be consistent with the local program.

Millennium Pipeline and Broadwater LNG project. In Neptune, Eastchester, and Islander East, DOS determined the projects were consistent with coastal policies; while in Millennium Pipeline and Broadwater, the projects, as proposed, were determined to be inconsistent with New York's coastal zone management plan. DOS objected to both projects, and the sponsors appealed those decisions to the U.S. Secretary of Commerce. DOS was upheld in the Millennium project, and the project sponsors subsequently filed an amended pipeline route with FERC that did not include the initial river crossing that prompted the inconsistency finding. The amended Millennium project was certified by FERC, and has been constructed and placed in-service. DOS was also upheld by the Secretary of Commerce on the Broadwater project.

It is anticipated that several project developers will be advancing proposals to site wind generation facilities located offshore in the Great Lakes and/or the Atlantic Ocean.²⁹ Unlike proposals located onshore and outside of the coastal zone, these offshore projects will be subject to Consistency Review by DOS, so long as they are located within coastal zones.³⁰

PSL Article X (Expired)

Prior to the expiration of PSL Article X on January 1, 2003, the siting of "major" electric generating facilities, i.e., facilities sized 80 MW or larger, was handled by a multi-agency Siting Board that included public representatives.³¹ Article X, contained in PSL §§160-172, was enacted in 1992 to consider, within a single forum, various issues with respect to the siting of such facilities that would otherwise fall under the jurisdiction of multiple state and local agencies.³² The Siting Board was authorized to permit the construction of a major generating facility by issuing a Certificate of Environmental Compatibility and Public Need (Article X Certificate). In conjunction with the Article X Certificate, DEC conducted a separate review process on applications for permits for the emission of air and water pollutants. Similar to SEQRA, approval of a facility under Article X did not confer the right of eminent domain upon the developer.

Overview of the Process

In general, the Article X siting process involved a mandatory pre-application phase designed to involve the public and obtain agreement on appropriate studies to support an application. This was followed by: the filing of an application; public hearings open to all interested parties before a presiding and associate examiner; the issuance of a recommended decision by the examiners after the evidence was presented and cross-examined; and an opportunity to raise exceptions and replies to the recommended decision before the Siting Board, culminating in a final determination.

²⁹ See the Regional Collaboration Issue Brief for a discussion of initiatives addressing the viability of offshore wind facilities.

³⁰ The coastal zone extends three miles into open ocean, to shared state lines in Long Island Sound and the New York Bight and to the International boundary in the Great Lakes, Niagara and St. Lawrence Rivers.

³¹ The New York State Board on Electric Generation Siting and the Environment (Siting Board) consisted of the Chairman of the Department of Public Service, the Commissioner of DEC, the Commissioner of the Department of Health, the Chairman of the New York State Energy Research and Development Authority, the Commissioner of the Department of Economic Development, and two ad hoc public members.

³² Facilities subject to Article X were specifically exempted from SEQRA. ECL §8-0111(5)(b) (expired and repealed 2003). The predecessor to Article X was PSL Article VIII, which was enacted in 1972, and applied to the siting of new major steam generating facilities.

In order to ensure expeditious review of applications, the Siting Board was required to issue a decision within 12 months of a complete application being filed, subject to limited extensions. A unique facet of the process was the availability of intervenor funding to defray the fees for expert witnesses and consultants of municipal and local parties in order to afford more meaningful participation by these entities.

The key findings that the Siting Board was required to make in granting an Article X Certificate included:

- that the facility is either consistent with the most recent State Energy Plan or was selected pursuant to an approved procurement process.
- that the facility will minimize adverse environmental impacts, considering the state of available technology, the nature and economics of reasonable alternatives, and other pertinent considerations.
- that the facility is compatible with public health and safety.
- that the facility is designed to operate in compliance with applicable State and local laws and regulations, other than local requirements found to be unreasonably restrictive.
- that the construction and operation of the facility is in the public interest.

Article X also contained a specific provision for any party aggrieved by the Siting Board's decision to systems, seek rehearing before the Siting Board, followed by judicial review. For example, Trans Gas Energy, LLC recently sought rehearing and judicial review of the Siting Board's determination denying an Article X Certificate, although the Court ultimately upheld the Siting Board's decision.³³

Siting Activity

There was a significant amount of activity regarding Article X applications prior to the statute expiring. The types of facilities proposed under Article X were all primarily natural gas-fired generators. Appendix A contains a summary of Article X projects that were proposed and the status of those projects.

While Article X has expired, it continues to apply to applications filed on or before December 31, 2002. Recently, Empire State Newsprint/Besicorp-Empire State Development Co, LLC began construction of a 505 MW natural gas-fired facility in Rensselaer County. Moreover, several applicants have renewed their CAA permits, and retained the ability to construct those facilities at a later date, such as the 250 MW facility by Spagnoli Road Energy Center/KeySpan in Suffolk County.

Nuclear Generation Facilities

NRC is responsible for licensing and regulating the design, construction, operation, and decommissioning of commercial nuclear power plants. The licensing process includes approving initial license, subsequent license modifications, and license renewals. For new reactor facilities, NRC reviews applications submitted by prospective licensees, and (when appropriate) issues standard design certifications, early site permits, limited work authorizations, construction permits, operating licenses, and combined licenses.

³³ TransGas Energy Systems, LLC v. New York State Board on Electric Generation Siting and the Environment, No. 2008-07407 (App. Div. 2nd Dept.) (issued September 22, 2009).

However, a developer must ensure adequate site control, since these approvals do not confer the right of eminent domain upon an applicant.

While NRC has jurisdiction over the safety aspects involved in the construction and operation of nuclear-powered electric generation facilities, the states retain authority to determine questions such as the need for additional generating capacity, cost, reliability, land use, ratemaking, consistency with coastal zone management policies, and other related state concerns.

Overview of the Process

In the past, nuclear power plants were licensed under a two-step licensing process. This process required both a construction permit and an operating license. In 1989, NRC established an alternative one-step licensing process that combines a construction permit and an operating license, with certain conditions, into a single Combined License (COL). In a COL application, NRC staff reviews the applicant's qualifications, design safety, environmental impacts, operational programs, site safety, and verification of construction. The staff conducts its review in accordance with the Atomic Energy Act, NRC regulations, and NEPA. By issuing a COL, NRC authorizes the licensee to construct and (with specified conditions) operate a nuclear power plant at a specific site, in accordance with established laws and regulations. A COL is valid for 40 years from the date of NRC's finding that the acceptance criteria in the COL are met and can be renewed for an additional 20 years.

Under either process, before an applicant can build and operate a nuclear power plant, it must obtain approval from NRC. Other licensing alternatives established in 1989 were early site permits, which allow an applicant to obtain approval for a reactor site and bank it for future use, and certified standard plant designs, which can be used as pre-approved off-the-shelf designs.

Under 10 CFR Part 52, NRC may issue an early site permit for approval of one or more sites separate from an application for a construction permit or COL. Such permits are good for 10 to 20 years and can be renewed for an additional 10 to 20 years. They address site safety issues, environmental protection issues, and plans for coping with emergencies, independent of the review of a specific nuclear plant design.

Upon receiving an application, and determining it is complete, NRC publishes a notice of receipt in the Federal Register. NRC reviews the application and documents its findings on site safety characteristics and emergency planning in a safety evaluation report. Public meetings are then scheduled near the proposed site. NRC also conducts an environmental review in accordance with NEPA to evaluate the potential environmental impacts and benefits of the proposed plant.³⁴

In accordance with NEPA, every proposal for a major federal action significantly affecting the quality of the human environment requires a detailed statement on, among other things, the environmental impact of the proposed action and alternatives to the proposed action. The statement accompanies the proposal through the agency review process. NEPA also established in the Executive Office of the President, a Council on Environmental Quality, which has issued regulations on the preparation of environmental impact statements and on public participation in the preparation of the statements.

An Environmental Assessment is typically prepared and describes the need for a proposed action and lists the agencies and experts consulted. If the assessment indicates the proposed facility or action will have a

³⁴ NEPA process is described earlier in greater detail in connection with FERC's electric transmission siting process.

significant effect on the environment, a DEIS is developed. Scoping meetings are held in the vicinity of the affected community to provide a forum for members of the public to express their opinions and provide information for the environmental review. These meetings are often held to help the agency identify issues to be addressed in an EIS and typically involve state and local agencies, sovereign Native American nations, or other interested people who request participation. The DEIS is issued for comment by the public, as well as appropriate federal, state, and local agencies. NRC will then issue and make public an FEIS, which addresses all comments that the agency received.

Preparation of an EIS under NEPA may eliminate the need to prepare an EIS under SEQRA, but a State agency requested to take an action, e.g., Water Quality Certification, will still need to make the appropriate findings under SEQRA.

Siting Activity

Although no nuclear generating facilities have been sited and constructed within the State recently, several facilities have been sited and are currently in operation, while one has been proposed. The units in operation include the James A. FitzPatrick, Ginna, Indian Point Units 2 and 3, and Nine Mile Point Units 1 and 2. On September 30, 2008, Nine Mile Point Nuclear Project, LLC and UniStar Nuclear Operating Services, LLC (UniStar) filed an application for a COL regarding a new facility, referred to as Nine Mile Point, Unit 3, located in Scriba, Oswego County, NY. This application is currently under review by NRC.

Hydroelectric

Under the FPA, FERC is charged with the authorization and regulation of the nation's non-federal hydroelectric power projects that affect navigable waters, occupy U.S. lands, use water or water power at a government dam, or affect the interests of interstate commerce. A potential developer of a hydroelectric project must file an application for a license or exemption from licensing if the project is or will be: 1) located on a navigable waterway of the U.S.; 2) occupying U.S. lands; 3) utilizing surplus water or water power from a U.S. government dam; or, 4) located on a body of water over which Congress has Commerce Clause jurisdiction, project construction occurred on or after August 26, 1935, and the project affects the interests of interstate or foreign commerce. Given its broad authority, it is anticipated that very few projects would fall outside of FERC's jurisdiction.

FERC recently indicated that it also has jurisdiction over hydrokinetic projects that generate electricity from waves or directly from the flow of water in ocean currents, tides, or inland waterways, which are located on the Outer Continental Shelf (OCS).³⁵ FERC provides a process to obtain a preliminary permit to study the development of a hydrokinetic project at an identified site, and to apply for a license to construct and operate a hydrokinetic electric generation facility utilizing one of three licensing processes provided for other hydroelectric projects, i.e., the Integrated, Traditional, or Alternative Licensing Processes.

FERC may issue a preliminary permit for up to three years. Although these permits do not authorize construction, they give the developer first priority to study a project at the specified site for the duration of the permit. This is otherwise known as guaranteed first-to-file status. Once the preliminary permit has

³⁵ *FERC Asserts Jurisdiction Over Outer Continental Shelf Hydroelectric Projects*, 2008. <http://www.ferc.gov/news/news-releases/2008/2008-4/10-16-08-H-2.asp> The U.S. Department of Interior is authorized to grant leases on the OCS for development of alternative energy sources such as offshore wind and wave.

been granted, the permittee must submit reports containing specific information, including a schedule of activities and target dates, and periodic reports on the status of its studies.³⁶

FERC issues three types of construction authorizations: 1) licenses for the construction of new projects, or for the continuation of an existing project, i.e., relicensing, which are issued for 30- to 50-year terms. These licenses provide the power of eminent domain to obtain lands or other rights needed to construct, operate, and maintain the hydroelectric project; 2) an under-5 MW exemption, which is issued in perpetuity at the site of an existing dam or for use of a natural water feature. In order to be exempt, an applicant must propose increased capacity and own all lands and facilities other than federal lands to be eligible; and, 3) a Conduit Exemption, which is also issued in perpetuity.³⁷

The exemptions noted above are from the requirements of Part I of the FPA. However, the exempted project is subject to mandatory terms and conditions set by federal and state fish and wildlife agencies and by FERC, and do not convey the right of eminent domain.

Overview of the Process

The hydropower licensing process generally includes consultation with stakeholders, identification of environmental issues through scoping, and preparation of environmental documents such as Environmental Assessments or an EIS under NEPA. Licenses are issued by FERC, while other approvals, such as DEC issuance of a Water Quality Certification under the CWA, or a consistency determination under the CZMA may be needed. In the traditional licensing process, environmental issues are identified through scoping after the license application has been filed with FERC. The traditional licensing process includes a pre-application and application process.

The alternative licensing process permits scoping of environmental issues to occur prior to the application being filed with FERC. The applicant files a preliminary draft environmental review document along with the application for a license. The alternative licensing process includes a pre-filing and application process.

The default process for filing an application for an original, new, or subsequent license is the Integrated Licensing Process (ILP). The ILP is intended to streamline FERC's licensing process by providing a predictable, efficient, and timely licensing process that ensures adequate resource protections.³⁸

The application steps generally require; a pre-filing consultation and initial project review, an application for a state Water Quality Certification or waiver, the filing of a license or exemption application, comments from interested agencies and entities, and a comprehensive project review.

³⁶ Developers interested in a short-term license to test new technologies may be eligible to use FERC's Hydrokinetic Pilot Project Licensing Process. The goal of the pilot process is to allow developers to test new hydrokinetic technologies, to determine appropriate siting of these technologies, and to confirm their environmental effects, while maintaining FERC-oversight and agency input.

³⁷ Conduit exemptions are authorized for generating capacities 15 megawatts or less for non-municipal and 40 megawatts or less for a municipal project. The conduit has to have been constructed primarily for purposes other than power production and be located entirely on non-federal lands, which the exemptee must own.

³⁸ *Integrated Licensing Process. Section 241 of the Energy Policy Act of 2005.* <http://www.ferc.gov/industries/hydropower/gen-info/licensing/ilp/flowchart.pdf>

Siting Activity

There has been significant interest in the development of new hydroelectric projects throughout the State. While FERC has issued preliminary permits to various developers to study the potential development of a combined total of approximately 740 MW, several other applications for preliminary permits are currently pending. On October 23, 2003, FERC issued a new 50-year license pursuant to the FPA to the New York Power Authority (NYPA) for the 912 MW St. Lawrence FDR project, located on the St. Lawrence River, St. Lawrence County, New York. On March 15, 2007, FERC issued a new license to NYPA for the continued operation and maintenance of the 2,756 MW facility located on the Niagara River, in Niagara County. More recently, the Green Island Power Authority submitted an application with FERC in March 2009 to relicense the Green Island Hydroelectric Project located on the Hudson River, and to increase the peak generating capacity from the current six MW to 48 MW.

2.3 Natural Gas Facilities

2.3.1 Natural Gas Pipelines

Intrastate Pipelines

PSL Article VII provides the PSC with jurisdiction over applications to construct and operate “major” fuel gas transmission lines, i.e., facilities extending a distance of at least 1,000 feet and operated at pressures of 125 psi or more, with some exceptions.³⁹ In 1981, the Legislature streamlined the Article VII procedure and application requirements in connection with natural fuel gas transmission facilities that extend 1,000 feet or more, but less than ten miles. The streamlined requirements applicable to such fuel gas transmission facilities are set forth in PSL Section 121-a and in 16 NYCRR Subpart 85-1.

Overview of the Process

The Article VII process, described generally earlier, addresses the State siting process for electric and fuel gas transmission facilities. While both electric and gas transmission applications under Article VII have similar procedures and may culminate in the issuance of an Article VII Certificate, the necessary findings are slightly different. With respect to major gas transmission lines, the PSC must find and determine:

- the basis of the need for the facility.
- the nature of the probable environmental impact.
- that the facility represents the minimum adverse environmental impact, considering various alternatives and other pertinent considerations.
- in the case of a gas transmission line, that the location of the line will not pose an undue hazard to persons or property along the area traversed by the line.

³⁹ Fuel gas facilities may include natural gas, i.e., primarily methane, and other types of fuels, such as propane.

- that the location of the facility conforms to applicable state and local laws and regulations.⁴⁰
- that the facility will serve the public interest, convenience, and necessity.

Siting Activity

The PSC has reviewed and certified various facilities under Article VII within the last few years.⁴¹ Some of those facilities were certified in connection with electric generating facilities, e.g., the Arthur Kill and Besicorp facilities, which are discussed below.

In 2002, Arthur Kill Power, LLC (Arthur Kill), a wholly-owned subsidiary of NRG Energy, Inc., filed an application, pursuant to PSL Article VII, to construct an approximately 2.3 mile, 20-inch natural gas transmission line in the Borough of Staten Island, Richmond County in order to enhance gas supply to the Arthur Kill Power Plant. Arthur Kill was subsequently granted an Article VII Certificate. The Article VII Certificate also included Freshwater and Tidal Wetland Permits required by ECL Articles 24 and 25, and a CWA section 401 Water Quality Certification for the proposed pipeline. Arthur Kill was also required to obtain USACE approval for any necessary authorization under §10 of the Rivers and Harbor Act and §404 of the CWA, relating to construction of pipelines in coastal areas.

In 2004, Besicorp-Empire Power Company, LLC (Besicorp) filed a PSL Article VII application to construct an approximately 4.5 mile long, 16-inch natural gas transmission line in the Towns of Schodack and East Greenbush, and in the City of Rensselaer, Rensselaer County. The gas pipeline was related to the project proposed by Besicorp-Empire Development Company, LLC to build a 505 MW cogeneration power plant in the City of Rensselaer.⁴² Besicorp was granted an Article VII Certificate to construct the gas pipeline, along with a CWA section 401 Water Quality Certification. Given that construction of the pipeline crossed streams and wetlands, Besicorp was required to obtain a USACE permit pursuant to Section 404 of the CWA. In addition, Besicorp sought approval from the New York State Department of Transportation (DOT) for highway work and occupancy permits for construction along and across the DOT's right-of-way. Because a review was performed pursuant to Section 106 of the National Historic Preservation Act, it precluded otherwise applicable requirements of Section 14.09 of the Parks, Recreation and Historic Preservation Law.

During the planning horizon, it is anticipated that there may be several projects seeking to utilize the Article VII siting process in the context of constructing pipelines for delivering gas extracted from wells drilled into the Marcellus Shale rock formations located within western New York. These developers may seek to construct pipelines for delivering gas prior to the wells being productive, and will be required to make an adequate demonstration of the need for such pipelines. As discussed in the Natural Gas Assessment, wells combined with hydraulic fracturing will provide the best means for producing economic volumes of natural gas from the Marcellus Shale. This process raises various environmental concerns with respect to the effects on water supplies, and proper measures for disposal of contaminated fluids used in the fracturing process. To assess the potential environmental concerns related to the

⁴⁰ The PSC may refuse to apply any local ordinance, law, resolution or other action or any regulation issued thereunder or any local standard or requirement which would be otherwise applicable if it finds that as applied to the proposed facility such is unreasonably restrictive in view of the existing technology, or of factors of cost or economics, or of the needs of consumers whether located inside or outside of such municipality.

⁴¹ A summary table of recent Article VII projects, which is current as of September 3, 2009, is available at: http://www.dps.state.ny.us/articlevii_Gas.pdf

⁴² Another related project was the proposal by Niagara Mohawk Power Corporation to construct a major electric transmission facility to interconnect the proposed power plant to the electric grid.

development of the Marcellus Shale formation in New York, DEC is reviewing horizontal drilling and hydraulic fracturing in the context of a SGEIS, which is expected to be finalized in 2010, and will form the basis for issuing permits for drilling.

Interstate Pipelines

Pursuant to the Natural Gas Act (15 U.S.C. §717 et seq.), FERC's jurisdiction extends to the issuance of certificates of public convenience and necessity to prospective companies providing energy services or constructing and operating interstate natural gas pipelines and storage facilities. In its review of an application, FERC ensures that the applicant has certified that it will comply with U.S. Department of Transportation safety standards. While FERC has no jurisdiction over pipeline safety or security, they work with other agencies with safety and security responsibilities.⁴³

The Natural Gas Act grants the right of eminent domain when a certificate of public convenience and necessity is issued by FERC (15 U.S.C. §717f). Thus, when FERC finds that a proposed project is in the public convenience and necessity, the pipeline company has the right to acquire the necessary property and right-of-ways for that project by eminent domain if the pipeline cannot acquire the necessary land through a negotiated easement, or where the landowner and the pipeline cannot agree on the compensation to be paid for the land.

Overview of the Process

The natural gas pipeline certificate process used by FERC generally includes consultation with stakeholders, identifying environmental issues through scoping, and preparing environmental documents such as an Environmental Assessment or EIS under NEPA.⁴⁴

Siting Activity

Approximately ten interstate gas pipelines have been approved by FERC within New York since 2003, such as the Iroquois Gas Transmission System, L.P. pipeline. While FERC also oversees construction practices and procedures, a potential disadvantage with FERC's oversight is its ability to effectively monitor compliance. In particular, a lack of sufficient personnel to carry out these responsibilities may hamper its efforts.

2.3.2 Natural Gas Wells/Storage Facilities

Overview of the Process

DEC has authority to permit natural gas wells (Environmental Conservation Law Article 23). Consideration of these permits entails a review under SEQRA, which is discussed in detail above. Regarding storage facilities, FERC may issue certificates of public convenience and necessity for the construction and operation of new natural gas storage projects and those seeking authorization to increase working gas capacity of an existing storage field. DEC has participated in FERC's certification

⁴³ A coastal zone Consistency Review may also be required for projects within or affecting coastal zones.

⁴⁴ FERC acts as the Lead Agency for purposes of complying with NEPA. NEPA process is described in detail above in the section addressing electric transmission siting by FERC.

proceedings as a cooperating agency for purposes of conducting the environmental review pursuant to NEPA (42 U.S.C. §4321 et seq.).

Siting Activity

In 2006, 352 gas well permits were issued; nearly double the 180 permits issued in 2005. At least 183 new gas wells were completed in 2006, a substantial increase from the 104 gas well completions in 2005. The gas wells currently in operation throughout the State are identified on DEC's website.⁴⁵

Since 2000, FERC has certified five projects for the expansion of capacity or new storage capacity within the State, for a total capacity of 42.7 billion cubic feet (Bcf). The largest of those projects is the Central New York Oil and Gas Company (Stagecoach) project in Tioga County, NY, with a capacity of 13.6 Bcf. An application is currently pending before FERC to construct another seven Bcf storage facility.

2.3.3 Liquefied Natural Gas (LNG) Terminals

FERC has authority under the Natural Gas Act (15 USC 717b(e) (1)) to authorize the siting, construction, expansion, and operation of facilities located onshore or in State waters for the import or export of LNG. However, even if FERC approves a project, the Applicant may only construct and operate it after obtaining CWA,⁴⁶ CZMA, and CAA⁴⁷ approvals from the states.⁴⁸ In the event a state finds a proposed project is inconsistent with its federally approved coastal management program, the developer may appeal the state's decision to the U.S. Secretary of Commerce.

The Deepwater Port Act gives the U.S. Coast Guard and Maritime Administration jurisdiction over LNG terminals and pipelines outside of state waters. Pipelines leading from deepwater LNG terminals come under FERC's jurisdiction above the high water mark when the pipeline comes onshore.⁴⁹

Overview of the Process

FERC uses a comprehensive review process that entails coordination between the U.S. Coast Guard, U.S. Department of Transportation, the states and local governments. Projects under review can go through two processes: the Pre-Filing process or the Traditional process. The end result of the review process is an EIS that addresses both environmental and safety concerns in accordance with NEPA.

Prior to a company filing an LNG-related application, company representatives commonly meet with Office of Energy Projects (OEP) staff to explain the proposal and solicit advice. These meetings provide prospective applicants the opportunity for FERC staff to offer suggestions related to the environmental,

⁴⁵ *Data on Oil, Gas and Other Wells in New York State.* <http://www.dec.ny.gov/energy/1524.html>

⁴⁶ Under the CWA, a Section 401 certification of compliance with the state's water quality standards is required from the responsible state agency for any activity (including construction and operation of LNG import facilities) that may result in a discharge into navigable waters. If the certification is denied, the LNG facility cannot be constructed. In addition, the CWA requires a Section 404 permit is permit from USACE for discharge of dredged and fill material.

⁴⁷ Under the CAA, Section 502, a permit is required for any person to operate a source of air pollution, as detailed in the Act. If the responsible state agency does not issue the permit, the project cannot go forward.

⁴⁸ State agencies have federally delegated authority under the CZMA, administered by the U.S. Department of Commerce; the CAA, administered by the U.S. Environmental Protection Agency; and the CWA, administered by USACE.

⁴⁹ 33 U.S.C. §1501, et seq.

engineering and safety features of the proposal. At this stage, FERC will review conceptual designs of planned LNG facilities, provide guidance on resolving potential environmental, safety, and design issues, and explain the level of design detail and safety analysis required for a complete application. In this manner, FERC staff learns about future projects which may be filed at the Commission and helps direct companies in their application preparation. This assistance is provided either informally or as part of the formal NEPA Pre-Filing Process, which is designed to reduce the amount of time required to issue an EIS once an application is made.⁵⁰

Prior to any FERC decision regarding an LNG application, OEP staff prepares an Environmental Assessment (EA) or an EIS to fulfill the requirements of NEPA. The purpose of the document is to inform the public and the permitting agencies about the potential adverse and/or beneficial environmental and safety impacts of proposed projects and their alternatives.

FERC's process generally starts with the issuance of a Notice of Application being filed. FERC acts as Lead Agency and undertakes an environmental scoping, and issues a Notice of Intent to Prepare an EIS or EA. Public meetings are then held to solicit initial input. Subsequently, FERC issues a Notice of Availability of the DEIS or EA, and will receive comments thereupon. Additional public meetings are then held to receive input on the DEIS or EA. Upon considering any comments, FERC will issue a Notice of Availability of the FEIS or EA and receive comments thereupon. Following consideration of the entire record, FERC will make a final decision on the project. If FERC determines that the proposed LNG project is in the public interest, it will be approved. The orders approving all projects contain conditions to protect the environment and ensure the safety and security of the project.

Beyond its authority based on federal statutes, the state also has the ability to be a cooperating agency with FERC during the review of a project under NEPA, and can contribute to the complete environmental review of the proposal.

Typically, NEPA documents for new LNG facilities (and major expansions of existing sites) include a more robust study of potential impacts to public safety, i.e., thermal and flammable vapor exclusion zone modeling and marine safety analysis. A large component of this analysis is accomplished under a separate Cryogenic Design Review which seeks to assure the safe design of the proposed facilities and system reliability and runs parallel to the environmental review.

Upon completion of the project review process by FERC, the developer will receive a decision stating whether or not to approve construction and operation of the LNG terminal. FERC may place conditions on the developer that must be met prior to construction, usually originating from the Cryogenic Design and Inspection Manual.

Siting Activity

FERC has seen a considerable amount of interest in the construction of LNG terminals. Several terminals have already been approved by FERC within the northeast, although they have not been constructed. One of those LNG terminals was proposed within Long Island Sound by Broadwater Energy LLC - TransCanada/Shell (Broadwater). Various State agencies were involved in the review of Broadwater's application, and coordinated in providing a safety advisory report to FERC in accordance with the

⁵⁰ FERC has adopted rules requiring potential developers of new LNG terminals to initiate pre-filing procedures at least six months prior to filing a formal application.

authority provided under EPACT (15 U.S.C. §717b-1). FERC considered this report, as well as the input received from various federal and State agencies, and interested parties in preparing the FEIS for the Broadwater LNG import terminal and associated natural gas pipeline. DOS determined that siting the facility within the Long Island Sound, as proposed, would be inconsistent with the policies and goals of the CMP and LISCMP, but identified two alternatives that would be consistent. Broadwater's appeal of DOS's inconsistency determination to the U.S. Secretary of Commerce was denied. Several parties have sought judicial review of FERC's determination granting a certificate to Broadwater, which is currently pending.⁵¹

Moreover, there is currently one terminal under U.S. Coast Guard/Maritime Administration jurisdiction that has been proposed, but has not completed the review process. This project was proposed by Safe Harbor Energy - ASIC, LLC, to construct a 2.0 Bcf per day terminal located several miles offshore of New York Harbor.

2.4 Oil Facilities

2.4.1 Oil Wells/Pipelines/Storage Facilities

Overview of the Process

DEC has authority over the permitting of oil wells, liquefied petroleum gas pipelines, underground oil storage facilities, and major onshore oil storage facilities, defined as facilities sized 400,000 gallons or larger.⁵² DEC ensures compliance with SEQRA, in coordination with any other involved local governmental entities, in determining whether to issue a permit for such infrastructure. Most wells are covered under a DEC generic EIS. Any pipelines used to carry oil from the well to a storage facility are relatively short and are considered as part of DEC's SEQRA review.

Siting Activity

Oil is produced in Cattaraugus, Chautauqua, Allegany, Erie, and Steuben Counties. High crude oil prices have stimulated the drilling of new oil wells in old fields. As of 2006, 186 oil well permits were issued, slightly less than the number of oil well permits issued in 2005, but nearly four times the number in 2004. Oil well completions surged to 166 new oil wells in 2006, up from 95 oil well completions in 2005. The pace of oil well drilling in 2005 was four times that of the late 1990s. Drilling permits in the State are at a 20-year high. The oil wells currently in operation throughout the State are listed on the DEC's website.⁵³ There are about a half-dozen oil pipelines currently operating in the State, although there has not been interest recently in constructing new pipelines.

⁵¹ County of Suffolk, et al. v FERC, Nos. 08-5087, et al. (2d Cir.)

⁵² See ECL Article 23, and New York State Navigation Law §174. Licenses for major oil storage facilities may be issued for a period up to five years. Smaller facilities are subject to registration requirements.

⁵³ *Data on Oil, Gas and Other Wells in New York State.* <http://www.dec.ny.gov/energy/1524.html>

2.5 Emerging Infrastructure (Carbon Capture and Sequestration Facilities)

It is anticipated that there will be an interest in constructing new carbon capture and sequestration infrastructure, such as pipelines and wells for underground storage, to achieve desired emissions reductions pursuant to public policy programs. Although no such infrastructure has been built to date in the State, the Jamestown Board of Public Utilities has proposed construction of a CO₂ pipeline in connection with a coal-fired electric generating facility. However, there are no uniform standards for the siting and construction of this infrastructure. To address this regulatory gap, existing siting process for intrastate natural gas pipelines could be expanded to also cover CO₂ pipelines, i.e., PSL Article VII.

3 Appendix A: PSL Article X – Siting Activity

Project/Developer	Primary Fuel Type	MW	Town/County	Application Filing Date	Certification/ Decision Date	In-Service Date/Status of Project
Athens Generating Plant/ Athens Generating Co., LP	Natural Gas	1080	Athens/Greene	8/28/98	6/15/00	May 2004
Bethlehem Energy Center/ PSEG Power New York, Inc.	Natural Gas	750 total 350 net increase	Bethlehem/Albany	11/27/98 Amended 7/2/01	2/28/02	July 2005
Bowline Unit 3/Mirant Bowline, LLC	Natural Gas	750	Haverstraw/Rockland	3/20/00	3/26/02	On hold
East River Repowering/ Consolidated Edison Company of New York, Inc.	Natural Gas	360 total 200 net increase	Lower Manhattan	6/1/00	8/30/01	April 2005
Astoria Energy/SCS Energy, LLC	Natural Gas	1000	Astoria/Queens	6/19/00	11/21/01	620 MW In- Service May 2006; 620 MW to be constructed
Ravenswood Cogeneration Project/KeySpan	Natural Gas	250	Queens	7/28/00	9/7/01	May 2004
Caithness Island Power/ Caithness Energy, LLC	Natural Gas	750	Brookhaven/Suffolk	8/17/00 (Preliminary Scoping Statement)	N/A	Project cancelled
Poletti/NYPA	Natural Gas	500	Astoria/Queens	8/18/00	10/22/02	Dec 2005
Brookhaven/Brookhaven Energy, LP	Natural Gas	540	Brookhaven/Suffolk	6/25/01	8/14/02	Project cancelled
Wawayanda Energy Center, LLC (Calpine)	Natural Gas	540	Wawayanda/Orange	8/27/01	10/22/02	On hold
Reliant Energy Astoria Repowering/Astoria Generating Co., LP	Natural Gas	1,816 total 562 net increase	Astoria/Queens	10/29/01	6/25/03	On hold

Project/Developer	Primary Fuel Type	MW	Town/County	Application Filing Date	Certification/ Decision Date	In-Service Date/Status of Project
Empire State Newsprint/ Besicorp-Empire State Development Co., LLC	Natural Gas	505	Rensselaer/Rensselaer	12/20/01	9/24/04	Under construction
King Park/PPL Global	Natural Gas	300	Smithtown/Suffolk	1/22/02	N/A	Project cancelled
Spagnoli Road Energy Center/ KeySpan	Natural Gas	250	Huntington/Suffolk	1/28/02	5/8/03	On hold
Glenville Energy Park Glenville Energy Park, LLC	Natural Gas	520	Scotia- Glenville/Schenectady	1/31/02	N/A	Project cancelled
Trans Gas Energy/Trans Gas Energy Systems, LLC	Natural Gas	1,100	Greenpoint/Brooklyn	12/24/02	Certificate Denied	Litigation Pending
Grassy Point/Haverstraw Bay LLC	Natural Gas	550	Haverstraw	9/24/99 Pre- Application Report	N/A	Project Canceled
Oak Point/Oak Point, LLC	Natural Gas	1,075	Bronx/New York	6/30/00 Preliminary Scoping Statement	N/A	Project Canceled
Twin Tier	Natural Gas		Nichols	6/10/99 Pre- Application Report	N/A	Project Canceled
Ramapo/American National Power	Natural Gas		Ramapo/Rockland	N/A	N/A	Application withdrawn
Heritage	Natural Gas	800	Scriba	2/23/00	1/19/01	Project cancelled
Sunset/Sunset Energy Fleet LLC	Natural Gas	520	Brooklyn/New York City	N/A	N/A	Application rejected
Torne Valley Station/Sithe Torne Valley, LLC	Natural Gas	827	Ramapo	N/A	N/A	Project Canceled
Indian Point Peaking Facility/Entergy Indian Point Peaking Facility, LLC	Natural Gas	330	Buchanan/Westchester	3/18/02 Preliminary Scoping Statement	N/A	Project Canceled

Draft Scope for the New York State Energy Plan

September 2024

The New York State Energy Plan (“Plan”) is guided by the provisions of [Article 6 of the Energy Law](#). This Plan will assess meeting future energy needs over a fifteen-year horizon through 2040, in a manner that ensures energy system reliability, advances economy-wide decarbonization, and balances objectives around cost, equity, the environment and climate change, public health, and economic development.

In accordance with Article 6 of the Energy Law, the Plan will be guided by the goals and long-range energy planning objectives of:

- Improving the reliability of New York State’s energy systems;
- Protecting consumers from market price volatility;
- Minimizing the overall cost of energy services in the state;
- Minimizing public health and environmental impacts, particularly those related to climate change;
- Maximizing energy conservation, energy efficiency, and load management; and
- Supporting economic development and the ability of the state to compete economically.

The [2019 Climate Leadership and Community Protection Act](#) (“Climate Act”) – New York State’s nation-leading law to reduce greenhouse gas emissions, promote climate change mitigation and adaptation, advance climate justice, and help to grow the state’s economy – guided the preparation of the [2022 New York State Climate Action Council Scoping Plan](#) (“Scoping Plan”). Consistent with the Climate Act direction that the State Energy Plan will be informed by recommendations made in the Scoping Plan, this Plan will incorporate and assess energy policy and program recommendations of the Scoping Plan, and as appropriate, the Plan will recommend additional policies, programs, and actions.

This document sets forth a Draft Scope (“Scope”) for the Plan. The Draft Scope is written to elicit feedback about the focus and direction of the Plan. Comments received through the public comment process will inform development of a Final Scope.

Topic Areas to be Developed in the State Energy Plan

Identified through the scoping and public comment process, the topic areas to be discussed and analyzed in the Plan are designed to meet statutory requirements, are informed by recommendations made in the Scoping Plan, and address additional issues identified by the State Energy Planning Board. In the development of the Plan, the Board will assemble and take into consideration relevant studies and plans undertaken by State agencies and authorities, the New York Independent System Operator (“NYISO”), energy transmission and distribution companies, and others. To the extent practicable and feasible, each topic area of the Plan will assess the current status and future outlook; discuss issues, challenges, and options; consider impacts on environmental justice communities and Disadvantaged Communities; discuss findings statewide and for the downstate region and the upstate region; and provide policy recommendations. The Plan will additionally evaluate how various actions interact across sectors and topic areas, including analysis of societal benefits and costs.

I. Overview of the Energy System

The Plan will:

- Provide an integrated overview of New York State’s energy systems – including historical trends, current data, and forecasts for energy use, expenditures, and prices disaggregated by sector and by fuel type for electricity, fossil natural gas, petroleum products including heating and transportation fuels, coal, and alternative fuels; and
- Provide this overview on a statewide basis and, to the extent practicable, for the downstate region (comprised of New York City, Long Island, and the Mid- and Lower-Hudson Valley) and the upstate region (comprised of the Capital Region, Western NY, the Finger Lakes, the Southern Tier, Central NY, Mohawk Valley, and the North Country), as defined in Article 6 of the Energy Law.

II. Climate Change, Adaptation, and Resiliency

New York’s clean energy and climate policies and programs are working toward a reduction in economywide greenhouse gas emissions of 40% by 2030 and 85% by 2050, from 1990 levels. In parallel with ambitious action on climate mitigation, it is likewise critical to understand the impacts of climate change on New York’s citizens, infrastructure, and natural resources, and to adapt and build resilience to those impacts.

The Plan will:

- Provide an inventory and forecast of greenhouse gas emissions statewide and across sectors, based on the Statewide Greenhouse Gas Emissions [Report](#);
- Synthesize the latest climate science and trends, as well as the impacts of climate change on the state’s natural resources, infrastructure, public health, economy, and energy systems, building upon the [NYS Climate Impacts Assessment](#); and
- Discuss relevant and impactful strategies to accelerate adoption of climate change resiliency and adaptation measures for the sectors and topic areas addressed in the Plan.

The analysis supporting the Plan will provide the foundation for an assessment of current policies and programs as well as the consideration of additional actions to further the State’s climate goals and requirements and resiliency and adaptation efforts. Among the issues that the State Energy Planning Board will take under consideration are: how to further our understanding of future climate change and its impacts; the status of ongoing adaptation and resiliency planning across the energy sector; and opportunities to inform regional planning through sector-wide vulnerability analyses.

III. Environmental Justice and Climate Justice

New York’s policies and programs seek to promote environmental justice and to ensure that frontline communities benefit from the state’s clean energy transition. These policies and programs work to address the structural disadvantages that have caused historically marginalized communities (e.g., people of color, indigenous people, low-income communities, women) to bear a disproportionate burden of the impacts of pollution and climate change.

The Plan will:

- Examine impacts from the energy sector on issues faced by environmental justice communities and by Disadvantaged Communities, as identified by [criteria](#) adopted by the [Climate Justice Working Group](#) under the Climate Act;

- Discuss mechanisms to ensure the fair treatment and meaningful involvement of all people in State decision making, policies, and programs;
- Evaluate progress on the Climate Act’s requirement that at least 35% with a goal of 40% of the benefits from clean energy and energy efficiency investments accrue to Disadvantaged Communities; and
- For each topic area in the Plan, assess current and additional actions to improve the health, economic, and environmental well-being of environmental justice communities and Disadvantaged Communities affected by the energy sector.

The analysis supporting the Plan will provide the foundation for an assessment of current policies and programs as well as the consideration of additional actions to advance environmental justice and climate justice. Among the issues that the State Energy Planning Board will take under consideration are: reducing localized, disparate environmental impacts identified as resulting from the energy sector; environmental and climate justice impacts of current State policies and programs and those under consideration in the Plan; methods to collect data and to measure meaningful impacts on Disadvantaged Communities, including community air monitoring efforts; energy affordability concerns and reducing the financial burden of energy costs; opportunities for economic development in historically-disinvested communities; full participation in the clean energy economy, including access to quality jobs in safe work environments; equitable access to clean energy programs and services (such as distributed generation, energy efficiency, electric appliances and vehicles); equitable access to climate resilient infrastructure; availability of quality and affordable housing; and increased low- and zero-emission transportation options.

IV. Clean Energy Jobs and a Just Transition

A core objective of New York’s climate and energy agenda is to ensure the advancement of a clean energy economy that results in economic development and job opportunities across New York and a just and equitable transition for New York’s existing and emerging workforce.

The Plan will:

- Provide key metrics, statistics, and trends for energy jobs in the context of the State’s growing clean energy economy;
- Identify workforce needs to support the future energy system;
- Discuss current workforce development, training, and educational initiatives and identify opportunities to improve these initiatives to meet future energy system needs;
- Discuss opportunities, challenges, and uncertainties with respect to hiring and skills development for clean energy jobs;
- Evaluate progress on policy priorities for a just transition, as identified by the Just Transition Working Group and outlined in the Scoping Plan; and
- Discuss continued coordination across State agencies to implement initiatives, including the New York Power Authority (NYPA) and Energy Research and Development Authority (NYSERDA), Empire State Development’s Office of Strategic Workforce Development (OSWD), and the New York State Department of Labor’s Office of Just Energy Transition (OJET).

The analysis supporting the Plan will provide the foundation for an assessment of current policies and programs as well as the consideration of additional actions to further the State’s climate and energy goals and requirements. Among the issues that the State Energy Planning Board will take under consideration are: the application of labor standards to promote job quality and financial benefits for the state; regional energy

employment dynamics; the siting of clean energy job training centers and workforce development programs; workforce development and training initiatives to support the hiring of workers from Disadvantaged Communities and Priority Populations, including displaced and transitioning workers; and investments to expand clean energy and emerging workforce opportunities, focusing on areas of future growth including offshore wind, electric vehicle charging, building decarbonization, solar development, energy storage, and emerging technologies.

V. Clean Energy Innovation and Economic Development

New York State’s support for clean energy innovation drives multiple benefits such as demonstrating the value of emerging technologies, generating in-state jobs, and economic development. The clean energy transition both in New York and globally provides the opportunity for New York-based manufacturers and companies to develop new products and expand their clients, including to meet sizeable regional needs across the energy, transportation, and buildings sectors.

The Plan will:

- Assess policies, programs, and funding mechanisms to stimulate energy research and development, support business and market development of emerging clean energy technologies, and bridge the gaps to full commercialization of new products that support clean energy needs;
- Discuss how New York can accelerate the development of clean energy industries and products, facilitate coordination between universities and industries, and encourage the growth of regional and statewide technology partnerships;
- Discuss how New York can continue to develop an in-state supply chain of clean energy businesses; and
- Assess future energy needs to support strategic economic growth in New York.

The analysis supporting the Plan will provide the foundation for an assessment of current policies and programs as well as the consideration of additional actions to further the State’s climate and energy goals and requirements. Among the issues that the State Energy Planning Board will take under consideration are: public-private partnerships and similar approaches to ensure access to adequate investment capital to grow clean energy innovation, research and development (R&D), and manufacturing in New York; opportunities to leverage that growth on the national and international stages; regional economic development opportunities, including existing community development programs, with a focus on unlocking opportunities in underutilized or blighted areas; innovation market mapping to determine opportunities for incubators, industry partnerships, workforce development, and similar opportunities; a framework to prioritize specific State-supported market engagements and activities to maximize impact; the equitable distribution of benefits from innovation and economic development; and coordination of State and federal investments to support clean energy economic development goals.

VI. Electricity

New York State is transforming the way that the state’s power sector and consumers generate, deliver, and use electricity – while ensuring a future electric grid that is dynamic, reliable, and resilient to climate change and extreme weather events. The Climate Act requires that 70% of statewide electricity come from renewable energy sources by 2030 and that the State achieve a zero-emission electricity system by 2040. The Climate Act and subsequent State targets set deployment goals of 6 gigawatts of distributed solar by 2025, 10 gigawatts of distributed solar by 2030, 6 gigawatts of energy storage by 2030, and 9 gigawatts of offshore wind by 2035. In the coming years, New York State also anticipates major growth in electric

demand driven by large economic development projects and widespread electrification of transportation and buildings. During the transformation of New York's electricity sector, several reliability challenges must be successfully managed, including changing patterns of demand and the variety of generation resources and associated resource attributes for balancing generation and demand.

i. **Electricity Demand, Supply, and System Reliability and Resiliency**

The Plan will:

- Provide historical, current, and forecasted trends in electricity load and supply requirements by region and for the State as a whole, including the amount of capacity needed to provide for adequate reserve margins and reliability and accounting for projected climate conditions;
- Assess the existing and scenarios for the possible future generation supply portfolio, including fuel diversity, expansion of renewable resources, and the role of next generation clean energy technologies and dispatchable emission-free resources;
- Assess the electric transmission and distribution system infrastructure, including areas of system constraint and needed upgrades and investments;
- Discuss changes in electricity market structures that can maintain reliability while promoting affordability and clean energy policy objectives;
- Discuss the current status of climate resilience and adaptation measures incorporated or planned;
- Assess the current and projected reliability of the state's electric power system, taking into account changes in the system and technology as well as potential changes in energy markets and policies and climate (e.g., increased future average temperature, increased number of heat waves);
- Discuss options to address any identified reliability needs or risks;
- Discuss options to address vulnerabilities posed by climate change; and
- Discuss technologies and practices for modernizing the state's electricity system, including to maintain its reliability, resilience, and efficiency; to facilitate the integration of renewable energy; and to prioritize clean resources consistent with the Climate Act.

The analysis supporting the Plan will provide the foundation for an assessment of current policies and programs as well as the consideration of additional actions to further the State's climate and energy goals and requirements. It will be developed in consultation with the NYISO and will include synthesis of NYISO reliability planning studies and relevant studies conducted by New York's electric utilities. Among the issues that the State Energy Planning Board will take under consideration are: projected impacts of climate change on electricity demand, generation, delivery, and system reliability and resilience; impacts of energy efficiency, electrification, flexible demand, and new large loads (such as industrial facilities and data centers) on electricity demand and supply requirements; control and dispatchability of intermittent resources with balancing resources (such as energy storage); strategies to accelerate deployment of dispatchable emission-free resources; transmission and distribution upgrades, including to accommodate renewable resources and to improve reliability and resilience; and accommodation of new electric generation facilities, repowering/life extension of existing facilities, and options to retire or repurpose existing fossil fuel electric generation facilities. The Board further will consider market designs, products, and price signals to facilitate system efficiency and reliability; advanced metering infrastructure; and customer and system data access. For the electricity sector overall, the Board will carefully consider energy affordability impacts and ways to reduce energy cost burdens, with specific attention to low-income households.

ii. **Renewable Resources for Electricity Generation**

The Plan will:

- Assess the market potential for renewable electricity generation resources to meet needs in the electricity sector, including large-scale renewables (solar, land-based wind, hydropower, and offshore wind) and distributed generation;
- Evaluate progress towards meeting New York’s renewable energy targets and zero emission goals set for the electricity sector, building upon the 2024 Draft Clean Energy Standard Biennial [Review](#);
- Discuss opportunities, challenges, uncertainties, and the State’s role in initiatives to promote deployment of large-scale renewables;
- Discuss opportunities, challenges, uncertainties, and the State’s role in initiatives to promote deployment of distributed generation;
- Examine the role of policy, regulation, and finance as well as research and development in encouraging deployment and investment in large-scale renewable resources and distributed generation; and
- Balance the development of large-scale renewable energy and distributed generation with preservation of open space, agricultural land, and other siting considerations.

The analysis supporting the Plan will provide the foundation for an assessment of current policies and programs as well as the consideration of additional actions to further the State’s climate and energy goals and requirements. Among the issues that the State Energy Planning Board will take under consideration are: clean energy siting, land use, and community acceptance; permitting processes including the implementation of New York’s Renewable Action Through Project Interconnection and Deployment (RAPID) Act; grid interconnection standards and capacity; transmission and distribution upgrades to accommodate renewable and distributed energy resources; incentives and financing to encourage deployment; additional strategies to meet New York’s Clean Energy Standard; encouragement of community choice aggregation programs with strong consumer protections; rate design and compensation for renewable resources, including value-based compensation; and system and customer data access.

iii. **Energy Storage and Flexible Resources**

The Plan will:

- Assess the market potential for energy storage technologies to provide the electricity system with dispatchable, flexible capacity that supports increased system reliability and a more efficient build out of renewable generation, and to provide end users with flexibility and resiliency benefits;
- Evaluate progress in meeting New York’s energy storage targets;
- Discuss opportunities, challenges, uncertainties, and the State’s role in initiatives to promote energy storage deployment, for large-scale storage and behind-the-meter applications;
- Discuss opportunities, challenges, uncertainties, and the State’s role in initiatives to promote the improved integration of flexible resources (such as energy storage, demand response, and virtual power plants) into grid planning and grid operations; and
- Examine the role of policy, regulation, and finance as well as research and development in encouraging deployment, grid integration, and investment in energy storage and other flexible resources.

The analysis supporting the Plan will provide the foundation for an assessment of current policies and programs as well as the consideration of additional actions to further the State’s climate and energy goals

and requirements. Among the issues that the State Energy Planning Board will take under consideration are: utility planning and procurement processes; siting and community acceptance; permitting processes; codes, standards, and practices for the fire safety of stationary battery energy storage systems; incentives and financing to encourage deployment; rate design and compensation for energy storage and flexibility services, including value-based compensation; opportunities for customer savings and benefits from flexibility services; advancements in smart grid technologies and metering infrastructure; physical and cyber security protocols; and system and customer data access.

VII. Nuclear Energy

Nuclear power generation provides reliable baseload electricity and is zero-emission — attributes that are valued under New York’s current energy policies. Yet at the same time, nuclear power generation technologies are complex, with potential impacts on host communities and questions relating to the long-term impacts of nuclear waste on health and the environment.

The Plan will:

- Assess the contribution of the existing nuclear fleet in meeting New York’s energy, capacity, and reliability requirements;
- Examine the implications of decommissioning, including long-term waste storage and disposal;
- Explore the potential role of advanced nuclear technologies in the power sector, including small-scale and modular units;
- Explore the potential role of nuclear-powered clean hydrogen production, whether through water electrolysis in existing nuclear facilities or in future nuclear units; and
- Discuss the opportunities and considerations necessary for deployment of advanced nuclear technologies for power generation, hydrogen production, and other applications.

The analysis supporting the Plan will provide the foundation for an assessment of current policies and programs as well as the consideration of additional actions to further the State’s climate and energy goals and requirements. Among the issues that the Board will take under consideration are: existing regulatory and policy structures; available technology and the development timeframe and risks for new technologies; impacts on economic growth; health, safety, and security considerations; nuclear waste management and environmental impacts; siting and community acceptance; permitting processes; land use considerations; financing considerations, including cost overrun insurance; environmental and climate justice impacts; supply chain concerns and opportunities; and job impacts and workforce development implications. The Board also will consider opportunities to leverage federal legislation and funding, such as through the Accelerating Deployment of Versatile, Advanced Nuclear for Clean Energy (ADVANCE) Act.

VIII. Fossil Fuels

New York’s Scoping Plan indicates that achieving the State’s greenhouse gas emissions limits will require deep reductions in fossil fuel use, including both petroleum fuels and natural gas, and the strategic downsizing and decarbonization of the gas system. A well-planned and strategic transition from reliance on fossil fuels to a clean energy economy will involve coordination across multiple sectors. An additional challenge in long-term planning is to strike a balance among multiple competing objectives, including maintaining safety and reliability, reducing public health and environmental impacts, advancing a transition that is equitable for workers and consumers, and the affordability of energy services.

i. **Natural Gas**

The Plan will:

- Provide historical, current, and forecasted trends in demand for natural gas by region and in the State as a whole;
- Assess production trends (regional, national, and global) in natural gas markets;
- Examine existing and projected natural gas supply sources, pipeline and storage capabilities, and delivery infrastructure, including areas of gas system constraints and possible supply-side and demand-side (non-pipes) alternatives to address such constraints;
- Assess current and projected gas system reliability needs, with attention to how clean energy policies will change needs for electricity generation and patterns of demand in the residential, commercial, and industrial sectors;
- Consider the potential use of alternative fuels such as renewable natural gas (RNG) and green hydrogen in the gas system (see Alternative Fuels);
- Discuss the importance of and associated technologies and practices for maintaining and improving the safety, reliability, and resilience of the gas system as it transitions; and
- Discuss the interdependency of the electricity and gas systems in transitioning toward a decarbonized energy system.

The analysis supporting the Plan will provide the foundation for an assessment of current policies and programs as well as the consideration of additional actions to further the State’s climate and energy goals and requirements, including establishing clear targets and a timeline for the gas system transition. Among the issues that the State Energy Planning Board will take under consideration are: the strategic downsizing of substantial portions of the gas system; long-term gas utility planning; impacts of energy efficiency, electrification, fuel switching between gas and delivered fuels, demand response, and large-scale industrial development on changing patterns of gas use; the deployment of non-pipe alternatives, building electrification and thermal energy networks, and other demand management strategies to reduce the need for gas system infrastructure; and the impact of the gas system transition on the gas system workforce, economic development, and hard-to-electrify gas users. The Board further will consider the potential for alternative fuels to meet strategic needs and policy objectives; the reduction of methane leakage from the gas system; and the reduction of methane emissions from the gas supply chain, including associated regulatory actions and the voluntary standards and costs associated with certified natural gas. The Board will carefully consider energy affordability impacts and ways to reduce energy cost burdens, with specific attention to low-income households. In addition, the Board will consider legislative and regulatory actions to effectuate the strategic downsizing of the gas system, to address the financial challenges of transition in part through reforming the business model of gas utilities (local distribution companies), and to adopt market-based emissions reduction mechanisms.

ii. **Petroleum Fuels**

The Plan will:

- Provide historical, current, and forecasted trends in demand for petroleum fuels and petroleum products, including distillate fuels, gasoline, propane, residual fuels, and jet fuels, by region and in the State as a whole;
- Assess petroleum markets, including trends in global production of crude oil as well as markets for refined products used in the State’s energy systems;
- Examine existing and future supply sources, pipeline and storage capabilities, delivery infrastructure, and system reliability needs, with attention to how clean energy policies will change

needs for electricity generation and patterns of demand in the residential, commercial, industrial, and transportation sectors;

- Consider the potential use of alternative fuels, such as renewable diesel, as replacement for traditional petroleum fuels (see Alternative Fuels); and
- Discuss the importance of and associated technologies and practices for maintaining and improving the safety, reliability, and resilience of the State’s petroleum and delivered fuels system.

The analysis supporting the Plan will provide the foundation for an assessment of current policies and programs as well as the consideration of additional actions to further the State’s climate and energy goals and requirements. Among the issues that the State Energy Planning Board will take under consideration are: fuels consumption outside of the electricity sector; the reduction of methane emissions from the petroleum supply chain, including associated regulatory actions; and a just transition for workers in the petroleum and delivered fuels sector. The Board will carefully consider energy affordability impacts and ways to reduce energy cost burdens, with specific attention to low-income households. In addition, the Board will consider legislative and regulatory actions to adopt market-based emissions reduction mechanisms.

IX. Alternative Fuels

Alternative fuels such as hydrogen, RNG, biogas, biofuels, and other bio-based fuel products have the potential to replace some fossil fuel use, particularly for hard-to-decarbonize end uses, to lower greenhouse gas emissions. Yet further analysis, research, and technological development is needed to determine the feasibility, climate impacts, and environmental and health impacts of alternative fuels, as is recognized in the Scoping Plan. Article 6 of the Energy Law requires that the Plan identify and assess emerging trends in energy supply and demand as well as the costs, risks, benefits, uncertainties, and market potential of energy supply source alternatives including alternative fuels.

The Plan will:

- Provide information on current and forecasted demand for alternative fuels in a decarbonized energy system and assess the potential for in-state and regional supplies and costs of alternative fuels;
- Examine the potential greenhouse gas emissions, air quality, and health impacts of alternative fuels and best practices or end-uses for minimizing and mitigating any impacts, including localized impacts in Disadvantaged Communities and frontline communities;
- Examine existing delivery and pipeline infrastructure, storage capabilities and safety and the potential for leveraging the existing infrastructure for use of alternative fuels;
- Develop guidelines to prioritize utilization of alternative fuels and feedstocks with the lowest greenhouse gas emissions, accounting for reduction in methane emissions from agriculture or food waste, the lowest air quality impacts, and affordable cost;
- Discuss opportunities, challenges, uncertainties, and best practices to target the use of alternative fuels to strategic end-uses where electrification is not a viable option, or to maintain or enhance reliability, resilience, or affordability in a decarbonized energy system; and
- Examine the role of federal and State policy, regulation, and tax and finance, as well as research and development in encouraging the strategic use of and investment in alternative fuels.

The analysis supporting the Plan will provide the foundation for an assessment of current policies and programs as well as the consideration of additional actions to further the State’s climate and energy goals and requirements. Among the issues that the State Energy Planning Board will take under consideration are: potential uses of alternative fuels in energy sectors where electrification is not yet feasible or to improve reliability and resilience; the potential for negative or positive impacts on other economic sectors, such as

waste management or agriculture; research on fugitive emissions (leaks) of hydrogen and methane and associated climate and safety impacts; and research on pollution controls that reduce/eliminate co-pollutant or greenhouse gas emissions from combustion of alternative fuels. The Board will carefully consider energy affordability impacts and ways to reduce energy cost burdens, with specific attention to low-income households.

X. Buildings and Industry

New York's policies and programs are working to reduce end-use energy consumption in buildings and industrial facilities by 185 trillion British thermal units (Btu), an all-fuels target designed to drive energy savings across electricity, natural gas, and petroleum fuels. The State also has set a goal of two million climate-friendly homes that are efficiently electrified or electrification-ready, including over 800,000 climate-friendly homes that are affordable for low- and moderate-income (LMI) households.

The Plan will:

- Evaluate progress in meeting New York's end-use energy savings target;
- Assess the market potential for energy efficiency and end-use electrification to meet the energy services needs in the residential, commercial, and institutional buildings sector and in the industrial sector, as well as the potential for strategic use of alternative fuels in these sectors;
- Discuss opportunities, challenges, uncertainties, and the State's role in initiatives to encourage adoption of energy efficiency, load management, and end-use electrification in residential buildings, including to meet the State's climate-friendly homes goal;
- Discuss opportunities, challenges, uncertainties, and the State's role in initiatives to encourage adoption of energy efficiency, load management, and end-use electrification in commercial and institutional buildings;
- Discuss opportunities, challenges, uncertainties, and the State's role in initiatives to encourage adoption of energy efficiency, end-use electrification, alternative fuels and feedstocks, and carbon capture and storage in industrial facilities;
- Discuss potential climate resilience benefits of energy efficiency and end-use electrification; and
- Examine the role of policy, regulatory, and financing mechanisms as well as research and development in encouraging adoption and investment in energy efficiency and decarbonization.

The analysis supporting the Plan will provide the foundation for an assessment of current policies and programs as well as the consideration of additional actions to further the State's climate and energy goals and requirements. Among the issues that the State Energy Planning Board will take under consideration are: employing a strategic approach to incentives offered for energy efficiency and end-use electrification; dedicated financial support for energy efficiency, electrification, and related health and safety upgrades for low- and moderate-income households and affordable housing; phased electrification approaches in existing buildings; leading by example through energy savings projects and new construction practices in State buildings and facilities; industrial process efficiency and emerging technologies to decarbonize industrial process heat; the deployment of thermal energy networks to decarbonize buildings at the community and utility scale; grid-interactive efficient buildings; advanced metering infrastructure; and customer data access. The Board will carefully consider energy affordability impacts and ways to reduce energy cost burdens while advancing decarbonization, with specific attention to low-income households. In addition, the Board will consider legislative and regulatory actions for building energy benchmarking, labeling, and building performance standards that promote the energy-efficient operation of buildings; for appliance standards; to reduce embodied carbon emissions in construction projects and construction materials; and to adopt market-based emissions reduction mechanisms.

XI. Transportation

New York's policies and programs are working toward the following Zero Emission Vehicle requirements: 100 percent of light-duty vehicle sales by 2035; 100 percent of all new school bus purchases by 2027; 100 percent of all school buses operating in the state by 2035; and 100 percent of medium- and heavy-duty vehicles sales by 2045. Additionally, New York is committed to reduce transportation emissions by enhancing access to public transportation and other forms of mobility and promoting mobility-oriented development.

The Plan will:

- Provide information and trends related to the existing transportation system, including highway, transit, rail, port, pedestrian, cycling, and other transportation modes;
- Assess the impact of increased electrification of the transportation system on electricity demand and usage patterns;
- Assess the infrastructure needs to enable widespread adoption of zero-emission vehicles and non-road engines (such as for freight facilities and ports, construction, agricultural, and industrial uses);
- Discuss opportunities, challenges, uncertainties, and the State's role in initiatives to encourage the adoption of electric vehicles and alternative transportation fuels, such as advanced biofuels and hydrogen;
- Discuss opportunities, challenges, uncertainties, and the State's role in initiatives to promote the use of transit, bicycling, and walking and to reduce vehicle miles traveled, including through transportation demand management and the integration of land use and transportation planning;
- Discuss opportunities, challenges, and the State's role in promoting energy efficiency and reducing embodied carbon emissions in the construction and maintenance of the transportation system; and
- Discuss preparedness and planning for emergency transportation operations and hazard mitigation; and
- Examine the role of policy, regulation, and finance in reducing transportation-related greenhouse gas emissions while facilitating reliable and equitable access to safe mobility.

The analysis supporting the Plan will provide the foundation for an assessment of current policies and programs as well as the consideration of additional actions to further the State's climate and energy goals and requirements. Among the issues that the State Energy Planning Board will take under consideration are: further electrification of light-duty vehicles, medium- and heavy-duty vehicles, micromobility options (e-bikes and e-scooters), and non-road equipment, as well as associated infrastructure development; leading by example in the decarbonization of State fleets; access to and infrastructure development for active mobility (biking and walking) and shared mobility options; public transit expansion; transportation demand management; traffic volume impacts, especially from commercial fleets; transportation preparedness for emergency response and hazard mitigation, including extreme weather; and regional collaborations and policies. The Board will further consider improving medium and heavy-duty vehicle efficiency; advanced battery technologies; advanced biofuels; and connected vehicles and autonomous vehicles. In addition, the Board will consider legislative and regulatory actions to adopt market-based emissions reduction mechanisms.

XII. Smart Growth

Article 6 of the Energy Law directs assessment of the ability of urban planning alternatives, including but not limited to smart growth, to reduce energy and transportation fuel demand.

The Plan will:

- Discuss smart growth principles, applications, and benefits;
- Examine market and demographic trends that support the implementation of smart growth strategies; and
- Examine the ways in which smart growth principles can support reductions in energy use, increases in clean energy siting and installation, greater energy efficiency across sectors, and improved public health and environmental outcomes.

The analysis supporting the Plan will provide the foundation for an assessment of current policies and programs as well as the consideration of additional actions to further the State's climate and energy goals and requirements. Among the issues that the State Energy Planning Board will take under consideration are: the role of planning and zoning in informing how efficiently energy is used in a community, including the development of compact, mixed-use, and multifamily development, particularly in municipal centers; the reduction in vehicle miles traveled; the increase in transit use; the benefits of the expansion of onsite solar, distributed energy, and thermal energy network installations that serve a critical mass of customers; encouraging the integration of land use and transportation planning; encouraging the redevelopment of existing buildings, including historic buildings, to reduce embodied carbon; and using green infrastructure to reduce energy use and greenhouse gas emissions attributable to water treatment facilities and to minimize the effects of extreme heat.

XIII. Emergency Preparedness and Security

New York State recognizes the importance of assessing and mitigating risks to the state's energy systems and ensuring equitable outcomes for all communities. The State's commitment to a safer, more resilient future is reflected in Article 6 of the Energy Law, in the Scoping Plan, and in the New York State Comprehensive [Emergency Management Plan](#).

The Plan will:

- Review and assess the impacts of natural, climate-related, technological, and human threats to the State's energy systems, fuel supplies, and generating modes;
- Examine the State's contingency planning processes, including emergency preparedness and redundancy planning and proactive response to disruptions (originating from both in-state and out-of-state) while maintaining critical operations; and
- Discuss physical and cyber security, emergency management and communications, and fire prevention efforts to prepare New York for emergencies and to maintain the reliability of the State's energy systems.

The analysis supporting the Plan will provide the foundation for an assessment of current policies and programs as well as the consideration of additional actions to further the State's goals and requirements. Among the issues that the State Energy Planning Board will take under consideration are: enhancing defense and protection of the energy system from evolving physical and cyber intrusions; preparedness, resilience, and response actions for severe weather and other challenges posed by climate change; and policies and programs to reduce human risks associated with new patterns of thermal extremes, with specific attention to vulnerable populations.

XIV. Assessment of Impacts of the Plan

Article 6 of the Energy Law directs assessment of the impacts of Plan implementation upon economic development, health, safety and welfare, environmental quality, and energy costs for consumers, specifically low-income consumers.

i. Economic Development Impacts

The Plan will:

- Assess the potential economic development impacts of energy production, distribution, and end-use, consistent with implementation of the Plan;
- Evaluate potential strategies for reducing economic development risks from the policies included in the Plan and explore opportunities for improving economic development outcomes from the Plan;
- Discuss New York's economic development policies and initiatives that relate to the energy sector and how these policies meet New York's energy and economic goals; and
- Consider how economic development opportunities can be leveraged to advance the State's clean energy goals, and vice versa.

ii. Health Impacts

The Plan will:

- Assess the potential health effects of the policies included in the Plan, including changes in various energy sector combustion emissions and other relevant effects where practicable;
- Evaluate potential strategies for reducing negative health impacts of the policies included in the Plan and explore opportunities for improving health outcomes related to the Plan;
- Examine community health impacts in the development of energy facilities and infrastructure;
- Discuss the health effects of the Plan in vulnerable communities and Disadvantaged Communities;
- Consider how renewable and distributed energy resources, as well as energy market changes and other policies in the electricity, buildings, transportation, and industrial sectors, can contribute to or mitigate potential health impacts, including health co-benefits associated with reduced combustion and other changes aimed at reducing greenhouse gas emissions.

iii. Environmental Impacts

The Plan will:

- Assess the potential effects of the policies included in the Plan on the state's environment and natural resources.
- Evaluate potential strategies for reducing negative environmental impacts of the policies included in the Plan and explore opportunities for improving environmental outcomes related to the Plan;
- Discuss the impacts on environmental justice communities and Disadvantaged Communities;
- Consider how renewable and distributed energy resources, as well as energy market changes in the electricity, buildings, transportation, and industrial sectors can contribute to or mitigate potential impacts on the environment and natural resources.

iv. **Energy Affordability Impacts**

The Plan will:

- Assess the potential effects of the policies included in the Plan on energy costs for consumers, with specific attention to impacts on energy, housing, and transportation costs for low-income households and Disadvantaged Communities;
- Evaluate potential strategies to minimize increases in the overall cost of energy services and explore opportunities related to the Plan to support affordability, reduce energy cost burdens, and minimize customer arrearages; and
- Identify barriers that inhibit access to affordable clean energy services for low- and moderate-income households and Disadvantaged Communities and explore opportunities to improve access.

XV. Local, Regional, and Federal Action and Collaboration

i. Local Level Action

The Plan will:

- Discuss the role of local government, including recognized Indigenous Nations, in energy and related climate planning and decision making;
- Explore best practices and issue areas for local/State coordination and engagement in energy planning and decision making that can support economic growth and benefit Disadvantaged Communities;
- Consider local energy planning, zoning, and ordinances and the development of local clean energy resources.

ii. Regional Level Action

The Plan will:

- Explore best practices and issue areas for regional coordination and engagement in energy and related climate planning and decision making; and
- Consider the regional policy landscapes and identify opportunities to expand New York's position in the larger clean energy supply chain and advance the State's clean energy goals.

iii. Federal Level Action

The Plan will:

- Discuss the role of the federal government in energy and related climate planning and decision making,
- Explore best practices and issue areas for federal/State coordination and engagement in energy planning and decision making, and clean energy financing; and
- Consider the national policy landscapes and identify opportunities to expand New York's position in the larger clean energy supply chain and advance the State's clean energy goals.