

STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

At a session of the Public Service
Commission held in the City of
Albany on December 17, 2015

COMMISSIONERS PRESENT:

Audrey Zibelman, Chair
Patricia L. Acampora
Gregg C. Sayre
Diane X. Burman

- CASE 12-T-0502 - Proceeding on Motion of the Commission to Examine Alternating Current Transmission Upgrades.
- CASE 13-E-0488 - In the Matter of Alternating Current Transmission Upgrades - Comparative Proceeding.
- CASE 13-T-0454 - Application of North America Transmission Corporation and North America Transmission, LLC for a Certificate of Environmental Compatibility and Public Need Pursuant to Article VII of the Public Service Law for an Alternating Current Transmission Upgrade Project Consisting of an Edic to Fraser 345 kV Transmission Line and a New Scotland to Leeds to Pleasant Valley 345 kV Transmission Line.
- CASE 13-T-0455 - Part A Application of NextEra Energy Transmission New York, Inc. for a Certificate of Environmental Compatibility and Public Need Pursuant to Article VII of the Public Service Law for the Marcy to Pleasant Valley Project.
- CASE 13-T-0456 - The Part A Application of NextEra Energy Transmission New York, Inc. for a Certificate of Environmental Compatibility and Public Need Pursuant to Article VII for the Oakdale to Fraser Project.
- CASE 13-M-0457 - Application of New York Transmission Owners Pursuant to Article VII for Authority to Construct and Operate Electric Transmission Facilities in Multiple Counties in New York State.

CASE 12-T-0502, et al.

CASE 13-T-0461 - Application of Boundless Energy NE, LLC for a Certificate of Environmental Compatibility and Public Need Pursuant to Article VII for Leeds Path West Project.

CASE 14-E-0454 - In the Matter of New York Independent System Operator, Inc.'s Proposed Public Policy Transmission Needs for Consideration.

ORDER FINDING TRANSMISSION NEEDS DRIVEN
BY PUBLIC POLICY REQUIREMENTS

(Issued and Effective December 17, 2015)

BY THE COMMISSION:

INTRODUCTION

The first seven above-captioned proceedings constitute the "AC Transmission" proceedings, a number of proceedings initiated for the Public Service Commission (Commission) to consider potential actions to address long-standing concerns that there is insufficient transmission capacity between upstate power generation sources and downstate consumers on New York's alternating current (AC) bulk electric transmission system. The eighth above-captioned proceeding was initiated for the Commission to fulfill its role on behalf of the State of New York pursuant to the Public Policy Transmission Planning Process regulated by the Federal Energy Regulatory Commission (FERC) to identify transmission needs driven by public policy requirements. As these matters are interrelated, they are being heard and considered by the Commission on a common record.

In this order, the Commission finds and determines that there is a transmission need driven by Public Policy Requirements for new 345 kV major electric transmission facilities to cross the Central East and UPNY/SENY interfaces to provide additional transmission capacity to move power from upstate to downstate. Those transmission interfaces have been

persistently congested and such congestion contributes significantly to higher energy costs and reliability concerns, whereas increasing the transfer capability of those sections of the transmission system could produce a number of valuable benefits for New York.

This finding will trigger a solicitation and review of transmission and other solutions by the New York Independent System Operator (NYISO) with the potential for selected transmission developers to obtain cost recovery for their development and construction costs from the beneficiaries of the transmission upgrades through the NYISO tariff mechanism regulated by FERC. As part of the NYISO Public Policy Transmission Planning Process, the Commission will be required to take future action to decide, after the NYISO has completed its viability and sufficiency analysis, whether a transmission solution should continue to be analyzed by the NYISO. Ultimately, if transmission solutions are selected in the NYISO/FERC process, the Commission will also have to decide, after further process including public statement hearings, whether to grant Public Service Law, Article VII major electric transmission facility siting certificates for the selected solutions.

LEGAL AUTHORITY AND BACKGROUND

Pursuant to the federalism principles of our system of government, the Federal Energy Regulatory Commission (FERC) and the States share the power to regulate bulk electric transmission facilities. FERC regulates the rates that can be charged for the use of the interstate bulk electric transmission system (Federal power to regulate interstate commerce), which includes deciding issues of cost allowance and cost allocation. The States generally regulate the siting of new major electric

transmission facilities in their jurisdictions, and the States and not FERC establish public policies. This Federal-State interplay means that for a new major transmission facility to be built or operated, it may require both a Federal approval as to cost recovery, and State approvals as to siting and public policy.

The New York Independent System Operator (NYISO) periodically conducts a four-part Comprehensive System Planning Process (CSPP) pursuant to the regulatory authority of FERC. The requirements of each part of the planning process are contained in Attachment Y of the NYISO's Open Access Transmission Tariff (NYISO Tariff) approved by FERC. The four components of the planning process are as follows: (1) Local Transmission Planning Process (LTPP); (2) Reliability Planning Process (RPP); (3) Congestion Assessment and Resource Integration Study (CARIS); and (4) Public Policy Transmission Planning Process.¹ This order involves the fourth component of the Comprehensive System Planning Process, the Public Policy Transmission Planning Process.

The Public Policy Transmission Planning Process (PPTPP) supports the FERC Order No. 1000 directive requiring public utility transmission providers to consider transmission needs driven by public policy requirements established by state or federal laws or regulations. Its main importance is that it provides a vehicle for cost recovery for the entity that

¹ The LTPP includes identification and evaluation of solutions to local transmission needs identified by local Transmission Owners (TOs). The RPP includes an assessment of the reliability of the New York bulk power system through a Reliability Needs Assessment (RNA) and a Comprehensive Reliability Plan (CRP) to satisfy any identified reliability needs. The CARIS process is an economic assessment of congestion on the New York bulk power system, the costs and benefits of generic alternatives to alleviate that congestion, and of specific transmission project proposals.

constructs and operates a needed transmission solution. The PPTPP consists of four main steps: (1) the identification of Public Policy Transmission Needs; (2) the proposal of solutions to identified Public Policy Transmission Needs; (3) the evaluation of the viability and sufficiency of proposed transmission and non-transmission solutions to a Public Policy Transmission Need; and (4) the evaluation and selection of the more efficient or cost effective Public Policy Transmission Project to satisfy a Public Policy Transmission Need.

A Public Policy Requirement is defined in the tariff as a federal or state law or regulation, including a Public Service Commission rulemaking order adopted after public notice and comment under state law,² which drives the need for transmission.³ Under New York State law, such a rulemaking order by the Public Service Commission can be either of general or particular applicability.⁴

In the first main step, regarding identification, the NYISO solicits proposals for Public Policy Transmission Needs, and the Public Service Commission role is to consider the proposals in order to identify the Public Policy Transmission Needs and also to determine for which of those the NYISO should solicit solutions. The NYISO Tariff provides that:

[the Commission] shall issue a written statement that identifies the relevant Public Policy Requirements driving transmission needs and explains why it has identified the Public Policy Transmission Needs for which transmission solutions will be requested by the ISO. The statement shall also explain why transmission solutions to other suggested transmission needs should not be requested. The [Commission's]

² New York Independent System Operator, Inc., 143 FERC ¶ 61,059 (2013), p.60 [See Docket No. ER13-102-000, Order on Compliance Filing (issued April 18, 2013)].

³ NYISO OATT, Attachment Y, §31.1.1.

⁴ N.Y.S.A.P.A. § 102(2)(a)(ii)(McKinney 2015).

statement may also provide additional criteria for the evaluation of transmission solutions and non-transmission projects, and the type of analyses that it will request from the ISO.⁵

This order is part of that first main step. It constitutes the preliminary State public policy approval called for in the NYISO Tariff by the Commission identifying a Public Policy Transmission Need for which the NYISO should solicit solutions.

Subsequent to the identification of a Public Policy Transmission Need, the NYISO solicits proposed solutions, and Developers submit Public Policy Transmission Projects and Other Public Policy Projects to satisfy the identified Public Policy Transmission Needs. All submissions, regardless of project type, are evaluated for their viability and sufficiency to meet the Public Policy Transmission Needs. Upon a confirmation by the Public Service Commission that a need for a transmission solution still exists, the NYISO then evaluates the proposed regulated Public Policy Transmission Projects that have satisfied the viability and sufficiency requirements and ranks them based on the quality of their satisfaction of numerous metrics. Based on this evaluation, the NYISO may select the more efficient or cost effective regulated Public Policy Transmission Project to satisfy any Public Policy Transmission Need. A selected project is eligible for cost recovery and cost allocation under the NYISO Tariff, in a manner to be determined by FERC. As described above, any selected Public Policy Transmission Project will likely also need separate State approvals as to siting before it may be built or operated.

⁵ NYISO OATT, Attachment Y, §31.4.2.1.

NOTICE OF PROPOSED RULE MAKING

Pursuant to the State Administrative Procedure Act (SAPA) §202(1), a Notice of Proposed Rulemaking was published in the State Register on October 7, 2015 [SAPA No. 12-T-0502SP5] regarding whether a need for new 345 kV major electric transmission facilities to cross the Central East and UPNY/SENY interfaces to provide additional transmission capacity to move power from upstate to downstate New York is driven by Public Policy Requirements. The time for submission of comments pursuant to the Notice expired on November 23, 2015. Moreover, the Secretary issued an additional notice on September 23, 2015 soliciting comments and establishing a deadline of November 6, 2015 for initial comments, and November 23, 2015 for reply comments. The SAPA notice described above was issued subsequent to an earlier SAPA notice that was published in the State Register on November 12, 2014.⁶ While the earlier SAPA notice covered the topic of the October 7, 2015 SAPA notice on a broader basis, it also covered two other categories of potential Public Policy Transmission Needs (i.e., Western New York congestion relief, and various other environmental and system-related needs), all of which were submitted to the Commission by the NYISO on October 3, 2014, in response to a NYISO Public Policy Transmission Planning Process solicitation. By an order issued on July 20, 2015, the Commission decided to defer consideration of whether to identify the transmission congestion that exists at the Central East and UPNY/SENY electrical interfaces as a Public Policy Requirement until certain analyses in the AC Transmission proceedings were complete and could be

⁶ Comments under that notice were due December 29, 2014.

considered.⁷ Those analyses resulted in the more specific definition of the transmission need now described in the October 7, 2015 SAPA notice. The relevant comments received pursuant to all of the notices described above are addressed below. In addition, a significant number of public comments have been received throughout the course of these proceedings. The public comments are generally reflected in the party comments and the Commission is greatly appreciative of the efforts taken to inform the Commission.

PROCEDURAL BACKGROUND

On August 1, 2014, the NYISO commenced its Public Policy Transmission Planning Process specified under the NYISO Tariff by requesting interested entities to identify any potential transmission needs that may be driven by a Public Policy Requirement (Public Policy Transmission Needs). On October 3, 2014, the NYISO filed, for the Commission's consideration, the proposed Public Policy Transmission Needs it received from eight entities. The proposals cover three broad categories, including those related to (a) the Commission's AC Transmission proceedings; (b) Western New York congestion relief; and (c) various other environmental and system-related needs. As mentioned above, by an order issued on July 20, 2015, the Commission decided to defer consideration of whether to identify the transmission congestion that exists at the Central East and UPNY/SENY electrical interfaces as a Public Policy Requirement until certain analyses in the AC Transmission proceedings were complete and could be considered.

⁷ Case 14-E-0454, New York Independent System Operator, Inc. - Public Policy Transmission Needs, Order Addressing Public Policy Requirements for Transmission Planning Purposes (issued July 20, 2015), p.30 [Commissioner Burman concurring].

The Commission had previously initiated the AC Transmission proceedings to consider whether to address the persistent transmission congestion that exists at the Central East and Upstate New York/Southeast New York (UPNY/SENY) electrical interfaces. The Commission sought proposals from transmission owners and other developers proposing projects to increase transmission transfer capacity by approximately 1,000 MW as recommended by the Governor's Energy Highway Task Force. After an initial round of proposals were received that raised environmental siting concerns, the Commission called for revised proposals that would better utilize existing rights-of-way and better match the scale of proposed transmission structures to be in keeping with existing facilities already in the landscape. The Commission's directive was consistent with Governor Cuomo's declaration in the 2014 State of the State Address that the State must encourage utilities and transmission developers to build wholly within existing transmission corridors, where possible, in order to minimize impacts and responsibly site projects in a way that is responsive to the concerns of local communities.

Twenty two revised proposals were received from four entities: North America Transmission LLC and North America Transmission Corporation (NAT), the New York Transmission Owners (NYTOs),⁸ NextEra Energy Transmission New York, Inc. (NextEra), and Boundless Energy NE, LLC (Boundless) (collectively, the Applicants). Many of the revised proposals included significant revisions to address environmental compatibility issues. Thereafter, the Commission directed Trial Staff, with the

⁸ The NYTOs include Central Hudson Gas & Electric Corporation, Consolidated Edison Company of New York, Inc., New York Power Authority, New York State Electric & Gas Corporation, Niagara Mohawk Power Corporation, Orange and Rockland Utilities, Inc., and Rochester Gas and Electric Corporation respectively.

assistance of the NYISO, to undertake a comparative evaluation of the project proposals. The comparative evaluation study required significant computer modeling of power flows, electric generation production cost benefits, and electric generation capacity cost benefits and resulted in benefit cost analyses. In addition, each project was analyzed as to its specific environmental impacts. At the request of the Hudson Valley Smart Energy Coalition (HVSEC) and others, the study also included an analysis of alternatives to a transmission facility to address the issue of whether there is sufficient public need for a transmission solution as a matter of public policy.

An initial result of that analysis was the Trial Staff Interim Report dated July 6, 2015, which addressed primarily the issues of environmental compatibility and beneficial electric system impacts on the Central East and Upstate New York/Southeast New York (UPNY/SENY) electrical interfaces. On June 12, 2015, it had been announced in the press that the planned 720 MW CPV Valley generation facility had obtained its financing and would be proceeding to construction. This significant change in the New York bulk electric system required Trial Staff to update its power flow, production cost benefit, and capacity cost benefit studies to reflect the change. Therefore, it was necessary for the projects to be further studied considering the effects of the planned 720 MW CPV Valley generating facility.

Pending that revised analysis, Trial Staff issued the Interim Report of its findings, and the parties to the AC Transmission proceedings met in a Technical Conference to review the findings and exchange further information. The initial Technical Conference focused primarily on issues of environmental compatibility and cost. HVSEC also presented its

environmental compatibility findings at the Technical Conference.

On September 22, 2015, Trial Staff issued its Final Report and a companion Motion recommending that the Commission find that there is a transmission need driven by Public Policy Requirements for new 345 kV major electric transmission facilities to cross the Central East and UPNY/SENY interfaces to provide additional transmission capacity to move power from upstate to downstate. The Trial Staff report included a comprehensive comparative analysis of the twenty-two project proposals which was used to identify the best proposals in a winnowing process using relative environmental impact, electric system impact (including modeling by the NYISO), and benefit and cost data and analysis (provided in the "Brattle Report" produced for the NYISO and Trial Staff attached to the Final Report).

Again the parties to the AC Transmission proceedings met in a Technical Conference to review the findings and exchange further information. The second Technical Conference focused primarily on issues of benefits, costs, and overall need. HVSEC also presented its peak load and congestion forecast findings at the Technical Conference.

TRANSMISSION NEED DRIVEN
BY PUBLIC POLICY REQUIREMENTS

In the order instituting Case 12-T-0502, the Commission explained that the transmission corridors that include the Central East and UPNY/SENY electrical interfaces were persistently congested and contributing to higher energy costs and reliability concerns. The Commission recognized that upgrades to those sections of the transmission system could produce various benefits for New York, including: 1) enhancing system reliability, flexibility, and efficiency; 2) reducing

environmental and health impacts; 3) increasing diversity in supply; 4) promoting job growth and the development of new efficient generation resources upstate; and, 5) mitigating reliability problems that may arise with expected generator retirements.⁹

Trial Staff in its Motion recommends that the Commission should find and determine that there is a transmission need driven by Public Policy Requirements as described in the Trial Staff Final Report for a portfolio of 345 kV transmission projects to reconfigure and upgrade transmission facilities from the Edic or Marcy substations to the New Scotland substation with a tie-in to the Rotterdam substation, and from a new Knickerbocker substation to the Pleasant Valley substation (with upgrades at the Greenbush substation). This portfolio included the concept most succinctly defined by Project P11 in the Trial Staff Interim and Final Reports. Three developers identified portfolios of projects and alternatives that are readily comparable (NYTOs P6 and P11; NAT P5; and NextEra P17 and 19c), and that Staff recommended advance to the next levels of review. Trial Staff recommends that these comparable facilities, locations and routes are most promising from an electric system benefit perspective, and are significantly more environmentally compatible primarily because they are designed to use existing rights-of-way, and generally replace existing facilities with new facilities while largely avoiding significant new intrusions into existing communities, landscapes and important farmland resources. Trial Staff concluded that the identified portfolio of projects beneficially balance the issues of transfer

⁹ Case 12-T-0502, Alternating Current Transmission Upgrades, Order Instituting Proceeding (issued November 30, 2012), pp. 1-2.

capability; cost; electric system impacts; emissions and production cost impacts; need to acquire additional rights-of-way; the application of innovative technologies; environmental compatibility; and visual impacts. Trial Staff asserts that its analysis demonstrates that the identified portfolio of projects will reduce transmission congestion so that large amounts of power can be transmitted to regions of New York where it is most needed; reduce production costs through congestion relief; reduce capacity resource costs; improve market competition and liquidity; enhance system reliability, flexibility, and efficiency; improve preparedness for and mitigation of impacts of generator retirements; enhance resiliency/storm hardening; avoid refurbishment costs of aging transmission; take better advantage of existing fuel diversity; increase diversity in supply, including additional renewable resources; promote job growth and the development of new efficient generation resources Upstate; reduce environmental and health impacts through reductions in less efficient electric generation; reduce costs of meeting renewable resource standards; increase tax receipts from increased infrastructure investment; enhance planning and operational flexibility; obtain synergies with other future transmission projects; and relieve gas transportation constraints.

Trial Staff also reviewed non-transmission alternatives including the alternatives of constructing a new generation facility and the possibility of promoting a targeted level of customer-driven energy efficiency and demand reduction benefits associated with the Reforming the Energy Vision (REV) initiative. The results of Trial Staff's generation alternative analysis shows that adding a 1,320-MW combined cycle natural gas facility where the plant could be dispatched to meet the needs in SENY would not be cost-effective or a better alternative for

ratepayers. The results of Trial Staff's REV alternative analysis shows that adding 1,200 MW of Distributed REV resources among Zones G-J (SENY area) would cost approximately \$2.63 billion with measure lives between 10 and 25 years and would have an approximate benefit/cost ratio of 1.2 that is nearly identical to the benefit/cost ratio for the portfolio of transmission projects identified by Trial Staff as the preferred solution. Trial Staff concluded that REV type measures complement the transmission solutions proposed, but do not address many of the transmission specific benefits that have been identified for the transmission solutions.

The NYISO points to the annual publication of *Power Trends 2014*, which it asserts highlights the need to update the transmission system. The NYISO maintains that New York's transmission infrastructure is aging and needs to be upgraded and replaced, and that transmission upgrades would bring many necessary and important benefits.

The NYTOs provide support for their proposal to designate the Commission's AC Transmission Upgrades proceedings as a Public Policy Requirement that is driving the need for transmission improvements. Their comments point to existing studies and findings which they believe show a clear need for AC transmission improvements to address the public policy goals established by the Commission's AC Transmission Upgrades proceedings and the Governor's Energy Highway Blueprint. The NYTOs point to multiple benefits of AC transmission upgrades across the UPNY/SENY and Central East interfaces, including congestion relief, improved reliability through replacement of aging infrastructure, environmental benefits through the ability to dispatch cleaner resources, a more flexible transmission system capable of withstanding various contingencies,

transmission system resiliency, fuel resource diversity, and economic development benefits.

The NYTOs focus on system efficiency and congestion relief and point to the NYISO's 2013 Congestion Assessment and Resource Integration Study (CARIS), which shows that system congestion can cost ratepayers between \$500 million and \$2.5 billion annually. Even with the recent downtrend in congestion cost over the past few years due to a slow economy and an abundance of natural gas resources, the NYTOs note that the NYISO is projecting that congestion costs will increase to over \$900 million by 2020.¹⁰

Further, the NYTOs argue that a robust transmission system allows the flexibility to address contingencies that may occur as a result of generation retirements, and could avoid costly and uneconomic gap solutions and reliability contracts. With adequate transmission, the NYTOs contend, generators that have become uneconomic or obsolete would be permitted to retire without adverse reliability or economic impacts.

Boundless Energy NE, LLC (Boundless) points to several statements and determinations made by the Energy Highway Initiative Task Force, and by the Commission, which they maintain supports the need for additional transmission capacity in the State. Boundless notes the difference between transmission and non-transmission solutions, suggesting that allowing non-transmission solution options to supplant the transmission solutions under consideration in the AC Transmission Upgrades proceedings would introduce regulatory issues.

West Point Partners, LLC (West Point Partners) endorses Public Policy Requirements to relieve congestion between upstate and downstate New York, ease limitations on

¹⁰ NYISO 2013 CARIS, p.49.

developing upstate renewable resources, provide access to lower cost and cleaner energy for downstate energy users, improve resource diversity, and enhance the flexibility of the system to address major contingencies such as the possible retirement of Indian Point. It points to the Commission's proceedings addressing the AC Transmission Upgrades and Indian Point Reliability Contingency Plan, and the 2014 Draft State Energy Plan as establishing Public Policy Requirements. It also notes that the NYISO has urged new investment in transmission and generation to maintain system reliability and reduce costs, which in turn would provide access to renewable resources, upgrade aging infrastructure, and provide greater operational flexibility.

Entergy¹¹ opposes proposals related to the New York Energy Highway Blueprint. Entergy maintains that the Blueprint has not been adopted as a rule of general applicability by any New York State agency, and thus cannot constitute a regulation promulgated under SAPA in the form of a Commission order, and therefore does not meet the definition of a Public Policy Requirement under the NYISO Tariff.

Scenic Hudson, Inc. (Scenic Hudson) opposes the designation of the AC Transmission proceedings as a Public Policy Requirement for three main reasons. First, Scenic Hudson contends that there is no established law, regulation, or order establishing relief of congestion on the UPNY/SENY and Central East interfaces. They suggest that the only apparent source identifying congestion relief as a policy goal is the New York Energy Highway Blueprint, which recommends transmission upgrades capable of providing approximately 1,000 MW of additional transfer capacity between upstate and downstate. However,

¹¹ Entergy Nuclear Fitzpatrick, LLC, Entergy Nuclear Indian Point 2, LLC, Entergy Nuclear Indian Point 3, LLC, and Entergy Nuclear Operations, Inc. (collectively, "Entergy").

Scenic Hudson does not believe the Energy Highway Blueprint qualifies as a law or regulation and therefore cannot be the basis for designating a Public Policy Requirement. Second, Scenic Hudson argues that transmission projects which increase transfer capability across UPNY/SENY and Central East will not produce congestion reduction benefits that justify their costs. Scenic Hudson points to the NYISO's 2013 CARIS, which projects congestion across the UPNY/SENY and Central East interfaces will decline over the 10-year planning horizon, and that the costs of a generic transmission solution will not be economically beneficial. Lastly, Scenic Hudson points to countervailing public policies that would be negatively impacted by construction of transmission projects to relieve congestion in the Hudson River and Hudson Valley region. Scenic Hudson notes several federal and State policies which promote environmental protection and conservation of this region, including the Hudson River Estuary Management Plan, the New York State Open Space Plan, the Mid-Hudson Regional Economic Development Council Strategic Plan, and the New York State Department of State Coastal Management Plan. The Town of Milan/Farmers and Friends for Livingston/Town of Pleasant Valley (Milan/Pleasant Valley) and Farmers and Families for Claverack supports the comments submitted by Scenic Hudson. Columbia Land Conservancy similarly supports Scenic Hudson's comments and also notes its involvement in the New York State Open Space Conservation Plan, the Hudson River Estuary Action Agenda, and the Capital Region Economic Development Council's Strategic Plan, as public policy agendas whose activities would be jeopardized by building new transmission projects in the proposed corridors.

According to Hudson Valley Smart Energy Coalition (HVSEC), the NYISO's Final Report on the 2014 Comprehensive Reliability Plan, dated July 21, 2015, demonstrates that there

is no reliability concern over the next ten years; consequently, it argues there is no reliability justification for new transmission lines in the Hudson Valley. HVSEC argues that the degree of congestion has been coming down (except for the last two winters due to the Polar Vortex) and that Staff's analysis failed to address this. It also claims the congestion analysis in the Brattle Report is flawed because it fails to assume an increase in the gas supply network leading to predicted congestion rents in 2019 and 2024 along the Central East and New Scotland-Pleasant Valley constrained paths of over \$300 million, which is twice as high as the historical average. It further argues that the Brattle Report, the 2013 Congestion Assessment and Resource Integration Study, and draft 2015 CARIS predict declining congestion. In addition, it notes that the 2013 CARIS report indicates congestion costs are declining. Based on these reports, HVSEC argues that transmission and generation solutions do not come close to a benefit/cost of greater than 1.0, and so are ineligible for regulated cost recovery.

Trial Staff reported that there has historically been significant congestion across the Central East interface (between western New York and the Hudson Valley), and Brattle and the NYISO forecast this congestion to continue. London Economics International, LLC (LEI), on behalf of HVSEC, prepared a forward-looking market study of energy and capacity prices, for the years 2016-2034. LEI used its proprietary simulation model, POOLMod, to project regional electric energy prices, Locational Based Market Prices (LBMPs) and zonal Installed Capacity (ICAP) prices. LEI's forecast analysis relied on NYISO's 2015 Gold Book demand forecasts; considered how the generation fleet would evolve based on modeled market dynamics; derived three future price paths for delivered natural gas prices. Two of these futures assume pipeline expansions and

capacity to occur due to market forces. LEI states that the focus on natural gas is because of the large percentage of generators within the NYCA that rely on natural gas as their fuel, and the price of natural gas has a strong impact on electricity price levels and the market value of transmission congestion. LEI did not directly assess or otherwise evaluate the potential market impacts of any of the proposed AC transmission projects under review. Given its assumptions and inputs and resulting computer simulations, LEI concluded that under all three of its gas scenarios, congestion across Central East and UPNY/SENY interfaces is forecast to decline as a result of a lower difference in locational gas prices between eastern and western New York. According to LEI, the declining trend is stronger in those scenarios where the natural gas price difference between eastern and western New York is smallest. Other drivers for the decline in congestion include the entry of new generating resources in eastern New York, especially the lower Hudson Valley and New York City. Retirements of western New York generation also contribute to the lower congestion level when compared to recent years.

In reply, Trial Staff notes that the contrary forecast by LEI is based on LEI's assumption of new gas pipeline construction in the Hudson Valley and Trial Staff observes that LEI fails to explain who would pay for all the new gas pipelines LEI assumes.

NYTOs urge that no weight be given to the LEI analysis. NYTOs assert that several areas of LEI's study are questionable, and understate the level of congestion and associated congestion cost. These include:

- 1 LEI analyzed infrastructure using speculative expansion of infrastructure that causes the problem to appear solved when it is not solved;

2. LEI presented a few cases and failed to provide an expected or probability weighted case. This is a variance with previous LEI analysis and is a fatal flaw in its approach;
3. LEI presented unrealistic gas price differentials. Not even the warmest winter ever had this low a price differential;
4. LEI failed to sufficiently document long term pipeline expansion and hence the assumptions regarding pipelines are unrealistic;
5. LEI's new power plant builds are another example of speculative infrastructure projects; and
6. LEI's CO2 assumptions are unreasonably low. They give no weight to the recently finalized Environmental Protection Agency *Clean Power Plan*.

NAT urges that the LEI Report is based on flawed assumptions regarding new downstate generation supply and natural gas supply in the state. In fact, the assumptions on which the LEI Report are based contradict assumptions used by LEI in other analyses conducted with respect to the New York markets. Because the LEI Report is based on flawed assumptions, NAT argues that its conclusions should not be relied upon by the Commission. According to NAT, among the flawed assumptions is the unrealistic assumption of 1,250 MW for new generation capacity in NYISO zones J and K before 2021. NAT goes on to state that it is highly speculative to assume that a new generation facility will enter service in this relatively short time period given the many constraints and challenges of siting generation within the downstate load pocket, such as limited real estate, air quality issues and lengthy permitting processes. Another flawed assumption in the LEI Report identified by NAT is that there will be an equalization of natural gas prices between eastern and western New York. NAT believes it is highly speculative that the persistent difference

in gas prices between eastern and western New York will simply just disappear. A conclusion that the delivered natural gas price would equalize assumes both significant new natural gas pipeline capacity and that the incremental shipping cost on this new natural gas pipeline capacity would be zero. Moreover, LEI does not appear to have used the same assumptions in at least one other study it conducted with respect to New York markets. The assumptions in the LEI Report prepared on behalf of HVSEC are not consistent with the report completed by LEI on behalf the Champlain Hudson Power Express (CHPE) project. The CHPE project, similar to the goals of this proceeding to increase the UPNY/SENY interface, proposes to add approximately 1,000 MW of new capacity to NYISO Zone J. The LEI report prepared on behalf of the CHPE project identified an average of over \$800 million per year in energy savings from an additional 1,000 MW of new transmission capacity which is in stark contrast to the report LEI prepared in this proceeding. In addition, the LEI report on behalf of CHPE identifies many other benefits of new transmission capacity such as impacts on capacity markets, reduction in market power, renewable policy benefits, decreased system losses, and improved system reliability.

HVSEC argues that new transmission will not facilitate additional renewable resources, including wind, but rather will increase emissions and increase generation from coal-burning plants. HVSEC also claims the greatest demand in New York is closest to the area with the greatest capacity for offshore wind power. Because the federal government has identified an area off Long Island for development of offshore wind farms as an area to increase the amount of renewable energy in the next decade, HVSEC claims new transmission is not needed to meet the State's renewable energy goals. In addition, HVSEC argues that the transmission projects will not help increase existing or

proposed upstate wind resources because the constraints on these resources are a result of constraints on the local 115 kV transmission system, not the UPNY/SENY or Central East interfaces.

HVSEC cites the 2015 Gold Book to show that historic trends in peak demand and peak load growth for the downstate region (Zones G to K) are declining. HVSEC also cites a report prepared for it by Gidon Eshel, Ph.D., a geophysicist and applied mathematician by training, a Senior Scientist at Northwest Research Associates and a Bard College environmental physics research professor, entitled "Hudson Valley Transmission Line Plan: Updated Analysis of Need & Alternatives," which criticizes the NYISO for projections that systematically overestimate future downstate peak load, and concludes that no additional transmission capacity into the downstate region is needed. According to Dr. Eshel, there are more than sufficient transmission and generation projects available, even assuming Indian Point retires, to serve in the unlikely event demand increases. Therefore, HVSEC argues, building unnecessary transmission infrastructure makes no sense. Dr. Eshel goes on to state that reducing congestion is not wise and asserts that it is fundamental that congestion is an asset, not a liability. He further asserts that congestion raises power prices for a few hours on a few afternoons a year.

In its comments NYISO maintains that its forecasting methodologies are consistent with well-established industry practices that have been proven effective and appropriate through widespread application. According to the NYISO, Dr. Eshel's arguments to the contrary provide no sound basis to change the proven methods employed by the NYISO and the utility industry as a whole.

Dr. Eshel argues that because of the amount of projects listed in NYISO's interconnection queue for new generation projects no need exists for the proposed transmission upgrades even after discounting by 45%-50% for completion rates of projects. NAT in its comments points out that Dr. Eshel's generation supply forecast assumes an unrealistic completion rate of generation in the NYISO queue. Significantly, the analysis contained in the Eshel Report, according to NAT, is based on the flawed assumption that completion rates of proposed queued generation is in the range of 45% to 50%. NAT asserts the best available information regarding completion rates of queued generation proves the assumed completion rates to be extremely optimistic. In the Eshel Report, the assumed completion rates of resources in the queue are approximately four times greater than the historic completion rate of 11.6%. The NYISO queue indicates fifteen (15) different values for status progressing from scoping meeting, various impact studies, interconnection agreement, construction, and completion. NAT also points out how generation interconnection requests progress through the PJM queue, similar to that of the NYISO, for a large number of requests (289,742 MW) with a completion rate of 11%.

HVSEC also argues that the Brattle Report included more benefits than are typically considered in evaluating transmission projects in order to calculate a benefit/cost ratio of over 1.0 for the P11 Project. According to HVSEC, the REV alternative provides all the benefits relied upon by the Brattle Report other than avoided refurbishment costs, which is the largest benefit metric for the P11 Project. It argues that the Brattle Report overstates this benefit category and fails to provide evidence that the new AC transmission would provide any deferral of refurbishment. Consequently, HVSEC claims the

refurbishment benefit should not be given anywhere near equal weight as production cost savings in the Benefit/Cost analysis.

HVSEC argues the REV solution is superior to the AC transmission solutions in almost every metric and has an identical benefit/cost ratio - 1.2 to the P11 Project. HVSEC also claims that REV performs comparably, if not better than, the transmission projects in the category of non-quantified benefits, including: job creation; system reliability and offsetting potential retirements in SENY; the need for future transmission projects; market benefits; and storm resiliency. The only non-quantified benefits the transmission projects have that differ from REV's benefits are synergies with other future transmission projects and maximizing future capacity options on existing ROW, which HVSEC claims are tenuous benefits.

According to HVSEC, REV has significantly more environmental benefits than any of the transmission projects. It claims the REV alternative reduces emissions more than ten times more than the highest-reducing transmission project and reduces New York's carbon footprint more than any of the transmission projects. Furthermore, HVSEC argues the P11 Project will cause NOX emissions from coal to increase from the base case by approximately 118 tons in 2019 and by approximately 52 tons in 2024, resulting in a direct conflict with New York's energy goals and policies. In addition, HVSEC claims that, in contrast to the Staff's recommendation to proceed with a transmission project that would increase emissions, REV is more consistent with the 2015 State Energy Plan's goal to reduce greenhouse gas emissions and generate 50 percent of its electricity from renewable energy sources by 2030.

Discussion

Electricity prices depend in part on the ability of generating facilities to delivery their energy into the NYISO

location-based market zones that have the greatest demand. Congestion results when there is a lack of sufficient electric transmission capacity to deliver all available power and historically has resulted in higher prices in New York City and the Hudson Valley because available upstate generators have not had a sufficient path to deliver the additional power. According to Trial Staff, NYISO, the Brattle Group, the electric utility companies, the other potential developers and others, if transmission is not built, the trend and costs of congestion will continue. Alternatively, HVSEC and others assert that a transmission solution is not needed and is not the only or best option to pursue.

The positions of the parties reveal two very different approaches to the future energy system in New York. The transmission approach looks to a system that uses existing resources in the western and northern part of the State, new wind resources, and a larger transmission backbone to supply power to the downstate region. The less populous northern and western parts of the State have traditionally been home to central station power plants that are less expensive to build upstate than downstate, and now wind generation facilities that are relied on to meet power needs. However, the lack of transmission infrastructure means that for too many hours throughout the year, and not just during the summer peaks, this power cannot reach downstate customers, which means they must continue to rely on older, less efficient and dirtier units to meet their power needs. In the alternative, the downstate customers would need to build new downstate generating facilities that are significantly more expensive than upstate facilities. As these parties point out, the result is higher prices and less ability to take advantage of new wind resources and promote fuel diversity, including reducing GHG emissions.

The alternative posited by LEI (including Dr. Eshel's assertions) presents a much different approach to development of the electric system, and one that the Commission finds to be inconsistent with New York public policy. Under this alternative view, the future electric needs of New Yorkers in the downstate region can be met by extensive build out of significant additional gas infrastructure (new gas pipelines and generating facilities) along with actions to manage demand (demand reduction being a key objective of REV). According to LEI, the combination of new gas plant fueled by low cost natural gas and load reductions through extensive deployment of distributed energy resources (DER) will reduce prices through the region and consequently, with less need for imports from the west and north, will reduce congestion. While new gas facilities will undoubtedly be part of the future energy landscape, the holistic view offered by LEI is unrealistic, and is therefore rejected.

REV is intended to achieve State policy goals of fostering a reliable, cost effective and environmentally sound power sector through actions that drive system wide efficiency at the supply, bulk power and demand sides of the power system. The future envisioned by REV is that distributed energy resources deployed locally will help customers become efficient and dynamic electric users. These new customer resources will also be able to be used to more effectively balance increased investments in wind and solar resources that are deployed remotely. Additionally, the Commission recognizes that large scale central generation, including our safe upstate nuclear facilities that are in their licensed periods, can continue to be operated and new investments can be made to compliment the distributed resources. Stated another way, while there is no doubt that we can all become better environmental and economic

stewards by becoming more efficient energy consumers and using energy more efficiently, the Commission also recognizes that in its entirety the optimal system design will be met by a balance of central station and distributed resources and that this balance will be found by markets that accurately value resources and public policies that stress the importance of building an electric system that reduces waste and decreases rather than increases reliance on fossil fuels.

Without question, having a strong transmission backbone that can respond to and balance a much more diverse and dynamic fuel and usage mix is core to this vision. Consequently the Commission rejects as inapposite to the State's policy a view of the system where the downstate region is denied the benefits of lower cost and renewable generation from upstate and is asked to rely only on fossil fueled electric infrastructure.

The LEI view suffers from a number of other weaknesses that were pointed out in the record. LEI asserts that investments in new infrastructure will be made, but its assertion is based on speculation and not on identified actors that have either specific plans or financial backing to make such investments. LEI's view also fails to account for local opposition and siting issues that might defeat the plans of such an investor. In contrast, the electric transmission facilities under consideration here have already passed through an initial vetting for environmental compatibility, are proposed by known entities that will be vetted by the NYISO for their viability and capability to follow through on their plans, and the NYISO Tariff provides a certain path for recovery of costs by any investor. LEI's view also fails to give sufficient recognition to the value of fuel diversity. While natural gas is an important component of New York's energy future, the current market structure which focuses almost exclusively on price will

drive all market decisions towards that one fuel type unless measures are taken to also recognize the real long-term values of fuel diversity and fuel types with fewer negative air emissions. LEI also fails to give account for the need to replace aging transmission infrastructure and the value to the State of maximizing the use of existing assets. It would not be very efficient or sensible to open new rights-of-way for new infrastructure when you are already going to be rebuilding existing infrastructure in place and could have avoided the new infrastructure and rights-of-way by merely upgrading the capacity of the existing infrastructure as part of the rebuild.

VISUAL IMPACT ON THE HUDSON VALLEY

The Commission has gone to great lengths in these proceedings to ensure that land use impacts and visual impacts will be minimized, not just in the Hudson Valley, but throughout the project areas. When the initial submittals appeared to cause more of such impacts than necessary, the Commission took an unprecedented approach and sent all of the developers back to the drawing board to improve their submissions. In addition, after the revised projects were submitted, Trial Staff was directed by the Commission to do a comprehensive comparative evaluation of the projects which resulted in a substantial winnowing out of all the projects that proposed establishing new or widening existing transmission rights-of-way. These measures have significantly lessened the impact of the remaining projects on the visual landscape of the Hudson Valley.

HVSEC is concerned that the proposed Segment B facilities will cause negative visual impacts in the Segment B corridor in the Hudson Valley, which could be avoided if Trial Staff's proposal is rejected. HVSEC urges that the Hudson River and its valley have nationally important historical, cultural,

ecological and aesthetic values that deserve special protection. Assemblywoman Didi Barrett raises similar concerns that the proposed towers would put Dutchess County's tourism and Columbia County's agricultural industries at risk. The Town of Pleasant Valley, host of the key regional transmission hub/substation, calls the existing substation a visual blight in its community and believes that Pleasant Valley residents have already endured too much.

Discussion

The Commission agrees that the Hudson River and the broader Hudson River Valley region have nationally important historical, cultural, ecological and aesthetic values that should be protected. The location of Segment B of Staff's recommended solution is no closer to the banks of the Hudson River than one and one half miles at any point, and for half of its length it is no closer than five miles. The topography is such that the facilities in question here would not present significant visual impacts at locations on the Hudson River. In addition, the facilities in question would not approach or cross the Hudson River. The Commission is fully satisfied that the proposed Segment B facilities would have absolutely no negative visual impact whatsoever on users of the Hudson River itself. Furthermore, visual impacts on resources within the Hudson Valley region will be minimized by utilizing existing electric transmission corridors to replace existing facilities with new facilities.

Many proposals have been put forth in these proceedings. Some would require the opening of new rights-of-way for overhead transmission lines. Some would require the widening of existing rights-of-way for new overhead transmission lines. One developer, Boundless, proposed some underground segments, including an underground crossing of the Hudson River,

but even the Boundless projects would have required reconductoring construction work along many miles of existing transmission rights-of-way in the Hudson Valley, many of those miles through the same communities that have raised concerns. The Boundless proposals ultimately proved to be inefficient and therefore infeasible in relation to the remaining proposals. The Segment B facilities proposed by Trial Staff would not require either the opening of new rights-of-way or the widening of existing rights-of-way for new overhead transmission lines. Clearly the opening of new rights-of-way would have a more significant visual impact than the reuse of existing rights-of-way.

The greater Hudson Valley is not an undisturbed wilderness. It is a working landscape that includes homes, farms and forests, but it also includes major industrial and commercial facilities, villages, cities, and infrastructure including highways, railroads, and some very significant electric substations and overhead transmission lines. The Segment B transmission corridor already contains a substantial number of overhead electric transmission lines that serve an important function and will have to remain in place for the foreseeable future. Some of the facilities are aging and will shortly need to be rebuilt in place. Accordingly, the Segment B corridor is going to be disturbed by new construction in the near future. One of the questions here is whether the existing facilities should be rebuilt in kind, or whether they should be upgraded in capacity as part of the rebuilding process so as to avoid having to build even more powerlines through the Hudson Valley.

The following sample cross section diagrams taken from the record simulate the visual difference between the existing

conditions and the proposed conditions.¹² The locations of the cross sections provide a fair representation of all of the conditions in Columbia and Dutchess counties. The first four compare the NYTOs projects where existing 80 to 85 foot lattice structures would be replaced by 90 to 100 foot steel monopole structures. For the sake of brevity, the fifth diagram is a single sample of the NextEra projects where existing 80 to 85 foot lattice structures would be replaced by 105 foot concrete monopole structures. The sixth diagram shows only the 80 foot two-pole horizontal structure proposed by NAT. NAT unfortunately did not provide comprehensive cross sections for all conditions. NAT has not committed to whether its structures would be made of steel, concrete, or a combination of the two. It should also be noted that in many locations some of the visual clutter would be reduced as two existing structures would be removed and replaced by a single, but possibly taller, structure.

¹² Note: the grayed out structures shown are to be removed.

Diagram One - NYTOs
Rensselaer and Northern Columbia Counties

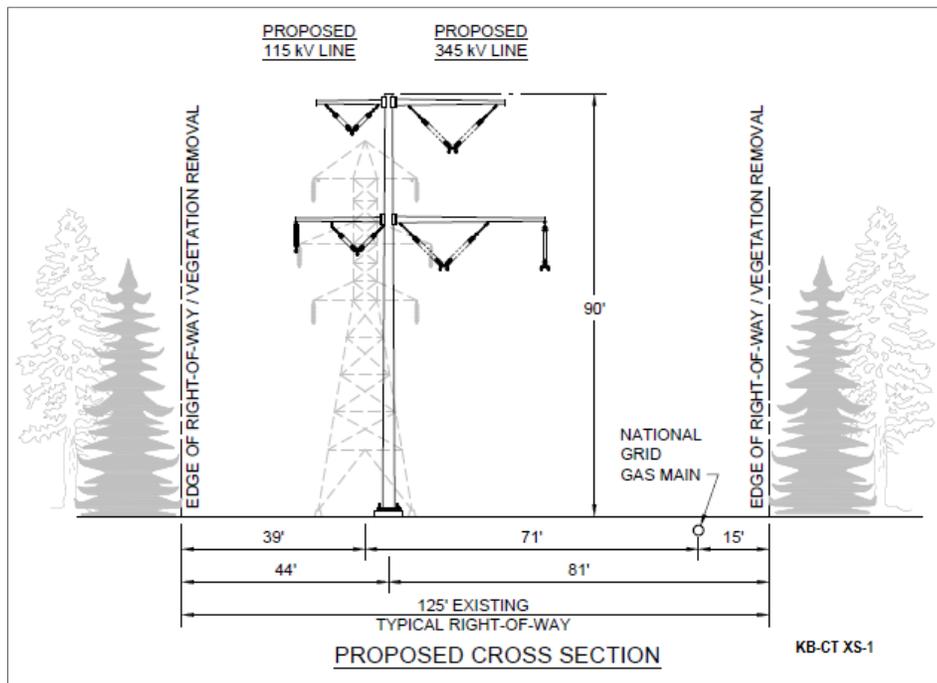
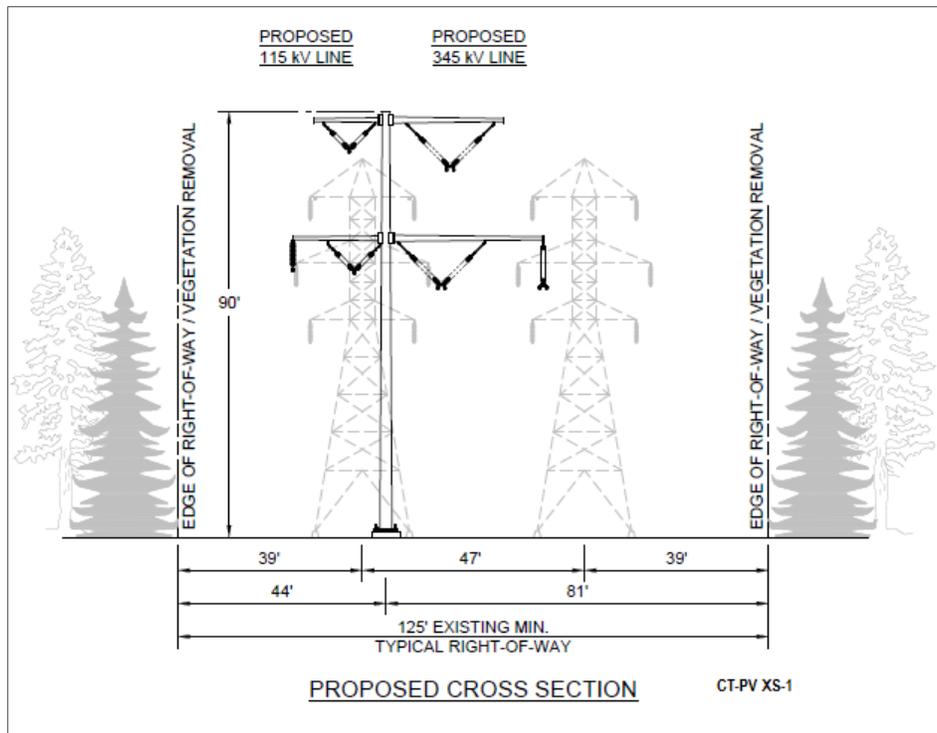
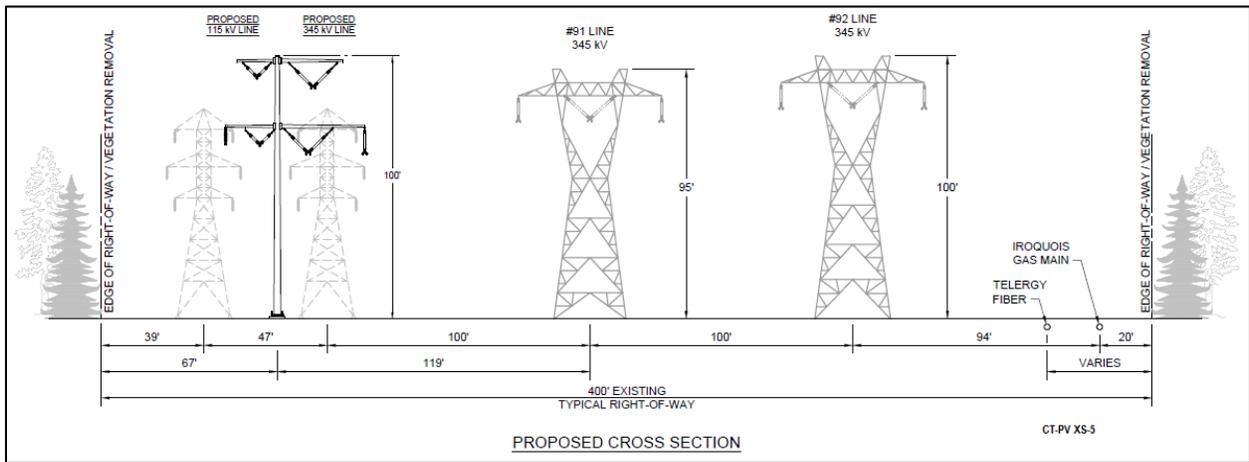


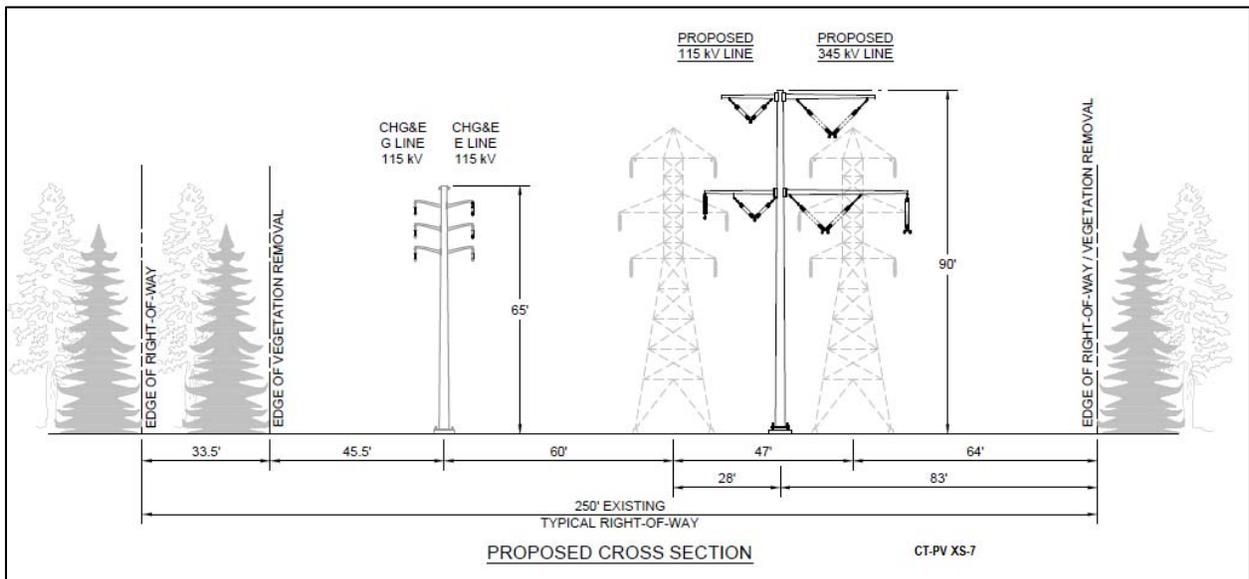
Diagram Two - NYTOs
Central Columbia County



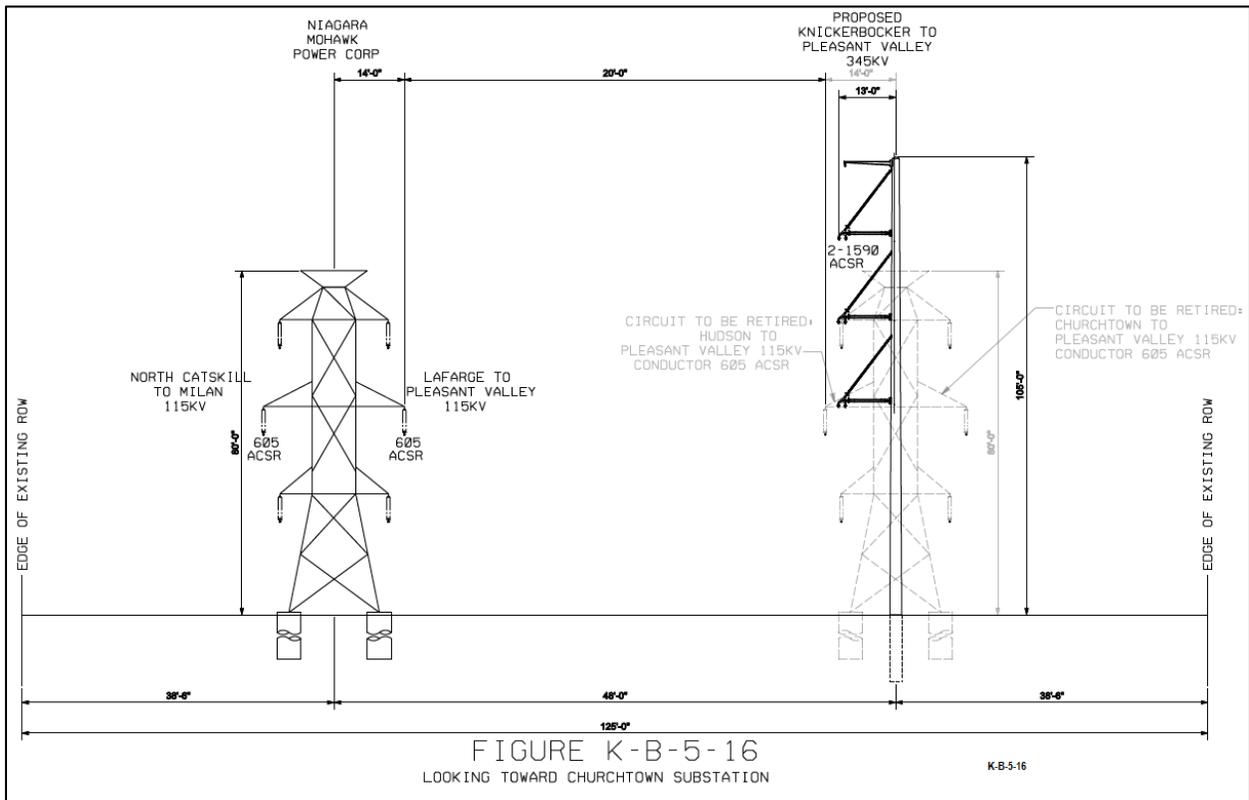
**Diagram Three - NYTOs
Town of Milan, Dutchess County**



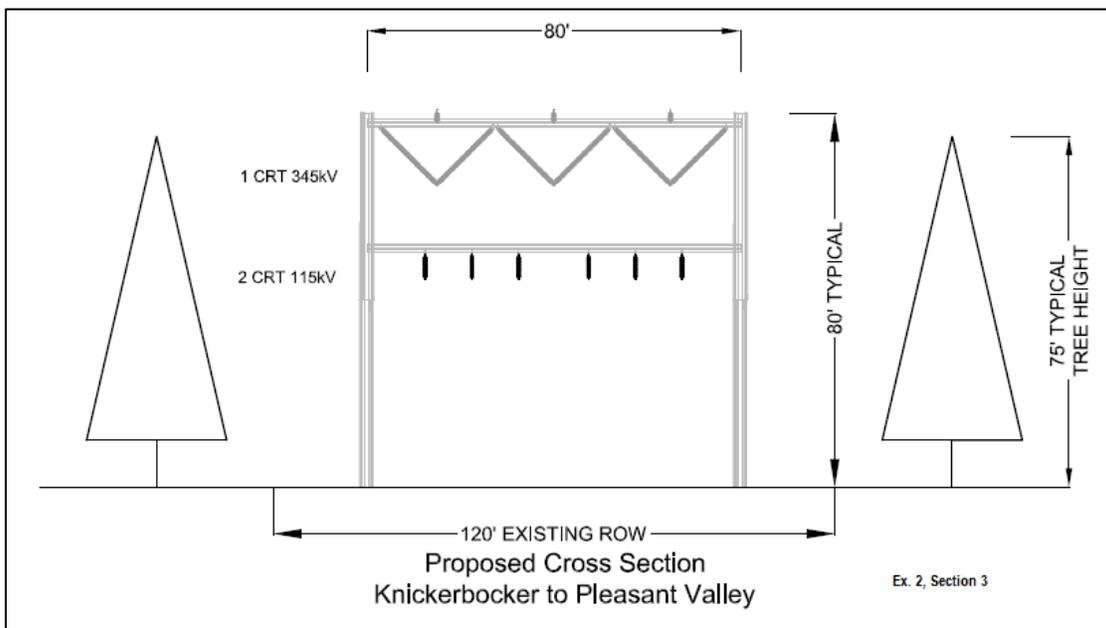
**Diagram Four - NYTOs
Pleasant Valley, Dutchess County**



**Diagram Five - NextEra
Columbia County**



**Diagram Six - NAT
Columbia County**



The Commission has seriously considered all the concerns that were raised and has examined the cross section diagrams. It is the Commission's conclusion that the potential for increased height of tower structures as presented here will result in a degree of increased visibility, but that the potential increment of increase (between zero and twenty five feet) will not create an adverse impact of a regional nature that would significantly impair the physical visual character of the Hudson Valley and its communities.

A change in structure types and structure heights of the types contemplated may have local, site specific visual impacts. During the Part B Article VII process where it will be possible to look at details including individual structure locations and heights, alternative designs, and mitigation opportunities, the Commission and Staff will assess the degree to which any of the necessary changes result in visible changes in the landscape. The Commission and Staff will work with the developers, local farmers, landowners and other stakeholders to minimize the visual and other impacts of structures, and the Commission throughout these proceedings will continue to encourage the applicants to further minimize the heights of their proposed structures to the degree possible consistent with safety regulations as to conductor clearances.

The Commission also notes that it finds it understandable that the Town of Pleasant Valley would feel challenged by the plethora of transmission proposals seeking to connect into the Pleasant Valley substation in both these and other proceedings. In these proceedings alone there were 19 such proposals in five different corridors. The Commission's action in this order is responsive by reducing the 19 proposals down to three very similar proposals on a single pre-existing corridor. The Commission will also be requesting that the

proposals that in the Commission's view are non-viable be withdrawn, in part to give relief and finality to communities like the Town of Pleasant Valley.

OTHER ENVIRONMENTAL IMPACTS

The minimization of environmental impacts due to construction activities is a key responsibility of the Commission in reviewing proposed major electric transmission facilities. Staff has considerable experience and expertise regarding such issues, and regularly goes to great lengths through on-site surveys, landowner discussions, and resource agency consultations to identify all resource constraints. The Commission regularly imposes numerous specific conditions on construction practices and Staff actively monitors all construction activities.

HVSEC identified a number of "priority sites" of environmental concern along the Segment B corridor that could be potentially adversely affected by construction of the Segment B facilities. Even though no new expansion of the existing rights-of-way are contemplated, HVSEC argues that construction activities can result in temporary and permanent negative environmental impacts along the proposed route that may harm ecological communities and spread invasive species. In addition, HVSEC argues construction along the Segment B corridor could impact a number of historic resources. Trial Staff's environmental analysis was remarkably similar in result to that of HVSEC and similarly identified areas that will be of concern during any construction.

Discussion

The Commission welcomes the additional review conducted by HVSEC and is gratified that the HVSEC and Trial Staff environmental experts made findings that support each

others' analysis, which lends credence to the efficacy of Trial Staff's comparative evaluation. The affected rights-of-way are areas that have already been highly disturbed by past construction activities. None of the resource concerns identified are so extraordinary that they could not be appropriately addressed through implementation of a well-designed Environmental Management and Construction Plan (EM&CP) as the Commission typically requires for major electric transmission facilities. However, the Commission will be looking to improve on past construction methods for these rights-of-way as it is likely that current standards are more protective of the environment than when the existing facilities were constructed. EM&CP issues will be further addressed in the follow-on Part B Article VII siting process.

EVALUATION CRITERIA AND SPECIFIC ANALYSES

The NYISO Open Access Transmission Tariff¹³ provides that in issuing a written statement identifying transmission needs driven by Public Policy Requirements, the Commission's statement may also provide additional criteria for the evaluation of transmission solutions and non-transmission solutions, and may also identify the type of analyses that the Commission will request from the NYISO for the NYISO to use in evaluating potential solutions. The NYISO will independently evaluate each solution - transmission, generation, demand response, or a combination of these resource types - to measure the degree to which the proposed solution satisfies the need, including the evaluation criteria provided by the Commission.¹⁴

¹³ NYISO Open Access Transmission Tariff, Attachment Y, §31.4.2.1.

¹⁴ NYISO Open Access Transmission Tariff, Attachment Y, §31.4.6.4.

Trial Staff proposed that the Commission's statement should establish evaluation criteria and specific analyses for the NYISO to undertake in reviewing transmission solutions to ensure that any selected solution avoids the opening of new transmission rights-of-way and also avoids a new crossing of the Hudson River by a power line as is intended by the identification by Trial Staff of a specific portfolio of projects. LIPA proposed evaluation criteria including a minimum 900 MW increase in power transfer capability across the UPNY/SENY interface; avoidance of a decrease in power transfer capability across the Central East interface; core environmental protections including utilization of existing right-of-ways or paralleling existing infrastructure as important avoidance or minimization measures; and a minimum 1.0 benefit/cost ratio. NYTOs also proposed evaluation criteria including that the project should already have begun the Article VII process (affects schedule for completion); not cross the Hudson River; be built entirely within currently existing rights of way; increase transfer capabilities over both the UPNY/SENY and Central East interfaces; enable the avoidance of future transmission refurbishment costs and result in upgrades to aging infrastructure; be built by a developer with significant experience with managing major transmission projects on an interconnected AC transmission system, including outage management capabilities; be able to obtain all necessary permits in the necessary course; and have a positive impact on the community, such as whether the project will reduce the total number of structures in a community from the number that exist today.

NAT proposed evaluation criteria including a recognition that the applicants that filed Article VII, Part A applications in 2013, and amended them in 2015, have a better

ability to meet a required in-service date; that although 80/20 sharing of cost risk should be required of all applicants, that differing risk mitigation options should be allowed and evaluated as part of the cost criteria; and that the different revenue requirements of the applicants be evaluated as part of the cost criteria. NAT requests that the weighting of the different criteria should be identified (weight of environmental factors against other factors), including a clarification of how "innovation and technology" is to be weighted. NAT also requests that when costs are evaluated, that the scope of costs used be identical for all projects including the cost of right-of-way acquisition (which NAT asserts also has a cost for the NYTOs).

NextEra requests that all applicants identify their proposed cost risk mitigation sharing percentages for evaluation. NextEra also requests that the Commission identify the intended in-service year for the facilities.

Boundless raises a concern that Trial Staff did not recognize the contribution of the Transmission Owner Transmission Solutions (TOTS) Projects towards increasing the transfer capability across the UPNY/SENY interface. Boundless cites information that it claims estimates the TOTS contribution at 450 MW therefore Boundless argues that the 1,000 MW target should be reduced to 550 MW. The amount of the target is important to Boundless because its projects are estimated to provide transfer capability increases of 687 MW and 605 MW respectively across the UPNY/SENY interface, whereas the other projects likely under consideration range from 918 MW to 1,136 MW. Boundless claims that any use of Central East transfer capability as a criterion is unfair and illegal. To resolve Central East issues, Boundless suggests that the Commission sequence its review and first separately compare

Central East projects, and then after selecting a Central East project, then compare UPNY/SENY projects as if the Central East project were already in place. Boundless also asserts that its proposal to install a line beneath the Hudson River does not have environmental impacts that are as significant as a new overhead crossing, therefore its Hudson River crossing does not provide a reasoned basis for project selection.

Trial Staff, in its assessment of relative impacts on "Major River Corridors", provided significant analysis and consideration of impacts to these corridors, and the Hudson River corridor in particular. Staff ranked proposals with either no new Hudson River crossing, or river crossings limited to reconductoring on existing towers as "low" in terms of environmental impact; in-kind replacement of existing transmission towers on the Hudson River, and drilled underground crossings of the Hudson River at or near Schodack Island or at Roseton¹⁵ as "medium"; and new crossings of the Hudson River at new locations or where forest clearing is required, or drilled underground crossings of the Hudson River at Athens-Greenport or Lloyd-Poughkeepsie as having relatively "high" impacts. The latter locations were deemed "high" because they may cross important fisheries or habitat areas, or the overhead facility approaches to the underground crossing will be within or directly visible from designated Scenic Areas of Statewide Significance (SASS). Some of these locations would involve potential conflicts with Local Waterfront Revitalization Programs and Coastal Area criteria. Trial Staff noted that impacts to be expected from horizontal directional drilling (HDD) activities include potential drilling fluid leaks or "frac-outs" and clearing for staging areas for construction equipment and HDD drill entrance and exit pits. Additionally,

¹⁵ The Hudson River crossing at Roseton is proposed by Boundless.

Trial Staff noted that noise to the surrounding community can be expected during HDD operations.¹⁶

Environmental Impact Criteria

Trial Staff's report demonstrates that the transmission need can be met in a cost effective manner without having to resort to the acquisition of new permanent transmission rights-of-way¹⁷ or to any crossing of the Hudson River with a powerline. There remains a need for land acquisition for substations or substation expansions, and although that need will be compact and highly localized, it should also be minimized. There is broad public support for minimizing the impacts of any new powerline by requiring the use of only existing rights-of-way and for avoiding impacts on the Hudson River. Only Boundless takes issue with the idea of avoiding a Hudson River crossing because its proposals rely on a crossing under the bed of the Hudson River. Having considered the record described above, the Commission finds that Boundless is not persuasive in its arguments that its Hudson River

¹⁶ In its reply comments, Trial Staff states that Boundless did not previously indicate any pipe-type, oil-filled, cable with a forced cooling system for its underground proposal and that Boundless now proposes installation of a forced cooling system for the underground cables to improve their capability. Trial Staff asserts that if oil-filled cables had been indicated, it would have requested additional information regarding the cooling system design, nature of coolant material and environmental assessment of impacts related to leakage, spills, or catastrophic system failure; and likely would have recommended consideration of solid dielectric cables as an alternative.

¹⁷ It will not be clear until a later phase whether there will be a need for de minimus exceptions, additional permanent access roads, or temporary construction access roads and lay-down areas for vehicles or equipment, etc. The impacts of such are generally minor, often temporary in nature, and can be managed and minimized through the Commission's Environmental Management and Construction Plan (EM&CP) process.

crossing should have been rated as having a "low" impact in relation to other river crossing methods, particularly since the recommended project portfolios avoid construction of any new or modified Hudson River crossing, either overhead or underground. In addition, the Boundless proposals have other shortcomings that do not hinge on the environmental impacts of its Hudson River crossing such that the exclusion of the Boundless projects as potential solutions would not interfere with obtaining the best overall transmission solution. The Commission has heard the concerns of the many stakeholders that plead that the impacts of any new transmission line be minimized, and is pleased that in this instance it is possible to provide a solution without the acquisition of new permanent transmission rights-of-way or any crossing of the Hudson River with a new transmission line. The comparative evaluation in these proceedings has been generally beneficial, but in this regard it has been invaluable. The Commission will state evaluation criteria to ensure that any transmission solution not include the acquisition of new permanent transmission rights-of-way or any crossing of the Hudson River with a powerline.

The Commission is sympathetic to the suggestion of the NYTOs that projects have a positive impact on the community by reducing the total number of structures in a community from the number that exists today. At this stage, however, the NYISO would not have sufficient information to determine such impacts and the Commission does not want to convert the NYISO process into a siting process. Those matters will be further addressed by the Commission in the Article VII siting cases after the Part B construction information is filed. Similarly, structure heights are often dependant on specific decisions as to structure location and span length which are often influenced by the consideration of site-specific impacts to natural resources,

agricultural practices, and visual impacts. As to structure heights, the Commission will not mandate criteria to be applied by the NYISO, but all proposers of transmission solutions should be aware as they prepare their submissions that minimization of structure heights will be an important issue in the siting review process so applicants should be careful to not lock themselves into designs that could not later be approved. All applicants are encouraged to minimize the heights of the proposed structures while keeping them within the context of their 2015 proposals. In making this statement, the Commission is not in any way suggesting that it would be suitable for applicants to appropriate the structure designs of other applicants.

The NYISO tariff-setting process does not allow for the concept of assigning numerical weights to different categories of factors, as did the Trial Staff report. By establishing threshold environmental and other criteria and a specific definition of the transmission need, the Commission is ensuring that environmental factors and other factors are receiving due weight in the overall evaluation of transmission solutions.

Electric System Impact Criteria

As noted earlier, the Commission had sought project proposals that would increase the transmission transfer capability of the UPNY/SENY interface by approximately 1,000 MW. Boundless overstates the impacts of the TOTS projects on the normal transfer capability of the UPNY/SENY interface. For example, the most significant of the three TOTS projects in terms of scope and cost is designed to improve transfers between Linden, New Jersey, Staten Island and Brooklyn; it is not targeted to improve the UPNY/SENY interface. Also, the Boundless reference to a 450 MW increase attributable to the

TOTS projects is misplaced. The 450 MW increase in the reference is an increase in emergency transfer capability for the purposes of a Reliability Needs Assessment (RNA), not normal transfer capability. RNA transmission topology limits are derived using emergency transfer criteria and not normal transfer criteria.¹⁸ Under emergency transfer criteria higher transfer limits are allowed as compared to normal transfer criteria, as clearly illustrated by Figure 11 of Trial Staff's Report. Further, the RNA emergency limits are used for resource adequacy and installed capacity assessments and not used in the production cost model, the model used for assessing congestion and production costs. In addition, the benefit cost analysis demonstrates that projects that don't create at least 900 MW of increased transfer capability at UPNY/SENY either create very little in the way of increased transfer capability (NYTOs projects: P7 = 352 MW; P12 = 432 MW), or provide only a medium level of capacity increase and are not cost effective (Boundless projects: P20 = 687 MW, BC Ratio = 0.7; P21 = 605 MW, BC Ratio = 0.7). By setting a cutoff at 900 MW, the NYISO will be able to concentrate on solutions that are both highly impactful and cost-effective. The Commission will require that no transmission solution shall be selected for Segment B that provides less than a 900 MW increase in normal transfer capability (NTC) across the UPNY/SENY interface.

Despite the contents of the Order Instituting Proceeding¹⁹ that identified both the Central East and UPNY/SENY

¹⁸ 2014 Reliability Needs Assessment, New York Independent System Operator Final Report (September 16, 2014), at p. D-12.

¹⁹ The corridor [source of persistent congestion] includes . . . two major electrical interfaces (i.e., groups of circuits) that are often referred to as "Central East" and "UPNY/SENY." See, Case 12-T-0502, Alternating Current Transmission Upgrades, Order Instituting Proceeding (issued November 30, 2012), p. 1.

interfaces as being the subject of these proceedings, Boundless appears to have missed the importance of the Central East interface. As a result, the Boundless projects do not attempt to improve transfer capability across the Central East interface.²⁰ The proposals of the other project applicants all included options that attempted to address congestion at the Central East interface. The Commission is not persuaded by the Boundless fairness or legal arguments. As to fairness, it is obvious from the submissions by the other applicants that the importance of the Central East interface should have been as apparent to Boundless as it was to the other participants. Similarly, the legal argument is fully misplaced.²¹ The Boundless suggestion that the Commission sequence its review, select a Central East project, and then compare UPNY/SENY projects as if the Central East project were already in place appears to be an opportunistic attempt to improve the Boundless UPNY/SENY ratings by artificially increasing the congestion at UPNY/SENY, but it fails to accept the reality that it would not make sense to invest in an upstream project without first eliminating downstream congestion. A project that merely moves the congestion point without increasing ultimate downstream power delivery would not be sensible. In fact, given the segmentation approach, the Commission believes it is important to ensure that the evaluation criteria not allow for the implementation of an upstream project without a downstream

²⁰ They actually degrade the Central East transfer capability by 25 MW.

²¹ The Boundless legal argument hinges on the citation of a judicial decision regarding contract law, whereas here the Commission is not entering into any contracts. Any Commission decision in these proceedings will hinge on the statutory requirements of the Public Service Law as to required Article VII findings and determinations and/or on the requirements stated in the NYISO Open Access Transmission Tariff.

project, and has stated criteria accordingly. The Commission will require that no transmission solution shall be selected for Segment A that provides less than a 350 MW increase in normal transfer capability (NTC) across the Central East interface.

Trial Staff was asked to evaluate "innovation and technology" aspects in the comparative evaluation process. Trial Staff's report demonstrates that the innovation claimed by the applicants (except structure types and heights) is already reflected in the powerflow results and environmental rankings. For example, the use of a more efficient conductor technology in a project is reflected in enhanced powerflow results for the project. Nothing in the comments has persuaded the Commission that such innovations should get additional credit. The value of the increased powerflow is the appropriate measure of the value of the innovation because that is the value that will be realized by the beneficiaries of the transmission facility. Assigning additional credit would be inefficient.

Cost Criteria

The NYISO Open Access Transmission Tariff already requires the NYISO to consider cost efficiency issues in its evaluation of solutions. The Commission expects that in evaluating project costs, the NYISO would put all of the proposed transmission solutions on a comparable basis as to the scope of costs, but at NAT's request the Commission will state that criterion so that there is no question as to the matter. In that regard, all parties including NYTOs must provide an estimate of their right-of-way or other real property acquisition costs. The Commission also agrees with the NYTOs that the evaluation should favor projects that avoid future transmission refurbishment costs.

Trial Staff's analysis of the cost estimates submitted to date in these proceedings indicates that most of the

developers omitted essential elements from their estimates. Staff also identified that many applicants did not understand New York's practices as to matting and related practices to protect soils from compaction. These omissions resulted in inaccurate cost estimates and are further exacerbated by the NYISO's recent identification of additional unanticipated upgrades to the Rock Tavern Substation and the Shoemaker to Sugarloaf transmission line that are needed to ensure the full value of the proposed transmission solutions but were not included in the developer's estimates. Given these facts, it is not reasonable to use the developer's original estimates as a base cost. Instead, the NYISO in its evaluation should obtain and use revised cost estimates from the developers that match the comprehensive approach established by Trial Staff. The percentage rates applied to account for contingencies and revenue requirement should all be treated uniformly across all estimates so that those factors are not manipulated by the bidders to confuse or artificially skew the results. Rather, the NYISO should evaluate the costs based on raw construction costs. In calling for revised cost estimates, the Commission is not abandoning the benefits of the estimates that were already made. A criterion will be included that caps future cost bids at the level estimated by Trial Staff for the applicant's project unless the applicant can demonstrate to the NYISO that upward estimates are necessary to correct errors or omissions made by Trial Staff for the components that were added or adjusted by Trial Staff.

The benefit-cost analysis prepared by Trial Staff demonstrates that upgrades to aging infrastructure could contribute significantly to the benefits of any transmission solution. Therefore, the Commission agrees with the NYTOs that

the selection process for transmission solutions should favor solutions that result in upgrades to aging infrastructure.

In the absence of a cost-containment incentive mechanism, FERC practice is to generally allow full recovery through the NYISO Open Access Transmission Tariff of any prudently incurred costs that exceed the developer's original estimate. The Commission already ruled in these proceedings on what incentive would be appropriate to ensure accurate cost estimates.²² If actual costs come in above a bid, the developer should bear 20% of the cost over-runs, while ratepayers should bear 80% of those costs. If actual costs come in below a bid, then the developer should retain 20% of the savings. Furthermore, if the developer seeks incentives from FERC above the base return-on-equity otherwise approved by FERC, then the developer should not receive any incentives above the base return-on-equity on any cost overruns over the bid price. The bid price would therefore cap the costs that may be proposed to FERC for incentives.

The Commission cannot predict at this time whether FERC will accept the Commission's preference for a cost-containment incentive mechanism. The Commission also is not privy to the bidding strategies of the potential developers. Those facts raise a concern that it may be very difficult to fairly compare bids if the bids are based on different models of risk. For example, if two competing projects appear to offer equivalent value, but one offers a lower bid subject to the recovery of all actual costs, and the other offers a higher bid, but the costs are firm, it may be difficult to choose a winner. The Commission is dedicated to a process that will ensure equity

²² Case 12-T-0502, et al., Alternating Current Transmission Upgrades, Order Establishing Modified Procedures for Comparative Evaluation (issued December 16, 2014), p. 44.

and a fair comparison. Bids should be sought from all developers in the alternative assuming both the FERC ordinary full recovery regime and the Commission's cost-overrun-sharing incentive regime. The Commission believes that this additional information as to risk assumption will be of assistance and may be crucial to discerning between close bids.

Developer Qualifications

The Commission endorses the view that demonstration of financial and operational experience is crucial for the selection of the developer of this type of project because the transmission facility will become an important integrated component of the backbone AC transmission system. While the developer may be an entrepreneur rather than an incumbent utility company, the project itself is not in the nature of a merchant project because the intended beneficiaries of the project will be relying significantly on its successful completion. The NYISO Open Access Transmission Tariff already requires a robust evaluation of developer qualifications such that adding additional criteria about developer experience or ability to obtain permits is unnecessary. In making this determination, the Commission is not inviting developers that have not already participated in these AC Transmission proceedings to submit "copycat" transmission solutions that opportunistically incorporate the work product of the original participants.

In-service Year

Ideally, the new facilities would be in service prior to the summer capability period of 2019. From the Commission's point of view, it is desirable to realize the in-service year as soon as is practicable. But it is difficult for the Commission to identify the intended in-service year of the facilities because, among other reasons, the Commission does not have

control of the timing of the NYISO Open Access Transmission Tariff process and the congested nature of the existing facilities to be rebuilt is such that any construction needs to be timed pursuant to a careful plan to minimize reliability risk and the cost of outages. In preparing the solicitation of solutions, the NYISO should consider whether it could apply its expertise and knowledge of the bulk electric system, its tariff process and the Commission's Article VII siting process²³ and establish summer 2019 as the intended in-service year, or another intended in-service year upon which the proposed solutions could be evaluated.

Definition of the Need as Two Segments

The City of New York supports the idea that the definition of the transmission need not predetermine the entity that will provide the solution such that the forces of competition will tend to make the solution more cost efficient. NYTOs argue that not selecting the NYTOs Project P11 at this time and allowing other developers to modify their projects to match the two segments of Project P11 is arbitrary and chilling to the idea of competition. NYTOs also raise concerns that creating two segments will increase the costs by increasing the number of system studies needed, could increase contractor costs, and will increase risks that outage avoidance will not be properly coordinated and that developers may make premature requests for outages to gain advantage.

The Commission is not ready to select the NYTOs' Project P11 as the best solution because of the significant disparity in cost between the higher costs estimated by NYTOs

²³ The Article VII proceedings should proceed in an expeditious manner taking full advantage of the robust record that has already been compiled in these proceedings, to be supplemented by the Part B filings which primarily relate to location-specific siting issues.

and the lower costs estimated by the other developers for essentially the same work. In the Commission's view, those costs need to be further tested and the best way to do that, as pointed out by the City of New York, is through competition. The Commission's cost concerns are material, and therefore not arbitrary, whereas the minor project modifications necessary for the developers to put their projects on a comparable basis so as to maximize competition are not material. In furtherance of the principle that competition will lead to the most efficient costs, the Commission adopts the segment approach proposed by Trial Staff so as to maximize competition and cost efficiency.

COST ALLOCATION AND RECOVERY METHODOLOGY

Under the NYISO tariff, if the Public Policy Requirement that results in the construction of a transmission project prescribes the use of a particular cost allocation and recovery methodology, then the NYISO shall file that methodology with the Federal Energy Regulatory Commission (FERC), although, such filing does not deprive the developer of the project of any rights it may have under Section 205 of the Federal Power Act to submit filings proposing any other cost allocation methodology to FERC.²⁴ The Commission already addressed what cost allocation methodology it would prescribe in these proceedings and adopted a "beneficiaries pay" approach for allocating costs, whereby those that derive the benefits of a project should bear the costs.²⁵ In application, the Commission adopted an approach whereby 75% of project costs are allocated to the economic beneficiaries of reduced congestion, while the other 25% of the

²⁴ NYISO Open Access Transmission Tariff, Attachment Y, §31.5.5.4.1.

²⁵ Case 12-T-0502, et al., AC Transmission Proceedings, Order Establishing Modified Procedures for Comparative Evaluation (issued December 16, 2014) pp. 40-42.

costs are allocated to all customers on a load-ratio share. This will result in approximately 90% of the project costs being allocated to customers in the downstate region, and about 10% to upstate customers. This allocation reflects that the primary benefit of the project will be reduced congestion into downstate load areas, but also recognizes that some benefits accrue to upstate customers in the form of increased reliability and reduced operational costs.

While parties that dispute they are beneficiaries, or that they are assigned a reasonable portion of the costs, would be able to raise their objections before FERC, the Commission notes that the Long Island Power Authority (LIPA) in its comments raised several concerns about the cost allocation methodology. LIPA's major concern is that a one-size-fits-all approach to cost allocation among downstate entities may not be appropriate as LIPA believes that not all downstate entities are similarly situated and that Long Island does not receive benefits in proportion to other downstate areas. LIPA asks that the Commission ensure that the NYISO apply a more granular analysis of the benefits of these proposed projects among downstate entities. Resolution of LIPA's concern will be a FERC matter, but the Commission agrees that a more granular analysis would be beneficial and perhaps more equitable. Therefore, the NYISO will be asked to incorporate such an analysis into the cost allocation methodology. The NYISO should apply its expertise in designing the more granular analysis to be performed.

LIPA also raises a peripheral concern that is not subsumed in the discussion above. LIPA asserts that the benefits of avoided refurbishment costs only accrue to the parties that would otherwise pay for such refurbishment. The Commission takes that to mean that LIPA believes that National

Grid ratepayers are the only ones that benefit from the avoided refurbishment of the transmission lines affected by the instant decisions. The Commission does not agree with LIPA's logic. The existing Edic/Marcy to New Scotland, and North Greenbush/Knickerbocker to Pleasant Valley transmission lines serve primarily the bulk system and as a corridor to transmit power from upstate generators for the benefit of downstate consumers. One of the reasons these lines have not been upgraded to date is because they do not sufficiently benefit National Grid's retail customers such that National Grid could justify the investment. FERC's Order No. 1000 and the AC Transmission proceedings are intended to address such a situation where the entity developing particular infrastructure is not the primary beneficiary. That is why FERC provides for a cost allocation and recovery mechanism whereby the developer of the upgrade can be compensated by the beneficiaries. Accordingly, the benefits of avoided refurbishment costs accrue to all the beneficiaries of the facility, regardless of who owns the lines. Therefore, no adjustment in cost allocation is to be made to the prescribed cost allocation and recovery methodology adopted herein on the basis that the current owner will avoid future refurbishment costs.

MISCELLANEOUS ISSUES

Value of Avoided Refurbishment Costs

Boundless asserts that DPS Trial Staff significantly exaggerated the avoided refurbishment costs for Project P11, while failing to credit any avoided refurbishment costs for the Boundless projects. Boundless asserts that Trial Staff's methodology should have chosen the lowest of available estimates of the cost of refurbishment, and should have applied efficiency factors to significantly reduce the cost estimates when two circuits are adjacent. Boundless estimates that its adjustments

would reduce the benefit/cost ratio for Project P11 from 1.20 to 1.15, or if other lower industry data was used, it would most probably drop below 1.0. Boundless does not provide an estimate of how much additional refurbishment credit to the Boundless projects would be needed to improve the 0.7 benefit cost ratios calculated for the two Boundless Projects P20 and P21.

The Trial Staff methodology, established in consultation with the consultant Brattle, appears to be reasonable and to have been fairly applied across all the projects. Each applicant could propose tweaks in the methodology that would tend to favor their own projects in relation to others, but the Commission is satisfied that Trial Staff followed its charge and has provided an independent and objective comparative evaluation of all the projects using reasonable assumptions. Trial Staff did in fact give Boundless Project P20 \$157 million in avoided transmission cost credit, and Boundless Project P21 \$76 million in avoided transmission cost credit.²⁶ Both credits were due to operation and maintenance costs that would be avoided due to the proposed reconductoring of the Leeds to Hurley Avenue, Leeds to Pleasant Valley, and CPV to and Rock Tavern lines, as appropriate to the project.

Boundless' question as to why it did not get refurbishment credit for reconductoring was addressed in the Trial Staff report at Brattle Slide 115. The information Trial Staff had and used as an assumption is that the lines in question were not slated for future reconductoring as a refurbishment, therefore reconductoring does not avoid a planned refurbishment. In any event, Boundless has not persuaded the Commission that the issues raised by Boundless would change the

²⁶ See Brattle Slide 111 attached to the Trial Staff report.

ultimate result were they to be modeled differently or more favorably to Boundless.

Potential NY-NE Powerflow Upgrade Costs

Boundless raises a concern that construction of a new Knickerbocker substation on a circuit leading to New England may result in what Boundless characterizes as an unexplored system upgrade cost element, possibly a significant cost element, that would not apply to the Boundless project, but would apply to others. As Boundless notes, the topic is expected to be examined in the System Reliability Impact Study (SRIS) for any project proposing such a substation. Boundless seeks a delay for that issue to be investigated.

The NYISO will resolve that issue in due course. At this point the concern raised by Boundless is speculative and the Commission is not persuaded that a process delay is necessary or in the public interest.

Project Modifications

Boundless criticizes project modifications proposed by Trial Staff as being in violation of a Commission directive that no substantial modifications in developers' project would be permitted after January 7, 2015. Yet Boundless was also the beneficiary of some of such modifications and now seeks approval of additional modifications to its projects.

The Commission finds that the modifications identified by Trial Staff were practical responses to the study results made in the interest of keeping the projects functional and cost efficient with as little negative impact as possible on the competitive process. The Commission's ban on modifications was intended to achieve finality and to prevent copycat ideas by developers that add no value. The ban was not directed at Trial Staff. In keeping with the ban, and in the interests of

fairness, the Commission will not entertain other modifications sought at this time by the developers.

Cost Recovery of Development Costs

The NYISO Open Access Tariff provides the developer of any selected transmission solution with full recovery of all costs to develop the transmission facility, assuming they are reasonably incurred.²⁷ The tariff does not appear to provide any recovery for the cost of developing alternative proposals that are ultimately not selected, with one exception. To ensure that there will be a response to the NYISO's solicitation of transmission solutions, the Commission may identify and request appropriate transmission owners or other developers to propose a transmission solution. Costs incurred by a transmission owner or other developer in preparing a proposed transmission solution in response to a request by the Commission will be recoverable.²⁸ The scope of costs that will be recoverable pursuant to the tariff will be determined by either the NYISO or FERC as the tariff has been established pursuant to FERC jurisdiction.

NextEra raises a concern that the NYISO's interpretation of the tariff may be unfair and too restrictive to encourage competition given the unusual procedural interplay between the commencement of these proceedings and the finalization of the Public Policy Requirements process when the cost recovery provisions became known. NextEra asks the

²⁷ Such cost recovery will include reasonable costs incurred, by the Transmission Owner or Other Developer, to provide a more detailed study or cost estimate for such project at the request of the NYPSC, and to prepare the application required to comply with New York Public Service Law Article VII, or any successor statute or any other applicable permits, and to seek other necessary authorizations. NYISO Open Access Transmission Tariff, Attachment Y, §31.5.6.5.

²⁸ NYISO Open Access Transmission Tariff, Attachment Y, §31.4.3.1. Recovery occurs under §31.5.6 of the tariff.

Commission to recommend to the NYISO that all costs incurred after August 13, 2014 should be eligible for recovery, and that the scope of cost recovery encourage further modifications consistent with the Trial Staff recommendations and any modifications that could be made to further reduce environmental impacts, improve electrical performance, or reduce costs. Boundless believes that its projects meet the goals the Commission initially announced; therefore it requests that Boundless and all developers be permitted to recover all development costs expended to date.

The Commission does not recommend that all developers be permitted to recover development costs expended to date, or that the costs of unsuccessful proposals be recovered except as provided in the tariff when the Commission has requested the developer to prepare a proposed transmission solution for submission to the NYISO. Competition works best when the competitors have a real stake in the results. The Commission does not want to create a cottage industry of entrepreneur-expert application drafters that enter competitions primarily to recoup their expert fees. More to the point, it should be noted that some of the many proposals submitted in these proceedings were not well thought out as to environmental impacts or electric system impacts such that they unnecessarily added to the burden of the review process. The Commission does not want to reward the applicants for submitting proposals that had obvious flaws, were not sufficiently designed, or were overly-redundant of other proposals.

As to the scope of costs that should be recoverable when the Commission has specifically requested the transmission owner or other developer to prepare a proposed transmission solution for submission to the NYISO, the Commission offers the following recommendations to the NYISO. It would be difficult

to establish a cut-off of recovery based on a specific date or event threshold. Each developer could make different arguments in that regard as to fairness as each has had different approaches and timelines as to preparation. What matters is the content, and not when it was prepared. In the Commission's view, the cost of creating any content that is necessary for submission to the NYISO under the tariff in support of the proposed transmission solution should be recoverable. It should not matter whether the content had been pre-prepared to satisfy some other purpose, such as the Part A filings made in these AC Transmission/Article VII cases. If the information is required or permitted by the NYISO tariff, the costs of preparation should be recoverable. Costs incurred for appearing and participating in the AC Transmission/Article VII cases, or in the preparation of alternatives that did not result in Commission requests to the transmission owner or other developer to prepare a proposed transmission solution for submission to the NYISO, may not be recoverable, in FERC's discretion. Finally, if the costs were already recouped in any manner in any other forum, no double-recovery of costs should be permitted.

Use of Utility Rights-of-Way by Non-utility Developers

The NYTOs currently have property rights (through their membership utility companies) to the essential rights-of-way under consideration for redevelopment in these proceedings. Their non-utility competitors in the comparative evaluation process and the future NYISO solicitation do not have such property rights. The NYISO Open Access Transmission Tariff requires the NYISO in evaluating transmission solutions to consider, among other things, the extent to which the developer of a proposed solution has the property rights, or ability to

obtain the property rights, required to implement the solution.²⁹ Concerns are raised by NAT and NextEra that the Commission's preference for transmission solutions that use existing rights-of-way not be used in the NYISO evaluation to disqualify non-utility applicants because the non-utility applicants do not already have a property interest in the existing utility rights-of-way. They argue that such a disqualification would undermine the concept of a competitive solicitation as only the utility competitor could ever win. The NYTOs for their part note that NAT and NextEra (a) fail to describe their plan with respect to rights-of-way ownership or control in the future (e.g., single ownership, mixed ownership and/or easements, shared use agreement, etc.) and how that plan would affect rights-of-way responsibilities, access and utility use issues going forward; and (b) fail to demonstrate how the need to secure the real property would impact the schedules and cost estimates presented to date.

NAT and NextEra are correct that their outright disqualification based solely on current non-ownership of essential utility rights-of-way would undermine the concept of a competitive solicitation. The selection process should be administered by the NYISO in a way that preserves both of the Commission's policies relevant to this discussion: (1) competition; and (2) minimization of new rights-of-way.

²⁹ The [NY]ISO will consider whether the Developer: (i) already possesses the rights of way necessary to implement the solution; (ii) has completed a transmission routing study, which (a) identifies a specific routing plan with alternatives, (b) includes a schedule indicating the timing for obtaining siting and permitting, and (c) provides specific attention to sensitive areas (e.g., wetlands, river crossings, protected areas, and schools); or (iii) has a specified a plan or approach for determining routing and acquiring property rights [NYISO Open Access Transmission Tariff, Attachment Y, §31.4.8.1.6].

However, the issues noted by the NYTOs and described above are also relevant and material. Incumbent utilities should offer competitors the same terms they offer Transco; there should be no bias shown to Transco.

All applicants should present the NYISO with robust information and a plan with respect to rights-of-way ownership or control in the future and how that plan would affect rights-of-way responsibilities, access and utility use issues going forward. All applicants should also address how the need to secure the real property would impact their construction schedules and cost estimates. The Commission does not expect the utility company owner of the rights-of-way to give away its ratepayer-funded property rights for free. Nor does the Commission expect the utility company owner to allow the use of utility rights-of-way without reasonable operating conditions. Instead, the Commission expects the utility company owner to bargain in good faith to reach an agreement with the developer of the transmission solution as to property access and compensation as it would for other linear project developers that seek to co-locate on utility property. The utility company owner is the steward of the property held for the benefit of its ratepayers, and the beneficiaries of the transmission solution should provide just compensation to the utility company ratepayers that funded the asset.

Withdrawal of Projects/Segments

Trial Staff urges the Commission to request the applicants to withdraw their projects and project segments which do not best meet the Commission's objectives and therefore have no expectation of public policy benefit and cost recovery. Trial Staff believes that withdrawal at this stage is in the public interest so as to not waste further effort on pursuing ideas that have no likelihood of future success; to provide

certainty to affected landowners and municipalities facing potential impacts from transmission upgrades; and to allow for market certainty as the applicants seek cost recovery at the NYISO. NAT has offered that it is willing to comply with such a request by the Commission.³⁰ The County of Delaware and the Village of Athens both provided comments in support of Staff's proposal and request further that once a proposal is withdrawn, that it not be reinstated without adequate notice.

The Commission finds that Trial Staff's request will further the orderly progress of these proceedings. Ordering clauses will be provided to effectuate the proposal in an appropriate manner including adequate notice provisions.

Segment B Upgrades

In assisting Trial Staff by conducting power flow analyses, the NYISO determined that all projects, with the exception of those proposed by Boundless, trigger a contingency on the existing double circuit 69 kV line from the Shoemaker to Sugarloaf substations in Orange County, which must be resolved for any of the projects to produce a positive benefit. In other words, if the Shoemaker to Sugarloaf line is not upgraded, the transmission solutions would not be allowed to operate at full capacity. Similarly, the NYISO found a need for upgrades to the Rock Tavern Substation, also in Orange County, so that it could handle the higher line currents that will result as a consequence of the new Edic/Marcy to New Scotland; Princetown to Rotterdam and Knickerbocker to Pleasant Valley lines. Trial Staff proposes that any developer of the Knickerbocker-Pleasant Valley segment work with the utility companies that own the affected facilities to ensure that they are upgraded. NAT seeks clarification as to who would perform the additional work and how the costs would be treated for both cost recovery and for

³⁰ NAT's cooperation is appreciated.

bidding. NextEra similarly requests clarification. Both of them appear to agree that the utility companies should do the work. The New York State Department of Environmental Conservation (DEC) seeks assurances that any work proposed for the Shoemaker to Sugarloaf right-of-way will be carefully planned after conducting habitat surveys and considering the need for avoidance and mitigation measures.

Orange and Rockland Utilities, Inc. (O&R) is the owner of the Shoemaker to Sugarloaf facilities and should do the necessary upgrades to those facilities. Central Hudson Gas & Electric Corporation (Central Hudson) is the owner of the Rock Tavern Substation and should do the necessary upgrades to the substation. O&R and Central Hudson should be reimbursed by the developer of the Segment B transmission solution for their actual reasonable costs in performing the upgrades. The developer in turn should recover those costs as a pass-through from the beneficiaries of the Segment B transmission solution through the NYISO Open Access Transmission Tariff. The developer should not be subject to risk sharing incentives as to those pass-through costs, as the developer has no control over the costs. For the purposes of bids, all developers should include the upgrade costs in their bids at the same level, and the upgrade costs should not be used as a distinguishing factor between bids. The developers should use the estimates provided in the Trial Staff report as a placeholder for the actual costs.

PROCESS OBJECTIONS

Scope of Staff Report

HVSEC claims that the September 22, 2015 Staff Report improperly included analysis that was introduced for the first time in these proceedings, including: reliance on Public Policy Requirements to justify the need for the transmission lines; evaluation of non-transmission alternatives including the

Commission's REV initiative; a new power flow analysis of the impact of the CPV Valley Generating Facility; and the conclusion that the Rock Tavern Substation and the Shoemaker to Sugarloaf line need to be upgraded in the Knickerbocker-Pleasant Valley section of the P11 corridor. HVSEC argues that because this analysis was not introduced sooner in the proceeding, the record is incomplete. It also claims that it and other intervenor parties have been deprived of the opportunity to seek intervenor funding to evaluate Staff's analysis and meaningfully contribute to the record on these issues, and it requests that the Commission withhold a decision on Staff's motion while it seeks leave to apply for additional intervenor funding. HVSEC argues that the Commission did not intend for Staff to rely on Public Policy Requirements to justify its conclusion and that the Commission's December 16, 2014 Order expressly declared a PPR justification was not part of the present proceedings.

Discussion

Earlier in these proceedings, HVSEC requested that the Commission expand the scope of the comparative evaluation to include an overall analysis of need by Trial Staff. The Commission was fully responsive to the request and in the December 16, 2014 Order required Trial Staff to address overall need in its report. The schedule attached to the December 16, 2014 Order also shows that it was clearly intended that the Public Policy Requirements analysis would be done on a parallel path and on a common record. The various notices issued in these proceedings also support these facts. Now that Trial Staff has provided the analysis HVSEC requested, it is raising procedural objections. The Commission rejects these objections as not correct. The objections ring hollow as they appear to be motivated more by the result than the process. The parties have been aware since December 2014 that the overall need issue would

be addressed. And with such knowledge, HVSEC commissioned two studies using intervenor funds³¹ which it has argued for months prove that there is no overall need for the facilities. A large portion of HVSEC's efforts in these proceedings have been directed at the overall need issue and its experts, including its need experts, have been accommodated in all processes including the technical conferences. The parties have had ample opportunity to participate and further process is therefore unnecessary.

SAPA Notice

HVSEC argues that the October 7, 2015 SAPA Notice does not comply with the Commission's own procedures because the issuance of the notice did not occur within 45 days of the posting of public policy transmission need on the Commission's website. Rather, that posting occurred over one year before the Notice. HVSEC also argues that neither Staff's motion, nor the SAPA notice reference the Public Policy Transmission Planning Process (PPTPP) in NYISO's OATT.

Discussion

A SAPA notice was issued within 45 days of the posting of public policy transmission need on the Commission's website. After considering the comments submitted in response to that SAPA notice, the Commission decided to proceed to a decision on the Western New York issue, to decline to proceed on other proposals, and to defer a decision on the AC transmission issue until the Trial Staff report was issued. After the Trial Staff report was issued, a second SAPA notice was issued directed solely at the AC transmission issue. It is within the Commission's prerogative to make such pragmatic alterations to

³¹ A total of \$270,000 in intervenor funds was awarded to HVSEC for it to conduct studies in these proceedings.

the schedule in consideration of all the circumstances. HVSEC is incorrect as to the contents of the SAPA notice.

Process Shift to NYISO

According to HVSEC, if the Commission adopts Staff's recommendations, the process will shift to the NYISO to issue RFPs, to which any developer, not just those in this proceeding, may submit a response. HVSEC argues this would create an entirely new process not contemplated when this comparative proceeding was originally commenced, which would result in confusion and delays.

Discussion

HVSEC's concern about delays appears to be inconsistent with its other positions and process objections. The relationship to the Public Policy Transmission Planning Process has been apparent to all parties for some time. It is difficult to understand how HVSEC could make such a claim at this time.

System Reliability Impact Study (SRIS)

The Commission's desire to ensure that developers are able to demonstrate that they have the ability to proceed with their projects in a timely fashion resulted in the establishment of a deadline for providing notification that a System Reliability Impact Study (SRIS) was in progress pursuant to the tariff requirements of the NYISO. The deadline has been repeatedly extended in the face of practical realities that the sheer number of project proposals has been too large to justify separate studies for every project, and a desire by the Commission that the developers refine their project proposals to minimize environmental and landowner impacts. Issuance of the Trial Staff report approximately one week before the extended deadline further complicates the question because of the recent discovery of the necessary additional system upgrades identified

in the report that were previously unknown to the parties, but may have an impact on the studies. Given these circumstances and the anticipated pending solicitation of transmission solutions by the NYISO, the Commission will suspend the application of the deadline and defer SRIS timing issues to the NYISO processes.

FINDINGS AND CONCLUSION

The Commission finds and determines that there is a transmission need driven by Public Policy Requirements as specifically described in Appendix A attached hereto. This transmission need driven by Public Policy Requirements shall be addressed by the NYISO by the solicitation and review of solutions, with the potential for the developers of any selected transmission solutions to obtain cost recovery for their development and construction costs from the beneficiaries of the new transmission facilities through the NYISO Tariff regulated by FERC. The relevant Public Policy Requirements driving such transmission needs are identified below.

The Commission hereby finds that having considered the extensive record in these proceedings, it is the public policy of the State of New York and the Public Service Commission: to reduce transmission congestion so that large amounts of power can be transmitted to regions of New York where it is most needed; to reduce production costs through congestion relief; reduce capacity resource costs; to improve market competition and liquidity; to enhance system reliability, flexibility, and efficiency; to improve preparedness for and mitigation of impacts of generator retirements; enhance resiliency/storm hardening; to avoid refurbishment costs of aging transmission; to take better advantage of existing fuel diversity; to increase diversity in supply, including additional renewable resources;

to promote job growth and the development of new efficient generation resources Upstate; to reduce environmental and health impacts through reductions in less efficient electric generation; to reduce costs of meeting renewable resource standards; to increase tax receipts from increased infrastructure investment; to enhance planning and operational flexibility; to obtain synergies with other future transmission projects; and to relieve gas transportation constraints, in the balanced and cost-effective manner that would be accomplished by the construction and operation of a portfolio of 345 kV transmission projects to reconfigure and upgrade transmission facilities from the Edic or Marcy substations to the New Scotland substation with a tie-in to the Rotterdam substation, and from a new Knickerbocker substation to the Pleasant Valley substation, with upgrades at the Greenbush substation, including also upgrades to the Rock Tavern substation, and the construction of a new double circuit 138 kV line from the Shoemaker to Sugarloaf substations (and as more specifically described in Appendix A attached hereto), and that such policies constitute Public Policy Requirements driving transmission needs.

The Commission also hereby finds that: the 2015 State Energy Plan, which contains adopted policies and long-range energy planning objectives and strategies, including fulfillment of the action items that constitute New York's Energy Highway Blueprint (implementation of a proposal to upgrade the transmission system being evaluated in the AC Transmission proceedings are one of the action items);³² Section 6-104(1) of the Energy Law which requires the State Energy Planning Board to

³² New York State Energy Planning Board, The Energy to Lead: 2015 New York State Energy Plan (June 25, 2015), Volume 1, pp. 93-94.

adopt a State Energy Plan; and Section 6-104(5)(b) of the Energy Law which generally requires the Commission to make energy-related actions or decisions that are reasonably consistent with the policies and long-range energy planning objectives and strategies contained in the State Energy Plan; together constitute Public Policy Requirements driving transmission needs.

The above identification of Public Policy Requirements driving transmission needs are hereby identified both jointly, as both contributing to the same conclusion, and severally, as each finding providing an independent identification of Public Policy Requirements driving transmission needs.

The Commission orders:

1. The Commission finds and determines that there is a transmission need driven by Public Policy Requirements as described in the body of this order and as more specifically described in Appendix A attached hereto. This transmission need driven by Public Policy Requirements shall be addressed by the New York Independent System Operator, Inc. (NYISO) by the solicitation and review of solutions, with the potential for the developers of any selected transmission solutions to obtain cost recovery for their development and construction costs from the beneficiaries of the new transmission facilities through the NYISO Open Access Transmission Tariff regulated by the Federal Energy Regulatory Commission (FERC).

2. In conjunction with the above Public Policy Requirements determination, the Commission establishes evaluation criteria set forth in Appendix B attached hereto. The NYISO shall apply such criteria in evaluating transmission solutions to satisfy the identified transmission need.

3. In conjunction with the above Public Policy Requirements determination, the Commission identifies specific analyses, set forth in Appendix C attached hereto, for the NYISO to undertake in reviewing transmission solutions to satisfy the identified transmission need.

4. In conjunction with the above Public Policy Requirements determination, the Commission prescribes the use of the cost allocation and recovery methodology set forth in Appendix D attached hereto. The NYISO shall file the prescribed cost allocation and recovery methodology with FERC in the manner provided for in the NYISO Open Access Transmission Tariff.

5. In Case 13-T-0454, the applicant, North America Transmission Corporation and North America Transmission, LLC (NAT), is hereby requested to withdraw, effective on or before January 15, 2016, the following routes from further consideration in the proceeding (such withdrawals to be effective concurrently in Cases 12-T-0502 and 13-E-0488):

- (a) Edic to Fraser (P1, P2, P3, P4, P5);
- (b) New Scotland to Pleasant Valley (P1, P3);
- (c) New Scotland to Pleasant Valley (Alt. 1/I-87)(P2); and
- (d) New Scotland to Knickerbocker (P4, P5); and
- (e) Knickerbocker to Pleasant Valley (P4).

6. NAT is hereby requested to propose to the NYISO NAT's Knickerbocker to Pleasant Valley (P5) transmission solution, coupled with the necessary add-on Rock Tavern Substation terminal upgrades and Shoemaker to Sugarloaf transmission line upgrades, such that NAT's costs incurred in preparing a proposed solution in response to this request will be recoverable under the NYISO tariff.

7. In Case 13-M-0457, the applicant, New York Transmission Owners (NYTOs), is hereby requested to withdraw, effective on or before January 15, 2016, the following

routes/equipment from further consideration in the proceeding (such withdrawals to be effective concurrently in Cases 12-T-0502 and 13-E-0488):

- (a) Oakdale to Fraser (P10);
- (b) Edic to New Scotland; Princetown to Rotterdam (P10, P12, P13, P14);
- (c) New Scotland to Leeds (Reconductor) (P9, P12, P14);
- (d) Leeds to Pleasant Valley (P9, P14);
- (e) Leeds to Pleasant Valley (Reconductor)(P7, P12);
- (f) Knickerbocker to Pleasant Valley (P10); and
- (g) Hurley Avenue PARS (P8, P13)

8. NYTOs are hereby requested to propose to the NYISO NYTOs' Edic to New Scotland; Princetown to Rotterdam (P11) transmission solution such that NYTOs' costs incurred in preparing a proposed solution in response to the Commission's request will be recoverable under the NYISO tariff.

9. NYTOs are hereby requested to propose to the NYISO NYTOs' Knickerbocker to Pleasant Valley (P6, P11) transmission solution, coupled with the necessary add-on Rock Tavern Substation terminal upgrades and Shoemaker to Sugarloaf transmission line upgrades, such that NYTOs' costs incurred in preparing a proposed solution in response to the Commission's request will be recoverable under the NYISO tariff.

10. In Case 13-T-0456, the applicant, NextEra Energy Transmission New York (NextEra), is hereby requested to withdraw, effective on or before January 15, 2016, the entire application for the Oakdale to Fraser project (P19b) from further consideration in the proceeding (such withdrawals to be effective concurrently in Cases 12-T-0502 and 13-E-0488).

11. In Case 13-T-0455, the applicant, NextEra, is hereby requested to withdraw, effective on or before January 15, 2016, the following routes from further consideration in the

proceeding (such withdrawals to be effective concurrently in Cases 12-T-0502 and 13-E-0488):

- (a) Edic to Pleasant Valley (P15);
- (b) Marcy to New Scotland (P18);
- (c) Marcy to Rotterdam (P16);
- (d) New Scotland to Knickerbocker (P17);
- (e) Greenbush to Pleasant Valley (P16, P18, P19a); and
- (f) Greenbush to Knickerbocker (P17).

12. NextEra is hereby requested to propose to the NYISO NextEra's Marcy to New Scotland; Princetown to Rotterdam (P17) transmission solution such that NextEra's costs incurred in preparing a proposed solution in response to the Commission's request will be recoverable under the NYISO tariff.

13. NextEra is hereby requested to propose to the NYISO NextEra's Greenbush to Pleasant Valley (P17, P19c) transmission solution, coupled with the necessary add-on Rock Tavern Substation terminal upgrades and Shoemaker to Sugarloaf transmission line upgrades, such that NextEra's costs incurred in preparing a proposed solution in response to the Commission's request will be recoverable under the NYISO tariff.

14. In Case 13-T-0461, the applicant, Boundless Energy NE, LLC (Boundless), is hereby requested to withdraw, effective on or before January 15, 2016, the entire application for all its project segments from further consideration in the proceeding (such withdrawals to be effective concurrently in Cases 12-T-0502 and 13-E-0488). The project segments to be withdrawn include:

- (a) Hurley Avenue to Leeds (Reconductor) (P20, P21);
- (b) Leeds to Pleasant Valley (Reconductor) (P20);
- (c) CPV Tap to Rock Tavern (Reconductor) (P20, P21); and
- (d) Roseton to East Fishkill (Underground) (P20, P21).

15. Once an application, route, project segment or equipment is withdrawn from further consideration in a proceeding, it shall not be re-introduced into the proceeding except on notice in the manner provided in Public Service Law Section 122(2) for new applications.

16. The above requests by the Commission to withdraw an application, route, project segment or equipment from further consideration in a proceeding are to be effectuated by filing written withdrawal statements with the Commission.

17. Any applicant that decides not to comply with any of the above requests by the Commission to withdraw an application, route, project segment or equipment from further consideration in a proceeding by the date requested is hereby directed to file with the Commission on or before January 15, 2016, a written (a) explanation as to why the applicant has decided not to comply with any such request; and (b) a statement of the applicant's going-forward intent regarding consideration by the Commission of the affected application, route, project segment or equipment.

18. Unless the NYISO determines that the upgrades are not material to the accomplishment of the purposes of the Segment B transmission solution, Orange and Rockland Utilities, Inc. (O&R) as the owner of the Shoemaker to Sugarloaf facilities shall work with the developer of any selected transmission solution regarding Segment B and shall pursuant to a written agreement to be negotiated between the two, design, obtain approvals and perform the necessary upgrades to those facilities identified in this order and shall be reimbursed by the developer of the Segment B transmission solution for the actual reasonable costs to design, obtain approvals and perform the upgrades. The NYISO and DPS Staff shall be consulted by O&R as part of the design process. Nothing herein waives the need, if

any, for O&R to obtain an Article VII certificate or certificate amendment, or other approvals, prior to constructing such upgrades.

19. Unless the NYISO determines that the upgrades are not material to the accomplishment of the purposes of the Segment B transmission solution, Central Hudson Gas & Electric Corporation (Central Hudson) as the owner of the Rock Tavern Substation shall work with the developer of any selected transmission solution regarding Segment B and shall pursuant to a written agreement to be negotiated between the two, design, obtain approvals and perform the necessary upgrades to the substation identified in this order and shall be reimbursed by the developer of the Segment B transmission solution for the actual reasonable costs to design, obtain approvals and perform the upgrades. The NYISO and DPS Staff shall be consulted by Central Hudson as part of the design process. Nothing herein waives the need, if any, for Central Hudson to obtain an Article VII certificate or certificate amendment, or other approvals, prior to constructing such upgrades.

20. This order constitutes a rule adopted subject to and in accordance with the State Administrative Procedure Act.

21. This order in its entirety shall constitute the written statement of the Commission to be provided to the NYISO during the identification step of the NYISO Public Policy Transmission Planning Process described in the body of this order.

22. In the Secretary's sole discretion, the deadlines set forth in this order may be extended. Any request for an extension must be in writing, must include a justification for the extension, and must be filed at least one day prior to the affected deadline.

23. These proceedings are continued.

By the Commission,

(SIGNED)

KATHLEEN H. BURGESS
Secretary

TRANSMISSION NEED DRIVEN BY PUBLIC POLICY REQUIREMENTSSEGMENT AEdic/Marcy to New Scotland; Princetown to Rotterdam

Construction of a new 345 kV line from Edic or Marcy to New Scotland on existing right-of-way (primarily using Edic to Rotterdam right-of-way west of Princetown); construction of two new 345 kV lines or two new 230 kV lines from Princetown to Rotterdam on existing Edic to Rotterdam right-of-way; decommissioning of two 230 kV lines from Edic to Rotterdam; related switching or substation work at Edic or Marcy, Princetown, Rotterdam and New Scotland.

SEGMENT BKnickerbocker to Pleasant Valley

Construction of a new double circuit 345 kV/115 kV line from Knickerbocker to Churchtown on existing Greenbush to Pleasant Valley right-of-way; construction of a new double circuit 345 kV/115 kV line or triple circuit 345 kV/115 kV/115 kV line from Churchtown to Pleasant Valley on existing Greenbush to Pleasant Valley right-of-way; decommissioning of a double-circuit 115 kV line from Knickerbocker to Churchtown; decommissioning of one or two double-circuit 115 kV lines from Knickerbocker to Pleasant Valley; construction of a new tap of the New Scotland-Alps 345 kV line and new Knickerbocker switching station; related switching or substation work at Greenbush, Knickerbocker, Churchtown and Pleasant Valley substations.

Upgrades to the Rock Tavern Substation

New line traps, relays, potential transformer upgrades, switch upgrades, system control upgrades and the installation of data acquisition measuring equipment and control wire needed to handle higher line currents that will result as a consequence of the new Edic/Marcy to New Scotland; Princetown to Rotterdam and Knickerbocker to Pleasant Valley lines.

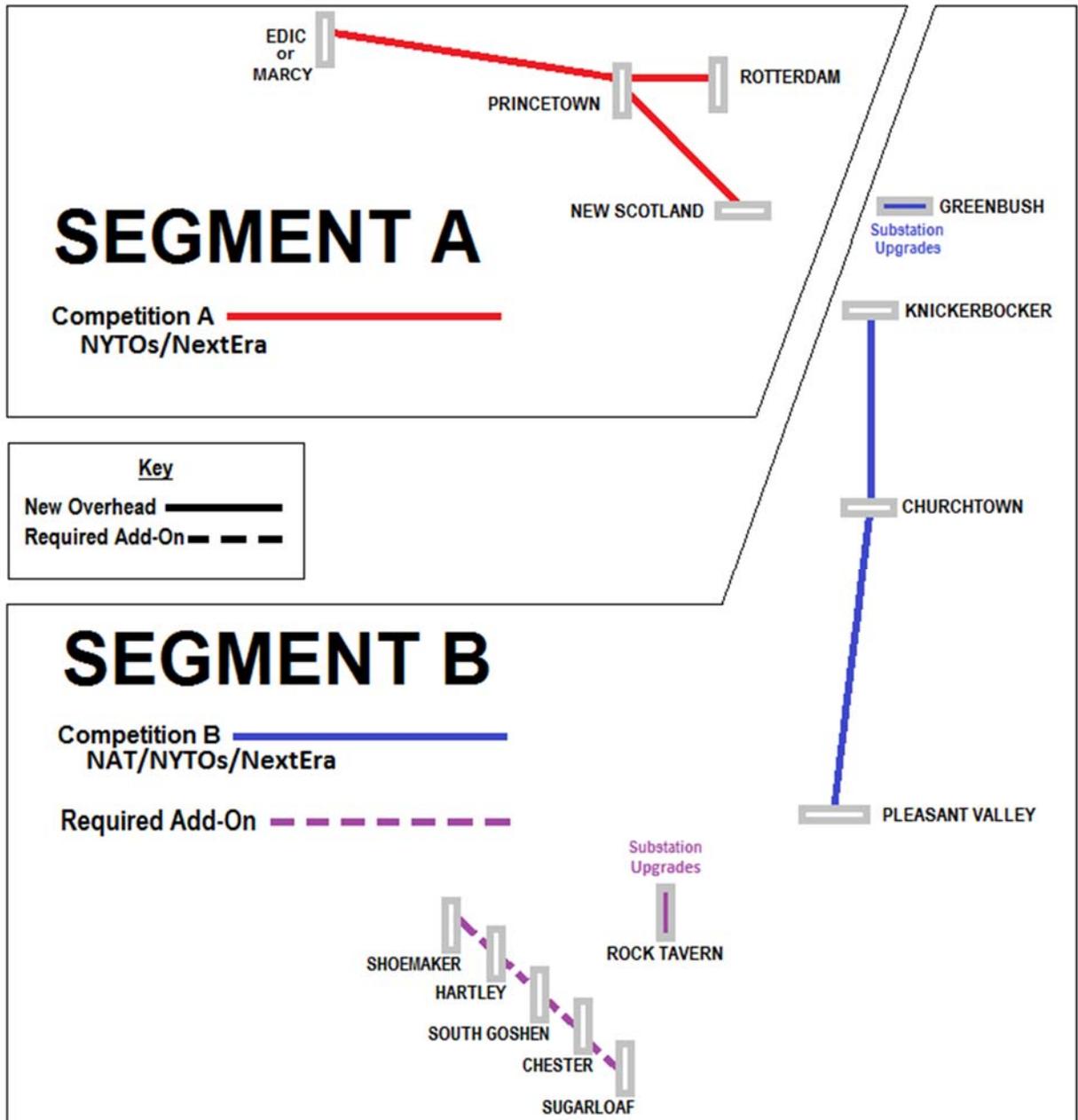
Shoemaker to Sugarloaf

Construction of a new double circuit 138 kV line from Shoemaker to Sugarloaf on existing Shoemaker to Sugarloaf right-of-way; decommissioning of a double circuit 69 kV line from Shoemaker to Sugarloaf; related switching or substation work at Shoemaker, Hartley, South Goshen, Chester, and Sugarloaf.

Notes:

The need is for the entire portfolio, but the portfolio lends itself to segmentation such that transmission solutions should be solicited in a manner that allows applicants to propose solutions either by segment or on a combined portfolio basis, or in the alternative on both bases. Segment A depends upon Segment B being in place, so Segment A would not be constructed without certainty that Segment B would be constructed. Segment B depends upon certain specified add-ons being in place, so Segment B would not be constructed without certainty that the specified add-ons would be constructed.

SCHEMATIC LAYOUT OF SEGMENTS



EVALUATION CRITERIA

The New York Independent System Operator, Inc. (NYISO) shall apply the following additional criteria for the evaluation of transmission solutions and non-transmission projects:

1. No transmission solution shall be selected that requires the acquisition of new permanent transmission rights-of-way, except for de minimus acquisitions that cannot be avoided due to unique circumstances. For the purposes of this criterion, the transfer or lease of existing transmission right-of-way property or access rights from a current utility company owner to a developer of the transmission solution shall not be considered such an acquisition.
2. The selection process for transmission solutions shall favor transmission solutions that minimize the acquisition of property rights for new substations and substation expansions. For the purposes of this criterion, the transfer or lease of existing property rights from a current utility company owner to a developer of the transmission solution shall not be considered such an acquisition.
3. No transmission solution shall be selected that includes a crossing of the Hudson River, either overhead, underwater, in riverbed, or underground, or in any other way, by any component of the transmission facility.
4. No transmission solution shall be selected for Segment B that provides less than a 900 MW increase in normal transfer capability (NTC) across the UPNY/SENY interface pursuant to the methodology employed by the NYISO for the Trial Staff report in the AC Transmission proceedings.
5. No transmission solution shall be selected for Segment B that does not incorporate certain specified add-ons that would be constructed (i.e., upgrades to the Rock Tavern Substation; upgrades to the Shoemaker to Sugarloaf transmission lines), unless the NYISO determines that such add-ons, jointly or severally, are not material to the accomplishment of the purpose of the transmission solution for Segment B.

6. The selection process for transmission solutions for Segment B shall not use the costs of upgrades to the Rock Tavern Substation and upgrades to the Shoemaker to Sugarloaf transmission lines as a distinguishing factor between bids. The developers shall include the upgrade costs in their bids at the same level using the cost estimates for the upgrades provided in the Trial Staff report as a placeholder for the actual costs.
7. No transmission solution shall be selected for Segment A that provides less than a 350 MW increase in normal transfer capability (NTC) across the Central East interface pursuant to the methodology employed by the NYISO for the Trial Staff report in the AC Transmission proceedings.
8. No transmission solution shall be selected for Segment A unless a transmission solution is selected for Segment B.
9. No transmission solution shall be selected for Segment A except on condition that the transmission solution selected for Segment A shall not be implemented until there is reasonable certainty established in a manner to be determined by the NYISO that the transmission solution selected for Segment B will be implemented.
10. The selection process for transmission solutions shall favor transmission solutions that result in upgrades to aging infrastructure.
11. Project selection shall be competitive by segment, but synergies produced by being selected to provide both segments may be considered.
12. No transmission solution shall be selected unless the developer has submitted a cost estimate or bid that does not exceed the cost estimate at the level estimated by Trial Staff for the applicant's project unless the applicant can demonstrate to the NYISO that upward estimates are necessary to correct errors or omissions made by Trial Staff for the components that were added or adjusted by Trial Staff.
13. The selection process for Segment B shall not use the cost to do the necessary upgrades to the Shoemaker to Sugarloaf facilities and the Rock Tavern Substation as a distinguishing factor between bids. For the purposes of bids, all developers should include the upgrade costs in their bids at the same level, using the estimates provided in the Trial Staff report as a placeholder for the actual costs.

14. The percentage rates applied to account for contingencies and revenue requirement should all be treated uniformly across all estimates so that those factors are not manipulated by the bidders to confuse or artificially skew the results. The selection process shall not use the percentage rates applied to account for contingencies and revenue requirement as a distinguishing factor between bids. For the purposes of bids, all developers should account for contingencies and revenue requirement at the percentage rates provided in the Trial Staff report as a placeholder for the actual rates.

SPECIFIC ANALYSES

The New York Independent System Operator, Inc. (NYISO) shall undertake the following analyses (in addition to those already required by the tariff) for use in the evaluation of transmission solutions and non-transmission projects:

1. The NYISO shall apply its expertise and design a more granular cost allocation among downstate entities.
2. If possible in time for the solicitation of solutions, the NYISO shall apply its expertise and knowledge of the bulk electric system, its tariff process and the Commission's Article VII siting process and establish an intended in-service year against which the project schedules for the proposed solutions shall be evaluated.
3. In evaluating project costs, the NYISO shall identify the necessary project elements of each project and ensure that all of the proposed transmission solutions are evaluated on a comparable basis as to the scope of costs. As to each necessary project element identified by the NYISO, it shall evaluate the costs proposed by each applicant and provide an evaluation of the reasonableness of the costs and the potential for cost overruns.
4. In evaluating project costs, the NYISO shall require each proposer of a transmission solution to submit at least two project cost bids. This requirement shall not preclude the proposer from submitting other additional bids pursuant to other incentive regimes that might be proposed by them. The first required bid shall presume that all prudently incurred costs will be recovered and there will be no sharing of cost overruns by the developer. The second required bid shall reflect the following incentive regime to control costs:
 - If actual costs come in above a bid, the developer shall bear 20% of the cost over-runs, while ratepayers shall bear 80% of those costs. If actual costs come in below a bid, then the developer should retain 20% of the savings. Furthermore, if the developer seeks incentives from FERC above the base return-on-equity otherwise approved by FERC, then the developer shall not receive any incentives above the base return-on-equity on any cost overruns over the bid price. The bid price would therefore cap the costs that may be proposed to FERC for incentives.

PRESCRIBED COST ALLOCATION
AND RECOVERY METHODOLOGY

The New York Independent System Operator, Inc. (NYISO) shall file the following prescribed cost allocation and recovery methodology with the Federal Energy Regulatory Commission (FERC):

The cost allocation and recovery methodology shall be based on a "beneficiaries pay" approach for allocating costs, whereby those that derive the benefits of a project shall bear the costs. In that regard, 75% of project costs are to be allocated to the economic beneficiaries of reduced congestion, while the other 25% of the project costs are to be allocated to all customers on a load-ratio share. The benefits of avoided refurbishment costs in this instance accrue to all the beneficiaries of the new transmission facility regardless of who owns the current transmission lines and therefore no adjustment in cost allocation is to be made on the basis that the current owners will avoid future refurbishment costs. To ensure equity based on the overriding principle that "beneficiaries pay", the NYISO shall apply its expertise and design a more granular cost allocation among downstate entities after first applying the methodology described above to determine the respective shares of upstate and downstate entities. For these purposes, upstate is defined as NYISO Locational Based Marginal Pricing (LBMP) Zones A-F, and downstate is defined as LBMP Zones G-K.

For transmission solutions for Segment B, the costs of upgrades to the Rock Tavern Substation and upgrades to the Shoemaker to Sugarloaf transmission line are pass-through costs that shall not be subject to any risk sharing incentives as to those costs.

Note: This will result in approximately 90% of the project costs being allocated to customers in the downstate region, and about 10% to upstate customers. This allocation reflects that the primary benefit of the projects will be reduced congestion into downstate load areas, but also recognizes that some benefits accrue to upstate customers in the form of increased reliability and reduced operational costs.

TRIAL STAFF PROJECT COST ESTIMATES
BY DEVELOPER AND SEGMENT

| | | |
|---------|---------------|-----------------|
| NYTOs | Segment A | Unstated |
| NYTOs | Segment B | \$631,056,714 |
| NYTOs | Segment A + B | \$1,188,796,308 |
| NextEra | Segment A | Unstated |
| NextEra | Segment B | \$460,855,417 |
| NextEra | Segment A + B | \$1,038,632,316 |
| NAT | Segment B | \$712,600,886 |

Note: No transmission solution shall be selected unless the developer has submitted a cost estimate or bid that does not exceed the cost estimate at the level estimated by Trial Staff for the applicant's project unless the applicant can demonstrate to the NYISO that upward estimates are necessary to correct errors or omissions made by Trial Staff for the components that were added or adjusted by Trial Staff.