STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

CASE 10-T-0139 - Application of Champlain Hudson Power Express, Inc. for a Certificate of Environmental Compatibility and Public Need Pursuant to Article VII of the PSL for the Construction, Operation and Maintenance of a High Voltage Direct Current Circuit from the Canadian Border to New York City.

NOTICE FOR FILING EXCEPTIONS

(Issued December 27, 2012)

Attached is the Recommended Decision of Administrative Law Judges Kevin Casutto and Michelle Phillips in this proceeding. Briefs on exceptions are due electronically to the Secretary at secretary@dps.ny.gov and to all active parties by 4:00 p.m. on January 17, 2013.

Briefs opposing exceptions are due by 4:00 p.m. on February 1, 2013, following the same procedures. The parties' briefs should adhere to the guidelines for filing documents with the Secretary (www.dps.ny.gov).

(SIGNED) Jeffrey C. Cohen
Acting Secretary

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RECOMMENDED DECISION

By

ADMINISTRATIVE LAW JUDGES

Michelle L. Phillips and Kevin J. Casutto

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RECOMMENDED DECISION

Michelle L. Phillips and Kevin J. Casutto,
Administrative Law Judges:

SUMMARY OF RECOMMENDATION

We recommend that (1) most of the terms and conditions of a Joint Proposal as revised in this proceeding and this recommended decision be adopted by the Commission; and (2) a Certificate of Environmental Compatibility and Public Need be granted by the Commission and (3) a Water Quality Certification be issued for the 1,000 MW transmission facility described herein.

INTRODUCTION/PROCEDURAL BACKGROUND

On March 30, 2010, Champlain Hudson Power Express, Inc. (CHPEI) filed an application pursuant to Article VII of the Public Service Law (PSL) for a Certificate of Environmental Compatibility and Public Need for the Champlain Hudson Power Express Project. On April 30, 2010, the Secretary issued a deficiency letter identifying seven deficiencies and containing 83 requests for further information. Four supplements were provided on July 22 and 29, and August 6 and 11, 2010. The cover letter accompanying the July 22nd supplement noted that

CHPE Properties, Inc. (CHPE) had been added as a co-applicant;[1] the proposal had been revised to eliminate the High Voltage Direct Current (HVDC) circuit from Rouses Point, New York, to Bridgeport, Connecticut; and the proposed end point of the New York State HVDC circuit had been changed from a substation in Sherman Creek to a substation in Astoria, Queens, New York (Astoria).

On August 12, 2010, the Secretary issued a compliance letter informing Applicants that, as of August 11, 2010, their Article VII application, as supplemented, was in compliance with PSL §122. A prehearing conference was held before us on Tuesday, September 21, 2010, in Albany, New York,[2] to discuss, among other things, requests for intervenor funding.[3] In accordance with PSL §123(1), a public statement hearing was held on Monday, October 25, 2010, in Yonkers, New York. Additional public statement hearings were held in Kingston on Thursday, October 28; Schenectady on Wednesday, November 3; Whitehall on Thursday, November 4; and Plattsburgh on Tuesday, November 9, 2010.

By letter dated November 2, 2010, Applicants filed a notice of intent to enter into settlement negotiations, stating, *inter alia*, that settlement discussions were scheduled to begin on November 9, 2010, in the Commission's Albany offices. They

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[1] In order to ensure that at least one of the certificate holders will be a transportation corporation, CHPEI formed CHPE as a wholly-owned subsidiary pursuant to the Transportation Corporations Law (July 22nd cover letter at 1, note 1). CHPEI and CHPE collectively are referred to as Applicants.

[2] A video conference link to the Commission's New York City offices was provided.

[3] Pursuant to PSL §122(5), an intervenor fund of $450,000 had been established for this proceeding.

noted that the topics to be addressed as part of the discussions included need, environmental issues, alternatives, best management practices, construction techniques, and ordering clauses.[4] Settlement discussions ensued[5] and continued for approximately 16 months, culminating in the February 2012 filing of a Joint Proposal (JP) purporting to resolve all issues in this proceeding among the signatory parties. The JP, attached as Appendix 2, has the following signatories: Applicants; Department of Public Service Staff (Staff); Department of Environmental Conservation (DEC); Department of State (DOS); Department of Transportation (DOT); Department of Agriculture and Markets; Office of Parks, Recreation, and Historic Preservation (OPRHP); the Adirondack Park Agency (APA); the Cities of New York (NYC) and Yonkers; the Palisades Interstate Park Commission; Riverkeeper, Inc. (Riverkeeper); Scenic Hudson, Inc. (Scenic Hudson); the N.Y.S. Council of Trout Unlimited; and Vermont Electric Power Company, Inc. (VELCO). VELCO and DOT support the JP only with respect to certificate conditions that address their specific concerns, which are, respectively, the requirements and restrictions governing work activities and infrastructure co-location; and the provisions addressing the use and protection of highways, roads, streets or avenues and other transportation facilities owned or operated by DOT or under DOT's jurisdiction. The Department of Agriculture and Markets in its supporting statement also indicates that it limits its endorsement of the JP to the terms and conditions

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[4] In accordance with 16 NYCRR §3.9, the notice was reported to the Commission on November 4, 2010.

[5] A list of parties participating in the settlement discussions as of the January 19, 2011 status report on settlement efforts is attached as Appendix 1.

designed to identify, protect, mitigate, and if need be, remediate agricultural resources impacted by construction.

The JP addresses, *inter alia*, the findings the Public Service Commission (Commission, PSC) must make pursuant to PSL §126(1). It contains proposed certificate conditions, Environmental Management and Construction Plan (EM&CP) guidelines, and a proposed Water Quality Certification. It also contains a list of the testimony and the JP exhibits and JP appendices proffered by the signatories in support of the terms of the JP and Applicants' requested Article VII certificate.

The JP contains proposed routing changes and provisions for a High Voltage Alternating Current (HVAC) cable circuit in Astoria between the Astoria Annex and Rainey substations. It provides for the establishment and funding of the Hudson River and Lake Champlain Habitat Enhancement, Restoration, and Research/Habitat Improvement Project Trust (Trust) to be used to study and mitigate any possible impacts of the facility's underwater cables on habitat in the Hudson River Estuary, the Harlem and East Rivers, and Lake Champlain, and their tributaries.[6] The JP also contains terms specifying Applicants' other obligations, including limitations on construction periods in both Lake Champlain and the Hudson River; establishment of "Exclusion Areas" within the Hudson River where construction may occur only as agreed to by DEC or as determined by the Commission; detailed requirements governing consultation and coordination with utilities and other owners or

[6] The Trust will receive funding of $117.15 million (nominal dollars), beginning with an initial payment of $2.5 million at the facility's financial closing, followed by additional, annual payments over a 35-year period, commencing with the facility's commercial operation date. See Hearing Exhibit 127, Section U and Table 2 (Summary of the Payment Stream for the Trust, page 117 of 147).

operators of co-located infrastructure prior to any entry onto land to prepare for or begin construction of the facility and prior to the formal filing of EM&CP documents; and detailed provisions governing the reimbursement of costs incurred by such owners or operators in reviewing, studying and supervising Applicants' construction plans.

After the JP was filed, we held another procedural conference. We conducted additional public statement hearings in Washington, Schenectady, Albany, Greene, Rockland, and Queens Counties, and another site visit in Rockland and Queens Counties.[7] Additional stipulations, two signed by Applicants, Staff and Consolidated Edison Company of New York, Inc. (Con Edison) and one signed by Applicants and Con Edison, were filed in June and July 2012. The first two stipulations further addressed merchant status (June 4th Stipulation, Hearing Exhibit 150) and deliverability (June 26th Stipulation, Hearing Exhibit 151) and proposed changes to certificate conditions 15 and 133. The third stipulation resolved issues surrounding the location of the converter station and use of the Luyster Creek property owned by Con Edison, and proposed changes to certificate conditions 21 and 22(f) (July 11th Stipulation, Hearing Exhibits 129 and 130). In addition, Applicants and Con Edison agreed to revise the proposed routing through the Astoria site in order to avoid an existing liquefied natural gas facility (Hearing Exhibit 152).

Evidentiary hearings were held on July 18, 19, and 20, 2012. At the evidentiary hearings, testimony and exhibits were proffered by witnesses for Applicants, Staff, and the Independent Power Producers of New York, Inc. (IPPNY). The

[7] In total, we conducted four site visits, three on November 17 and 18 and December 1, 2010, and one on May 1, 2012.

evidentiary hearing record consists of 219 hearing exhibits[8] and over 700 transcript pages.[9] In addition, parties submitted initial and reply statements on March 16 and 30, 2012, and initial and reply briefs on August 22 and September 7, 2012.

Except as noted above, the signatories recommend adoption of all of the terms of the JP, along with the proposed certificate conditions as modified by the stipulations filed on June 4 and 26 and July 11, 2012. New York Power Authority (NYPA) neither supports nor opposes the project but it requests approval of several proposed certificate conditions that address its concerns. Con Edison originally opposed the project; however, in July 2012, it reached a resolution of its objections to the project, and now requests approval of the JP provisions that address its concerns.[10] IPPNY, Entergy Nuclear Marketing, LLC and Entergy Nuclear Fitzpatrick, LLC (Entergy), Central Hudson Gas & Electric Corporation (Central Hudson), and International Brotherhood of Electrical Workers, Local 97 (IBEW) oppose the project and the JP.

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[8] The hearing exhibits include, *inter alia*, the 125 exhibits that accompanied the JP.

[9] With the exception of granting (1) IPPNY's request that we incorporate by reference mothballing notices filed with the Commission on December 14, 2011, and August 3, 2012, by Astoria Generator Company, L.P., and (2) an unopposed Joint Motion to incorporate by reference the New York Independent System Operator's Final 2012 Reliability Needs Assessment, the record was closed at the end of the evidentiary hearings on July 20th. See Ruling on Motions to Incorporate by Reference or Take Notice Filed by DEC, jointly with Applicants and Staff; and, Separately, by IPPNY and Entergy (issued August 21, 2012) and Ruling on Motion to Incorporate or Notice (issued October 10, 2012).

[10] As a result of the stipulations, Con Edison and NYPA did not introduce their pre-filed testimony and/or exhibits into the record at the evidentiary hearing.

PROJECT DESCRIPTION/PROPOSED ROUTE

The HVDC Transmission System, as proposed, would comprise two solid dielectric (i.e., no fluids) HVDC electric cables, each approximately six inches in diameter, extending from the international border to the converter station in Astoria. From the converter station, two HVAC circuits would connect to NYPA's 345 kV gas insulated switchgear (GIS) substation located at the complex of electric generating facilities located north of 20th Avenue and 29th Street in northernmost Astoria. The Astoria-Rainey Cable would connect that substation to Con Edison's 345 kV Rainey substation located on the northwest corner of 36th Avenue and Vernon Boulevard in Astoria. The HVDC transmission cables would be installed either underwater or underground along the proposed route. The converter station would be connected to the NYPA GIS substation by an underground HVAC line. The HVAC cables of the Astoria-Rainey Cable would be installed underground in the streets of New York City.[11]

The converter station would be installed on properties currently owned by Con Edison located in an industrial zone in Astoria. The HVDC would be a "compact type" with a total footprint (i.e., building and associated areas and equipment) of approximately 4.5 acres.

The proposed route of the facility (the Route) is depicted on a series of maps included as JP Appendix B.[12] The depiction is of a nominal centerline (the Centerline) and an Allowed Deviation Zone. Those portions of the Allowed Deviation

[11] The Astoria-Rainey Cable would be constructed, owned, and maintained by the facility's owners (also referred to as Certificate Holders) and would be under the operational control of the New York Independent System Operator.

[12] See also Hearing Exhibit 152.

Zone ultimately determined to be actually affected by construction of the facility, as well as certain areas outside the Allowed Deviation Zone that are needed temporarily for site investigation, access, and construction, are referred to as the Construction Zone.

The HVDC portion of the proposed transmission system would originate underwater at the international border between the United States and Canada in the Town of Champlain, New York and continue south in Lake Champlain. Two cables would extend south through Lake Champlain for approximately 101 miles entirely within the jurisdictional waters of New York State. At the southern end of Lake Champlain, the cables would exit the water in the Town of Dresden, New York.

From Dresden, the HVDC transmission system would continue overland for approximately 11 miles primarily within the right-of-way (ROW) of NYS Route 22, to the Village of Whitehall. The cables would be buried along this overland route to avoid installing HVDC cables within the Hudson River polychlorinated biphenyl (PCB) site (U.S. Environmental Protection Agency Identification Number NYD980763841), which stretches from Hudson Falls, New York, to the Federal Dam at Troy, New York.[13] In the Village of Whitehall, the cables would transition from the Route 22 ROW to enter the existing railroad ROW owned by Canadian Pacific Railway (CP) and remain buried for approximately 65 miles in and along the railroad ROW from Whitehall to Schenectady.

In Schenectady, the proposed cable route would enter Erie Boulevard just north of the railroad crossing at Nott Street and continue along Erie Boulevard to a point south of

[13] Overland routes are also proposed in order to avoid certain sensitive areas within the lower Hudson River.

State Street where it would again enter the railroad ROW.[14] The route would follow the railroad ROW for a short distance, and would then deviate west of the railroad property, pass under Interstate 890, then turn south along the eastern edge of the General Electric property, approximately parallel with the CSX railroad (CSX), re-entering the CP railroad ROW just north of Delaware Avenue. From this point in Schenectady, the line would follow the CP railroad ROW to the Town of Rotterdam, New York. In Rotterdam, the route would transfer from the CP ROW to the CSX ROW and proceed southeast for approximately 24 miles before entering the Town of Selkirk. The cables would then travel south for approximately 29 miles generally in and along the CSX ROW through Ravena, New Baltimore, Coxsackie, the Town of Athens, and the Village and Town of Catskill, before entering the Hudson River in the Town of Catskill (hamlet of Cementon).

Upon entering the Hudson River via Horizontal Directional Drill (HDD), the HVDC underwater cables would be located within the Hudson River for approximately 67 miles until reaching a point north of Haverstraw Bay. The cables would leave the water via HDD and enter the CSX ROW in the Town of Stony Point, Rockland County. The cables would bypass Haverstraw Bay for approximately 7.66 miles, via three HDD installations under the Stony Point State Historic Park Site and Rockland Lake State Park.

Thereafter, the cables would enter the Hudson River via HDD, and be buried in the river for approximately 20.7 miles

[14] Along this portion of the route there are several alternative routings that include both the railroad ROW and various public ways for transitioning from the railroad to the city streets. The public ways include Nott Street, North Jay Street, Green Street, North Center Street, Pine Street, Union Street, Liberty Street and State Street as well as private property (Parking Lot) at approximately 160 Erie Boulevard.

to the Spuyten Duyvil, which leads to the Harlem River. The cables would extend south-easterly within the Harlem River for approximately 6.6 miles, exiting the water to a location along an existing railway ROW in the Bronx and continuing along that ROW for approximately 1.1 miles. At this point, the line would enter the East River via HDD, cross the East River and make landfall at Astoria.

At Astoria, the cables would terminate at a converter station to be located near Luyster Creek, north of 20th Avenue. From the converter station, a 345 kV underground circuit would connect to the existing 345 kV GIS substation owned by NYPA. The circuits would interconnect with the NYPA substation near the site of the Charles Poletti Power Project in Queens, New York.

PROJECT OPERATION

Applicants propose to build and operate the HVDC portion of the facility on a merchant basis, meaning that Applicants will not rely on cost-of-service rates to recover the majority of the project costs identified in this proceeding but will instead recover the majority of the project's costs from users of the facilities.[15] The facility has received authorization from FERC to charge negotiated rates and to enter into negotiated pre-subscription agreements with one or more "anchor" customers for up to 75% of the facility's throughput, with the remaining 25% of the line's capacity to be available to all bidders in an open season. As a condition of the

[15] Applicants have reserved the right to recover the costs associated with the use of the Astoria Rainey cable to deliver energy and capacity not transmitted over the HVDC transmission system on a non-merchant basis, that is, pursuant to cost-based rates set by the Federal Energy Regulatory Commission (FERC). Tr. 65, 76.

certificate, Applicants must have 75% percent of their service under binding contract for a period of at least 25 years before commencing construction in New York State.[16]

Currently, Applicants do not have any contracts with shippers. However, Applicants and Hydro-Québec[17] are exploring the possibility of Hydro-Québec becoming an "anchor tenant" for the project.[18] If Hydro-Québec becomes the anchor tenant, it may commit to up to a 40-year purchase of 75% of the transmission rights and would invest in new transmission in Québec that is necessary to support the project's 1,000 MW capacity.[19]

Applicants expect to ship mostly hydroelectric and wind power through the proposed HVDC cables, with the most likely source being the four-station, 1500 MW Romaine hydro

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[16] Tr. 65, Hearing Exhibit 150.

[17] Hydro-Québec is a Crown corporation wholly owned by the province of Québec. It has been developing and operating Québec's hydropower resources for over 50 years. Hydro-Québec generates, transmits and distributes electricity and consists of four divisions: Hydro-Québec Production, its power generation division; Hydro-Québec TransÉnergie, its transmission division; Hydro-Québec Distribution; and, Hydro-Québec Equipment and Services, its construction division. Hearing Exhibit 197 at 1.

[18] Hearing Exhibit 197 at 3.

[19] Id. Applicants have not finalized interconnection plans and details, but studies show that the project can be connected to the New York State Bulk Power System without adversely affecting reliability. JP ¶127. Exploration is underway to determine the feasibility of an interconnection on the Canadian side of the border. TransÉnergie would determine the feasibility of an interconnection on the Canadian side of the border. See Comments filed on March 30, 2012, by H.Q. Energy Services (U.S.), Inc. (HQUS). HQUS is the U.S. power marketing subsidiary of Hydro-Québec Production, the power generating division of Hydro-Québec.

complex that is currently under construction by Hydro-Québec in Canada, and expected to be put in service starting in 2015.[20]

GENERAL SUMMARY OF PARTY SUPPORT AND OPPOSITION

Parties supporting the project represent a wide range of diverse interests. They argue that the project offers numerous benefits, including reduced emissions, more competitive energy prices, increased supply of energy and capacity, increased diversity of supply, and reliance on private investments for its construction costs, all with minimal environmental and visual impacts. The parties opposing the project include IPPNY and Entergy, who represent incumbent New York generators, IBEW, and Central Hudson. Among other things, the party opponents assert that the project is not needed for system reliability, does not address existing transmission constraints, is uneconomic (meaning its costs will exceed its anticipated benefits) and does not advance several important state policy goals, including creating in-State jobs and promoting in-State renewable resources. If certificated, they say, the project will ultimately prove detrimental to consumers, to the competitive electric market, and to the State as a whole.

Public Statements and Comments[21]

As noted above, five public statement hearings were held in the Fall of 2010. Speakers during this initial series of public comment sessions included representatives of the City of Yonkers; Scenic Hudson Inc.; Yonkers Committee for Smart Development; Ground Work Hudson Valley; Reezak Environmental Education Center; Sierra Club; Atlantic Chapter; the Hudson

[20] Hearing Exhibit 197 at 1.

[21] These include public comments as expressed at the public statement hearings or in filed comments, electronic and voice mail, and correspondence.

River Sloop Clearwater; the Lake Champlain Committee; Saranac Power Partners the Adirondack Council; the Citizens Environmental Coalition; a former Commissioner of the Vermont Department of Environmental Conservation; and approximately eight interested members of the public.

As further noted above, after the JP was filed, six additional public statement hearings were scheduled in areas of the State where the proposed project route was revised. In this second series of public statement hearings, 17 individuals or members of organizations provided comments and identified many of the same concerns and issues identified in the first series of public statement hearings. Several of the commenters represented organizations that had commented previously.

In addition to comments received during the public statement hearings, approximately 100 written public comments have been received by the Department.

Comments in Support

Many comments were received from members of the public in support of the facility. Larry Federman, President, Northern Catskills Audubon Society, stated that the facility is an improvement over previously proposed projects. He stressed the need to avoid sensitive environmental areas along the facility route. C.U.N.Y. Professor P. J. Gammarano stated that the facility is a most timely addition that will promote less expensive electrical power from non-polluting sources. He stated that this additional transmission line will assure a lower electricity rate for many ratepayers for many years into the future.

The Lake Champlain Committee (LCC) is a bi-state citizens' environmental organization. LCC Executive Director Lori Fisher stated that the LCC approves of revisions to the project provided in the JP, including the plan to minimize the

impacts to wetlands in the southern portion of Lake Champlain and the changed cable application method from water jet plow to shear plow. The LCC also supports the provision creating and funding the Hudson River and Lake Champlain Habitat Enhancement, Restoration, and Research/Habitat Improvement Project Trust.[22]

The National Parks Service of the U.S. Department of the Interior, the Saratoga National Historical Park, the N.Y.S. Office of Parks, Recreation, and Historic Preservation, and the Town of Clifton Park each advocate for recreational uses of railroad ROWs proposed to be used in this project. Their requests are supported by other groups including Saratoga Preserving Land and Nature (Saratoga PLAN), Parks & Trails New York, the New York State Snowmobile Association, the Washington County Association of Snowmobile Clubs, and the Charlton Snowmobile Club. These commenters assert that the rail corridors that Applicants propose to use offer significant opportunities for trails in both Saratoga and Washington Counties. In Washington County, they say, this corridor, along with lands owned by the NYS Canal Corporation, could complete the 58-mile Waterford to Whitehall Champlain Canalway trail.

On October 21, 2011, the Washington County Board of Supervisors adopted Resolution No. 220 to "Support Use of the Old Champlain Canal as the Preferred Route of the Proposed Transmission Lines from Whitehall South to At Least Ryder Road." The Board's Resolution also calls for the adoption of a "Champlain Canalway Train Action Plan" to create a recreational trail into the Village of Whitehall that is not near active railroad tracks.

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[22] See, Hearing Exhibit 127, Revised Certificate Conditions, Proposed Certificate Condition 165, and Stipulation Extending Time for Submission of Trust Agreement (dated October 19, 2012).

These commenters have identified four discrete sections where use of the railroad ROWs acquired by Applicants for the facility could enhance recreational trail networks:

1. Washington County/Canal Corporation sections - Applicants should place the power lines under the towpath of the Old Champlain Canal from Poultney Street in Whitehall south to where the old canal intersects with the Amtrak D&H line just north of Champlain Canal Lock 11.

2. Town of Greenfield - Daniels Road section between Route 9 and Clinton Street ties into an extensive trail system, referred to as the Palmertown Ridge Trail, which reaches north through Greenfield and Wilton into Moreau Lake State Park. Additionally, the Daniels Road connection could tie into the Skidmore College trail system leading into the City of Saratoga Springs.

3. City of Saratoga Springs - from Geyser Road on the north to Oak Street on the south in the Village of Ballston Spa. This connection in all or in part will connect the Zim Smith Trail on the south (currently from Coons Crossing in Halfmoon to the Village of Ballston Spa) to the City of Saratoga Springs and the Saratoga Spa State Park.

4. Towns of Ballston and Clifton Park - Lake Hill Road in the Town of Ballston to connect to the Ballston Veterans Trail south to Schenectady County where it can link to the Hudson Mohawk Bike Path on the south side of the river.

NYS Conference International Union of Operating Engineers President Daniel J. McGraw stated his union's support for the facility and the JP. The union's members consist of over 30,000 operating engineers who work as heavy equipment operators, mechanics and surveyors in the construction industry and stationary engineers, custodial engineers, and building inspectors who work in operations and maintenance.
The Laborers' International Union of North America, the Long Island Association, Inc., the New York League of Conservation

Voters, and the North Country Chamber of Commerce (representing businesses in five upstate counties) all support the project.

On March 30, 2012, Maxime Lanctôt, Executive Vice President-Business Development and Strategy, HQUS provided a comment in response to other comments. Ms. Lanctôt stated that the proposed Champlain Hudson project is well designed and timely, and that it will contribute to the long-standing electricity relationship between New York and Québec. HQUS's parent company owns or controls a substantial amount of generation capacity and is increasing this capacity by building additional hydro complexes in Québec. Ms. Lanctôt stated that HQUS has been in active discussions with Champlain Hudson, and although no agreement is finalized, HQUS is "sufficiently interested" to request a study to explore the economic and technical feasibility of an interconnection on the Québec side of the border. HQUS supports Commission approval of the facility.

Comments in Opposition

Public commenters opposed to the facility include N.Y.S. Senator George Maziarz;[23] N.Y.S. Assembly Member Kenneth P. Zebrowski; Town of Haverstraw Supervisor Howard T. Phillips, Jr.; Town of Clarkstown Supervisor Alexander J. Gromack; Town of Stony Point Supervisor Geoffrey Finn; Village of Haverstraw Mayor Michael F. Kohut; Village of West Haverstraw Mayor John F. Ramundo, Jr.; the Business Council of Westchester; the Hudson Valley Gateway Chamber of Commerce; the New York Affordable

[23] On December 12, 2012, Senator Maziarz filed a transcript of an October 23, 2012 public hearing that he convened in Stony Point, in his capacity as Chair of the N.Y.S. Senate Standing Committee on Energy and Telecommunications "To Determine And Analyze The Champlain-Hudson Power Express And Its Impact On The Residents Of The Town Of Stony Point."

Reliable Electricity Alliance; Westchester County Association; Bronx Chamber of Commerce; the Building and Construction Trades Council of Rockland County; the African American Men of Westchester, Inc.; Local Union 754 (Chestnut Ridge); IBEW Local Union 363 (Harriman); the Metro Pilots, New York Harbor and Hudson River; the Maritime Association of the Port of New York/New Jersey; the Hudson River Pilots' Association; Stony Point Historical Society; the Sierra Club Atlantic Chapter; Kevin P. Mahar, P.E.; and many interested members of the public.

N.Y.S. Senator Maziarz, labor union representatives and others stated that because the proposal is for a direct current transmission line, the facility will provide no ability for upstate generators to tie in to the facility, to transport their capacity downstate. These commenters contend that many megawatts of electric capacity are stranded upstate with no ability to reach markets in southern and eastern portions of the State, due to limitations of the electric transmission system. These commenters further asserted that the proposed project will adversely impact many upstate jobs and adversely impact the tax base of upstate counties.

Several commenters questioned the need for the facility, and advocated instead for consideration of alternative technologies, including development of renewables, storage technology, local generation, and conservation.

Some commenters raised concerns about potential adverse impacts on Lake Champlain, the Hudson River, and other waterbodies, including impacts to benthic habitat and water quality standards.

Some opined that Applicants' proposed use of the upstate road and railroad ROWs for its facility provides no real tangible benefits to the upstate residents. They say that for the land-based portions of the facility, Applicants should

provide an evaluation of health and welfare impacts on upstate residents.

Some commenters stated that the residents along existing railroad ROWs have had little or no say as to the rail corridor's location or the health and welfare impacts associated with the corridors. In some instances, the railroad ROW is also the pathway for several other utility uses. The addition of Applicants' facility to these ROWs, they argue, will negatively affect the property values for nearby residents. They say Applicants should be required to identify mitigation measures for such impacts. Other commenters contend that the Commission should consider the potential homeland security issues resulting from the concentration of several utilities along a single railway corridor.

Yet other commenters contend that the railroad ROWs have lacked a continual upkeep and maintenance program, and as a result, old rails, ties, equipment, and trash are commonplace in these ROWs. They say the Commission should require a funded ROW maintenance program in the event it grants a certificate for this project. Lastly, several commenters asserted that the proposed use of railroad ROWs raises environmental justice issues.

Some commenters asserted that the application should be reviewed for compatibility with the Governor's draft N.Y.S. Climate Action Plan. These commenters contend that, rather than risk the continuation of Lake Champlain and Hudson River degradation, this entire project should be terrestrially based. Some full-time Lake Champlain lakefront residents stated that military and other artifacts located on the lake's bottom must be preserved; and further, that the lake already suffers from adverse impacts of overuse.

Adirondack Wild, Friends of the Forest Preserve (Adirondack Wild) is a membership organization that promotes public and private land stewardship in the Adirondack and Catskill Parks. Adirondack Wild expressed concern that the facility does not comply with the "forever wild" provisions of the New York Constitution, Article 14.

On June 19, 2012, the Board of the Rockland County Legislature approved Resolution No. 314 of 2012, "Opposing the Proposed Champlain Hudson Power Express Inc., Transmission Line in Rockland County." The Board's Resolution sought additional time for public comment on this project and requested additional hearings in Rockland County.[24] Further the Board's Resolution suggested two other Rockland properties, the Lovett and Bowline electric generation sites, as alternatives to generate electricity within New York, which would create jobs and stabilize the local tax base.

Some Rockland County citizens wrote to express their opposition to the facility. Some of these commenters asserted that adequate public notice regarding this proceeding was lacking and residents adjacent to the proposed project should have received individual written notification. Others questioned why underutilized existing generation in Rockland could not be reactivated or repowered, as an alternative to this facility, and expressed concern about potential adverse impacts to historic resources in Rockland.

An attorney for the Uashaunnaut, the Innu of Uashat and Mani-Utenam, First Nation commented that the tribes'

[24] In response to the requests of other Rockland County elected officials and citizens, pursuant to a notice issued on May 10, 2012, the Commission extended the date for receipt of public comments in this proceeding. The Commission requested comments by June 29, 2012, but stated that comments would be accepted throughout the pendency of the proceeding.

traditional lands are located in the North Shore region of Québec and in Labrador. The Uashaunnaut and a Canadian citizen group, Alliance Romaine, commented that they are opposed to Hydro-Québec's construction of the four-dam, 1,500 MW Romaine hydroelectric complex currently under construction on the Romaine River in Québec. These commenters contend that the Romaine hydroelectric facility will provide the power to Applicants' facility. Consequently, they assert, they also are opposed to Applicants' facility.

Other Comments

Some comments received neither clearly supported nor opposed the facility. Mid-Hudson Cablevision, a provider of internet and phone connectivity in Columbia, Greene, and southern Albany Counties, expressed concern about possible interference with its existing infrastructure that traverses the Hudson riverbed.

REQUIRED FINDINGS

The PSL provides that the Commission may not grant a certificate for the construction or operation of a major utility transmission facility unless it shall find and determine:

> (a) the basis of the need for the facility;
>
> (b) the nature of the probable environmental impact;
>
> (c) that the facility represents the minimum adverse environmental impact, considering the state of available technology and the nature and economics of the various alternatives, and other pertinent considerations including but not limited to, the effect on agricultural lands, wetlands, parklands, and river corridors traversed;
>
> (d) ... (1) what part, if any, of the line shall be located underground; (2) that such facility conforms to a long-range plan for expansion of the electric power grid of the

> electric systems serving this state and interconnected utility systems, which will serve the interests of electric system economy and reliability;
>
> (e) [not applicable][25]
>
> (f) that the location of the facility as proposed conforms to applicable state and local laws and regulations ..., all of which shall be binding upon the commission, except that the commission may refuse to apply any local ordinance, law, resolution or other action or any regulations ... or any local standard or requirement which would be otherwise applicable if it finds that as applied to the proposed facility such is unreasonably restrictive in view of the existing technology, or of factors of cost or economics, or of the needs of consumers whether located inside or outside of such municipality;
>
> (g) that the facility will serve the public interest, convenience, and necessity ....

Moreover, if the Commission determines that the location of all or a part of the proposed facility should be modified, it may condition its certificate upon such modification, provided that the municipalities and persons residing in such municipalities affected by the modification shall have had notice of the application as provided in PSL §122(2).[26]

The signatories state that the Commission must consider the totality of all of the relevant factors in making its determination of environmental compatibility and public need. They indicate that their support for issuance of an Article VII certificate to Applicants for the proposed facility,

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[25] PSL §126(e) applies to gas transmission lines.

[26] PSL §126(3).

as described in the JP, is based on the relevant statutory factors.[27]

In the sections that follow, we will summarize the parties' positions on the statutory findings that the Commission must make in this proceeding, presenting them in the same order in which they are listed in the statute.

1. Need for the Facility

PSL Article VII need is determined by examining numerous factors, including system reliability benefits, economic benefits for customers and the State, and the achievement of public policy goals.[28] As a result, PSL Article VII certificates have been granted to merchant facilities[29] even though the then-most recent Reliability Needs Assessment (RNA) showed no reliability need during the applicable 10-year planning horizon. In such cases, need was based on a demonstration of a merchant facility's ability to provide a useful bulk transmission connection to another region, alleviate existing transmission constraints, protect the security of the transmission network, and enhance system reliability.[30] Need also has been based on demonstration of a merchant facility's ability to provide economic and environmental benefits and an additional supply source in the

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[27] JP ¶18, p. 13.

[28] Case 08-T-0034, Hudson Transmission Partners, LLC, Order Granting Certificate of Environmental Compatibility and Public Need (issued September 15, 2010) (HTP Order) at 42.

[29] Merchant facilities are constructed and financed without reliance on ratepayer funding; their business and financial risks are borne by the project developers. See, e.g., HTP Order at 45-46.

[30] HTP Order at 42-47.

event that one or more of the types of risk factors cited in the RNA materialized.[31]

JP – Need[32]

The JP states that the proposed facility is needed to deliver about 7,640 gigawatt hours (GWh) per year of hydroelectric and wind energy generated in Canada to New York City. It lists the benefits of such deliveries as including reductions in wholesale electric power prices and expected reductions in emissions of sulfur dioxide (SO_2), oxides of nitrogen (NO_x) and carbon dioxide (CO_2). It cites the New York Independent System Operator's (NYISO) 2010 Comprehensive Reliability Plan (CRP) for its identification of several risk factors that could affect the implementation of the reliability plan and future system reliability, including higher than expected load growth (§3.1.1); environmental initiatives and zones at risk (§3.1.2); and the retirement of the Indian Point plant (§3.1.3). It notes the increasing reliance on customers' willingness to curtail their electric power demands (Special Case Resources or SCRs) and observes that such customers are not obligated to continue to register at the rates projected by the 2010 CRP. Though acknowledging that it is uncertain whether these risk factors will materialize or to what extent the facility could mitigate such impacts, the JP recites that the facility should mitigate the potential adverse impacts that may be associated with these risk factors.

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[31] Case 08-T-1245, Bayonne Energy Center, LLC, Order Adopting the Terms of a Joint Proposal and Granting Certificate of Environmental Compatibility and Public Need, With Conditions, and Clean Water Act §401 Water Quality Certification (issued November 12, 2009) (Bayonne Order), at 12-14.

[32] JP ¶¶19-21.

Finally, the JP asserts that the facility's delivery of up to an additional 1,000 MW of electricity to New York City would significantly increase energy supply capability and enhance fuel diversity by reducing the proportion of New York City's electricity needs supplied by natural gas-fired generation, thereby enhancing system reliability.

Parties' Positions on Reliability Need

IPPNY, Entergy and IBEW assert that there is no system reliability need for this project. They point to the NYISO's 2010 Reliability Needs Assessment (2010 RNA) for its finding that no new supply resources are needed over the NYISO's 10-year planning horizon that extends through 2020.[33] IPPNY and Entergy discount any reliance on the risks identified in the CRP, claiming that they are "speculative and unlikely" and are studied by the NYISO simply as a means of providing an outer bound to potential impacts.[34] Entergy dismisses the CRP risk factors as "mere footnotes" to the main finding that there are no reliability needs in the New York bulk system through 2020.

Applicants, Staff, and NYC argue that the need for this facility, as indicated by the terms of the JP, is supported by several bases, all of which are consistent with prior Commission findings concerning reliability, economics, wholesale competition and public policy. They note the importance and propriety of looking to a variety of factors, including system reliability benefits, economic benefits for customers and for the State, and achievement of public policy goals.

Applicants contend that the facility will meet the New York State Reliability Council's (NYSRC) installed capacity

[33] Tr. 436-437.

[34] Tr. 438-439.

requirements. They assert that the Commission therefore must consider both the extent to which (1) the facility will qualify for Unforced Delivery Rights (UDRs)[35] and (2) the installed capacity delivered using such UDRs is needed to meet applicable reliability standards. According to Applicants, the facility is eligible to receive up to 690 MWs of UDRs in the NYISO's 2012 Class Year Facilities Study and up to a total of 1,000 UDRs if one considers potential retirements and construction of additional facilities.[36]

Staff notes that New York City is a load pocket. Staff therefore argues that the facility will provide increased reliability by increasing import capability into the City and reducing NYC's dependence on local generation. NYC adds that the facility would enhance reliability because it is a highly controllable transmission resource that will offer voltage control, the ability to energize at lower voltages, as necessary, and the ability to match load and generation. It also says the facility will increase the number of energy sources available within the Con Edison service territory and prevent the propagation of system disturbances from, and into, the Hydro-Québec system. NYC notes that these are reliability enhancements that were recognized by the Commission in the HTP Order.[37]

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[35] UDRs are rights, as measured in megawatts, associated with new incremental controllable transmission projects that provide a transmission interface to a New York Control Area (NYCA) Locality (i.e., an area of the NYCA in which a minimum amount of installed capacity must be maintained). NYISO Installed Capacity Manual, January 2012, §4.14.

[36] As discussed, *infra*, IPPNY and Applicants disagree on this point.

[37] HTP Order at 42.

NYISO's 2012 Reliability Needs Assessment

Subsequent to the submission of briefs in this proceeding, the NYISO issued its 2012 Reliability Needs Assessment (2012 RNA). The 2012 RNA found that additional installed capacity in New York City and surrounding areas may be needed during the next 10-year planning period, starting in 2020. On October 10, 2012, we granted a motion by Applicants, Staff and NYC to incorporate the 2012 RNA into the record. Our ruling allowed parties to submit supplemental briefs evaluating the 2012 RNA as it pertains herein.

Parties' Positions on 2012 RNA

Applicants, Staff and NYC assert that the 2012 RNA's need finding directly addresses the disagreement as to the future need for additional installed capacity in New York City and surrounding areas that is reflected in the testimony of Mr. Younger, IPPNY's witness regarding the economics of the project, and Ms. Frayer, Applicants' witness on project economics. Applicants, Staff and NYC note that the 2012 RNA need finding was due to changes in market conditions occurring since the NYISO performed its 2010 RNA. They add that these same changes are cited in the JP and are relied upon by Ms. Frayer as factors supporting need for this project. They note that the 2012 RNA also examines several alternative scenarios that could move this capacity need date up to as early as 2016.[38]

[38] These include higher than forecasted load growth, the possible retirement of Indian Point, the possibility that all coal generation in New York State may be forced to retire in order to reduce carbon emissions and the possibility that additional generating facilities in New York City may be forced to retire due to other changes in air quality requirements. NYISO Final 2012 RNA at 40-56.

IPPNY states that the 2012 RNA need finding rests on the NYISO's assumption that 1,704 MW of generation that had merely filed mothball notices with the Commission had actually permanently retired those facilities.[39] IPPNY states that a generator electing to mothball its facility does so to retain the right for a period of time to re-enter the market if market conditions so warrant. IPPNY points to Mr. Younger's testimony that many of the mothball intention notices that have been submitted to the Commission explicitly referenced their intent to return to the market when market prices became sustainable. IPPNY observes that one of the generators subsequently rescinded its notice, and states that if others do the same, the potential need that was found to exist could be partially or entirely eliminated. IPPNY therefore concludes that both the 2012 RNA and Ms. Frayer erroneously rely on mothball notices, and thus neither provides a credible basis for assuming that this project may be needed to ensure system reliability.

IPPNY says that the 2012 RNA will not definitively identify and address reliability needs on the New York system. According to IPPNY, the NYISO will not address solutions to reliability needs unless the next step in the NYISO's planning process confirms that the need continues to exist. Even then, IPPNY argues that, if a need is confirmed, the NYISO must focus on whether such need is expected to materialize in the first five-year study period or the second.

IPPNY contends that there are other critical facts that limit the significance of the need finding. These facts include the 2012 RNA's express recognition that the Gowanus 1&4 units had rescinded their notice of intent to mothball after the

[39] Because one of the generators subsequently rescinded its notice, IPPNY intimates that this estimate is overstated by at least 268 MW.

2012 RNA base case assumptions were set and its statements that the base case for the next planning step will reflect that these units have, and will, continue to operate. It is because the NYISO says it will monitor and evaluate any change to system conditions -- including specifically, any change in the status of mothballed facilities -- that IPPNY opines the need preliminarily identified in the 2012 RNA is likely to be postponed and may be eliminated.

Finally, IPPNY says any reliability need identified in the second five years of the ten year planning period -- as is the case here -- only requires that the affected transmission owner submit a conceptual regulated backstop solution. IPPNY states that such a proposal may include the proposed return of some or all of the generating facilities that submitted mothballing notices.

In their supplemental briefs, Applicants state that the 2012 RNA need finding supports Ms. Frayer's testimony that the facility will provide $6.5 billion in capacity price savings over the period 2017-2026. They also state that the 2012 RNA undermines Mr. Younger's contrary testimony that Ms. Frayer's future generating capacity retirements analysis was unduly optimistic and her estimated capacity benefits were overstated. Applicants contend that the NYISO's explanation for its change in outlook from its 2010 RNA to its 2012 RNA – 1,000 MW reduction in generation capacity due to retirements, 200 MW increase in load growth and 100 MW less in SCRs -- vindicate Ms. Frayer's analysis finding that a number of generators currently serving New York City and its environs are likely to retire by 2020. They add that the findings in the 2012 RNA make clear that Mr. Younger's "static" assumption that all existing generators will continue to operate throughout the period from 2017 to 2026 cannot be squared with the realities of the

competitive market. Applicants urge reliance on the NYISO's assessment of the extent to which additional resources may be required to meet future reliability needs, especially given the long lead times associated with the construction of this and other merchant transmission projects.

NYC asserts that the 2012 RNA need finding is consistent with Ms. Frayer's testimony that updating the 2010 RNA to reflect current market conditions would reveal a downstate reliability need. NYC says the 2012 RNA contradicts Mr. Younger's testimony that a certificate should be denied because the 2010 RNA found no reliability need for new resources.

NYC acknowledges that market prices are uncertain, but asserts there is no record basis to conclude that units that are or will soon be mothballed will reverse their mothballing decisions. NYC also says that such units are likely categorized as such because they are uneconomic under existing market conditions. NYC adds that the evidentiary record is devoid of data demonstrating that (1) future market prices will be sufficient for such units to sustain commercial operations or (2) the 2012 RNA's reliability need determination otherwise may be negated.

NYC and Staff state that the 2012 RNA provides material evidence regarding a factor supporting the statutorily required need finding. NYC adds that the evidentiary record demonstrates that the merchant transmission line proposed herein would address needs substantially similar to those that the Commission relied upon when issuing certificates to the merchant facilities in prior proceedings (i.e., HTP and Bayonne).

Discussion

Even though relevant precedent establishes that the most recent RNA is not automatically dispositive, we note that

both the 2010 and 2012 RNAs examined similar scenarios when determining whether there will be a need for additional installed capacity in New York City and surrounding areas. Based on assumptions regarding these same scenarios and consideration thereof, the NYISO most recently concluded that there could be a potential need for additional installed capacity in New York City and surrounding areas as early as 2020, in order to offset generation retirements and reductions in SCRs and to meet expected additional load growth.[40] Thus, we find that the outlook expressed in the 2012 RNA buttresses proponents' arguments for granting a certificate for this facility.

In addition, we concur with Staff witness Paynter's testimony that entry of merchant projects in advance of a "reliability need" is not only consistent with, but is in fact an integral part of the NYISO's market-based planning process"[41] and we find that this proceeding presents a viable opportunity to authorize such an investment in electrical infrastructure in advance of an actual reliability need.

Parties' Positions Regarding Emissions Reductions

As noted above, the JP envisions reductions in emissions of sulfur dioxide (SO_2), oxides of nitrogen (NO_x) and carbon dioxide (CO_2) as a result of delivering 1,000 MW of hydroelectric and wind energy generated in Canada to New York City as one of the bases of project need and one of its public interest benefits. Applicants highlight witness Frayer's quantification of such benefits for the period 2017 to 2027; her estimated reductions in total emissions of SO_2, NO_x, and CO_2 are

[40] NYISO Final 2012 RNA at 7.

[41] Tr. 195.

1,329 tons, 5,612 tons and 35,434,116 tons, respectively.[42] They also point to her estimates for 2018, which calculated reductions in SO_2 of 243 tons, NO_x and CO_2, 1,026 tons and 3,890,175 tons, respectively.

Staff observes that its updated study yielded air emissions benefits for New York City of 40 tons of SO_2, 320 tons of NO_X, and 1,037,062 tons of CO_2.[43] For the State as a whole, Staff witnesses Gjonaj and Wheat calculated expected annual air pollutant emissions reductions of SO_2, NO_x, and CO_2 to be 751, 641, and about 1.5 tons per year, respectively, in 2018.[44]

Applicants state that the facility's ability to reduce air emissions associated with the generation of electricity consumed in New York State, as demonstrated by Ms. Frayer and Staff witnesses Gjonaj and Wheat, is a substantial environmental benefit. They assert this because New York City is a load pocket and thus often is forced to rely on older, less reliable, uneconomic, more polluting in-city generation to meet its needs. Both Applicants and NYC note that this facility can more competitively serve New York City load while at the same time displacing more polluting generation sources. Applicants conclude that the facility's air emissions benefits are sufficient, in and of themselves, to require a finding that the facility is needed and in the public interest.

NYC states that the facility will advance major energy and policy goals as set forth in its *PlaNYC 2030: A Greener, Greater New York (*PlaNYC*)*, which it describes as its policy blueprint intended to synthesize the economic and population

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[42] Tr. 304.

[43] Tr. 248.

[44] Tr. 246-247; Hearing Exhibit 204.

growth in the City with broad, multi-faceted efforts to protect and enhance the environment. Staff stresses that the facility presents a unique opportunity to advance several state policy objectives, including the avoidance of negative environmental impacts associated with fossil-fueled power plants, and implement several of the State's and the City's energy plan objectives, while relying almost entirely on private investments. Staff asserts that the emissions benefits are enduring and substantial.

Staff adds that areas outside the New York Control Area may also see air emissions benefits. Staff states, for example, that the four modeled control areas, New York, New England, Ontario, and the Reliability First Corporation, could benefit through a reduction of 4.8 million tons of CO_2 emissions in the year 2018.[45] Staff considers its air emissions benefit study results to be permanent facility benefits, meaning they can be expected to persist over the long term. Staff contends that a no build alternative could potentially result in the loss of significant emission reductions of SO_2, NO_x, and CO_2, because the facility will displace electricity that would otherwise be generated by burning fossil fuels.

Entergy states that any representations Applicants make as to the characteristics of its power are mere speculation since they have not entered into a contract nor conducted open season. Other than this statement, the project opponents do not address the facility's expected emissions benefits.

Discussion

Based on the testimony of Applicants' and Staff's witnesses and in light of the arguments by Applicants, Staff, and NYC, we conclude that the facility's expected and

[45] Tr. 249.

uncontested emissions benefits have been amply demonstrated and they support both the need and public interest findings.

Parties' Positions on Fuel Diversity

The JP projects that the facility's delivery of up to an additional 1,000 MW of electricity to New York City would enhance fuel diversity by reducing the proportion of New York City's electricity needs supplied by natural gas-fired generation. Increased fuel diversity is cited by proponents as component of the need for, and as a public interest benefit of, the project.

Applicants, Staff and NYC cite the facility's ability to increase fuel diversity, noting its consistency with Commission[46] and state policies encouraging diversification of the generation resource mix of energy sold in the State and increased reliance on renewable energy sources. Applicants add that the project would be consistent with Commission policies of reducing dependence on natural gas as a fuel for electric generation -- contributing to a reduction from 85% to 78%.[47]

Entergy, the only party to challenge claims that the project would enhance fuel diversity, observes that Applicants have conceded their lack of a supplier contract. As a result, Entergy asserts that any statements concerning source are purely speculative.[48]

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[46] Applicants cite Case 03-E-0188, Retail Renewable Portfolio Standard, Order Regarding Retail Renewable Portfolio Standard (issued September 24, 2004) at 22 (noting that the Commission has long been committed to a policy of diversifying the generation resource mix of energy sold in New York State as a means to improve energy security and independence, while ensuring protection of system reliability).

[47] Tr. 307-308.

[48] Entergy adds that Applicants have no authority or jurisdiction to compel the delivery of only hydroelectric or wind power to

Discussion

Entergy's assertions should be rejected because the record evidence indicates that the most probable source of the power to be supplied by this facility will come from Hydro-Québec's portfolio of supplies which consist predominately of hydro and wind power.[49]

Parties' Positions on Black Start

Applicants note that as a condition of the JP, they have agreed to "include in the Facilities Study for the HVDC Transmission System prepared by NYISO, and request that NYISO identify, the additional facilities required for the Certificate Holders to provide black start service, as well as the cost of those facilities."[50] Applicants assert that as a result of this condition the facility will be uniquely positioned to provide up to 1,000 MW of black start service in New York City.[51]

Entergy states that the project currently offers no black start capability and therefore does nothing to advance the State's interest in acquiring black start providers. IPPNY adds that there is no guarantee that the project will in fact provide black start service and the record is entirely devoid of any evidence that Applicants will provide such service.

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the facility. However, the likely supply consistently has been described as consisting of predominately, not exclusively, hydroelectric and wind power.

[49] We note that Entergy's arguments in this regard contradict its arguments for why (1) the project is not and will not remain "purely" merchant and (2) should therefore be subject to additional certificate conditions.

[50] Hearing Exhibit 127, proposed certificate condition 127.

[51] Staff also notes the possibility that the facility may be able to provide black start capability.

Discussion

Entergy and IPPNY are correct that the project currently offers no black start capability. The terms of the JP provide only that the ability of the project to provide such service will be explored. As a result, whether the project is capable of providing such a service, and, if so, at what cost, has not been demonstrated and should not be considered as evidence supporting the need or public interest findings.

Parties' Positions on Project Costs and Economics

Project Costs

The cost of the HVDC transmission system (i.e., the 1,000 MW HVDC transmission line from the U.S. border with Québec to Astoria and the 1,000 MW converter station to be constructed at Astoria) approximates $2 billion, while the estimated cost of the HVAC cable linking the substations in Astoria and Rainey is about $194 million.[52]

Applicants observe that these figures do not include real estate costs. They note that their President and Chief Executive Officer, Mr. Jessome, explained that real estate would be leased rather than purchased and therefore such costs are not appropriately included in the facility's capital costs.[53]

Entergy and IPPNY argue that project cost is understated. Entergy observes that Applicants have committed to construct a new four-breaker ring bus at the Astoria Annex, which will be housed in a new building approximately 72' long by 58' wide by 40' high with footings up to 8' below the surface, and have acknowledged that they will have leasing costs and potential increases in construction costs, costs Entergy says are not accounted for in the current cost estimates. IPPNY also

[52] JP ¶¶22, 23, pp. 14-15; Tr. 66; Hearing Exhibit 70 at 87.

[53] Tr. 81.

claims that the estimated capital cost is incomplete because it does not include the capital costs of the facilities in Québec required to interconnect the facility to the transmission system of TransÉnergie, the transmission provider in Québec.[54] Applicants estimate the capital cost of these additional facilities to be $346 million;[55] this estimate is uncontroverted.

Applicants, however, assert that the $346 million Canadian interconnection cost should not be considered as part of the capital costs of the facility for two reasons: (1) the Canadian facilities will be owned by TransÉnergie rather than by Applicants and therefore do not constitute part of Applicants' proposed facility and (2) the cost of the facilities in Québec will not be borne by shippers using the facility to transmit electricity from Québec to New York City because TransÉnergie's Open Access Transmission Tariff (OATT) expressly limits the costs for upgrades to a neighboring control area that TransÉnergie may pass through to shippers using its transmission system.[56] Because the upgrades to be constructed in Québec will transmit and deliver 1,000 MW of electricity into the New York Control Area, Applicants assert that this tariff provision requires TransÉnergie to bear the first $571 million in costs for these upgrades without passing them through to the users of those facilities. As the estimated cost of these upgrades is

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[54] Tr. 499.

[55] Tr. 67.

[56] Specifically, section E of TransÉnergie's OATT, entitled "Method for Calculating Maximums for Network Upgrades" provides, in pertinent part, that, "[t]he maximum amount to be borne by the Transmission Provider for Network Upgrades made to meet the requirements for Transmission Services offered ... shall be $571/kW multiplied by the new maximum capacity in kW to be transmitted on the system." See Hearing Exhibit 166 excerpt at 2.

well below $571 million, Applicants state that TransÉnergie is prohibited by its OATT from assigning any of the costs of these upgrades to shippers using those facilities, and Mr. Younger's contrary testimony must be rejected.

IPPNY notes that TransÉnergie, the likely shipper on the facility, is owned by Hydro-Québec, the facility's likely anchor tenant. IPPNY and Entergy assert that Hydro-Québec will seek to recover all of its costs through any avenue available to it, namely an above-market contract with a New York entity. IPPNY cites Hydro-Québec's Energy Highway RFI submission, where Hydro-Québec states that it will fund necessary transmission infrastructure investments by its reservation on Applicants' line, as evidence supporting IPPNY's position.[57] IPPNY claims that since the facility cannot operate without the Canadian transmission upgrades, the cost of such upgrades must be included in evaluating the project's economics -- which Mr. Younger did -- regardless of who pays for the upgrade.

Staff estimated the cost of the Astoria-Rainey Cable by using the NYISO's Class Year 2010 Facilities Study.[58] Staff notes Applicants' agreements that (1) all costs associated with the use of the Astoria-Rainey Cable to deliver energy and capacity transmitted over the HVDC Transmission System will be recovered exclusively on a merchant basis with no reliance on cost-of-service rates and (2) there will be no cost-based charges for use of the Astoria-Rainey Cable for any energy or capacity produced by the existing Astoria Energy II Generating Station.[59]

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[57] Hearing Exhibit 197.

[58] See Hearing Exhibit 70 at 87.

[59] Hearing Exhibit 150, Stipulation Regarding Revised Certificate Condition 15, dated June 4, 2012.

NYC acknowledges that it is not in a position to independently confirm the accuracy of the cost estimates advanced by any party, but, as with other merchant projects, it signed the JP in reliance on the cost estimates advanced by the merchant developer. NYC highlights that, as a result of several efforts to strengthen Applicants' representations that the facility will be constructed, financed, and operated on a merchant basis in a manner consistent with the terms and conditions of the JP, Con Edison agreed to give up arguments that Applicants ultimately might shift the risks and costs of the facility onto customers. NYC and Staff also stress that the difficulty of precisely estimating the cost of constructing the Astoria-Rainey Cable has been addressed by Applicants' agreements to (1) include an updated cost for the construction of the Astoria-Rainey Cable with its proposed EM&CP plan and (2) to file a request for reconsideration of the public interest, convenience and necessity determination if the updated cost exceeds the estimated cost by 10% or more.

Project Economics

The record includes much conflicting testimony as to whether the facility will produce economic benefits. The parties disagree about the methodology that should be used to forecast such benefits and about the application of any given methodology.

"Production Cost" Analyses

Staff witness Paynter performed an analysis comparing the cost of 1,000 MW of Canadian hydroelectric power delivered to New York City via the facility to the cost of building and operating 1,000 MW of combined cycle gas-fired turbine (CCGT) generation of similar capacity located in New York City. Staff says that it provided this comparison solely as an estimate of one important component of societal benefits -- total production

costs -- to assist the Commission in deciding whether the proposed facility can be expected to yield net societal benefits. Mr. Paynter estimated the long-term production cost savings of the facility as the cost of the facility plus the cost of the hydropower (dams), less the cost of the CCGT and the present value of the plant's fuel and other operating and maintenance costs. Over a 35-year period, the savings (net present value) ranged from $0.4 billion to $2.6 billion (in 2015 dollars).[60]

Applicants' witness Frayer estimated annual average "production cost savings" -- in this instance meaning the difference in total annual short-run costs of production for generating electricity between the Base Case and the Project Case, including (i) the change in generation costs from internal generation and (ii) the change in marginal costs of imports[61] -- of $606 million, or $6.1 billion in total over the 10-year period from 2018 to 2027, as compared to IPPNY witness Younger's estimate of only $590 million in total over the same 10-year period. IPPNY identified two factors that account for the difference between these two estimates: (1) different assumptions concerning the marginal cost of the electricity

[60] Tr. 198-199; see also Hearing Exhibit 202. Staff initially estimated these benefits as ranging between $1.2 billion and $3.2 billion dollars over a 35-year period (net present value in 2015 dollars). Tr. 165. Staff also estimated significant short-term ratepayer benefits, but adds that such benefits largely represent price impacts or transfers between producers and consumers and are short lived due to the market tendency to respond to, and offset, such price impacts over time. Tr. 171-172; see also Hearing Exhibit 204. Staff's short-term estimates are discussed *infra*.

[61] Tr. 282.

supplies delivered by the facility[62] and (2) the inability of Ms. Frayer's model to accurately represent the interfaces between the NYISO and neighboring control areas.[63]

IPPNY witness Younger performed two production cost savings analyses. The first used the same General Electric's Multi-Area Production Simulation (GE MAPS) model J database that Staff used for its economic analysis of wholesale market benefits Staff provided in the JP. IPPNY states that the production cost savings metric more accurately measures the societal benefits of a proposed project because it takes into account market responses to short-term price changes. Mr. Younger used Staff's representation of the physical and economic characteristics of the project and modeled the first ten years of the project's expected operation. Mr. Younger then made limited updates to Staff's MAPS database to account for the most recent available data on gas prices, generator retirements and full deliveries of 1,550 MW out of the Astoria Annex. Then, using the methodology the NYISO performs under its Congestion

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[62] Specifically, IPPNY claims that Ms. Frayer's decision to treat the energy that would be delivered by the project as if it were free, or close to free is wrong because IPPNY's witness (Mr. Younger) testified that the energy that would be delivered across the project has an opportunity cost that reflects Hydro-Québec's ability to sell the energy elsewhere. IPPNY's witness asserts that when this "flaw" is corrected, Ms. Frayer's estimated project production cost savings closely mirror his own.

[63] Tr. 509-513. IPPNY argues that by using a set of static supply curves to represent the imports and exports into the NYISO from neighboring areas -- curves that do not accurately represent how marginal costs in the neighboring regions vary across the time of day and time of year -- Ms. Frayer's model artificially decreases the amount of resources that can effectively respond to a significant market (e.g., the introduction of the project) thereby producing artificially high savings projections for the project. Tr. 512.

Assessment and Resource Integration Study (CARIS) to determine whether a transmission project is economic, Mr. Younger compared the first ten years of the annualized cost of the project to its production cost savings over the same period.

IPPNY explains that, pursuant to the CARIS, a benefit/cost ratio of more than 1.0 indicates that the project is economic, and a benefit/cost ratio of less than 1.0 indicates that the project is uneconomic. The benefits represent the production cost savings produced by displacing less efficient internal NYISO generators and the net savings associated with net imports that result from adding the project. IPPNY states that the results showed that over the first ten years of the project's operation it would cost a total of over $2 billion but create only $590 million in benefits, thus producing a benefit/cost ratio of only 0.29, substantially below the minimum threshold used by the NYISO to determine whether a proposed transmission project is economic. IPPNY also states that once the Canadian transmission upgrades are added, the ratio changes from 0.29 to 0.25. IPPNY states that this analysis, too, shows that the project is uneconomic by such a substantial margin that it will not be sustainable in the competitive market without significant and long-lasting extra-market subsidies in some form.[64]

In his rebuttal testimony, Staff witness Paynter testified that the CARIS test is inapplicable to the project because it is a merchant facility and is not requesting regulated dollars. He also testified that "limiting merchant

[64] Tr. 489-490, 504. Entergy also relies on Mr. Younger's production cost savings analysis to assert that the project is grossly uneconomic and will require a significant subsidy in the "above market manner" that Entergy says is intimated by Hydro-Québec in its RFI submission.

developers to those projects that pass the CARIS test would turn the NYISO's process on its head, by deterring market-based projects and ultimately forcing greater reliance on regulated projects."[65] IPPNY says it is not advocating that the CARIS benefit/cost test be used generally as the determinative factor to identify whether a project is economic. IPPNY, however, asserts that its use is entirely appropriate as an additional measure of the project's economics.

According to IPPNY, another of its analyses consisted of correcting the errors in the production cost analysis performed by Staff to support the JP.[66] IPPNY contends that Staff significantly understated the combined costs of the project and the Hydro-Québec hydro facility while at the same time substantially overstating the CCGT costs that would be avoided by adding the project.[67] IPPNY claims that when Mr. Younger corrected for these errors, Staff's analysis shows that the project is just as uneconomic as Mr. Younger's other two analyses indicated.

IPPNY says that Mr. Younger found that Staff's estimated costs of the hydro facility were understated in three respects: (1) an atypical hydro facility was used as the basis for estimating Hydro-Québec hydro costs, (2) Staff failed to include all the costs of the new hydro facility, and (3) Staff understated the losses associated with delivering power from the hydro facility to the injection point for the project on the

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[65] Tr. 192.

[66] IPPNY asserts that, while Staff coined its study a "production cost analysis," Staff did not actually provide information concerning the production cost savings metric that Staff has consistently relied upon in other merchant certification proceedings.

[67] Tr. 433.

Canadian side of the interface. IPPNY's witness testified that Staff estimated the cost of a new hydro facility in Hydro-Québec by averaging the MWh costs of two recent Hydro-Québec projects, the Eastmain-1-A, La Sarcelle and Rupert Diversion (ELRD) project and the Romaine project. According to IPPNY, Staff (1) understated the costs of the Romaine project by failing to account for the cost of building transmission to get power from the Romaine project to the bulk power system in Québec and (2) improperly included the ELRD project because that project essentially amounted to an uprate of existing hydro facilities instead of representing the costs of building a typical hydro facility.[68]

IPPNY's witness faulted Staff's estimate of the CCGT costs, claiming that it was overstated because Staff assumed prices for 2016, the year that Staff expected the project to go into service, instead of 2026, the year Mr. Younger argues is appropriate given that no new generation is projected to be needed until then.[69]

IPPNY's witness also testified that Staff inappropriately assumed that the 1,000 MW project/hydro facility combination would displace 1,000 MW of combined cycle facilities. But, as Mr. Younger demonstrated, the project can only qualify as a capacity resource for, at most, 378 MW of its capacity because it faces substantial costs to upgrade the system to allow full capacity deliverability under the NYISO's rules.[70] Mr. Younger also testified that Staff used outdated natural gas forecasts to estimate the operating costs of the CCGT facility, instead of using the most recent data.

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[68] Tr. 443-445.

[69] Tr. 447.

[70] Tr. 448.

Finally, IPPNY claims that Staff used an abnormally long, 35-year amortization period for the project, which according to the IPPNY witness, hides the fact that any projected benefits of the project are likely to occur far in the future, long after substantial expenditures will be required.

IPPNY claims that based on current gas price forecasts, when all of the flaws identified in DPS Staff's analysis are corrected and the project costs are updated to incorporate the Canadian interconnection costs, the Hydro-Québec hydro/project combination is more than $5 billion more expensive than building CCGTs in New York City when they are needed.[71]

Applicants' witness Frayer determined that Mr. Younger attempted to bias the discussion of economics by choosing a 100% capacity factor for the project's deliveries because this results in the lowest estimate of production cost savings. In her response to IPPNY-58, subpart 5, she changed the load factor in Mr. Younger's MAPS model, and presented a table representing the first 10 hours of 2018. This table purports to show that (1) the larger the amount of energy flowing over the project, the greater the deduction from production cost savings, and (2) Mr. Younger erroneously reduced the project's production cost savings by over $430 million, to $71 million in 2018.

IPPNY contends Ms. Frayer's conclusions are incorrect because she adjusted one figure in Mr. Younger's model, the amount of energy flowing across the project, without making corresponding adjustments to the amount of energy displaced from other units within New York and outside of New York to accommodate the energy flowing across the project. IPPNY states that this error leads to the absurd result that the project would provide the greatest savings to consumers if it had a zero

[71] Tr. 449-452, 505.

capacity factor (i.e., no energy was transmitted across it), and thus Ms. Frayer's rebuttal of Mr. Younger's testimony should be rejected.

IPPNY acknowledges that, in his rebuttal testimony, Staff witness Paynter updated his long-term production cost savings analysis, resulting in a lower estimate.[72] IPPNY however contends that Staff's updated analysis still is fraught with a number of errors, including understated costs for the hydro facility and overstated costs for the CCGT facility.

Applicants, on the other hand, assert that Staff's rebuttal estimate is substantially understated because (1) it reflects the $346 million cost of the transmission upgrades in Canada, a cost that Applicants say they demonstrated shall not be passed through by shippers due to a prohibition in the TransÉnergie's OATT and (2) the Québec Energy Board has limited the amount of the transmission upgrades that may be recovered by TransÉnergie from its shippers to $918 million, or about half, of the $1.8 billion in upgrades that were required for it to interconnect the Romaine project to its transmission system.[73] Applicants urge consideration and acknowledgement of the Québec Energy Board's allocation decisions in this proceeding. Applicants assert that in addition to pointing out the error of including the costs of transmission upgrades in Canada, witness Frayer provided detailed analysis showing that the facility will be displacing new entry by a CCGT in 2021, not 2027 as IPPNY

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[72] Tr. 199.

[73] Hearing Exhibits 171 (Certification of Translation and Québec Energy Board Decision in R-3757-2011 in Hydro-Québec Matter (English) at 8 and 170 (original French language version of Québec Energy Board Decision in R-3757-2011 in Hydro-Québec Matter).

contends.[74] Applicants therefore assert that IPNNY's attempts to overcome the evidence demonstrating the project's economic soundness should be flatly rejected.

Cash Flow Analysis

IPPNY and Entergy claim that the Mr. Younger's cash flow analysis shows that the project will not be able to earn sufficient revenues in the market to cover its costs. Accepting the $2.194 billion construction cost and 90% capacity factor advanced by Applicants, and adjusting costs to reflect other operating expenses, IPPNY says its witness calculated the project's yearly cost to be $351 million per year or $44.52 to deliver one MWh of energy across the line. IPPNY states that when Mr. Younger adjusted for the $346 million cost to interconnect the project with TransÉnergie's transmission system in Canada, the project's annualized cost rose to $406 million, and its corresponding delivered cost increased to $51.54/MWh.[75]

IPPNY indicates that Mr. Younger then estimated the project's revenues. Noting that the benefit of the project to a shipper, for the purposes of this analysis, is the ability to sell lower-priced energy from one end of the line to the other end of the line where the prices are higher, Mr. Younger compared the most recent available historic data indicating the price difference between these two points and found that the difference was in the range of approximately $7.50 to $8.00 per MWh. Thus, IPPNY states, it would cost a shipper over $50.00 to receive an $8.00 benefit by using the line, a benefit that would not come close to covering the project's costs.[76]

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[74] Tr. 278.

[75] Tr. 474-475, 502.

[76] Tr. 476-477, 478-485.

Applicants point to alleged errors in the cash flow analysis witness Younger employed, such as using an inappropriately high carrying charge[77] and historically low gas prices.[78] Another alleged error is assuming that Canadian suppliers, such as Hydro-Québec, would or could sell an additional 1,000 MW of electricity into New York over its existing interties as (i) they are likely to be fully loaded during high priced peak periods and (ii) the low prices that would be necessary to displace other generation during non-peak times would undercut the economic rationale for such a decision.[79]

Discussion

In our view, the most meaningful economic analysis of this project is one that focuses on the long-term and gauges whether the proposal will provide net benefits to society as a whole.

After considering all of the competing arguments, we are persuaded that Staff's long-term analysis is the one that is best suited to determining whether the proposed facility will provide overall net societal benefits. Moreover, we find that Staff's updated analysis was performed in such a way that it reasonably balanced the competing assumptions and views advocated by the projects' opponents, on the one hand, and Applicants, on the other. For purposes of evaluating the project's expected long-term societal benefits, we therefore recommend Staff's updated long-term analysis.

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[77] Tr. 474-475; 350-352.

[78] Tr. 170.

[79] Tr. 175.

We find IPPNY's analyses unpersuasive because, among other things, IPPNY inappropriately incorporated and relied on the CARIS model, which is geared toward determining whether regulated solutions should be approved and thus sets a very high bar; the analysis timeframe was limited to a 10-year period, instead of a time period commensurate with the facility's expected service life; and IPPNY's overarching views on need for additional energy and capacity were informed by the now-outdated 2010 RNA's need finding, and by assumptions that the generation would not be needed until 2026.

Parties' Positions on Energy Price Impacts (Wholesale Electricity Prices)

The JP lists reductions in wholesale electric power prices as one of the bases for need and as one of the public interest benefits of this project. No party disagrees that this facility will (or is likely to) reduce wholesale electricity prices; parties disagree on whether these reductions should be viewed as a benefit, whether the estimates are accurate, and whether the metric should be relied on by the Commission in this proceeding.

The JP estimates have been updated. Ms. Frayer's updated analysis of the impact of the facility on wholesale energy prices in New York State showed that the facility would generate energy price savings of an estimated $503 million in 2018 alone and $3.4 billion over the ten year period from 2017 to 2027,[80] and Staff's rebuttal testimony estimate of wholesale market impacts in the State in the year 2018 is $492 million (undiscounted 2018 dollars).[81] Applicants note that Ms. Frayer expressly addresses the impact of changing market conditions on

[80] Tr. 277.

[81] Tr. 246-247; Hearing Exhibit 204.

energy price savings in her analysis, which shows the amount of these benefits decreasing over time as a result of new entry.

IPPNY's witness, Mr. Younger, did not present his own analysis of expected energy price savings, but he asserts that Applicants' and Staff's estimates were overstated by at least $211 million because they did not account for the potential effects of Transmission Owner hedged contracts on behalf of ratepayers ($97 million), transmission congestion contracts on behalf of Transmission Owners ($67 million), and grandfathered transmission congestion contracts ($47 million) on behalf of Load Serving Entities.

IPPNY and Entergy argue that the Commission should place little weight on wholesale energy price savings, as they are short-term price changes that inevitably lead to a corrective market response. They add that such savings are not sustained when they are not created by underlying production cost decreases.

By way of example, IPPNY explains that, if a new entrant to the market begins selling electricity at an artificially suppressed price, the overall price of energy would fall. However, as that happens, existing generators would be unable to profit in the market and would retire. In response, as the energy surplus created by the new entrant disappears due to the exit of existing market participants, energy prices would increase in accordance with traditional supply and demand principles.

Alternatively, IPPNY argues, if the new entrant lowers prices because it has developed a method to produce and supply electricity at a lower cost, the price decrease can be sustained over the long term because the reduced prices will still be able to support this new lower-cost form of generation. IPPNY and Entergy say that this is precisely what the production cost

savings metric measures -- it predicts sustainable society-wide benefits as opposed to inevitably ephemeral wholesale energy price savings.

IPNNY and Entergy contend that both the JP and Staff witness Paynter acknowledge the shortcomings of the wholesale energy price savings metric. IPPNY highlights Staff witness Paynter's testimony as follows:

> When large new supplies enter a market, they naturally tend to depress market prices. These price reductions benefit consumers at the expense of the suppliers; but the reduction in prices does not represent an economic (or societal) benefit, just a transfer payment from suppliers to consumers. The economic (societal) benefit ignores the price impacts, and just measures the difference in costs between the hydroelectric resources (including delivery costs) and the likely alternative resources. Over time, markets respond to the depressed prices, e.g., through additional load or reductions in supply, until prices return to long-run equilibrium levels that reflect the cost of new entry. Thus, the transfer payments associated with price changes tend to fade over time.[82]

IPPNY notes that, during cross-examination, Dr. Paynter testified that it is customary to ignore the transfer payments that result from price changes, and that production cost savings are used to evaluate the costs and benefits of a project from a societal perspective and are a measure that the Commission ordinarily uses in making a determination as to whether the project is in the public interest.[83]

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[82] IPPNY Initial Brief at 32; Tr. 171-172.

[83] Tr. 203.

IPPNY states that Staff witnesses Gjonaj and Wheat also confirmed the temporary nature of wholesale energy price savings when they testified to the short-term nature of wholesale market benefits and their propensity to decline and diminish over time as market participants (suppliers and consumers) adjust their behavior in response to the additional supply.[84] IPPNY asserts that when a project's profitability and promised ability to operate as a merchant facility are directly at issue, use of the production cost savings metric is entirely necessary, while the wholesale energy price savings metric provides no help in addressing these issues.

IPPNY acknowledges that in properly functioning competitive markets, it is perfectly appropriate to expect that new entrants that have lower costs than existing suppliers will produce price reductions for consumers. However, IPPNY says, market forces are crippled if the new entrant has higher costs than existing, otherwise economic suppliers, yet, artificially suppresses prices for consumers in the short term because it is able to recover its above-market costs through a different avenue, such as a subsidized contract. IPPNY contends that Mr. Younger's testimony demonstrates that the project's costs, when combined with the cost of energy that will be transmitted over the project, are vastly greater than the costs of existing suppliers as demonstrated by New York City market prices. As Applicants' and Staff's estimates of wholesale market benefits are merely measuring the artificial price suppression effects of the project that will only exist for a short period of time until the market corrects itself, IPPNY, along with Entergy, contend they must be disregarded.

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[84] Tr. 245.

Entergy notes that the estimates of wholesale energy price savings set forth in the JP have been wholly supplanted by the revised wholesale energy price savings analyses contained in the testimony of Applicants' witness Frayer and Staff witnesses Gjonaj and Wheat. Entergy argues that since all of these analyses suffer from inherent limitations which render them unreliable, the iteration of these studies that the Commission ultimately elects to use is irrelevant. Entergy also states that any representations Applicants make as to the price of its power are mere speculation since they have not entered into a contract nor conducted open season.

Applicants assert that the "Incumbent Generators" urge the Commission to ignore all testimony on the facility's energy price savings on legal and policy rather than factual grounds. Applicants argue that neither the transitory nature of energy price savings nor the fact that they do not measure societal benefits provides a basis for disregarding the consumer benefits that these savings provide. Applicants note that Mr. Younger previously testified that such energy price savings should be a factor considered by the Siting Board when deciding whether to grant an Article X certificate to a proposed new generating facility.

Applicants reiterate that there are several reasons for the Commission to give particular weight to evidence of energy price savings including that energy price savings properly measure the economic benefits that this merchant facility will provide to consumers in New York City and surrounding areas and can be determined without having to address the complex issue of Hydro-Québec's alternative markets for the electricity that would otherwise be delivered by the facility. Applicants urge that this important facility benefit not be ignored.

Staff notes that it calculated wholesale market benefits for New York City, the State and all regions in the 2011 CARIS Study modeling (i.e., New England, Ontario, and the Reliability First Corporation (PJM) regions as well as New York), at $243 million, $492 million, and 1.8 billion (undiscounted 2018 dollars), respectively.[85] Staff acknowledges arguments could be made that the types of adjustment proposed by IPPNY are reasonable. However, Staff says the total adjustment amount suggested by IPPNY is incorrect. Staff disagrees with it because hedged contracts by some transmission owners are negotiated periodically and are designed to track market prices. Nevertheless, Staff notes that while the adjustments proposed by IPPNY could reduce the estimated benefits, they would not eliminate the benefits.[86]

Staff recognizes its analyses do not address how long these savings could be expected to persist since they do not consider potential supply and demand responses to lower prices resulting from Applicants' proposed project. Staff nonetheless believes these benefits, though short-term in nature, are significant and would be reflected in the energy market. NYC highlights the fact that Applicants' and Staff's estimates indicate that customers in the City and throughout the State will benefit from wholesale market price reductions when the facility commences commercial operations.

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[85] Tr. 246-248, 256.

[86] Staff notes that IPPNY's $194 million estimate would be $281 million (undiscounted 2018 dollars) if its updated estimate were used as the starting figure for IPPNY's adjustments. Tr. 258.

Discussion

We find that, even after accounting for opponents' criticisms and proposed offsets, the proponents have successfully demonstrated that the project will have sizable benefits in the form of reductions in the wholesale price of electricity. These particular benefits will not be enduring but they nonetheless will be realized and thus should be considered as evidence supporting both the required need and public interest findings.

Capacity Market Savings

Ms. Frayer produced estimates of capacity market savings under two different scenarios based on capacity levels that she studied at Applicants' request -- a conservative assumption that the project will be granted 600 MW of UDRs and another assuming a 1,000 MW level.

Ms. Frayer found that the facility would reduce the prices consumers must pay for installed capacity by an average of $308 million per year in New York City and by $344 million statewide assuming the facility receives 600 MW of UDRs. If the facility is able to obtain a full 1,000 MW of UDRs, these amounts increase to $518 million and $782 million per year. Thus, on an undiscounted basis, the capacity price savings resulting from the facility would be between $6.5 billion and $13 billion over the first ten years of the facility's operation.

IPPNY contends that these estimates are erroneous because Ms. Frayer ignored the fact that the introduction of the project would result in a market response to the lowered capacity prices and that, therefore, consumers would essentially see no savings. In addition, IPPNY asserts that Ms. Frayer

incorrectly applied the NYISO's Buyer-Side Market Power Rules to the project.[87]

According to IPPNY, Ms. Frayer correctly recognized in her testimony that the buyer-side mitigation exemption test has two prongs to determine whether a project's capacity sales are subject to mitigation in the form of a mandatory offer floor: a Part A test based on a default net cost of new entry ("Net CONE") and a Part B test based on an individual project's own unit Net CONE. However, IPPNY says Ms. Frayer erred in concluding that the project may qualify for an exemption from the offer floor under the Part B test. IPPNY witness Mr. Younger testified that the project would fail both the Part A and Part B tests. As a result, the project would be required to bid at an offer floor that would make it very unlikely that it would clear any capacity (assuming that it could obtain the required capacity deliverability rights and thus could even be eligible to sell such capacity) for an extended period of time. Thus, IPPNY witness Younger asserts that correctly applying NYISO's buyer-side market power rules significantly reduces Ms. Frayer's project benefits, to about 378 MWs of UDRs. Further, IPPNY argues that Ms. Frayer's approach and resulting capacity price savings are flawed in at least eight other ways, all of which result in the savings being overstated. Consequently, IPPNY argues that the capacity savings identified by Ms. Frayer must be given no weight.

Applicants dispute IPPNY's position that the facility will only be eligible to receive a maximum of 378 MWs of UDRs, claiming that IPPNY's witness failed to account for the Poletti Station's exclusion from the 2012 Class Year Study and the impact of future generation retirements at Astoria East. They

[87] Tr. 514.

add that IPPNY's witness focused solely on the NYISO's 2010 RNA, while Applicants' witness Frayer accounted for changes in market conditions and analyzed generator economics in the New York Control Area to support her forecasts.

Applicants further contend that Mr. Younger's assertion that NYISO's buyer-side mitigation rules will prevent shippers using the facility from selling installed capacity for many years to come is based on the same flawed analysis of the opportunity costs associated with the electricity to be delivered by the facility. Similarly, Mr. Younger's claim that if the facility is subject to an offer floor, that offer floor will prevent shippers using the facility from selling installed capacity for many years is said to be based on Mr. Younger's claim that there will be no need for additional installed capacity in New York City until after 2027. If either of these contentions fails, say Applicants, then Mr. Younger's contentions regarding buyer-side mitigation fail as well.

Discussion

We are not persuaded that capacity price savings should be considered as a factor supporting the need or public interest findings. The analyses supporting these estimates are dependent on numerous assumptions about future developments and conditions, including, but not limited to, the application of buyer-side mitigation rules. The considerable and vigorous debate over the accuracy of these estimates and how and if the buyer-side mitigation rules might be applied to the proposed facility leads us to question whether there is sufficient basis to draw any reliable conclusions concerning the extent to which the facility will qualify for UDRs. In our view, what is relevant for purposes of reviewing a merchant transmission proposal is whether the proposed facility will offer additional transmission capacity in an area that could benefit from it. We

conclude that it will, mainly because New York City is a load pocket. We therefore recommend that with respect to capacity, the additional installed capacity that the facility will provide is what should be considered as a factor supporting both the need and public interest findings.

Parties' Policy Arguments on Need With Regard to Developing Competitive Energy Markets, Energy Infrastructure and Energy Resources

General Policy Arguments

IPPNY and Entergy assert that granting a certificate for this project would be inconsistent with the State's public policy goals to develop in-State energy infrastructure and associated jobs, in-State renewable resources, and competitive electricity markets. IPPNY states that one of the main objectives of the 2009 New York State Energy Plan is to develop in-State energy supply resources to improve the State's energy independence and fuel diversity. IPPNY and IBEW cite Governor Cuomo's 2012 State of the State address, saying that he expressly encouraged development of an "energy highway" to provide the State's surplus of inexpensive fossil and renewable generation in western and upstate New York with a means to reach load centers in the downstate region.

IPPNY claims that the project will harm the potential economics of constructing new intrastate transmission to transmit power from upstate to New York City. To the extent that the project is sourced with power from new Canadian generation that would otherwise be sold at the New York/Canadian border, IPPNY claims, all else being equal, that New York consumers in upstate areas will be forced to bear higher electric rates. IPPNY, IBEW, and Entergy state that the project will not provide any realistic opportunity for the fossil and renewable generation in western and upstate New York to access the New York City market. IPPNY discounts claims that upstate

generators could access the project by simply wheeling their energy through Canada, saying that the uncontroverted demonstration by IPPNY witness Younger, revealed that this "solution" is an uneconomic choice for upstate generators -- one that would make them $45.94/MWh worse off than if they just delivered the power to their own bus.[88]

Applicants note that one of the contentions frequently advanced by opponents of the facility is that the Commission should reject its proposal in favor of increased investment in generation and/or upgrades to the HVAC transmission system in New York State. Applicants say that, in the event that the Commission rejected Applicants' request for a certificate on this ground, the Commission would have no assurance that any such alternative project would, in fact, be brought forward. Applicants add that nothing in a Commission order granting such a certificate would prevent any other party from moving forward with other projects designed to meet New York's electric power needs by constructing additional generation and/or HVAC transmission facilities.

Arguments on Competitive Impacts

IPPNY says that it strongly favors the continued development of a fully competitive electric market in New York. IPPNY acknowledges that competitive electric markets lead to more efficient operations and support lower utility bills for customers, a better climate for companies seeking to do business in the State, and a healthier state economy overall. IPPNY also recognizes that the Commission, in establishing its policy for the creation of a competitive wholesale generation market, found that competitors would have a greater incentive to minimize costs than utilities under cost of service regulation; the

[88] Tr. 494.

competitive market is the most efficient means of selecting resources; and one of the primary benefits of competitive markets is that investment risks shift from captive utility ratepayers to private investors.[89]

IPPNY says it fully supports the Commission's policy that enhancing competition satisfies the public need standard. IPPNY and Entergy contend, however, that the construction and operation of Applicants' proposed project will be financed by above-market, subsidized contracts. IPPNY says this will turn on their head the bases underlying the Commission's determination to implement competitive markets, significantly harming the competitive market the Commission sought to produce. IPPNY and Entergy claim this project will adversely affect otherwise economic, existing resources in New York City, in some instances causing existing facilities to be dispatched less often, if at all, or be paid lower, artificially suppressed market-clearing prices. They also claim that in-City facilities not otherwise needed to meet a reliability requirement may be forced to retire prematurely, while those facilities that are needed to meet a reliability requirement will require a reliability must-run contract to continue operations -- subsidization that will needlessly be borne by New York's consumers. IPPNY and Entergy conclude the in-City competitive market and system reliability will be compromised.

[89] Cases 94-E-0952, et al., Competitive Opportunities Regarding Electric Service, Opinion and Order Regarding Competitive Opportunities for Electric Service, Opinion 96-12 (issued May 20, 1996).

With the Commission's well-established policy favoring competitive wholesale power markets,[90] Applicants assert that IPPNY bears a heavy burden of justifying its contention that the Commission should substitute its judgment for competitive market forces in determining whether or not the facility may go forward. Applicants say that IPPNY's burden is particularly heavy here because record evidence shows that (1) the total long-run costs of the facility will be between $0.4 and $2.6 billion less than those of a comparable gas-fired generating plant[91] and (2) many of IPPNY's individual members are themselves moving forward with new gas-fired generating facilities to serve consumers in New York City and surrounding areas.[92]

Applicants add that no market can be regarded as truly competitive as long as incumbent firms are protected from the threat of new entry yet IPPNY and Entergy are advocating for such protection. Applicants state that one of the fundamental ways in which competition drives market participants to provide high quality products and services at the lowest possible cost

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[90] Case 88-T-132, Empire State Pipeline - Natural Gas Pipeline, Opinion and Order Granting Certificate of Environmental Compatibility and Public Need, Opinion No. 91-3 (issued March 1, 1991), at 8 ("competition itself is desirable and justifies a finding of need") and Case 00-M-0504, Fostering Development of Retail Competitive Opportunities, Statement of Policy on Further Steps Toward Competition in Retail Energy Markets (issued August 25, 2004), at 18 ("Competitive markets, where feasible, are the preferred means of promoting efficient energy services, and are well suited to deliver just and reasonable prices, while also providing customers with the benefit of greater choice, value and innovation. Regulatory involvement will be tailored to reflect the competitiveness of the market").

[91] Tr. 199. As discussed above, this evidence is contested by IPPNY.

[92] Tr. 542-555, 592-595; Hearing Exhibits 161, 167, 168, and 173.

is by permitting more efficient new entrants to displace their less efficient rivals, and they stress that the absence of unreasonable barriers to new entry therefore is one of the essential requirements of a workably competitive market.

Applicants contend that the project's opponents would substitute the Commission's judgment for that of competitive wholesale power markets with respect to the feasibility of new entry, thus violating the very notion of relying on competition and market mechanisms to ensure that consumers are protected from the costs of poor investment decisions. They note that in order to fully assess the facility's financial viability, the Commission would need to assume responsibility for accurately forecasting, among other things, natural gas prices, load growth, the extent to which existing generating facilities will retire or will be required to retire, the extent to which electricity delivered by the facility will flow to neighboring control areas, and the opportunity cost that Hydro-Québec will assign to alternative markets in deciding whether to commit to use the facility. Applicants posit that the Commission long ago determined that the market can make the same determinations more efficiently without regulatory intervention. In addition, they assert that IPPNY's concerns with preventing uneconomic entry are addressed by the proposed certificate conditions, especially 15(b), and by the price mitigation provisions of the NYISO's Market Administration and Control Area Services Tariff (Services Tariff).

Applicants add that, as a policy matter, IPPNY should be required to address its concerns with uneconomic entry on a generic basis and not in individual Article VII cases. They further claim that as a result of (1) FERC's active supervision of the effects of uneconomic entry on wholesale power rates under the Federal Power Act and (2) IPPNY and Mr. Younger being

now engaged at FERC regarding these issues, it would be an inappropriate and unnecessary expansion of the Commission's jurisdiction to address IPPNY's concerns about uneconomic entry into wholesale power markets in New York State.

IPPNY reiterates that its witness's economic analyses demonstrates that the project, if approved, is so uneconomic that it will not remain a merchant facility because the only way it can be developed and operated profitably over the long term is through some form of out-of-market subsidy. In IPPNY's view, no matter what form such subsidy takes, it is the very fact of the subsidy itself that is directly inimical to merchant operations and that ultimately will be detrimental to New York's consumers and the deregulated electricity market.

IPPNY counters Applicants' assertions regarding the ability to rely on NYISO buyer-side market power rules by stating that the rules do not fully protect existing generators from competitive harm because a new entrant "mitigated" under the rules can still artificially suppress energy prices. IPPNY suggests that, although it would be costly, an entity could elect to proceed with a project even though it knows that it will not be paid capacity revenues. IPPNY adds that new entrants that are mitigated are subject to an offer floor of 75% of the cost of new entry. As a result, IPPNY asserts that an uneconomic entrant can be up to 25% less efficient than a true merchant supplier and still earn capacity revenues in the market.

Next, IPPNY disputes Applicants' argument -- that there is no reason for the Commission to address IPPNY's uneconomic entry concerns in this Article VII proceeding because IPPNY can seek to strengthen the Buyer-Side Market Power Rules at FERC or seek legislative or regulatory action prohibiting it. IPPNY says that Applicants' Article VII application is before

the Commission now, and it could take years to achieve a solution from the Legislature that would prevent uneconomic entry as effectively as the Commission must do here to meet its public interest obligations. IPPNY adds that the NYISO rules may actually mean that consumers will pay even more than if the project were not subject to mitigation, because Applicants or the shippers on the project would try to recover directly from consumers any costs that they are precluded from recovering from the capacity market.

Merchant Status/Additional Conditions

IPPNY and Entergy observe that under the current version of certificate condition 15, the term "merchant" means that the project will not rely on cost-of-service rates and that Applicants themselves will not enter into a contract with a state authority or agency, a municipality or an investor-owned utility. Such a definition, they say, begins to address some of the loopholes left open in the JP, but remains far too permissive. IPPNY and Entergy assert that a merchant project is one that earns all of its revenues exclusively from the competitive market where existing and new suppliers compete on a level playing field. If the project remained truly merchant over the full course of its operations, they add that its investors alone would be responsible for recovering its construction and operating costs from market-based revenues. Entergy adds that Applicants have done nothing to prove that the project will proceed as, and remain, "purely" merchant.[93]

Thus, if the Commission ultimately decides that a certificate may be granted in this case, IPPNY and Entergy urge

[93] Moreover, Entergy argues that a sole focus on "captive" ratepayers is too limited and would not prohibit a direct state subsidy to a shipper.

the Commission to impose certificate conditions to expressly proscribe indirect subsidization, and to impose certificate invalidation if the revised conditions are violated. Specifically, Entergy urges adoption of the following conditions, at a minimum:

> Applicants, their affiliates and their successors cannot obtain any direct subsidy or payment to defray the cost of the project from any utility or State, municipal or other governmental agency, authority or other entity;
>
> Applicants, their affiliates and their successors cannot seek to include the costs of the project through cost-of-service rates for delivery services under FERC or PSC jurisdiction;
>
> Applicants shall require each shipper to certify that the buyers of the shipper's power will not recover the power contract costs (or any portion of them) through a non-bypassable portion of a utility's rates, or in the case of a state power authority through a charge to a customer unless the customer can both legally and practicably avoid the charge by switching suppliers; and
>
> Applicants, their affiliates and their successors shall require each shipper to certify that it has not received any above-market subsidy or other payment from any utility or state, municipal or other governmental agency, authority or other entity if that subsidy or payment would not have been available but for the shipper's use of the project to deliver its power.

Discussion

We conclude that opponents' policy arguments against the approval of this project should be rejected. First, we find that the claims that this project is inconsistent with Governor Cuomo's 2012 State of the State address and the most recent

State Energy Plan fail because they are based on one-sided, selective citation of the source documents. While it is true that the 2012 State of the State address encouraged the development of an "energy highway" to connect surplus inexpensive fossil and renewable generation in western and upstate New York to "centers in the Downstate region," it is also true that the Governor stated his support for "an energy expressway down from Québec."[94] Likewise, the 2009 State Energy Plan expresses support for the development of in-state energy supplies and investments in energy infrastructure, especially infrastructure investments that support the State's transition to a clean energy economy, reduce greenhouse gas emissions, and "allow the State to fully exploit the potential benefits of ... additional Canadian imports ...."[95]

Second, we note that some project opponents claim that the project could raise wholesale electricity prices at the U.S.-Canadian border. This potential scenario, however, is premised on the assumption that all other circumstances would remain constant. In fact, no basis for that assumption is substantiated on this record, where we have credible testimony that markets tend to respond to such price differentials, eventually offsetting them over time.[96]

Third, claims that this project should be rejected in favor of proposals to connect existing generators in upstate and western regions of the State to the downstate region or to

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[94] Building a New New York ... with you, at 12; available at: http://www.governor.ny.gov/stateofthestate2012.

[95] 2009 State Energy Plan, Executive Summary at *xv*.

[96] See, e.g., Tr. 172. See also the 2012 NYISO RNA and its outlook regarding generator retirements (down about 1,000 MW), SCRs (down about 100 MW), and load growth (up about 200 MW) during the next ten year planning period.

repower existing plants must be rejected on this record. For one thing, other than advocating the no build alternative, project opponents have not identified an actual, reasonable alternative to this project that is as far advanced in the certification review process as this proposal.[97] Even more importantly, there is no persuasive support for the assertions that approval of this project would preclude or prevent some other entity or any other party from moving forward with an alternative project designed to meet New York's electric power needs by constructing additional generation and/or HVAC transmission facilities.[98]

Fourth, we are not persuaded by the claims that the project would hasten the exodus of fossil or renewable generation. There are far too many variables at play that could influence or explain a generator's decision to exit the competitive market, including changes in environmental regulations or tax laws. We find no credible basis for concluding that any generator's decision to exit the market can be definitively and exclusively linked to the entry of this project.

We find that arguments that this facility will harm competitive markets if it is certificated also should be rejected. First, short-term price decreases should not cause

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[97] Not building this project is a viable alternative but it is one that will require the State as a whole to forsake, *inter alia*, the project's significant and uncontested emissions benefits, contested but demonstrated short-term energy price savings, and, as estimated by Staff, potential long-term production cost savings.

[98] Because the project developers are not seeking regulated dollars to help fund the construction of their project, it follows that they are not, in fact, competing with proposals that might require regulatory support in order to be constructed.

harm to existing generators who are able to adapt to an evolving competitive market. Indeed, even IPPNY acknowledges that in properly functioning competitive markets, new entrants that have lower costs than existing suppliers will produce price reductions for consumers. Second, as several parties noted, the entry of additional energy and capacity supply could help consumers, particularly in a load pocket like the New York Control Area, because it could reduce the potential for market manipulation in the first place. Third, there is persuasive record evidence rebutting the claims that the project will be an uneconomic entrant. Alternatively, if some of the project's costs prove to be uneconomic, there are certificate conditions designed to protect captive ratepayers from a significant portion of any such costs; and, the buyer-side mitigation provisions of the NYISO Services Tariff were designed, are available, and, thus should be used, if necessary, to protect incumbent generators from any such uneconomic entry. In light of these factors, on this record, we conclude that the addition of such a facility should improve competitiveness of the market in New York City and is consistent with State, Commission, and City policies encouraging competitive markets. The opponents' arguments to the contrary should be rejected.

With respect to assertions that the project will not be a merchant facility, we note that Applicants have stated their intention to finance, construct and operate this facility on a merchant basis and confirmed their intentions as conditions to the granting, and the continued validity, of the Article VII certificate. While we recognize that even with the existing certificate conditions, there still are no "iron-clad" guarantees, we believe the goal should be to adopt certificate conditions that will provide reasonable assurances that the statutory obligations will be satisfied, expected benefits of

the facility will be realized, conditions precedent will be met, and commitments will be honored. Here, the JP's proposed certificate conditions, once adopted, would make Applicants' commitments enforceable provisions of a Commission Order. Equally importantly, violation of Applicants' commitments regarding the operation and financing of the project on a merchant basis would invalidate the certificate, thereby invalidating their authority to construct or operate the facility. With these safeguards against and remedies for violating the commitment to construct, operate or finance the facility on a merchant basis, it does not seem reasonable to assume noncompliance with the certificate conditions and then, based on that assumption, impose even more conditions.

With respect to the project's merchant status, we find it is more appropriate to consider the following: will the risks associated with the financing and recovery of project costs be borne by private investors and will project revenues be recovered from wholesale power transactions? We would answer those questions affirmatively.

Proposed certificate condition 15 memorializes Applicants' commitment to construct and operate the HVDC portion of the facility (HVDC transmission system plus the Astoria-Rainey cable to the extent used to deliver energy and capacity that was also transmitted over the HVDC transmission system) on a merchant basis and imposes certificate invalidation as the consequence if Applicants do not honor their commitment. The proposed certificate condition makes the Commission's public interest determination explicitly contingent on (1) the HVDC transmission system being "developed, financed, constructed, and operated on a merchant basis" and (2) all costs associated with the use of the Astoria-Rainey Cable to deliver electric energy and capacity transmitted over the HVDC transmission system being

recovered exclusively on a merchant basis. The condition makes clear that "merchant basis" in this context means no reliance on New York State or Federal cost-of-service rates[99] for recovery of costs and that no such costs may be included in utility base rates directly or through a contract between certificate holders and any New York State agency, authority, entity or municipal subdivision, or any utility subject to cost-based regulation (or any instrumentality of any of the foregoing).

The condition also requires that the facility certificate holders provide a report, to be filed with and accepted by the Commission, confirming, prior to commencing construction of the facility, that they have received binding contractual commitments from one or more financially responsible entities for a combined total of no less than 75% of the facility's firm transmission service for a period of no less than 25 years.

The proposed condition further provides that the Commission's required public interest determination is made contingent on the cost estimate for the Astoria-Rainey cable being accurate by a differential of less than 10%. Otherwise, the certificate holders must request reconsideration of the Commission's public interest determination, by virtue of a request that is served on all parties to this proceeding and that explains how such increased cost would be consistent with the Commission's public interest, convenience and necessity determination made in this proceeding. The parties will be permitted 30 days to comment on any such filing.

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[99] Here, "rates" include any charges established by NYPA or a utility operating under cost-based regulation, including without limitation base rates, surcharges, adjustments, or any other recovery mechanism.

In short, because Applicants must have 75% percent of their service under binding contract for a period of at least 25 years before commencing construction, the HVDC "cost risk" has been limited substantially. In addition, the HVAC "cost risk" has been limited because, with respect to seeking any cost-based recoveries, Applicants would be limited to an overall cost estimate (about $214 million) and would be limited with regard to the users who could be charged cost-based rates (i.e., only users (excluding Astoria II) who use the Astoria-Rainey cable but have not also used the HVDC portion of the facility).

IPPNY and Entergy assert that this project cannot be considered a merchant project because it is not a "purely" merchant project. By this they mean that Applicants intend to recover project costs through a "discriminatory process" involving an "above-market" contract.[100] They characterize Hydro-Québec's RFI submission and its proposal for a stakeholder process to consider ways of prioritizing and promoting incremental hydropower deliveries as evidence of "Hydro-Québec's desire to participate in a discriminatory procurement process for its hydropower," secure subsidies, and thereby harm consumers and the competitive market. In reality, if Hydro-Québec succeeds in securing a contract as a result of its RFI submission, the resulting contract, at best, will be evidence that two parties were able to agree on terms that were mutually agreeable and presumably mutually beneficial. In addition, as we noted above, we do not agree that this record conclusively establishes that the project will need subsidies or will exact above-market costs. Accordingly, the potential for the type of

[100] IPPNY defines a merchant project as one that earns all of its revenues exclusively from the competitive market where existing and new suppliers compete on a level playing field. IPPNY Initial Brief at 50.

contractual commitments complained of here does not provide justification for the additional certificate conditions proposed by the opponents.

Proposed certificate condition 15 allocates the majority of the risk associated with the financing and recovery of project costs to private investors. A demonstration that at least 75% of the project's output is under contract prior to commencing construction is consistent with Commission precedent in the HTP case (where the fact that approximately 76% of HTP's anticipated 660 MW output was already committed was sufficient for the Commission to find that it was merchant)[101] and the Bayonne case (where the fact that 50% of its output was subject to identified and firm commitments was a sufficient basis for the Commission to find that is was a merchant project).[102] Admittedly, there is a temporal difference in having such commitments at the time the Commission grants the certificates versus having them prior to commencing construction, but the requirement that construction not commence until the relevant demonstration has been made nullifies the temporal distinction.

Many of the JP proponents, including NYC and Con Edison, expressly stated that their support for the project is based on the project's merchant status and that they would not have supported the JP if Applicants were seeking cost-based rates. And, as NYC highlighted, the proposed condition was modified several times after the submission of the JP in an

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[101] See HTP Order at 4 (the proposed facility had 600 MW of electric capacity and was the winning bidder in a request for proposals by NYPA for up to 500 MW of electric capacity and energy).

[102] See Bayonne Order at 3 (a merchant generation plant and facility with long-term agreements for the purchase of 50% of its output).

effort to address concerns that were raised about Applicants' ability to transfer risk to captive ratepayers or to derive revenues from sources other than wholesale power transactions. We find that the obligations accepted by Applicants and reflected in proposed certificate condition 15, along with the express support for this provision by a large number of parties with diverse interests, sufficiently demonstrate that the risks associated with the financing and recovery of project costs will be borne, in large part, by private investors and that project revenues will be recovered from wholesale power transactions.

Overall Conclusion Regarding Need

Statutory need is and has been determined by examining numerous factors, including system reliability benefits, economic benefits for customers and the State, and the achievement of public policy goals.[103] Each of these bases of need has been demonstrated on this record.

The record in this proceeding demonstrates the facility's expected and uncontested emissions benefits, likely fuel diversity attributes, ability to provide an additional transmission interface into the New York City Control area, likely long-term net economic benefits (as measured by Staff) and likely, albeit short-term, reductions in the prices of wholesale energy prices. These benefits and attributes support both the need and the public interest findings that are required in this proceeding. In addition, the record contains evidence that numerous public policy objectives would be achieved including, *inter alia*, significant reductions in the emissions of SO_2, NO_x, and CO_2[104] which are goals expressed in the State

[103] HTP Order at 42.

[104] Tr. 277, 280, 296, and 304.

Energy Plan and *PlanNYC*, and promoting competition in wholesale markets and supporting reliance on competitive markets and private investments in such markets. These reliability, economic and public policy benefits justified the need findings in the HTP and Bayonne Orders. We recommend that these factors support a similar finding in this case.

2. The Nature Of The Probable Environmental Impact And Whether The Facility Represents The Minimum Adverse Environmental Impact

The record in this proceeding, including the application, the JP, testimony, and exhibits admitted into evidence, describes the nature of the probable environmental impacts of the facility. Joint Proposal ¶¶24 through 123 address the nature of the probable environmental impacts of the facility and minimization of such impacts.

As provided in the JP, the signatory parties assert that the environmental impacts associated with the facility will be avoided, minimized, or mitigated, as conditioned by the JP's terms and conditions. Those terms and conditions include best management practices (BMPs) and guidelines in the preparation of the environmental management and construction plan (EM&CP Guidelines).[105] The JP's terms and conditions provide that Applicants must strictly comply with the EM&CP and the Proposed Certificate Conditions during facility construction, operation, and maintenance.

The JP's terms and conditions further provide for the establishment of a Hudson River and Lake Champlain Habitat Enhancement, Restoration, and Research/Habitat Improvement

[105] JP, Appendix E, EM&CP Guidelines, and Appendix F, BMPs.

Project Trust (Trust).[106] The signatory parties explain that the Trust's mission will be to protect, restore, and improve aquatic habitats and fisheries in these important aquatic resources of the State, thereby minimizing and mitigating any unavoidable adverse aquatic facility impacts and, overall, improving the aquatic habitats and fisheries in these aquatic resources of the State.

Below, we describe some environmental aspects of the case as context for the discussion of contested environmental issues that follows. The JP is supported by a remarkable degree of consensus by many parties with diverse environmental interests. To a great extent, the nature and minimization of environmental impacts have been addressed through the lengthy negotiation process leading to the development of the JP, and the facility's potential environmental impacts are not the primary disputed issues in this proceeding.

Benthic Habitat

The signatory parties contend that the nature of impacts on benthic[107] organisms and habitat from the facility will be localized and temporary in most instances. During jet plow, shear plow, conventional dredging and other installation activities, potential impacts to benthic communities will be

[106] See, Hearing Exhibit 127, Revised Certificate Conditions, Proposed Certificate Condition 165, and Stipulation Extending Time for Submission of Trust Agreement (dated October 19, 2012).

[107] I.e., bottom; occurring at the bottom of a body of water, such as a seabed, riverbed, or lake bottom.

limited to the areas of cable installation and cofferdam[108] dredging.

Jet plow (or hydro-plow) technology is the proposed method for cable burial for the majority of the underwater cable route. The jet plow is a hydraulically powered water jetting device that simultaneously lays and buries the cable in the sediments. The jet-plow is deployed from a ship (referred to as the installation vessel) that is positioned so that the water jetting device can continuously lay and bury the cable, using pressurized water to suspend the sediment in the water. This allows the cable to settle below it through the force of gravity.[109]

The shear plow method is proposed for cable burial in the southern portion of Lake Champlain. Shear plows typically are used with shallower burial depths (less than three ft) and in less cohesive sediment, so that less force is required. As a consequence, this method generally reduces the overall volume of sediment disturbed during installation. The shear plow is tethered to a surface support vessel, which provides the pulling power. With the shear plowing method, a trench is created for the cable by towing the shear plow through the sediment of the waterbody, and the cables are simultaneously fed into the trench as it is created by the plow.[110] With either jet plow or shear plow, the bottom sediment usually will naturally backfill the trench over the cable.

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[108] A cofferdam is a watertight enclosure from which water is pumped to expose the bed of a body of water in order to permit construction activities, dredging, or other hydraulic work.

[109] See JP, Appendix F, BMPs, §9.1.

[110] See generally JP, Appendix F, BMPs, §9.2.

Temporary impacts, including increases in suspended sediment concentrations and re-deposition of these sediments, may extend beyond the immediate area of active construction but the signatory parties expect such impacts to be temporally and spatially limited. Moreover, the signatory parties anticipate that recruitment and re-colonization of the benthic communities will occur following construction, because soft-bottom benthic species can adapt to naturally occurring bottom disturbances.[111]

The signatory parties anticipate that there will be some mortality of benthic biota and other immobile or slow-moving benthic organisms in areas where protective covering of the cables with concrete mats or rip-rap is necessary to protect utility crossings or because the bottom is solid rock, preventing burial of the cable. They say, however, that such areas will be minimal. The signatory parties do not anticipate that loss of soft bottom benthic habitat or associated benthic species will be significant. In areas of hard bottom, the signatory parties anticipate that the exposed surface of the concrete mats will create similar habitat, and that communities of organisms that live upon or in the bottom of the riverbed or lake floor may develop on the mats over time. Development of such communities would provide structure that can be used by other species living and feeding primarily near or in the deepest part of the waterbody. The JP's terms and conditions acknowledge that impacts to benthic organisms and habitat cannot be completely avoided, and provide that Applicants must complete a pre-construction and post-construction monitoring study to characterize changes to these communities.[112] Overall, the

[111] Hearing Exhibit 121, the Revised and Amended Environmental Impact Assessment (July 2012), at 191-193.

[112] Hearing Exhibit 127, Revised Certificate Conditions at ¶163, Attachment 2.

signatory parties expect that any adverse impact to benthic communities will be minimal, localized, and temporary.

Finfish

The nature of potential impacts to finfish includes gill abrasion, negative effects on respiration, and the hindering of predation efficiency for sight-feeding fish when visibility is reduced due to suspended sediment in or adjacent to the cable route. However, the signatory parties anticipate that sediments suspended during construction activities will affect only localized areas and settle quickly out of the water column or be dispersed, so that any impacts on finfish species in or adjacent to the cable route are likely to be temporary and insignificant. Because the construction route will be narrow, the signatory parties contend, bottom-feeding finfish will likely be able to temporarily relocate to adjacent areas that are unaffected by construction. Any ocean dwelling finfish species might leave the immediate construction area because of the noise and minor suspended sediment plume the construction produces, but the signatory parties anticipate that pelagic species would resume feeding along the cable route as soon as the cable installation vessel leaves.[113] Moreover, the avoidance of important habitats and the use of protective construction measures will further reduce potential adverse impacts to fish species. In view of the necessity of burying the cable in significant portions of the route and the state of technology for installing the cable, the signatory parties assert that the facility represents the minimum adverse impact to fish species.

[113] Hearing Exhibit 121 at 224-26; ¶46.

Sediment and Water Quality

The JP provides that Applicants will comply with all limits and water quality standards during the installation of the facility as required in the Certificate Conditions and Water Quality Certification. Hydrodynamic modeling of northern Lake Champlain and the Hudson, Harlem, and East Rivers indicates that installation of the HVDC facility's underwater cables via jet plow technology will likely result in sediment disturbance and re-suspension of short duration and within the JP's limits.[114] Dispersion of sediments during cable installation, the signatory parties assert, will be influenced by the horizontal movement of water (advection), local tidal currents, and settling rates. Because the bottom sediments along the sub-aquatic facility route are primarily silt and sand, the signatory parties anticipate that sediments re-suspended during cable installation will settle quickly. In southern Lake Champlain, similar hydrodynamic modeling indicates that water quality standards for the states of New York and Vermont will be maintained with the use of shear plow, rather than jet plow, from Crown Point south to Dresden, New York.[115]

The signatory parties do not anticipate that there will be any on-water or underwater spills of petroleum products during underwater cable installation activities. However, the JP provides that Applicants must file a Spill Prevention, Control, and Countermeasures ("SPCC") Plan or its equivalent as part of the EM&CP. The SPCC will describe the oil and chemical

[114] Hearing Exhibit 84 at 37-38 (Lake Champlain Water Quality Monitoring, October 2010); Hearing Exhibit 85 at 54-55 (Hudson, Harlem and East River Water Quality Monitoring, October 2010); Hearing Exhibit 90 at 3, ¶35.

[115] Hearing Exhibit 84 at 37-38; Hearing Exhibit 90 at 3 (Revised Lake Champlain Water Quality Report with Shear Plow).

storage operations during and after cable installation for the cable laying vessel and barge, and provide information on the prevention of spills, containment of spills, cleanup measures, and reporting procedures to be used in the event of a spill. The JP also provides that Applicants will implement the approved SPCC plan to avoid or minimize potential impacts to aquatic sediments and water quality that could result in the event of a spill of fuel, oils, or other substances associated with aquatic installation vessels and construction equipment.

Horizontal Directional Drilling

Applicants state that utilization of Horizontal Directional Drill (HDD) technology will avoid adverse environmental impacts that could potentially occur during water-to-land transitions by avoiding the need for shoreline trenching and disturbance of the shallow water interface between land and water. The cables would enter and exit the water through either a cofferdam, which would be approximately 16 feet by 30 feet (with a dredged entry/exit pit typically six to eight feet deep) or through a steel pipe. The installation and removal of cofferdams, the signatory parties contend, is not expected to have any significant impacts on aquatic physical characteristics.[116] The signatory parties conclude that use of HDD technology will facilitate routing of the facility to and from overland areas and will avoid, minimize, or mitigate impacts associated with water quality and habitat and aquatic species.

The facility will have no permanent impacts on New York State parklands. For example, in order to bypass the Haverstraw Bay Significant Coastal Fish and Wildlife Habitat, the facility will cross into Rockland Lake State Park, Hook

[116] Hearing Exhibit 121 at 25-28, 181.

Mountain State Park, and Stony Point State Historic Site. However, the cables will traverse these parklands underground via HDD, so there would be no permanent impacts to the current uses or visual character of these areas.[117]

Dredging

Applicants acknowledge that the impacts of suspended sediments from dredging cannot be avoided. Conventional bucket dredging will be used for HDD entry and exit pits and also if it is necessary to pre-dredge in order to achieve authorized cable burial depths in any federal navigation channel. Applicants state that dredging will be utilized only in limited circumstances and will have a minimum, localized, and temporary environmental impact similar to the deposited sediments suspended by water jetting.

Proposed Certificate Condition 99 provides the practices and procedures that will be utilized during dredging. The dredged material will be placed in scows and either replaced in the trench or pits (if determined by the appropriate permitting authority to be suitable for replacement), or removed for disposition at an authorized location. An aquatic inspector will be present on-board during dredging operations. Dredging may result in some sediment re-suspension as the bucket is brought to the surface. The associated plume would travel varying distances depending upon sediment type and hydrodynamics. Placement of imported backfill when dredge spoil is not used would create some additional increases in suspended sediment. However, the signatory parties anticipate any such impacts to be short-term and localized.[118]

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[117] Hearing Exhibit 121 at 122.

[118] Hearing Exhibit 121 at 181.

Terrestrial Segments of the Facility

Terrestrial segments of the facility will be primarily located underground in railroad ROWs. The signatory parties agree on proposed construction techniques for the terrestrial segments, primarily trenching.

Public comments advocate the use of four terrestrial facility route sections along railroad ROWs acquired by Applicants to enhance recreational trail networks. The first section is in the Washington County Canal Corporation segment, which includes wetland areas and, potentially, historic remains of the old canal infrastructure. The potential benefits to recreational resources, including actual development of this section of the Champlain Canalway Trail for recreational use as a result of facility construction and restoration as a multi-use trail surface, are noted in the record. However, further detailed field studies and historic archeological investigation would be required to compare this alignment with Applicants' current proposal to locate the facility close to the active Canadian Pacific Rail lines.

This trail concept was well-defined in plans for the Champlain Canalway Trail and it is supported in the State Open Space Conservation Plan. Consequently, Applicants agreed to widen the project Deviation Zone for this section to allow for possible accommodation of recreational trail use. Applicants will further consider trail accommodation at the time of final engineering and EM&CP development.[119]

The remaining three sections proposed for recreational use are in locations that would pose safety issues due to proposed co-location of recreational trails along, or in close

[119] See Exhibit 121, at 73-74; and Project Location maps, JP Appendix B, Sheets 46 - 73.

proximity to, active railroad lines. The Champlain Canalway Trail section, discussed above, deviates away from the active railway, but remains almost exclusively within Canadian Pacific Rail property.[120] Development of an alternative facility alignment that would have potentially accommodated safe location for recreational trails in the remaining three sections would require relocating the facility centerline outside of the Canadian Pacific rail corridor. Such a relocation would require acquiring private lands from multiple landowners. Therefore, recreational use of these three facility sections is not feasible.[121]

Cable Maintenance

Although Applicants do not anticipate extensive cable maintenance, any such repair of the damaged cable would result in impacts similar to those created with the original installation, but for a much smaller duration and to a lesser extent. In the event repair is necessary, a jet plow may be used to unbury a length of the cable on either side of the repair location. The cable would then be cut and the ends brought to the surface. The damaged section of cable would be cut out and a new, slightly longer piece of cable would be spliced in. The repaired cable would then be lowered to the lakebed or riverbed. Next, the cable would be reburied by diver-operated hand jets or use of remotely operated vehicles (ROVs) with water jets. Because the cable does not contain a coolant fluid, there is no potential for fluid release in the event of a damaged cable.

[120] See JP Appendix B, Deviation Zone Mapping.

[121] Id.

Contested Environmental Issues

We next turn to potential adverse environmental impacts addressed in the JP for which a party contends minimization has not been proposed or cannot be accomplished.

Entergy, operator of the Indian Point nuclear power generation facilities and a competitor of Applicants, is the only party that has raised such issues. Entergy opposes the application and instead advocates the "no build" alternative. Applicant, Staff, DEC, NYC, and jointly, Riverkeeper and Scenic Hudson, all signatory parties, have responded to Entergy's environmental issues.[122]

The signatory parties responding to Entergy's environmental issues state that the changes to the facility that have been set forth in the terms and conditions of the JP are the product of lengthy, detailed negotiations. They say the JP represents the signatory parties' determinations, first, that the environmental impacts of the facility are very likely to be minimal; and, second, that environmental impacts have been avoided, minimized, and mitigated to the greatest extent practicable.

Using an award of intervenor funds, Scenic Hudson and Riverkeeper jointly commissioned an expert report by ESS Group, Inc. (the ESS report). The findings in this report were based upon the initial Article VII application as supplemented in July and August 2010, and do not address modifications made to the project during subsequent settlement negotiations, which are reflected under the provisions of the JP. The ESS report

[122] Among the signatory parties are several entities whose mission, directly or indirectly, provides for conservation and protection of environmental resources in the public interest. These parties include DPS Staff, DEC, Riverkeeper, Scenic Hudson, Trout Unlimited, and other state agencies including APA, Ag & Markets, DOS, DOT, and OPRHP.

concluded that, to varying degrees, the overall environmental impacts of the project would likely be small and, with additional measures for minimization or mitigation of impacts (such as those proposed in the JP), would very likely be negligible. Environmental impacts studied in the ESS report included: sediment disturbance and re-suspension of PCBs and other contaminants; benthic habitat disturbance (both temporary and permanent); tributary and stream impacts; drinking water intake impacts; and magnetic field and thermal impacts.

The potential aquatic impacts of the facility are discussed below. To the extent that adverse impacts cannot be avoided, the signatory parties contend that such impacts will be minimized. In addition, the signatory parties assert that the Hudson River and Lake Champlain Habitat Enhancement, Restoration, and Research/Habitat Improvement Project Trust will provide mitigation of any minimal adverse aquatic facility impacts that cannot be avoided and will improve aquatic habitats and fisheries in these important aquatic resources of the State.

Potential Sub-aquatic Environmental Impacts

U.S. Army Corps of Engineers Standards for Cable Burial Depth and Location of Cables in Federal Navigation Channels

Entergy contends that the cable burial depth standards proposed in the JP and the proposed certificate conditions are less stringent than those that may be imposed by the U.S. Army Corps of Engineers (USACE). Entergy also argues that the application, as conditioned by the JP, is inconsistent with previous Commission decisions regarding burial depths in Federal navigation channels. Entergy asserts that USACE prohibits the installation of cables laterally in federal navigation channels, and that Applicants' facility will linearly occupy approximately nine miles of the federal navigation channel, contrary to USACE requirements and the Commission's past practice.

In support of these assertions, Entergy cites a letter dated July 5, 2011 from USACE to Applicants which states that,

> the Corps of Engineers does not permit permanent structures within the length of the right of way, including side slopes, of a Federal navigation channel (perpendicular crossings are permitted)"

It also states that "burial must be fifteen (15) feet below the authorized depths when crossing a federally maintained navigation channel."[123] Entergy reasons that because the sub-aquatic cable burial depths described in the JP are inconsistent with requirements of the USACE, the JP cannot support a finding that the facility represents the minimum adverse environmental impact, as required by PSL 126(1)(c).

Proposed Certificate conditions addressing cable burial depth are set forth in Hearing Exhibit 127. Proposed Certificate Condition ¶95(a)(i) provides that,

> where the cables shall be located within the limits of the maintained Federal Navigation Channels in the Harlem, Hudson, or East Rivers, the Certificate Holders shall install the cables to a depth of at least fifteen (15) feet below the federally-authorized depth of the Federal Navigation Channel.

Proposed Certificate Condition 95(a)(ii) provides that,

> within the Hudson, Harlem and East Rivers, where the cables shall be located outside the limits of the maintained Federal Navigation Channels in such rivers, the Certificate Holders shall install the cables to the maximum depth achievable that would allow each pole of the bi-pole to be buried in a single trench using a jet plow, which

[123] The letter is contained within Hearing Exhibit 216, Attachment D (Updated USACE Application).

> is expected to be at least six (6) feet below the sediment water interface or, if sand waves are present, the trough of said waves..."

Proposed Certificate Condition 95(b) outlines the requirements for Lake Champlain installation technologies and burial depths, which are intended to ensure the integrity of bottom topography and consistency with navigational uses of the Lake. Proposed certificate condition 95(b)(i) provides that,

> in locations where the water depth is less than one hundred fifty (150) feet, the target burial depth is three (3) to four (4) feet below the sediment surface, except where the cables cross other utility lines or other infrastructure or where geologic or bathymetric features prevent burial at such depth, and adequate measures for cable and infrastructure protection are provided.

The signatory parties assert that the cable installation technologies that will be utilized are the standard in the industry and will avoid, minimize, or mitigate any potential effects on lake or river bottom topography and hydrodynamics, including potential adverse effects within the federally maintained navigation channel.

In areas where the cables cannot be buried, primarily areas of rocky substrate or at utility crossings, the JP provides that the cables will be laid on the bottom with articulated concrete mats or other appropriate materials laid over the cables for protection.

Applicants and Staff assert that USACE has not yet established parameters for this project or made a determination upon Applicants' USACE permit application. Furthermore, they contend that USACE establishes individual permit conditions regarding the longitudinal installation or burial depth of submarine cables within federally maintained navigation channels

on a case-by-case basis. For example, they cite the Bayonne Energy Center proceeding, contending that the USACE issued a permit authorizing Bayonne to install its cables across or along the following federal navigation channels: Kill Van Kull Navigation Channel, Pierhead Navigation Channel, Port Jersey Navigation Channel, Anchorage Navigation Channel, Buttermilk Navigation Channel, Red Hook Navigation Channel, and Gowanus Creek Navigation Channel.[124] For the Bayonne project, the USACE permit authorized a burial depth of at least eight feet below the Congressionally authorized depth of the federal navigation channel. Applicants, Staff, Scenic Hudson, and Riverkeeper emphasize that pursuant to revised Certificate Condition 95(a)(i), Applicants will bury the cable proposed in this proceeding at a depth of at least 15 feet below the authorized depth of the federally maintained navigation channel.

Lastly, the signatory parties contend that the Commission should not substitute its judgment for that of the USACE.

Discussion

We agree with Applicants and Staff that the USACE has not made a determination to grant, modify, or deny Applicants' federal application for a USACE permit, including a determination on minimization regarding this facility. We decline to recommend that the Commission anticipate or substitute its judgment for that of USACE regarding the federal USACE permit. Instead, we recommend that the Commission allow USACE to complete its permit review and render its determination. Consequently, we reject Entergy's contention

[124] Bayonne Energy Center, LLC USACE Permit, NAN-2008-01564-M3, July 7, 2011, *available at* http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={EADD1AF6-8451-4660-A9D4-5C150BB29BA8}.

that the JP's provisions do not comply with USACE requirements or that the environmental impacts of cable burial have not been minimized due to non-compliance with USACE requirements. The JP's Revised Certificate Condition 11 provides that, prior to construction, Applicants must obtain USACE permits pursuant to Section 404 of the Federal Clean Water Act and Section 10 of the Federal Rivers and Harbors Act. This Certificate Condition mandates that Applicants obtain the necessary USACE permit.

In view of these circumstances, Entergy's contentions regarding cable placement within federally maintained navigation channels and cable burial depth are misplaced and premature. We find that the JP's proposed Certificate conditions regarding cable placement and burial depth are consistent with Commission practice in previous cases, and will minimize potential adverse impacts related to cable burial depth and the location of cables in federal navigation channels.

Cable Disposition

Next, Entergy objects to Applicants' proposal to leave the HVDC Transmission line in place at the end of its useful life. Entergy contends that an omission in the record exists as to the potential environmental impacts of abandoning the HVDC cable in the sensitive environments of Lake Champlain, the Hudson River, and the Harlem River. Entergy contends that these omissions in the record preclude the Commission from rendering the required statutory findings.

Applicants contend that Entergy has not provided any example of a potential adverse impact. Applicants assert that the cables are inert and solid, with no fluids that could leak over time.[125] Moreover, Applicants note that the JP's provisions would require them to abide by conditions that will be set forth

[125] Hearing Exhibit 63 at 85 (DPS-1 through DPS-190).

in a Use and Occupation of Lands Underwater Easement that Applicants must obtain from the New York State Office of General Services (OGS).[126] Therefore, Applicants conclude, Entergy's argument regarding potential impacts of leaving the transmission line in place at the end of its useful life is without merit.

Discussion

Entergy has failed to identify any potential adverse impact related to leaving the cables in place at the end of their useful life. In addition, Applicants must comply with the OGS Use and Occupation of Lands Underwater Easement, as provided by the JP's terms and conditions. We are persuaded that the long-term presence of the cables represents a minimum adverse impact consistent with PSL §126. Consequently, we reject Entergy's contention that the potential adverse impacts of leaving the HVDC Transmission line in place at the end of its useful life have not been adequately addressed in the record.

Endangered Species

The Hudson River contains significant fish and related resources including designated significant habitats and threatened and endangered fish such as the Shortnose Sturgeon and Atlantic Sturgeon. More than a dozen additional fish species in the Hudson River are designated as essential fish habitat species.

Entergy asserts that the record is inadequate in identifying the potential impacts of facility construction upon Shortnose Sturgeon and Atlantic Sturgeon in the Hudson River. These two aquatic species are listed as endangered under the

[126] See Public Lands Law §§3 and 75, and 9 NYCRR Parts 270 and 271.

federal Endangered Species Act[127] and in New York pursuant to the Environmental Conservation Law (ECL)[128] (collectively, the ESA).

Both species are anadramous, meaning they spawn in the upstream, freshwater reaches of their natal river, and spend their adult lives in brackish or marine water. Both species live and feed primarily in the water very near the river bottom.

The Shortnose Sturgeon has been federally listed as endangered since 1967, and its range includes the Hudson River and its tributaries. The federal Atlantic Sturgeon also is present in the Hudson River and its tributaries. Its ESA listing took effect on April 6, 2012. By operation of New York law[129], both federally listed sturgeon species are also New York State listed endangered species.

Potential adverse impacts to these sturgeon, Entergy contends, include l) habitat displacement associated with the installation of concrete mats, rip-rap, or other structures in portions of the Hudson River (i.e., where the HVDC cables cannot be buried in bottom sediments); and 2) exposure of ESA sturgeon to the electromagnetic field ("EMF") generated by the HVDC cable, and related effects attributable to the EMF. Entergy argues that no minimization of adverse environmental impact has been or can be established for these two endangered Hudson River species.

Habitat Displacement

Entergy asserts that the record does not sufficiently analyze potential adverse impacts to ESA-listed sturgeon due to habitat displacement. Entergy claims that the concrete matting

[127] 16 U.S.C. 1531.

[128] See ECL §11-0535.

[129] 6 NYCRR §182.2(e)(2)

represents approximately 6.41 miles of indeterminate width.[130] Entergy contends that such information is necessary before the Commission can make the required statutory findings of PSL §§126.1(b) and (c).

Applicants argue that Entergy's concern regarding potential habitat displacement impacts to ESA sturgeon ignores months of collaborative discussions between Applicants and the signatory parties, including the DEC, DOS, DPS Staff, Riverkeeper, Scenic Hudson, and Trout Unlimited concerning the avoidance or minimization of impacts to threatened and endangered species and their habitats. Applicants assert that collaborative discussions with the DEC and other signatory parties resulted in development of a modified route for the facility that avoids, to the maximum extent possible, areas recognized as sensitive habitat for aquatic species, including ESA sturgeon. The sensitive habitat areas include DOS Significant Coastal Fish and Wildlife Habitats (SCFWHs) and DEC Exclusion Zones.

Paragraph 51 of the JP requires Applicants to

> take all necessary measures consistent with this JP, the Proposed Certificate Conditions, the BMPs and the EM&CP Guidelines, to avoid and/or minimize impacts to threatened or endangered wildlife species listed at 6 N.Y.C.R.R. Part 182 (Threatened and Endangered species) and their occupied habitats that are found to be located in the Construction Zone.

In the DOS Conditional Concurrence with Consistency Certification, which was issued prior to the February 24, 2012 JP, DOS stated that, "the most certain way to minimize the impact on benthic habitats is by siting

[130] Entergy Initial Brief, at 35.

the cable route to avoid particularly sensitive habitats."[131] Applicants contend that, as conditioned by the JP, the facility has been modified so that SCFWHs, including Haverstraw Bay and those located in the upper Hudson River, will be avoided to the extent practicable.

Applicants and other signatory parties state that the JP includes a project route that avoids 17 SCFWHs within the vicinity of the proposed facility. The proposed route totally avoids 12 of these significant habitat areas, including sensitive ESA sturgeon habitat, but is located close to five such areas. These parties state that during the EM&CP phase of the project, Applicants will be required to develop a final facility design that minimizes adverse impacts to these five resource areas. Furthermore, the signatory parties state that the JP provides for construction work windows to avoid or minimize interference with ESA species. In addition, the JP provides for compliance monitoring studies, including scopes of study for benthic and sediment monitoring; bathymetry, sediment, temperature and magnetic field; and Atlantic Sturgeon pre-installation and post-energizing hydrophone studies. These provisions of the JP, the signatory parties assert, will serve to minimize adverse impacts to the ESA sturgeon species in the river.

Applicants state that the facility also avoids certain DEC Exclusion Zones, to the maximum extent practicable. The DEC utilized Hudson River bottom bathymetry, as well as fisheries

[131] Letter from the New York State Department of State to Applicants regarding Conditional Concurrence with Consistency Certification (June 8, 2011) at 6, available at http://docs.dos.ny.gov/coastal/cd/F-2010-1162%20CondCCR_web.pdf.

data, to identify areas of concentrated usage and habitat for important coastal migratory fish, including ESA sturgeon.[132] These Exclusion Zones, Applicants assert, were initially proposed by the DEC for the specific purpose of going above and beyond identifying legally protected habitats to include other areas that DEC considered to be areas of high quality habitat.[133] Therefore, Applicants assert that the record in this proceeding shows that the facility, as conditioned by the JP, will avoid important and sensitive habitats identified by the signatory parties to the maximum extent practicable.

Applicants contend that Entergy grossly overestimates the portions of the Hudson River in which concrete matting will be required. Applicants dispute Entergy's interpretation of data provided to DOS by Applicants' consultants to support its claim that the concrete matting represents approximately 6.41 miles of indeterminate width. Applicants assert that even this level of concrete mat use is an overstatement because, as they stated in their response letter to DOS, the final facility design must "optimize the placement of protection to minimize the area of the bottom covered by concrete mattresses or other protective devices" and that "the actual area of additional protection is likely to be substantially less than the total width of the cable/pipeline area as depicted on the NOAA charts."[134]

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[132] Hearing Exhibit 102. Fisheries data sources included acoustic fish tracking data, a summary of annual Hudson River surveys of egg, larvae, and juvenile fish distribution, and adult and juvenile sturgeon monitoring data.

[133] See Hearing Exhibit 102 (Description of Protected Areas within Hudson River); and Hearing Exhibit 127: Revised Certificate Condition ¶156(b)(1).

[134] See Hearing Exhibit 92 at 3 (Applicants' letter to DOS, dated February 18, 2011).

In addition, Applicants assert that in many locations the concrete mats will function in essentially the same manner as the hard substrate over which they will be placed, and therefore, the effective length of impact is 25% less than Entergy argues.[135]

Discussion

We find that the record is sufficient to support a finding of minimization of ESA sturgeon habitat impacts. First, Applicants have largely avoided routing the facility within Exclusion Areas and SCFWHs. Second, the JP provides seasonal construction windows to prohibit construction during times when these Exclusion Areas and SCFWHS are likely to be occupied by sensitive species.[136] Third, in the EM&CP phase of the project, the JP provides that Applicants must develop a final facility design that minimizes impacts to the five nearby SCFWHS.

Electromagnetic Field Impacts

Entergy next asserts that the potential adverse impacts upon ESA sturgeon of electromagnetic fields (EMF) generated by the HVDC cable are not adequately addressed in the record. Entergy contends that such information is necessary before the Commission can make the required statutory findings of PSL §§126(1)(b) and (c).

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[135] See Hearing Exhibit 121 at 193 ("In areas of hard bottom, the mats will create similar habitat, and in soft bottom areas the mats will, in essence, create small artificial patch reefs. The surface of the mats may develop an epibenthic community over time as well as provide structure that is important for some benthic species and fish. The mats will have an insignificant effect on near bottom hydrodynamics, which may be similar to the conditions found in rocky bottom areas.")

[136] Hearing Exhibit 127: Revised Certificate Conditions ¶156(b)(1); Hearing Exhibit 121 at 250-52.

Entergy states that Applicants have not addressed any data for the behavioral responses of sturgeon to EMFs. Entergy argues that operation of the facility would result in EMF influence along a significant portion of the ESA sturgeon's deep water habitat and migratory route in the Hudson River. Consequently, Entergy objects to JP, ¶50, which states that the

> potential impacts to fish species, if any, from electromagnetic fields and during the normal operation of the [facility] are expected to be insignificant as a result of the proposed installation method of two cables being buried side-by-side in a single trench to an expected burial depth of at least six (6) feet below the sediment-water interface.

Applicants state that magnetic field levels were calculated for a variety of locations along the facility route using computer modeling to simulate varying configurations of cable burial depth and distances between the bipoles. Locations that were modeled included railroad ROWs, roadways, surface waters and river/lake beds. JP, Certificate Condition 30 provides that the facility must comply with the limits for magnetic fields set forth in the Commission's Statement of Interim Policy on Magnetic Fields of Major Electric Transmission Facilities.[137] This modeling shows that expected magnetic field levels of the facility will comply with the Statement of Interim Policy, producing EMFs comparable to the expected magnetic field of a household appliance and considerably less than the earth's magnetic field of approximately 470 to 590 mG.[138]

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[137] Cases 26529 and 26559, Statement of Interim Policy on Magnetic Fields of Major Electric Transmission Facilities (Issued September 11, 1990).

[138] See Hearing Exhibits 39 and 116.

The parties, including Entergy, agree that as a general matter, direct current (DC) electric cables may create EMFs that extend into the environment, and the EMF emanations decrease in intensity exponentially with distance from the cable. For modern underwater high voltage cables, such as those Applicants propose for this facility, Entergy acknowledges that the emanation of a "direct" EMF into the environment is reduced or eliminated by encasing the cables in conductive sheathing.

Entergy nonetheless contends that the EMFs created by Applicants' cables in the Hudson River will induce an electric field in the ESA sturgeon swimming near them, thereby creating indirect adverse consequences upon ESA sturgeon. The strength of the induced electric field, Entergy contends, depends upon several site-specific factors, including the strength of the magnetic field, the swimming speed of the organism, and the orientation of the organism relative to the magnetic field. Entergy concludes that site-specific analysis of EMF impacts is required for this proposed facility.

Entergy cites information in the record to show that high magnitudes of generated EMFs can have adverse effects upon fish egg and larval development. Entergy contends that for lower levels of generated EMFs, adverse effects upon aquatic organisms can include disruption of orientation, navigation, feeding and other behaviors. Entergy has asserted that the lower magnitude EMFs expected from the facility may affect magnetic navigation capabilities of the ESA sturgeon and may result in modified migratory paths (away from the cables) within the Hudson River. Entergy concludes that because both AC and DC EMFs have the potential to adversely impact aquatic species, the Commission should require a project-specific assessment, particularly because ESA species are implicated.

Applicants and other signatory parties state that EMFs generated by the operation of the facility's HVDC cables will be localized and insignificant. They state that the zone of influence in which EMFs may be detectable above background levels will be focused directly above the facility centerline, and EMF levels decrease exponentially with distance from the centerline.[139] The zone of influence is expected to be small. As described in the Revised and Amended Environmental Impact Assessment,[140] based upon the anticipated spatial distribution of the cables' EMFs, only a small portion of the migrating fish population would come in contact with the EMF zone of influence of the cables. The EIA describes that the cables will be located, generally, parallel to the river, and therefore, migrating fish could potentially travel the full length of the Hudson without encountering the zone of influence of the cables.[141]

The EIA further describes that the modeling of EMFs on the riverbed shows that for the proposed vertical cable configuration, very little change in total geo-magnetic field would be expected,[142] if cables were to be buried at a depth of

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[139] Hearing Exhibit 121, at 203 – 204 (citing Exhibits 91, 92, and 100): "When the cables are laid vertically into a single trench, the maximum magnetic field deviation from background magnetic field if the cables are in a north/south orientation is 26.2 mG at ten (10) feet from the centerline at one foot above the riverbed or lakebed. If the modeling is performed under the assumption that the top cable may "slide" off of the other so that the cables were horizontal (i.e., side-by-side), the maximum deviation from the background magnetic field is 83.5 mG at a height of one foot above the riverbed directly over the centerline."

[140] Hearing Exhibit 121.

[141] Hearing Exhibit 121.

[142] 5.0% at one foot above the river bottom.

six feet. However, cables located in the Hudson River's federal navigation channel are proposed to be buried at a depth of least 15 feet.

Moreover, the signatory parties assert that the Hudson River is a highly developed estuary which contains many stimuli that could potentially impact fish migration.[143] Additionally, migratory species such as the ESA sturgeon, the signatory parties state, utilize multiple stimuli for migration, not magnetic detection alone. The signatory parties assert that aquatic species normally are exposed to other natural alterations in the earth's geo-magnetic field, including magnetic anomalies in sediments. Therefore, these parties conclude, EMF impacts have been minimized.

Discussion

We reject Entergy's arguments regarding EMF effects upon ESA sturgeon for several reasons. First, the signatory parties agree, and Entergy concedes, that modern DC cables are designed with sheathing to substantially reduce or eliminate direct electric fields. Second, the JP provides that the cables will be buried to a depth of at least 15 feet, for portions of the cable located in the Hudson River's federal navigation channel, and at least six feet below the sediment floor, for portions of the cable located in the Hudson River outside the federal navigation channel. Because EMFs diminish exponentially with distance from the cables, any such emanations will be reduced further, in proportion to the cable burial depth. Thus, achieving cable burial to the target depths (except in very limited areas where burial is not possible due to infrastructure

[143] See generally, Hearing Exhibit 121, the Revised and Amended Environmental Impact Assessment.

crossing or geological features) should minimize environmental impact from EMFs.

Third, the JP's proposed Certificate Conditions provide that the cables will be buried in a single trench, vertically on top of one another. This configuration also should result in the EMFs from each cable essentially cancelling out the other, thereby further minimizing any emanations of EMFs.[144]

We reject Entergy's contention that statutory findings cannot be made, because the application does not contain any site-specific data for the behavioral responses of sturgeon to EMFs. An applicant is not required to conduct every conceivable study to support required findings on nature and minimization of impacts. To the extent that EMFs may affect navigation abilities of ESA sturgeon, the record supports a finding that such impacts would be minimal, including avoidance of the waters nearest the cables. As noted above, ESA sturgeon utilize multiple stimuli for migration, not magnetic detection alone. In sum, upon our review of the record, we find ample basis for the Commission to make the required findings on nature and minimization of impacts. We recommend a finding that emanation of EMFs from the cables will have minimal impact, if any, on migratory species, including ESA sturgeon, in the Hudson River.

Potential Overland and Subterranean Environmental Impacts

Astoria Converter Station

Applicants originally proposed to have a converter station sited in a residential area of the City of Yonkers that is currently undergoing waterfront revitalization. The JP instead locates the converter station in an industrial area in

[144] See JP ¶96.

Astoria. By stipulation, Con Edison has authorized Applicants' use of 4.5 acres of a 21-acre parcel owned by Con Edison for construction of the facility's converter station and a new, four-breaker 345 kV GIS ring bus building (the Luyster Creek Site).[145] The signatory parties contend that the converter station is more consistent with the character of surrounding land uses at this location. In addition, the signatory parties state that relocating the converter station from Yonkers to Astoria in close proximity to the terminus of the transmission line, eliminates the need for the installation of a bundle of six AC cables in the Hudson, Harlem, and East Rivers from Yonkers to Astoria.

Applicants state that, in 1999, an independent third-party review of the available information concluded that "the proposed development of the [21-acre] site would not be anticipated to require any extensive modifications to typical construction practices."[146] In 2001, the New York City Industrial Development Corporation (NYCIDC) conducted a review of a proposal to use the 21-acre site for an envelope factory. The NYCIDC's review included review of environmental impacts pursuant to the State Environmental Quality Review Act.[147]

The NYCIDC initially designated that project as a Type I Action, indicating a presumption of significant environmental impact that must be affirmatively rebutted in order to avoid the preparation of an in-depth Environmental Impact Statement (EIS).

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[145] See Hearing Exhibits 129 and 130.

[146] Hearing Exhibit 135 at 2 (SM-2 Sean Murphy Direct Testimony Exhibit 2).

[147] Case 02-M-0741, Consolidated Edison Company of New York, Inc., Astoria Complex to Luyster Creek, LLC, Order Approving Transfer Subject to Conditions, (issued November 25, 2002) at 5.

The NYCIDC concluded that even though there was contamination present on the 21-acre parcel, its proposed use for industrial and manufacturing purposes (i.e., an envelope factory) would not pose any significant environmental impacts, and therefore preparation of a full EIS was not necessary. This conclusion was memorialized in the NYCIDC's issuance on July 10, 2001 of a SEQRA Negative Declaration, which ended the environmental review process for that proposed project.

In a 2002 Order, the Commission concurred with NYCIDC's finding of no significant environmental impacts and issuance of a Negative Declaration.[148] Accordingly, the Commission determined, based upon NYCIDC's assessment, that it would not be necessary to conduct any additional environmental review relating to the use of the 21-acre site for industrial/manufacturing purposes.

On April 26, 2012, the New York State Court of Appeals held that the Commission's 2002 Order was not exclusively conditioned upon the site's use for only one specific use (i.e. an envelope factory).[149] Applicants contend that this holding supports the proposed use of the Luyster Creek Site, a portion of the 21-acre site, for its converter station and related facilities.

Entergy asserts that the Luyster Creek Site is heavily contaminated and will require potentially extensive remediation before Applicants can use it. In support of its argument, Entergy cites the Commission's statement in Case 02-M-0741, that Con Edison's 21-acre parcel "is contaminated and will require

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[148] Id., at 15.

[149] *Luyster Creek, LLC v NYS Public Service Commission*, 18 N.Y.3d 977; 968 N.E.2d 965; 945 N.Y.S.2d 611 (April 26, 2012).

potentially extensive remediation before it can be productively utilized."[150]

In evaluating environmental conditions of the Luyster Creek Site, Applicants have reviewed existing third-party environmental site reports but have not conducted any recent environmental site investigation. Entergy asserts that the record lacks necessary information, including an updated environmental assessment of the subsurface conditions at the Luyster Creek Site, a plan to protect public and worker health and safety during any excavation or disturbance of the soils at the converter station and ring bus site, and any commitment by Applicants to indemnify, release, or hold harmless Con Edison (and, by extension, its ratepayers) from any damages or costs arising from Applicants' proposed construction activities at the 4.5-acre converter station/ring bus site, or any cost estimate for remediation of the converter station and ring bus site. Entergy asserts that because the record does not contain a recent environmental site investigation, the Commission cannot make a statutory finding as to the nature of the probable environmental impacts of developing the proposed converter station site.

Applicants and Staff assert that the issues raised by Entergy regarding the environmental conditions of the proposed converter station site have been thoroughly addressed in the record. Applicants and signatory parties do not dispute that portions of Con Edison's 21-acre Con Edison site are contaminated, but contend that the record evidence shows the areas of heavy contamination previously identified at the site

[150] Case 02-M-0741, *Consolidated Edison Company of New York, Inc., Astoria Complex, to Luyster Creek, LLC*, Order Approving Transfer Subject to Conditions (issued November 25, 2012), at 6.

are located approximately 3,000 feet west of the Luyster Creek Site, in an area previously used for a Manufactured Gas Plant (MGP).[151] Historical records of the Luyster Creek Site, they assert, indicate that the location of the proposed converter station consisted primarily of undeveloped land prior to 1959; and since 1959, the Luyster Creek Site has been used for materials storage and concrete casting operations.[152] Further, Applicants and Staff state, recent sampling of the periphery of the parcel indicates only low levels of contaminants, consistent with former uses.[153] Therefore, the signatory parties contend that the Luyster Creek Site has not been used for the kinds of operations likely to result in substantial soil contamination, and it is a suitable and appropriate location for Applicants' converter station and related facilities.

Applicants conclude that any potential contamination on the remainder of the Luyster Creek Site can be addressed through existing NYSDEC programs and requirements. Further, they assert, in the event evidence of environmental contamination is found, Applicants will be responsible for any costs required for environmental clean-up or remediation, because the facility is a merchant project. The proposed construction of the converter station, they conclude, should not

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[151] Applicants and Staff state that the MGP area is located within a larger property currently being investigated by DEC under the federal Resource Conservation and Recovery Act (RCRA), Corrective Action Program. DEC is the New York agency that oversees site remediation planning and implementation.

[152] Hearing Exhibit 108, the Revised Comparative Analysis of Converter Station Sites.

[153] Due to existing facilities on the parcel containing the Luyster Creek Site, sampling was only possible on the periphery of the site.

conflict with any planned investigation or environmental remediation of the MGP Site.[154]

The record evidence, the signatory parties assert, shows that the typical environmental issues associated with a historically industrial site have been assessed at the Luyster Creek Site, and that construction and operation of the converter station at this location will have a minimum adverse impact, if any.

Discussion

Entergy has not presented any evidence that environmental conditions at the Luyster Creek Site have changed since the previous Commission decision. The record evidence shows that Con Edison has continued to use the Luyster Creek Site as a materials storage area. Further, in view of the broad construction that the Court of Appeals gave to the Commission's 2002 Order, declining to foreclose the use of the 21-acre site for other industrial purposes, it is reasonable to conclude that Applicants' proposed use of a portion of the 21-acre site for its facility is not inconsistent with the NYCIDC's environmental review and the Commission's express concurrence with that review.

It is our view that the record evidence, including previous environmental studies in the area, as well as the support of the signatory parties including DEC, the state's environmental regulatory agency, amply support a finding regarding the environmental suitability of the Luyster Creek Site. We reject Entergy's argument that the Commission should require further site investigation at the Luyster Creek Site.

[154] Hearing Exhibit 108 at 23-24.

Conclusion

In sum, the facility route is preferred because it would avoid or minimize the disturbance of natural habitat, and would use some existing and previously disturbed ROW (e.g., railroad ROW). We recommend finding that the nature of probable environmental impacts have been identified, and that the facility, located and configured as conditioned by the JP's terms and conditions, represents the minimum adverse environmental impact considering the state of available technology and the nature and economics of the various alternatives and other pertinent considerations.

3. Undergrounding

Except for the converter station[155] and various above-ground components, such as cooling equipment,[156] line markers, and warning signs at navigable waterways, the facility is proposed to be located entirely underground or underwater.[157]

Staff states that this proposed configuration offers many advantages not afforded by an overhead line design, including limiting the land required for, and potential land use impacts attributable to, the facility. Staff notes that the underground configuration requires a 35-foot ROW to protect the cables compared to its 150-foot ROW estimate for an equivalent overhead HVDC facility. Staff adds that an overhead facility would require transmission structures with a height between 125 and 150 feet and would be visible to the public and local communities through which it passed. Staff and NYC assert that undergrounding will minimize visual and aesthetic impacts.

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[155] Including, if necessary, a four-bay GIS ring bus.

[156] To be located along the facility's right-of-way, as specified in Hearing Exhibit 117.

[157] JP ¶¶11, 71, 78, 124.

Staff also notes that no party has indicated a preference for an overhead configuration.

Discussion

There is ample support for finding that the facility's transmission lines should be underground (or underwater). Undergrounding provides beneficial visual and land use impacts that would not be achieved if the transmission lines were above ground. In addition, undergrounding is the proposed method, supported by the signatories.

4. Long-Range Planning

The record supports a finding that this facility would conform to a long-range plan for expansion of the electric power grid of the electric systems serving this state and interconnected utility systems, which will serve the interests of electric system economy and reliability.

The main challenges to the Commission's ability to make this required finding are the claims by Entergy, IBEW and Central Hudson that the facility would in effect be an "extension cord" with no NYS "on-ramps" providing access to existing in-State generation sources and will not address existing transmission constraints, especially in western and upstate portions of New York State.[158]

Discussion

Entergy, IBEW and Central Hudson fail to point to any policy, rule, law or precedent that prohibits approval of a direct current transmission line. The signatories, on the other hand, observe that both the 2009 State Energy Plan and the

[158] IPNNY also claims the Commission cannot make this finding due IPPNY's claims that the project is uneconomic. Consistent with our discussion of the project's economics, *supra*, we recommend that this claim be rejected.

Governor's 2012 State of the State address encourage facilities like this one that would provide infrastructure investments that support the State's transition to a clean energy economy, reduce greenhouse gas emissions, and allow the State to fully exploit the potential benefits of additional Canadian imports.[159] In addition, as noted *supra*, the facility's so-called "extension-cord" configuration means that system disturbances from the Hydro-Québec system would be prevented from propagating into New York (and vice versa).

The facility advances a goal, expressed in NYC's *PlaNYC*, of increasing NYC's clean energy supply by effectuating one of its strategies, i.e., increasing the amount of clean energy that can be imported into the City. Moreover, NYC asserts that the facility represents a unique opportunity to dramatically increase the amount of renewable energy available in-City in a way that, due to the project being developed on a merchant basis, will not burden electric delivery rates.

The facility would directly expand the State's electrical grid by providing an additional tie to Québec and to Québec's hydroelectric power. This would, according to Staff, indirectly help relieve congestion on the existing HVAC electric transmission system, because absent the facility, the new hydroelectric resources anticipated to enter service in 2012 and beyond would tend to increase supply at the State's northern border, likely leading to additional imports over the existing tie lines to Québec, which in turn would likely lead to increased congestion on the existing NYS HVAC transmission system and increased bottling of upstate generation. In addition, energy imports over the facility would increase supply

[159] 2009 State Energy Plan, Executive Summary at *xv*.

downstream of the congested interfaces, thus reducing congestion on the State's HVAC transmission interfaces.

Finally, a System Reliability Impact Study ("SRIS") for the interconnection of the HVDC Transmission System at NYPA's 345 kV bus located at Astoria has been completed by the NYISO. It shows that the HVDC Transmission System can be connected to the New York State Bulk Power System without adversely affecting reliability.

5. State and Local Laws and Regulations

The JP provides that Applicants will: comply with the substantive provisions of each applicable state statute and regulation, including the NYS Coastal Management Program and Article 42 of the Executive Law ("Waterfront Revitalization of Coastal Areas and Inland Waterways"); obtain required proprietary permits/consents/authorizations before the start of construction; and obtain Commission approval of all required Municipal consents under PSL §68. The JP identifies numerous substantive local law requirements that Applicants have requested the Commission waive. JP Appendix C, Certificate Conditions 16-20, and Hearing Exhibit 115 identify the local laws and regulations for which waiver is requested. Waiver of such laws is sought based on Applicants' assertion that the provisions are unreasonably restrictive in view of the existing technology, factors of cost or economics, or the needs of consumers. With the exception of the provisions of local laws identified in Hearing Exhibit 115, the JP further provides that Applicants will comply with, and the location of the facility as proposed conforms to, all substantive local legal provisions applicable thereto.

As a condition of the certificate, Applicants will apply for specified NYC permits, subject to the Commission's ongoing jurisdiction. And, to the degree that the New York

State Uniform Fire Prevention and Building Code and the Energy Conservation Construction Code apply to the facility, Applicants agree to undergo building plan review and obtain building permits, inspections, and certificates of occupancy, as appropriate, upon the inspection and completion of construction from NYC's Department of Building.

Applicants, Staff and NYC were the only parties to brief whether the facility, as proposed, conforms to applicable state laws and regulations and local laws. They argue that the record supports findings that (1) the requested waivers are warranted because the local law provisions are unreasonably restrictive in view of the existing technology, or of factors of cost or economics, or of the needs of consumers and (2) the facility, as proposed, conforms to applicable state laws and regulations and local laws. Applicants say that their waiver requests concern: (i) noise level limits; (ii) smoke, glare, odor and dust generation; (iii) limits for seasonal mooring and anchoring of boats; (iv) weight, idling and parking limits for construction vehicles; (v) time limits on the use of rail tracks and construction trailers; (vi) specific zoning district restrictions for utilities; and (vii) overnight storage of explosives.

Staff states that it has reviewed the State and local laws and regulations applicable to the proposed facility and has determined that, if an Article VII Certificate were to be granted subject to JP Appendix C, the record would justify a finding that the substantive provisions of State and local laws and regulations are or shall be conformed to by Applicants in the construction and operation of the facility, with the exception of those local laws for which Applicants are seeking waivers. Staff opines that Applicants' justifications in support of their requested waivers provide a sufficient basis

for the Commission to refuse to apply those local legal requirements.

Staff cites the Legislature's declaration that the purpose of Article VII is "to provide a forum for the expeditious resolution of all matters concerning the location of electric and gas transmission facilities … and all matters of state and local laws, in a single proceeding." It observes that Article VII deals directly with matters of local law affecting major utility transmission facilities and permits the waiver of otherwise-applicable, substantive local law requirements.

Staff asserts that Applicants met their burden of identifying applicable local laws with substantive requirements and justifying why they needed waivers of those they considered unreasonably restrictive or that prohibited construction of the facility. Staff notes its agreement with this showing, and states that the justifications set forth in Exhibit 115 provide a sufficient basis for the Commission to refuse to apply the legal requirements specified therein.

NYC touts Applicants' agreement to comply with certain NYC laws, codes and regulations, including obtaining consents to access municipal property, regulatory permits, and approvals applicable to the in-City construction and operation of the facility. These include obtaining a certificate of occupancy from NYC prior to commercial operation of the converter station and compliance with the standards and inspection requirements provided by the NYC Electrical Code, Fire Code, and Administrative Code, including the New York City Construction Code, during facility construction and operation. NYC also highlights Applicants' agreement to adopt noise mitigation procedures that equal or exceed the standards set forth in NYC's Construction Noise Mitigation Procedures. Finally, NYC notes that the JP signatories adopted a stringent protocol to ensure

that infrastructure co-located with the facility, such as City sewer and water mains, would be protected during facility construction, operation and maintenance. NYC states that it would not have entered the JP absent these agreements.

Applicants listed the local laws and regulations that they assert might interfere with the construction of the facility. For example, local laws regarding noise level limits and time limits on the use of rail tracks and construction trailers could unreasonably restrict or interfere with Applicants' ability to conduct some upland construction activities either overnight or on a continuous basis in order to minimize disruption of existing rail traffic while utilizing the railway to move heavy equipment and material to the construction site. However to mitigate negative impacts that could be associated with waiving local noise restrictions and limits, appropriate noise control measures are included in the construction and mitigation control measures that are to be applied during facility construction pursuant to terms and conditions of the JP. Such measures, applicable at residential areas and other noise sensitive locations include: public outreach, appropriate work hour and operation restrictions, temporary sound barriers, employment of equipment fitted with sound deadening materials, selection of low noise equipment and procedures, and other noise reduction work methods or devices as determined appropriate for the locale and task.

Discussion

The municipalities through which any part of the proposed facility route segments will pass are served with a copy of the application pursuant to PSL §122. Based on (1) our review of application Exhibit 7 and Hearing Exhibit 115, (2) our consideration of the briefs submitted by Applicants, Staff and NYC, and (3) the absence of municipal opposition to the request,

we find that there is *prima facie* justification for waiving the substantive requirements of the local law and regulations listed in Hearing Exhibit 115.

Consistency with NYS Constitution

Concerns have been expressed regarding the placement of the facility within state lands, particularly those submerged under Lake Champlain. These concerns are premised on claims that a transmission line in or on the land beneath Lake Champlain would violate Article XIV of the New York State Constitution. The relevant portion of Article XIV states: "The lands of the state, now owned or hereafter acquired, constituting the forest preserve as now fixed by law, shall be forever kept as wild forest lands. They shall not be leased, sold or exchanged, or be taken by any corporation, public or private, nor shall the timber thereon be sold, removed or destroyed."

Applicants assert that exclusive jurisdiction over the terms and conditions for the use of the lands underneath the navigable waters of the State rests with OGS. They add that they are in negotiations with OGS to obtain the permits and rights to use such lands.

Staff states "[w]hether the area in Lake Champlain that is proposed for location of the Facility cable is part of the protected Forest Preserve is a legal question that has been answered repeatedly in the negative."[160] Staff asserts that the area under Lake Champlain that is proposed for the location of this facility thus may be leased to Applicants by the OGS. Staff also asserts that an Article VII proceeding is not the

[160] Staff Reply Statement at 23, citing to 1918 N.Y. Op. Atty Gen. 356.

appropriate place to litigate OGS' authority to grant leases or other property rights to lands submerged under Lake Champlain.

APA is a statutory party to all Article VII proceedings for facilities located within the Adirondack Park (the Park). APA supports the JP and agreed to the routing of the transmission line in Lake Champlain, from the northeast border of the Park, to Dresden/Whitehall, where the line exits the Park. APA states that the burial of the approximately 8.3 miles of transmission line upland along State Route 22 from Dresden to Whitehall will mitigate the visual impact along that Scenic Byway. It also asserts that the JP, including the proposed Certificate Conditions, Best Management Practices and EM&CP Guidelines, contains mechanisms to ensure compliance with the requirements of the Adirondack Park Agency Act and the Freshwater Wetlands Act within the Park and provides for the environmental and natural resources protections under the Adirondack Park Act, the Freshwater Wetlands Act, and the Adirondack Park State Land Master Plan.

Discussion

Assuming the Commission decides to grant the requested Article VII certificate, Applicants will have to acquire any necessary land rights through other applicable means.[161] As a result, Staff is correct that this proceeding is not the appropriate venue for litigating land rights. However, it may be helpful to briefly review some of the available case law on the constitutional clause at issue, given the concerns expressed by some commenters that the clause may foreclose use of the proposed route.

[161] OGS will be the agency charged with determining whether Applicants will be granted authority to install cables on the bottom of Lake Champlain.

There are very few court decisions construing the New York State Constitution's Article XIV "forever wild" clause. The leading case appears to be Association for the Protection of the Adirondacks v. Macdonald, 228 A.D. 73 (3rd Dep't 1930), aff'd 253 N.Y. 234 (1930). In the Macdonald case, the Appellate Division and the Court of Appeals held that a statute that would have authorized the construction and maintenance of a bobsleigh run on State lands in the forest preserve was void because it violated the constitutional language here at issue. In reaching its decision, the Appellate Division noted that the construction of the run would require the cutting down and removal of over 2,000 trees; it concluded that creating a bobsleigh run or any sport that requires a setting that is man-made is inconsistent with the land's preservation as forest lands in a wild state. The Appellate Division recognized that some cutting of timber in the preserve, depending on the facts in each case, may be authorized, if it is reasonable and does not impair the wild forest nature of the preserve.

Another case concerning the construction of the "forever wild" clause is Helms v. Reid, 90 Misc. 2d 583 (Sup. Ct. Hamilton County, 1977). There, litigants challenged the validity of various uses permitted in the Adirondack Park, the APA's Master Plan (which continued and promoted such uses), and any regulations promulgated thereunder. In dicta, the Helms court observed that other than interpretations provided by the Appellate Division and the Court of Appeals in the Macdonald case, the only authority it had for interpretation of the "forever wild" clause came from various opinions of the Attorney General. It noted that the clause had not been uniformly interpreted in the Attorney General decisions but it observed certain trends, specifically a strict approach or construction

in early years, followed by a more liberalized or possibly more reasonable approach since the Macdonald decision in 1930.

First, we note that in the 1918 Attorney General decision cited by Staff, power to convey State lands under the State's navigable waters (of Lake George) was found to exist because the Attorney General concluded that the lands under navigable water in the Forest Preserve Counties were never intended to form a part of the Forest Preserve. Second, we note that the 1996 Attorney General decision cited by one of the commenters expressly recognizes that in two prior opinions,

> we concluded that the [State agency] could grant permits for the construction of power and telephone lines across forest preserve lands if it made a determination that the wild forest character of the lands would not be impaired by the proposed construction.[162]

The 1996 opinion goes on to state that neither prior opinion considered the question whether the proposed permit would grant an interest in the forest preserve lands that was prohibited by the NYS Constitution, but that the facts of one of the prior opinions indicated that power also would be provided, in all likelihood, to a public campsite thus bringing the line within the public use exception recognized by Macdonald, *supra*. Third, we note that the record evidence in this proceeding indicates that placement of the cable underwater in Lake Champlain should not impair the Lake's "wild character" nor interfere with its natural qualities or recreational uses, and that the power to be provided is intended for the competitive

[162] 1996 N.Y. Op. Atty Gen. F2 (1996 N.Y. AG LEXIS 117). The opinion was cited for its determination the constitutional provision at issue prohibited DEC from granting permits that would authorize the installation of electrical cable and other equipment on the beds and shorelines of Raquette and Big Moose Lakes.

wholesale market, not for use by a select few individuals. In addition, the agencies responsible for safeguarding the Adirondack Park –– APA -- and for maintaining the Route 22 ROW -– DOT -- are signatories to the JP and support the proposed route. In light of the foregoing, we are persuaded that the proposal to lay cable on the bottom of Lake Champlain and bury it in the ROW alongside Route 22 should not implicate interests nor impair qualities sought to be protected by the NYS Constitution's "forever wild" clause.

In any event, as we noted above, if the Commission decides to adopt the terms of the JP, it will be adopting provisions that require Applicants to comply with otherwise applicable state law and regulation, but will not be granting Applicants any specific land rights. As a result, this proceeding is not the appropriate venue to litigate constitutional claims premised on the "forever wild" clause.

6. Public Interest, Convenience and Necessity

According to the terms of the JP, the benefits establishing that the facility will serve the public interest, convenience and necessity fall into the following three categories: reduced wholesale market prices in NYC, Long Island and the Hudson Valley; reduced air pollutant emissions in those areas; and increased reliability of the bulk power system in NYC. As discussed above, opponents of the facility challenge the asserted price and reliability benefits.[163] Opponents, however, have also claimed there will be detriments in the form of lost jobs and unmitigated and uncompensated risks to the maintenance and operation of existing submerged co-located

[163] Accordingly, we will not reiterate our discussions or findings with respect to claims concerning competitive market impacts and the risk of project costs being borne by captive ratepayers (see subheading 1, *supra*).

utility infrastructure. We will address the arguments regarding the facility and its potential impact on jobs and co-located infrastructure in this section.

Employment Impacts

IPPNY notes that in February 2012 Applicants claimed that the project would create 2400 indirect and induced jobs over the long run.[164] IPPNY asserts that this claim is inaccurate because it is based on Applicants' upper estimate of wholesale energy price savings, an analysis IPPNY asserts was fraught with inaccuracies and thus cannot be the basis for an accurate job creation estimate. IPPNY's witness, Mr. Younger testified that even if one assumes, *arguendo*, that any job creation benefits can be projected as a result of the project, those projections must be based on Staff's wholesale energy savings, as corrected by Mr. Younger. Because the corrected wholesale energy savings amounted to roughly 30% of the number used by Applicants, Mr. Younger testified that the jobs created must also be proportionately reduced, resulting in a long term job creation prospect of approximately 720 jobs.[165]

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[164] Tr. 470 (Younger's Initial Testimony). The witness indicates he relied on an estimate contained in the "Analysis of the Macroeconomic Impacts of the Proposed Champlain Hudson Power Express Project in New York, LEI, February 2, 2012, p. 4, available at: http://www.chpexpress.com/docs/Analysis-of-the-Macroeconomic-Impacts-of-the-Proposed-CHPE-Project.pdf." This document does not appear to have been entered into the evidentiary record of this proceeding. As indicated in the summary of Applicants' arguments on this point, *infra*, the current estimate is 4,600, not 2,400.

[165] Tr. 470-471. As we indicated in the previous footnote, the starting point relied upon by the witness was subsequently updated to 4,600; thus, the corresponding update of his derived estimate is 1,380 (30% of 4,600).

Furthermore, IPPNY contends that Applicants' job creation estimates contained two additional flaws. First, Applicants assumed that the project will be built as a purely merchant project;[166] IPPNY says it demonstrated, however, that this assumption was wrong and that it is unlikely to be built without some form of direct or indirect subsidy. Consequently, IPPNY argues that the amount of any such subsidy would need to be subtracted from the corrected wholesale energy price savings before determining the estimated level of indirect and induced job creation.

Second, IPPNY argues that Applicants' estimate of job creation fails to account for offsetting job losses at existing otherwise economic generating units that might be forced out of the market as a result of the project's operation[167] -- specifically, a shutdown of existing generating units would result in the loss of direct, indirect and induced jobs. IPPNY adds that the job creation estimate also fails to recognize that, in the absence of the project, other resources would be developed internally when needed, and the construction and operation of those internal resources would result in direct, indirect and induced job creation that are likely to far surpass those produced by the project.

Applicants assert that Ms. Frayer demonstrated in her direct testimony that the facility would result in the creation of new jobs in New York State both directly during its construction phase and indirectly during its operational phase due to the energy and capacity price savings it will provide. Specifically, Applicants note Ms. Frayer's testimony that Applicants will spend an additional $100 million on average per

[166] Tr. 471.

[167] Tr. 472.

year in New York State during the construction of the facility and that these expenditures will generate an average of over 300 direct construction jobs per year and more than 600 direct jobs in 2016. In addition, Ms. Frayer noted that the formation of the Hudson River and Lake Champlain Habitat Enhancement, Restoration, and Research/Habitat Improvement Project Trust will result in a total of 25 additional direct jobs and approximately $1.3 million per year in non-labor spending.[168]

Applicants also note Ms. Frayer's testimony that, once the facility becomes operational, the energy and capacity price savings resulting from the facility will provide a strong stimulus to the economy in New York State, creating and supporting more than 4,600 indirect and induced jobs over its first ten years of operations.[169] They state that Ms. Frayer developed this estimate using the estimates of energy and capacity price savings presented in her direct testimony, along with the PI^{+} Model developed by Regional Economic Models, Inc. ("REMI").[170]

Applicants observe that, in his testimony, Mr. Younger urges the Commission to reject a similar analysis that was previously performed by Ms. Frayer. Applicants state that the first two reasons Mr. Younger offered were his contentions that Ms. Frayer's estimate of indirect job creation was based on an inflated estimate of the energy price savings resulting from the facility and failed to take into account the effects of hedging by long-term contracts and TCCs.[171] To this, Applicants respond

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[168] Tr. 311.

[169] Tr. 315.

[170] Applicants refer the reader to Hearing Exhibit 145 for a detailed description of the analysis performed by Ms. Frayer.

[171] Tr. 471.

that (1) the effects of hedging are largely short term in nature and most existing hedges will expire before the facility becomes operational and (2) the energy price savings figures implicit in Mr. Younger's own GE MAPS study do not differ significantly from those provided by Ms. Frayer and by Staff witnesses Gjonaj and Wheat. Second, Applicants note Mr. Younger's contentions that the facility will need a subsidy in order to move forward and the amount of that subsidy should be subtracted from any energy price savings. In response, Applicants refer us to arguments they made on pages 30-40 of their Initial Brief.[172]

Applicants stress that Mr. Younger failed to offer any support for his claim that any jobs created by the facility will be offset by jobs lost at generating facilities now operating in New York City.[173] In contrast, they observe that Ms. Frayer's rebuttal testimony explained that her detailed analysis of generator economics demonstrates that there will be no retirements of existing generating facilities caused by the facility.[174] Finally, Applicants note that Mr. Younger speculated that in the absence of the facility other resources would be developed that would also create jobs, but they highlight his failure to quantify the jobs that would be created by such facilities, either directly or indirectly.[175]

Discussion

The evidence regarding the number of direct construction jobs that would be created if the project is

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[172] These arguments are summarized and discussed above in the "Project Economics" section.

[173] Tr. 471.

[174] Tr. 349.

[175] Tr. 471.

constructed is unopposed. We therefore find that Applicants' evidence regarding the number of direct construction jobs that would be created if the project is constructed provides support for the public interest finding that is required by PSL §126(1)(g).

The accuracy of Applicants' estimates of the indirect and induced jobs that would be created by the project is contested. Still, we find that there is record evidence supporting the claims that the project, if constructed, will also lead to the creation of indirect and induced in-State jobs. We note that the only actual support provided by the opponents regarding the project's impact on creating indirect and induced jobs concludes that there will not be as many indirect and induced jobs as Applicants contend – perhaps 1,380, instead of the 4,600 estimated by Applicants. Notably absent from the record is evidence to substantiate the opponents' assertions that jobs created by the project must and will be offset in whole or in part by a loss of jobs caused by the facility. The opponents' claimed nexus between generator jobs that may be lost and the approval/operation of the project is assumed but simply has not been demonstrated.

The competing analyses however also confirm that estimating the facility's indirect and induced long-term job creation and economic impacts is a very complex endeavor, and, depending on the inputs used, the results of such analyses can vary significantly -- here, it varies between 1,380[176] and 4,600

[176] We note that this number may be understated because of alleged errors in its calculation. See, e.g., Tr. 257-259. Because we conclude that the project should be viewed as merchant and disagree that a definitive nexus between lost generator jobs and approval of this project has been demonstrated on this record, we are not persuaded that, on this basis, that this number should be further reduced, potentially to the point of elimination.

-- depending on the party/witness. Thus, while we believe there is sufficient reason to anticipate indirect and induced job creation as a result of the facility's construction, given the complexity that attends these long-term forecasts and the myriad concerns and contentions that have been expressed regarding the derivation of such estimates,[177] we are less assured of the accuracy of such estimates. Accordingly, we find sufficient basis to conclude that indirect and induced job creation is likely and we recommend that the project's potential for creating such jobs should be viewed as additional support for the public interest finding required by PSL §126(1)(g).

Co-located Infrastructure[178]

Several certificate conditions are proposed in order to safeguard existing infrastructure. They include: (1) Applicants' commitment to engineer, construct, and install the facility so as to make it fully compatible with the continued operation and maintenance of Co-located Infrastructure ("CI") and affected railroads, railways, highways, roads, streets, or avenues;[179] (2) mandatory preconstruction consultation by the certificate holder with owners and operators of CI, including the discussion of measures that will be employed whenever the

[177] In particular, we agree with arguments that use of the CARIS modeling, in whole or part, as a basis for such estimates is inappropriate for a merchant facility.

[178] Co-located Infrastructure includes electric, gas, telecommunication, water, wastewater, sewer, and steam infrastructure and appurtenant facilities and associated equipment, whether above or below ground or submerged, that is located within the Construction Zone approved in the EM&CP or in a proposed Construction Zone and is owned or operated for public utility purposes by a regulated service provider or a State agency or municipality. Hearing Exhibit 127, ¶27.

[179] Hearing Exhibit 127, ¶27.

proposed facility might cross or come in close proximity to existing CI;[180] and (3) provisions requiring reimbursement of certain expenses incurred by owners and operators of existing and potential CI for activities such as consultation, review, study, etc.[181] There also are numerous requirements that specify what the certificate holders must include in the EM&CP.[182] The CI Conditions are intended to protect CI and covered infrastructure from risk of harm due to the construction, operation and maintenance of the facility.

Central Hudson is the lone opponent with respect to these proposed conditions. It expresses concern that its infrastructure may be harmed or access thereto may be hindered by the facility construction, maintenance or operation, and claims that certificate conditions 27-29 are unreasonable because they (1) attempt to qualify or limit Applicants' responsibilities and (2) are inconsistent with Applicants' representations that they are seeking approval of their project based on the acceptance of all risks. NYC, VELCO, and NYPA vigorously oppose Central Hudson's interpretation of the CI provisions and its proposed modifications thereto; they instead advocate the adoption of the CI conditions in their entirety and without modification.

NYC notes that construction-related risks, and even some elements of its CI, may not be identified until construction and engineering details are developed in relevant EM&CP segments. NYC also observes that its infrastructure and facilities, if damaged, would affect tens of thousands of City

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[180] Hearing Exhibit 127, ¶28.

[181] Hearing Exhibit 127, ¶29.

[182] Hearing Exhibit 127, ¶162.

residents and businesses. It views these proposed conditions as comprehensive, robust, and critical to NYC's support of the JP and of the facility. NYC expresses confidence that these provisions, when applied in coordination with the Best Management Practices (BMPs) and EM&CP Guidelines, will be sufficient to ensure that NYC infrastructure will be protected and preserved during facility construction.

NYC highlights the requirement that Applicants submit documentation with relevant EM&CP segment proposals showing agreement by NYC that its CI, whether located within the NYC boundaries or elsewhere, has been adequately identified and protected or a description of those aspects of Certificate Holders' proposal that are disputed and a discussion of the positions taken by the Certificate Holders and NYC.[183] NYC characterizes this provision as an essential element of its support for the JP and the proposed certificate conditions.

NYC states that Central Hudson's complaints that Applicants failed to provide sufficient detail regarding the precise location and manner of each CI crossing should be dismissed. NYC observes that the JP sets forth a consensus route that was scrutinized by Staff and DEC to ensure that actual and potential risks of environmental harm would be avoided or minimized to the greatest extent practicable. It notes that the details sought by Central Hudson will be developed as Applicants prepare relevant EM&CP segments for Commission review and approval. NYC adds that CI owners and operators such as Central Hudson will have ample opportunity prior to the submission of relevant EM&CP segments to discuss how the facility should be installed over or near co-located infrastructure. NYC states that Central Hudson fails to explain

[183] Hearing Exhibit 127, ¶162(j).

how the cumulative procedures afforded by the CI Conditions and EM&CP Guidelines would be inadequate to address its concerns.

NYC also addresses Central Hudson's assertions that Applicants refused to promise reimbursement for incremental costs that the utility may incur to maintain or repair its infrastructure that is located in proximity to the facility. NYC responds that this assertion ignores the plain language of Condition 29(a), which details the expenses for which owners or operators of CI would receive reimbursement.

NYC says that Central Hudson's claims that the CI conditions would deny it due process because it could not pursue legal remedies in a court of law lack merit and should be dismissed. NYC states that the challenged provision requires only that any CI owner or operator with a dispute regarding Applicants' cost reimbursement responsibility will pursue available administrative remedies before commencing action in a court of law, and does not preclude CI owners or operators from pursuing remedies otherwise available under the law to challenge how the Commission resolves such disputes, and it would not shield Applicants from liability for injuries arising from its negligent acts or omissions.

Finally, NYC observes that Central Hudson apparently stands alone among utilities in its interpretation of the CI Conditions.

VELCO, a co-owner of the 115 kV transmission line connecting New York and Vermont, submitted reply comments solely to respond to Central Hudson's assertions regarding the proposed reimbursement provisions and to advocate for the rejection of Central Hudson's interpretations. VELCO states that it shares Central Hudson's underlying concern that the engineering, pre-installation work, construction, operation, maintenance and repair of the facility be done in a manner that will not

interfere with, endanger, damage or add costs to the operation, maintenance and repair of existing utility infrastructure. It further agrees that the certificate holder must bear all new and increased costs incurred by owners of existing infrastructure in protecting, operating, maintaining and repairing existing facilities as a result of the facility or Applicants' activities. VELCO, however, "differs with Central Hudson over the meaning of proposed Condition 29," and expresses concern that

> if Central Hudson's interpretation of [Applicants'] obligations were to be accepted, directly or indirectly, by the Commission … the obligations of [Applicants] with regard to Co-located Infrastructure would be diluted to the detriment of VELCO and other utilities that own and operate such facilities.

VELCO argues that, except in the case of local municipal laws that the Commission explicitly overrides for being unreasonably restrictive, the Commission has no authority to dilute obligations Applicants bear as a matter of common or statutory law.

VELCO asserts that the obligations imposed by Condition 29 either supplement or more precisely define Applicants' obligations, thus mooting Central Hudson's concerns that the conditions "exclude personal injury" and prevent an affected owner from pursuing its remedies in court. VELCO expressly disavows such conclusions, saying that the laws governing parties' rights and obligations, whether substantive, procedural or venue-based, and whether derived from tort, real property law, Workers' Compensation laws, or worker safety regulations, for example, would not be affected and cannot be displaced by conditions imposed by the Commission in granting an Article VII Certificate. VELCO adds that it did not, by signing

the JP, limit in any way its rights to pursue all available legal remedies.

VELCO also disagrees with Central Hudson's view that condition 29 places unreasonably restrictive burdens on pre-existing facility owners seeking cost reimbursement. It characterizes the language of conditions 29(b) and (c) as reflecting a compromise. It disagrees with Central Hudson's views that Applicants' exposure is limited to $5,000 and that the proposed requirements of condition 29(c) are unreasonably burdensome. It argues that reimbursement up to $5,000 for each study or design proposal it reviews in connection with its CI is ensured, as are all reasonably incurred costs, so long as it provides the notice and estimates prescribed in condition 29(c). VELCO adds that costs incurred in responding to emergency situations will be subject to reimbursement without advance notice and estimate. Finally, VELCO emphasizes that the reimbursement rights and obligations provided for by the proposed condition are wholly supplemental to the rights and obligations granted and imposed by other relevant laws.

NYPA states that the CI provisions adequately protect NYPA property that may be affected by facility. NYPA argues that the failure to incorporate these proposed conditions could jeopardize its critical energy infrastructure and compromise electric reliability in New York and Vermont.

Staff argues that the CI conditions apply to the infrastructure Central Hudson appears to be concerned about. Staff adds that the obligations on the certificate holders concerning notice, reimbursement for certain costs, and study and design requirements will provide additional protections to existing infrastructure and its owners.

Discussion

In Article VII proceedings, the exact location of proposed facilities often is determined in the EM&CP process because that is when a certificate holder will have conducted the in-field inspections that will permit it and the staff of relevant agencies to ascertain whether there are any conditions that warrant a deviation that is still within the approved ROW but that may vary from the proposed centerline. Such conditions are likely to better inform and directly influence ultimate routing and cable burial decisions, including, for example, the exact placement of the proposed cable relative to existing infrastructure. If that is the case, those decisions will be made based on the prior review of and input from the owners of such existing infrastructure, including Central Hudson.

Central Hudson's concerns are premised on assertions that Applicants' cable would be placed on top of Central Hudson's existing infrastructure and that the facility and its construction, operation and maintenance will cause harm to existing CI and impose unrecompensed costs on regulated utilities. It is not yet clear where the proposed transmission line would be placed relative to existing infrastructure, but it is clear that the JP provisions at issue are designed to protect existing CI to the maximum extent practicable and to provide for reimbursement on reasonable terms. Finally, there is no basis for concluding that the provisions are designed to affect or displace laws governing parties' existing rights and

obligations. Accordingly, we recommend that Central Hudson's opposition to the CI provisions be rejected.[184]

OTHER CONCERNS

JP ¶5 – deletion of "directly"

JP ¶5 begins by stating:

> Nothing in this Joint Proposal or any appendix thereto is intended: (a) to directly impose any obligations on or limit any pre-existing rights of any party other than Applicants;

Central Hudson recommends deletion of the word "directly" from this provision. Applicants respond that they would agree to delete the word if Central Hudson had signed the JP. They add that they do not object to that change as it relates to the signatories.

Discussion

Based on Applicants' concession that they do not object to the deletion of the word and positions expressed in VELCO's reply statement, among others, the deletion of the word "directly" seems to more accurately reflect the signatories' intent with respect to clarifying that the JP was not meant to affect or displace any other legal rights or remedies. We therefore recommend that the word "directly" be deleted from JP ¶5(a).

[184] This includes rejection of Central Hudson's recommendation to delete JP ¶¶5(b-d) because they allegedly "exculpate Applicants from potential future responsibilities to other parties or persons and restrict other parties' and persons' rights." As discussed above, JP ¶¶5(b-d) do not exculpate Applicants.

Proposed certificate condition 5 – Land Acquisitions and Maintenance

Proposed certificate condition 5 states:

> The portions of the Allowed Deviation Zone to be occupied by the Facility once construction is complete are referred to herein as the Facility ROW. The Certificate Holders shall also acquire and maintain the continuing right to enter onto and use certain additional lands immediately adjacent to the Facility ROW needed for repair and maintenance purposes, including preclusion of vegetative encroachment, on terms prohibiting the owners of such land from taking any action on that land that would interfere with such repair and maintenance activities.

Central Hudson argues that certificate condition 5 should be revised to so that it merely authorizes the certificate holder to acquire such lands and/or land rights, consistent with all applicable requirements of law, rather than mandate that Applicants make such acquisitions.

Central Hudson adds that this condition should be further revised by striking the language referring to "terms prohibiting the owners of such land from taking any action on that land that would interfere with such repair and maintenance activities" because it alleges that the language is not consistent with, and would have the effect of seeking to overrule settled law in New York. Central Hudson contends that

> an existing utility has the right to interfere with the new facility under at least some circumstances. See, LIRR v. LILCO, 103 AD2d 156 (2d Dept 1984), which, among other things, holds that 'Consequently, we hold it to be the law in this State that the grant of authority found in section 11 of the Transportation Corporations Law is sufficient to empower LILCO to condemn the limited interest sought

> herein unless the evidence establishes that its proposed easement will materially interfere with the LIRR's existing public use.'

Central Hudson asserts that "it is potentially feasible that Central Hudson, in the future, would need to exercise the right to condemn some portion of the new facility, should the facts warrant."

Staff responds that Central Hudson's claims reflect a misunderstanding of the import of the certificate condition 5, which read as a whole is appropriate and will not interfere with Central Hudson's ability to maintain its existing infrastructure. Staff observes that the requirement to obtain the right to enter and use certain lands is limited to those property rights that the certificate holders will need in order to maintain and repair their facility in the future.

Discussion

We recommend rejecting Central Hudson's proposed modifications because they reflect an interpretation that is contrary to JP ¶5's plain language and wholly unsupported when viewed in the context of all of the provisions regarding CI.

Certificate Condition 15(a)[185]

Certificate Condition 15 (a) states in relevant part, that the Certificate is granted and the required determinations of the need for the facility and that the facility will serve the public interest, convenience and necessity are explicitly made contingent on Certificate Holders delivering a minimum of 1,550 MW of energy out of NYPA's Astoria substation; it provides for a report to be filed documenting how Applicants will achieve

[185] Attached hereto as Appendix 2.

this level of deliverability prior to, or at the time they file their EM&CP for the first segment of the facility.

Central Hudson opposes certificate condition 15(a) because it says it is unknown whether the deliverability criterion can be met.

Discussion

Central Hudson's position in this regard has been refuted by (1) Hearing Exhibit 151, a stipulation between Applicants and Con Edison, in which Con Edison agreed that the deliverability target had been met, and (2) Applicants' Deliverability Panel testimony that the Astoria Annex Phase Angle Regulator, together with NYPA's two existing lines and the Astoria-Rainey Cable, would be able to deliver more than 1,550 MW of electric energy out of the Astoria substation.[186]

Certificate Conditions, Section S, ¶¶138-144[187]

Section S is entitled "Mapping, Land Acquisition, and As-built Drawings for the Facility." In paragraph 139, it states:

> following final completion of construction of a particular Segment, the Certificate Holders shall prepare and provide to the DPS the as-built design drawings, which shall include a detailed map or maps showing (a) the boundary of the permanent Facility ROW and areas that will be subject to periodic vegetation management ("Final Layout Area"), (b) the location of the Facility as installed ("As-built Design Drawings")… and (c) With respect to As-built Design Drawings that relate to installation of the Project on lands owned or controlled by the Canadian Pacific Railway, such As-built Design

[186] Tr. 577-578.

[187] Provisions concerning mapping, land acquisition, and as-built drawings for the facility. See JP Appendix C.

> Drawings shall be provided to DPS staff within ninety (90) days of the completion of construction and shall conform with Section 5.5.5 of the American Railway Engineering and Maintenance-of-Way Association ("AREMA") Manual for Railway Engineering, taking into account the fact that such standard is specifically addressed to fiber optic infrastructure. With respect to As-built Design Drawings that relate to installation of the HVDC Transmission System on lands owned or controlled by CSX Transportation, such As-built Design Drawings shall be provided to DPS staff within ninety (90) days of the completion of construction and shall conform to an appropriate standard that is substantially equivalent in terms of detail to the AREMA standard referenced, and (d) With respect to As-built Design Drawings that relate to submerged portions of the HVDC Transmission System, such As-built Design Drawings shall indicate areas in which the cables are laid in deep waters without cover and areas in which the cables are laid on the bottom but covered, in which case(s) the type of cover (i.e., natural bed material, rip-rap or concrete mattress cover) shall also be described.

Central Hudson asserts that certificate conditions in Section S should be modified to assure that Central Hudson is provided with as-built drawings for any new facility, or acquisition of any interest in land, within 50 feet of existing Central Hudson property, and for the full length of the route in the Hudson River within Central Hudson's service territory. Applicants respond that proposed certificate condition 139 requires them to provide DPS Staff with as-built design drawings for each facility segment following final completion of construction of that segment and that they would also provide copies of such drawings to Central Hudson for portions of the facility in Central Hudson's service territory, so long as

Central Hudson agrees to maintain the confidentiality of any Critical Infrastructure Information contained in those drawings.

Discussion

There is no obvious dispute on this issue. It seems that Applicants and Central Hudson should be able agree to a process for sharing such information.

JP ¶7[188]

Central Hudson claims that JP ¶7's exclusion of non-signatory parties from future issues related to the JP is incorrect and prejudicial to the rights of parties in interest to this proceeding. Applicants respond that Central Hudson is not a signatory and is therefore properly excluded from participating in this process for resolution of disputes concerning the provisions of the JP.

Discussion

We recommend that the general terms that govern the behavior and rights of JP signatories, including paragraphs 1,

[188] This paragraph reads: In the event of any disagreement over the interpretation of this Joint Proposal, or implementation of any of the provisions thereof, that cannot be resolved informally among the Signatory Parties, such disagreement shall be resolved in the following manner: a. the Signatory Parties shall promptly convene a conference and in good faith attempt to resolve any such disagreement; and, b. if any such disagreement cannot be resolved by the Signatory Parties, any Signatory Party may petition the Commission for resolution of the disputed matter. c. Notwithstanding paragraphs 7(a) and (b) above, any material changes to the project that would alter the Applicant's ability to fulfill the accepted conditions in Applicants' coastal consistency certification, or should future consistency certifications be necessary if additional federal authorization activities require federal agency approval or funding beyond those NYSDOS considered in its June 8, 2011 conditional concurrence, those material changes or additional activities shall be resolved pursuant to 15 C.F.R. Part 930 subpart D.

2, 3, 4, 6, 7, 8 and 9, not be adopted as terms of the Commission Order if the Commission decides to grant a certificate. If the Commission decides to grant Applicants a certificate, if and to the extent it adopts the terms of the JP, Central Hudson will have the same rights as any other party with respect to filing a petition with the Commission regarding the correct interpretation of one or more of the Order's terms or requesting dispute resolution assistance or services.

Other concerns

Central Hudson also expresses confusion or has questions about JP paragraphs 11, (and maybe 12), 107-119, 122, 132, 136-138 and 140 and says it opposes all or portions of JP ¶¶11, 20, 107-119, 122, 132, 136-138, and 140, and proposed certificate condition 5.

Discussion

There is insufficient explanation of the bases for confusion or opposition to these provisions to provide a response. We therefore recommend that Central Hudson's opposition to these provisions be rejected.

Discrimination claim

One of NYC local laws (§28-105.1 of the N.Y. Adm. Code) makes it unlawful to construct a building in NYC without first obtaining a written permit. This permit, in turn, implicates §28-105.12.7.1 of N.Y. Adm. Code, a section that requires Applicants to procure insurance to, *inter alia*, insure adjacent property owners from loss, property damage and personal injury. In its reply brief, Central Hudson, claims for the first time that the JP is discriminatory because "[t]he City Administrative Code requires essentially the indemnification protections to property affected by the proposed facilities in New York City that Central Hudson requested Applicants provide

to Central Hudson's pre-existing property and operations that would be similarly affected by the proposed facility." Central Hudson contends that it and the City are situated similarly to each other in the sense of having pre-existing property and facilities that could be harmed by the construction, installation, location, or operation of Applicants' new facilities and thus it would be discriminatory to approve the indemnification in favor of the City but deny it to Central Hudson.

In addition to being untimely, Central Hudson's new discrimination claim is premised on being "similarly situated" to NYC. In this regard, it is not. The NYC Administrative Code section cited by Central Hudson applies because Applicants plan to build the converter station in New York City, not because they plan to lay cable there. With regard to plans to lay cable, Central Hudson has the same protections as any other owner of CI, as discussed in the subsection entitled "Co-located infrastructure", *supra*.

Central Hudson's other new claim is that discrimination is evidenced by the presence of the proposed environmental trust because it will be pre-funded while the CI provisions do not provide for pre-funding. As Central Hudson provides absolutely no support for this assertion, we recommend that it be rejected.

EM&CP GUIDELINES

The signatories agree that the BMPs and the EM&CP Guidelines set forth in Appendices E and F of the JP are acceptable and appropriate for application to the facility as proposed herein. JP ¶¶24, 152; Appendices E & F. The JP opponents do not contest the proposed application, or the substantive requirements, of the proposed BMPs and EM&CP guidelines.

The proposed practices and guidelines are consistent with similar such practices and guidelines adopted in other Article VII proceedings and are unopposed. We therefore recommend that the proposed practices and guidelines be adopted and applied to the facility.

As noted above, the portion of the underground route that is located in Stony Point, New York is proposed to be located CSX's ROW. Even so, some of the public comments submitted by residents of Stony Point expressed concern that this portion of the route could impact the Waldron Cemetery and ROW-adjacent residences. In response, we note that routing details and plans will be finalized as part of the EM&CP process. We further note that the EM&CP Guidelines expressly provide that a Cultural Resource Management Plan (CRMP) will be developed in consultation with the OPRHP Field Services Bureau, the Advisory Council on Historic Preservation, the United States National Park Service, and other stakeholders. The CRMP will include, among other things, the identification, evaluation, and management of historic properties within the facility's area of potential effects and an outline of the processes for resolving potential impacts on those historic properties and determining the appropriate treatment, avoidance, or mitigation.[189]

In addition, the BMPs require that the initial work of identifying alternative and competing land uses will be re-confirmed, as appropriate, with special interest given to areas with sensitive land uses, including cemeteries and residences along the facility route. With regard to identified residences, the BMPs further state that a list of residential landowners will be compiled with contact information, and they will be contacted to discuss the facility, construction schedule, and

[189] See JP Appendix E at 16.

any potential concerns.[190] Finally, there are requirements that notice of the filing and availability of the EM&CP will be provided to ROW-adjacent municipalities and residents, including plain language instructions to such residents explaining how and when they may file comments with the PSC Secretary on construction plans and mitigation measures.[191] These provisions should ensure that the concerns regarding the types of sensitive areas highlighted by the comments of some Stony Point residents are properly addressed.

WATER QUALITY CERTIFICATION (WQC)

As part of the JP, the signatories agree that the record in this proceeding supports the proposed WQC set forth in JP Appendix D. Only Entergy in its initial statement in opposition to the JP challenged the proposed WQC, claiming that it was "skeletal in several key areas, including, without limitation, with respect to impact mitigation, contaminant management and endangered species protection." It added that the WQC was plainly inadequate given that the overland portions of the project route cross more than 100 water bodies, including several water bodies designated by NYSDEC as being water quality-impaired or as having other water quality issues -- conditions which Riverkeeper's environmental consultant has opined are likely to be exacerbated by Applicants' proposed construction methods.

In its reply statement, Staff asserted that Entergy mischaracterized the proposed WQC and did not support its claims that the WQC is "skeletal" or "bare and plainly inadequate".

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[190] See JP Appendix F, document entitled "Best Management Practices, General Information Regarding Application, February 10, 2012," at 22-1, 22-2.

[191] See, e.g., Hearing Exhibit 127, ¶¶ 153 and 155.

Staff notes the proposed WQC requires that Applicants demonstrate compliance with the applicable provisions of Sections 301-303, 306 and 307 of the Federal Water Pollution Control Act and 6 NYCRR Part 608.9. Staff says that the proposed WQC also contains conditions to ensure compliance with applicable regulations for both water-body crossings and underwater cable installation, including designation of water quality standards, requirements for water quality and suspended sediment monitoring, and provisions for mitigation of in-water construction impacts and protection of underwater habitats. Staff adds that endangered species protection and contamination issues for construction in water-bodies are addressed elsewhere in the JP and are not appropriate for the WQC. Finally, Staff contends that the proposed WQC's conditions are consistent with those approved in other recent cases involving underwater cable installation, namely HTP and Bayonne.

Discussion

For the reasons stated by Staff, we reject the assertions made by Entergy with respect to the proposed WQC. We recommend that the proposed WQC be issued by the Director of the Office of Energy Efficiency and the Environment (OEEE) prior to the expiration of the USACE's February 24, 2013 waiver deadline.

CONCLUSION

We recommend that the Commission adopt the terms and conditions of the February 24, 2012 Joint Proposal, as revised by the Stipulations filed on June 4 and 26, July 11, and October 19, 2012, and as revised in accordance with our recommendations so that Applicants thus are granted a Certificate of Environmental Compatibility and Public Need for the facility described herein. We also recommend that the proposed Water

Quality Certification be issued by the Director of OEEE prior to the expiration of the USACE’s February 2013 waiver deadline.

December 27, 2012
MLP, KJC /seh

Appendix 1

List of Parties Participating in the Settlement Negotiations as of the January 2011 Status Report on Settlement Negotiations

1. Adirondack Park Agency
2. Albany County
3. Central Hudson Gas & Electric Corporation
4. Champlain Hudson Power Express, Inc.
5. City of New York
6. City of Yonkers
7. Consolidated Edison Company of New York, Inc.
8. County of Westchester
9. Entergy Nuclear Power Marketing, LLC
10. International Brotherhood of Electrical Workers, Local Union No. 97
11. Independent Power Producers of New York, Inc.
12. National Grid USA
13. New York Power Authority
14. New York State Council of Trout Unlimited
15. NYS Canal Corporation/ NYS Thruway Authority
16. NYS Department of Agriculture and Markets
17. Staff of NYS Department of Environmental Conservation
18. NYS Department of Transportation
19. NYS Office of Parks, Recreation & Historic Preservation
20. Staff of NYS Department of Public Service
21. Riverkeeper, Inc.
22. Scenic Hudson, Inc.
23. Town of Saugerties

a. The Certificate is granted and the required determinations of the need for the Facility and that the Facility will serve the public interest, convenience and necessity are explicitly made contingent on Certificate Holders delivering a minimum of 1,550 MW of energy (including 550 MW of energy not flowing through the HVDC Transmission System) out of NYPA's Astoria substation. The Certificate Holders shall file a report documenting how they will achieve this level of deliverability prior to, or at the time they file their EM&CP for the first segment of the Facility. If the Certificate Holders cannot demonstrate compliance with this deliverability requirement, the Certificate Holders shall file with the Secretary a Request for Reconsideration of the need and public interest, convenience and necessity determinations made with respect to the Facility. The request shall be served on all parties to this proceeding and shall clearly state that all parties may submit comments on the filing within thirty (30) days of service. Such request shall explain why Certificate Holders believe that a lesser amount of energy deliverability is consistent with the Commission's findings that the Facility is needed and will serve the public interest, convenience and necessity. Such request shall include a discussion of each option the Certificate Holders considered as a means of achieving the minimum threshold level of deliverability. The Certificate Holders may not commence construction of the Facility unless and until the Commission has accepted the report or approved the request filed pursuant to this subpart.

b. The Certificate is granted and the required determination that the Facility will serve the public interest, convenience and necessity is explicitly made contingent on the HVDC Transmission System being developed, financed, constructed, and operated on a merchant basis with no reliance on cost-of-service rates set by either a federal or state regulatory entity, and will not be included in utility rate base, either directly or through a contractual arrangement between Certificate Holders and any agency, authority or other entity of the State of New York, any municipal subdivision of the State of New York, any utility subject to cost-based regulation, or any instrumentality of any of the foregoing, and on the further condition that all costs associated with the use of the Astoria-Rainey Cable to deliver electric energy and capacity transmitted over the HVDC Transmission System will also be recovered exclusively on a merchant basis with no reliance on cost-of-service rates set by either a federal or state regulatory entity, and will not be included in utility rate base, either directly or through a contractual arrangement between Certificate Holders and any agency, authority or other entity of the State of New York, any

municipal subdivision of the State of New York, any utility subject to cost-based regulation, or any instrumentality of any of the foregoing. Prior to, or at the same time they file their EM&CP for the first segment of the Facility, the Certificate Holders shall file a report documenting that they have received binding contractual commitments from one or more financially-responsible entities for a combined total of no less than 750 MW of Firm Transmission Service over the Facility for a period of no less than twenty-five (25) years. The Certificate Holders may not commence construction of the Facility unless and until the Commission has accepted this report. In the event that Certificate Holders seek to recover any of the costs of the HVDC Transmission System, or any of the costs associated with the use of the Astoria-Rainey Cable to deliver electric energy and capacity transmitted over the HVDC Transmission System, in cost-based rates set by a Federal or State regulatory authority, the Certificate shall be deemed invalid. In the event that the Certificate Holders recover all or any part of the costs of the HVDC Transmission System, or any of the costs associated with the use of the Astoria-Rainey Cable to deliver electric energy and capacity transmitted over the HVDC Transmission System, under a contract between Certificate Holders and any agency, authority or other entity of the State of New York, any municipal subdivision of the State of New York, any utility subject to cost-based regulation, or any instrumentality of any of the foregoing, the Certificate shall also be deemed invalid. For purposes of this provision, the term “rates” shall include any charges established by NYPA or a utility operating under cost-based regulation, including without limitation base rates, surcharges, adjustments, or any other recovery mechanism.

c. The Certificate is granted and the required determination that the Facility will serve the public interest, convenience and necessity is explicitly made based on the cost estimate for the Astoria-Rainey Cable set out in Paragraph 23 of the Joint Proposal in this proceeding. Certificate Holders shall include as part of their EM&CP for the Astoria-Rainey Cable a report providing an updated construction cost estimate for the Astoria-Rainey cable, including supporting documentation. If the updated cost estimate exceeds the cost estimate in the evidentiary record of this proceeding by ten (10) percent or more, the Certificate Holders shall file with the Secretary a Request for Reconsideration of the determination of public interest, convenience and necessity made with respect to the Facility. The request shall be served on all parties to this proceeding and shall clearly state that all parties may submit comments on the filing within thirty (30) days of service. Such request shall explain how such increased cost would be

consistent with the Commission's public interest, convenience and necessity determination made in this proceeding.

d. Upon commencement of construction, the Certificate Holders shall file with the Secretary monthly reports showing the costs for the Astoria-Rainey Cable as they occur, broken out as follows: excavation costs, traffic control costs, cable installation costs, splicing costs, thermal back fill, manhole and vault costs, costs relating to damage to other facilities (gas, electric, telephone, fiber optic cables, sewer, water, etc.), engineering costs, inspector costs, fines, cable costs, and all other costs by category. The reports shall include the names of the individuals responsible for providing the information, along with their contact information, and shall contain all supporting documentation.

e. Subject to the limitations of Condition 15(b), nothing contained in this Certificate shall be construed as affecting in any way the rights of Certificate Holders to unilaterally make application to the Federal Energy Regulatory Commission ("FERC") for a change in rates, terms and conditions, charges, classification of service, Service Agreement, rule or regulation under section 205 of the Federal Power Act ("FPA") and pursuant to FERC's rules and regulations promulgated thereunder.