# PUBLIC SERVICE COMMISSION The Matter of Service Commission Service Case 13-T WEST POINT PARTNERS, LLC Service Case 13-T Application of West Point Partners, LLC for a Service Certificate of Environmental Compatibility and Public Service Law Service Case 13-T Need Pursuant to Article VII of the Public Service Law Service Case 13-T Environmental Compatibility and Public Service Case Ser

# APPLICATION OF WEST POINT PARTNERS, LLC FOR A CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED

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STATE OF NEW YORK

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Certificate of Environmental Compatibility and Public	:	
Need Pursuant to Article VII of the Public Service Law	:	
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# APPLICATION OF WEST POINT PARTNERS, LLC FOR A CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED

West Point Partners, LLC (WPP) submits this Application (Application) for a Certificate of Environmental Compatibility and Public Need (Certificate) authorizing the construction, ownership and operation of the major electric transmission facility described herein (West Point Project or Project). The Application was prepared in conformance with Article VII of the New York Public Service Law (PSL) and Parts 85, 86 and 88 of the Commission's rules (16 NYCRR Parts 85, 86 and 88). In conformance with Section 85-2.8 of the Commission's rules, WPP states as follows:

### 1.0 PROJECT DESCRIPTION

### a. Interconnection Points

The Project is an approximately 80 mile long high voltage electric transmission facility that will connect two points within the 345 kV New York State transmission system: the existing National Grid Leeds Substation in the Town of Athens, Greene County, New York and the existing Consolidated Edison Company of New York, Inc., Buchanan North Substation

located adjacent to the Indian Point Energy Center in the Village of Buchanan, Westchester County, New York.

### b. Transmission Capacity

The Project will be capable of providing up to 1000 MW of firm transmission capacity. At a 100 percent capacity factor, the Project would deliver 8.76 million MWh of energy per year from New York Independent System Operator's (NYISO) Zone G to NYISO's Zone H. In addition to providing firm transmission, because the Project will be a controllable DC circuit, it can provide other services, such as voltage support, load following and energy transfer scheduling to enhance overall system efficiency.

### c. Project Components

The Project will include a 320 kV High-Voltage Direct Current (HVDC) submarine cable system, including a fiber optic communications line, buried in the bed of the Hudson River; two underground transition vaults where the submarine cable is spliced to upland HVDC cables; upland HVDC cables connecting the submarine cable to Voltage Source Conversion-High Voltage Direct Current (VSC-HVDC) converter stations at each terminus; VSC-HVDC converter stations at each end of the HVDC cable system, located close to the points of interconnection at the Leeds and Buchanan North substations; and short lengths of buried 345 kV AC lines connecting the converter stations to buses in the Leeds and Buchanan North Substations. The Project will employ VSC-HVDC technology for controllability, voltage stability and efficiency.

Drawings and detailed descriptions of the Project are provided in the **Exhibit 5**, and **Exhibits E-1** through **E-4** to this Application.

# 2.0 <u>STATEMENT OF THE LOCATION OF THE PROPOSED SITE OR</u> RIGHT-OF-WAY

For most of its length, the Project will be buried in the bed of the Hudson River in submerged lands owned by the State of New York. At either end of the in-River route the Project's cables will be buried in existing public rights-of-way and/or in rights-of-way secured from private landowners. The converter stations will be located on private property proximate to the existing Leeds and Buchanan North Substations. The planned location of the Project is depicted on maps provided in **Exhibit 2**.

# 3.0 <u>SUMMARY AND DESCRIPTION OF ANY STUDIES WHICH HAVE BEEN</u> MADE OF THE ENVIRONMENTAL IMPACT OF THE PROJECT.

Studies of the environmental impact of the Project are presented in **Exhibit 4** and its associated appendices. In general, these studies show that by embedding the Project cables in the riverbed and underground and by locating the converter stations near existing substations the Project's environmental impacts will be minimal, temporary and primarily limited to the construction phase. Exhibit 4 also describes how the environmental impacts associated with construction of the Project will be minimized by the type of construction methods chosen, by limiting work to time-of-year construction windows and by building upon the experience WPP's personnel and contractors have gained installing and operating similar electric transmission facilities.

### 4.0 STATEMENT EXPLAINING THE NEED FOR THE PROPOSED FACILITY.

As explained in greater detail in An Assessment of the Impacts of the West Point DC

Transmission Project on the New York State Electric System's prepared by ESAI Power LLC and

included as **Appendix E-4A**, the West Point Project will meet, in part or in whole, the following needs:

- a. providing a transmission path capable of delivering 1000 MW of firm capacity from Upstate New York to Southeastern New York;
- b. providing a means for replacing approximately 50 percent of the output of Indian Point Units 2 and 3;
- c. enhancing the AC transmission system by alleviating an existing constraint on the AC system from Leeds Substation south;
- d. enabling generators, including wind, other renewable resources and repowered plants, located north and west of Leeds to deliver an additional 1000 MW of power to loads in Southeastern New York;
- e. decreasing the State's reliance on relatively higher cost power sources in favor of relatively lower cost power sources, thereby reducing Statewide production costs and, on a net basis, prices paid by consumers for electricity;
- f. reducing the use of relatively higher emitting sources of air emissions in favor of relatively lower emitting sources, resulting in a net reduction Statewide in air emissions and greenhouse gases;
- g. providing the benefits of a controllable HVDC circuit, including voltage support, outage recovery capability, load following capability and power transfer scheduling capability; and
- h. increasing the overall reliability and security of the New York State Transmission System in the Hudson Valley by installing a brand new 1000 MW circuit buried underground and in the bed of the Hudson River in contrast to an overhead circuit in existing utility corridors.

Numerous studies have identified the AC transmission corridor between the Leeds and Pleasant Valley substations as a source of significant congestion. In its call for "projects that would increase the capacity for transfer of electric power between Upstate and Central New York and the Lower Hudson Valley," the *New York Energy Highway Blueprint* has identified this corridor as requiring transmission upgrades (Blueprint at 40-41 and Figure 5). The Blueprint and the Commission's *Order Instituting Proceeding* in Case 12-T-0502 have called for upgrades

to this and other parts of the AC system. The Project will provide both the benefits of an AC upgrade identified by the Commission and the Energy Highway Taskforce and additional benefits that controllable DC technology provides, as summarized below:

- a. Electrically, the Project postpones or eliminates the need for a Leeds-to-Pleasant Valley expansion. The recently-completed Feasibility Study (Appendix E-4B), conducted in accordance with NYISO criteria and the basis for the System Reliability Impact Study (SRIS) for the West Point Project now underway, states that the Project "effectively unloads the Leeds-Pleasant Valley corridor and reduces its thermal loading." (The study assumed Leeds-Pleasant Valley at its existing capacity, without upgrades.) Thus, the West Point Project achieves the goal of reducing congestion on the Leeds-Pleasant Valley branch of the system without the need to construct upgrades on that line.
- b. The West Point Project provides additional system reliability benefits. The Project will provide controllable transfers of up to 1000 MW of power north-to-south, and will act as a buffer between zones in the event of system faults. Moreover, it will be a source of VAR support to help regulate voltages and enhance reliability, reducing or eliminating the need for static VAR compensators at other points in the system. Unlike conventional HVDC technology, the proposed VSC-HVDC converters are also capable of offering "black-start" functionality to the receiving end of the line, which could be very useful to the NYISO for system restoration following a wide-spread outage. Because the Project will be buried, it will not be subject to the kind of weather-related damage and outages that overhead facilities are exposed to.
- c. The West Point Project concurrently addresses the need for transmission upgrades and reliability concerns in the event of retirement of Indian Point. In its *Order*

Instituting Proceeding and Soliciting Indian Point Contingency Plan in Case 12-E-0503, the Commission called for a plan to address reduced system reliability associated with the possible retirement of Indian Point Units 2 and 3. With its southern interconnection at the Con Edison Buchanan North substation, 1000 MW of power carried by the West Point Project – nearly half of Indian Point's capacity – can be dispatched to serve loads south of Indian Point using existing transmission facilities.

Although the West Point Project can serve as a direct replacement for half of Indian Point's capacity, the West Point Project can also bring 1000 MW to southern load centers even if Indian Point continues to operate, without significant adverse impacts to the existing transmission system.

The Commission's *Order Instituting Proceeding* in Case 12-T-0502 listed several benefits to New York's ratepayers that could be realized by upgrading New York's transmission system. In addition to the advantages described above, we address these briefly as follows:

• Enhanced system reliability, flexibility, and efficiency – the West Point Project helps assure reliability of the electric system both in the short run and in the long run. In the short term, the line can be built without impacting existing north-south transmission infrastructure; no facilities need to be taken out of service in order to build it. In the long run, the West Point Project will serve as a permanent "backbone" of the state's transmission infrastructure using proven technology with a useful life of at least 40 years (and likely far greater) – and one that can more easily withstand severe weather events than typical overhead lines. Moreover, the use of VSC-HVDC technology offers the advantages of controllability and voltage stability to the system as a whole while at the

same time avoiding or minimizing certain impacts and disadvantages of a conventional AC system.

In addition, relieving north-south transmission constraints reduces the need to run older, dirtier, and less efficient power plants located closer to downstate load, and helps provide far more optionality for the system to facilitate both economic and environmental dispatch of generation.

- Reduced environmental and health impacts the West Point Project will be a major new north-south energy pathway that helps create access for cleaner sources of generation upstate natural gas (new and repowered) and renewables to downstate energy markets that are currently load pockets, constrained by an aging and inadequate transmission system. Relieving these constraints will help meet the State's 30 percent renewable target, all with in-State resources rather than importing "green" energy from generators outside the State.
- Increased diversity of supply with lower-cost new resources Upstate New York holds the greatest potential for development of a wide range of desirable resources (wind, solar, biomass, hydro, natural gas, etc.) compared with densely populated and heavily developed areas of southeastern New York. In creating a new pathway to the north, the West Point Project will help reduce overdependence on only one or two types of resources. Moreover, such new resources are likely to be significantly less expensive to build and operate upstate than in high-cost areas in and around New York City and Long Island.

- Long-term benefits in terms of job growth Removing transmission constraints within New York and encouraging the construction of renewable, repowered and other clean forms of generation upstate will clearly provide new job opportunities during construction itself, in increased activity at existing and new generating plants, and through the "multiplier effect" of stimulating products and services to meet the demands created by increased employment. As noted in the Energy Highway RFI, \$1 billion worth of transmission investment has been found to be worth 13,000 FTE years of employment and \$2.4 billion in total economic activity.
- Mitigation of reliability problems that may arise with expected generator retirements As noted above, the West Point Project meets the dual objectives of alleviating transmission congestion and of replacing major generation north of New York City, such as Indian Point, on a time schedule that avoids risking the availability of power supply into heavy load areas.

### 5.0 <u>DESCRIPTION OF REASONABLE ALTERNATIVES.</u>

A description of alternative locations, technologies and routes considered by WPP is provided in **Exhibit 3**.

### 6.0 OTHER INFORMATION

Pursuant to PSL § 130 and Section 401 of the Federal Water Pollution Control Act, WPP requests that the Commission issue a Water Quality Certificate for the Project.

Pursuant to PSL § 126(1)(f) WPP requests that the Commission exempt the Project from certain provisions of local laws of the Town of Athens, Village of Athens, Village of Buchanan,

Town of Cortlandt and County of Westchester described in Exhibit 7. These provisions concern

primarily prohibitions against locating utility infrastructure in certain districts, building height,

and limitations that would unreasonably restrict construction practices.

7.0 **CONCLUSION** 

WHEREFORE, for the above-stated reasons, West Point Partners, LLC respectfully

requests that the Commission issue a Certificate of Environmental Compatibility and Public

Need for the Project described herein and a Water Quality Certificate.

Dated: June 28, 2013

Albany, New York

Respectfully submitted,

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