VIA ELECTRONIC TRANSMITTAL

January 25, 2013

Hon. Jeffrey Cohen
Acting Secretary to the Commission
New York State Public Service Commission
3 Empire State Plaza
Albany, NY 12223-1350

RE: Case 12-E-0502
Proceeding on Motion TO Examine Alternating Current Transmission Upgrades

Dear Acting Secretary Cohen:

Pursuant to the Commission's Order Instituting Proceeding of November 30, 2012 in the above referenced case, West Point Partners, LLC is submitting the attached Statement of Intent (SOI) for the West Point Transmission Project.

Please do not hesitate to contact me if you require more information (e-mail: chocker @powerbridge.us).

Sincerely,

Christopher Hocker
Vice President, Planning

cc: John W. Dax, The Dax Law Firm

STATE OF NEW YORK

PUBLIC SERVICE COMMISSION

CASE 12-T-0502

PROCEEDING ON MOTION TO EXAMINE ALTERNATING CURRENT TRANSMISSION UPGRADES

STATEMENT OF INTENT

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c/o PowerBridge, LLC

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January 25, 2013

A. RESPONDENT INFORMATION

1. Contact Information

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203-416-5590

Primary Contact: Christopher Hocker, Vice President-Planning
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2. Respondent's Background and Experience

West Point Partners, LLC (WPP) is a single-purpose entity formed by PowerBridge, LLC of Fairfield, CT and Anbaric, LLC of Wakefield, MA for the purpose of developing, building, owning, and operating the West Point Transmission Project, the proposed electric transmission cable project that is the subject of this Statement of Intent (SOI). PowerBridge, the Managing Partner of WPP, specializes in the development, permitting, financing, construction, ownership, and operation of energy and infrastructure projects (www.powerbridge.us). Notable examples of PowerBridge projects include:

- **Neptune Regional Transmission System (PSC Case 02-T-0036):** Neptune is a 660 MW, HVDC underground and underwater transmission cable that links PJM with NYISO, serving the Long Island Power Authority (LIPA). It extends 65 miles between Sayreville, New Jersey and North Hempstead, Long Island, New York, and includes an HVDC converter station at both ends of the line. Neptune was completed in June 2007 after a two-year construction period, on budget and ahead of schedule, at a cost of approximately $650 million that was entirely financed in the private capital markets. For the past five years, it has provided approximately 20 percent of Long Island's electricity needs. (www.neptunerts.com)

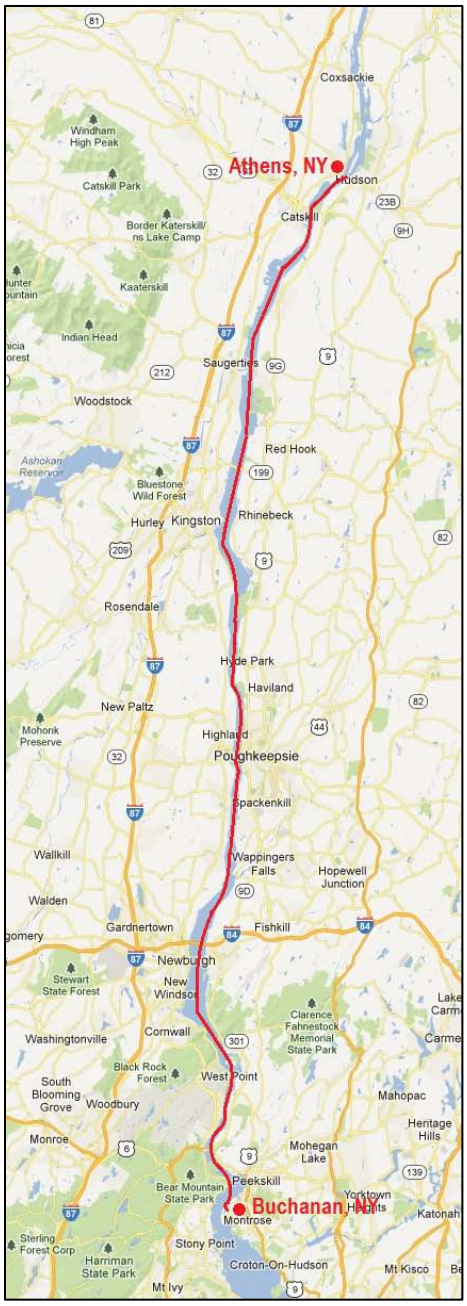
- **Hudson Transmission (PSC Case 08-T-0034):** Hudson, like Neptune, is a 660 MW underground and underwater transmission connection between PJM and NYISO. It includes a back-to-back HVDC converter station in Ridgefield, New Jersey and a 345 kV AC transmission cable that runs approximately seven miles, including nearly four miles under the Hudson River, to the Con Edison W. 49th Street substation. Construction began in May 2011, with underwater cables installed under the Hudson in December 2011, and the project is expected to be completed by May 2013. Financing for the $850 million project was obtained from private investors, many of whom also participated in the Neptune project financing. (www.hudsonproject.com)

The core development team for WPP includes individuals who were and are directly involved in the development, permitting, financing, construction, and operation of the Neptune and Hudson projects.

B. PROJECT DESCRIPTION

1. Location and Interconnection Points

The West Point Transmission facility (West Point) will be capable of carrying 1000 MW of electric power for approximately 80 miles between the existing National Grid Leeds substation in Athens, Greene County, New York, and the existing Consolidated Edison Buchanan North substation adjacent to the Indian Point Energy Center in Buchanan, Westchester County, New York.



Proposed West Point Project route

The Leeds substation is located in NYISO Zone G, and the Buchanan North substation is located in NYISO Zone H. It is our understanding that NYISO may be establishing a new capacity zone for the lower Hudson Valley in 2014, and it is likely that the southern converter station for West Point would be located in the new zone.

1. Transmission Capability

West Point will be capable of carrying up to 1000 MW of firm transmission capacity at all times. At 100 percent capacity factor, this would represent 8.76 million MWh of energy per year. A representative example of actual energy utilization is the Neptune project, which historically been utilized in the 70–80 percent range, and has been utilized as a baseload resource at its full 660 MW of transmission capacity for much of its five-plus years of operation. However, as a controllable line, West Point (like Neptune) can be utilized in a variety of ways, such as following loads and scheduling energy transfers to enhance overall system efficiency.

West Point will feature a high voltage (320 kV) cable buried for most of its route underneath the bed of the Hudson River and will use Voltage Source Conversion-High Voltage Direct Current (VSC-HVDC) technology for controllability, voltage stability, and efficiency (Siemens technology for this application is known as “HVDC-Plus”). A VSC-HVDC converter station will be constructed at each end of the line, close to each point of interconnection at the Leeds and Buchanan North substations.

For further descriptive purposes, West Point is conceptually similar to the Trans Bay Cable Project, a 400MW VSC-HVDC project that includes a 53 mile underwater cable between Pittsburg and San Francisco, California, completed in 2010. Principal contractors for Trans Bay Cable were Siemens and Prysmian, who also were the joint contractors for the Neptune and Hudson transmission projects in New York and are expected to be the contractors for West Point. Please see the website www.transbaycable.com that includes photographs and other descriptive information that are indicative of the proposed West Point facilities.

C. PROJECT BENEFITS

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). Although the Blueprint and the Commission's *Order Instituting Proceeding* have called for upgrades to this and other parts of the AC system, WPP believes the State can promote the goals of the Blueprint by carefully considering the benefits of the West Point Transmission Project. As an alternative to an AC transmission upgrade between Leeds and Pleasant Valley, the West Point Transmission Project can provide both the benefits of an AC upgrade and additional advantages that an AC upgrade cannot provide, as summarized below:

1. **West Point is more readily permittable with less likelihood of public opposition.** Entirely underground and underwater, West Point takes advantage of the direct Hudson River route between the Leeds substation and the Buchanan North substation adjacent to Indian Point Energy Center without the visual and land use impacts of a high-voltage overhead AC line expansion.

   WPP acknowledges that the Blueprint expresses a "preference for projects developed along existing rights-of-way or that include upgrades to existing lines" because it is expected that such projects would "minimize environmental impacts and potential community opposition that could result from construction in new transmission rights-of-way." (Blueprint at 41-42.) WPP concurs in that expectation. But, as between the West Point Transmission Project and the projects anticipated by the Blueprint, West Point offers the very kinds of advantages that the Blueprint highlights. Expanding the capacity of an existing AC corridor such as the existing right-of-way for a third Leeds-Pleasant Valley 345 kV transmission line will require either much taller overhead transmission line towers – up to 135 feet compared to the existing 85 feet -- or the expansion of the existing right-of-way by as much as 100 feet. This new AC line will also require either a new, overhead Hudson River crossing at Athens or a complex and expensive underwater cable crossing and associated shoreline overhead/cable transition stations. These impacts elevate the likelihood of strong and vocal opposition from nearby property owners and the general public, including potential litigation, notwithstanding their use of existing rights-of-way. The practical result will be to delay the construction schedule and drive up costs.

   By contrast, West Point has no visual impacts and requires no private property acquisition other than two parcels of approximately 5-7 acres for converter stations; acquisition of these parcels will not require eminent domain authority. West Point can more readily deliver the benefits of the AC upgrades identified in the Blueprint – and more.

2. **Electrically, West Point postpones or eliminates the need for a Leeds-to-Pleasant Valley expansion.** The recently-completed Feasibility Study, conducted in accordance with NYISO criteria and the basis for the System Reliability Impact Study (SRIS) for West Point now underway, states that West Point "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, West Point achieves the goal of reducing congestion on the Leeds-Pleasant Valley branch of the system without the need to construct upgrades on that line.

3. **West Point provides system reliability benefits that AC transmission cannot offer.** As a DC system, West Point 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.
   As a final point about reliability, West Point will not be subject to significant damage and outages due to severe weather events.

4. **West Point concurrently addresses the need for transmission upgrades and reliability concerns in the event of retirement of Indian Point.** The PSC's Case 12-E-0503 contemplates the need to assure the continuity of reliable power supply if Indian Point's 2040 MW are not relicensed or otherwise are retired. With its southern interconnection at the Con Edison Buchanan North substation, 1000 MW of power carried by West Point – nearly half of Indian Point's capacity -- can be dispatched to load south of Indian Point using existing transmission facilities.

Although West Point can serve as a direct replacement for half of Indian Point's capacity, it is also noteworthy that according to the West Point Feasibility Study referenced above, West Point 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.

In describing the advantages above, WPP does not intend to disparage the proposed Leeds-Pleasant Valley AC transmission upgrade that has been put forward by others, which clearly would serve the purpose of relieving congestion on this part of the system in the absence of another alternative. However, WPP proposes to take advantage of the fact that a direct submarine route exists that has no visual or land use impacts and therefore little prospect of attracting widespread opposition; only short-term, mitigable impacts to the Hudson River (as has been indicated by current Article VII proceedings in another case); system benefits that no AC line can provide; and the prospect of replacing half of Indian Point's capacity by late 2016 or 2017.

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 --** West Point 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, West Point is envisioned 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 --** West Point will be a major new north-south energy pathway that helps create access for cleaner sources of generation upstate – natural gas 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, West Point helps 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 generation 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. (Note that the preliminary cost estimate for West Point is approximately $1 billion.)

- **Mitigation of reliability problems that may arise with expected generator retirements –** As noted above, West Point 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 jeopardizing the availability of power supply into heavy load areas.

D. PROJECT IN-SERVICE DATE AND SCHEDULE

WPP has completed environmental studies and in-water surveys that will enable us to submit applications for a New York State Article VII Certificate and a U.S. Army Corps of Engineers permit, in the second quarter of 2013. Beyond this, the schedule to complete the facility is dependent on the length of time required to obtain the major permits, as well as work window restrictions for in-water cable installation that might be imposed in the permits. Our experience with the Neptune and Hudson projects suggests that construction and commissioning is likely to require approximately 30 months. This period includes engineering, design and procurement under an Engineering-Procurement-Construction (EPC) contract such as those used for the Neptune and Hudson projects.

Thus, assuming approximately one year for review and issuance of the principal permits, we envision the commercial operation date for West Point could come in late 2016 or during the first half of 2017.

E. FINANCIAL STRUCTURE

Capital for well structured infrastructure projects, such as transmission, remains readily available to developers with proven track records. In general, privately financed transmission projects have been structured around one of two revenue models: (a) a long term transmission capacity purchase agreement or (b) a cost-of-service, rate-base model.

The Neptune and Hudson projects are examples of projects financed on the basis of a long term transmission purchase agreement. Those projects have 20 year contracts with LIPA and NYPA, respectively. The projects receive their revenue solely on the basis of an availability-driven tariff. If the transmission line is available for operation, then the project receives its monthly tariff payment, irrespective of the actual energy that flows through the line. The Customer is therefore free to optimize the use of the asset for its benefit and that of its own customers. The long term transmission capacity purchase agreement framework is similar to how most gas pipelines are financed.

A major advantage of this type of structure for the Customer lies in the allocation of risk. The project entity (developer) takes on all development, permitting, design and construction risks and will not earn revenues until the transmission line is built to pre-agreed specifications and successfully goes into service. In addition, all construction and operating cost risks are generally borne by the project owners. If there are cost overruns in constructing or operating the project, the tariff payments generally would not be increased.

Examples of projects financed on the rate base model include the Competitive Renewable Energy Zone (CREZ) projects in Texas, which involve about 400 miles of 345-kV transmission to areas of the state with high-value renewable resources; and the Path 15 and Trans Bay projects in California. The rate base model is similar to how investor-owned utilities recover their costs for constructing new transmission and distribution lines and how Congestion Assessment and Resource Integration Study (CARIS) projects are intended to recover costs through the NYISO tariff. The revenue requirements of the project company are determined each year on the basis of its prudent operating costs, cost of debt capital, agreed return on equity and applicable capital structure.

Under this framework, greater amounts of risk are usually borne by the ratepayers than under the long term purchase agreement model. Increases in capital and/or operating costs, if deemed to be prudently incurred, are passed through to the ratepayers. In addition, unlike the long term purchase agreement model, the revenue requirement is usually not adjusted for poor operating performance such as reduced availability. Nonetheless, there may be means to modify the rate based model structure somewhat in order to insulate ratepayers from certain risks. For instance, it may be possible to cap ratepayers' exposure to cost overruns, and/or to make rate recovery contingent on the project achieving a minimum performance level, thereby mitigating the construction completion risk for ratepayers. Similarly, it may be possible to structure an adjustment mechanism to the annual revenue requirement on the basis of the actual availability of the transmission line.

WPP and its financial sponsors are very comfortable implementing a project under either of the two financing frameworks. To date, the West Point/Powerbridge development team has raised over $1.5 billion in capital to finance the development, construction and operation of the 660 MW Neptune project and the 660 MW Hudson project. While each of those projects utilized 20 year Firm Transmission Capacity Purchase Agreements (FTCPA) as the cornerstone for establishing the credit to raise the financing, WPP's investors have also used other financial structures, including the rate base model.

WPP is amenable to working with any number of different risk allocation structures, provided there is a balance between the risks and the rewards.

As noted above, we believe there will be plenty of capital available for a well structured transmission project. The development capital for West Point is currently being provided by three principal Equity Sponsors:

- **Energy Investors Funds (EIF)**, which was founded in 1987 as the first private equity fund manager to invest exclusively in the power sector, has raised more than $4 billion in equity capital in support of more than $15 billion worth of projects, including the Neptune and Hudson transmission projects.

- **Starwood Energy Group**, an affiliate of Starwood Capital Group Global, LLC, a privately held global investment management firm based in Greenwich, Connecticut that is also a principal investor in Neptune and Hudson.

- **NRG Energy**, a Fortune 250 wholesale power generation company with nearly 25,000 MW of generating assets in North America, including nearly 4,000 MW in New York.

On the debt side, we anticipate some combination of the commercial bank market and the institutional private placement market will be the financing source for West Point. Each of these markets has its pluses and minuses for financing the construction and operation of large, capital intensive, long-lived energy assets. Neptune and Hudson were predominantly financed in the institutional private placement market, with placements totaling more than $1 billion. The CREZ projects in Texas, on the other hand, were predominantly financed in the bank market. As of today, each of those markets would have sufficient capacity on its own to finance West Point, which is expected to have a capital cost on the order of $1 billion. Since access, competitive pressures, and relative pricing in each of these two markets can vary based on market conditions, we would not determine a final financing plan until much closer to the time of execution. The WPP development team has significant experience in raising capital in each of the markets and is highly confident of its ability to raise the necessary debt capital at the appropriate time.

F. NYISO INTERCONNECTION STUDY STATUS

The West Point Transmission Project (NYISO Queue # 358) is the subject of a Feasibility Study conducted in accordance with NYISO criteria and guidelines completed in October 2012. On the basis of the Feasibility Study, WPP agreed to proceed to the System Impact Reliability Study (SRIS) phase of the interconnection approval process, and submitted an executed SRIS Agreement, a deposit to cover study costs, and other required documentation in January 2013. On January 17, the NYISO Operating Committee approved the SRIS scope. Other parties to the SRIS Agreement are expected to execute the Agreement as required on or before February 2, 2013.

The Feasibility Study was based on existing system conditions, including the continued operation of Indian Point and the Leeds-Pleasant Valley line as it currently exists. Results included:

- The project does not cause new thermal overloads or exacerbate existing overloads that cannot be managed through minor generation redispatch;
- The project does not cause any new system overloads under normal conditions;
- Due to its size, the project results in significant changes in flow patterns of the power system near its points of interconnection, including unloading the Leeds-Pleasant Valley corridor and reducing its thermal loading;
- Under contingency conditions, the project does introduce minor overloads on the lines out of Buchanan North (assuming that Indian Point is operating), but these overloads can be mitigated by reducing Indian Point #2 output by 6 MW;
- Due to its reactive capabilities, the project has a generally positive impact on bus voltages, and does not introduce any new voltage problems;
- The project has no impact on short circuit levels.

G. LAND USE AND RELATED CONSIDERATIONS

As described above in Section C, the West Point cable will be entirely buried, primarily in the bed of the Hudson River. Our current plan is to maximize the underwater portion of the route, but we understand that it may be necessary to avoid the River in some locations and therefore we are examining land-based alternatives for relatively short stretches of the route. The land-based portion of the cable route is expected to be buried beneath public rights-of-way such as main roads or existing transmission ROW, with little or no involvement of private property.

West Point will require two converter stations that will occupy approximately five acres each, requiring clearing of unoccupied land. Potential impacts to affected land, and appropriate mitigation, will be the subject of studies being conducted in preparing of permit applications. WPP has identified suitable converter station sites both at the northern and southern end of the route, in close proximity to the Leeds and Buchanan North substations, respectively. We have an option agreement with the owner of the northern site and are in active discussions with the owner of the southern site, whom we know is willing to sell.

Environmental impacts of West Point will primarily occur during construction, since the cable will primarily be buried beneath the Hudson River between the Towns of Athens and Buchanan. WPP is well aware that this portion of the River includes environmentally sensitive areas, including habitat for a variety of valuable species. We have performed preliminary routing studies showing that many of the especially sensitive areas in the River can be avoided altogether. For those areas that cannot be avoided, impacts can be avoided or minimized by restricting construction to seasonal "windows" that permit in-water activity only during times of the year when sensitive species are not present. WPP is very familiar with NYSDEC and USACOE expectations and requirements regarding submarine cable installation, as well as Coastal Zone Management Act consistency considerations.

During operation, environmental impacts of West Point will be negligible, as the transmission cable will not be visible, and the converter stations produce no emissions or discharges into the environment.

To the extent environmental impacts of construction cannot be avoided, WPP will take necessary measures to minimize the impacts and to provide mitigation through restoration and enhancement, either directly or by funding mechanisms as appropriate. In addition, we will work closely with stakeholder groups such as local communities and not-for-profit groups including Riverkeeper, Scenic Hudson, and the Natural Resources Defense Council (NRDC) to assure that their concerns are satisfactorily addressed.

As discussed above in Section C, the environmental impacts of a high-voltage cable installation in the Hudson River compare favorably to the potential impacts of a high-voltage overhead transmission line, even in an existing corridor. Major upgrades to an existing overhead line will necessarily produce permanent visual impacts and likely changes in land use abutting the existing ROW. Construction and operation of West Point is entirely compatible with the stated Energy Highway Blueprint goal of minimizing environmental impacts and potential community opposition.

H. PRELIMINARY COST ESTIMATE

Our preliminary cost estimate for constructing the West Point Transmission project is approximately $1 billion ($1,000,000,000). This total is all-inclusive, covering development, permitting, real estate, financing, engineering, and construction through the commencement of commercial operation of the project.

This estimate is based on the experience of PowerBridge with the Neptune and Hudson transmission projects that are similar in most respects to West Point. Neptune, with a transmission capacity of 660 MW, was completed in 2007 at a cost of approximately $650 million, or approximately $1 million per MW of capacity. Hudson, also at 660 MW, will cost approximately $850 million when completed in the spring of 2013 (including nearly $200 million in required system upgrades), or approximately $1.25 million per MW.

It should be noted that use of the Siemens "HVDC-Plus" technology for West Point will require converter stations with smaller footprints than for Neptune and Hudson, which used conventional Siemens HVDC conversion technology.

Transmission projects such as Neptune, Hudson, and West Point are not "cookie cutter" projects, and costs cannot generally be estimated accurately on the basis of dollars-per-mile. Certain variables that could significantly affect the final project cost may include (but are not limited to):

- Extent of underground vs. underwater installation;
- Price of copper and other materials essential to the manufacture of project components;
- Currency exchange rates ($US to Euro);
- Prevailing interest rates at the time of construction and for permanent financing.

Despite these variables, it is important to note that projects such as these have been and can be financed on the basis of firm, fixed-price Engineering-Procurement-Construction (EPC) contracts that do not subject ratepayers to the risk of cost overruns. (Please see the discussion of risk allocation in Section E, Financial Structure, above.) As stated previously, the West Point development team has extensive experience in the financing of comparable projects and will work with other involved parties to determine the appropriate allocation of risks and benefits pertaining to the West Point project.