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August, 4th 2008

Stephen J. Rourke, Vice President
ISO New England System Planning
One Sullivan Road
Holyoke MA, 01040-2841

RE: TCA Application Northwest Reliability Project Revision 1 – Request for Information #02
VELCO-03-155-01-R1, VELCO-03-155-02-R1, VELCO-03-155-03-R1, VELCO-03-155-04-R1

Dear Mr. Rourke,

We've received your second request for information on NRP cost and TCA related issues. Please find attached our responses to your inquiries.

We believe that with this response, VELCO has addressed all of the outstanding ISO-NE questions on the NRP's cost and its TCA related matters. If so, we await the ISO's response regarding the VELCO's NRP TCA. We appreciate your time and recognize the ISO's need for due diligence on these matters.

Please do not hesitate to contact us should you have further questions on the material provided here or on other TCA matters with regard to the NRP. You may contact me at the my office via phone at 802-770-6323 or e-mail via dlaforest@velco.com. Please also copy Jose Sebastiao (802-770-6495 & jsebastiao@velco.com) with any further queries to help insure we meet your needs.

Sincerely,

Dean LaForest

cc: Carissa Sedlacek, ISO-NE, José Sebastiao, VELCO, Ernie Hiatt, VELCO, Tom Dunn, VELCO



Q. A-1 Discuss why wood H-frame construction was used rather than single pole construction. Also, provide a cost estimate comparison.

A. A-1 VELCO's standard for 345 kV construction is wooden H-frame structures. This standard is based on over 30 years experience of operating and maintaining wooden H-frames for our 345 kV line, over 50 years experience with 115 kV lines, in addition this standard allows our line designs to conform to the terrain and area where they are found. With respect to this last point, the use of 345 kV H-frames often leaves the line at or below the adjacent tree canopy along the ROW edge. With our active ROW maintenance program, this has not resulted in significant vegetative contacts, and we believe has minimized the H-frame designed lines as lightning targets (due to the lower profile when compared to local terrain and adjacent vegetation).

Building a single pole 345kV line would require, by design, steel poles and foundations to be used. The cost comparison of wooden H-frames to a single pole steel design for 345 kV takes into account the requisite installation manpower and hardware for each design in the terrain considered for the line. Here is a side by side material and installation cost comparison (2007 estimate):

<u>345kV Structure Direct Cost Comparison</u>	Steel Poles Average Direct Cost	H-Frame Average Direct Cost
Material	\$ 66,695	\$ 27,574
Labor	\$ 14,777	\$ 15,906
Equipment	\$ 7,856	\$ 11,488
Average Cost Per Structure	\$ 89,328	\$ 54,967

Note: Based on 2007 dollars and assuming 1/3 structure being a deadend structure.

The direct cost of the steel pole foundations is included in the above cost comparison. It would be extremely difficult and costly to build these foundations in the roughed, hilly or wetland terrain found along the 370 line ROW. The added cost for access roads to accommodate the requisite insallation equipment for the single steel pole design has not been included in the cost comparison.



Q. A-2 Beyond the Aesthetic Mitigation Plans already identified in the revised TCA applications, were there any beautification components and/or municipal improvements (i.e. bike paths, sidewalks, sewer system upgrades) associated with this project?

A. A-2 VELCO has not included any beautification components and/or municipal improvements with the NRP.



Q. A-3 Describe what, if any, the incremental benefit(s) of this project to the NY system?

A. A-3 Two elements of the NRP have a material impact on the NY system. They are the Sand Bar and Blissville PSTs. Each PST and its wide angular range allow pre and post-contingency control of the flow along these ties, with unique NY benefits for each device.

The Sand Bar PST controls flow along the PV20 115 kV tie line between NYPA's Plattsburgh and VELCO's Sand Bar substations. Northern NY is a region that for years has had access to generation well in excess of its local load. With plans to add approximately 1000 MW of wind generation in the area over the next three years, the Sand Bar PST allows control of the flow out of the area on the PV20 tie which may reduce the amount of transmission needed to support this new generation, allows a wider array of potential post-contingency flows for a variety of local outages, and presents greater flexibility than the facility it replaced – the Plattsburgh 115 kV PST, which had only a 40 degree variable range and a rating less than 200 MVA.

The Blissville PST controls flow on the Whitehall, NY (National Grid) to Blissville, VT (VELCO) 115 kV tie-line. This line is the sole connection between the National Grid 115 kV network north of the Capital District Area (Albany / Schenectady / Troy) and central VT. Four 115 kV lines leave the Capital District area and, combined with the Whitehall-Blissville tie, supply communities such as Clifton Park, Saratoga, Glens Falls, Lake George, Ticonderoga and many communities in the southeastern Adirondacks. Some tie-line outages between New York and New England, as well as lines in New England (like the 340 line) have the potential to cause parallel post-contingency flows in the 115 kV network from the Capital District area and onto the Whitehall – Blissville tie-line. These post-contingency flows can overload 115 kV lines in NY and cause poor 115 kV voltages. The Blissville PST allows a pre-contingency optimization of flow on the Whitehall – Blissville corridor to minimize, if not eliminate, post-contingency overloads and low voltages for the most troublesome outages.



Q. A-4 Describe in detail why VELCO decided to submit their 15.5 application early in the project development/design process.

A. A-4 VELCO submitted the NRP 15.5 application at the time it did during the design process due to a number of reasons. The main reason the 15.5 was submitted at this time was due to consistency with past submittals and a belief that, based on this past experience, the estimate was accurate. VELCO had submitted the 15.5 applications for the Essex substation rebuild/STATCOM project, the Rutland Region Reliability Project and the Northern Loop Project at similar points in the project development/design process. All of these projects were constructed and permitted within the budgetary estimates provided in the 15.5 applications. VELCO used the same budgetary / estimating methodologies when creating the NRP estimates with added support from a major A/E firm. In addition, VELCO needed to provide an estimate of the NRP's cost prior to in-state permitting to track cost or scope changes that came after initiation of in-state permitting. VELCO also knew that the question of regional approvals of the project would be posed during in-state siting; VELCO submitted the 15.5 application, as well as the 18.4 application, at that time to be able to respond to those questions with authoritative responses.