



January 30, 2006

Dean Laforest
VELCO
366 Pinnacle Ridge Road
Rutland, VT 05701

Re: VELCO Comments on UPC Substation

Dear Dean,

Thank you for your e-mailed comments dated January 24, 2006 on the E/PRO preliminary design of the proposed UPC substation for Sheffield, VT. On behalf of UPC Wind Management, LLC, I have reviewed VELCO's comments in detail with E/PRO and others involved with the proposed project. We felt it was appropriate to respond in detail to your comments prior to our submittal of the Section 248 permit application. Following the permitting process, we will continue with our final detailed design plans and will provide VELCO with opportunity to provide input and approve the final design.

115kV Design

1. 115kV bus and associated equipment shall be rated for 2000A continuous.
Response: This modification has been completed in the permit level design.
2. The 115kV Bus short circuit withstand shall be rated for 25kA minimum. Final rating shall be determined by VELCO Engineering and Planning.
Response: This modification will be addressed during the final design process following further discussions with VELCO.
3. The 115kV VT's shall be wire wound VT's, not CCVT's.
Response: This modification has been completed in the permit level design.
4. The 115kV circuit breakers shall be specified with three (3) CT's per bushing.
Response: This modification has been completed in the permit level design.
5. Ground and LA/VT disconnect switches shall be rated minimum 1200A continuous.
Response: This modification has been completed in the permit level design.
6. What is your rationale for the proposed MOD on the transformer high side breaker disconnect?
Response: This feature has been removed in the permit level design.

7. 115kV bus disconnects are gang operated center break with arching horns.
Response: See the response to comment #8.
8. All 115kV disconnect switches shall be illustrated with arching horns. Gang operated switches shall be identified where applicable.
Response: This modification has been completed in the permit level design.
9. VELCO standardizes on three phase line VT's (with tertiary winding) and single phase bus VT's (with tertiary winding) for radial bus designs.
Response: This modification has been completed in the permit level design.
10. The 115kV line LA's shall be 96kV duty cycle (grounded criteria) and the transformer high side LA's shall be 120kV duty cycle (ungrounded criteria).
Response: This modification will be discussed with VELCO and addressed as necessary during the final design process.
11. What is the high speed tripping medium; fiber/leased line or carrier?
Response: At this time, fiber is being considered. However, this will be addressed as part of the final design process.
12. Locate a station service off the 115kV Bus for maintaining separation. UPC can have their own station service transformers or provided a service from the 115kV station service summation cabinet.
Response: We would like to discuss this in further detail as part of the final design.
13. VELCO always specifies transformer 115kV windings and bushings with a 550kV BIL rating and four off nominal NLTC taps (+2.5, +5% and -2.5%, -5%).
Response: This modification will be discussed as part of the final design.
14. VELCO request's a copy of the transformer specification for review and final approval.
Response: VELCO will be provided with all information necessary to review and approve the final design of the substation.
15. LA's are placed on the high and low side "bushings" of the transformer.
Response: We will modify the design as necessary to address this comment following further discussion with VELCO during the final design process.

34.5kV design suggestions/questions:

1. Has an additional low side transformer bank breaker been considered?
Response: An additional low side transformer bank breaker has not been considered at this time. However, we would like to discuss this in greater detail with VELCO as part of the on-going design process.

2. Have single phase ($\emptyset 1$ - $\emptyset 2$) line VTs been considered for indication on the 34.5kV lines?

Response: This modification to the 35 kV side of the substation has not been considered as part of the preliminary design. We would like to discuss this in greater detail with VELCO as part of the on-going design process.

3. Typically 34.5 kV VTs incorporate a fused disconnect on the VELCO system.

Response: This modification will be incorporated into the preliminary design plans provided for the 248 permitting process.

4. The 34.5kV LA's shall be 27kV duty cycle (grounded criteria).

Response: This modification will be included as part of the final design developed for this project.

Control Building Design:

1. An alternate approach to separate control buildings is a single control building split by a wall at the boundary fence. This partitioned building shall minimize control and communication cable lengths, conduit and trench and achieve a smaller foot print.

Response: This modification will be incorporated into the design. Further, the location of the control building will be relocated to a location between the two entrances due to site conditions. Finally, we will be proposing two outside doors (one on the VELCO side and one on the UPC side that will access their control room. An inside door that would allow access between the control rooms, if required by VELCO, can also be incorporated into the final design.

Design Plan Modifications

1. The fence between the two yards should be the same as the perimeter fence if possible for consistency. Our standard fence is 7' of mesh with another foot of barbed wire (3 wires). If E/PRO runs into problems we can discuss further. Using the lattice structure as proposed on the drawings will have the bus tie between the bank breaker and the transformer high enough that an 8' fence will not be a problem.

Response: A fence will be added to the substation layout as part of the 248 permit plans. This fence will allow for controlled access to either side of the substation. The actual design and location of this fence will be developed as part of the final design. Further, no gate will be installed between the two sides of the substation.

2. See attached sketch of relocated sub under the 115kV line.

Response: We have reviewed the sketch provided by VELCO that indicates the substation can be located underneath the 115 kV transmission line. This location would appear to provide some significant advantages. However, we will submit the substation as a stand alone structure outside the right of way at this time since we do not know if wetlands, archeological resources or other aspects of the site will make this location impractical. We are open to discussing this location further with VELCO as final design proceeds.

3. Finally, after internal discussion, VELCO would like to own the land beneath our equipment.

Response: UPC has no issue with this and will proceed with the transfer of land as negotiated as part of the final design.

We understand that the above comments reflect the last comments that VELCO will provide on the preliminary design. We appreciate the time and effort on VELCO's part to provide these comments and look forward to working with VELCO in the future as we proceed with the final design of the electrical substation. We further understand that, as stated in your e-mail:

"VELCO believes if the station design conforms to our suggestions, we will have no significant concern with regard to station design as presented to us for the present Sheffield proposal. We reserve the right to comment upon, and approve or reject, portions or elements of the final station design and will not provide any final approval until such time as the final design is available."

Please feel free to contact me at the Greatwood Management Company if you have any comments on the above information. Thank you.

Sincerely,

The Greatwood Management Company, LLC

By: 

Gregory B Johnson, PE
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cc: Craig Myotte, E/PRO
Andy Raubvogel, Esq., Shems Dunkiel Kassel & Saunders