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STAR Group, LLC

Date: May 12, 2007
 To: Members of the Coolidge Connector Community Working Group
 From: Chris Kenny, Process Manager
 Re: Notes from April 30, 2007 CCCWG Meeting

<u>Members Present</u>	<u>Members Absent</u>
Andrew Perchlik, Renewable Energy Vermont	Kathy Pellett, State Representative
Frank Heald, Ludlow Municipal Manager	Joyce Meehl, Brookline Select Board
Richard Svec, Cavendish Town Manager	Bill Driscoll, AIV
Thomas Kennedy, Southern Windsor County Regional Planning Commission	Susan Spaulding, Chester Town Manager
Jack Collins, Ludlow Electric	Jeffrey Lewis, Brattleboro Development Credit Corp.
Bruce Bentley, CVPS	Marc Colety, Mack Molding
Dean LaForest, VELCO	Sen. Alice Nitka, Windsor County
Kerrick Johnson, VELCO	Heath Boyer, Town of Windham
Ralph Roam, VELCO	
	<u>Guests Present</u>
	Jim Matteau, Wyndham Regional Planning Commission
	Richard Hahn, La Capra Associates
	Greg White, CVPS

The Coolidge Connector Community Working Group (“CCCWG”) met at the Putney Inn on Monday, April 30, 2007 from 4 – 6:00 p.m.

Kerrick Johnson began the meeting by reminding the group that at the February 26, 2007 CCCWG meeting in Cavendish, members had asked VELCO and CVPS to review the results of La Capra Associates’ Non Transmission Alternatives (NTA) analysis, to present to the CCCWG the companies’ suggestions for how to move forward, and to obtain the CCCWG’s recommendations regarding those suggestions. Kerrick informed the group that

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La Capra Associates had further refined the NTA analysis, that VELCO and CVPS had evaluated the refined NTA analysis, and that they were prepared to present for the CCCWG's consideration, the companies' suggestions for moving forward.

Dick Hahn provided the group with a review of the information presented at the February 26, 2007 meeting. Mr. Hahn and the CCCWG members also discussed the key pieces of information that La Capra Associates had learned since the preliminary NTA analysis was presented to the CCCWG that caused La Capra to modify the NTA analysis. The material information learned since the last CCCWG meeting included (a) the state-wide load level at which a solution is needed for the stability of the transmission grid was lowered to 1,190MW from 1,200MW, (b) a memo issued by the Vermont Department of Public Service that lowered line loss estimates and the anticipated contribution to the system load from energy efficiency measures, and (c) further analysis concluded that ARC 1 (100% Energy Efficiency) is no longer a viable option.

Greg White, Director of Engineering, Business Development and Technology for CVPS, led a discussion concerning the overall strategy developed by CVPS and VELCO following the companies' evaluation of the La Capra NTA analysis. The strategy being pursued by the two companies consists of the following components: (1) CVPS will pursue, along with Vermont's other distribution utilities, increased energy efficiency measures, load management including demand response, distributed resources and new generation; (2) VELCO will pursue a permit to construct the new transmission components recommended by the Utility Search Conference and Southern Loop Community Working Group participants; and (3) VELCO and CVPS will monitor Vermont's electric load levels relative to the new 1,190MW critical need threshold and move forward with construction of the new transmission components should the actual load meet or exceed the load level at which the Connector is needed.

Mr. White said that the strategies developed by CVPS and VELCO were consistent with the recommendations developed at the January 2006 Utility Search Conference and those developed by the Southern Loop Community Working Group: namely, to deploy two synchronous condensers near Stratton, to implement all cost-effective demand-side management, to pursue new, local generation, and to build new transmission facilities in the event the utilities determined that distributed resources would not provide sufficient system reliability.

Dean LaForest of VELCO provided the group with an overview of various system demand scenarios that were based on historical load data. Based on current trends in electricity demand and barring significant reductions in demand, VELCO has concluded that system demand could exceed 1,190MW as

early as 2008. Given the time required to construct the new transmission facilities necessary to maintain system reliability consistent with federal requirements, VELCO believes that it will need to make a decision regarding new construction some time in 2008. Mr. LaForest also noted that effective June 4, 2007, VELCO, its owners and possibly Vermont ratepayers may face penalties of up to \$1,000,000 per day, per violation if VELCO fails to maintain its system according to federal reliability standards.

Bruce Bentley took the group through the non-transmission alternatives that were included in the La Capra study and upon which VELCO and CVPS relied, in part, in developing the overall strategy being presented to the CCCWG for its consideration at this meeting. These included (a) the increase in Efficiency Vermont's budget through 2008 implemented by the Vermont Public Service Board, (b) the anticipated impact of geo-targeting of efficiency measures pursuant to Act 61, (c) the anticipated effects of the forward capacity market on peaking generation and load management, and (d) opportunities for renewable generation as well as combined heat and power resources pursuant to Act 61. Regarding items (b) and (c), Mr. Bentley advised the group that several distribution utilities, including CVPS, presently were conducting a study to evaluate the feasibility of new generation in Vermont.

The two companies identified their next steps for resolving the Southern Loop Problem Statement. First, the companies will host a combined meeting of the Coolidge Connector Working Group and the Southern Loop Community Working Group to obtain additional input on the strategies outlined this afternoon.

Second, VELCO plans to make a Section 248 filing with the Vermont Public Service Board in July or August of 2007 requesting the issuance of a Certificate of Public Good for the transmission solution derived as a result of the Southern Loop public involvement process.

Third, CVPS will continue to support energy efficiency measures in the Southern Loop area.

Fourth, CVPS and Vermont's other distribution utilities will complete a study for new generation in Vermont.

Fifth, CVPS and other distribution utilities will take steps to encourage the development of new generation in affected areas.

Sixth, CVPS and other distribution utilities will take steps to implement enhanced load management, including demand response, in affected areas.

Seventh, VELCO and CVPS will continue to monitor the weather-adjusted load growth trend in Vermont. If load levels continue to track in a manner consistent with VELCO's forecast, VELCO will proceed with its plan to construct a new 115kV transmission line (built to 345kV standards) and related infrastructure between Vermont Yankee and the Coolidge substation.

Eighth, if load levels are lower than forecast, VELCO will consider "pausing" its proposal to construct the new 115kV transmission line and related infrastructure; in that event however, CVPS and VELCO would likely have to build new transmission facilities in the Brattleboro – Dummerston area to address local reliability.

Members of the CCCWG asked questions and offered comments during and after each of the presentations. The following represent the issues discussed, including clarifications provided by VELCO and CVPS staff following the meeting:

Q: Do VELCO's load forecast assumptions include the potential for global warming?

A: No. We use actual historical data to make predictions about future demand levels. However, as information about consumer responses to global warming and its impacts on energy demand levels becomes more available and has a sufficient degree of certainty, we will try to include it.

Q: Does the fact that many local ski areas have their own generators create an understated winter load level in your forecast?

A: The impact is somewhat unclear; however, many ski areas are not using the generators because of air quality issues.

Q: Does VELCO's load forecast include information provided to CVPS and/or VELCO by CVPS's large customers?

A: VELCO does not receive direct information from individual customers; however, we do receive information from our owners, such as CVPS, and they in turn receive information from many of their large customers. From CVPS's perspective, historical and anticipated load growth in the Ludlow through St. Alban's area is having a large impact on the need for the Coolidge Connector. In addition, CVPS has developed a method for forecasting new loads coming onto the system through the Act 250 process.

Q: You spoke of the "forward capacity market" and its affect on opportunities for efficiency measures and new generation. What are "capacity payments" and how are they calculated? What is the formula for calculating capacity payments for efficiency measures?

A: Capacity payments are based on a

three year schedule of payments based on your rated capacity (not your actual generation) in the first year and increase thereafter. After 2010 the payments will be the result of an auction based price. The process to validate efficiency measures is still being devised.

Q: For purposes of the NTA analysis, how much energy efficiency was assumed?

A: An independent firm, Optimal Energy, assisted with this portion of the NTA analysis. They assumed a 20% reduction in peak loads by 2016 through efficiency measures.

However, their assumptions were made prior to the revised line loss data provided recently by the Vermont Department of Public Service. They also assumed that every available efficiency measure was implemented successfully, which is very hard to do. From CVPS's perspective, some of the energy efficiency measures have yet to be fully tested in Vermont. Vermont utilities have done a much better job implementing (and have much more experience with) winter energy efficiency measures. We do not have as much experience implementing summer efficiency measures.

Q: If Optimal Energy's analysis of the amount of and opportunity for additional efficiency measures is correct, shouldn't the implementation of these measures actually become self-funding through the energy savings generated? Aren't there technologies out there that would make implementation of these measures easy for the average consumer, so that overall system load growth will not be as high as in VELCO's forecast?

A: Current programs are driven by incentives. Programs to convince customers to invest without incentives or to pay back a loan from future savings are difficult to implement. More and more technologies are being developed to enhance efficiency; however, most of these technologies are not likely to be implemented widely enough in Vermont to offset anticipated system load growth by 2009.

Q: What are the national reliability standards that Dean referred to? Where did they come from and who pays if they are not met?

A: These standards were developed as a result of the blackout that occurred in Canada and the northeast United States in August 2003. The National Electricity Reliability Council (NERC) is the “transmission grid police officer.” NERC has created reliability standards for owners and operators of the country’s electrical grid. VELCO is required to comply with these standards. Effective June 4, 2007, NERC has the authority to impose fines of up to \$1,000,000 per day, per violation for violations of its standards. If fined, VELCO would look to its owners for payment. It is unclear how much, if any, of the fine would be passed on to VELCO’s owners, their customers, or customers throughout the New England grid.

Q: What types of poles would you use if you were to build the new 115kV line from Vermont Yankee to Coolidge?

A: Though the final determination will depend on many factors, our initial analysis suggests a wood H-frame (similar to the existing H-frame structures in that corridor), but we likely would use steel cross arms (vs. the wood cross-arms in use today) for more sturdy construction consistent with today’s engineering standards.

Q: If the new 115kV line is built, how much will it cost? Who would pay for it?

A: Our current estimate (which could change significantly based on a

Q: VELCO said that it would not try to build the new 115kV line on its existing poles because of reliability standards.

Was that conclusion based on the new NERC standards or based on industry standards in existence prior to NERC?

A: We made that determination based on electric reliability standards that were in place prior to NERC’s standards. Putting these two critical lines on the same poles would not be acceptable under industry reliability standards in existence prior to NERC’s jurisdiction. Doing so also is unacceptable under NERC’s reliability standards.

Q: What additional capacity will the new 115kV transmission line provide, if it is constructed?

A: The new line would accommodate approximately 200MW of additional load growth. However, this is not the end of the story. Many transmission lines, particularly in northern Vermont, are at or near their capacity. Several may need to be rebuilt or replaced in the coming years.

Q: What progress, if any, is being made with respect to including energy efficiency improvement costs as part of ISO-NE’s PTF formula?

A: This is an ongoing issue that we are

number of factors, such as material and labor costs at the time of construction) is that this facility and related infrastructure would cost approximately \$175,000,000. We believe that the New England Independent System Operator (ISO-NE) would deem this facility to be necessary for the reliability of the New England grid. If they were to designate the facility as such, the cost to build it would qualify for “pooled transmission facility” (PTF) funding. This means that the cost to build the line would be shared by all New England electricity ratepayers, according to each member State’s proportionate share of electricity usage. Under ISO-NE’s present PTF formula, approximately \$7 million to \$10 million of the \$175 million would be paid for by Vermont’s electric utility customers. These figures do not include the costs of the system upgrades to CVPS’s 46kV system (a new Dummerston 46kV transformer and any other upgrades to the 46kV system). Those costs will be borne exclusively by CVPS customers.

Q: Where is the load growth occurring in Vermont that caused VELCO to determine that the Coolidge Connector is necessary?

A: Primarily the load growth in central and northwestern Vermont.

discussing with ISO-NE. However, the introduction of the forward capacity market and coming up with formulas to calculate the value and costs associated with efficiency measures is helping to move that conversation forward and diminishes the need for further regional support like PTF funding for power lines..

Q: Did the Coolidge Connector NTA analysis and the alternatives identified relate specifically to the load growth in central and northwestern Vermont?

What did the NTA analysis assume in terms of implemented energy efficiency and distributed generation?

A: Yes, the Coolidge Connector NTA analysis and the alternatives identified related specifically to the load growth in central and northwestern Vermont. The analysis assumed that energy efficiency and distributed generation measures are being implemented in the

Q: What happens to the Southern Loop 46kV system if the new 115kV transmission line between Vermont Yankee and Coolidge is deferred for a long time?

A: CVPS would need to reevaluate the Brattleboro reliability problem (specifically, the problem that could be caused by the loss of the existing 115kV line and/or the loss of the existing 345kV – 115kV auto transformer at the Vermont Yankee substation). If a decision is reached in 2008 to defer building the new 115kV line from Vermont Yankee to Coolidge, CVPS might choose to (a) build improvements from Vermont Yankee to Dummerston on its own (there would be no PTF funding for this and CVPS ratepayers would bear the entire cost until such time as the entire Coolidge Connector is completed), or (b) identify and construct a new 69kV source to support the Brattleboro load (this facility would also be paid for entirely by CVPS ratepayers).

Southern Loop western area to defer the 46kV upgrades.

Q: So the Section 248 filing VELCO will be making later this year is going to be a “contingent” filing? Will the Public Service Board allow that?

A: Based on the information available today, the VELCO filing would seek a CPG for the Coolidge Connector on grounds that it is needed. The line construction would only be paused if the actual load growth declines so that the year of need moves further out in time. Rather than considering the Petition contingent, CVPS and VELCO look at the approach as a plan that protects against the possibility that the line will be needed at the time it is currently called for based on available load and source information.

The group also identified the following as potential issues that may need to be addressed by VELCO and CVPS as they move forward with the strategies outlined at today’s meeting:

- You should work closely with groups that are sponsoring projects such as the Brattleboro District Heating initiative
- A “contingent” Act 248 filing could provide useful information and motivation to energy efficiency and local generation advocates: if the system load levels can be maintained or reduced within the next year, construction of the new 115kV transmission line might be able to be deferred.
- To say that “you may not build” the new line may come across as disingenuous to many people.

- Many people might feel that if you build the line (with its 200MW of capacity), Vermont will find a way to fill that capacity without reducing demand.
- Many will simply not want you to clear the 100' of trees that you will need to clear in order to build the new line, regardless of the fact that almost all of the tree clearing will occur within VELCO's existing right of way.
- If you propose building the new line, you will need to be clear why you need to clear the trees and build a series of parallel structures to your existing line, rather than simply adding the new line to your existing structures.

The next meeting of the Coolidge Connector Community Working Group will be held from **4 – 6 p.m. on Monday, May 14, 2007** in the Education Conference Room of the Brattleboro Retreat. The meeting will be a combined meeting with the Southern Loop Community Working Group.

Directions to the Brattleboro Retreat:

North and South : I-91 to Exit 2. Left on Western Ave. Bear left onto High Street. At traffic light, turn left on Main Street. Follow signs for Rt. 30 North, bearing left at Park Place and then turning right on Rt. 30.

East: Route 9 West. At the roundabout on Routes 9 & 5, enter the roundabout and follow the signs for Route 5 South. Bear right after Vermont Information booth. Stay in right lane and turn right on to Route 30 North.

West: Route 9 East to Brattleboro. Left on Main Street. Follow signs for Rt. 30 North, bearing left at Park Place and then turning right on Rt. 30.

All: Retreat driveway is on your right. Follow the signs for visitor parking.