

Attachment 1: Comments of the Vermont System Planning Committee on the Technical Analysis

COMMENTS	Source	Disposition
Page IV: Much of VEC's Essex County load is not electrically connected to Vermont. It is served by Hydro-Quebec or Public Service Company of New Hampshire.	VEC	Referenced content is not in Public Review Draft or Final Plan.
Pages IV & 74: By how many years does moving the VEC block load at Newport to VELCO advance the need to make transmission system improvements?	VEC	Supplying the Newport block load from the Vermont system has effectively no impact on the timing of system improvements except for two upgrades. The need to address the Coolidge transformer deficiency (#16) is advanced by one year and the need to address the Coolidge to Cold River deficiency (#15) is advanced by two years.
Page VII: The description of the upgrades required at St. Johnsbury is misleading, as it contains both localized and bulk system deficiencies. The capacitor bank described later in the report on Page 38 for St. Johnsbury is for a bulk system problem (loss of K-60), for which all Vermont DU's should be identified as Affected DU's, not just CVPS, Lyndonville, and VEC.	VEC	This designation of Affected Utilities was negotiated with the utilities through the VELCO Operating Committee and was not subsequently disputed by any utility in the VSPC process.
Page VIII: The capacitor bank recommendation should state that it is for the 115 kV system.	VEC	Addressed in Section 4, however, if the 115 kV system is affected, the 46 kV system is also affected. Both systems depend on each other and cannot be separated.
"Failure to converge" is jargon and should be explained (glossary)	Richard Suitor	Glossary added. Term defined.
p. 5: Phase angle regulator "ran out of angle" I suppose the fact that we have a regulator implies that "out of angle" is not good, but an informative footnote would help. "Unable to reduce PV20 flow below 114 MW..." Footnote for implication?	Richard Suitor	Glossary added. Term defined.
Maybe a glossary of terms somewhere? Put "reactive reinforcement" in glossary.	Richard Suitor	Glossary added. Term edited out.
Future of Highgate Converter: description of current contracts is reasonable. I note a lot of political talk about new HQ, and, in fact, talks occur. I have no objection to the position of this draft, but does it require a word or two about what might occur? Or why it isn't part of the scenario? Some sort of renewal is an event several politicians have said will happen. As I understand it, this scenario is a "what-if" scenario, as is the "Yankee decommissioned" scenario: things that might well happen, but we don't know now. Maybe a few words about the nature and reasons for "what-if" scenarios, so that partisans don't get panicked or over-excited?	Richard Suitor	Some discussion of the larger context issues raised in this comment were added as Section 4 in the public review draft. See additional discussion in Section 1 of the final report.
p. 6: what is .95pu? Glossary or footnote.	Richard	Glossary added. Term defined.

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	Suitor	
<p>STUDY OBJECTIVE: Should this section state the purpose of Docket 7081 and its goal of full, fair and timely consideration of cost effective non-transmission alternatives? The VELCO Analysis is neutral on the issue of whether deferral of transmission upgrades will result in a more cost-effective approach to maintaining the electric supply infrastructure, or whether alternatives to transmission are in any way beneficial to the Vermont economy or individual consumers. It may be appropriate for an <i>analysis</i> to present objective data and recommendations based on the data as this study has done, but as a <i>Plan</i> it could go further to set goals related to non-transmission alternatives (or acknowledge the goals of Docket 7081), identify VELCO plans to achieve those goals, and discuss the role others (such as consumers) play in support of these goals.</p>	Jenny Cole	These concepts added in multiple places in the Public Review Draft and Final Plan, including: cover letter and Section 2.4.
<p>In the chart of Transmission deficiencies and proposed conceptual solutions on pages VIII-X of the EXECUTIVE SUMMARY there are 14 upgrades needed in 2009 based on projected load levels. These upgrades added together have a cost of \$170-\$320 million. We have discussed at VSPC meetings adding “Based on VELCO Load Projections” to the “Year Needed” column on the chart. This makes it clear that, for this analysis “need” has a specific meaning that may be subject to dispute, may be modified by future studies, or may represent a focus of planning not only for transmission upgrades but for non-transmission alternatives as well.</p>	Jenny Cole	This concept was handled slightly differently than the proposed solution. Where “year of need” has been cited (as required by ¶ 28 of the Docket 7081 MOU), the load level is also need. Text was added to Section 2.3 to explain that load levels may be reached in a different year than projected.
<p>At the December VSPC meeting there was discussion of the graph on page 7 and removing the blue line connecting the 2008 historical peak with the ITRON forecast starting point.</p>	Jenny Cole	Completed.
<p>It is difficult to determine on page 3 of the Analysis what DSM was included in the VELCO analysis and what is included in Forecast 20. This would be a good location in the document for VELCO to state what it plans to do when the DSM forecast is completed—that is, whether it will apply the information to the 2009 Transmission System Analysis and provide an update.</p>	Jenny Cole	This issue is now addressed in Section 2.3.
<p>On page 5 of the Docket 7081 MOU (9. under Step 1) it states, “For each such Reliability Deficiency that is Bulk Transmission System or Predominantly Bulk System, VELCO will identify the likely Transmission solution and costs thereof, and identify the performance specifications that NTAs will need meet to achieve Equivalence.” I could not find this information. A good location for these performance specifications would be with the deficiencies listed starting at page 65.</p>	Jenny Cole	Equivalence issues are now addressed in Section 3.3 and Fig. 3-8.
<p>NTA SCREENING OF PROPOSED SOLUTIONS For most deficiencies with a “Year Needed” date of 2009, the VELCO response to Question 2 of the NTA screening is: <i>No. The load level at which the project is needed is () MW, which is approximately ()% of the</i></p>	Jenny Cole	In the Public Review Draft and Final Plan, the cited section has been replaced by a table indicating whether an NTA has screened in or out. Nevertheless, the underlying issue raised here remains relevant

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<p><i>projected 2009 summer peak load level.</i> VELCO is taking a different approach than previous screenings. With the Lyndonville Substation Project the answer to Question 2 was “yes” because, at least in theory, the upgrade could be deferred by alternatives. The intent of the NTA screening tool was to keep non-transmission alternatives under consideration for all but a few reliability deficiencies that clearly cannot be resolved other than by transmission upgrades. I believe this is how the tool should be used, and that further work should be done to develop the NTA screening tool or another step in the VSPC process so that alternatives to transmission have at least some consideration. In several instances there is a “Don’t know” response to Question 3 of the NTA screening. A better response would be to explain how and when this question will be answered.</p>		<p>to the NTA screening process. The VSPC is scheduled to begin addressing a variety of issues related to NTA screening and equivalence in June, 2009, and the NTA screenings included in the plan will be reviewed with the VSPC in the summer and fall of 2009, providing an opportunity to address the issue raised in this comment.</p>
<p>I agree with others who have commented on the difficult to understand language in the Analysis, and support the idea of using “plain English” when possible—and the addition of a glossary. Some terms that should be defined include:</p> <ul style="list-style-type: none"> • “dispatch” • “steady state” • “power factor” • “phase shifter” • “thermal” vs. “voltage” • “failed to converge” • “reactive compensation” • “bus” • “ring station” • “emergency capability” • “shoulder load levels” <p>Some sentences or sections that could be made clearer include:</p> <ul style="list-style-type: none"> • Page 2, Section 1.3.1 LOAD: “Losses increased due to no additions to the network or generation in Vermont.” • Page 55, section 3.3: “The majority of step-down transformer substations contain only one transformer, and there are fewer than 40% of the transformer locations where loss of a transformer does not cause some concern immediately.” • Page 5: Most of the zones also have a number identification. An explanation of this numbering system would be helpful. • Page 20, paragraph under Contingencies excluded: Change “rested” to “tested.” 	<p>Jenny Cole</p>	<p>Extensive editing done to reduce technical language in Public Review Draft and Final Plan. Glossary added.</p>

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<p>1. GMP is considering whether to install new, more reliable generating capacity at one or more Vermont sites; other distribution utilities may also be considering new in-state generating capacity. To the extent that generating capacity would defer the projected need date for transmission projects, this could materially affect the distribution utilities' benefit/cost analyses.</p> <ul style="list-style-type: none"> GMP suggests that it would be useful for future Long Range Plans to test and discuss the extent to which specific potential generating projects (identified by the distribution utilities and/or other stakeholders) would defer the projected need date for one or more future Vermont transmission projects. Between Long Range Plans, to what extent can VELCO assess the deferral value of such additional generating capacity? How would VELCO go about doing this? What information about the generation projects would be needed in order to support this type of analysis? Conversely, knowledge of where generation would be most beneficial to transmission reliability may motivate the exploration of possible generation at those locations. 	GMP 2/23/09	<p>The Plan considers generation projects that have been studied by ISO-NE.</p> <p>Due to FERC requirements, VELCO cannot perform analyses for conceptual generation projects that would benefit one market participant. ISO-NE is responsible for administering generation interconnection requests, and it is only after a generator requests interconnection that VELCO may perform such an analysis.</p> <p>Information on the potential benefit of generation can be found in the NTA screening section of the public review plan.</p>
<p>2. The Draft LRP's discussion of import paths from Quebec and New York is primarily in the context of reliability planning, but transmission projects affecting these paths could also have significant implications with respect to Vermont's power supply planning. Effective least-cost planning for Vermont would seem to benefit from further analysis that addresses both power supply and transmission costs. How would VELCO suggest that this type of integrated dialogue and analysis be conducted? To what extent can VELCO personnel participate in a collaborative discussion with the distribution utilities, including distribution utility personnel who are engaged in power supply planning? What ground rules would be needed for this type of discussion?</p>	GMP 2/23/09	<p>Final Plan includes expanded discussion of potential economic transmission.</p> <p>VELCO will support an integrated planning effort to the extent it is allowed by FERC. FERC rules on sharing transmission information with market related personnel govern. Generally, there is a wall between the transmission function (VELCO) and the generation or market function, whether at a Vermont DU or elsewhere.</p>
<p>3. Page IV of the Draft LRP states that while the Newport block load is normally supplied from Canada..."this load is transferred to Vermont frequently, requiring the Vermont transmission system to serve this load at any time." GMP suggests that the LRP include additional narrative context explaining this assumption, to allow the reader to better understand the block load dynamic and gain comfort with the reasonableness of planning the Vermont transmission system to be able to serve this load at any time. We would suggest that the LRP discuss the following points, and any other perspective that VELCO believes is pertinent. For example:</p> <ul style="list-style-type: none"> What amount of Newport load is at stake here? Does the presence of the Newport load on the VELCO system meaningfully 	GMP 2/23/09	<p>The Newport load is included in the calculation of Vermont load and New England load due to the responsibility of the New England system to supply that load.</p> <ul style="list-style-type: none"> The impact of the Newport load on the system is discussed in the report. VELCO cannot discuss VEC's business practices. <p>The Newport load has no effect on the timing of most of the deficiencies. One deficiency is advanced by one year and another by 2 years. Arrangements to keep the load on HQ involving VELCO and ISO-NE have not been explored to date. The consequences of those</p>

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<p>contribute to the deficiencies identified in the Draft LRP analysis?</p> <ul style="list-style-type: none"> • Historically, why has the Newport load been frequently transferred to Vermont? In particular, is the load transferred for economic reasons (e.g., less costly energy available in New England, relative to Hydro-Quebec)? To the extent there are other reasons, we would suggest explaining them briefly. • Could VEC or others credibly defer some of the deficiencies identified in the LRP by making commercial arrangements to keep the block load on HQ during peak periods? What would be the implications of this approach? 		<p>efforts cannot be guessed without a framework understanding of the potential actions to be taken.</p>
<p>4. Page IV of the Draft LRP discusses system performance with VY retired. GMP suggests that this constructive discussion be made clearer if possible, so that readers without a transmission planning background will clearly understand whether retirement of Vermont Yankee would trigger the need for any significant transmission projects. For example:</p> <ul style="list-style-type: none"> • The first paragraph describes changes in loading on certain lines, including overloads under some conditions. <ul style="list-style-type: none"> ○ When (or at what load levels) are these results projected to occur? ○ Please explain the extent to which these results indicate deficiencies which need to be addressed by 2018 or earlier. If so, does the LRP identify solutions to address them? • The second paragraph states that “the analysis did not show any specific voltage violations at the 2018 load level.” Does this mean that an assumed VY retirement did not, in VELCO’s analysis, trigger any transmission system deficiencies through 2018? 	<p>GMP 2/23/09</p>	<p>The technical discussion of this issue referenced by the comment was not included in the Public Review draft of the plan.</p>
<p>5. Page II of the Draft LRP describes that the EEU is presently forecasting DSM peak demand reductions for the 20-year horizon, and that “these DSM amounts can be superimposed on the ITRON load forecast to determine the load level...” We suggest that this narrative be supplemented to more clearly indicate (conceptually, and perhaps in volumes) the DSM savings, particularly from assumed future energy efficiency investments, that are already included in the ITRON forecast.</p> <ul style="list-style-type: none"> • For example, does the ITRON forecast implicitly include a level of DSM savings that would be associated with a continuation of past efficiency spending levels? The language at the top of page 3 (i.e., “the effects of additional DSM due to an increased budget were not included...”) suggests that this is the case. If so, then to obtain a “post-DSM” forecast it would seem appropriate to subtract only the savings associated with future expenditures above historical levels. 	<p>GMP 2/23/09</p>	<p>A discussion of how the Plan handles DSM is included on pp. 8-9. The level of detail included in the Public Review Draft did not accommodate a detailed discussion of the relationship between DSM and the load forecast. This issue has therefore not been addressed.</p>

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<ul style="list-style-type: none"> Or, alternatively, in order to obtain a “post-DSM” forecast should all future savings that the Energy Efficiency Utility identifies be subtracted? 		
6. We recommend that Figure 2 be enhanced to more clearly indicate that the Itron forecast reflects 90/10 weather conditions. This could potentially be accomplished by labeling, or by showing both the 50/50 and 90/10 forecasts.	GMP 2/23/09	See discussion and graph on p. 8 of Public Review Draft and Final Plan.
7. Page 9 of the Draft LRP notes that the Highgate converter is one of the most critical resources in the Vermont system, and the LRP appears to test Vermont system performance under several potential outcomes for Highgate (i.e., carrying a firm contract, or only available to delivery emergency energy, or decommissioned). Has VELCO examined the extent to which a future firm contract amounts of significantly less than 200 MW (say, 100 or 150 MW) over Highgate would provide substantial reliability benefits, perhaps comparable to the 200 MW levels that were tested?	GMP 2/23/09	No, VELCO did not test the system with various contract levels through Highgate. It was assumed that Highgate could operate at full capability when dispatched in service. Operating Highgate at some import level between 0 and 200 MW would be useful but not necessarily as effective as a 200 MW import. The extent of the benefit was not examined.
8. Page 10 of the Draft LRP summarizes the generation dispatch assumptions under the first contingency. GMP recommends that the LRP very briefly summarize the reasoning (e.g., concepts, planning procedures) that VELCO used to select the amount of in-state generating capacity assumed online, and the particular units that were chosen.	GMP 2/23/09	This question is addressed in the Plan.
Section 3: RESULTS OF SUB-TRANSMISSION ANALYSIS: Second paragraph on page 51. Suggested edit: “Post-contingency flows should be at or below <u>short term (or long term)</u> emergency ratings, although subtransmission lines do not appear to have <u>not generally been assigned any emergency capability.</u> ”	GMP 2/13/09	Section not included in Public Review Draft nor Final Plan.
In the “Subtransmission System Results” section on page VII: I would assume that these results are for 2018 but it actually doesn’t say. Are these results for 2018?	GMP 2/13/09	Section not included in Public Review Draft nor Final Plan.
It appears that the Lamoille Project has not been correctly modeled in the study. A suggested corrected model is attached. Note that the corrected model dated 1/28/09 has been updated (2/13/09) to indicate that the Willkens load is not connect to the Stowe VELCO 34.5 kV bus but to the 34.5 kV line going north out of Stowe VELCO toward Morrisville.	GMP 2/13/09	This information will be incorporated for future model use.
The Plan identifies transmission projects that address <i>reliability</i> deficiencies. The Plan should make clear to the reader that projects, not identified in the Plan, could otherwise be proposed. For example, a transmission line could be proposed and constructed for the purpose of importing power from renewable resources located outside of Vermont. Likewise, new transmission could result from federal initiatives seeking to enhance economic, reliability, national security, and environmental goals.	DPS	Language was added to the Public Review Draft to address this issue. (See pp. 3 and 29-30.) The Sec. 1 (overview) was further expanded to address this issue in the Final Plan, based on input at the public forums on the plan.
A significant number of Bulk category projects show a year of need of 2009. The Plan should discuss why this number of projects are presently needed and should indicate whether VELCO intends to permit and construct these projects in 2009.	DPS	Discussion added to the Final Plan on p. 20.

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The Plan should indicate when, in what manner, the upcoming demand-side resources forecast (the EEU's so-called Forecast 20) will be integrated into the Plan.	DPS	See p. 8-9 of the Public Review Draft and pp. 7 and 16-17 of the Final Plan.
Included among the recommendations at page 38 are the installations of a 12.5 MVAR capacitor bank at Irasburg and two 12.5 MVAR capacitor banks at Bennington. These projects should be included in the summary table at pages VIII, IX and X.	DPS	Capacitor banks are now included in Fig. 4-5 in the Final Plan.
How does the recently revised ISO load forecast impact the Plan? Differences between the ITRON and ISO forecasts should be resolved and incorporated into the Plan.	DPS	VELCO will be re-examining the load forecast with each specific upgrade or group of upgrades before regulatory or permitting processes proceed. Information such as the latest ISO-NE forecast will be taken into account at the time.
An appendix describing transmission line designations would be helpful.	DPS	This suggestion was not adopted because references to line numbers were removed from the document and all projects are now described by location.
An appendix showing the VELCO map would be helpful.	DPS	A state map showing the general location of the potential projects to address identified reliability deficiencies was added in the Public Review Draft. VELCO has determined that its Vermont transmission system map contained Critical Energy Infrastructure Information and could not be printed in the public document.
Clarify what system is impacted the most by a deficiency that includes both bulk and subtransmission.	1/21 mtg	The Technical Analysis details this information and can be obtained if needed through a CEII non-disclosure agreement.
Make readable to lay reader	1/21 mtg	Completed.
Clarify why N-1-1 is being applied to subtransmission system. Clarify that these criteria may not be applicable to subsystem.	1/21 mtg	See p. 15 of Public Review Draft and p. 22-23 of Final Plan.
MOU states that Affected Utilities define subsystem criteria. The LRTP will be seen and used by a variety of parties in the future. Important to call subsystem issues RDs when the MOU has a different process for doing so.	1/21 mtg	See p. 15 of Public Review Draft and pp. 21-23 of Final Plan.
<p>Comment 1: N-1 is not the standard contemplated under CVPS's IRP. 7081 MOU puts responsibility for determining the standards for assessment of subsystem issues. VELCO should identify subsystem issues where its criteria have been violated, but should not characterize these as RDs or imply existing or forecasted violation. Figure 3-2 provides Forecast of Year Needed. There should be a footnote on Figure 3.2 that reinforces application of DU criteria may not show violation, therefore no year needed.</p> <ul style="list-style-type: none"> • Clarify in the final Plan that "characterization of subsystem issues does not constitute a determination that the issue constitutes a reliability deficiency in any planning, legal or regulatory proceedings involving the affected utilities." • Adopt appropriate terminology to deal with above. • Further VSPC engagement to clarify this aspect of the development of the 	CVPS	Fig. 3-2 (subtransmission issues) described as "potential reliability issues." Text was added to address this issue in Sec. 3.1 (p. 15 of Public Review Draft). VELCO used a uniform screening criteria, N-1, as was contemplated in the MOU discussions.

COMMENTS	Source	Disposition
L RTP.		
Comment 2 re: system performance with Highgate decommissioned. Figure 3-1 Deficiency number 21, Plattsburg-Essex describes an unlikely scenario that should not be used as the base assumption for reliability analysis.	CVPS	This language is not included in the Public Review Draft nor the Final Plan, however, VELCO believes this is a potential scenario that must be accounted for in planning.
Comment 4 re: role of portable substations. Figure 3-1 lists a number of outages that could be addressed with portable substation. Draft makes no reference to the existence/availability of portable subs, making analysis regarding transformer outages overly pessimistic regarding duration. Portables should be taken into account in analysis and future plans.	CVPS	The portable transformer may be occupied somewhere else during the outage. If the transformer failure is permanent, VELCO may choose to locate a spare transformer instead of moving and tying up the portable transformer at a location. Further, even if the portable is used, there will be at least one additional load loss event until the portable is connected. Current expected times for temporary replacement of a failed transformer vary between one and five days even with the portable transformer.
Comment 6 re prioritization of deficiencies & solutions. Prioritized list Figure 3-5. In intro discussion of prioritization, VELCO should modify language to recognize multiple additional factors that must be taken into consideration by a DU in prioritization of projects. (See list of factors in comment.)	CVPS	VELCO's base assumption is that all criteria violations need to be addressed. Therefore, the prioritization is not meant to be an implementation schedule. Rather, it is meant to convey which project is likely to come before the Board in what order based on the stage of studies, project development, impact area, timing of deficiency based upon a single set screening reliability criteria. We recognize that other factors may also impact the priority list and filing order.
Comment 7 re: summary table presentation Figure 3-5. Amend table to include a column that identifies affected systems.	CVPS	The affected utilities / systems are included in the table.
Comment 8 re: assumptions. <ul style="list-style-type: none"> Load: 2008 90/10 load level is significantly higher than the actual 2008 load level, even when adjusted to 90/10. CVPS projects declining to flat loads, not increasing as in VELCO forecast. VSPC should further address and VELCO should provide an addendum to the plan. The current recession is very severe compared to those in the past. DSM (at page 3): VELCO should acknowledge the impact of recently installed demand response on 2nd contingency N-1-1 analysis. Should note conclusions that may be altered based on acquisition of this DR. 	CVPS	The load forecast shown in figure 3-3 does not represent a 2008 90/10 load level. Actual load levels from 1985 to 2008 are shown. Our analysis of the peak demand level in 2008, a comparison to recent demands/weather conditions during the same time of year (early June) and how that relates to typical summer peak times (mid July to August) indicates continued summer peak growth in 2008.
Comment 11 re: recognition of merchant transmission project. Plan does not discuss impact of merchant projects on VT transmission planning. Consider addressing in future to the extent info is available beyond mere discussion.	CVPS	Discussion of economic transmission has been expanded and will continue to be included if relevant in future Plans.
Comment 24 re: loss of Middlebury transformer. Figure 3-1, Deficiency number 2, Figure	CVPS	The alternative CVPS is pursuing has been noted in figure 4-5.

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3-5, Priority number 2. Plans to address Middlebury problems by CVPS are underway and should be reflected in plan analysis.		
Comment 25 re: loss of Blissville transformer: Figure 3-1, Deficiency number 3, Figure 3-5, Priority number 5. Equal slope analysis does not confirm an RD. Plan should reflect CVPS's finds and not treat this as an RD. Should also acknowledge availability of a cold stand-by transformer at Blissville.	CVPS	The loss of the Blissville transformer at peak load can result in a collapse of voltage on the subsystem that may propagate. Further coordinated review and efforts between VELCO and CVPS should be undertaken. While a cold stand-by transformer does exist at Blissville, it could take a day or two to install.
Comment 26 re: loss of Hartford transformer. Figure 3-1, Deficiency number 4, Figure 3-5, Priority number 6. CVPS is conducting equal slope analysis of Hartford.	CVPS	VELCO will coordinate with any analysis efforts undertaken by CVPS with regard to this deficiency.
Comment 27 re: loss of Chelsea transformer. Figure 3-1, Deficiency number 4, Figure 3-5, Priority number 18. This issue doesn't arise until 2013. CVPS is assessing under its reliability criteria.	CVPS	VELCO will coordinate with any analysis efforts undertaken by CVPS with regard to this deficiency.
Comment 28 re: loss of St. Albans transformer. Figure 3-1, Deficiency number 1, Figure 3-5, Priority number 3A. Plan should reflect the fact that this RD is currently being assessed under joint CVPS-VELCO study.	CVPS	VELCO will continue to coordinate and cooperate with CVPS with our ongoing analysis efforts.
Comment 29 re: loss of Rutland area transformers. Figure 3-1, Deficiency number 5, Figure 3-5, Priority number 4. Update plan to reflect planned joint reliability study by CVPS & VELCO to be undertaken in 2009.	CVPS	VELCO plans to undertake local analysis of this portion of the system in 2009. The System Assessment List provided by CVPS, which lists present study plans for subsystem issues including this area, has been included as Attachment 3 to the Plan.
Comment 30 re: loss of Ascutney transformer. Figure 3-1, Deficiency number 6, Figure 3-5, Priority number 15. CVPS will assess this issue under its applicable reliability criteria.	CVPS	VELCO will coordinate with any analysis efforts undertaken by CVPS with regard to this deficiency. The loss of the Ascutney transformer at peak load can result in a collapse of voltage on the subsystem that may propagate depending on the actions taken by system operators.
<p>Comment 32 re: recommendations regarding substations. P16 and Figure 3-5.</p> <p>a. Substation config: At low voltage sizes assumption of upgrades to ring or breaker-and-a-half is not cost-effective. Plan should be amended to take cost-effectiveness into consideration in design.</p> <p>b.</p>	CVPS	VELCO discussion regarding substation configurations was offered with regard to bulk system substations (115 kV and above).
Comment 41. Figure 3-5 project descriptions recommends that capacitor banks be added to address various conditions. Depending on the circumstances CVPS will continue to work with VELCO to identify the most cost-effective locations for capacitor bank additions on its subsystem and distribution facilities.	CVPS	VELCO will coordinate with any analysis efforts or alternative evaluations undertaken by CVPS with regard to deficiencies or alternatives.
Comment 42. Issues Associated with NTA Screening Section 3.3. Where NTA screening is presented affecting the CVPS loads, the use of projected 2009 load may be a problem due to the Company's concerns with the VELCO forecast. In addition, projects affecting CVPS's subsystem should not be tested using N-1-1 bulk system reliability criteria. As a	CVPS	The information VELCO used to screen those projects that were predominantly bulk (i.e. loss of transformer) was based upon N-1 system results, not N-1-1 results. Many of the reliability concerns

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consequence of these concerns, there may be more time and opportunity for NTAs to be effective than would otherwise be suggested.		that screened out demonstrated problems at load levels as low as 60 to 85% of peak, which indicate many hundreds to thousands of hours of potential exposure.