

The VELCO logo is displayed in a bold, white, sans-serif font. It is positioned on the left side of the top banner, which features a scenic background of Vermont's autumn foliage and rolling hills. Several transmission towers are visible in the distance, and a larger tower structure is partially visible on the right edge of the banner.

**VELCO**

VERMONT'S TRANSMISSION RELIABILITY RESOURCE

# Newport Substation Asset Condition project

VSPC meeting  
April 30<sup>th</sup>, 2014

# Asset condition assessment program

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- Ensures reliable operation of existing equipment
- Ensures compliance with current codes and standards
- Seeks to prevent catastrophic failures and consequent safety and environmental impacts
- Condition assessment program
  - Substation condition assessment
    - Identified refurbishment at Newport, St Albans, Florence, Barre, Berlin, Chelsea, and Windsor
  - Line structure condition assessment
    - Inspected 5200 structures and will replace 300 structures per year
  - Transformer condition assessment
    - Suspect transformers at St Albans, Hartford, Highgate, Irasburg, Bennington, Berlin, Ascutney, and Coolidge

# Newport Substation





# Scope of Newport refurbishment project

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- Station was constructed by Citizen Utilities in 1992 and purchased by VELCO in 2003
- Project will resolve protection and control deficiencies
  - The station has only one protection system
  - Standards require two systems, primary and backup
    - Either system is required to protect the system adequately
- A second protection system requires
  - Installation of a second battery system
  - Replacement of the control panels, cable trenches and conduits
  - Replacement of the control house
  - Potentially replace the breakers

# Newport project NTA screening analysis

Identify the proposed upgrade: Newport Substation Upgrades

Date of analysis: March 10, 2014

1. Does the project meet one of the following criteria that define the term "impracticable" (check all that apply)?

- a. Needed for a redundant supply to a radial load; or
- b. Maintenance-related, addressing asset condition, operations, or safety; or
- c. Addressing transmission performance, e.g., addition of high-speed protection or a switch to sectionalize a line; or
- d. Needed to address stability or short circuit problems;<sup>1</sup> or
- e. Other technical reason why NTAs are impracticable. Attach detailed justification that must be reviewed by the VSPC.

*If any box above is checked, project screens out of full NTA analysis.*

2. What is the proposed transmission project's need date? NA - the project is not being driven by a need date.

*If the need for the project is based on existing or imminent reliability criteria violations (i.e., arising within one year based on the controlling load forecast), project screens out of full NTA analysis.*

# Newport project NTA screening analysis

3. Could elimination or deferral of all or part of the upgrade be accomplished by a 25% or smaller load reduction or off-setting generation of the same magnitude? (See note.)  Yes  No

*If "no," project screens out of full NTA analysis.*

4. Is the likely reduction in costs from the potential elimination or deferral of all or part of the upgrade greater than \$2.5 million. (See note.)  Yes  No

*If "no," project screens out of full NTA analysis.*

Sign and date this form.

This analysis performed by:

Douglas E. Best - Project Manager

Print name & title

VELCO

Company

March 10, 2014

Date

Douglas E. Best

Signature