
PV20 CABLE REPLACEMENT



PV20 Cable Replacement status update

Scope

- New 230 kV XLPE submarine cables (3 phases and 1 spare), terminal station, and overhead line connection
- Remove old 7 oil-filled cables from lake (6 in service and 1 abandoned) and terminal station
- Construct on new Vermont parcel immediately to the north
 - Minimize PV20 line outage; existing line remains in service during construction
- NYPA and VELCO team approach for engineering, permitting, procurement, and construction
 - MOU and work began in 2013

Need

- Existing cables are aged and degraded
 - Past 50 yr. lifespan; anode and armor damage, unprotected in areas, poor dissolved gas results
 - No spare cable; therefore, 6-12 months to complete a repair
 - Outages could be costly (i.e., 5th line to NWVT out of service)
 - One 500 MCM cable failed in 1969; likely thermally overloading and damaging one other cable
 - Gravity fed oil cooling system is obsolete; time consuming and costly to repair/replace
 - Addresses prior VELCO need to refurbish terminal station ~\$1m
- Desire to eliminate environmental consequences of potential oil leaks

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Planning

- ISO-NE approved proposed plan application (I.3.9) with no adverse system impact

Vermont Permitting (planned for Q3 2015)

- Section 248 process
 - Finalizing testimony and exhibits
 - Public outreach
 - Discussed project with Agency of Natural Resources, US Army Corp of Engineers, and ferry operator; Coast Guard meeting to be scheduled
 - Addressing questions from neighbor, Department of Public Service, and Regional Planning Commission
 - EMF, distance from house, aesthetics, water turbidity/quality, drinking water intake, signage, cost detail, least cost planning/design
 - Communicating with Town of Grand Isle, Conservation Law Foundation and others to proactively address intervenor concerns
 - Reviewing TDI-NE's Clean Power Link applications, discovery responses, intervenor testimony, and private meetings to protect VELCO's rights and address common concerns
 - Revising cost estimate given install and removal bid information
 - Continuing to review and address bid questions
 - Negotiating preliminary terms for inclusion
- Construction Stormwater General Permit
- Lake Encroachment Permit
- Water Quality Certification

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New York Permitting

- New York Environmental Quality Review Act—NYPA filing expected in Q3 2015
 - Obtaining land access to perform environmental assessment
- Water Quality Certification - tbd
- Protection of Waters - tbd
- Occupation of Lands Underwater Easement - tbd
- Historical review & determination of effects - tbd

Federal Permitting

- Army Corp of Engineers Individual Permit – planned filing in Q3 2015
- Fish and Wildlife Service Coordination for threatened and endangered species – planned filing in Q3 2015

Engineering & procurement

- Evaluating bids, questions, and terms to make award recommendation for engineer, procure, construct contracts:
 - Cable installation and terminal station removal and installation
 - Cable and oil removal
 - NYPA Board of Trustee approval planned for July 2015
 - VELCO Board of Director approval planned for August 2015
 - Final engineering expected August 2015 to January 2016

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Construction

- Construction details under review
- Earliest start is September 2016 after receipt of all permits

Project cost & schedule

- Cost estimate is being updated with details from bidders and NYPA
 - Required for CPG filing
- Schedule is under review with details from bidders
 - Final Engineering: 2015
 - Procurement: 2016
 - Land and drilling construction: 2016-2017
 - Cable, terminal, and overhead structure installation: 2017
 - Removal of existing equipment: 2017
 - Closeout: 2018

Risks & Mitigation Strategies

- Permits: Outreach, design changes, staged contract procurement dates and exit provisions
- Construction past 2017: Focus on RFP process to secure production queue, periodic project sponsor meetings with NYPA, decision for install contractor to manage schedule