



<https://stopmarlvirginia.com/underground-hvdc>

For the PATH 765kV transmission line Black & Veatch did a study that proved HVDC underground was a feasible solution through our area. That study was : Black & Veatch, "PJM Interconnection Potomac-Appalachian Transmission Highline (PATH) Project, HVDC Conceptual Study, B&V Project No.164996, B&V File 42.2004 , FINAL November 17, 2009 This was entered into the record as part of the Virginia SCC Case PUE 2009-00043 Application of PATH Allegheny Virginia Transmission Corporation. Recent projects:

Dominion Heritage To Mosby HVDC Backbone (aka the Commonwealth Energy Express)



- PJM Approved, Estimated Completion Date June 2032 ([Project Site](#))
- From the Heritage substation in Brunswick County, Virginia to the Mosby substation in Loudoun County, Virginia to serve Data Center Alley.
- 525kV, Total transmission capacity of 6,000 MW, with 3,000 MW to be implemented in Phase 1, and an additional 3,000 MW for Phase 2
- HVDC XLPE Cables
- 185 Miles
- \$4.8 billion **This is a PJM Ratepayer funded project.**
- "The project is expected to primarily follow existing rights-of-way, limiting the need for property acquisitions."
- "The physical footprint of the duct banks is assumed to be 8 feet wide. For typical operations and maintenance practice, 15-ft is added to each side of the duct banks. The total permanent new Right-of-Way necessary for the underground cable system would be 40-ft. For trench-less crossings, 150ft of ROW is needed for Horizontal Directional Drilling and 50ft of ROW is needed for Jack and Bore. At locations where splice vaults are required, the ROW will need to expand to 40-ft to accommodate the larger footprint of the system."
- each of the two required High Voltage Direct Current converter stations (built at the Heritage and Mosby substation ends) is estimated to require a land footprint of approximately **12 acres**

SSO Green HVDC Link



- In Progress - Estimated Completion Date 2031 ([Project Overview](#))
- Mason City, Iowa to Yorkville, Illinois , Connecting MISO in the Midwest, and PJM in the East.
- 2,100 MW, 525KV
- HVDC XLPE Cables
- "The project will use two 5-inch diameters (about the size of a wine bottle), 525KV extruded cross-link polyethylene (XLPE) insulated cables installed in a 3-foot wide by 5-foot deep trench. SSO Green HVDC Link will construct two VSC power converter stations at either end of the 350-mile HVDC line."
- 350 miles
- All underground with transmission line running along existing rail corridors from Iowa to Illinois

This is a privately funded project.

[Read 2.1-GW SSO Green transmission project advances with Iowa agreement](#)

View video on the construction techniques being used [here](#)

Champlain Hudson Power Express



- November, 2022 - Completed May 13, 2024 ([Project Overview](#))
- Canadian Border to Queens, New York
- 1,250 MW - enough power for more than 1 million homes
- HVDC cable
- 339 miles with 60% in waterways and 40% buried underground
- The main conversion facility in Astoria, Queens occupies a total site area of approximately 4.5 acres. The primary high-voltage direct current (HVDC) converter building measures roughly 165 feet by 325 feet (a footprint of about 1.2 acres) and stands about 70 feet tall.
- "This project is entirely privately funded, and the overall cost is approximately \$6 billion" ([CHPE Q&A](#))
- " The reason for the unusual approach of a submerged and buried line is that it reduces the local opposition that always accompanies large transmission line construction projects. "

Watch the [webinar on under water installation](#) (Expand & Click Marine Installation and Studies)

[Read more about North America's Longest Underground Transmission Line](#)

New England Clean Power Link



- Construction began in 2021 - Completed January 16, 2026 ([Project Overview](#))
- Canadian border to Vermont
- 1,000 MW
- 300 kV - 320 kV HVDC cable
- 150 miles, all under water or **buried underground in existing rights-of-way**
- **\$1.6 billion merchant line will be privately financed and will not use taxpayer dollars**
- "Ensured the permanent conservation of 50,000 acres of Maine wilderness, creating one of the largest contiguous conservation areas in the region. This land preservation initiative safeguards critical wildlife habitats, protects biodiversity, and ensures sustainable forestry practices."

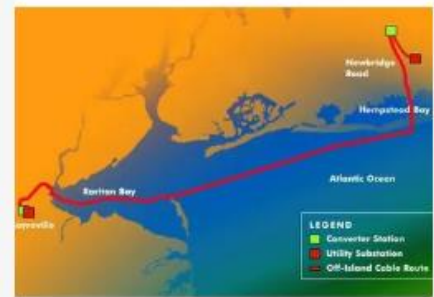
Press Release: [Avangrid's New England Clean Energy Connect Project Is Complete and Energized](#)
[DOE New England Clean Power Project Summary](#)
[ISO New England Consumer Liaison Group Presentation](#)

The Hudson Project



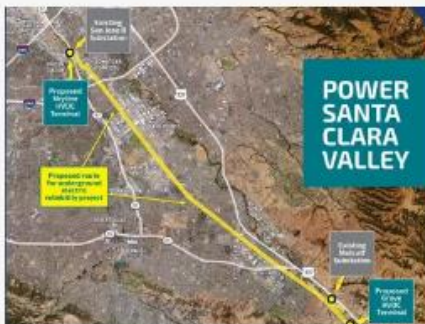
- May 2011 - Completed June 2013 ([Project Overview](#))
- New Jersey, Long Island New York
- 660 MW - enough power for about 600,000 homes
- 345 kV HVDC cable
- 7.5 miles, entirely underground & underwater. It follows existing railroad rights-of-way, through an inactive railroad tunnel to the edge of the Hudson River in Edgewater. It is then buried beneath the Hudson for approximately three-and-a-half miles
- \$850 Million

Neptune Transmission



- June 2005 - Completed June 2007 ([Project Overview](#))
- New Jersey To Long Island, New York
- 660 MW, enough power for about 600,000 homes
- 500 kV HVDC cable
- 65 miles, @15 miles buried underground & @60 miles underwater
- **\$650 Million, This project was privately funded.** ([Neptune Project In Operation](#))

Power Santa Clara Project



- Construction started May 2026 with a completion date in 2028 ([Project Overview](#))
- California
- 500 kV and 320 kV HVDC cables
- 1 mile 500 kV buried underground and 13 miles 320 kV buried underground
- \$450 Million

Sign our petition for an Underground HVDC Alternative



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