



NH 2029 Preferred Solution

TCA Submittal Presentation

ES-22-TCA-03

ES-22-TCA-04

ES-22-TCA-27

NEPOOL Reliability Committee Meeting

August 15, 2023

ES-23-TCA-20 submitted in support of NHT's RSP #1881

Agenda

- Project Background
- NH 2029 Preferred Solution - Eversource Locations
- Project Components
- TCA Submittal
- Project Summary
- TCA Submittals

Project Background

History

- NH 2029 Preliminary Preferred Solution (Central/Western) presented February 2021
- NH 2029 Preliminary Preferred Solution (Southern) presented April 2021
- Final NH 2029 Solutions Study posted May 2021, Revised August 2022
- Proposed Plan Applications (PPA) Study Presentation to RC June 2022
- Eversource TCAs submitted:
 - Huckins Hill (Central) and North Keene (Western) submitted September 2022
 - Amherst (Southern) submitted November 2022
- Targeted completion:
 - Huckins Hill (Central) – December 2023
 - North Keene (Western) – September 2024
 - Amherst (Southern) – June 2024

Eversource's 363 345kV Line Bisect project for NHT's RSP #1881 project is targeting completion October 2023.

NH 2029 Preferred Solution – Eversource Components

- Central New Hampshire
 - Huckins Hill Substation
 - ❖ Install a +55/-33.2 MVAR (+50/-25 MVAR at POI) Synchronous Condenser with one 115kV breaker and one 13.8kV breaker

- Western New Hampshire
 - North Keene Substation
 - ❖ Install a +55/-33.2 MVAR (+50/-25 MVAR at POI) Synchronous Condenser with one 115kV breaker and one 13.8kV breaker

- Southern New Hampshire
 - Amherst Substation
 - ❖ Install a +127/-50 MVAR (+100/-50 MVAR at POI) Synchronous Condenser with three 345kV breaker and one 13.8kV breaker

Huckins Hill Substation



Drilled shafts installed



Foundation forms set up

Amherst and North Keene Substation



Left: Foundation for control house extension at Amherst

Right: Drilling at North Keene



TCA Submittals - Eversource

	A	B	C	D	E
	Project RSP ID	TCA	Project Description	Solution Study PTF Cost	TCA PTF Cost
1	1879	ES-22-TCA-04	Install a +55/-32.2 MVAR synchronous condenser at Huckins Hill 115kV Substation with a 115kV breaker and a 13.8kV breaker	\$ 36,200,000	\$ 33,449,000
2	1878	ES-22-TCA-03	Install a +55/-32.2 MVAR synchronous condenser at North Keene 115kV Substation with a 115kV breaker and a 13.8kV breaker	36,200,000	32,375,000
3	1880	ES-22-TCA-27	Install a +127/-50 MVAR synchronous condenser at Amherst 345kV Substation with two 345kV breakers and a 13.8kV breaker	53,600,000	65,366,000
4	1880	ES-22-TCA-27	Additional 345kV breaker at Amherst*	-	1,630,000
5	Total, TCA PTF Cost			\$ 126,000,000	\$ 132,820,000

*The Final NH2029 Solution Selection report was revised in August 2022 to clarify the connection schemes for the Synchronous Condensers. This update included a third 345kV breaker at Amherst in the preferred solution.

Summary - Eversource



To address the peak and minimum load needs identified by ISO NE in the NH 2029 Final Solution Study Eversource will design and construct three new Synchronous Condensers at the Huckins Hill, North Keene, and Amherst Substations.



Targeted In-service Dates:

- Huckins Hill, December 2023
- Amherst, June 2024
- North Keene, September 2024



The total Eversource requested PTF Transmission cost for regionalization is \$132,820,000.

Questions

