



Greater Boston

TCA Submittal Presentation

ES-17-TCA-04 – Rev 2

NEPOOL Reliability Committee Meeting

July 18th, 2023

Eversource - Greater Boston, TCA/ISO Update 2023

Status of Eversource project components:

- 30 in-service
- 3 ongoing: Sudbury to Hudson (SH), Mystic to Woburn (MW), Woburn to Wakefield (WW)
 - Cost increases in 3 ongoing projects driving forecasts above TCA threshold for revision (+10%) specified in ISO-NE PP-4

ISO/NEPOOL GB Timeline

- May/June 2017 – TCA submitted to ISO, Presented to RC 5/23/17, Received RC support 6/20/17
- Sept/October 2020 – TCA (Revised) submitted to ISO
 - Presented to PAC 9/24/2020 and RC 9/23/2020
 - Failed to receive RC support on 10/20/20 - 59.83% in favor with 15 abstentions
- Mar 2023 – Cost update to PAC on Mystic to Woburn
 - ISO-NE Transmission Planning Process Guide requirement
- June 2023 - Updated TCA submitted
 - Driven primarily by updates on SH, MW, and WW

Eversource Project Cost Updates

Project Component	Original (2017 TCA)	Revised (2020 TCA)	Current (2023 TCA)	RSP ISD (June 2023)
RSP#1356 – Mystic to Woburn 115 kV cable	\$81.5 M	\$138.8 M	\$223.1 M	Dec 2023
% over original TCA	-	+70%, +\$57.3M	+174%, +\$141.6M	
% over revised TCA			+61%, +\$84.3M	
RSP#1335 – Sudbury to Hudson 115 kV Line	\$45.3 M	\$91 M	\$128.5 M	Mar 2025
% over original TCA	-	+101%, +\$45.7M	+184%, +\$83.2M	
% over revised TCA			+41%, +\$37.5M	
RSP#1552 – Wakefield to Woburn 345 kV cable	\$78.7 M*	\$121.8 M	\$152.6 M	Dec 2023
% over original TCA	-	+55%, +\$43.1M	+94%, +\$73.9M	
% over revised TCA			+25%, +\$30.8M	
Other Components	\$366.5 M	\$410.4 M	\$416.8 M	-
% over original TCA	-	+12%, +\$43.9M	+14%, +\$50.3M	
% over revised TCA			+2%, +\$6.4M	
Eversource Greater Boston TCA (Total)	\$572 M**	\$762 M	\$921 M	-
% over original TCA	-	+33%, +\$190M	+61%, +\$349M	
% over revised TCA			+21%, +\$159M	

* Original TCA cost of \$117.1 M revised to \$78.7 M in 2017 to reflect transfer of costs associated with National Grid portion of Wakefield-Woburn cable from RSP#1552 to RSP#1551

** \$611.7 M revised to \$572 M to reflect transfer of costs associated with National Grid portion of Wakefield-Woburn cable from RSP#1552 to RSP#1551 as of October 2017 RSP update

Mystic - Woburn

Project Component	Original	Revised	Current	ISD
RSP#1356 – Mystic to Woburn 115 kV cable	\$81.5 M	\$138.8 M	\$223.1 M	Dec '23
% over original TCA	-	+70%, +\$57.3M	+174%, +\$141.6M	
% over revised TCA			+61%, +\$84.3M	

Primary reasons for cost changes:

- Additional restrictions imposed on design and construction
 - Shifts in alignment of underground construction within roadways to avoid interference with existing and/or uncharted utilities, or replacement of existing utilities
 - Unanticipated restrictions on work hours & number of concurrent crew limitation
 - Significant increase in police details required due to town safety requirements
- Underground interferences and work hour restrictions are common on underground projects, but magnitude of challenges exceeded those encountered on prior projects in the Boston area
- Field conditions required change in construction design and work methods
- Different geotechnical conditions than subsurface exploration indicated were found under the active railroad line at Sullivan Square Crossing which necessitated change in design, work methods and required specialized drilling equipment

No change to project scope since original TCA submission

Sullivan Square Crossing



Horizontal Pile
(Spile) installation
(Top left)



Cutter head at face
of rock
(Left)



Tunnel boring machine

Sudbury - Hudson

Project Component	Original	Revised	Current	ISD
RSP#1335 – Build new Sudbury to Hudson 115 kV Line	\$45.3 M	\$91 M	\$128.5 M	Mar '25
% over original TCA	-	+101%, +\$45.7M	+184%, +\$83.2M	
% over revised TCA			+41%, +\$37.5M	

- **Primary reasons for cost change:**

- Lengthy siting/permitting and appeal process due to continued opposition to the project by municipalities and organized community groups
 - Additional environmental, siting, legal, and outreach costs
 - Increased cost of labor and equipment
- Increased soil management and disposal costs
- Increased groundwater treatment costs
- Increased material costs (bridge structure, components, conduit)

No change to project scope since 2020 Revised TCA submission

Wakefield - Woburn

Project Component	Original	Revised	Current	ISD
RSP#1552 – Wakefield to Woburn 345 kV cable	\$78.7 M*	\$121.8 M	\$152.6 M	Dec '23
% over original TCA	-	+55%, +\$43.1M	+94%, +\$73.9M	
% over revised TCA			+25%, +\$30.8M	

Primary reasons for cost changes:

- Additional restrictions imposed on design and construction
 - Shifts in alignment of underground construction within roadways to avoid interference with existing and/or uncharted utilities, or replacement of existing utilities
 - Unanticipated restrictions on work hours & number of concurrent crew limitation
 - Significant increase in police details required due to town safety requirements
- Underground interferences and work hour restrictions are common on underground projects, but magnitude of challenges exceeded those encountered on prior projects in the Boston area
- Field conditions required change in construction design and work methods

No change to overall project scope since original TCA submission

* Original TCA cost of \$117.1 M revised to \$78.7 M in 2017 to reflect transfer of costs associated with National Grid portion of Wakefield-Woburn cable from RSP#1552 to RSP#1551

Questions

