



August 18th 2021

Singer 345kV Substation – Flood Mitigation Project Update

Presentation to:
Planning Advisory Committee

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Today's Presentation

Objective:

Communicate UI's plan to proceed with construction of the Singer 345kV Substation floodwall project.

Background/Timeline:

- Storm Irene (2011)
- Storm Sandy (2012)
- PAC Presentation (2016)¹
- Today's PAC Update
- TCA/Contract Award (Q3 2021)
- Construction Start (Q2 2022)
- In-Service Date (Q1 2023)



UI has completed engineering to a level as necessary to proceed with the procurement of construction service contracts

(1) PAC Presentation - Coastal Substation Flood Mitigation Study, September 21st 2016

https://smd.iso-ne.com/operations-services/ceii/pac/2016/09/a2_ui_coastal_substation_flood_mitigation_study.pdf

Background: Alternatives / Recommendations

- After Storms Irene and Sandy, UI indicated there was a Bridgeport Area Resiliency Project in development, funded by the U.S. Department of Housing and Urban Development (HUD) resiliency grant.
- While the Singer S/S is located within the area being upgraded as part of the resiliency project, there is insufficient detail to confirm if the project would adequately protect the station from flooding at this time.



Original Cost Estimate (provided in Sept 2016)						
Mitigation Strategies		Solution Alternative Development	Total Capital Cost (in Millions) ¹			
			Transmission		Distribution	Total
			PTF	Non-PTF		
1	Perimeter Flood Wall System ² (Approx. 11'6")	Alternative Developed	\$11.6	\$1.3	\$0.0	\$12.9
2	Raise and Rebuild "Adjacent"	Alternative Developed	\$171.3	\$23.4	\$0.0	\$194.6
Recommended Flood Mitigation Strategy - Highlighted						

Based on updated construction pricing, the cost estimate is now approximately \$24M (nearing +10/-10%).

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Resilient Bridgeport Project - Update

On July 12th, 2021 UI met with representatives of the Resilient Bridgeport project team to discuss the progress since 2016 and potential interplay between the Singer Substation Floodwall Project and the RB Project. UI's understanding about the RB (flood defense system) project is as follows:

- Design Flood Elevation = 100-year + 2ft⁽¹⁾ (ISO-NE PP4 = 100-year + 3ft)
- Target Construction Start Spring 2022 / Completion Fall 2023
- Project partially grant funded – seeking additional funding
- Project is at 60% Design Level
- Awaiting confirmation of future O&M agreements (e.g. state, city, etc.)
- Flood system deployment dependent on manual actions (1+ days)
- Project will seek FEMA accreditation as a future step

(1) ISO New England Planning Procedure PP4 – Procedure for Poll-Supported PTF Cost Recover, Attachment H – Guidance for Submission of TCA Application for Projects in Flood Hazard Areas
https://www.iso-ne.com/static-assets/documents/2018/12/pp_4_rev9.pdf

Conclusion & Next Steps

UI intends to proceed with construction of the Singer floodwall protection system independent of Resilient Bridgeport project activities in consideration of a number of factors including:

- The Singer 345kV S/S is a critical part of the New England Bulk Electric system.
- Its been 10 years since Singer Substation was at risk of catastrophic flooding from back to back storms Irene (2011) and Sandy (2012) flooding; this exposure remains.
- Project remains partially funded.
- The proposed Singer floodwall system meets the recommended flood protection of 100-year + 3 ft⁽¹⁾.
- UI is nearly ready to execute on construction service contracts which will provide schedule and cost certainty.

(1) Flood recommendations from ASCE 24-14 and FEMA "Reducing Flood Effects in Critical Facilities" <http://core-es.com/wp-content/uploads/FEMA-RA2-Reducing-Flood-Effects-in-Critical-Facilities.pdf>

Questions

