

because NPT requires upgrades to that station, mandated by ISO. It also includes the towns in between; Candia, Raymond, Chester, Auburn and Derry, because of the upgrades required for NPT on this route. So the route is really 222 miles, at least.

Below: Candia, Raymond, Chester, Auburn, Derry and Londonderry/Scobie Pond are part of NPT's application to the SEC:

- Appendices 19 - 30 Archeological Reports (436 KB)

Volume XIX Appendix 21: Results of Phase I-A Archeological Survey - AC System Transmission Line Upgrades (PSNH 373 Line): Deerfield, Candia, Raymond, Chester, Auburn, Derry and Londonderry, NH (2014)

- Appendices 19 - 30 Archeological Reports (436 KB)

Volume XX Appendix 22: Results of Phase I-A and Phase I-B Archeological Survey - Proposed Expansion of Deerfield Substation, Proposed Expansion of Scobie Pond Substation and AC System Transmission Line Upgrades (PSNH 373 Line): Deerfield, Candia, Raymond, Chester, Auburn, Derry and Londonderry, NH (2015)

As part of NPT, ISO also required upgrades in Hudson/Pelham. There is a very unclear line between NPT and the Merrimack Valley Reliability Project, since the upgrades in Pelham are somehow part of this project as well; "to be coordinated with..." (see below, **)

http://www.nhsec.nh.gov/projects/2015-06/public-comments/2015-06_2016-05-16_ltr_k_pastoriza.pdf

Previous Proposal HVDC LCC Technology	Current Proposal HVDC VSC Technology
345-kV Line 391 (Buxton to Scobie Pond) looped into Deerfield Substation	345-kV Line 391 (Buxton to Scobie Pond) looped into Deerfield Substation*
Upgrade 345-kV Line 373 Deerfield to Scobie Pond	Upgrade 345-kV Line 373 Deerfield to Scobie Pond*
Upgrade 345-kV Line 391S Deerfield to Scobie Pond	Upgrade 345-kV Line 391S Deerfield to Scobie Pond*
Line 326 SPS Thermal Set-point Increase	Not Required*
Not required	Upgrade 115-kV line Y151 Power Street to Pelham**

* Upgrades are preliminary and subject to change
 ** To be coordinated with Greater Boston Preferred Solution 10

http://www.iso-ne.com/static-assets/documents/2016/02/a3_3_northern_pass_transmission_project_presentation.pdf

The above NPT updated proposal to ISO indicates that Northern Pass is now required to “upgrade the 115kV line Y151, Power Street to Pelham...to be coordinated with Greater Boston Preferred Solution.” now called the Greater Boston and New Hampshire Solution. On the Y151 line 37 wooden structures will be replaced with weathering steel H-frames of 80'-100'.

In public meetings with the SEC, the applicant also showed the route as going to Londonderry on their maps.

Study Results Summary

NPT tested for:

- Study results from the System Impact Study indicated that Northern Pass Transmission would be able to interconnect with the New England system without a significant adverse impact with the following system upgrades:
 - Loop the 345-kV Buxton to Scobie Pond 391 line into Deerfield.
 - Upgrade 345-kV transmission lines 373 (Deerfield to Scobie Pond) and 391S (Deerfield to Scobie Pond) and line 326 (Scobie Pond to MA border) to increase thermal capabilities.
 - Add reactive compensation at Deerfield (200 Mvar (4 - 50Mvar)) and at Scobie Pond (210 Mvar (3 - 60 Mvar 1-30Mvar)).
 - Add two 345-kV series circuit breakers (9126 & 262) at Scobie Pond

http://www.iso-ne.com/committees/comm_wkgrps/reblty_comm/reblty/mtrls/2013/nov192013/a3_2_northern_pass_project_presentation_redacted.pdf

3.1 GREATER BOSTON TRANSMISSION PROJECT – LEVEL III (66.6% VOTE)
(NEP: Jack Martin)

ES-16-T05 – Transmission notification from Eversource Energy (ES) for the installation of a new 25 mile long 345 kV overhead line from Eversource's Scobie Pond Substation, in Londonderry, NH to National Grid's Tewksbury 22A Substation, in Tewksbury, MA. The Eversource portion of the new line is 9.8 miles. A new 345 kV bay connected to the existing breaker-and-half bus arrangement will be constructed at Scobie Pond Substation with a circuit breaker on either side of the new circuit. Proposed in service date of the project is December 2017.

www.iso-ne.com/static-assets/documents/.../060916_rc_agenda.doc

So NPT goes to Scobie Pond, and something else called a reliability project (last NU) goes from Scobie Pond to Tewksbury

- NU-13-T22
Build a new 345-kV ac overhead transmission line from the 345-kV Franklin Switching Station to the 345-kV Deerfield Substation.
- NU-13-T23
Modify the 345-kV Deerfield Substation and add 200 Mvar of reactive compensation, and a 400 Mvar SVC. 400 Mvar leading, 0 Mvar lagging, made up of 400 Mvar TCR and 400 Mvar MSC
- NU-13-T24
Modify the 345-kV Scobie Pond Substation and add 210 Mvar of reactive compensation. (3 – 60 Mvar, 1 – 30 Mvar)
- NU-13-T25
Re-terminate 345-kV Buxton – Scobie Pond Line 391 into the 345-kV Deerfield Substation and uprate the 391S line section from Deerfield to Scobie.
- NU-13-T26
Uprate 345-kV transmission line 373 Deerfield – Scobie Pond.
- NU-13-T27
Uprate 345-kV transmission line 326 section from Scobie Pond to Lawrence Road to NU/NGRID border.

**Northeast
Utilities**

Critical Energy Infrastructure has been redacted

43

http://www.iso-ne.com/committees/comm_wkgrps/reblty_comm/reblty/mtrls/2013/nov192013/a3_2_northern_pass_project_presentation_redacted.pdf

Yet we all know NPT power is destined for southern New England. So where does this project actually end? Would the "upgrade" from Scobie Pond to Tewksbury be built if NPT was not proposed?

Could this be clarified please, and by someone other than the applicant?

Kris