



**Northeast
Utilities System**

Northeast Utilities Service Company
107 Selden Street
Berlin, CT 06037-1651

Transmission Planning Department
Allen Scarfone
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April 13, 2006

Mr. Donald Gates
Chairman, NEPOOL Reliability Committee
ISO New England, Inc.
One Sullivan Road
Holyoke, MA 01040-2841

Dear Mr. Gates,

In accordance with Section I.3.9 of the ISO New England ("ISO-NE") Transmission, Markets, and Services Tariff ("ISO-NE Tariff"), Northeast Utilities ("NU") hereby submits the attached Proposed Plan Application/s ("PPA") reporting notice of intent to construct, retire, or change facilities (rated 69 kV and above) for the following project(s):

NU-06-T12 Install a new 345-kV circuit breaker at the Deerfield Substation

NU believes that the project described by this PPA will not have a significant adverse effect on the stability, reliability, or operating characteristics of the Transmission Owner's transmission facilities, the transmission facilities of another Transmission Owner, or the system of a Market Participant in New England.

If you have any questions, I can be reached at the numbers above.

Sincerely,

Allen Scarfone

TRANSMISSION FACILITIES PROPOSED PLAN APPLICATION

Application No. **NU-06-T12**

1. Applicant: **Northeast Utilities (NU)** Date: **April 13, 2006**
2. Type of Facility: **Install new 345-kV circuit breaker at the Deerfield Substation**
3. In-Service Date: **June 2006**
4. Transmission Line and/or Substations:

- a. From: **Deerfield Substation, Deerfield, NH** To: _____
 (Terminal - Name - Location) (Terminal - Name - Location)
- b. Third Terminal or tap (if any) _____
 (Name - Location)
- c. Distance – Overhead: **n/a** miles. Underground: **n/a** miles. Design Voltage: **345 kV** kV
 Conductor Size: **n/a** Initial Operation: **n/a** kV
- d. Proposed Relaying: **See Attachment A**
 Type of line relaying: **SEL387E – Bus Differential**
 Backup relaying: **SEL587Z – Bus Differential**
 Stuck breaker: **SEL352 – Breaker Failure**
 Special protective relaying schemes:

5. Transformer Rating: **n/a MVA** HV: kV LV: kV Tertiary: kV
- Parameters in percent on a 100 MVA Base
- Resistance: - R Reactance: - X

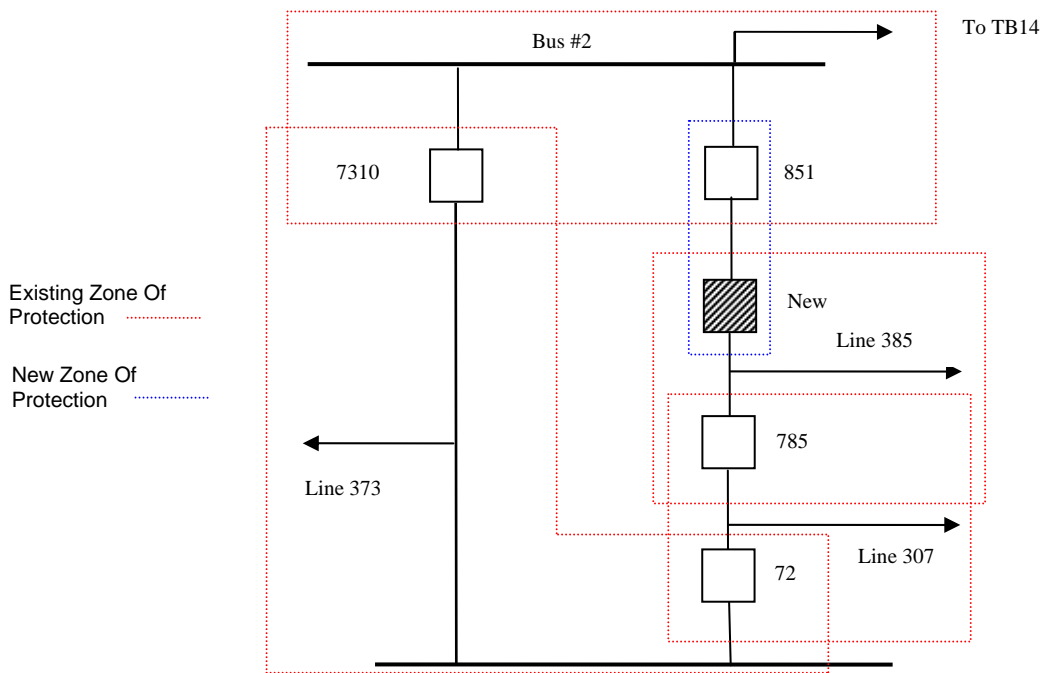
6. Attach simplified one line diagram(s) of transmission and/or substations with breaker configuration, indicating existing and proposed additions or changes on construction.

Comments: **The new 345-kV circuit breaker will be installed in series with the existing 851 circuit breaker.**

7. Reliability Studies
- | | | | | |
|-------------|------------------------------------|----------------------------------|------------------------------------------------|-----------------------------------------------|
| Load Flow: | Completed <input type="checkbox"/> | Planned <input type="checkbox"/> | Not Needed <input checked="" type="checkbox"/> | Explanation Attached <input type="checkbox"/> |
| Stability: | Completed <input type="checkbox"/> | Planned <input type="checkbox"/> | Not Needed <input checked="" type="checkbox"/> | Explanation Attached <input type="checkbox"/> |
| Other _____ | Completed <input type="checkbox"/> | Planned <input type="checkbox"/> | Not Needed <input checked="" type="checkbox"/> | Explanation Attached <input type="checkbox"/> |

- 8.a. If this Application is associated with a Generation Proposed Plan Application, identify the Generator Proposed Plan Application(s) and the Governance Participant(s) responsible for submitting it. **n/a**
- b. Has the Generation Proposed Plan Application(s) been submitted? Yes No
 If "No", when will the Application(s) be submitted?

Attachment A



High Level Summary Of Protection Issues:

A new zone of protection will be created between the 851 circuit breaker and the new circuit breaker. The protection system will consist of redundant bus differential scheme. The new breaker will also be equipped with a circuit breaker failure protection scheme.

Preliminary Tripping Logic:

Faults On Bus #2 – No Change to Tripping Logic

Faults between 851 and new circuit breaker – Trip new circuit breaker and 851

Faults On Line 385 – Trip circuit breaker 785 and new circuit breaker. The new circuit breaker will now be a transmission line circuit breaker. The 851 circuit breaker will not trip for 385 transmission line faults.

The 851 circuit breaker failure protection scheme will be modified to trip the new circuit breaker rather than transfer trip 385 line and trip the 785 circuit breaker. The new circuit breaker failure protection scheme will trip the 851 and 785 circuit breakers and transfer trip 385 at the Buxton Substation in Maine.