

**APPENDIX C -
INSTRUCTIONS FOR THE ISO NEW ENGLAND LOAD
POWER FACTOR SURVEY**

Effective Date: May 22, 2024

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Instructions for the ISO New England Load Power Factor Survey

The purpose of this Appendix C to Operating Procedure No. 17 – Load Power Factor and System Assessment (OP-17C) is to establish a list of Transmission Load Customers (TLCs) and Transmission Load Customer Contacts (TLC Contacts) within each load power factor (LPF) survey area. The list of TLCs in Table 1 is *not* a comprehensive list of TLCs.

The current LPF standards can be found in an excel document on ISO's external website by searching for "[op17_lpf_standards](#)."

For the purposes of LPF analysis, the New England Reliability Coordinator Area/Balancing Authority Area (RCA/BAA) has been divided into LPF areas as defined in OP17 Appendix A – Area Definitions (OP-17A).

Table 1 of this OP-17C lists each TLC, their LPF area, and their TLC Contact. For the purposes of ISO LPF communications, the TLC Contact is the point of contact for each TLC. **Where the TLC and TLC Contact are different entities, the TLC Contact shall act as the communication channel between ISO and the TLC.** TLC Contacts are specified because ISO *does not* have Transmission Compliance Contacts for all of the TLCs. Conversely, ISO's Customer and Asset Management System (CAMS) *does* have a Transmission Compliance Contact for all of the TLC Contacts listed below. The TLC Contact names used in Table 1 are the names in CAMS in the "Customer Long Name" field, and due to the field's character restrictions, some TLC Contact names are truncated.

As explained in OP-17, the two scenarios in which ISO will be communicating to the TLC via the TLC Contact include:

Annual LPF Survey with No Operating Issues:

As specified in OP-17, the ISO shall conduct a survey of all LPF areas annually or more frequently as circumstances may dictate. Communication of this information will proceed as follows:

1. ISO VTF Chair sends the LPF area survey results to the TLC Contacts.
2. TLC Contacts forward the LPF area survey results to each of their associated TLCs within the surveyed area(s).

Operating Issue Related to LPF Non-Compliance:

As specified in OP-17, if an operating issue relating to LPF non-compliance is identified, communication will proceed as follows:

1. ISO will request the applicable LCC(s) to confirm the TLCs in the non-compliant area(s).
2. ISO will send a data request to the TLC Contact for each TLC in the non-compliant area.
3. TLC Contacts forward the data request(s) to the indicated TLCs. In the most optimistic scenario, the TLC Contact will then have no further involvement because the TLC will reach out to ISO directly, as described in step 4 below.

However, in the event that there is no response from the TLC, ISO will re-send the data request to the TLC Contact and again, the TLC Contact forwards the data request to the indicated TLCs.

4. Upon receipt of the data request, the TLC is expected to respond directly to the ISO. The intention of the data request is to procure additional LPF data from the TLC to determine the TLCs involvement in the area's non-compliant LPF performance. The data request will include ISO's contact so that the TLC can communicate with the ISO directly.

Table 1

LPF Survey Areas and Transmission Load Customers/Contacts		
Transmission Load Customer	LPF Survey Area	Transmission Load Customer Contact
Ashburnham	Central MA/Harriman	Massachusetts Municipal Wholesale Electric Company
Block Island	Rhode Island	Rhode Island Energy / PPL
Boylston	Central MA/Harriman	Massachusetts Municipal Wholesale Electric Company
Bozrah	Connecticut	CMEEC
Braintree	Southeast MA	Braintree Electric Light Department, Town of
Central Maine Power	Maine	Central Maine Power Company
Chicopee	Western MA	Massachusetts Municipal Wholesale Electric Company
CL&P dba Eversource	Southwest CT	Eversource Energy Service Company
CL&P dba Eversource	Connecticut	Eversource Energy Service Company
Concord	Boston	NSTAR dba Eversource
Danvers	Northeast MA	Danvers
Devens	Central MA/Harriman	New England Power Company
Fitchburg	Central MA/Harriman	Fitchburg Gas & Electric Light Company
Georgetown	Northeast MA	New England Power Company
Great River Hydro	Central MA/Harriman	New England Power Company
Green Mountain Power	Central MA/Harriman	New England Power Company
Green Mountain Power	New Hampshire	New England Power Company
Green Mountain Power (load served from NEP)	Vermont	New England Power Company
Groton	Central MA/Harriman	Massachusetts Municipal Wholesale Electric Company
Groton Utilities	Connecticut	Connecticut Transmission Municipal Electric Energy Cooperative
Groveland	Northeast MA	New England Power Company
Hingham	Southeast MA	NSTAR dba Eversource
Holden	Central MA/Harriman	Massachusetts Municipal Wholesale Electric Company
Holyoke	Western MA	Holyoke Gas & Electric Department
Hudson	Central MA/Harriman	Hudson Light & Power Department
Hull	Southeast MA	Massachusetts Municipal Wholesale Electric Company
Ipswich	Northeast MA	Massachusetts Municipal Wholesale Electric Company
Island Corp	Vermont	New England Power Company
Jewett City Dept of Public Utilities	Connecticut	Connecticut Transmission Municipal Electric Energy Cooperative
Liberty Utilities (former Granite State Electric West load)	Vermont	New England Power Company
Liberty Utilities (former Granite State Electric East load)	Northeast MA	New England Power Company
Littleton Massachusetts	Northeast MA	Littleton Electric Light & Water Department

LPF Survey Areas and Transmission Load Customers/Contacts		
Transmission Load Customer	LPF Survey Area	Transmission Load Customer Contact
Littleton New Hampshire	New Hampshire	New England Power Company
Mansfield	Southeast MA	Massachusetts Municipal Wholesale Electric Company
Marblehead	Northeast MA	Massachusetts Municipal Wholesale Electric Company
Massachusetts Electric	Northeast MA	New England Power Company
Massachusetts Electric (Southern Berkshires, Northampton and Granby loads excluded)	Central MA/Harriman	New England Power Company
Massachusetts Electric	Southeast MA	New England Power Company
Merrimac	Northeast MA	New England Power Company
Middleborough	Southeast MA	Middleborough Gas & Electric Department
Middleton	Northeast MA	Middleton Municipal Light Department
Mohegan Tribal Utilities Authority	Connecticut	Connecticut Transmission Municipal Electric Energy Cooperative
Nantucket	Southeast MA	New England Power Company
Narragansett	Rhode Island	Rhode Island Energy / PPL
New Hampshire Electric Coop	New Hampshire	New Hampshire Electric Cooperative, Inc.
New Hampshire Electric Coop	Vermont	New England Power Company
North Attleborough	Southeast MA	North Attleborough Electric Department
Norwich	Connecticut	Connecticut Transmission Municipal Electric Energy Cooperative
Norwood	Southeast MA	NSTAR dba Eversource
NSTAR dba Eversource	Boston	Eversource Energy Service Company
NSTAR dba Eversource	Southeast MA	Eversource Energy Service Company
NSTAR dba Eversource	Western MA	Eversource Energy Service Company
Pascoag	Rhode Island	Rhode Island Energy / PPL
Paxton	Central MA/Harriman	Massachusetts Municipal Wholesale Electric Company
Peabody	Northeast MA	Massachusetts Municipal Wholesale Electric Company
Princeton	Central MA/Harriman	New England Power Company
PSNH dba Eversource	New Hampshire	Eversource Energy Service Company
Reading	Northeast MA	Reading Municipal Light Department
Reading	Boston	Reading Municipal Light Department
Rowley	Northeast MA	Rowley Municipal Lighting Plant
Shrewsbury	Central MA/Harriman	Massachusetts Municipal Wholesale Electric Company
Sterling	Central MA/Harriman	Massachusetts Municipal Wholesale Electric Company
South Hadley	Western MA	Massachusetts Municipal Wholesale Electric Company
South Norwalk	Southwest CT	Connecticut Transmission Municipal Electric Energy Cooperative
Taunton	Southeast MA	Taunton Municipal Lighting Plant

LPF Survey Areas and Transmission Load Customers/Contacts		
Transmission Load Customer	LPF Survey Area	Transmission Load Customer Contact
Templeton	Central MA/Harriman	Massachusetts Municipal Wholesale Electric Company
The United Illuminating Company	Southwest CT	United Illuminating Company, The
The United Illuminating Company	Connecticut	United Illuminating Company, The
Third Taxing District - Norwalk	Southwest CT	Connecticut Transmission Municipal Electric Energy Cooperative
Unitil Energy Systems	New Hampshire	Unitil Energy Systems, Inc.
VELCO	Vermont	Vermont Electric Power Company, Inc.
Vermont Public Power Supply Authority	New Hampshire	Vermont Public Power Supply Authority
Versant Power	Maine	Versant Power
Wakefield	Northeast MA	Massachusetts Municipal Wholesale Electric Company
Wallingford	Connecticut	Town of Wallingford CT Dept of Public Utilities Electric Div
Wallingford	Southwest CT	Town of Wallingford CT Dept of Public Utilities Electric Div
Wellesley Municipal Light Plant	Boston	Wellesley Municipal Light Plant
West Boylston	Central MA/Harriman	Massachusetts Municipal Wholesale Electric Company
Western Massachusetts Electric (load served from NEP)	Central MA/Harriman	New England Power Company
Westfield	Western MA	Westfield Gas and Electric Department

OP-17 Appendix C Revision History

Document History (This Document History documents action taken on the equivalent NEPOOL Procedure prior to the RTO Operations Date as well revisions made to the ISO New England Procedure subsequent to the RTO Operations Date.)

Rev. No.	Date	Reason
- -	12/16/16	For previous revision history, refer to Rev 10 available through Ask ISO;
Rev 11	01/06/15	<p>Added language to include non-conforming load fed directly from the transmission system in the LPF survey form and updated Figure 1 and Table 3 accordingly.</p> <p>Updated Table 1 as follows:</p> <p>Bangor Hydro - renamed as EMERA Maine (Bangor Hydro)</p> <p>CVPS (NH) - removed due to the merger with GMP, load rolled into GMP (NH)</p> <p>CVPS (Vermont) - removed due to the merger with GMP, load rolled into GMP (VT)</p> <p>CVPS (Vernon G-33) - removed due to the merger with GMP, load rolled into GMP(H/C);</p> <p>GMP (Tarif 1) - rolled into GMP (H/C);</p> <p>Granite State Electric (GS West) - renamed as Liberty (Granite State Electric GS West);</p> <p>Granite State Electric - renamed as Liberty (Granite State Electric)</p> <p>NH Elec Coop (NGRID) - removed due to the elimination of load as a result of the Monroe HVDC terminal retirement;</p> <p>NH Elec Coop (NU) - rolled into the PSNH load</p> <p>Town of Wallingford Electric Division (CT & SWCT)- removed CMEEC as reporting entity and replaced it with Town of Wallingford Electric Division</p> <p>Updated Table 2 as follows:</p> <p>Bangor Hydro renamed as EMERA Maine (Bangor Hydro)</p>
Rev 11.1	02/20/15	Correct the Revision History, Rev 11, Date typo (replaced 01/16/15 with 01/06/15)
Rev 12	09/01/15	<p>Throughout the whole document "Market Participant" is replaced by "Transmission Owners/Market Participants"</p> <p>Updated Table 1 as follows:</p> <p>Data row changes:</p> <p>Company NH Elec Coop data row deleted (rolled into the PSNH load);</p> <p>Corrected Narragansett and Pascoag companies Area assignment to Rhode Island</p> <p>Company Column changes:</p> <p>All listings of "NSTAR" replaced with "NSTAR dba Eversource";</p> <p>1st listing of "NU" replaced with "WMECO dba Eversource";</p> <p>2nd & 3rd listing of "NU" replaced with "CL&P dba Eversource";</p> <p>"PSNH" replaced with "PSNH dba Eversource";</p> <p>Typo for company name corrected: "Narrangensett" changed to "Narragansett"</p> <p>Area Column changes:</p> <p>The area assignment for two companies, "Narragansett" and "Pascoag", changed from "Southeast" to "Rhode Island";</p> <p>The following area names are changed to match OP17 Appendix A area definitions:</p> <ul style="list-style-type: none"> • "Harriman/Central" changed to "Central MA/Harriman" • "CT" changed to "Connecticut" • "WMASS" changed to "Western MA" • "SWCT" changed to "Southwest CT" • "NH" changed to "New Hampshire" <p>Reporting Agent Column changes:</p> <p>All listings of "NSTAR" replaced with "NSTAR dba Eversource";</p> <p>All listings of "Northeast Utilities" replaced with "Eversource";</p> <p>Only listing of "PSNH" replaced with "PSNH dba Eversource";</p>

Rev. No.	Date	Reason
Rev 13	12/16/16	Biennial review by procedure owner; Added required corporate document identity to all footers; Instruction section: made editorial changes to clarify and be consistent with current practices and management expectations and added a closing paragraph before Table 1 to describe the start of the LPF survey process each year; Table 1 modified as follows: Company names are updated and changed to have consistent abbreviations; Reporting agent for Westfield is changed from MMWEC to Westfield; Sorted alphabetically after the company name updates; Truncated the Revision History per SOP-RTMKTS.0210.0010 Section 5.6;
Rev 13.1	09/26/18	Periodic review completed requiring no changes; Made administrative changes required to publish a Minor Revision;
Rev 14	05/06/19	Periodic review completed :Clarified instructions for completion of power factor survey, updated Table 1 Company names: TransCanada changed to Great River Hydro, WMECO changed to NSTAR
Rev 15	10/01/20	Periodic review completed; modified EMERA to Versant Power; added NH Elec.Coop for NH. Major rewrite to support process changes in OP-17 r7; deleted Figure 1, Tables 2 and 3.
Rev 16	08/05/21	Globally replaced legacy term "Company" with "Transmission Load Customer", abbreviated as "TLC"; Globally replaced legacy term "Reporting Agent(s)" with "Transmission Load Customer Contact", abbreviated as "TLC Contact"; Rewrite of instruction section to support current LPF survey protocols and responsibilities; In Table 1, replaced Transmission Load Customer Contact names with the names listed in the CAMS "Customer Long Name" field; Globally replaced "Southeast" area with "Southeast MA" area; Regrouped alphabetically the following TLCs in Table 1: Great River Hydro, Littleton Massachusetts, NSTAR dba Eversource; Added the following TLCs in Table 1: Block Island with New England Power Company as TLC Contact, Vermont Public Power Supply Authority with themselves as TLC Contact, and Wellesley Municipal Light Plant with themselves as TLC Contact;
Rev 17	09/08/22	Periodic review completed by procedure owner; Updated title to "Instructions for the ISO New England Load Power Factor Survey".
Rev 17.1	05/22/24	Biennial review completed by procedure owner; Updated Block Island, Narragansett, and Pascoag to Rhode Island Energy / PPL.