

New England Electrical Transmission Substations
5 June 2013

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1. Intro

Existing electrical transmission substations and those planned through 2022 for the New England coastal region. A substation is a part of an electrical generation, transmission, and distribution system. Substations transform voltage from high to low, or the reverse, or perform any of several other important functions. Between the generating station and consumer, electric power may flow through several substations at different voltage levels. This data depicts substations (facilities that switch, change, and/or regulate electric voltage) existing in the New England area (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island and Vermont). These substations are all connected using segments of the New England Transmission Lines layer. Transmission lines (structures that form a path for directing the transmission of electric power), when interconnected with each other, become transmission networks, typically referred to as "power grids".

2. Purpose

To support coastal and ocean planning and other activities pursuant to the Energy Policy Act, Coastal Zone Management Act, Magnuson-Stevens Fishery Conservation and Management Act, National Environmental Policy Act, Rivers and Harbors Act and the Submerged Lands Act.

3. Sources

- http://www.iso-ne.com/nwsiss/grid_mkts/key_facts/iso-geo-diagram-2012-final-non-ceii.pdf

4. Data Design

Name of Feature Class	New England Electrical Transmission Substations
Number of Unique Features	526
Storage format and type	ArcGIS File Geodatabase - simple feature class - vector point
Geographic Coordinate System	WGS_1984_Web_Mercator_Auxiliary_Sphere

5. Data Content

ISO 19115 Topic Category Keywords: oceans, structure, utilitiesCommunication

None: energy, power, transmission, substation

Place Names Keywords: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, United States, Vermont

Maximum scale of intended use is 1:80,000.

5. Data Dictionary

Field	name	state	description	status
Alias	Name	State	Description	Status
Type	Text	Text	Text	Text
Length	50	25	50	10
Desc.	Substation ID	State location	Substation type	In Service or Proposed

6. Data Process

- To be sure that you are using the most current map, visit:
http://www.iso-ne.com/nwsiss/grid_mkts/key_facts/
And click on New England Geographic Transmission Map Through 2022.
The map used for this copy is located at:
http://www.iso-ne.com/nwsiss/grid_mkts/key_facts/iso-geo-diagram-2012-final-non-ceii.pdf
- Heads up digitize using ESRI OpenStreetMap and Imagery Basemaps at a 1:40,000 scale using the ISO-NE map as a guide.

7. Quality Process

All known features acquired.

Original content was acquired from authoritative sources.

No new testing was done to cross reference or confirm otherwise the field or geometry values.

Spatial and attribute properties are believed to be complete, although attribute information has been simplified. Geometric thresholds from original data are preserved. No tests have been completed for exhaustiveness.

These data are intended for coastal and ocean planning. Not for navigation.

Use restrictions: NOT FOR NAVIGATION.