

National Grid WSI Weather Specifications

Minimum Services Specification

Minimum services are described under the following categories:

1. Weather Forecasts
2. Notifications of Forecast Significant Weather
3. Weather Consultations
4. Web Based Weather Displays

1. Weather Forecasts

Weather forecasts are provided by credentialed and experienced meteorologists under the direct employ of the bidder. Forecasts are based on the meteorologists' analysis and interpretation of multiple sources including the output of multiple standard weather models and will reflect most likely weather conditions to be experienced.

- a. Variables in Forecast – The forecasts include details on temperature, precipitation, winds and any other meteorological information that could affect National Grid's electrical operations including ice accretion, characterization of snow precipitation (e.g. wet/heavy, dry; so as to be able to gauge the likelihood that it may accumulate on and weigh down trees limbs and cause contact with overhead lines).
- b. Probability Ranges for Potentially Damaging Weather - For forecasted weather phenomena expected to affect National Grid's electric operations, WSI provides ranges in magnitude for each variable forecast to exceed the potential impact threshold with associated probability levels. These thresholds are defined under "Notifications of Forecast Significant Weather" below.
- c. Graphics required with Forecast – Forecasts of certain weather phenomena that may impact National Grid's operations are supported by graphics that aid interpretation. The forecast conditions have distinct geographic boundaries, these boundaries are shown graphically on maps that include county boundaries e.g. areas with probable ice accretion, thunderstorm maps, high-wind isobars. In addition to being available through a web browser, these graphics are also distributed with forecasts by fax and e-mail.
- d. Forecast Zones - Forecasts are provided on a county basis for those counties located in whole or part within National Grid's service territory as depicted on the two attached National Grid service territory maps and the maps depicting the State of Vermont. Additional zona differentiation within counties are provided as warranted by significant differences in normal weather patterns.

- e. Distribution and Schedule – Forecasts are posted on Infosite accessible by National Grid employees. Forecasts are listed by region (Long Island, New York, New England), then by National Grid division and then by county. Forecasts are also be distributed by fax and email in accordance with schedules and distribution lists that vary by forecast conditions below, time of day that would coincide with normal business hours for different National Grid functions, and the forecast zones.
- Normal Conditions - Forecasts will be provided three times daily at 06:00, 13:00, and 19:30 subject to change by National Grid.
 - Adverse Conditions - Forecasts of weather that could effect the operations of National Grid such as snow/ice, severe thunderstorm, high winds, and hurricane episodes will be provided on an unscheduled basis and will be updated as forecasts show substantive changes.
 - Thunderstorms - During thunderstorm events, maps depicting the various cells and projected track will be provided.
 - Hurricanes & Tropical Storms – During hurricane and tropical storm events, maps depicting probable storm tracks will be provided beginning at least two weeks prior to predicted arrival time to National Grid's service territory.

2. Notifications of Forecast Significant Weather

Notifications of forecasted significant weather events that could have an effect on the electric distribution or transmission system within any of the National Grid divisional boundaries are provided by fax, email, text messaging (PDA, pager or cell phone) and verbally. Separate notifications are made for events forecast to affect NE divisions NY Divisions, and Long Island territory. Notifications include a commentary on which National Grid divisions the forecast conditions apply to with differentiation between and within divisions on a county basis.

- a. Potential Operational Impact Thresholds:
- i. Sustained wind speeds: 30 mph
 - ii. Wind gusts: 40 mph
 - iii. Radial ice accretion: 1/8 inch.
 - iv. Heavy, wet snow total accumulation: 2 inches
 - v. Hurricanes, Tornadoes, Downbursts, Microbursts: All
 - vi. Lightning: Moderate to Heavy
 - vii. Road Icing: All or conditions forecast to affect multiple towns
 - viii. Dew Point: threshold level to be defined subsequent to award

3. Weather Consultations

WSI provides National Grid personnel with unlimited 24/7 access to forecast meteorologists to answer questions regarding forecast conditions that could impact National Grid's operations. The same meteorologists that provide forecasts support these consultations if available.

4. Web Based Weather Displays

WSI provides web accessible weather displays to enable access to current weather conditions and forecast information. The intent is to make information broadly available as National Grid requires access to the information from many locations including normal work locations, interim storm management locations, and employee's homes.

Wide Area Displays include:

- Composite Radar of United States
- Composite Radar centered on Harrisburg, PA
- Composite Radar centered on Washington DC
- Composite Radar centered on Long Island, NY
- Satellite Infrared High resolution of the United States
- Satellite Infrared High resolution of the Northeast United States
- Tropical Activity in Atlantic
- Hurricane Landfall Probability
- Primary Track of Tropical Storm
- Secondary Track of Tropical Storm