NERC TPL-008 Data Library Documentation

Daily Data

Daily temperature statistics by Weather Zone.

- **Region:** The weather region associated with the data
- **Date:** Date in mm/dd/yyyy format
- **Daily_Min_Temp:** Minimum hourly temperature recorded on the associated date (F)
- **Daily_Avg_Temp:** Average hourly temperature recorded on the associated date (F)
- **Daily_Max_Temp:** Minimum hourly temperature recorded on the associated date (F)
- **3_Day_Rolling_Avg_Max_Temp:** Three-day rolling average of daily maximum temperature (F)
- **3_Day_Rolling_Avg_Min_Temp:** Three-day rolling average of daily minimum temperature (F)

Top 40 Events

Top 40 hottest and coldest days in each weather zone, measured by 3-day rolling average temperatures

- **Region:** The weather region associated with the data
- **Event_Type:** Heat Event or Cold Event
- **Year:** Year of associated event
- **Month:** Month of associated event
- **Date:** Date of associated event in mm/dd/yyyy format
- **Daily_Min_Temp:** Minimum hourly temperature recorded on the associated date (F)
- **Daily_Avg_Temp:** Average hourly temperature recorded on the associated date (F)
- **Daily_Max_Temp:** Minimum hourly temperature recorded on the associated date (F)
- **3_Day_Rolling_Avg_Max_Temp:** Three-day rolling average of daily maximum temperature (F)
- **3_Day_Rolling_Avg_Min_Temp:** Three-day rolling average of daily minimum temperature (F)
- **Event_Temp:** Temperature used to benchmark weather event (3_Day_Rolling_Avg_Max_Temp for Heat Events, 3_Day_Rolling_Avg_Min_Temp for Cold Events)

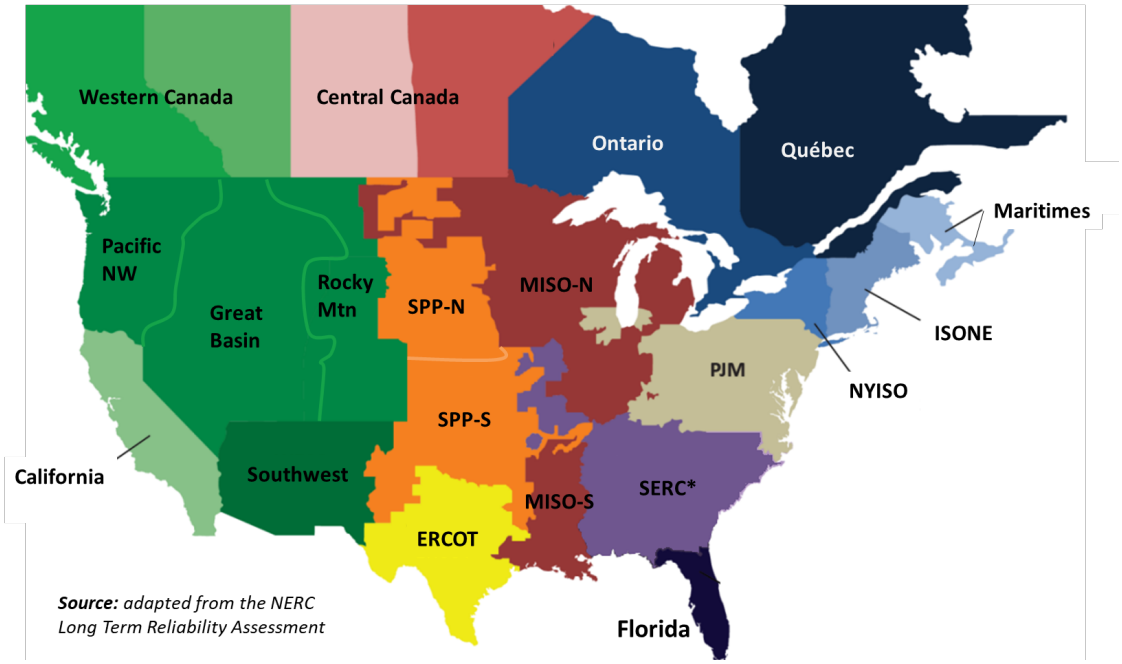
Hourly Data (Filtered)

Hourly weather data from PNNL Dataset with modifications. Values are weighted if the region was represented by multiple BAs. Values are filtered to only include Top 40 event days. Temperature converted from Kelvin to Fahrenheit.

- **Region:** The weather region associated with the data
- **Time_UTC:** Datetime of hourly data in UTC timezone
- **Temperature_F:** Hourly temperature measured at 2-m (F)
- **Q2:** Specific humidity measured as 2-m water vapor mixing ratio (kg/kg)
- **SWDOWN:** Shortwave radiation measured as downwelling shortwave radiative flux at the surface (W/m^2)
- **SLW:** Longwave radiation measured as radiative flux at the surface (W/m^2)
- **WSPD:** Wind speed measured as 10-m wind speed (m/s)

For original data, including hourly data by county and balancing authority, please refer to:
Burleyson, C., Thurber, T., & Vernon, C. (2023). Projections of Hourly Meteorology by Balancing Authority Based on the IM3/HyperFACETS Thermodynamic Global Warming (TGW) Simulations (v1.0.0) [Data set]. MSD-LIVE Data Repository. https://doi.org/10.57931/1960530

Weather Zones



Source: *adapted from the NERC Long Term Reliability Assessment*