



Independent Statistics & Analysis

U.S. Energy Information
Administration

EIA-930 Data Users Guide and Known Issues

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EIA-930 U.S. electric system operating data

The EIA-930 information collection consists of basic hourly electric system operating data from all balancing authorities (BAs) that make up the electric system in the lower 48 states. The following data elements are collected:

- Actual system demand
- Day-ahead system demand forecast
- System net generation
- System total interchange
- Interchange with directly connected balancing authorities

Aggregate values are calculated and made available for 13 regions and the U.S. lower 48 states. A list of the BAs that make up each region is provided at the end of this document.

Bulk historical data availability

API Data Series: Individual data series are available via API calls. Information about this is available on EIA's [OPENDATA page](#). API data series may be found in the [API Browser](#) tab under the [U.S. Electric System Operating Data](#) child category. API data series calls may be embedded in an Excel spreadsheet using [EIA's Excel Add-In](#). There is also a [bulk download facility](#).

The API data series include data up to the latest available:

- Actual system demand for today is available today 1 ½ hours after the end of the operating hour.
- Day-ahead system demand forecast for each hour today (1 am to midnight local time) is available after 8:30 am eastern time today.
- System net generation and total interchange for each hour yesterday (1 am to midnight local time) are available after 8:30 am eastern time today.
- Interchange with directly connected balancing authorities for each hour two days ago (1 am to midnight local time) is available after 8:30 am eastern time today.

Note: API data series values are listed with a Greenwich Mean Time (GMT)/ Coordinated Universal Time (UTC) date-time stamp value. This allows matching values from different data series for the same hour without having to adjust for time zone and daylight saving time changes. If a value is missing in an API data series, the series will not include a record for that hour. Therefore, for multiple data series pulled into Excel, the value for the same hour for each series may not be on the same spreadsheet row.

Bulk Database Files: EIA-930 historical data is also available as zipped .csv files in six-month chunks starting with July 1 to December 31, 2015. For each six-month period, there are two zip files. The Interchange file contains interchange values reported by each BA with their directly connected balancing authorities. The Balance file contains all other data values.

The bulk database files, updated every day by 11 am eastern time, include the following data:

- Actual system demand through yesterday (1 am to midnight local time)
- Day-ahead system demand forecast through yesterday
- System net generation and total interchange through yesterday
- Interchange with directly connected balancing authorities through two days ago

Note: Data values are listed with local and a Greenwich Mean Time (GMT)/Coordinated Universal Time (UTC) date-time stamp values. BA local time zones are listed in a table at the end of this document. Arizona time is Mountain Standard Time all year long. Those that use it do not observe daylight saving time. There are a few BAs that observe time that you might not expect:

- El Paso Electric Company (EPE) – Located in the Mountain Time zone, but reports as Arizona Time.
- Idaho Power Company (IPCO) – Located in the Mountain Time zone, but reports as Pacific Time.
- Louisville Gas and Electric Company and Kentucky Utilities Company (LGEE) – Located in the Eastern Time zone, but reports as Central Standard Time all year long.
- Midcontinent Independent System Operator, Inc. (MISO) – Mostly located in the Central Time zone, but reports as Eastern Standard Time all year long.
- Public Service Company of New Mexico (PNM) – Located in the Mountain Time zone, but reports as Arizona Time.
- Western Area Power Administration - Rocky Mountain Region (WACM) – Located in the Mountain Time zone, but reports in Arizona Time.

Data Temporarily Withheld: The current data availability discussed above does not apply to ten BAs for which data is withheld for two days. Data for the following BAs for two days ago (1 am to midnight local time) become available after 8:30 am eastern time today on the webpages and via API data series and after 11 am eastern time today via the bulk database files:

- PowerSouth Energy Cooperative (AEC)
- PUD No. 1 of Douglas County (DOPD)

- Gainesville Regional Utilities (GVL)
- Homestead, City of (HST)
- New Smyrna Beach, Utilities Commission of (NSB)
- Portland General Electric Company (PGE)
- Seattle City Light (SCL)
- Tallahassee, City of (TAL)
- Turlock Irrigation District (TIDC)
- City of Tacoma, Department of Public Utilities, Light Division (TPWR)

Note: Data from these temporarily withheld BAs is included in regional and US aggregate values for the withholding period.

Generation-only balancing authorities: The current data availability discussed above does not apply to ten BAs that do not report demand or demand forecasts. These BAs consist of a power plant or group of power plants and do not directly serve retail customers. The following BAs only report net generation and interchange:

- Arlington Valley, LLC – AVBA (DEAA)
- Electric Energy, Inc. (EEI)
- Gridforce Energy Management, LLC (GRID)
- Griffith Energy, LLC (GRIF)
- Gila River Power, LLC (GRMA)
- NaturEner Power Watch, LLC (GWA)
- New Harquahala Generating Company, LLC – HGBA (HGMA)
- Southeastern Power Administration (SEPA)
- NaturEner Wind Watch, LLC (WWA)
- Alcoa Power Generating, Inc. - Yadkin Division (YAD)

Limited generation balancing authorities: Two BAs do not always have net generation to report. Most BAs produce electricity within their service territories. However, the following BAs have a small number of local generators that are not always producing electricity:

- Homestead, City of (HST)
- New Smyrna Beach, Utilities Commission of (NSB)

EIA-930 data quality

Users of the EIA-930 data should familiarize themselves with the quirks of the collection. These stem from the nature of the data and the collection design. Also, respondents are in various stages of enhancing their collection processes and correcting historical data.

The nature of the data

We have acknowledged the “as is” nature of the collection. The collection process depends on serial automated processes from generator and tie line meters to energy management and accounting systems to data presentation and delivery. Things can and do happen to disrupt these processes and produce missing or anomalous values. When this happens to reported demand and net generation values, EIA estimates a value to include in U.S. and regional aggregates, but the anomalous value is posted for the BA. Notwithstanding the “as is” nature of the collection, we expect respondents to correct anomalous values for the historical record.

EIA-930 collection design

The EIA-930 collection was designed to marry near real-time reporting of demand and next-day reporting of other system operating measures with reasonably accurate historical data. For example, we collect actual demand values twice: once in near real-time during the operating day and then again at 7 am the next day. The reported values may or not be the same depending on the source of the data and revisions that have taken place overnight.

Similarly, we collect interchange values twice: once at 7 am the day after the operating day and then again the next day. Total interchange is needed the next day along with net generation to derive demand. The reporting of interchange values with each directly connected BA take advantage of a mandatory requirement that BAs agree on this value with neighboring BAs by the end of the next business day, known as interchange check-out. The total interchange value may or may not match the sum of the interchange with all the neighboring BAs depending on the source of the data and any revisions due to check-out.

The EIA-930 collection of system operating data attempts to represent as purely as possible a physical picture of supply, demand, and energy flow (interchange) on the U.S. electric grid. For the purposes of the EIA-930 survey, interchange is the physical flow of electricity metered at the tie line boundaries between electric systems. Net generation is a metered value and demand (load, or [net energy for load](#)) is a calculated value based on the activity occurring within the tie line boundaries of the electric system.

This physical picture of balancing authority operations is not how many electric systems account for and report how they dispatch their generators, manage interchange, and balance their systems. Utilities enter into commercial arrangements with other systems (1) to dispatch generating units located in other systems or to serve customers in other systems (dynamic scheduling) or (2) to engage in “virtual” interchange at locations that are not direct physical connections between the two systems (pseudo ties).

Reporting operating data with these commercial arrangements incorporated means that “demand” may include demand served outside the BA’s tie line boundaries or may not include demand served by others inside. “Net generation” may include the output of generating units outside the BA’s tie line boundaries or may not include the output of internal units dispatched by other systems. Energy flows may be reported between BAs that are not directly connected. Metered physical flow values may be adjusted to account for dynamic scheduling arrangements and interchanges on pseudo ties.

Since physical tie line flows and generator output are metered, BAs have been able to adjust their accounting to report the physical values required for the EIA-930 survey. In some cases, this involves significant changes in the reported demand values, which are derived from net generation and total interchange.

Electric systems produce demand forecasts aligned with the way they operate and account for electricity on their system. EIA has not asked respondents to produce a demand forecast consistent with our physical picture of their operations. This means that for some systems, where a significant portion of their demand is outside their system or other balancing authorities have significant demand inside their system, the comparison between actual and forecast demand color-coded on the webpage map and shown on the forecast error chart is not very meaningful. Those systems include:

- PowerSouth Energy Cooperative (AEC)
- Avista Corporation (AVA)
- Duke Energy Florida, Inc. (FPC)
- Gainesville Regional Utilities (GVL)
- Ohio Valley Electric Corporation (OVEC)
- Puget Sound Energy, Inc. (PSEI)
- Seminole Electric Cooperative (SEC)
- Southwestern Power Administration (SPA), and perhaps
- Tucson Electric Power (TEPC)

Historical data quality

Our focus has been on working with EIA-930 respondents to properly report going forward. (We will describe below where this stands.) While the quality of the historical data is much improved, **you should not assume that all historical data is good**. We describe the nature of the issues and then document, BA by BA, known data issues.

Data submission issues

No data is available for two BAs operated by the Western Area Power Administration prior to October 1, 2015:

- WAPA - Upper Great Plains East (WAUE) merged into the Southwest Power Pool (SWPP) on October 1, 2015. It did not report data before the merger.
- WAPA - Upper Great Plains West (WAUW) did not report data prior to October 1, 2015.

Data are missing for these BAs and dates:

- Tucson Electric Power Company (TEPC) -- 8/5/2015, 10/8-10/2015, 5/6-18/2016, 6/23-27/2016
- PacifiCorp East (PACE) – 2/25-27/2016, 4/13-15/2016
- PacifiCorp West (PACW) – 2/25-27/2016, 4/13-15/2016, 5/8-10/2016

Reporting inconsistencies on which BAs are directly connected

Not all BAs agree on which BAs they are directly connected to. This occurred due to failure to modify reporting when WAPA - Upper Great Plains East (WAUE) merged into the Southwest Power Pool (SWPP) on October 1, 2015. Difference in handling dynamic scheduling and pseudo tie arrangements can also result in reporting discrepancies.

Anomalous value issues

Many respondents have reported anomalous data values involving blank, zero, negative, high, and low values.

Data relationships

Relationships among the data elements can be used to check the quality of data reporting.

System energy balance: Respondents typically derive the value for actual demand (D) each hour from total interchange (TI) and net generation (NG), which are both aggregated metered values. D equals NG minus TI.

Interchange reporting consistency with neighboring BAs: BAs are physically connected to their neighboring BAs by one or more transmission lines. These lines have meters that measure the flow of electricity between BAs. Interchange reported by BA1 to or from BA2 should equal the interchange reported by BA2 to or from BA1.

Correcting mismatches in reporting of interchange is particularly challenging. It is difficult to identify the sources of mismatches. Is one BA or the other misreporting or is it both? The EIA-930 collection is designed to take advantage of a mandatory reliability standard that requires BAs to agree on actual interchange for each hour of a day by the end of the next business day. We have found that a number BAs are not reporting using a data source with the checked-out values (see

the BA by BA comments below).

Internal interchange reporting consistency: Total interchange (TI) may equal the sum of interchange with each directly interconnected balancing authority (DIBA). $TI = \text{SUM}(DIBA)$. As mentioned above, these two values may differ due to the use of different data sources and revisions.

Daylight saving time reporting

Respondents have found reporting data for daylight saving time days particularly challenging. This may lead to duplicate values reported for the same hour or a missing value for an hour. Sometimes this leads to a value for an hour being reported as the value the hour before or after. These time shifts in reporting may go on for days or months.

We have been focusing on this issue in our data quality reviews and have been notifying respondents to resubmit corrections. Getting all these corrections in may take a while. Also, there is no guarantee that respondents have successfully revised their reporting processes to report correctly in the future.

Balancing authority compliance status

Below are documented BA specific data quality issues between October 1, 2015 and the date of this document for those BAs with the most significant issues. “Continuing” issues appear in the historical data and are continuing in reported data going forward. We are working with BAs to correct their reporting of continuing issues. “Historical” issues are ones where the BA has corrected the issue for reporting going forward, but has not yet corrected values in the historical data.

Midcontinent Independent System Operator, Inc. (MISO)

- (continuing) System energy not balanced. MISO is reporting real-time state estimated values for demand and net generation from their DART system. MISO has agreed to derive demand from net generation and total interchange from their energy management system (EMS).
- (continuing) MISO’s reported interchange consistently mismatches with 10 of its 11 directly connected BA neighbors. MISO is not reporting checked out interchange values. MISO shares balancing authority functions with its local balancing authorities (LBAs). One function the LBAs perform is the next business day interchange check-out with MISO’s BA neighbors. LBA currently have 48 hours to report the checked out interchange values to MISO.
- (historical) MISO reported interchange with WAUE for October 1-27, 2015 after it merged into SWPP.
- Note: MISO does not observe daylight saving time and its local time is Eastern Standard Time.

Bonneville Power Administration (BPAT)

- (continuing) Since November 18, 2015, BPAT has been reporting interchange with NaturEner Power Watch, LLC (GWA), a wind farm in Montana. GWA is directly connected to

NorthWestern Corporation (NWMT). GWA and NWMT are reporting interchange with each other. While BPAT has a commercial arrangement to receive electricity from GWA, it should not be reporting interchange with GWA on the EIA-930.

- (continuing) BPAT is not passing any of the three data relationship checks. System energy is not balanced and their reporting of interchange is inconsistent with their neighbor and internally. These issues appear to be related. BPAT has said that their reporting includes dynamic schedules and pseudo tie arrangements. BPAT is working on a plan to not include these arrangements in their system energy reporting.
- (historical) BPAT did not report demand and net generation values on:
 - July 1, 2015 (24 hours)
 - October 13, 2015 (17 hours)
- (historical) BPAT did not report total interchange values on:
 - September 3, 2015 (4 hours)
 - September 15, 2015 (3 hours)
 - January 16, 2016 (1 hour)
 - January 21, 2016 (1 hour)
 - February 3, 2016 (1 hour)
 - March 12, 2016 (1 hour)
 - March 19, 2016 (1 hour)
 - May 1, 2016 (4 hours)

PJM Interconnection, LLC (PJM)

- (Continuing) The reporting of data for daylight saving time days is not correct. Do not rely on the quality of the data reported for November 1, 2015 and March 13, 2016.
- (Continuing) PJM's reporting of interchange does not match that reported for any of their eight neighboring BAs. PJM says that current reporting of interchange uses their real-time data system and does not reflect next business day checkout with their neighboring BAs. PJM is working to correct this issue.
- (historical) PJM's system energy did not balance on March 10, 2015 (2 hours)

Southwest Power Pool (SWPP)

- (continuing) SWPP has not been reporting interchange with Saskatchewan Power Corporation (SPC) since October 1, 2015 when the Western Area Power Administration - Upper Great Plains East (WAUE) merged into SWPP.
- (continuing) SWPP has issues with consistent reporting with its four neighbors with AC ties and its six neighbors with DC ties. SWPP says that current reporting of interchange uses their real-time data system and does not reflect checkout with their neighboring BAs. SWPP is working to correct this issue.

California ISO (CISO)

- (continuing) CISO's reporting of interchange is inconsistent with their neighbors and internally. With most of CISO's neighbors, the mismatches are for a few hours. There are significant on-going mismatches with the Balancing Authority of Northern California (BANC) and Salt River Project Agricultural Improvement and Power District (SRP).

- (historical) CISO did not report values on the following days: 10/4/2015 (8 hours), 11/1/2015 (2 hours), 11/16-17/2015 (4 hours), 2/29/2016 (2 hours).

Tennessee Valley Authority (TVA)

- (Continuing) The reporting of data for daylight saving time days is not correct. Do not rely on the quality of the data reported for November 1, 2015 and March 13, 2016.
- (continuing) TVA’s reporting of interchange is inconsistent with their neighbors and internally. There are significant mismatches with Louisville Gas and Electric Company and Kentucky Utilities Company (LGEE), Midcontinent Independent System Operator, Inc. (MISO), and PJM Interconnection, LLC (PJM). MISO and PJM’s interchange reporting issues are noted above. TVA has frequent mismatches with Associated Electric Cooperative, Inc. (AECI) and less frequent mismatches with Southern Company Services, Inc. – Trans (SOCO).

Seminole Electric Cooperative (SEC)

- (Continuing) The reporting of data for daylight saving time days is not correct. Do not rely on the quality of the data reported for November 1, 2015 and March 13, 2016.
- (historical) SEC reported extremely high net generation values in October 2015 (3 days), November 2015 (12 days), December 2015 (2 days), January 2016 (4 days), February and March 2016 (1 day each), April 2016 (10 days), May 2016 (6 days), June 2016 (9 days).
- (historical) SEC did not report demand forecasts values on 11/18/2015 (24 hours), 2/19-20/2016 (48 hours), 6/30/2016 to present (all hours).
- (historical) SEC did not report interchange with neighboring BAs on 10/31/2015 (1 hour)
- (historical) SEC reported zero for net generation on 10/27/2015 (1 hour), 3/3/2016 (3 hour).
- (historical) SEC reported zero for demand, net generation, and total interchange on 11/1/2015 (1 hour), 5/19/2016 (21 hours), 6/1/2016 (24 hour), 6/5/2016 (24 hours).
- (historical) SEC reported zero for net generation and total interchange on 5/13/2016 (1 hour), 6/4/2016 (1 hour).
- (historical) SEC reported zero for interchange with neighboring BAs on 6/4/2016 (1 hour)
- (historical) SEC report a negative demand forecasts values on 10/14/2015 (3 hours).
- (continuing) SEC’s reporting of interchange is inconsistent with their neighbors and internally. There are significant mismatches with Duke Energy Florida, Inc. (FPC). There are sporadic mismatches with other neighboring BAs.

PUD No. 1 of Douglas County (DOPD)

- (continuing) The reporting of data for daylight saving time days is not correct. Do not rely on the quality of the data reported for November 1, 2015 and March 13, 2016.
- (continuing) Since 12/18/2015, DOPD has not been reporting day ahead load forecast for all hours and actual demand, net generation and total interchange for hours 23 and 24.
- (continuing) DOPD’s reporting of interchange is inconsistent with their neighbors and internally. There are significant mismatches with Public Utility District No. 1 of Chelan County (CHPD).
- (historical) DOPD reported zero for total interchange on 11/25/2015 (1 hour), 12/25/2015 (1 hour).

- (historical) DOPD reported zero for interchange with neighboring BAs on 1/17/2016 (1 hour).

Public Utility District No. 1 of Chelan County (CHPD)

- (continuing) The reporting of data for daylight saving time days is not correct. Do not rely on the quality of the data reported for November 1, 2015 and March 13, 2016.
- (continuing) CHPD's reporting of interchange is inconsistent with their neighbors. There are significant mismatches with Bonneville Power Administration (BPAT), PUD No. 1 of Douglas County (DOPD), and Puget Sound Energy, Inc. (PSEI). BPAT's interchange reporting issues are noted above.
- (historical) There is a single instance of internal interchange reporting inconsistency on October 14, 2015 (24 hours).
- (historical) CHPD did not report demand, net generation and total interchange values on the following days: 12/5/ 2015 (6 hours), 1/6/2016 (4 hours)

Tucson Electric Power Company (TEPC)

- (continuing) TEPC is missing data for these dates: 8/5/2015, 10/8-10/2015, 5/6-18/2016, 6/23-27/2016
- (continuing) TEPC's reporting of interchange is inconsistent with their neighbors and internally. There are significant mismatches with all five of its neighboring BAs. Interchange discrepancies have increased significantly since mid-May 2016.
- (continuing) Missing data for these dates: 8/5/2015, 10/8-10/2015, 5/6-18/2016, 6/23-27/2016
- (historical) TEPC reported zero for day ahead demand forecast on 4/15-16/2016.
- (historical) TEPC reported negative net generation values on 1/22/2016 (1 hour), 2/2/2016 (1 hour), 6/3/2016 (2 hours), 6/5/2016 (1 hour)
- (historical) TEPC reported negative day ahead demand forecast on 10/12/2015 (24 hours), 11/16/2015 (24 hours), 12/6/2015 (24 hours), 1/2/2016 (24 hours), 1/10/2016 (24 hours), 4/28/2016 (24 hours), 4/30/2016 (24 hours), 5/1-2/2016 (48 hours), 5/6/2016 (hours)
- (historical) TEPC's system energy does not balance prior to October 27, 2015

Public Service Company of Colorado (PSCO)

- (historical) PSCO reported negative demand and net generation values on 2/11/2016 (1 hour)
- (historical) PSCO's system energy is not balanced double digit hours of each day from March 1 to May 2, 2016.
- (historical) PSCO's reporting of interchange is inconsistent with their neighbors and internally. There are mismatches primarily with Southwest Power Pool (SWPP). SWPP's interchange reporting issues are noted above. There are also sporadic mismatches with Public Service Company of New Mexico (PNM) and Western Area Power Administration - Rocky Mountain Region (WACM). Internal consistency of reporting interchange is off on 11/1/2015 (22 hours), 12/5-6/2015 (46 hours), and 3/11-14/2016 (64 hours).

PacifiCorp East (PACE)

- (historical) PACE is missing data for these dates: 2/25-27/2016, 4/13-15/2016
- (continuing) PACE reported negative demand values on 11/17/2015 (1 hour), 12/8/2015 (1

hour).

- (continuing) PACE reported negative demand and net generation values on 11/30/2015 (2 hours), 12/29/2015 (2 hours), 2/2/2016 (2 hours), 4/2/2016 (1 hour), 4/21-22/2016 (2 hours), 5/6/2016 (1 hour), 6/3/2016 (1 hour).
- (continuing) PACE reported unusually large demand and net generation values on 10/14/2015 (2 hours), 11/2/2015 (3 hours), 11/17/2015 (1 hour), 11/30/2015 (3 hours), 12/22/2015 (2 hours), 3/22/2016 (2 hours), 4/21-22/2016 (2 hours), 5/25/2016 (1 hour), 6/9/2016 (1 hour), 6/15/2016 (1 hour).
- (continuing) PACE reported an unusually large net generation value on 5/17/2016 (1 hour)
- (continuing) PACE's reporting of interchange is inconsistent with their neighbors and internally. There are consistently significant mismatches with WACM. PACE is working with WACM on this issue and there have been significant improvement recently. There are sporadic mismatches with other BAs. There are mismatches with all neighboring BAs for 1 hour on 3/13-14/2016. The discrepancies between total interchange and the sum of interchange with BA neighbors is due to the use of different sources.

PacifiCorp West (PACW)

- (historical) PACW is missing data for these dates: 2/25-27/2016, 4/13-15/2016, 5/8-10/2016
- (continuing) PACW reported negative demand and net generation values on 10/30/2015 (1 hour), 11/3/2015 (1 hours), 1/5/2016 (1hour), 1/11/2016 (2 hours), 4/21/2016 (1 hour).
- (continuing) PACW reported an unusually large demand and net generation values on 10/30/2015 (1 hour), 11/3/2015 (1 hour), 12/7-8/2015 (2 hours), 1/5/2016 (1 hour), 1/10-11/2016 (2 hours), 2/1/2016 (1 hour), 2/18-19/2016 (4 hours), 2/21-22/2016 (4 hours), 2/29/2016 (2 hours), 3/2/2016 (2 hours), 4/21/2016 (1 hour).
- (continuing) PACW reported zero for total interchange on 5/19/2016 (1 hour).
- (continuing) PACW's reporting of interchange is sporadically inconsistent with their neighbors and internally. There are mismatches with all neighboring BAs for 1 hour on 3/13-14/2016. The discrepancies between total interchange and the sum of interchange with BA neighbors is due to the use of different sources.

Duke Energy Carolinas (DUK)

- (continuing) The reporting of data for daylight saving time days is not correct. Do not rely on the quality of the data reported for most of November 2015.
- (historical) DUK did not report demand forecasts values on 4/13/2016, 5/11/2016.
- (historical) DUK reported zero for net generation for 1 hour each day on 11/3-23/2015 and 12/31/2015 (11 hours).
- (continuing) PACW's reporting of interchange is inconsistent with their neighbors and internally. There are continuing and sometimes significant mismatches with Alcoa Power Generating, Inc. - Yadkin Division (YAD). There are consistent significant mismatches with all neighboring BAs on 3/13/-14/2016. There are sporadic other mismatches.

Duke Energy Progress East (CPLE)

- (continuing) The reporting of data for daylight saving time days is not correct. Do not rely on the quality of the data reported for most of November 2015.

- (historical) CPLE did not report demand forecasts values for 4/13/2016, 5/11/2016.
- (historical) CPLE did not report a total interchange value on 11/2/2015 (1 hour).
- (historical) CPLE reported zero for net generation for 1 hour each day on 11/3-23/2015 and 12/31/2015 (11 hours).
- (historical) CPLE reported zero for demand and net generation on 2/24/2016 (1 hour).
- (historical) CPLE reported an unusually large net generation value on 5/10/2016 (1 hour).
- (continuing) CPLE is not consistently passing any of the three data relationship checks. System energy is often not balanced and their reporting of interchange is inconsistent with their neighbor and internally. There are significant mismatches with PJM Interconnection, LLC (PJM). PJM's interchange reporting issues are noted above. There are consistent significant mismatches with all neighboring BAs on 3/13/-14/2016. There are sporadic other mismatches.

Duke Energy Progress West (CPLW)

- (continuing) The reporting of data for daylight saving time days is not correct. Do not rely on the quality of the data reported for most of November 2015.
- (historical) CPLW did not report demand forecasts values for 4/13/2016, 5/11/2016.
- (historical) CPLW did not report a total interchange value on 11/2/2015 (1 hour).
- (historical) CPLW reported zero for net generation for 1 hour each day on 11/3-23/2015 and 12/31/2015 (6 hours), 4/15-17/2016 (22 hours), 6/10/2016 (5 hours).
- (continuing) CPLW is not consistently passing any of the three data relationship checks. System energy is often not balanced and their reporting of interchange is inconsistent with their neighbor and internally. There are significant mismatches with PJM Interconnection, LLC (PJM). PJM's interchange reporting issues are noted above. There are consistent significant mismatches with all neighboring BAs on 3/13/-14/2016. There are sporadic other mismatches.

Duke Energy Florida, Inc. (FPC)

- (continuing) The reporting of data for daylight saving time days is not correct. Do not rely on the quality of the data reported for most of November 2015.
- (historical) FPC did not report demand forecasts values for 4/13/2016, 5/11/2016.
- (Historical) FPC reported zero for net generation for 1 hour each day on 11/3-10/2015, 11/12-20/2015, 11/22-23/2015 and 12/31/2015 (11 hours).
- (historical) FPC reported zero for demand and net generation on 12/31/2015 (1 hour), 1/10/2016 (12 hour), 3/25/2016 (1 hour), 4/16/2016 (1 hour).
- (continuing) FPC is not consistently passing any of the three data relationship checks. System energy is often not balanced and their reporting of interchange is inconsistent with their neighbor and internally. There are significant mismatches with Seminole Electric Cooperative (SEC). There are consistent significant mismatches with all neighboring BAs for most of November 2015 and on 3/13/-14/2016. There are sporadic mismatches with other neighboring BAs.

Florida Municipal Power Pool (FMPP)

- (continuing) FMPP reported unusually large demand and net generation values on

1/13/2016 (1 hour), 2/17/2016 (1 hour), 3/2/2016 (1 hour), 4/12/2016 (1 hour), 5/25/2016 (1 hour).

- (continuing) FMPP's reporting of interchange is inconsistent with their neighbors and internally. There are significant mismatches with Florida Power & Light Co. (FPL). There are also sporadic mismatches with Duke Energy Florida, Inc. (FPC), Jacksonville Electric Authority (JEA), and Tampa Electric Company (TEC).
- (historical) FMPP did not report values for day ahead demand forecast on 3/16/2016 (24 hours), 3/25/2016 (24 hours), and 4/5/2016 (24 hours).
- (historical) TEPC reported zero for total interchange on 10/1/2015 (1 hour) and 2/11/2016 (1 hour).

Tampa Electric Company (TEC)

- (continuing) The reporting of data for daylight saving time days is not correct. Do not rely on the quality of the data reported for November 1, 2015.
- (historical) TEC did not report interchange with neighboring BAs on 5/20/2016 (1 hour).
- (historical) TEC reported zero for total interchange on 11/1/2015 (1 hour), 11/14/2015 (1 hour), 11/30/2015 (1 hour),
- (historical) TEC reported zero interchange with neighboring BAs on 12/16/2015 (1 hour), 12/29/2015 (1 hour), 5/11/2016 (1 hour), 6/2/2016 (1 hour)
- (historical) TEC's reporting of interchange is inconsistent with their neighbors and internally. There are mismatches primarily with Duke Energy Florida, Inc. (FPC) in November 2015. FPC's reporting issues in November 2015 are noted above. There are also sporadic mismatches with TEC's other neighboring BAs.

Los Angeles Department of Water and Power (LDWP)

- (continuing) The reporting of data for daylight saving time days is not correct. Do not rely on the quality of the data reported for November 1, 2015 and March 13, 2016.
- (historical) LDWP is missing data on 5/18-20/2016 (all hours).
- (historical) LDWP did not report demand, net generation and total interchange values on 1/21/2016 (1 hour)
- (historical) LDWP did not report a day ahead forecast demand value for 3/12/2016 (1 hour).
- (historical) LDWP reported zero for actual demand on 4/25/2016 (2 hours), 5/24/2016 (1 hour).
- (historical) LDWP reported negative net generation values on 4/25/2016 (2 hours), 5/24/2016 (1 hour).
- (historical) LDWP's reporting of interchange is sporadically inconsistent with their neighbors and internally.

LG&E and KU Services Company as agent for Louisville Gas and Electric Company and Kentucky Utilities Company (LGEE)

- (historical) LGEE did not report interchange with neighboring BAs on 12/30/2015 (24 hours).
- (historical) LGEE reported zero for interchange with neighboring BAs on 10/10/2015 (1 hour).
- (historical) LGEE reported a negative actual demand value on 4/26/2016 (1 hour)

- (continuing) LGEE is not consistently passing any of the three data relationship checks. System energy is consistently not balanced and their reporting of interchange is inconsistent with their neighbor and internally (sporadically). There are significant mismatches with Midcontinent Independent System Operator, Inc. (MISO), PJM Interconnection, LLC (PJM) and Tennessee Valley Authority (TVA). MISO, PJM and TVA's interchange reporting issues are noted above. There are significant mismatches with Ohio Valley Electric Corporation (OVEC) on standard time days (November 1, 2015 to March 13, 2016).
- Note: that LGEE does not observe day light savings time and its local time is Central Standard Time.

NorthWestern Corporation (NWMT)

- (continuing) The reporting of data for daylight saving time days is not correct. Do not rely on the quality of the data reported for November 1, 2015 and March 13, 2016.
- (historical) NWMT's reporting of interchange is sporadically inconsistent with their neighbors and internally.

Associated Electric Cooperative, Inc. (AECI)

- (historical) AECI did not report demand and net generation on 11/19/2015 (5 hours), 1/21/2016 (4 hours), 2/11/2016 (5 hours), 5/19/2016 (5 hours).
- (historical) AECI reported zero for interchange with neighboring BAs on 10/14/2015 (1 hour), 10/25/2015 (1 hour), 11/18-19/2015 (1 hour each), 12/26/2015 (1 hour), 1/14/2016 (1 hour), 1/22/2016 (1 hour), 2/9/2016 (1 hour), 4/3/2016 (1 hour), 4/23/2016 (1 hour).
- (historical) AECI reported zero for total interchange on 1/6/2016 (1 hour), 1/9/2016 (1 hour), 1/12/2016 (1 hour), 1/20/2016 (1 hour), 2/15/2016, 3/6/2016 (1 hour), 3/25/2016 (2 hours), 4/24/2016 (1 hour).
- (continuing) AECI is not consistently passing any of the three data relationship checks. System energy is sporadically not balanced and their reporting of interchange is consistently inconsistent with their neighbor and internally. There are significant mismatches with Midcontinent Independent System Operator, Inc. (MISO) and Southwest Power Pool (SWPP). MISO and SWPP's interchange reporting issues are noted above. There are also sporadic mismatches with Tennessee Valley Authority (TVA).

Arizona Public Service Company (AZPS)

- (historical) AZPS is missing data for these dates: 11/22-23/2015.
- (historical) AZPS reported zero for total interchange and interchange with neighboring BAs on 1/3/2016 (4 hours).
- (historical) AZPS did not report day ahead forecast demand values on 11/5/2015 (24 hours).
- (historical) AZPS reported unusually large demand and net generation values on 2/24/2016 (1 hour).
- (continuing) AZPS is not consistently passing any of the three data relationship checks. System energy is consistently not balanced and their reporting of interchange is sporadically inconsistent with their neighbor and internally. There are significant mismatches with Tucson Electric Power (TEPC) and Imperial Irrigation District (IID). TEPC's interchange reporting issues are noted above. There are also sporadic mismatches with other

neighboring BAs.

Gainesville Regional Utilities (GVL)

- (continuing) The reporting of data for daylight saving time days is not correct. Do not rely on the quality of the data reported for November 1, 2015 and March 13, 2016.
- (continuing) GVL is missing data for 12/30/2015, 12/31/2015, 6/26/2016 to present
- (historical) GVL did not report actual demand, net generation and total interchange on 6/21/2016 (1 hour).
- (continuing) GVL reported zero for total interchange on 10/1-2/2015 (1 hour each), 10/5/2015 (1 hour), 10/8/2015 (2 hours), 11/7/2015 (1 hour), 11/14/2015 (1 hour), 1/16/2016 (1 hour), 1/22/2016 (1 hour), 1/31/2016 (1 hour), 2/4/2016 (1 hour), 2/17/2016 (1 hour), 2/18/2016 (1 hour), 2/21/2016 (1 hour), 2/24/2016 (1 hour), 3/23/2016 (1 hour), 3/27-28/2016 (1 hour each), 4/7/2016 (1 hour), 4/9/2016 (1 hour), 4/20/2016 (1 hour), 6/3-4/2016 (1 hour each), 6/6/2016 (1 hour), 6/22-23/2016 (1 hour each).
- (continuing) GVL reported zero for interchange with neighboring BAs on 10/6/2015 (1 hour), 10/9/2015 (1 hour), 11/10/2015 (1 hour), 11/24/2015 (1 hour), 1/29-30/2016 (1 hour each), 3/8-9/2016 (1 hour each), 3/19/2016 (1 hour), 3/31/2016 (1 hour), 4/6/2016 (1 hour), 4/14/2016 (1 hour), 4/18/2016 (1 hour), 4/22/2016 (1 hour), 4/24-25/2016 (1 hour each), 4/28/2016 (1 hour), 6/5/2016 (1 hour).
- (continuing) GVL's reporting of system energy was not in balance for most hours in April and May 2016.
- (continuing) GVL reports sporadic internal interchange reporting inconsistencies and has significant mismatches in reporting of interchange with Duke Energy Florida, Inc. (FPC) in November 2015. FPC's interchange reporting issues are noted above. There are sporadic mismatches with other neighboring BAs.

Southern Company Services, Inc. – Trans (SOCO)

- (historical) SOCO's reporting of interchange is inconsistent with their neighbors and internally. There are significant mismatches with Midcontinent Independent System Operator, Inc. (MISO), and Tennessee Valley Authority (TVA). MISO and TVA's interchange reporting issues are noted above. SOCO often mismatches with its neighboring BAs on Friday and Saturday. Interchange checkout is not available or required on these non-business days. To ensure the quality of the historical record, SOCO resubmits data after 7 days with revisions, as needed.

Ohio Valley Electric Corporation (OVEC)

- (continuing) OVEC's reporting of interchange is inconsistent with their neighbors and internally. There are significant mismatches with Louisville Gas and Electric Company and Kentucky Utilities Company (LGEE) on standard time days (November 1, 2015 to March 13, 2016) and PJM Interconnection, LLC (PJM). PJM's interchange reporting issues are noted above.

Nevada Power Company (NEVP)

- (continuing) The reporting of data for daylight saving time days is not correct. Do not rely on the quality of the data reported for March 13, 2016.
- (historical) NEVP reported zero for actual demand on 10/30/2015 (1 hour), 11/2/2015 (1

hour), 5/13/2016 (1 hour), 5/15/2016 (1 hour), 5/17/2016 (1 hour).

- (continuing) NEVP reported zero for total interchange on every other day for 1 hour between 5/11/2016 and 6/2/2016, 6/8/2016 (1 hour), every other day for 1 hour between 6/12/2016 and 6/28/2016, every other day for 1 hour between 6/30/2016 and 7/4/2016.
- (historical) NEVP report zeros for day ahead demand forecast on 10/19/2015 (24 hours), 12/28/2015 (24 hours)
- (continuing) NEVP is not consistently passing any of the three data relationship checks. System energy is consistently not balanced and their reporting of interchange is inconsistent with their neighbor and internally particularly since mid-May 2016. There are significant mismatches with Los Angeles Department of Water and Power (LDWP) in May 2016. There are also sporadic mismatches with other neighboring BAs.

New England ISO (ISNE)

- (historical) ISNE did not report demand, net generation and total interchange values on 11/9/2015 (2 hours), 5/24/2016 (3 hours).
- (continuing) ISNE's reporting of interchange is inconsistent with their neighbors and internally (sporadically). There are significant mismatches with New York Independent System Operator (NYIS).

New York Independent System Operator (NYIS)

- (historical) NEVP reported zero for actual demand on 10/4/2015 (1 hour).
- (continuing) NEVP reported zero for total interchange on 6/21/2016 (8 hours).
- (continuing) ISNE's reporting of interchange is inconsistent with their neighbors and internally (sporadically). There are significant mismatches with New England ISO (ISNE) and PJM Interconnection, LLC (PJM). PJM's interchange reporting issues are noted above.

El Paso Electric Company (EPE)

- EPE reports small energy imbalances, sporadic internal interchange reporting inconsistencies and has significant mismatches in reporting of interchange with Tucson Electric Power Company (TEPC). TEPC's interchange reporting issues are noted above.

Public Service Company of New Mexico (PNM)

- PNM reports small energy imbalances, sporadic internal interchange reporting inconsistencies and has significant mismatches in reporting of interchange with Tucson Electric Power Company (TEPC). TEPC's interchange reporting issues are noted above.

Gridforce Energy Management, LLC (GRID)

- (historical) The reporting of data for daylight saving time days is not correct. Do not rely on the quality of the data reported for November 1, 2015.
- GRID reported negative net generation values on most days in April and May 2016. Net generation is not expected to be negative. However, in this situation this generation-only BA was off-line during this period was drawing plant service power off the grid. This plant service power is reported as negative interchange. For the BA's system energy to balance, a value must be reported for demand or net generation. The system energy convention used for generation-only BAs is for them to report negative net generation.

- (historical) GRID's reporting of interchange was internally inconstant on 6/28/2016 to 7/1/2016.

Gila River Power, LLC (GRMA)

- (historical) GRMA's reporting of interchange does not match that of Arizona Public Service Company (AZPS) for a few hours on a few days: 10/12/2015, 11/1/2015, 11/13-14/2015, 1/3/2016, 1/8/2016, 2/24/2016, 2/29/2016, 3/13/2016, 3/28/2016.

NaturEner Power Watch, LLC (GWA)

- (continuing) The reporting of data for daylight saving time days is not correct. Do not rely on the quality of the data reported for November 1, 2015 and March 13, 2016.
- (historical) GWA's reporting of interchange does not match that of NorthWestern Corporation (NWMT) for a few hours on a few days: 10/21/2015, 11/1/2015, 2/10/2016, 2/13-14/2016, 3/13-14/2016.

NaturEner Wind Watch, LLC (WWA)

- (continuing) The reporting of data for daylight saving time days is not correct. Do not rely on the quality of the data reported for November 1, 2015 and March 13, 2016.
- (historical) GWA's reporting of interchange does not match that of NorthWestern Corporation (NWMT) for a few hours on a few days: 10/21/2015, 11/1/2015, 2/10/2016, 3/13-14/2016.

Southeastern Power Administration (SEPA)

- (continuing) The reporting of data for daylight saving time days is not correct. Do not rely on the quality of the data reported for November 1, 2015 and March 13, 2016.
- SEPA's system energy is not in balance by less than 10 MWh each hour. This is because of transmission losses for electricity flowing through their transmission system.
- (historical) SEPA did not report interchange with neighboring BAs on 11/24/2015 (24 hours), 11/4/2015 (24 hours), 11/7/2015 (24 hours), 12/26/2015 (24 hours),
- (historical) SEPA reported zero for total interchange on 12/4/2015 (1 hour), 12/7/2015 (1 hour),
- (historical) SEPA reported negative net generation values for many days in October 2015 and June July 2016.
- SEPA reports sporadic internal interchange reporting inconsistencies and has significant mismatches in reporting of interchange with Duke Energy Carolinas (DUK) in November 2015. DUK's interchange reporting issues are noted above. There are sporadic mismatches with other neighboring BAs.

Alcoa Power Generating, Inc. - Yadkin Division (YAD)

- (continuing) The reporting of data for daylight saving time days is not correct. Do not rely on the quality of the data reported for November 1, 2015 and March 13, 2016.
- (historical) YAD is missing data for June 21-22.
- (historical) YAD did not report net generation on 1/14/2016 (1 hour).
- (continuing) YAD reported zero for interchange with neighboring BAs on 10/11/2015 (5 hours), 10/21/2015 (3 hours), 10/24/2015 (1 hour), 12/8/2015 (1 hour), 12/9/2015 (1 hour), 12/11/2015 (3 hours), 12/12/2015 (1 hour), 2/17 2016 (24 hours), 3/20/2016 (20 hours),

3/25/2016 (2 hour), 3/28/2016 (4 hours), 4/15/2016 (2 hour), 4/20/2016 (12 hours), 4/25/2016 (8 hours), 5/17/2016 (2 hours), 5/29/2016 (1 hour), 5/30/2016 (15 hours), 6/4/2016 (4 hours), 6/13/2016 (9 hours), 6/23/2016 (7 hours), 6/24/2016 (17 hours), 6/26/2016 (18 hours), 6/30/2016 (9 hours), 7/1/2016 (13 hours).

- (continuing) YAD reported zero for total interchange on 10/ 22/2015 (1 hour), 11/2/2015 (2 hours), 12/10/2015 (2 hours), 1/28/2016 (1 hour), 4/19/2016 (3 hours), 4/23/2016 (2 hour), 4/24/2016 (3 hours), 4/30/2016 (3 hours), 5/11/2016 (1 hour), 6/22/2016 (7 hours), 7/2/2016 (2 hours).
- YAD's system energy is not in balance by less than 10 MWh each hour. This is because of transmission losses for electricity flowing through their transmission system.
- YAD reports sporadic internal interchange reporting inconsistencies and has significant mismatches in reporting of interchange with Duke Energy Carolinas (DUK) and Duke Energy Progress East (CPLE). DUK and CPLE's interchange reporting issues are noted above.

Electric Energy, Inc. (EEI)

- (historical) Reported values for 3/6-12/2016 are correct but are off by one hour.
- (historical) EEI reported a negative net generation value on 1/11/2016 (1 hour).
- (historical) EEI reported unusually large net generation values on 3/19/2016 (2 hours), 4/29/2016.
- EEI's system energy is not in balance by less than 10 MWh each hour. This is because of transmission losses for electricity flowing through their transmission system.
- (continuing) EEI reports sporadic internal interchange reporting inconsistencies and has significant mismatches in reporting of interchange with Midcontinent Independent System Operator, Inc. (MISO). MISO's interchange reporting issues are noted above. There are sporadic mismatches with other neighboring BAs.

Idaho Power Company (IPCO)

- (continuing) IPCO reported unusually large demand and net generation values on 1/6-8/2016 (1 hour each), 3/17/2016 (1 hour), 7/3/2016 (1 hour).
- (historical) The reporting of data for daylight saving time days is not correct. Do not rely on the quality of the data reported for November 1, 2015.
- (historical) IPCO did not report actual demand, net generation and total interchange on 3/3/2016 (11 hours).
- (historical) IPCO reported zero for total interchange on 2/14/2016 (1 hour).
- (historical) IPCO reported negative net generation values on 12/14/2015 (1 hour), 3/17/2016 (1 hour), 3/18/2016 (1 hour).
- (continuing) IPCO reports sporadic internal interchange reporting inconsistencies and has significant mismatches in reporting of interchange with Bonneville Power Administration (BPAT). BPAT's interchange reporting issues are noted above. There are sporadic mismatches with other neighboring BAs.

JEA (Jacksonville, FL)

- (historical) Reported values for 11/3-5/2015 are correct but are off by one hour.

- (continuing) The reporting of data for daylight saving time days is not correct. Do not rely on the quality of the data reported for November 1, 2015 and March 13, 2016.
- (historical) JEA did not report interchange with neighboring BAs on 12/30/2015.
- (continuing) GVL's reporting of system energy was not in balance for most hours
- (continuing) JEA reports sporadic internal interchange reporting inconsistencies and has significant mismatches in reporting of interchange with Florida Power & Light Co. (FPL). FPL's interchange reporting issues are noted above. There are sporadic mismatches with other neighboring BAs.

List of U.S. and Connected Foreign Balancing Authorities

Code	Name	Time Zone	Region
AEC	PowerSouth Energy Cooperative	Central	Southeast
AECI	Associated Electric Cooperative, Inc.	Central	Midwest
AESO	Alberta Electric System Operator		Canada
AVA	Avista Corporation	Pacific	Northwest
AZPS	Arizona Public Service Company	Arizona	Southwest
BANC	Balancing Authority of Northern California	Pacific	California
BCTC	British Columbia Transmission Corporation		Canada
BPAT	Bonneville Power Administration	Pacific	Northwest
CFE	Comision Federal de Electricidad		Mexico
CHPD	Public Utility District No. 1 of Chelan County	Pacific	Northwest
CISO	California Independent System Operator	Pacific	California
CPLE	Duke Energy Progress East	Eastern	Carolinas
CPLW	Duke Energy Progress West	Eastern	Carolinas
DEAA	Arlington Valley, LLC - AVBA	Arizona	Southwest
DOPD	PUD No. 1 of Douglas County	Pacific	Northwest
DUK	Duke Energy Carolinas	Eastern	Carolinas
EEL	Electric Energy, Inc.	Central	Midwest
EPE	El Paso Electric Company	Arizona	Southwest
ERCO	Electric Reliability Council of Texas, Inc.	Central	Electric Reliability Council of Texas, Inc.
FMPP	Florida Municipal Power Pool	Eastern	Florida
FPC	Duke Energy Florida, Inc.	Eastern	Florida
FPL	Florida Power & Light Co.	Eastern	Florida
GCPD	Public Utility District No. 2 of Grant County, Washington	Pacific	Northwest
GRID	Gridforce Energy Management, LLC	Pacific	Northwest
GRIF	Griffith Energy, LLC	Arizona	Southwest
GRMA	Gila River Power, LLC	Arizona	Southwest
GVL	Gainesville Regional Utilities	Eastern	Florida
GWA	NaturEner Power Watch, LLC (GWA)	Mountain	Northwest
HGMA	New Harquahala Generating Company, LLC - HGBA	Arizona	Southwest
HQT	Hydro-Quebec TransEnergie		Canada
HST	Homestead, City of	Eastern	Florida
IESO	Ontario IESO		Canada
IID	Imperial Irrigation District	Pacific	California
IPCO	Idaho Power Company	Pacific	Northwest

ISNE	New England ISO	Eastern	New England ISO
JEA	JEA (Jacksonville, FL)	Eastern	Florida
LDWP	Los Angeles Department of Water and Power	Pacific	California
LGEE	LG&E and KU Services Company as agent for Louisville Gas and Electric Company and Kentucky Utilities Company	Central Standard	Midwest
MHEB	Manitoba Hydro		Canada
MISO	Midcontinent Independent System Operator, Inc.	Eastern Standard	Midwest
NBSO	New Brunswick System Operator		Canada
NEVP	Nevada Power Company	Pacific	Northwest
NSB	New Smyrna Beach, Utilities Commission of	Eastern	Florida
NWMT	NorthWestern Corporation	Mountain	Northwest
NYIS	New York Independent System Operator	Eastern	New York Independent System Operator
OVEC	Ohio Valley Electric Corporation	Eastern	Mid-Atlantic
PACE	PacifiCorp East	Mountain	Northwest
PACW	PacifiCorp West	Pacific	Northwest
PGE	Portland General Electric Company	Pacific	Northwest
PJM	PJM Interconnection, LLC	Eastern	Mid-Atlantic
PNM	Public Service Company of New Mexico	Arizona	Southwest
PSCO	Public Service Company of Colorado	Mountain	Northwest
PSEI	Puget Sound Energy, Inc.	Pacific	Northwest
SC	South Carolina Public Service Authority	Eastern	Carolinas
SCEG	South Carolina Electric & Gas Company	Eastern	Carolinas
SCL	Seattle City Light	Pacific	Northwest
SEC	Seminole Electric Cooperative	Eastern	Florida
SEPA	Southeastern Power Administration	Eastern	Southeast
SOCO	Southern Company Services, Inc. - Trans	Central	Southeast
SPA	Southwestern Power Administration	Central	Central
SPC	Saskatchewan Power Corporation		Canada
SRP	Salt River Project Agricultural Improvement and Power District	Arizona	Southwest
SWPP	Southwest Power Pool	Central	Central
TAL	Tallahassee, City of	Eastern	Florida
TEC	Tampa Electric Company	Eastern	Florida
TEPC	Tucson Electric Power	Arizona	Southwest
TIDC	Turlock Irrigation District	Pacific	California
TPWR	City of Tacoma, Department of Public Utilities, Light Division	Pacific	Northwest

TVA	Tennessee Valley Authority	Central	Tennessee Valley Authority
WACM	Western Area Power Administration - Rocky Mountain Region	Arizona	Northwest
WALC	Western Area Power Administration - Desert Southwest Region	Arizona	Southwest
WAUW	Western Area Power Administration - Upper Great Plains West	Mountain	Northwest
WWA	NaturEner Wind Watch, LLC	Mountain	Northwest
YAD	Alcoa Power Generating, Inc. - Yadkin Division	Eastern	Carolinas