EIA Hurricane Michael Electricity Status Report

Tracking the electricity impact of Hurricane Michael on the Southeastern region of the United States

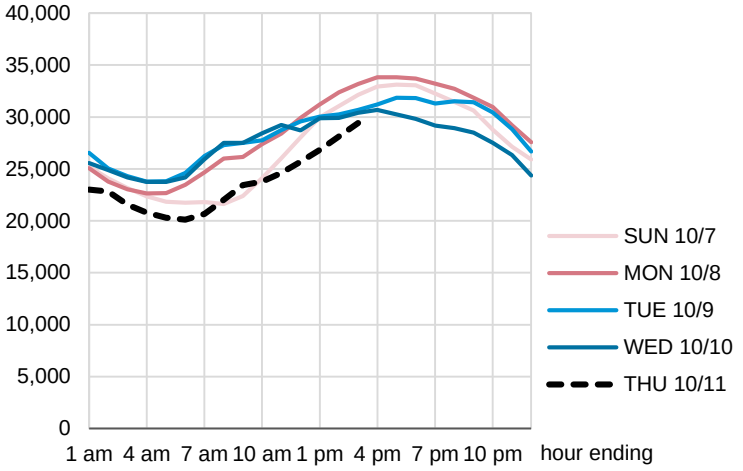
Thursday, October 11, 2018

- **Weather:** Hurricane Michael downgraded to a tropical storm as it moved northeast across central Georgia last night and this morning. Storm surge in the Florida panhandle continues to recede. Michael is producing heavy rainfall and up to 50 mile-per-hour winds in South and North Carolina. The storm is projected to move into the Atlantic Ocean tonight.
- **Electricity:** Load dropped sharply yesterday afternoon in the TAL (City of Tallahassee) balancing authority (BA) as Hurricane Michael passed nearby. Loads in AEC and SOCO, which together cover most of Georgia, Alabama, and the Florida panhandle, declined through Thursday morning; however, because these BAs cover large areas outside of the hurricane's path, the impact of the storm on their overall load is less pronounced than in TAL.
- **Generators**: As of this morning, the 1,751-megawatt Farley nuclear plant in Alabama reported 30% capacity availability.
- **Customer outages, as of 6:00 p.m.:** About 484,000 customers in North Carolina (roughly 9% of the state); 381,000 customers in Florida (4%); 214,000 customers in Georgia (4%); 108,000 customers in Virginia (3%); 35,000 customers in South Carolina (1%); and 38,000 customers in Alabama (2%). The outages from Hurricane Michael are heavily concentrated in a narrow band compared to Hurricane Florence's wider impacts.

REGIONAL OVERVIEW

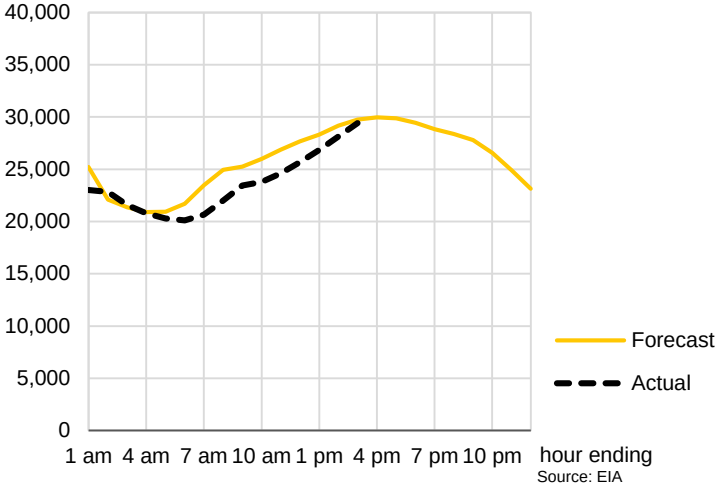
Southeast region electricity load current day vs. past 4 days

megawatts



Southeast region electricity load current day actual vs. forecast

megawatts

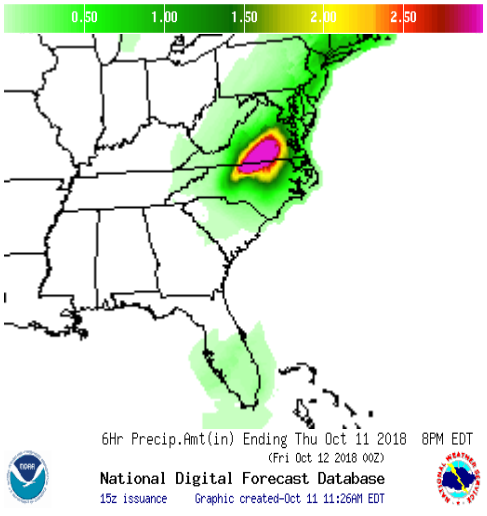


Source: EIA

WEATHER PROJECTIONS

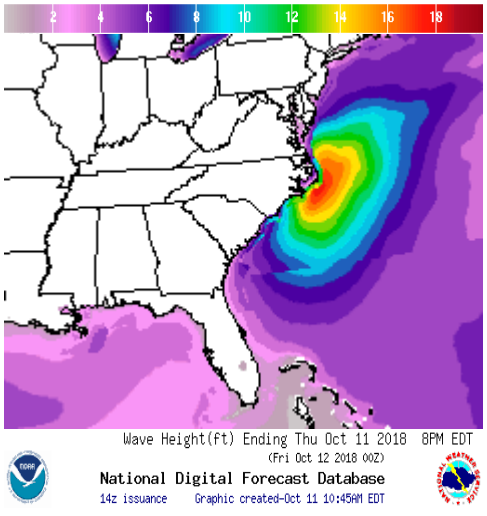
Precipitation

inches
6 hr period ending Thu Oct 11 at 8 pm EDT



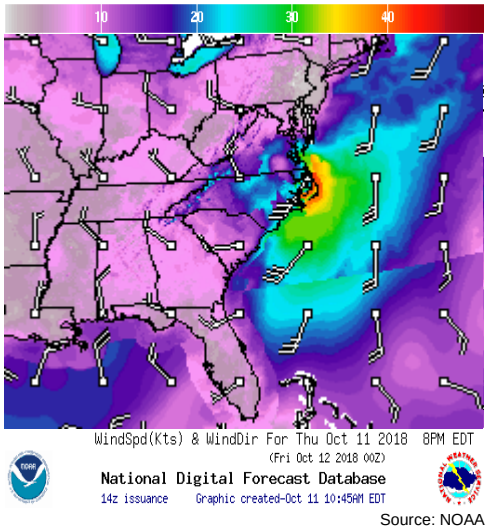
Wave Height

feet
for Thu Oct 11 at 8 pm EDT



Wind Speed & Direction

knots (1 knot = 1.15 mph)
for Thu Oct 11 at 8 pm EDT



Source: NOAA

Send questions or comments about this report to infoelectric@eia.gov.

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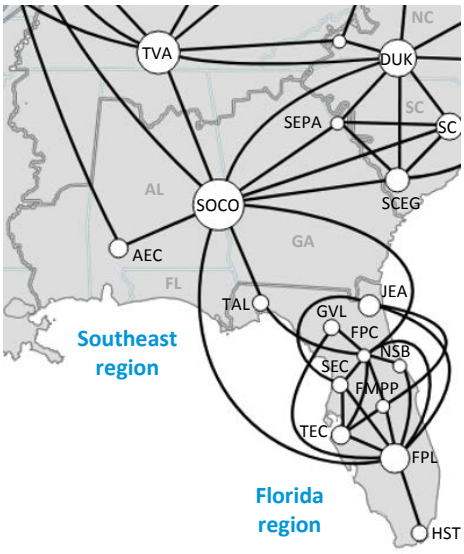
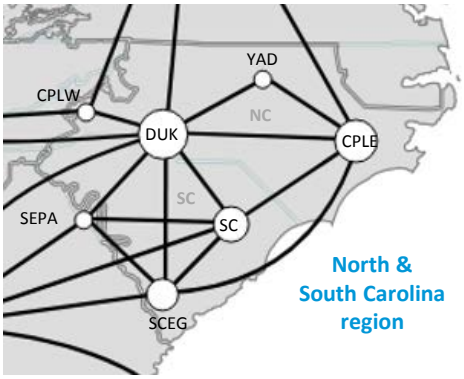
REGIONAL OVERVEW

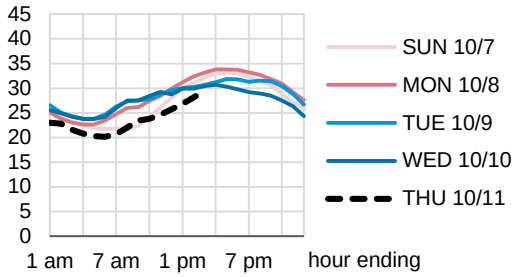


Balancing Authorities
Maps indicate the balancing authorities within each region and the interconnections between balancing authorities

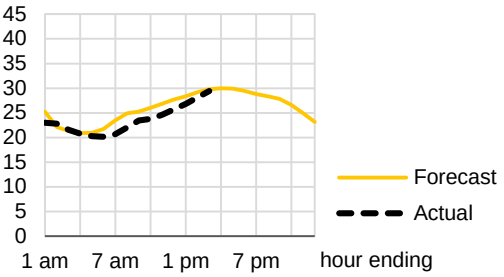


Southeast region electricity load

Current day vs. past 4 days
thousand megawatts

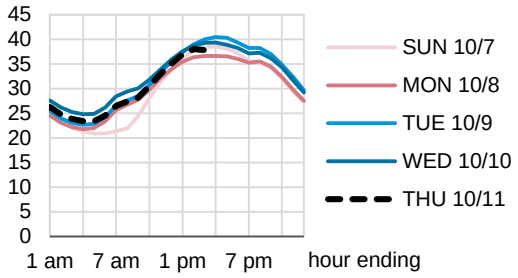


Current day actual vs. forecast
thousand megawatts

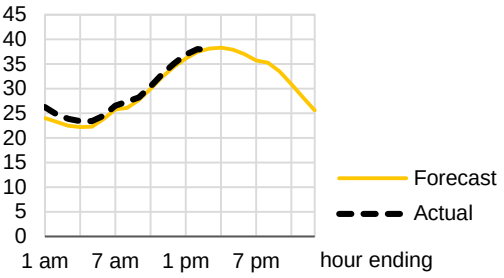


Florida region electricity load

Current day vs. past 4 days
thousand megawatts

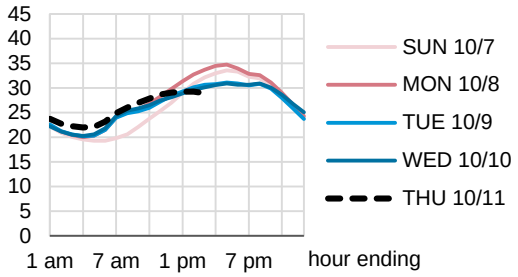


Current day actual vs. forecast
thousand megawatts

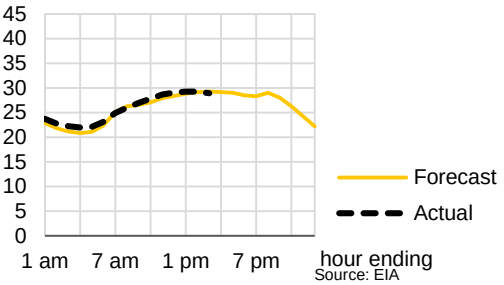


North & South Carolina region electricity load

Current day vs. past 4 days
thousand megawatts

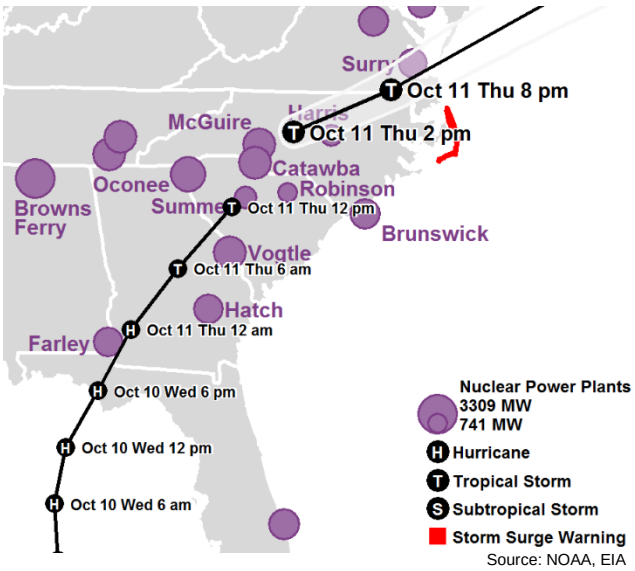


Current day actual vs. forecast
thousand megawatts



Source: EIA

NUCLEAR PLANTS & AVAILABILITY

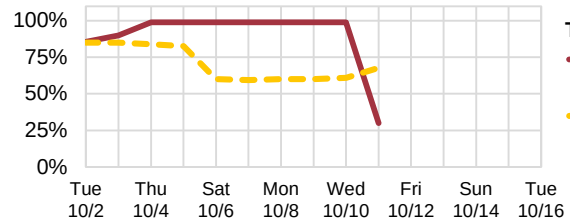


Source: NOAA, EIA

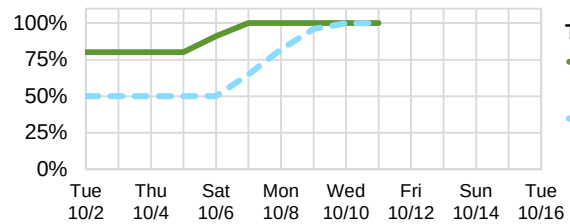
Daily snapshot of nuclear plant availability

percent of total plant capacity

Alabama



Georgia



Source: NRC, EIA

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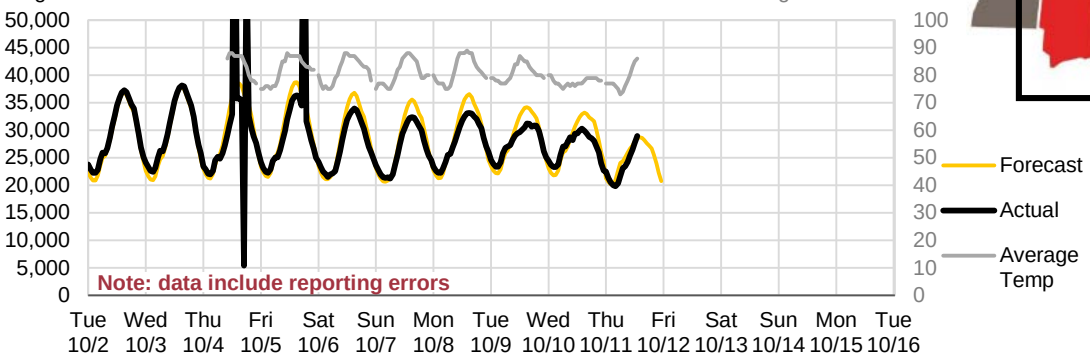
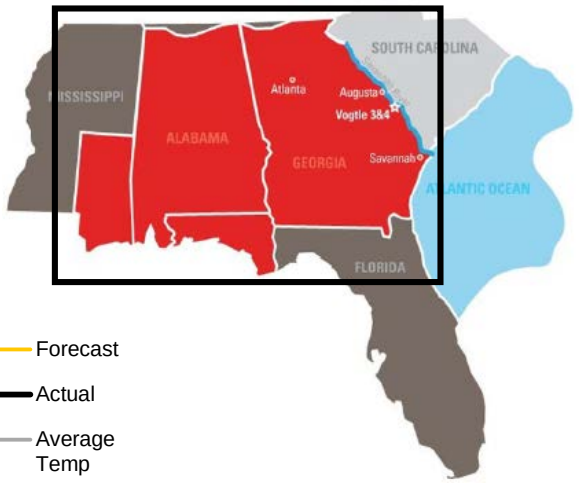
SOUTHERN COMPANY SERVICES (SOCO)

Current electricity load data through hour ending 3 pm

Southern Company Services (SOCO) Electricity load, actual vs. forecast

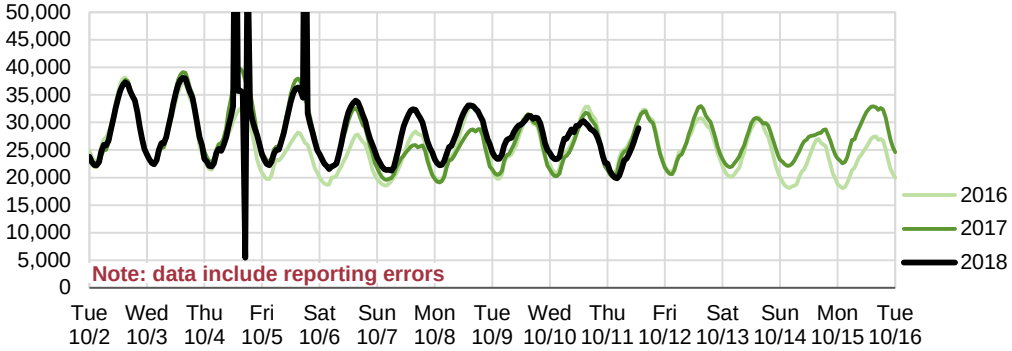
Destin, Florida Hourly average temperature





Source: Southern Company

Southern Company Services (SOCO) electricity load, 2018 vs. past two years



Southern Company Services (SOCO) Balancing Authority

2017 Total Number of Customers

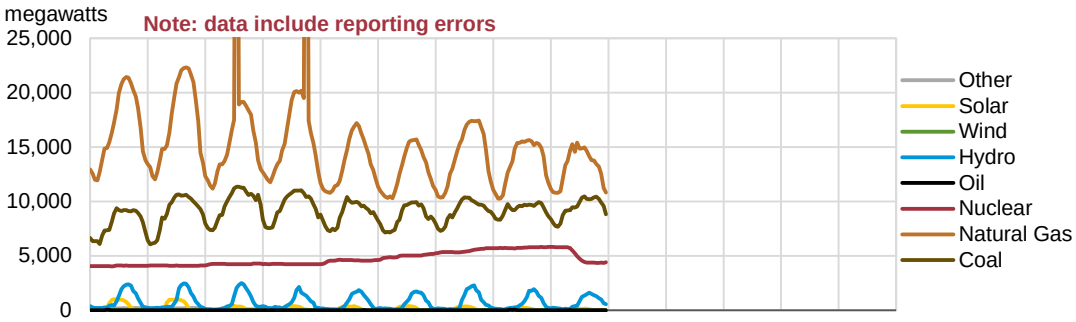
4,712,660 in Georgia
96% of the state

1,651,193 in Alabama
64% of the state

470,906 in Florida
4% of the state

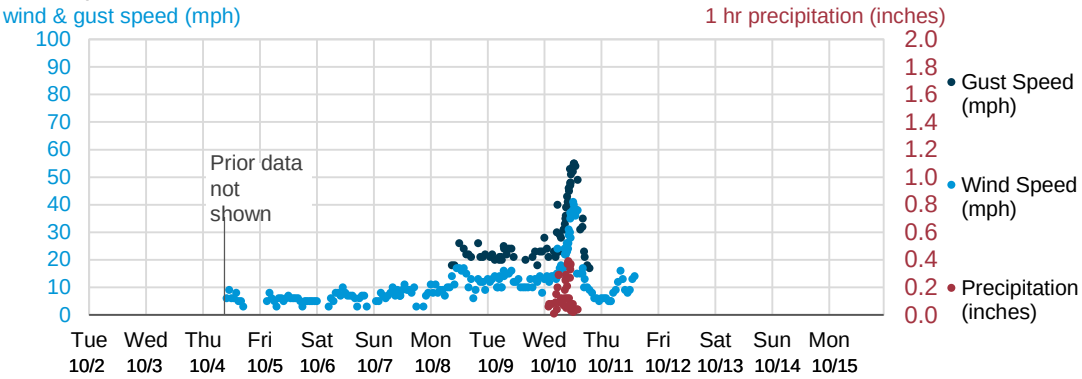
Source: EIA

Southern Company Services (SOCO) net generation by energy source



Source: EIA

Destin, Florida weather



Source: NOAA

EIA Hurricane Michael Electricity Status Report

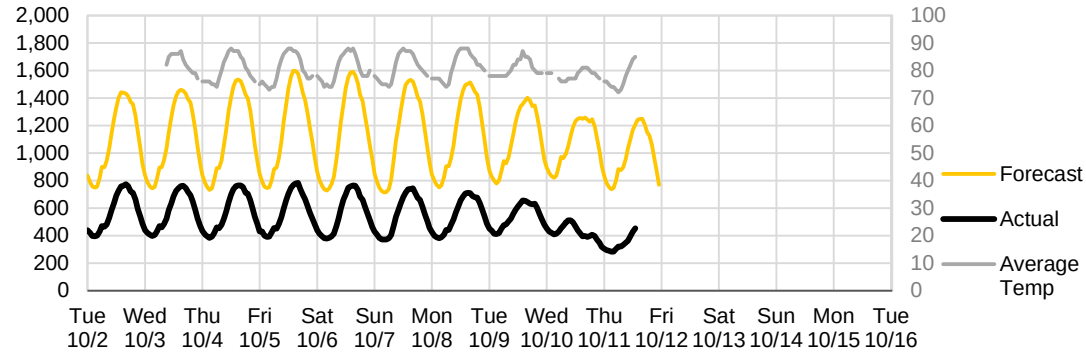
Tracking the electricity impact of Hurricane Michael on the Southeastern region of the United States

POWERSOUTH ENERGY COOPERATIVE (AEC)

Current electricity load data through hour ending 3 pm

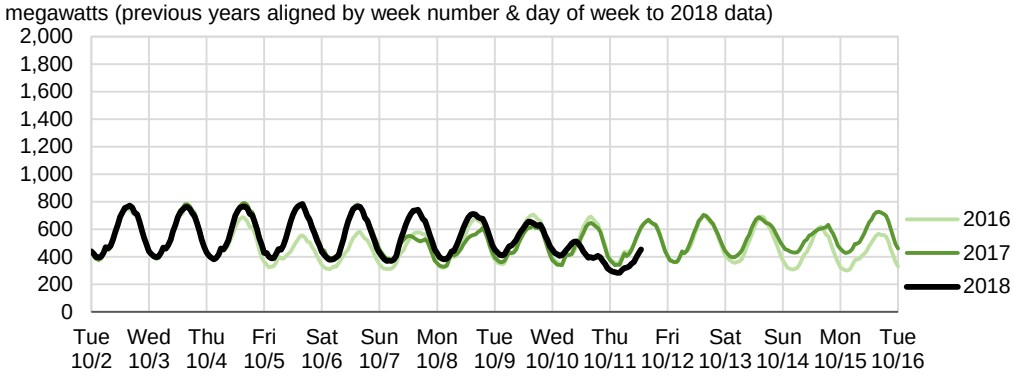
Power South Energy Cooperative (AEC)
Electricity load, actual vs. forecast

Pensacola, Florida
Hourly average temperature
degrees Fahrenheit



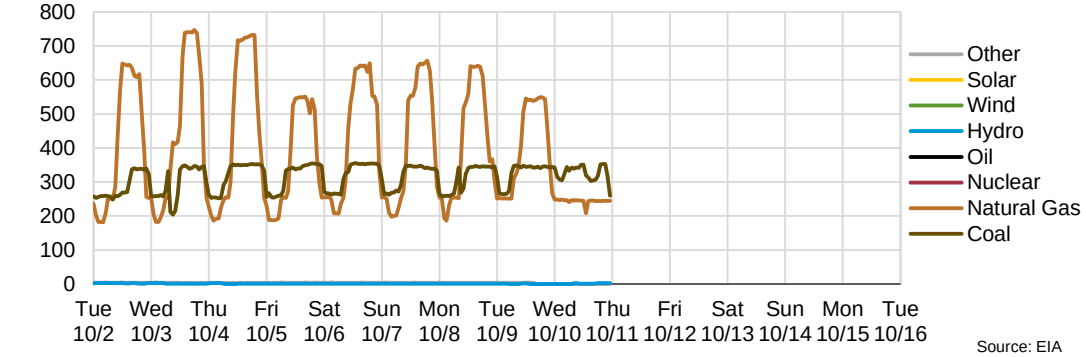
Power South Energy Cooperative (AEC) electricity load, 2018 vs. past two years

megawatts (previous years aligned by week number & day of week to 2018 data)



Power South Energy Cooperative (AEC) net generation by energy source

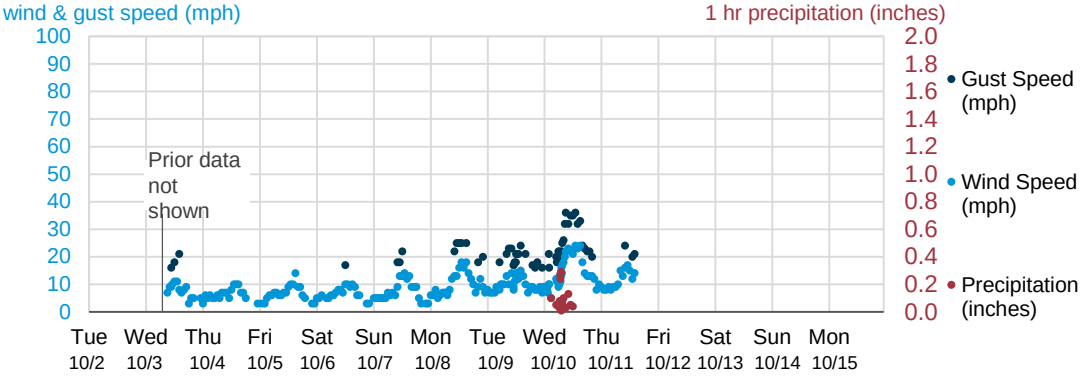
megawatts



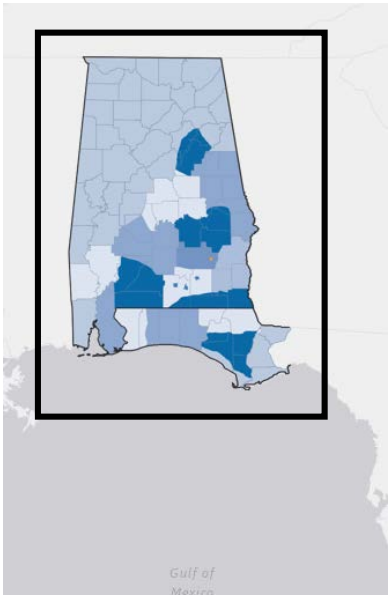
Source: EIA

Pensacola, Florida weather

wind & gust speed (mph) | 1 hr precipitation (inches)



Source: NOAA



Source: PowerSouth Energy Cooperative, EIA

PowerSouth Energy Cooperative (AEC) Balancing Authority

2017 Total Number of Customers

334,517 in Alabama
13% of the state

110,396 in Florida
1% of the state

Source: EIA

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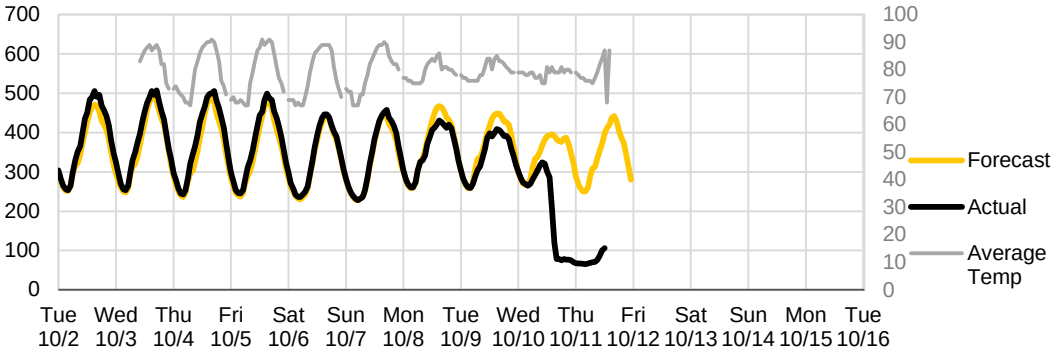
CITY OF TALLAHASSEE (TAL)

Current electricity load data through hour ending 3 pm

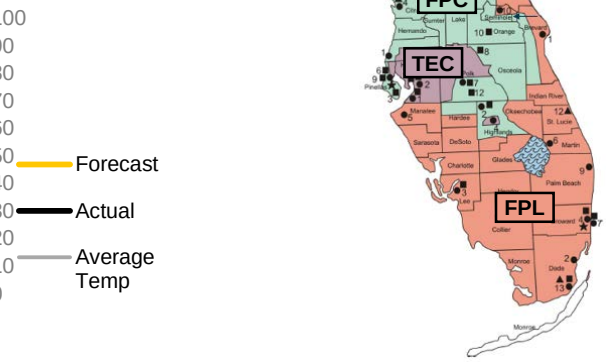
City of Tallahassee (TAL)
Electricity load, actual vs. forecast

megawatts



Tallahassee, Florida
Hourly average temperature

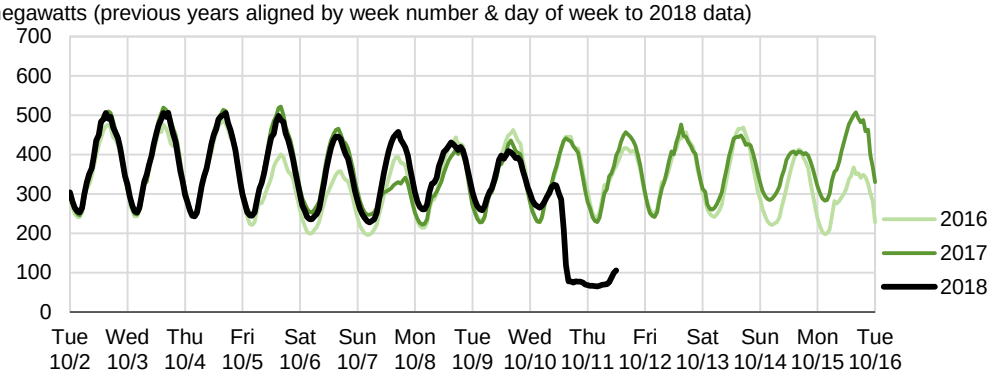
degrees Fahrenheit



Source: Florida PSC, EIA

City of Tallahassee (TAL) electricity load, 2018 vs. past two years

megawatts (previous years aligned by week number & day of week to 2018 data)



City of Tallahassee (TAL)
Balancing Authority

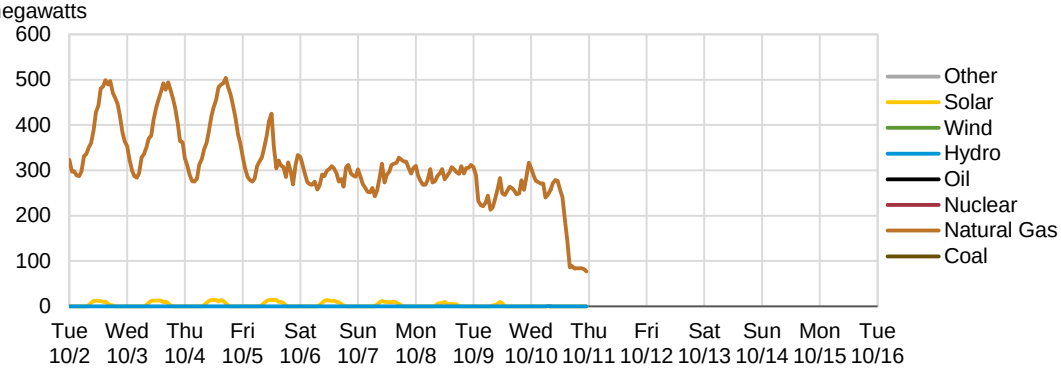
2017 Total Number of Customers

115,556 in Florida
1% of the state

Source: EIA

City of Tallahassee (TAL) net generation by energy source

megawatts

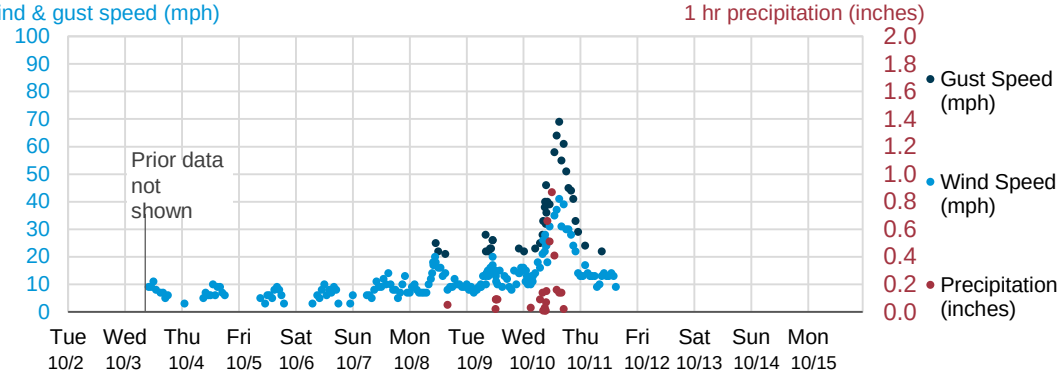


Source: EIA

Tallahassee, Florida weather

wind & gust speed (mph)

1 hr precipitation (inches)



Source: NOAA

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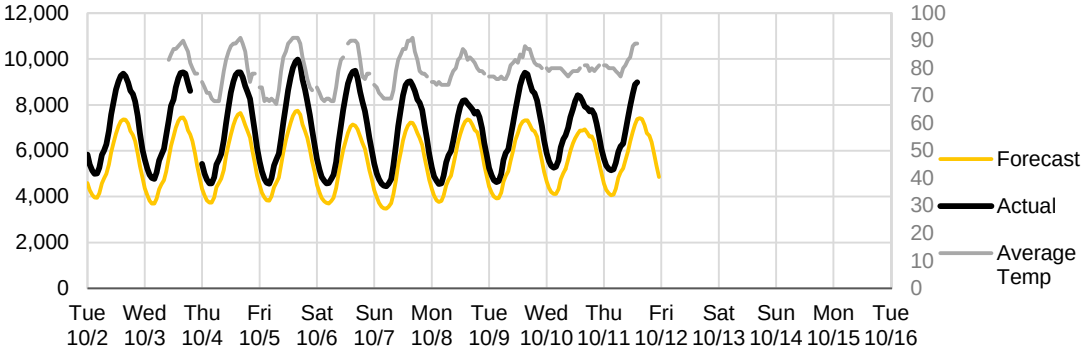
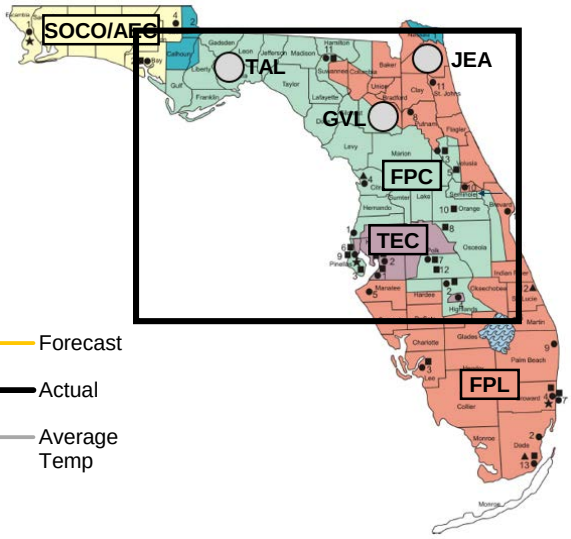
DUKE ENERGY FLORIDA (FPC)

Current electricity load data through hour ending 3 pm

Duke Energy Florida (FPC)
Electricity load, actual vs. forecast
megawatts

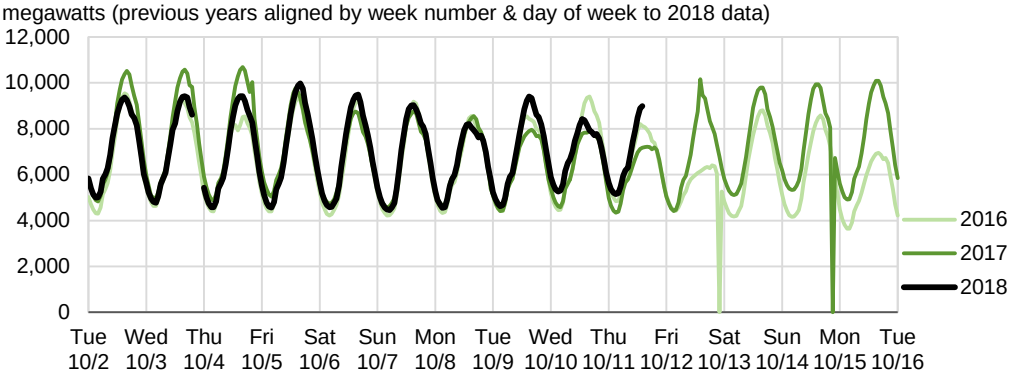
Perry, Florida
Hourly average temperature
degrees Fahrenheit





Source: Florida PSC, EIA

Duke Energy Florida (FPC) electricity load, 2018 vs. past two years
megawatts (previous years aligned by week number & day of week to 2018 data)

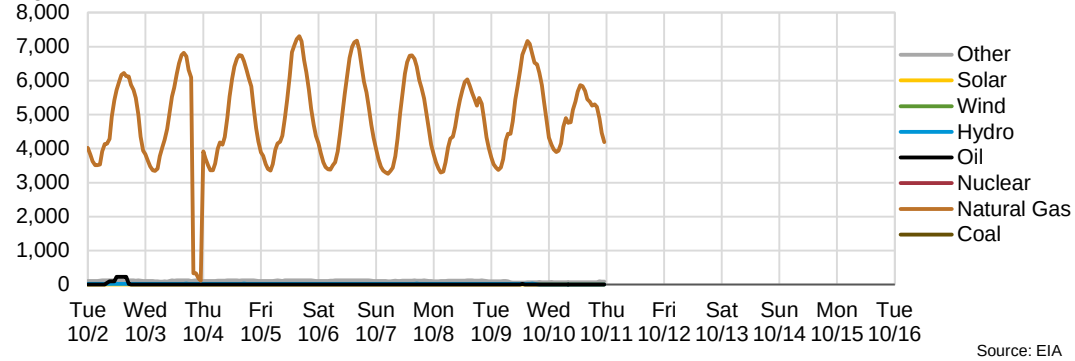


Duke Energy Florida (FPC)
Balancing Authority

2017 Total Number of Customers
1,859,620 in Florida
18% of the state

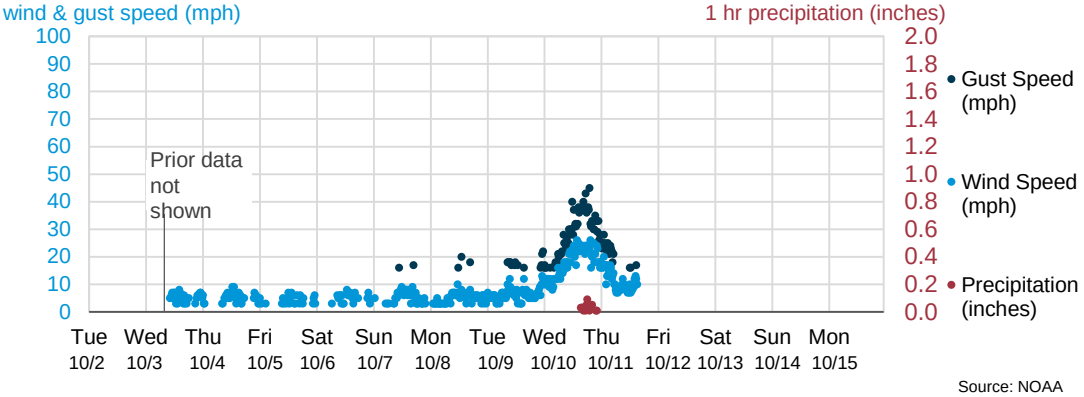
Source: EIA

Duke Energy Florida (FPC) net generation by energy source
megawatts



Source: EIA

Perry, Florida weather
wind & gust speed (mph)
1 hr precipitation (inches)



Source: NOAA

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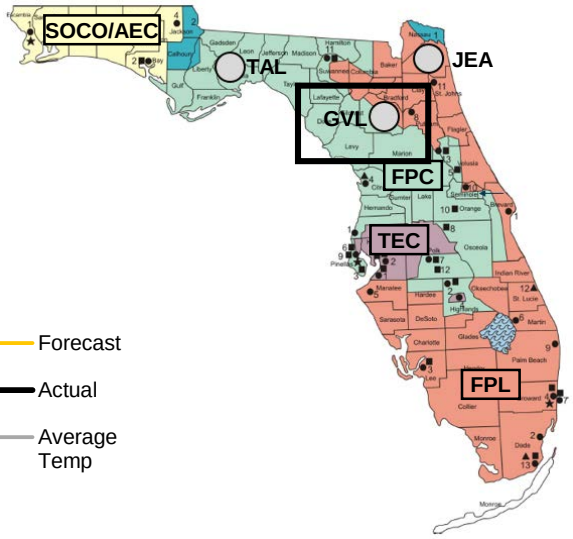
GAINESVILLE REGIONAL UTILITIES (GVL)

Current electricity load data through hour ending 3 pm



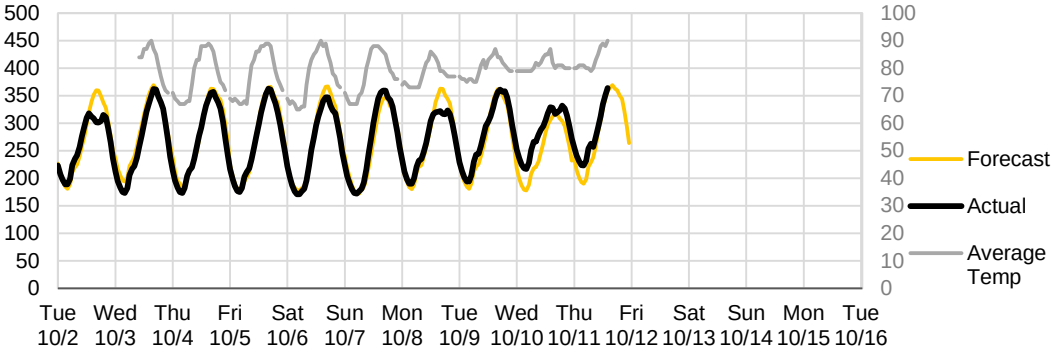
Source: Florida PSC, EIA

Gainesville Regional Utilities (GVL) Electricity load, actual vs. forecast

megawatts

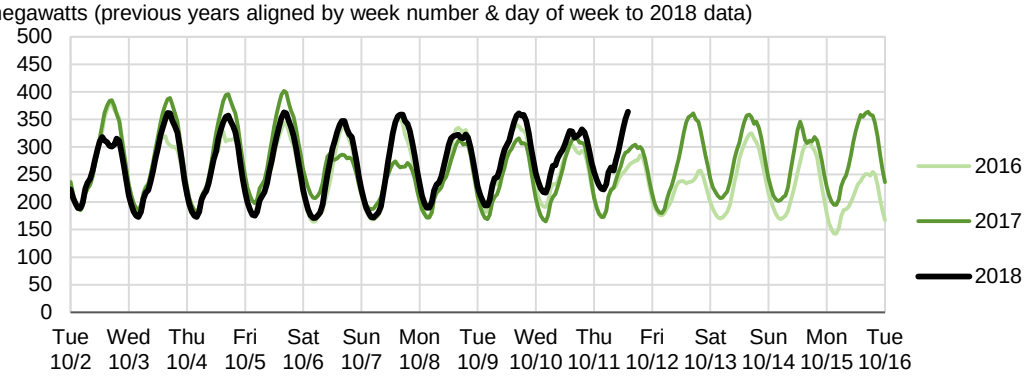
Gainesville, Florida Hourly average temperature

degrees Fahrenheit



Gainesville Regional Utilities (GVL) electricity load, 2018 vs. past two years

megawatts (previous years aligned by week number & day of week to 2018 data)



Gainesville Regional Utilities (GVL) Balancing Authority

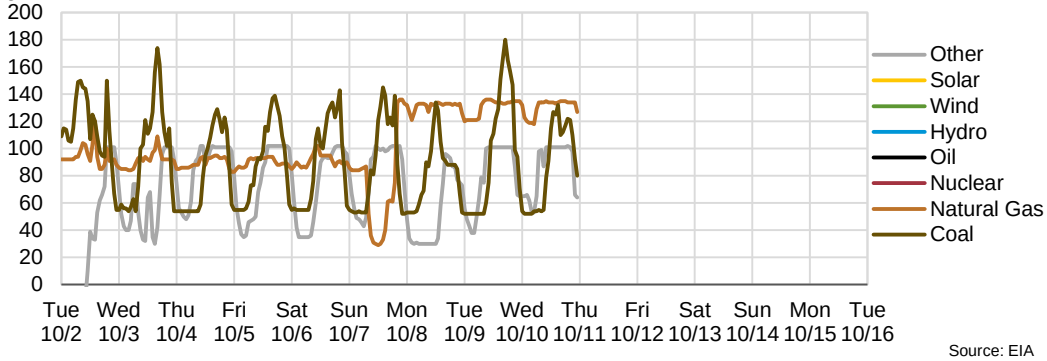
2017 Total Number of Customers

97,246 in Florida
1% of the state

Source: EIA

Gainesville Regional Utilities (GVL) net generation by energy source

megawatts

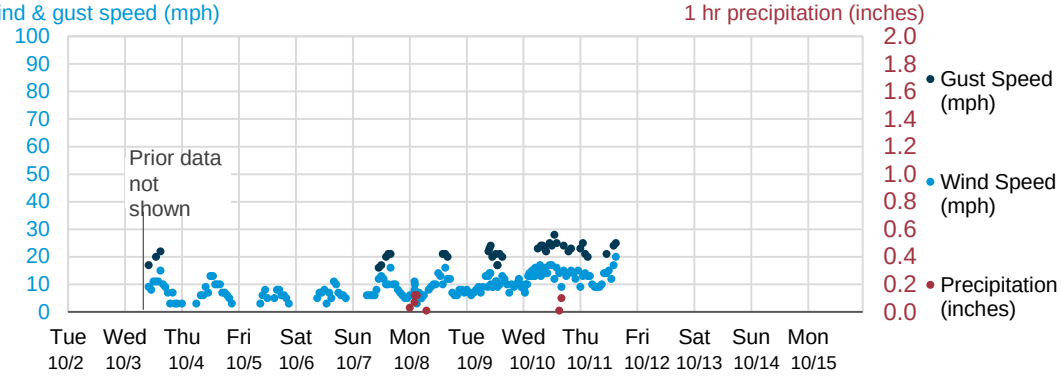


Source: EIA

Gainesville, Florida weather

wind & gust speed (mph)

1 hr precipitation (inches)



Source: NOAA

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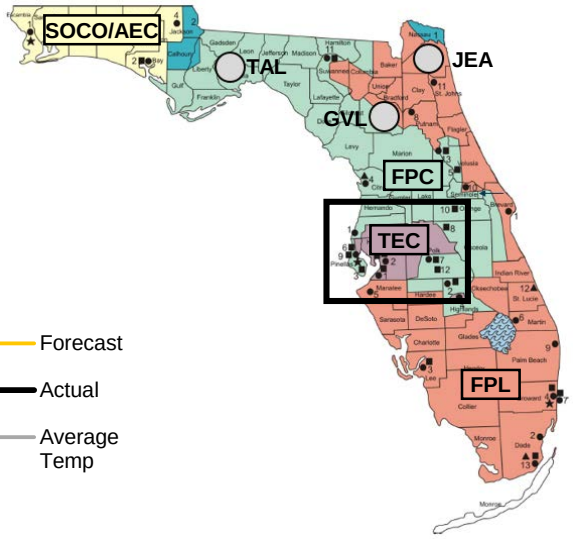
TAMPA ELECTRIC COMPANY (TEC)

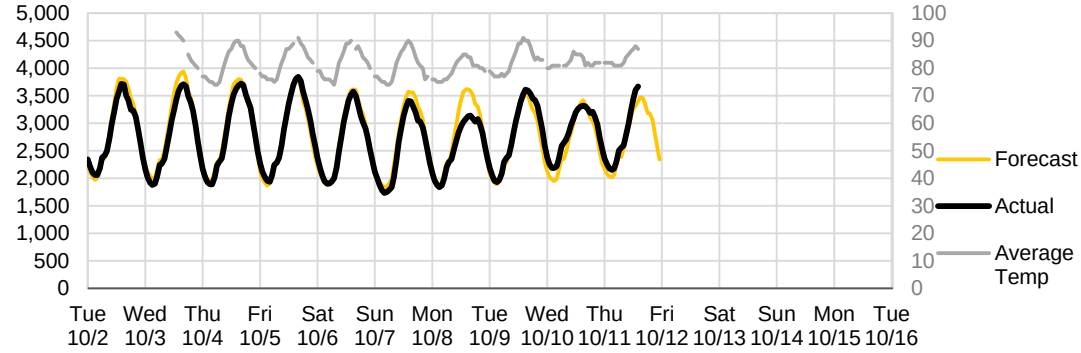
Current electricity load data through hour ending 3 pm



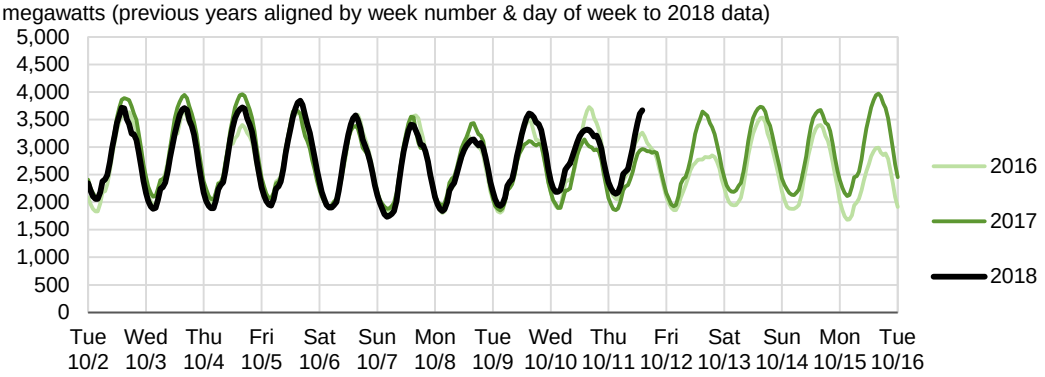
Source: Florida PSC, EIA

Tampa Electric Company (TEC)
Electricity load, actual vs. forecast
megawatts

Tampa, Florida
Hourly average temperature
degrees Fahrenheit



Tampa Electric Company (TEC) electricity load, 2018 vs. past two years
megawatts (previous years aligned by week number & day of week to 2018 data)

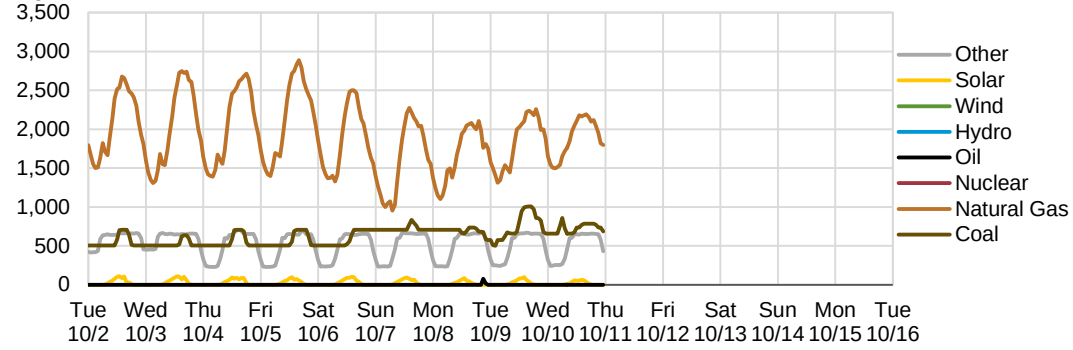


Tampa Electric Company (TEC)
Balancing Authority

2017 Total Number of Customers
747,493 in Florida
7% of the state

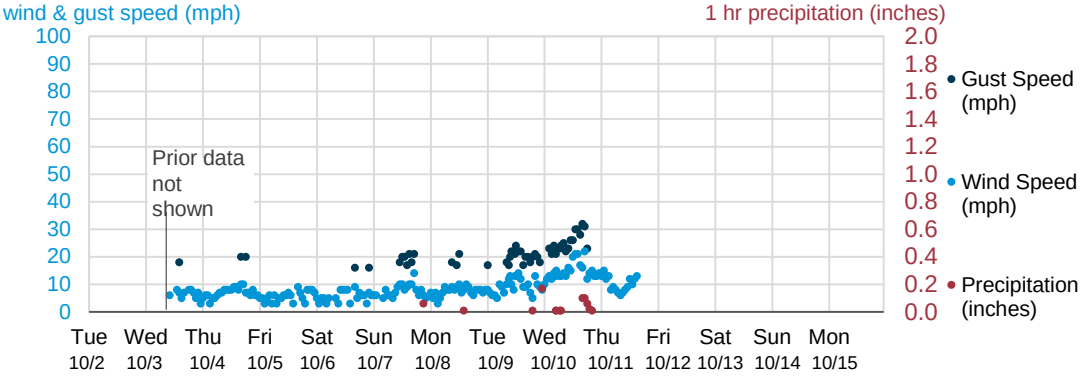
Source: EIA

Tampa Electric Company (TEC) net generation by energy source
megawatts



Source: EIA

Tampa, Florida weather
wind & gust speed (mph)
1 hr precipitation (inches)



Source: NOAA

DATA SOURCES & NOTES

- **Hourly electricity load, load forecast, and generation by energy source**: EIA-930 data. Note that information submitted by reporting entities (balancing authorities (BAs)) is preliminary data and made available "as-is" by EIA. Neither EIA nor reporting entities are responsible for reliance on the data for any specific use. See the EIA-930 user guide for more information about the EIA-930 data collection.

  BAs are responsible for assuring in real-time that electricity supply and demand are balanced within a specified geographical footprint. An electric utility that functions as a balancing authority will likely have an area of responsibility that extends beyond its service territory, providing grid balancing services to other electric power companies. For example, the Southern Company Services (SOCO) balancing authority is responsible for balancing the grid in an area that extends beyond Southern Company's utility service territories.

  There can be systematic differences between BAs' reported actual and forecast load because of the way some BAs operate their systems and EIA's reporting requirements. Examples include PowerSouth Energy Cooperative (AEC) and Duke Energy Florida (FPC).

  Below are direct links to EIA-930 webpages (with select data series) or excel files (with all data series and a full history) for the balancing authorities highlighted in this report:

  - North & South Carolina region: website
  - Southeast region: website
  - Florida region: website
  - Southern Company Services (SOCO): website, Excel file (includes generation by energy source)
  - PowerSouth Energy Cooperative (AEC): website, Excel file (includes generation by energy source)
  - City of Tallahassee (TAL): website, Excel file (includes generation by energy source)
  - Duke Energy Florida (FPC): website, Excel file (includes generation by energy source)
  - Gainesville Regional Utilities (GVL): website, Excel file (includes generation by energy source)
  - Tampa Electric Company (TEC): website, Excel file (includes generation by energy source)
- **Weather data**: NOAA data for the cities and locations listed below:
  - Destin, FL: Destin-Ft. Walton Beach Airport
  - Pensacola, FL: Pensacola Regional Airport
  - Tallahassee, FL: Tallahassee Regional Airport
  - Perry, FL: Perry-Foley Airport
  - Gainesville, FL: Gainesville Regional Airport
  - Tampa, FL: Tampa International Airport
- **Nuclear plant outages**: Nuclear Regulatory Commission, displayed on EIA's Status of U.S. Nuclear Outages. The NRC updates its reactor status information once each morning on business days. The NRC information is supplemented as necessary by press reports.
- **Number of customer outages**: Florida Public Service Commission Hurricane Michael outage report, poweroutage.us, North Carolina Department of Public Safety Hurricane Michael outage report, and utility websites. Percentage outages calculated with customer counts from the EIA-861 survey. A "customer" typically represents one metered location. The number of customers is not equivalent to the number of persons without power. Customers include all types of power purchasers but are primarily residences. The outage estimates presented in the commentary section of this report are a snapshot in time. Outage numbers can change rapidly as weather conditions deteriorate or improve and repairs are effectuated.