



Attorneys and Counselors at Law
123 South Calhoun Street
P.O. Box 391 32302
Tallahassee, FL 32301
P: (850) 224-9115
F: (850) 222-7560
ausley.com

March 31, 2025

ELECTRONIC FILING

Mr. Adam J. Teitzman, Commission Clerk
Office of Commission Clerk
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, Florida 32399-0850

Re: Docket 20250029-GU, Petition for Rate Increase by Peoples Gas System, Inc.

Dear Mr. Teitzman:

Attached for filing on behalf of Peoples Gas System, Inc. in the above-referenced docket is the Direct Testimony of Eric Fox and Exhibit No. EF-1.

Thank you for your assistance with this matter.

(Document 7 of 16)

Sincerely,

A handwritten signature in blue ink, appearing to read 'J. Jeffry Wahlen', with a long horizontal flourish extending to the right.

J. Jeffry Wahlen

cc: Major Thompson, OGC
Jacob Imig, OGC
Walt Trierweiler, Public Counsel
Jon Moyle, FIPUG

JJW/dh
Attachments

BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 20250029-GU
IN RE: PETITION FOR RATE INCREASE
BY PEOPLES GAS SYSTEM, INC.

PREPARED DIRECT TESTIMONY AND EXHIBIT
OF
ERIC FOX

ON BEHALF OF
PEOPLES GAS SYSTEM, INC.

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

PREPARED DIRECT TESTIMONY

OF

ERIC FOX

ON BEHALF OF PEOPLES GAS SYSTEM, INC.

Q. Please state your name, address, occupation and employer.

A. My name is Eric Fox. My business address is 20 Park Plaza, Suite 428, Boston, Massachusetts 02116. I am employed by Itron, Inc.

Q. Please describe your duties and responsibilities in that position.

A. I am Director, Forecast Solutions, where I am responsible for supporting utilities, independent system operators ("ISOs"), and transmission companies' sales and energy forecasting requirements. My work includes developing budget and long-term energy forecasts, providing forecast and modeling training, supporting Itron's Energy Forecasting Group ("EFG"), providing regulatory support, and managing Itron's forecasting consulting team.

Q. Please provide a brief outline of your educational

1 background, work, and regulatory experience.

2
3 **A.** I received my Master of Arts in Economics from San Diego State
4 University in 1984 and my Bachelor of Arts in Economics from
5 San Diego State University in 1981. While attending graduate
6 school, I worked for Regional Economic Research, Inc. ("RER")
7 as an SAS programmer. After graduating, I worked as an Analyst
8 in the Forecasting department of San Diego Gas & Electric. I
9 was later promoted to Senior Analyst in the Rate department.
10 I also taught statistics in the Economics department of San
11 Diego State University on a part-time basis.

12
13 In 1986, I was employed by RER as a Senior Analyst. I worked
14 at RER for three years before moving to Boston and taking a
15 position with New England Electric as a Senior Analyst in the
16 Forecasting Group. I was later promoted to Manager of Load
17 Research. In 1994, I left New England Electric to open the
18 Boston office for RER, which was acquired by Itron in 2002.

19
20 Over the last 30 years, I have provided support for a wide
21 range of utility operations and planning requirements,
22 including forecasting, load research, weather normalization,
23 rate design, financial analysis, and conservation and load
24 management program evaluation. Clients include traditional
25 integrated utilities, distribution companies, ISOs,

1 generation and power trading companies, and energy retailers.
2 I have presented various forecasting and energy analysis
3 topics at numerous forecasting conferences and forums. I also
4 direct electric and gas forecasting workshops that focus on
5 estimating econometric models and using statistical-based
6 models for monthly sales and customer forecasting, weather
7 normalization, and calculation of billed and unbilled sales.
8 Over the last twenty years, I have provided forecast training
9 to several hundred analysts from utilities and other
10 industries.

11
12 In the area of forecasting, I have implemented and directed
13 numerous forecasts to support utility financial planning and
14 long-term resource planning. Recent works include developing
15 and supporting an energy and demand forecast for AES Indiana's
16 Integrated Resource Plan ("IRP"), developing a set of
17 recommendations for improving the PJM system long-term load
18 forecast, conducting commercial end-use analysis for the New
19 York ISO, and assessing temperature trends and incorporating
20 these trends in normalizing historical test-year sales for
21 Sierra Pacific.

22
23 I provided direct testimony as part of both rate and resource
24 planning filings. My previous testimony includes supporting
25 sales weather normalization for historical rate case test

1 years and forecasts for rate case future test years and long-
2 term resource planning. Further details of my work and
3 regulatory experience are included in Document No. 2 of my
4 Exhibit No. EF-1.

5
6 **Q.** Have you provided testimony before the Florida Public Service
7 Commission ("Commission")?

8
9 **A.** Yes. I provided testimony supporting the long-term
10 forecast in Orlando Utilities Commission's ("OUC") 2006
11 determination of need for the Stanton Energy Center
12 (Docket 20060155-EM), and review and assessment of Tampa
13 Electric Company's 2013 base rate proceeding, (Docket
14 20130040-EI). I also provided testimony supporting the gas
15 forecast in Peoples Gas System, Inc.'s 2023 rate filing
16 (Docket 20230023-GU).

17
18 **Q.** What are the purposes of your prepared direct testimony in
19 this proceeding?

20
21 **A.** The purposes of my prepared direct testimony are to:

- 22 1. Support Peoples Gas Company, Inc.'s ("Peoples" or the
23 "company") 2026 Test Year Residential and Small Commercial
24 load forecast;
25 2. Address the change from 20-year normal to 10-year normal

1 weather; and

2 3. Discuss the performance of Peoples' 2023 rate case

3 forecast.

4

5 **Q.** Did you prepare any exhibits in support of your prepared

6 direct testimony?

7

8 **A.** Yes. Exhibit EF-1 was prepared under my direction and

9 supervision. My exhibit consists of six documents entitled:

10

11 Document No. 1	List Of Minimum Filing Requirement
12	Schedules Co-Sponsored by Eric Fox
13 Document No. 2	Resume - Work and Regulatory Experience
14 Document No. 3	Overview of the SAE Forecast Model
15 Document No. 4	Heating Degree Day by Division
16 Document No. 5	Heating Degree Trend Models by Division
17 Document No. 6	Temperature Base by Division

18

19 **Q.** Did Itron complete the Peoples' load forecast that it used in

20 preparing the 2026 rate case budget (or "2026 Budget")?

21

22 **A.** No. Peoples' forecasting staff completed the 2026 Budget and

23 the company asked me to review the forecast models and to

24 evaluate the results of their current load forecast for

25 reasonableness.

1 **Q.** Have you reviewed the company's 2026 Budget?

2

3 **A.** Yes. I reviewed the forecast models, forecast drivers, and
4 results. The forecast models are based on a theoretically
5 sound framework, are statistically strong, and given expected
6 economic projections and end-use efficiency trends, provide
7 a reasonable load forecast for determining the 2026 Budget
8 revenues.

9

10 **Q.** Please describe and summarize the results of the 2026 Budget
11 forecast completed by the company in November 2024.

12

13 **A.** The company has 14 service areas: (1) Miami, (2) Tampa, (3)
14 St. Petersburg, (4) Orlando, (5) Eustis, (6) Jacksonville,
15 (7) Lakeland, (8) Daytona, (9) Avon Park, (10) Sarasota, (11)
16 Jupiter, (12) Panama City, (13) Ocala, and (14) Fort Myers.
17 Separate forecasts are developed for each customer class
18 (Residential and Small Commercial) within each of the service
19 areas. The 2026 Budget forecast is summarized in Table 1 which
20 shows actual therm consumption (sales) and customers through
21 2026 with the forecast beginning in 2025.

22

23

24

25

Table 1: 2026 Test-Year Forecast

Residential					
Year	Sales (Therms)	Customers	Avg Use (Therms)	EOY Customers	New Customers
2019	85,073,881	361,488	235.34	368,014	
2020	89,543,002	378,583	236.52	388,063	20,049
2021	100,985,239	398,211	253.60	406,599	18,536
2022	99,041,781	418,216	236.82	428,538	21,939
2023	99,033,760	440,009	225.07	449,443	20,905
2024	107,339,852	459,482	233.61	468,258	18,815
2025	110,221,131	478,101	230.54	486,429	18,171
2026	114,247,532	495,984	230.35	504,071	17,642

Small Commercial					
Year	Sales (Therms)	Customers	Avg Use (Therms)	EOY Customers	New Customers
2019	304,290,965	35,563	8,556.5	35,982	
2020	265,456,163	36,223	7,328.4	36,373	391
2021	298,526,148	36,809	8,110.3	37,203	830
2022	302,872,408	37,589	8,057.5	37,889	686
2023	302,999,855	38,352	7,900.5	38,766	877
2024	311,533,344	39,154	7,956.7	39,460	694
2025	310,646,438	39,837	7,798.0	40,156	696
2026	316,654,163	40,534	7,812.0	40,854	698

The following rate classes are not included in Table 1 above: RS-SG, RS-GHP, CS-SG, CS-GHP, CSLS.

Q. Please explain how the forecast is derived.

A. The Residential and Small Commercial load forecasts are based on separate customer and average use forecasts. Forecast models are estimated at the aggregated Residential and Small Commercial customer class level. Total sales are derived as the product of the customer and average use forecast.

Q. What rate classes are forecasted within the Statistically

Adjusted End-Use ("SAE") models?

The SAE models are used to forecast a subset of the Residential rate classes, which are impacted by weather trends and end-use efficiencies. This includes the following ten rate classes: (1) Residential-1 (RS1), (2) Residential-2 (RS2), (3) Residential-3 (RS3) (4) Residential General Service 1 (RG1), (5) Residential General Service 2 (RG2), (6) Residential General Service 3 (RG3), (7) Residential Transportation General Service 1 (RT1), (8) Residential Transportation General Service 2 (RT2), (9) Residential Transportation General Service 3 (RT3) and (10) Residential Standby Generator (RSG).

The SAE models are used to forecast a subset of the Small Commercial rate classes (discussed in Peoples witness Luke Buzard's prepared direct testimony), which are impacted by weather trends and end-use efficiencies. This includes the following 8 rate classes: Small General Service (SGS), (2) Small General Service Transportation (SGT), (3) General Service 1 (GS1), (4) General Service 2 (GS2), (5) General Service 3 (GS3), (6) General Service-1 Transportation (GT1), (7) General Service-2 Transportation (GT2), and (8) General Service-3 Transportation (GT3).

1 Q. How was the customer forecast developed?

2

3 A. Both Residential and Small Commercial customer forecasts are
4 developed using exogenous adjustments based on anticipated
5 future growth expectations. This is discussed in witness
6 Buzard's testimony. Regression-based customer models that
7 relate historical customer counts to Woods & Poole regional
8 household (Residential) and employment (Small Commercial)
9 projections are used in providing guidance on expected
10 customer trend forecasts. These trends serve as a basis for
11 discussion with Peoples development team.

12

13 Q. Please describe how the average use models for Residential
14 and Small Commercial were developed.

15

16 A. Average use models are estimated for both Residential and
17 Small Commercial classes. Models are estimated with what is
18 known as a SAE model. The SAE model is an end-use framework
19 that relates monthly average use to economic growth, weather,
20 price, and end-use efficiency improvements. Models are
21 estimated using a SAE specification. The SAE model combines
22 economic and expected (or normal) winter weather conditions
23 with gas end-use intensity trends to construct monthly
24 heating (XHeat) and base use (XOther) which includes cooking,
25 laundry drying, water heating and other end-use model

1 variables. XHeat and XOther include structural drivers (end-
2 use efficiency and saturation trends) as well as variables
3 that capture short-term and long-term monthly utilization
4 (heating degree-days, "HDD"), number of days in the billing
5 period, price, household size and income in the Residential
6 model, and employment and gross state product in the Small
7 Commercial model. These variables are then used in estimating
8 monthly average use gas models. The modeling approach is
9 described in Document No. 3 of my exhibit.

10
11 **Q.** Have these models been used in other regulatory proceedings?

12
13 **A.** Yes. The SAE modeling approach, developed by Itron about 20
14 years ago, is well established and is used by utilities across
15 North America, including Tampa Electric Company, OUC, and
16 Lakeland Electric. It has been approved by regulators in
17 numerous jurisdictions for both rate cases, capacity need
18 filings, and integrated resource plans. PJM Interconnection
19 and New York ISO also use these models for developing long-
20 term system demand forecasts.

21
22 **Q.** Did Peoples use these SAE models in preparation of the 2026
23 Budget?

24
25 **A.** Yes. The SAE models employed by Peoples' for the 2026 Budget

1 Year forecast were originally developed by my team for the
2 2023 rate case. The company's forecasting staff continues to
3 use SAE models in updating sales forecasts.
4

5 **Q.** What data is used in estimating the forecast models?
6

7 **A.** The monthly average use models are based on billed sales and
8 customer data from January 2015 through October 2024. Winter
9 weather conditions that drive heating requirements are
10 captured in HDD variables that are calculated from historical
11 temperature data from each of the planning divisions. The
12 economic drivers are from Moody's Analytics June 2023 state
13 forecast, and the end-use intensities and price forecasts are
14 based on the Energy Information Administration ("EIA") 2023
15 projections for the South Atlantic Census Division. Further
16 details on HDD and economic drivers will be provided later in
17 my testimony.
18

19 **Q.** How does the economic forecast impact the Small Commercial
20 load forecast?
21

22 **A.** The economic drivers impact usage through the constructed
23 model variables described in Document 3 of my exhibit. The
24 economic index used in the average use models combines gross
25 state product ("GSP") and employment with more weight on

1 employment. GSP has a twenty percent weight and employment an
2 eighty percent weight. The weights were determined by
3 evaluating the out of sample statistics for different weight
4 combinations.

5
6 **Q.** What led to the drop in Small Commercial average use from
7 2024 to 2025?

8
9 **A.** There are 3 contributing factors.

10
11 First, both colder-than-average weather in January, February,
12 and December and a robust tourism season in the second quarter
13 of 2024 increased actual therm consumption for 2024. The 2025
14 forecast is based on 10-year normal weather and typical levels
15 of tourism.

16
17 Next, economic growth is expected to slow in 2025. Moody's
18 Analytics December 2024 forecast shows GSP increased 3.7
19 percent in 2024 with employment growth of 1.4 percent. 2025
20 GSP growth is projected to slow to 3.2 percent annual rate
21 and employment growth slows to 1.0 percent annual growth.

22
23 Finally, a decline in the number of billing days in 2025
24 impacted average use. In 2024, the company had an elevated
25 number of billing days (368.4 billing days) because of the

1 additional leap-year day in February and adjustments to the
2 meter read schedule to account for both late 2023 and January
3 2024 holidays.

4
5 **Q.** How does the economic forecast impact the Residential load
6 forecast?

7
8 The primary economic driver in the residential model is real
9 average household income which is expected to increase to 1.3
10 percent in 2025 and 1.4 percent in 2026. Household income
11 impacts average use through the constructed heating and base
12 use variables.

13
14 **Q.** What factors led to Residential average use decline from 2024
15 to 2025?

16
17 **A.** Residential average use declines from 2024 to 2025 for three
18 reasons.

19
20 First, actual therm consumption for 2024 accounts for colder-
21 than-average weather encountered in January, February, and
22 December. The 2025 forecast is based on 10-year normal weather
23 patterns.

24
25 Next, 2025 Residential average use is also impacted by the

1 decline in the number of billing days. The number of billing
2 days in 2024 was elevated (368.4 billing days) because of the
3 additional leap-year day in February and adjustments to the
4 meter read schedule to account for the late 2023 and January
5 holidays.

6
7 Finally, end-use gas efficiencies are improving at a rate
8 slightly exceeding the positive gains from household income
9 growth, resulting in a consequent decrease in average usage.

10
11 **Q.** How do the gas intensity projections impact usage?

12
13 **A.** As discussed in Document 3 of my exhibit, gas end-use
14 intensities are derived from the EIA 2023 Annual Energy
15 Outlook. This is the latest forecast as the EIA did not
16 release a forecast in 2024. EIA develops end-use saturation
17 and average stock efficiency projections for 9 census
18 divisions including the Southeast Census Division which is
19 the basis for the constructed Peoples Residential and Small
20 Commercial model variables. The primary gas end-uses are
21 heating, water heating, cooking, and laundry drying.

22
23 Residential gas intensities are expressed in therms per
24 household and Small Commercial gas intensities are expressed
25 in therms per square foot. While in general, there have been

1 strong energy efficiency improvements across all the gas end-
2 uses, the rate of end-use efficiency improvements for the
3 nonweather sensitive end-uses (cooking, laundry drying,
4 miscellaneous) has flattened out. This is true for both
5 Residential and Small Commercial sectors, as there are still
6 over 1.0 percent annual efficiency gains in gas heating. But
7 as space heating is a much smaller share of state gas
8 consumption than even the Southeast region, heating
9 efficiency improvements have a much smaller impact on Florida
10 gas usage.

11
12 **Q.** How did the company's 2023 rate-case forecast perform?

13
14 **A.** While the models are extremely reliable, the forecast models
15 estimated with data through July 2022, overestimated average
16 use (both Residential and Small Commercial) and
17 underestimated Residential customer growth.

18
19 **Q.** What factors led to the overestimated Residential average
20 use?

21
22 **A.** The principal cause of the overestimation is that the average
23 use models utilized in the 2023 rate case are predicated on
24 20-year normal weather conditions. Actual customer usage,
25 however, corresponds more accurately with what would be

1 expected under 10-year average weather conditions.

2
3 **Q.** What factors led to the overestimated Small Commercial
4 average use?

5
6 **A.** There are two main reasons for the overestimated Small
7 Commercial average use: (1) the average usage models for Small
8 Commercial used in the 2023 rate case are based on 20-year
9 normal weather conditions, while actual customer usage
10 corresponds more closely to expectations under 10-year normal
11 weather conditions, and (2) the usage per customer has
12 stabilized below pre-COVID levels.

13
14 The 2023 rate case models were developed using data up to
15 July 2022, incorporating a COVID impact variable. This
16 variable was based on Google Mobility data that tracked cell
17 phone activity near workplaces. The company expected Small
18 Commercial usage to revert to pre-COVID usage levels,
19 however, the usage stabilized below these levels. On an
20 aggregate basis, Small Commercial average use has leveled off
21 at roughly 8,000 therms. As illustrated in Figure 1, actual
22 average therm consumption (solid line) is lower than the
23 forecasted value from the 2023 rate case (dashed line).

Figure 1: Actual Vs 2023 Forecast

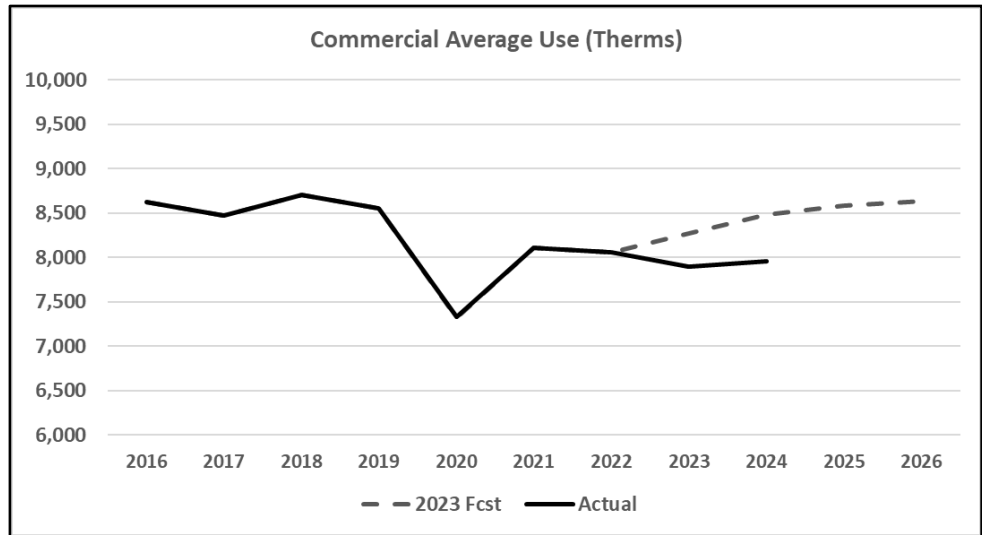


Figure 1 shows actual commercial use (the solid line) and the 2023 forecasted average use (the dotted line). Actual use stabilizes around 8,000 therms compared with the 2023 forecast for 2024 of close to 8,500 therms.

Q. What factors led to the underestimated Residential customer growth?

A. The 2023 forecast models were based on regression models that related the number of customers to regional household projections. While the models statistically explain the long-term trend well, they do not have explanatory variables that capture known construction activity and market conditions. This is discussed further in the direct testimony of witness Buzard.

1 Q. What enhancements have been made to the 2026 Budget models?
2
3 A. There were 3 primary changes that should improve the forecast
4 accuracy.
5
6 First, while the statistical models have proven highly
7 reliable, the company identified exogenous adjustments that
8 were necessary to meet anticipated future growth expectations
9 within specific Residential service areas. This is further
10 discussed in the direct testimony of witness Buzard.
11
12 Next, the company updated the Small Commercial average use
13 model by maintaining the COVID variable at a constant level
14 starting from October 2022 (the last month the mobility data
15 was available). The GSP and employment forecasts account for
16 the average use trend after that point. Simply updating the
17 sales data through October 2024 helped to calibrate average
18 use to post-COVID usage levels.
19
20 Finally, to bring the Residential and Small Commercial
21 average use forecast more in line with actual customer usage
22 levels, the forecast models are now based on a 10-year normal
23 instead of 20-year normal HDD.
24
25 Q. What are heating degree days ("HDD") and how are they captured

1 within the forecast models?

2

3 **A.** The primary weather variable used in modeling gas consumption
4 are the number of HDD. HDD measures the difference between a
5 temperature reference point and average temperature. As
6 temperatures decline, the number of HDD increases. HDD are
7 known as a spline variable as they take on a positive value
8 when temperatures are below a temperature reference point and
9 are 0 otherwise.

10

11 National Oceanic and Atmospheric Administration ("NOAA")
12 reports HDD with a 65-degree reference point. Using this
13 reference point, a day where the average temperature is 60
14 degrees would have an HDD value of 5 (65 degrees - 60
15 degrees). If the temperature is 66 degrees, then HDD is 0.
16 HDD are calculated on a daily basis and then summed over the
17 month. Monthly HDDs are used in modeling gas usage as there
18 is a strong correlation between the number of HDD and
19 consumption.

20

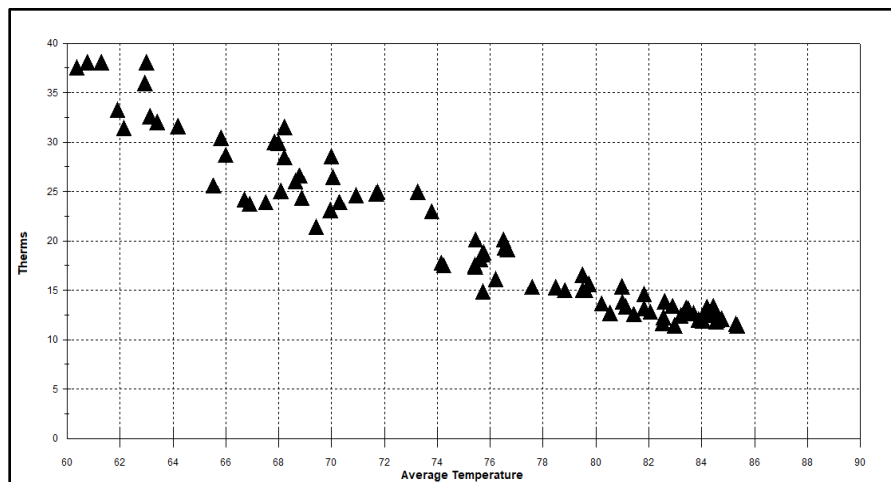
21 **Q.** Do all of the company's service areas use 65 degrees as a
22 reference point?

23

24 **A.** No. The reference temperature varies across the service areas
25 as heating-related loads appear to start at a higher

1 temperature point. The appropriate temperature breakpoint is
2 based on both the usage/weather scatter plot and evaluating
3 the model fit statistics for different temperature break
4 points. As an example, Figure 2 shows the temperature/average
5 use relationship for Orlando.

7 **Figure 2: Orlando Monthly Avg Use vs Avg Temperature**



16

17 In Orlando, the best model fit is with HDD with a 75-degree

18 temperature base. Division temperature/average use scatter

19 plots and selected temperature breakpoints are included in

20 Document 6 of my exhibit.

21

22 **Q.** How are billing-month HDD derived?

23

24 **A.** Billing month (or cycle weighted) HDD are constructed to

25 correspond with the billing month period. There are twenty-

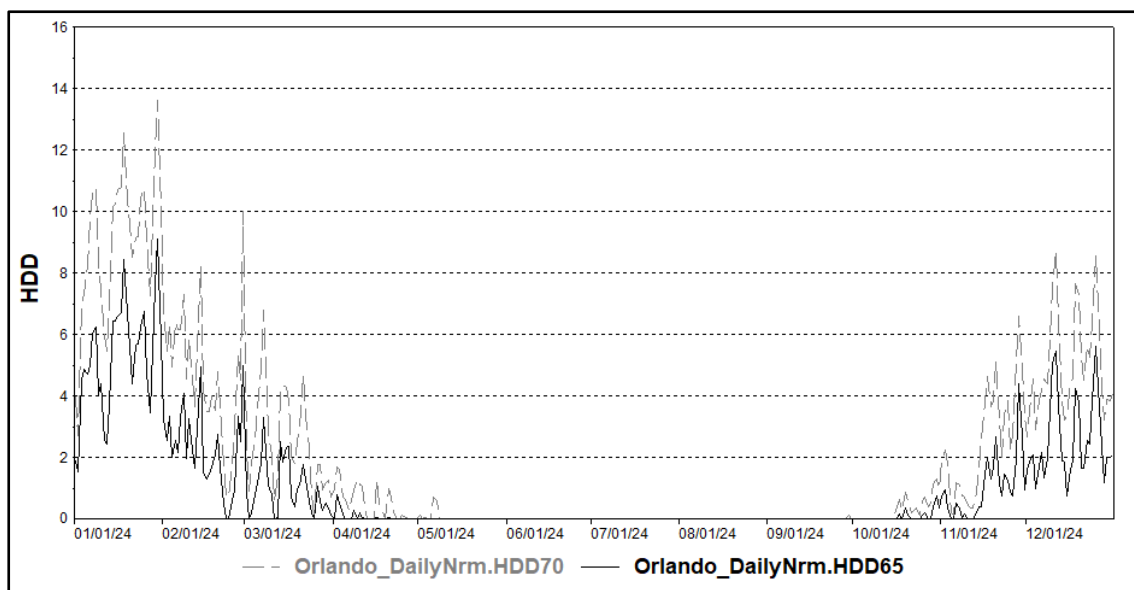
one billing cycles, each with a start and end-date that overlap calendar months and each other. Each day is assigned a weight based on the number of meter-read schedules that include that day. The weight is calculated by taking the number of billing cycles that include the day (i.e. that are "on") and dividing it by twenty-one, which is the total number of billing cycles. For example, if a day at the beginning of January is included in 4 of the February billing cycles, that day has a February billing weight of 0.19048 (4/21). A day at the end of January that may be in all February cycle read dates has a weight of 1 (21/21). The daily weights are multiplied by the daily HDD and then summed over the billing period. Normal billing month HDD are calculated the same way. The daily normal degree days are combined with the daily cycle weights and summed over the billing period.

Q. How are daily normal HDD derived?

A. Normal daily HDD are calculated by averaging daily HDD for a defined time period. For the 2026 Budget, the 10-year normal period is 2014 to 2023. A daily normal is calculated for each calendar day by averaging all the HDD for that day. For example, the daily normal HDD for January 1st is calculated by averaging all the prior year January 1st HDD; for a 10-year normal that would be an average of the January 1st HDD

from 2014 to 2023 (ten observations). An average HDD is calculated for each calendar day. Figure 3 shows the Orlando daily normal (2014 to 2023) HDD65 and HDD70.

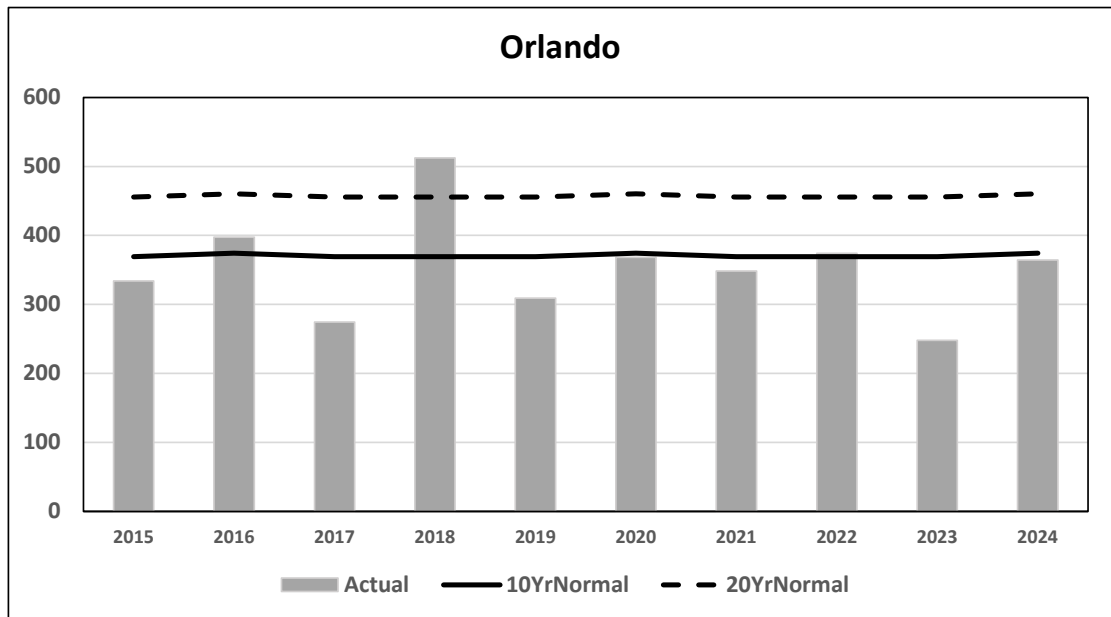
Figure 3: Orlando Daily Normal HDD65 and HDD70



Q. Do you support using 10-year normal HDD rather than 20-year HDD?

A. Yes. The 10-year normal HDD more accurately reflects current weather conditions. This is illustrated in Figure 4.

Figure 4: Actual vs 10 Yr and 20 Yr Normal HDD65

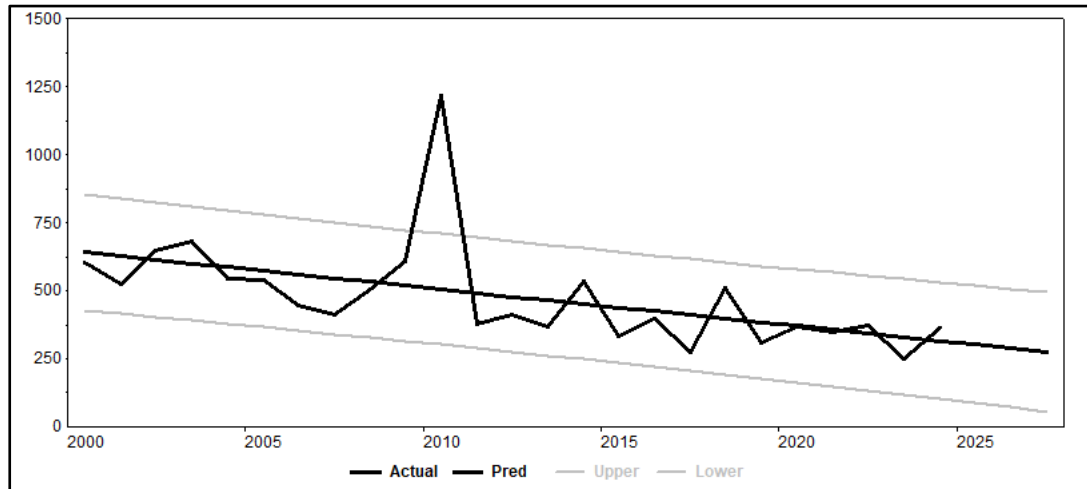


The bars show actual HDD with a 65-degree temperature base for Orlando. The solid line shows the 10-year normal HDD and the dotted line the 20-year normal HDD. Over the past decade, only 1-year (2018) exhibited HDD values surpassing the 20-year average. The graph indicates that the 10-year normal best represents current heating conditions in Orlando, which is also true across all divisions. Document 4 of my exhibit shows the remaining divisions.

- Q.** Do you believe that 10-year normal HDD will continue to track usage better than 20-year normal HDD?
- A.** Yes. The data indicates that HDD has been declining as a result of warming winter weather temperatures. Figure 5 shows

the result of a simple trend model of Orlando annual HDD.

Figure 5: Orlando HDD Trend



The trend model is estimated with annual HDD data from 2000 through 2024 and the predicted line shows the HDD trend. The trend variable is statistically significant and indicates that HDD are declining on average 13.5 HDD per year. The expected number of HDD declines from 641 in 2000 to 316 in 2024. The 95 percent confidence range (depicted as the outer light grey lines) is 102 to 530 HDD in 2024 compared with a 95 percent confidence interval of 426 to 641 HDD in 2000. The same trend can be seen across all divisions, which is illustrated in Document 5 of my exhibit.

Q. Please summarize your testimony.

1 **A.** The 2026 Budget is based on a strong theoretical framework
2 that relates customer usage to heating and base-use gas
3 requirements. The model, known as an SAE model, is used by
4 electric and gas utilities across North America and has been
5 accepted as a reasonable forecasting approach by state
6 Commissions and other regulatory agencies across the country.

7
8 While the average use model structure is sound, the forecast
9 proved to be too high. Peoples' forecasting staff were able
10 to enhance the forecast by replacing 20-year normal HDD with
11 10-year normal HDD and calibrating Small Commercial average
12 use to "new normal" post-COVID usage levels. The 2023 rate
13 case Residential customer models based on regional household
14 projections underestimated customer growth. In the 2026
15 Budget, the company enhanced its outlook by incorporating
16 exogenous adjustments to account for anticipated future
17 growth expectations. Combined, these enhancements provide a
18 reasonable forecast for revenue projects.

19
20 **Q.** Does this conclude your prepared direct testimony?

21
22 **A.** Yes.
23
24
25

DOCKET NO. 20250029-GU
WITNESS: FOX

EXHIBIT

OF

ERIC FOX

ON BEHALF OF PEOPLES GAS SYSTEM, INC.

Table of Contents

DOCUMENT NO.	TITLE	PAGE
1	List Of Minimum Filing Requirement Schedules Co-Sponsored By Eric Fox	28
2	Resume - Work and Regulatory Experience	29
3	Overview of the SAE Forecast Model	38
4	Heating Degree Day by Division	45
5	Heating Degree Trend Models by Division	47
6	Temperature Base by Division	50

DOCKET NO. 20250029-GU
EXHIBIT NO. EF-1
WITNESS: FOX
DOCUMENT NO. 1
PAGE 1 OF 1
FILED: 03/31/2025

**List of Minimum Filing Requirement Schedules
Co-Sponsored by Eric Fox**

MFR Schedule	Page No.	MFR Title
G-02	P. 6	Historic Base Year + 1 – Revenues And Cost Of Gas
G-02	P. 8	Projected Test Year - Revenues And Cost Of Gas
G-06	P. 1-9	Projected Test Year - Major Assumptions

Resume and Project Experience

Eric Fox

**Director, Forecast Solutions
Itron, Inc.**

Education

- M.A. in Economics, San Diego State University, 1984
- B.A. in Economics, San Diego State University, 1981

Employment History

- Director, Forecasting Solutions, Itron, Inc. 2002 - present
- Vice President, Regional Economic Research, Inc. (now part of Itron, Inc.), 1999 – 2002
- Project Manager, Regional Economic Research, Inc., 1994 – 1999
- New England Electric Service Power Company, 1990 – 1994
Positions Held:
 - Principal Rate Analyst, Rates
 - Coordinator, Load Research
 - Senior Analyst, Forecasting
- Senior Economist, Regional Economic Research, Inc., 1987 – 1990
- San Diego Gas & Electric, 1984 – 1987
Positions Held:
 - Senior Analyst, Rate Department
 - Analyst, Forecasting and Evaluation Department
- Instructor, Economics Department, San Diego State University, 1985 – 1986

Experience

Mr. Eric Fox is Director Forecasting Solutions with Itron where he directs electric and gas analytics and forecasting projects and manages Itron's forecast consulting team. Mr. Fox has over 30 years of forecasting experience with expertise in financial forecasting and analysis, long-term energy and demand forecasting, and load research.

His team focuses on developing sales, customers, and revenue forecasts for financial planning and long-term energy, load, and demand forecasts for resource planning. Related work includes load research for developing rate class loads for cost of service studies, building technology load forecasts, weather normalization and sales variance analysis, and regulatory support for rate cases and integrated resource plans. The team also supports Itron's forecasting and load research applications and the Energy Forecasting Group (EFG). The EFG provides utility members with models, end-use inputs, and training to support their budget and long-term load forecasting requirements. The annual EFG conference focuses on addressing issues facing electric and gas forecasters; it is the largest forecast conference in North America. Mr. Fox has provided expert testimony and support in rate and regulatory related hearings, presented on numerous forecast topics, and is one of the primary forecast instructors.

Prior to joining Itron, Mr. Fox supervised the load research group at New England Electric where he oversaw systems development, directed load research programs, and customer load analysis. He also worked in the Rate Department as a Principal Analyst where he was responsible for DSM rate and incentive filings, and related cost studies. The position required providing testimony in regulatory proceedings.

Projects, Reports, and Presentations

FY 2026 Budget and Revenue Forecast, Green Mountain Power, with Oleg Moskatov,
March 2025

Development of a Long-Term Forecast and Model Training, with Stuart McMenamin,
ITC, February 2025

Forecast Review and Recommendations, Saskatchewan Power, November 2025

Budget Sales and Customer Forecast, Alectra Utilities, with Oleg Moskatov and Brien
Rissman, October 2024

Development of Long-Term Energy, Peak, and Load Forecast, Sacramento Municipal
Utility District, with Oleg Moskatov, August 2024

Addressing Complexities in the Long-Term Load Forecast, Indiana Utility Regulatory
Commission, Contemporary Issues Technical Conference, June 2024

Rate Class Load Development with AMI data, Colorado Springs Utilities, with Mike
Russo, April 2024

FY 2025 Budget and Revenue Forecast, Green Mountain Power, with Oleg Moskatov,
Mike Russo, and Brien Rissman, March 2024

Factors Driving Long-Term Electric Load Demand, A Focus on Vermont, Energy
Forecasting Group Conference, New Orleans, March 2024

Forecast Workshop – Advanced Topics, with Mike Russo, Energy Forecasting Group
Conference, New Orleans, March 2024

Forecast Model Development and Training, Sacramento Municipal Utility District,
December 2023

Gas Sales and Customer Forecast Update, Peoples Gas System (TECo), with Brien
Rissman and Oleg Moskatov, November 2023

When Even Y Isn't Known, How Policy Re-Shaping Electric Loads, New York ISO Load
Forecasting Task Force, October 2023

Modeling Energy Efficiency, Electrification, and the Inflation Reduction Act,
Online presentation with Mike Russo, October 2023

Forecast Fundamentals Workshop, San Diego
Itron Inc, September 2023

Long-Term System Load Forecast, Model Development and Training

Sacramento Municipal Utility District, with Oleg Moskatov, September 2023

Test-Year Sales and Customer Forecast

Peoples Gas System (PGS), with Oleg Moskatov, March 2023

Test-Year Sales and Load Weather Normalization

AES, Indiana, with Michael Russo, June 2023

Vermont Long-Term System and Delivery Point Forecast,

Vermont Electric Company, with Mike Russo and Oleg Moskatov, June 2023

Test-Year Sales Weather Normalization for the Arkansas Electric Rate Case,

The Empire District Electric Company/Liberty Utilities, with Oleg Moskatov, January 2023

Commercial Data Development for Long-Term Forecasting and Electrification Study,

NYISO, with Mike Russo, Oleg Moskatov, and Rich Simons, December 2022

Forecast Model Development and Training, ISO New England, with Mike Russo,

November 2022

2022 Long-term Residential and Commercial Energy Intensity Trends Presentation, Itron

Energy Forecasting Group, with Oleg Moskatov and Mike Russo, September 20th, 2022

2022 Model Review Report and Presentation, PJM, with Michael Russo, Dr. Stuart

McMenamin, and Dr. Frank Monforte, September 2022

Modeling Climate Change, Itron Brownbag Presentation, with Mike Russo and Dr. Frank

Monforte, July 12, 2022

Forecast Review and Presentation to the SRP Power Committee, Salt River Project, with

Mark Quan, April 24, 2022

Cold Climate Heat Pump Study, Nova Scotia Power, July 2022, with Rich Simons

Long-Term Energy and Demand Outlook, Indiana Stakeholder Meeting, AES Indiana, with

Mike Russo, January 24, 2022

Long-Term Energy and Demand Forecast, 2022 IRP, AES Indiana, with Mike Russo,

December 2021

Delmarva Power & Light, Forecast Review, Delmarva Maryland, with Stuart McMenamin

and Mike Russo, December 2021

Forecast Model Review and Recommendations, ISO New England, November 2021

Heat Pump Program Impact Study, Nova Scotia Power, with Rich Simons, August 2021

Sales, Customer, and Revenue Forecast Through 2040, Green Mountain Power Company, with Oleg Moskatov and Mike Russo, April 2021

Reacting to a Changing Environment: Trends in Estimated Load Impacts of COVID-19 Mitigation Policies, submitted to National Association of Regulatory Utility Commissioners, March 2021, with Frank Monforte, Ph.D.

Accounting for COVID-19 in the Sales Forecast, March 2021, Itron Brownbag Presentation, with Andy Sukenik, and Mike Russo

Long-Term Data Center Demand Analysis and Forecast, Salt River Project, March 2021, with Mike Russo

Temperature Trend Study, Puget Sound Energy, November 2020, with Rich Simons

Vermont Long-Term Energy and Demand Forecast, Vermont Electric Power Company, October 2020, with Oleg Moskatov and Mike Russo

IRP Forecast Support and Data Center Forecast, Dominion Energy, September 2020

Long-Term Temperature Trend Analysis and Workshop, NV Energy, August 2020, with Rich Simons

Sales and Revenue Forecast for 2020 Rate Case, with Mike Russo, Hydro Ottawa, March 2020

New York ISO Climate Impact Study: Phase 1 Long-Term Load Impact, New York ISO, December 2019, with Rich Simons, Oleg Moskatov, and Mike Russo

Cold Climate Heat Pump Study, Sample Design, December 2019, with Rich Simons, Nova Scotia Power

Long-Term Energy and Demand Forecast, 2020 IRP, October 2019, with Mike Russo, Vectren (A CenterPoint Energy Company)

Fundamentals of Forecasting Workshop, October 2019, Washington DC

Development of Energy Efficiency Conservation Curves for Long-Term System Load Model, ISO New England, September 2019 with Mike Russo

Test-Year Weather Normalization and Filed Testimony, July 2019, with Oleg Moskatov,
Liberty Utilities

Advanced Forecast Topics Workshop, Energy Forecasting Group 2019 Annual Meeting,
April 2, 2019, Boston NA

Long-Term Forecast Development and Modeling Workshop. Salt River Project, Tempe
Arizona, March 26-27, 2019

Sales and Revenue Forecast for 2019 Rate Filing, with Oleg Moskatov and Mike Russo,
Green Mountain Power Company, March 2019

Modeling Long-Term Peak Demand - Forecasting Workshop. ISO New England,
December 19, 2018

Testimony and Supporting Sales Weather-Normalization for the 2018 Kansas Rate Case.
Empire District Electric/Liberty Utilities, November 2018.

Load Research Training – Methods, Design, and LRS Applications. Colorado Springs
Utilities. November 29-30, 2018

2018 Benchmark Survey – Energy Trends, Projections, and Methods. Electric Utility
Forecaster Forum, November 13-14, 2018. Orlando, Florida

Forecasting Methods, Model Development, and Training. WEC Energy Group, Milwaukee
WI, September 20 -21, 2018.

*Development of Budget Sales and Customer Forecast Models, Report, and Forecast
Training*. Alectra Utilities, July 2018

Electricity Forecasting in a Dynamic Market. Presentation and Panel Participant,
Organization of MISO States, Forecast Workshop & Spring Seminar, Des Moines
Iowa, March 21 -23, 2018.

Load Research Methods and Results, IPL and Indiana Office of Utility Consumer
Counselor (OUCC), March 12, 2018

Sales Weather Normalization to Support the IPL 2018 Rate Case, with Richard Simons,
Indianapolis Power & Light, December 2017

Dominion Long-Term Electricity Demand Forecast Review. Dominion Energy Virginia,
September 15, 2017.

Dominion Long-Term Electricity Demand Forecast Review. Dominion Energy Virginia,
September 15, 2017.

Vermont Long-Term Energy and Demand Forecast, with Mike Russo and Oleg Moskatov,
Presented to the Vermont State Forecast Committee, August 1, 2017

Utility Forecasting Trends and Approaches, with Rich Simons and Mike Russo, Presented
to the Energy Information Administration, July 27, 2017

Sales and Revenue Forecast Delivery and Presentation, with Mike Russo, Indianapolis
Power & Light, July 13, 2017

Forecasting Gas Demand When GDP No Longer Works, Southern Gas Association Gas
Forecasters Forum, June 13 to 17, Ft Lauderdale, Florida

Behind the Meter Solar Forecasting, with Rudy Bombien, Duke Energy, Electric Utility
Forecaster Forum, May 3 to 5, 2017, Orlando, Florida

Advanced Forecast Training Workshop, with Mike Russo, EFG Meeting, Chicago Illinois,
April 25th, 2017

Budget-Year Electric Sales, Customer, and Revenue Forecast, with Oleg Moskatov and
Mike Russo, Green Mountain Power Company, March 2017

Solar Load Modeling, Statistic Analysis, and Software Training, Duke Energy, March 1 to
3, 2017

Development of a Multi-Jurisdictional Electric Sales and Demand Forecast Application,
with Mike Russo and Rich Simons, Wabash Valley Power Cooperative, January 2017,

Regulatory Experience

June 2024: Addressing Complexities in the Long-Term Load Forecast, Indiana Utility
Regulatory Commission, Contemporary Issues Technical Conference

February 2024: Provided testimony and documentation supporting the Liberty Midstates
Natural Gas (Missouri) rate case

August 2023: Presented Indiana AES Test-Year Weather Normalization and Load
Development Method and Results to the Indiana Office of Utility Consumer
Counselor (OUCC)

June 2023: Provided testimony and supporting test-year normalized sales and rate class
hourly loads for the 2023 AES Indiana general rate case.

March 2023: Provided testimony, report, and documentation supporting the 2024 test-year forecast for People's Gas System 2023 general rate case.

January 2023: Provided testimony and documentation supporting the Empire District Electric Company/Liberty Utilities, Arkansas electric general rate case.

June 2022: Provided testimony and supporting sales and weather-normalization for the 2022 Sierra Pacific Power Company (NV Energy) general rate case.

February 2022: Provided testimony and supporting sales and weather-normalization for the 2022 Oklahoma rate case. Empire District Electric/Liberty Utilities.

May 2021: Provided testimony and supporting sales and weather-normalization for the 2021 Missouri rate case. Empire District Electric/Liberty Utilities.

June 2020: Provided testimony and supporting analysis of weather trends and analysis as part of Nevada Power's 2020 general rate review.

July 2019: Provided testimony and supporting sales and weather-normalization for the 2020 Missouri rate case. Empire District Electric/Liberty Utilities.

November 2018: Provided testimony and supporting sales weather-normalization for the 2018 Kansas rate case. Empire District Electric/Liberty Utilities.

December 2017: Provided testimony and support related to sales weather-normalization for the 2018 rate case. Indianapolis Power & Light.

October 2017: Provided testimony and support for the Dominion Energy Virginia 2017 Integrated Resource Plan

Jan 2015 – Dec 2016: Assisted Power Stream with developing and supporting the 2015 rate case sales and customer forecast before the Ontario Energy Board

Jan 2015 – Dec 2016: Assisted Hydro Ottawa with developing and supporting the 2015 rate case sales and customer forecast before the Ontario Energy Board

September 2015: Provided testimony and support related to sales weather-normalization for the 2015 rate case. Indianapolis Power & Light

October 2014 – July 2015: Assisted Entergy Arkansas with developing and supporting weather adjusted sales and demand estimates for the 2015 rate case.

September 2014: Assisted with developing the budget sales and revenue forecast and provided regulatory support related Horizon Utilities 2014 rate filing before the Ontario Energy Board

August 2013: Reviewed and provided testimony supporting Sierra Pacific Power Company's forecast for the 2013 Energy Supply Plan before the Nevada Public Utilities Commission

July 2013: Reviewed and provided testimony supporting Tampa Electric's forecast for the 2013 rate case before the Florida Public Service Commission

March 2013: Reviewed and provided testimony supporting Entergy Arkansas sales weather normalization for the 2013 rate filing before the Arkansas Public Service Commission

June 2012: Reviewed and provided testimony supporting Nevada Power Company's 2012 Long-Term Energy and Demand Forecast before the Nevada Public Utilities Commission

May 2010: Provided testimony supporting Sierra Pacific Power's Company's 2010 Long-Term Energy and Demand Forecast before the Nevada Public Utilities Commission

March 2010: Assisted with development of the IRP forecast and provided testimony supporting Nevada Power Company's 2010 Long-Term Energy and Demand Forecast before the Nevada Public Utilities Commission

August 2009: Reviewed Entergy Arkansas weather normalization and provided supporting testimony before the Arkansas Public Service Commission

February 2006: Developed long-term forecast and provided testimony to support Orlando Utilities Commission *Need for Power Application* before the Florida Public Service Commission

July 2005: Developed sales and customer forecast and provided testimony to support Central Hudson's electric rate filing before the New York Public Service Commission

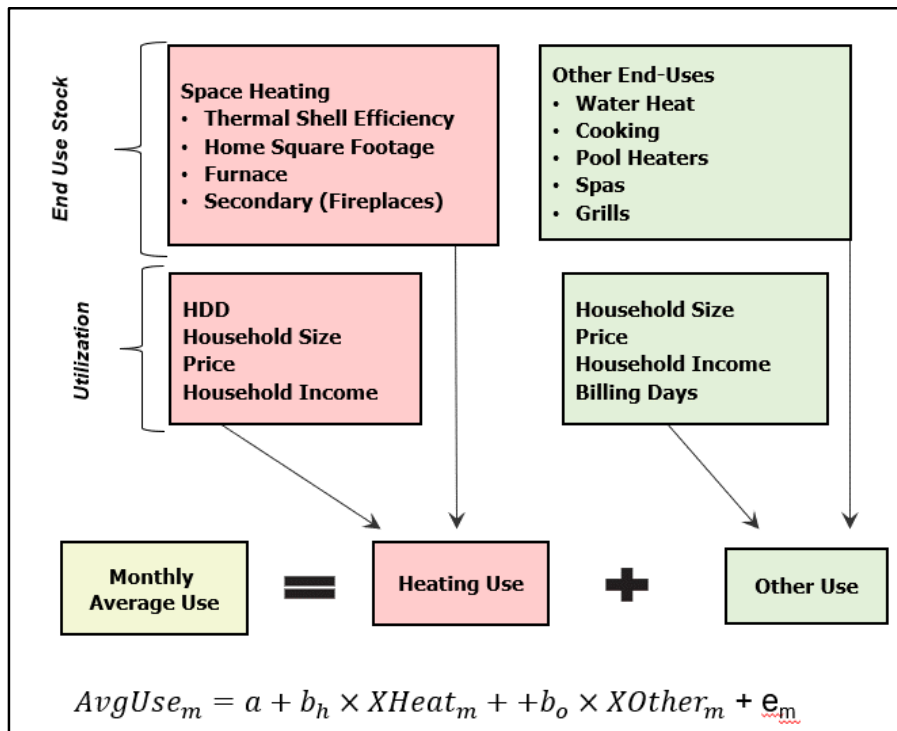
April 2004: Held Weather Normalization Workshop with the Missouri Public Service Commission Staff

July 2001: Conducted workshop on long-term forecasting with the Colorado Public Utilities Commission Staff

STATISTICALLY ADJUSTED END-USE (SAE) GAS MODEL

The Residential and Small Commercial average use models are estimated using a Statistically Adjusted End-Use (SAE) specification. The SAE model is a structured framework where monthly gas usage is defined in terms of heating requirements and base-use gas end-uses that include cooking, dryers, water heating, and other miscellaneous gas use. It constructs estimates of end-use energy requirements and then calibrates (statistically adjust) to actual monthly usage using linear regression models. The impact of weather, price, and economic activity are captured in the constructed heating (XHeat) and cooling (XCool) model variables. Figure 1 shows the Residential SAE model framework.

FIGURE 1: RESIDENTIAL STASTICALLY ADJUSTED END-USE (SAE) MODEL FRAMEWORK



End-use stock intensities are measured in therms per household. Factors influencing gas intensities include changes in saturation (ownership rate) and the overall stock efficiency (a measure of output relative to energy input). Stock utilization, such as hours of space heating, number of loads of laundry, and gallons of hot water delivered, is influenced by temperature (for the heating end-use), average number of people in the household, household average income, and price. Heating requirements, measured in heating degree days, have the most significant impact on gas usage. The effects of economic variables on utilization are relatively minor. Moderate changes in income or price are unlikely to significantly alter month-to-month consumption levels.

Variable Construction. XHeat and XOther are the primary end-use model variables. The variables combine annual end-use intensity projections with monthly utilization drivers: heating degree-days (XHeat), billing days (XOther), household size (HHSIZE), household income (HsehdInc), and gas prices (Price). Small elasticities (from the Itron Census Division models) are imposed on these variables as the impact of these variables on month-to-month usage is small.

The monthly XHeat variable specification is shown below:

- $XHeat_m = HeatEI_a \times HeatUse_m$
- $HeatUse_m = HDD_m \times HHSIZE_m^{-30} \times HsehdInc_m^{-20} \times Price_m^{-20}$

The heating intensity (HeatEI) reflects heating requirements per household for the South Atlantic Census Division. The model estimation process scales/calibrates the heating variable down to Florida average annual use which is roughly a tenth of that for the Census Division. In addition to space heat, HeatEI is also capturing gas pool and spa heating.

The non-weather sensitive end-uses (XOther) include water heating, dryers, and cooking. XOther is specified as:

- $XOther_m = OtherEI_a \times BaseUse_m$
- $BaseUse_m = Days_m \times HHSIZE_m^{.60} \times HsehdInc_m^{.10} \times Price_m^{-.12}$

Estimated base use is close to that of the Southeast Census Division. Figures 2 & 3 show the constructed XHeat and XOther variables for Orlando, respectively.

FIGURE 2: XHEAT (SCALED TO FLORIDA HEATING LEVELS)

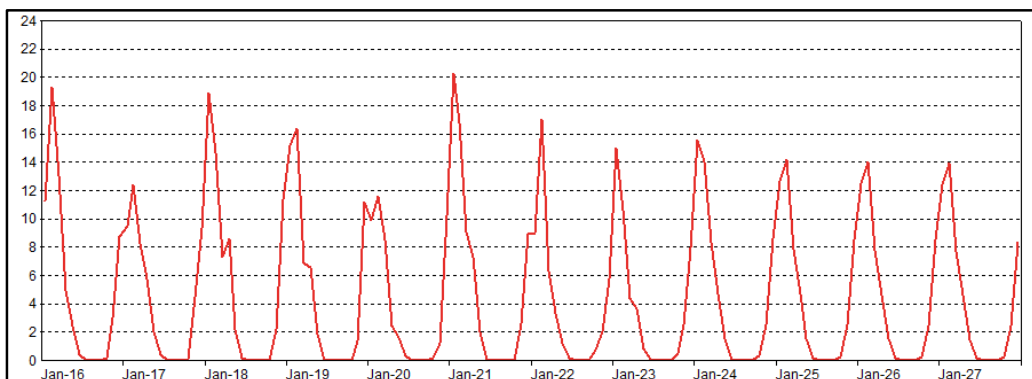
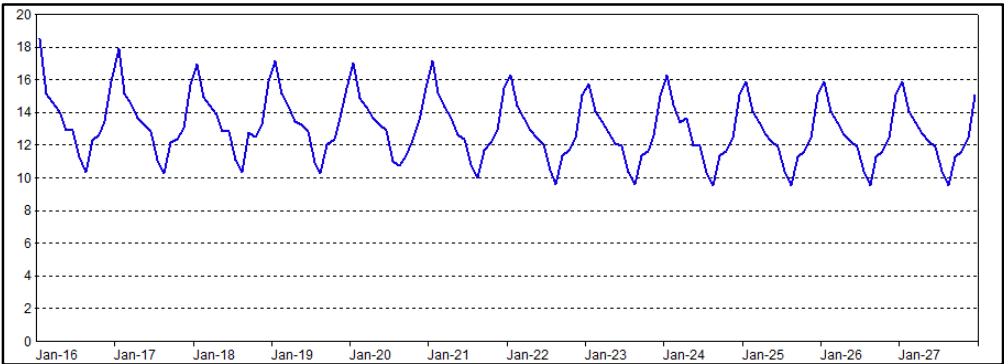
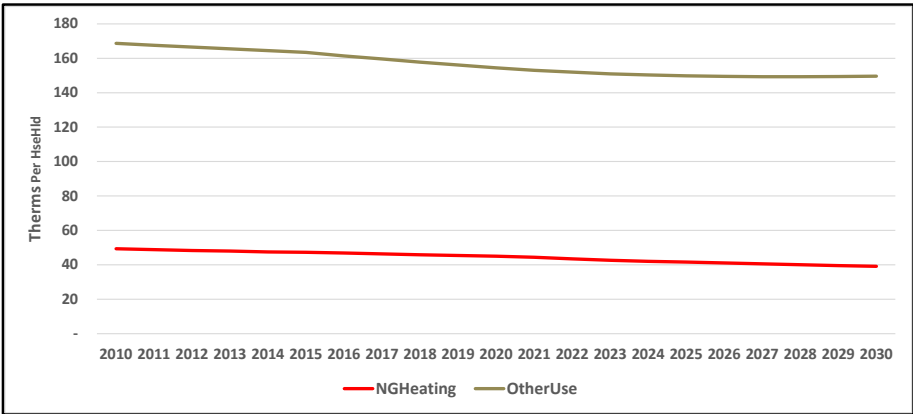


FIGURE 3: XOTHER



Historical and projected end-use gas intensities are derived from the Energy Information Administration (EIA) Annual Energy Outlook (AEO). The AEO database includes actual and projected end-use consumption data, number of households in the Residential forecast and square footage in the Small Commercial forecast. The forecast is based on the 2023 projections for the South Atlantic Census Division. Figure 4 shows historical and projected heating and other use intensity trends; heating has been scaled to reflect Florida heating loads. Heating accounts for approximately 70% of Residential gas use in the Census Division and roughly 25% of gas use in Florida.

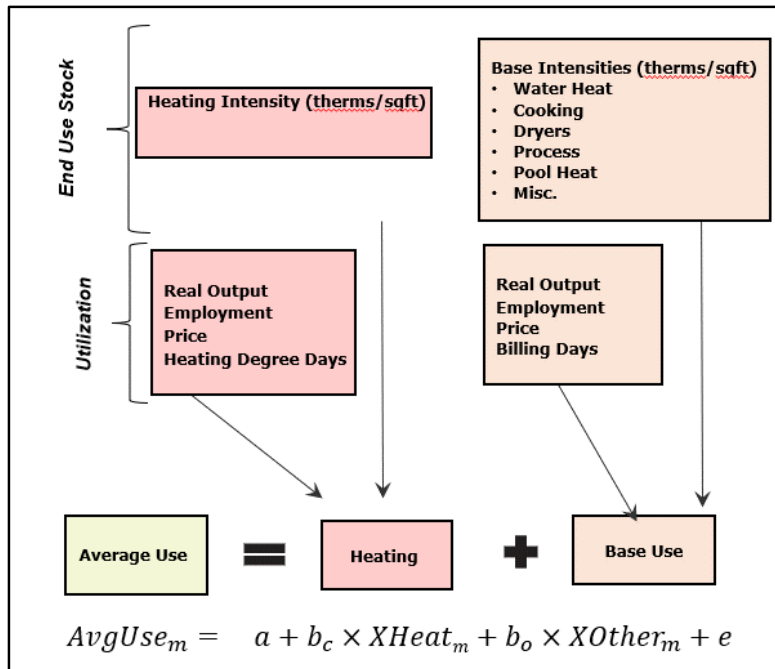
FIGURE 4: RESIDENTIAL GAS AND OTHERUSE INTENSITY TRENDS



Heating intensities are decreasing with the installation of more efficient systems, while base use intensities have mostly stabilized. End-use intensities slightly increase over time due to higher saturation outweighing efficiency gains. Considering that nearly all efficiency gains are related to heating, the overall impact of these gains is significantly lower in Florida.

The Small Commercial SAE model is similar in structure to the Residential model. Figure 5 shows the Small Commercial model structure.

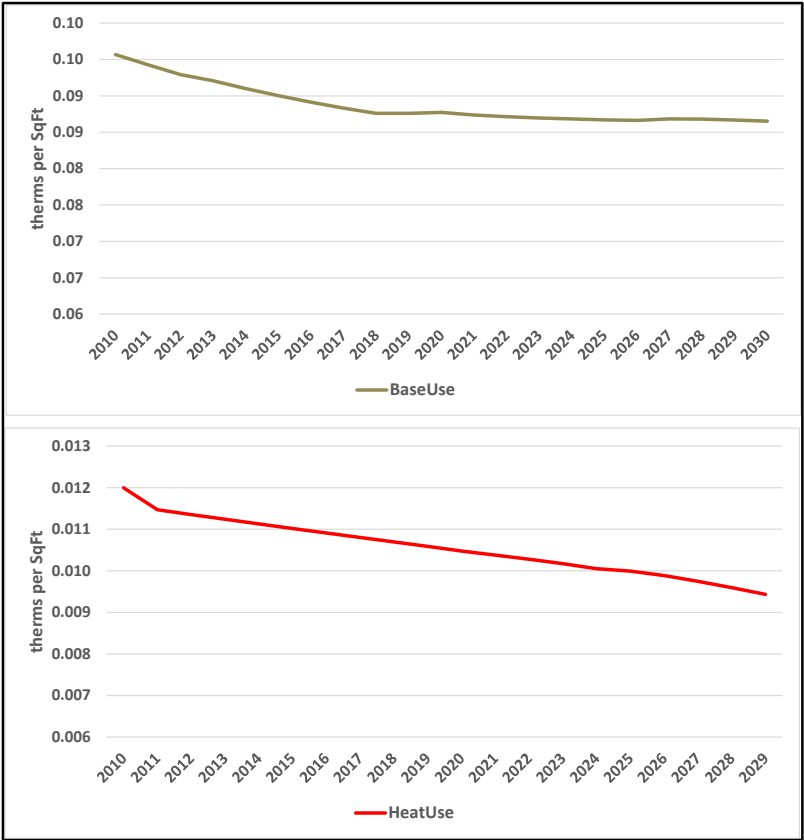
FIGURE 5: SMALL COMMERCIAL AVERAGE USE MODEL



Like Residential, estimates of monthly heating (XHeat) and base use (XOther) are derived by combining Small Commercial end-use gas intensities with a utilization variable that includes gross state product (GSP), employment, price, and HDD in the XHeat variable and number of billing days in the XOther variable. Small Commercial economic variables combine GSP and employment, with greater emphasis on employment. XHeat and XOther are measured on a therm per square foot basis. The model coefficients (a, bc, and bo) are estimated using monthly linear regression models.

Space heating efficiency has significantly improved, and EIA projects further gains of over 1.0 percent annually for Small Commercial heating efficiency. Expected improvements in intensities for other primary end-uses are minimal, as most efficiency gains have already been achieved. As space heating constitutes a minor portion of Small Commercial gas consumption in Florida, enhancements in heating efficiency yield only a limited reduction in overall gas usage. Figure 6 shows Small Commercial gas intensity trends. Heating intensity has been scaled down to reflect Florida Small Commercial gas consumption level.

FIGURE 6: SMALL COMMERCIAL GAS INTENSTIY TRENDS



Model Estimation. The constructed model variables are utilized to estimate the average use models for Residential and Small Commercial sectors. Distinct models are developed for each Division and the estimation period spans from January 2016 to October 2024. Models typically incorporate monthly binary variables to account for seasonal variations and significant outliers not captured by the model variables. Additionally, a COVID-19 variable is included to reflect the increase in Residential use and the decrease in Small Commercial sales during the pandemic period. As an example, Figures 7 & 8 show the Orlando Residential and Small Commercial average use models.

FIGURE 7: ORLANDO RESIDENTIAL AVERAGE USE MODEL

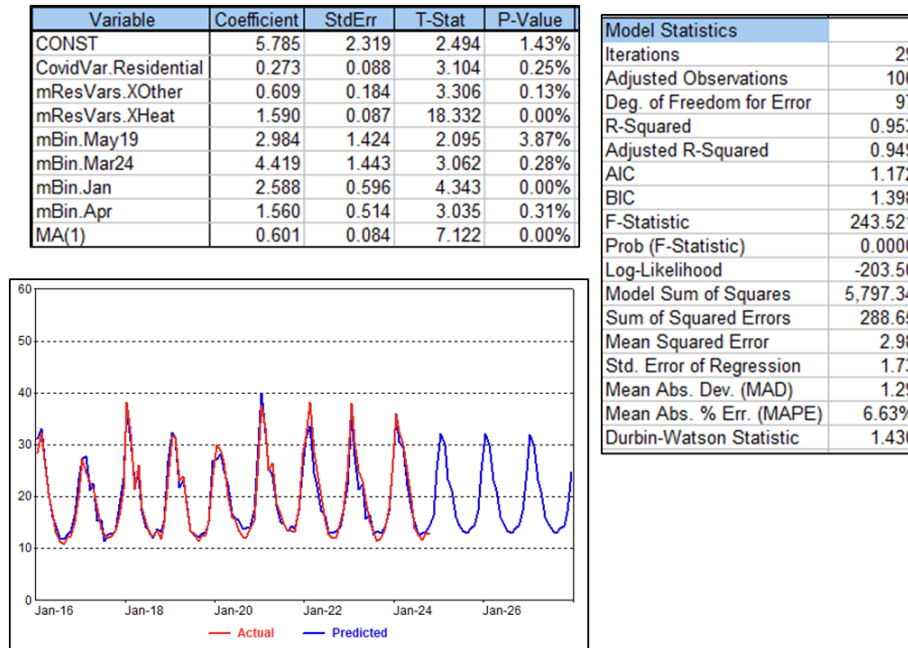
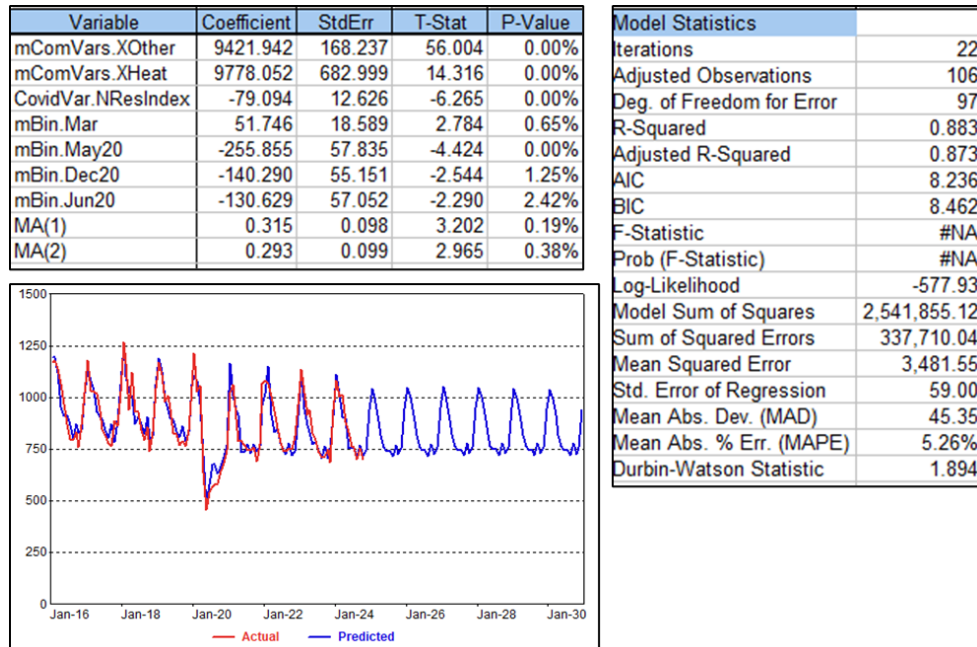


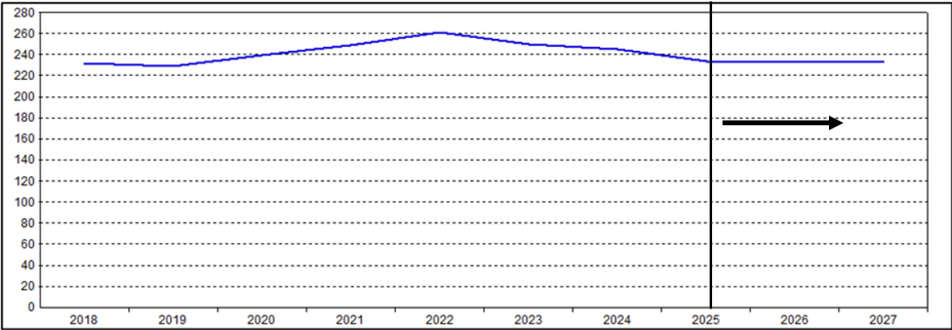
FIGURE 8: ORLANDO COMMERCIAL AVERAGE USE MODEL



The models are relatively strong from a statistical measure with a Residential Adjusted-R-Squared of 0.949 and standard error of 1.73 therms (compared with a mean of 19.75 therms). The Small Commercial model shows an adjusted R-Squared of 0.873 with a standard error of 59 therms

(compared with mean use of 878.6 therms). The XHeat and XOther coefficients are statistically significant. Figure 9 shows the resulting annual average use forecast.

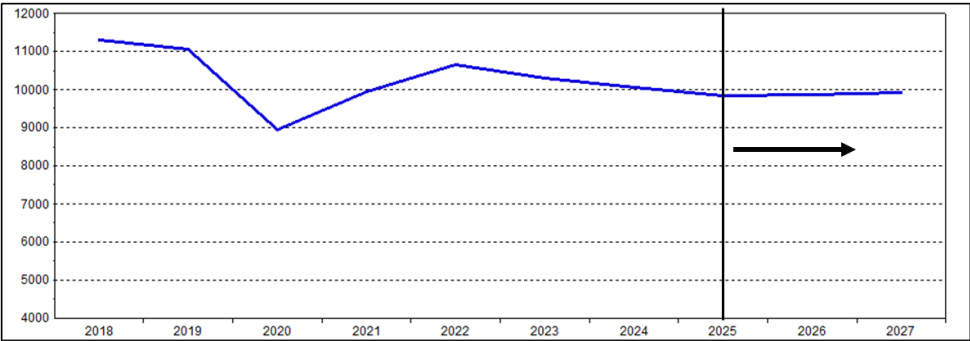
FIGURE 9: ORLANDO RESIDENTIAL AVERAGE USE FORECAST (WEAHTER NORMAL)



Gas consumption peaked in 2022 due to the shift from office to home during COVID-19. Although average use has declined since then, it is expected to stabilize by 2025 as rising household incomes and lower prices offset smaller household sizes and better heating efficiency.

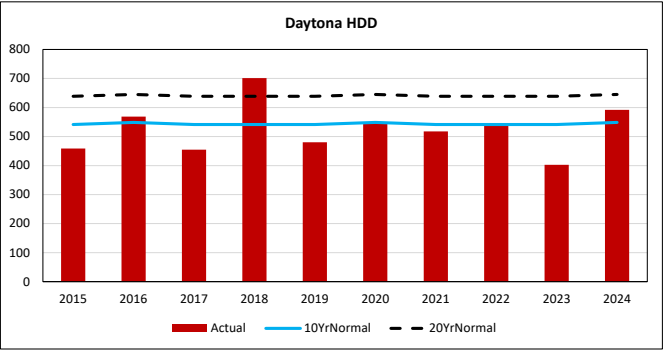
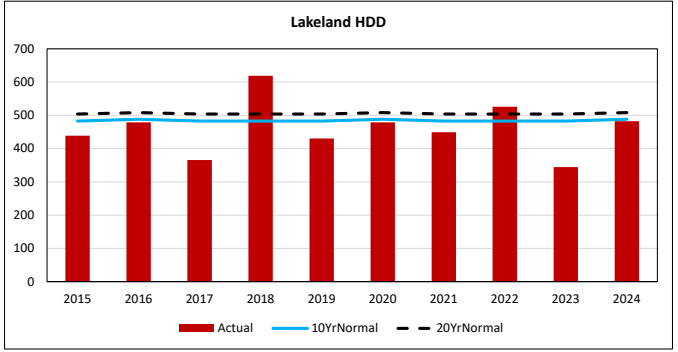
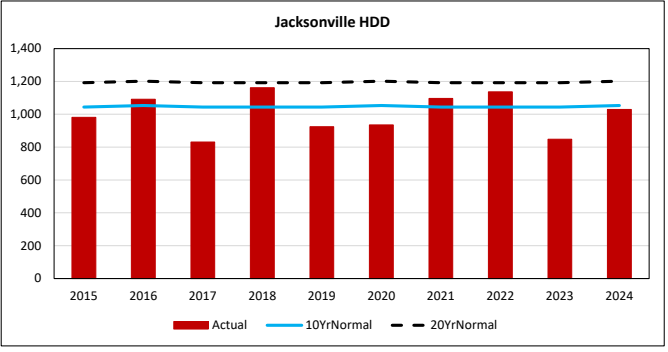
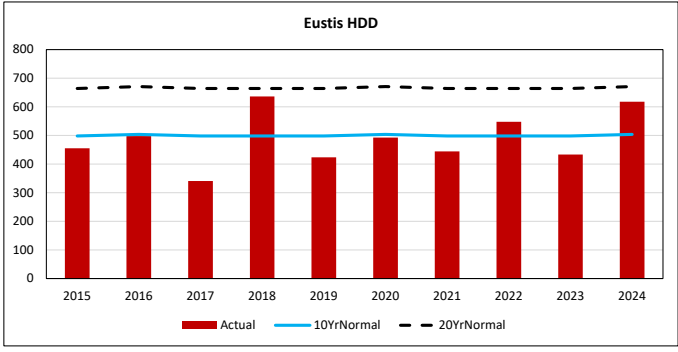
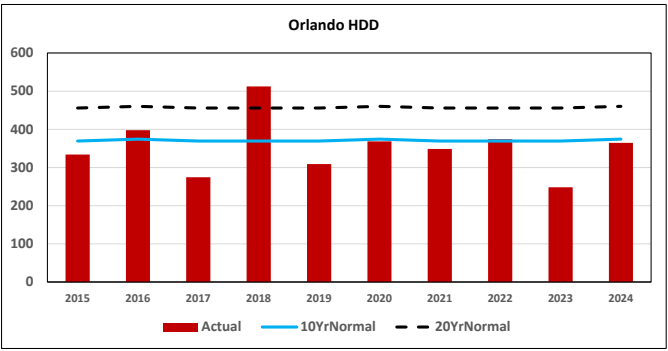
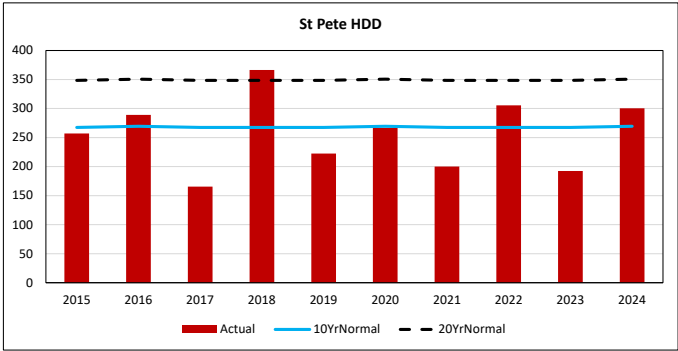
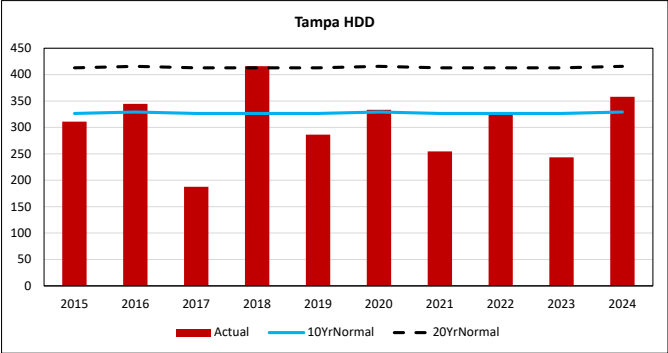
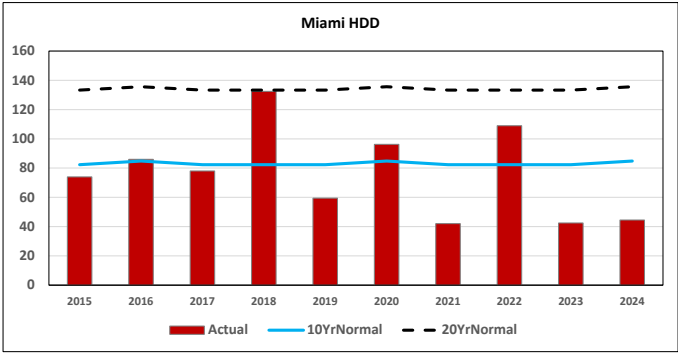
Figure 10 shows the Small Commercial average use forecast.

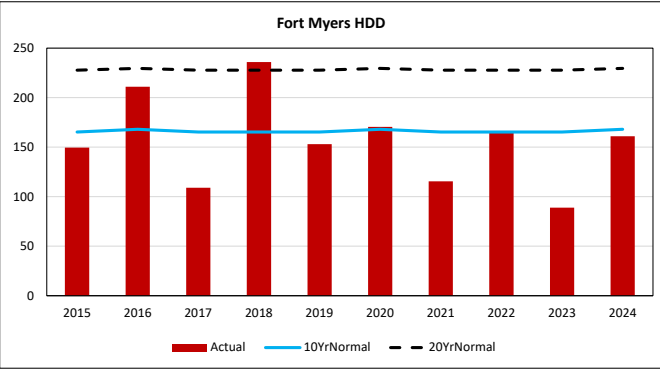
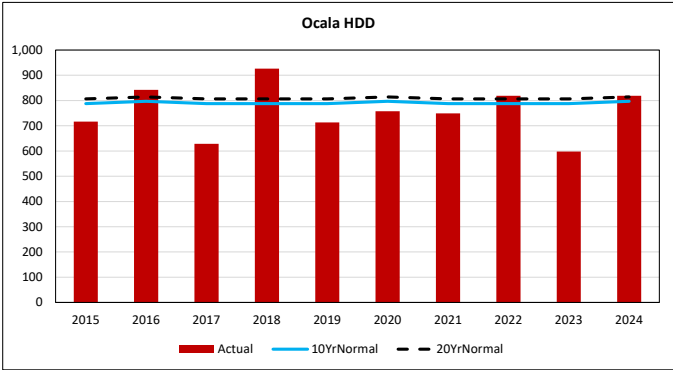
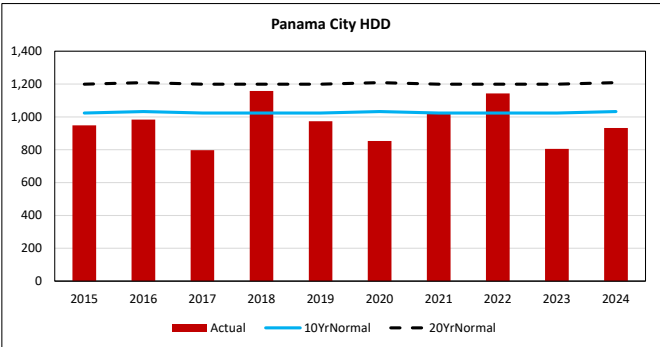
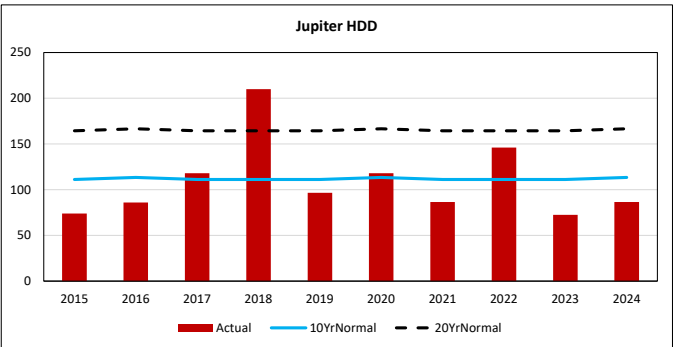
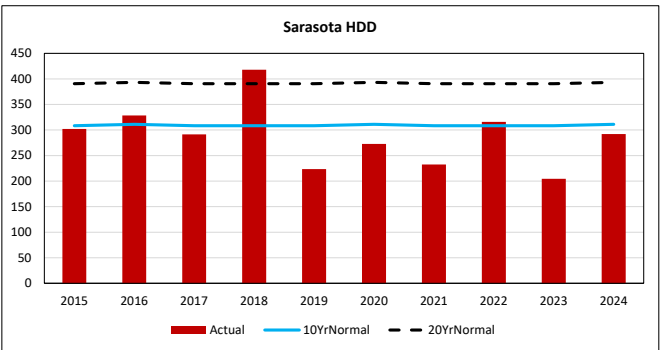
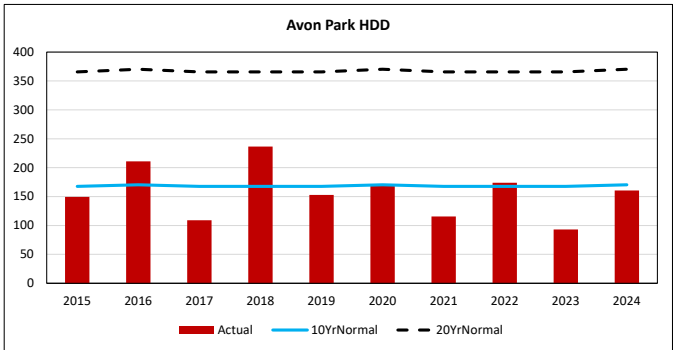
FIGURE 10: ORLANDO SMALL COMMERCIAL AVERAGE USE MODEL



Small Commercial use experienced a significant decline in 2020 due to business closures in response to COVID-19. Usage saw partial recovery by 2022, followed by a subsequent downward trend. Similar to Residential, the combination of minor improvements in heating efficiency and moderate economic growth results in a stable projection for average usage.

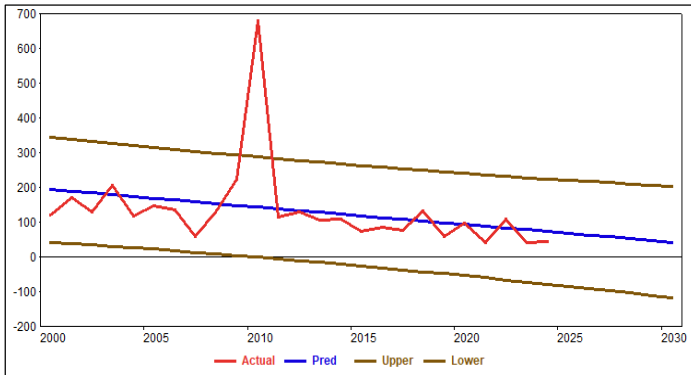
Peoples Gas System
HDD by Division
2015 - 2024





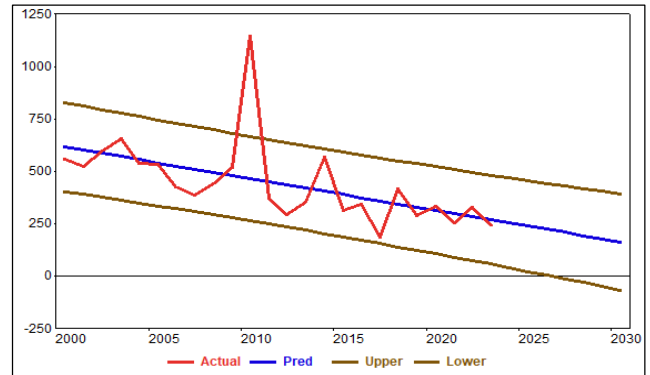
Peoples Gas System
HDD Trend Models by Division
2000 - 2030

Miami



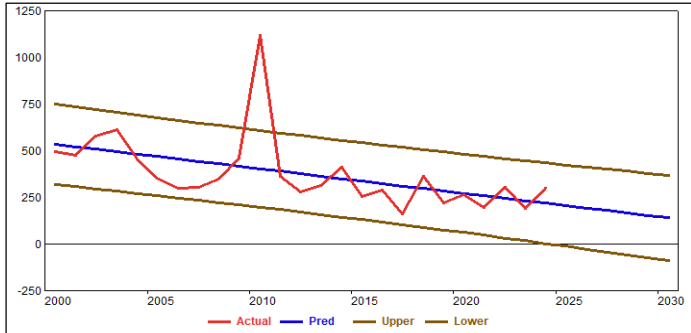
Variable	Coefficient	StdErr	T-Stat	P-Value
CONST	194.545	46.461	4.187	0.04%
aMiamiWthr.TrendVar	-5.040	3.319	-1.519	14.25%

Tampa



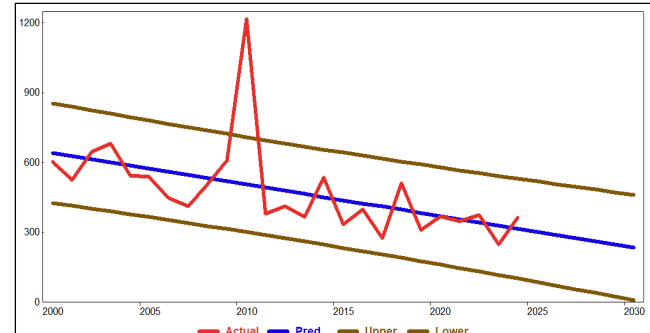
Variable	Coefficient	StdErr	T-Stat	P-Value
CONST	615.420	66.272	9.286	0.00%
aTampaWthr.TrendVar	-15.085	4.937	-3.055	0.58%

St. Petersburg



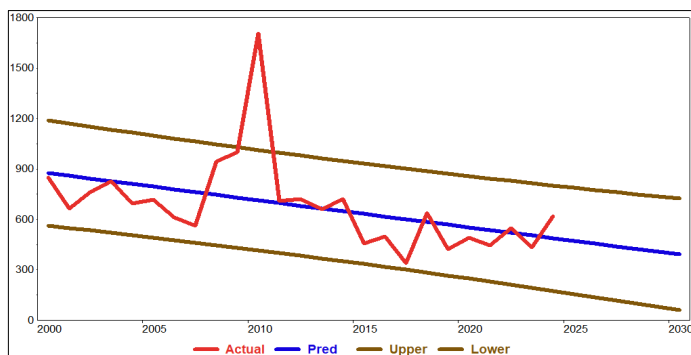
Variable	Coefficient	StdErr	T-Stat	P-Value
CONST	535.748	66.321	8.078	0.00%
aStPeteWthr.TrendVar	-13.132	4.737	-2.772	1.08%

Orlando



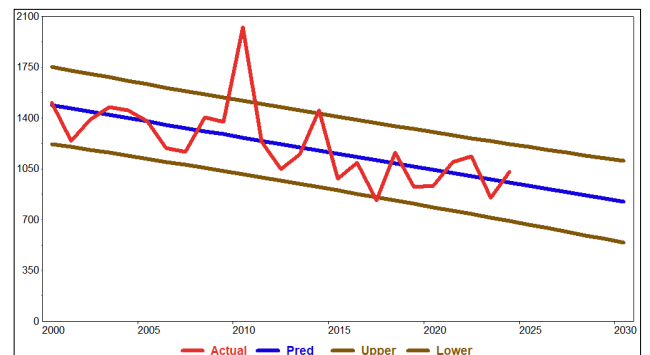
Variable	Coefficient	StdErr	T-Stat	P-Value
CONST	640.792	65.770	9.743	0.00%
aOrlandoWthr.TrendVar	-13.536	4.698	-2.881	0.84%

Eustis



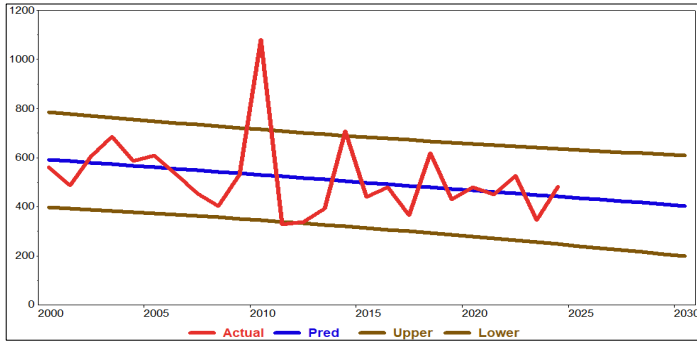
Variable	Coefficient	StdErr	T-Stat	P-Value
CONST	874.955	96.129	9.102	0.00%
aEustisWthr.TrendVar	-16.125	6.866	-2.348	2.78%

Jacksonville



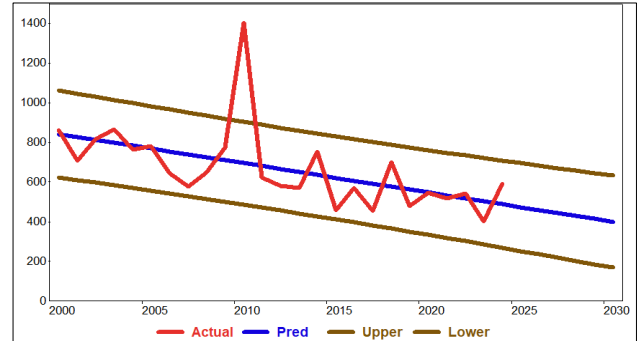
Variable	Coefficient	StdErr	T-Stat	P-Value
CONST	1487.248	81.490	18.251	0.00%
aJacksonWthr.TrendVar	-22.152	5.821	-3.806	0.09%

Lakeland



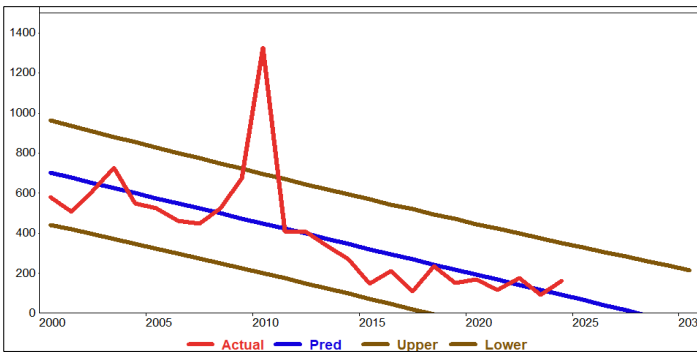
Variable	Coefficient	StdErr	T-Stat	P-Value
CONST	592.296	59.604	9.937	0.00%
aLakelandWthr.TrendVar	-6.281	4.257	-1.475	15.37%

Daytona



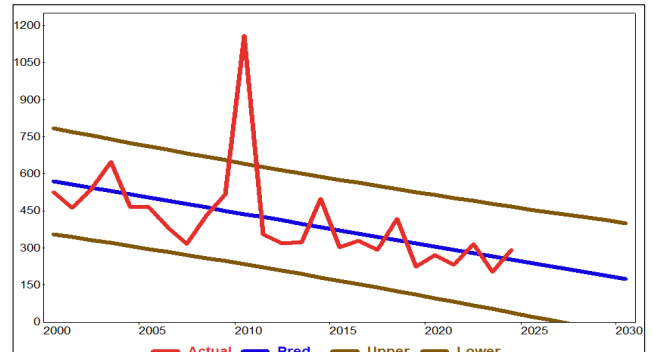
Variable	Coefficient	StdErr	T-Stat	P-Value
CONST	843.258	67.346	12.521	0.00%
aDaytonaWthr.TrendVar	-14.777	4.810	-3.072	0.54%

Avon Park



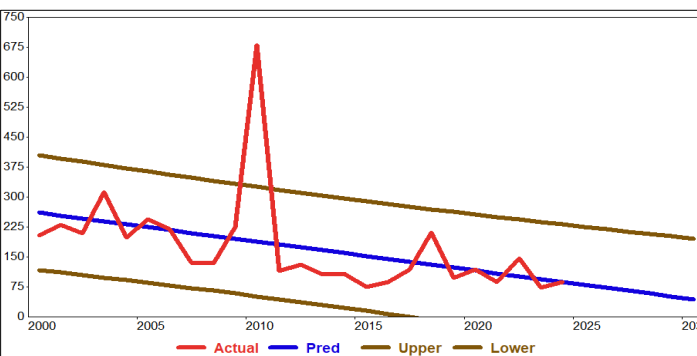
Variable	Coefficient	StdErr	T-Stat	P-Value
CONST	702.174	79.840	8.795	0.00%
aAvonParkWthr.TrendVar	-25.451	5.703	-4.463	0.02%

Sarasota



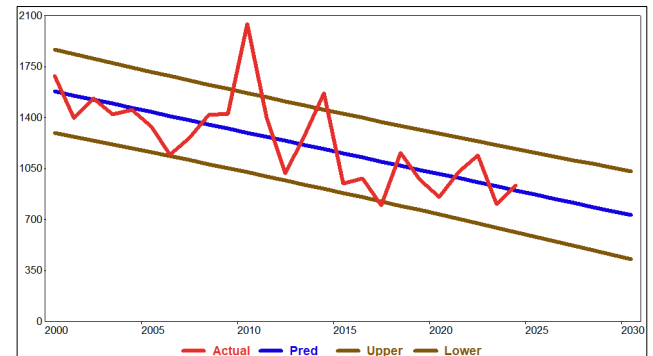
Variable	Coefficient	StdErr	T-Stat	P-Value
CONST	570.052	65.714	8.675	0.00%
aSarasotaWthr.TrendVar	-13.198	4.694	-2.812	0.99%

Jupiter

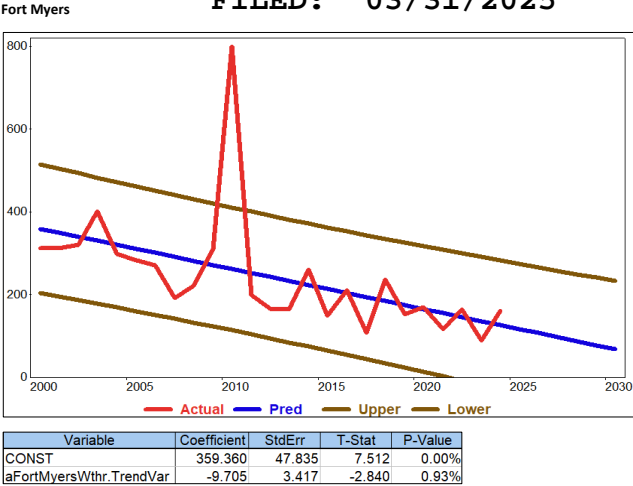
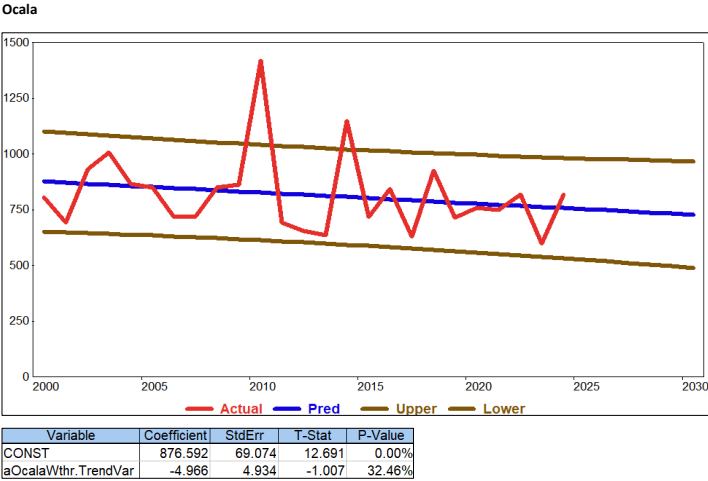


Variable	Coefficient	StdErr	T-Stat	P-Value
CONST	260.383	44.165	5.896	0.00%
aJupiterWthr.TrendVar	-7.232	3.155	-2.292	3.14%

Panama City

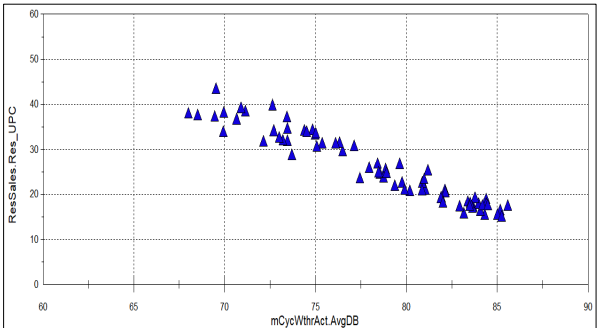


Variable	Coefficient	StdErr	T-Stat	P-Value
CONST	1581.035	87.500	18.069	0.00%
aPanamaCityWthr.TrendVar	-28.397	6.250	-4.544	0.01%

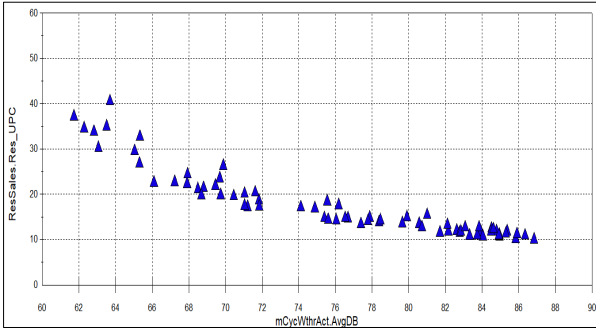


Peoples Gas System
Temperature Base by Division
60 - 90 Degrees

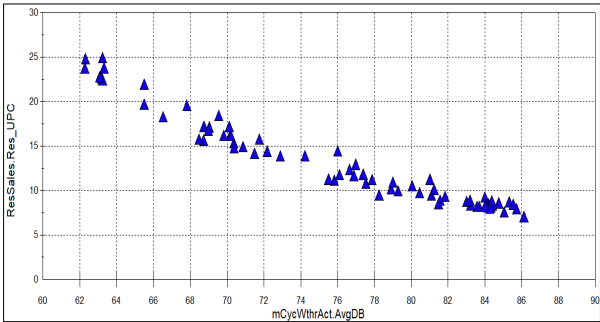
Miami - 85 degree



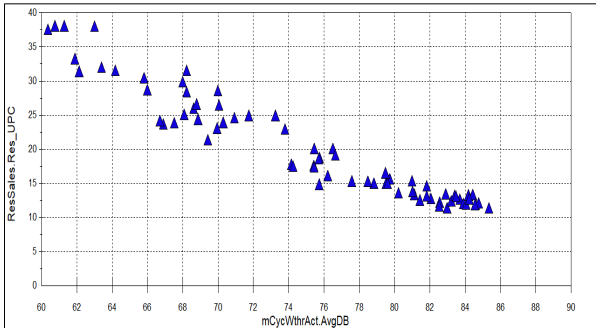
Tampa - 75 degree



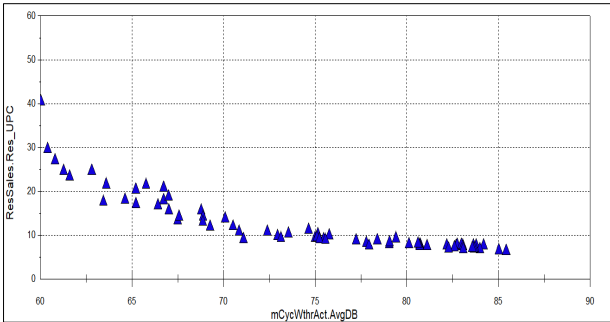
St. Petersburg - 75 degree



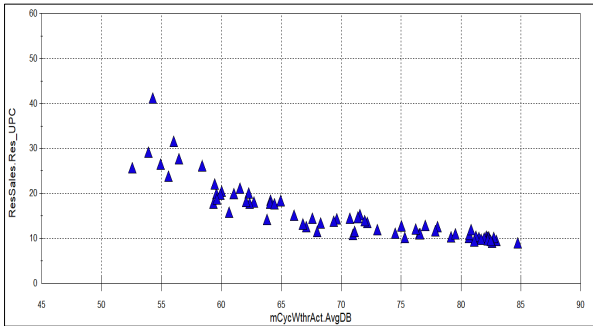
Orlando - 75 degree



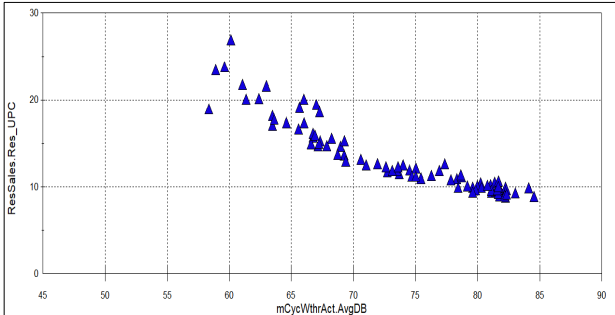
Eustis - 70 degree



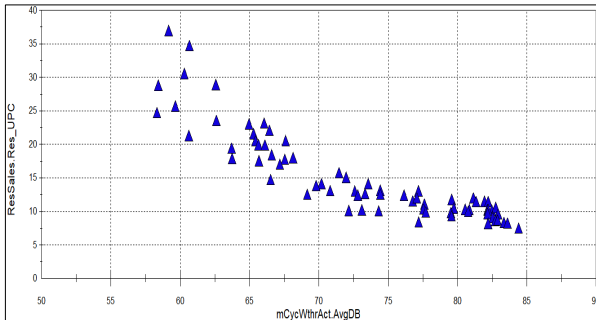
Jacksonville - 65 degree



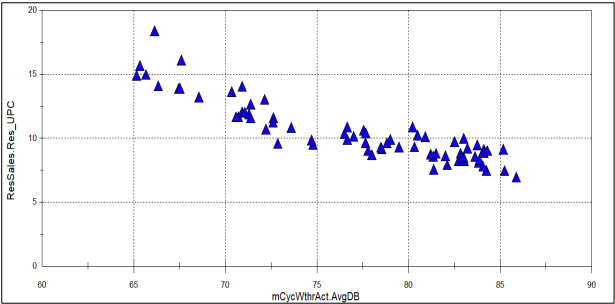
Lakeland - 75 degree



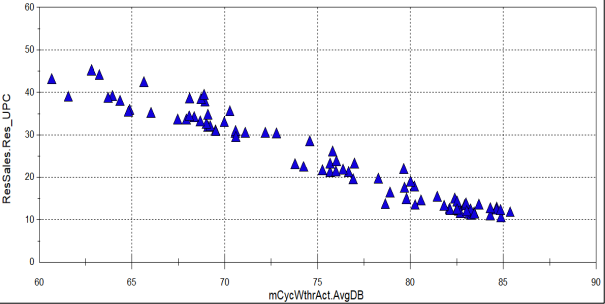
Daytona - 70 degree



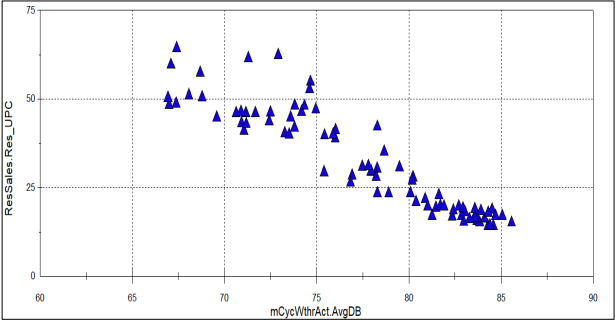
Avon Park - 75 degree temperature base



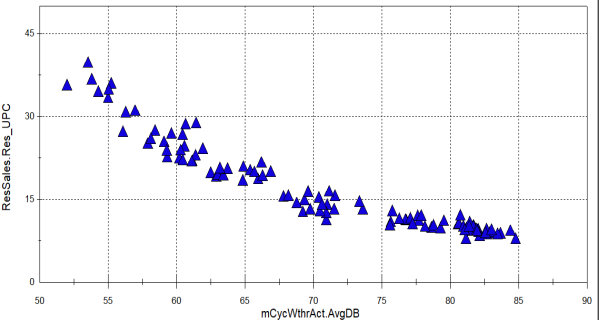
Sarasota - 85 degree



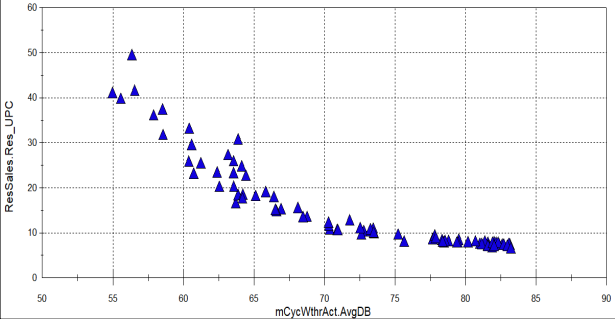
Jupiter - 85 degree



Panama City - 75 degree



Ocala - 75 degree temperature



Fort Myers - 85 degree

