JENNIFER J. VOSBURG

January 2, 2025

VIA HAND DELIVERY
Ms. Krys Abel
Louisiana Public Service Commission
Records and Recording Division
Galvez Building – 12th Floor
602 North 5th Street
Baton Rouge, Louisiana 70825

Re: R-36262 In re: Possible Modification of the Commission's Integrated Resource Planning Rules to Remove the Exemption for Electric Cooperatives; and
R-30021 In re: Development and Implementation of Rule for Integrated Resource Planning for Electric Utilities.

Dear Ms. Abel,

Enclosed for filing are the original and three copies of Pointe Coupee Electric Membership Corporation's Simplified Integrated Resource Plan filed in compliance with R-36262 and in accordance with R-30021. An electronic version has also been provided. Please return a filed stamped copy for our records.

If you have any questions, please do not hesitate to call me. Thank you for your courtesy and assistance with this matter.

Respectfully submitted,

Jennifer J. Vosburg
Attorney for Pointe Coupee Electric Membership Corporation

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DEPT.	DATE	DEPT.	

Hand

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JENNIFER
J. VOSBURG

January 2, 2025

VIA HAND DELIVERY
Mr. Brandon Frey, Executive Secretary
Louisiana Public Service Commission
Galvez Building – 12th Floor
602 North 5th Street
Baton Rouge, Louisiana 70825

Re: R-36262 In re: Possible Modification of the Commission's Integrated Resource Planning Rules to Remove the Exemption for Electric Cooperatives; and
R-30021 In re: Development and Implementation of Rule for Integrated Resource Planning for Electric Utilities.

Dear Secretary Frey,

Pointe Coupee Electric Membership Corporation submits the attached Simplified Integrated Resource Plan filed in compliance with R-36262 and R-30021.

If you have any questions, please do not hesitate to call me.

Respectfully submitted,

Jennifer J. Vosburg
Attorney for Pointe Coupee Electric
Membership Corporation

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REPORT

Simplified Integrated Resource Plan

PREPARED FOR

Pointe Coupee Electric Membership Corporation (PC Electric)

DATE

January 2, 2025

PREPARED BY

Ajit Kulkarni, PhD
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Mobile: (530) 220-0867

DISCLAIMER: This report is prepared by Quanta Technology, LLC. Quanta Technology was engaged by Pointe Coupee Electric Membership Corporation ("the Client"). The report is to the parameters set by the Client and contained in the engagement documentation between Quanta Technology and the Client. Data for this report was provided by the Client, and Quanta Technology bears no responsibility if the data was incorrect.. Information contained in this report is current as of the date of this report and may not reflect any event or circumstances that occurred after the date of this report. All queries related to this report's content or use must be addressed to the Client.

REPORT CONTRIBUTORS

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- Michael Mount
- Namrata Rajput
- Edison Cardona

Report Terminology

Table RT-0-1. Report Terms

TERM	DEFINITION
Base Case	The most likely forecast.
Class	Grouping of consumers based upon load behavior, as found on Form 7.
Component	Load data used as the dependent (Y) variables in the regression analysis.
Demand	Peak demand either instantaneous of over a period of time, e.g., Annual System Peak demand is the highest demand attained
Energy	System energy requirement.
Hourly Load Forecast (HLF)	Forecast of hourly system load based on the results of the base case.
Hourly Profile	Hourly load shape representative of the system load and developed using recent years of historical load.
Loss Of Load Probability (LOLP)	A probabilistic measure of supply resource adequacy that seeks to minimize the probability that a supply portfolio will have insufficient supply resources to meet its customer demand (i.e., minimize events and durations of periods of forecasted unserved energy).
Pattern Year	A single year of actual hourly load determined to be the most representative of the system.
Ranked Order Averaging Analysis	Methodology to develop the Hourly Profile based upon the Pattern Year and recent years of hourly load.
Sensitivity Forecast	An uncertainty analysis to determine the sensitivity of the system energy requirement and system peak demand to changes in economic and weather conditions.
Set	A combination of a Class and Component used in the regression analysis.
Weather Normalization	Determination of the effect of weather on the system energy requirement and system peak demand to calculate “normal” values.
Midcontinent Independent System Operator (MISO)	An Independent System Operator (ISO) and Regional Transmission Organization (RTO) that provides open-access transmission services, monitors the high-voltage grid, and operates one of the largest real-time energy markets across 15 U.S. states and Manitoba, Canada.
Consumer Price Index (CPI)	Measures the average change in prices paid by consumers for energy-related goods and services over time.
Weighted average cost of capital (WACC)	Average rate of return required by investors and lenders, weighted by the proportion of equity and debt financing, projects or operations.

Executive Summary

This Simplified Integrated Resource Plan (Simplified IRP) is being submitted by Pointe Coupee Electric Membership Corporation (PC Electric) in accordance with the Louisiana Public Service Commission (LPSC, the Commission) General Order No. 08-28-2024 (R-36262) Corrected. The document focuses on PC Electric's current portfolio of power supply agreements, its recent activities to develop load forecasts, assessments and contracts for future resources, and future strategies for developing a full resource plan by February 2026. The activities and plans in this report reflect PC Electric's commitment to ensuring reliable and cost-effective energy supply for its members.

For more than 20 years, PC Electric has relied upon full-requirement Purchase Power Agreements (PPA) to supply the resource needs of its members. PC Electric's current PPA is with Louisiana Generating, LLC (LaGen), a subsidiary of Pelican Power LLC. . This agreement is set to expire on March 31, 2025. Additionally, PC Electric maintains a wholesale power purchase contract with the Southwestern Power Administration (SWPA) for hydroelectric power, which is expected to be renewed upon its expiration in 2032.

Currently, PC Electric's transmission and distribution services involve ownership and operational responsibilities shared between LaGen and PC Electric itself. PC Electric has also contracted with 1803 Cooperative (1803), a member-owned electric cooperative serving customers with generation and transmission services in LA to provide PC Electric transmission services beginning April 1, 2025. Currently, the assets of PC Electric are owned, operated, and managed either by LaGen, the existing power supply counterparty of PC Electric, or by PC Electric itself.

In 2024, PC Electric worked with a consultant, Guernsey (Forecast Consultant), who had been contracted by 1803 to develop a forecast for its customer, to develop a 30-year forecast (2024–2053) of system energy, customer class-level energy, and system peak demand.

In compliance with the LPSC's 1983 General Order[1] and the LPSC's Market-Based Mechanism (MBM) Order in docket R-28376, which mandates a competitive solicitation process, PC Electric collaborated with other Louisiana cooperatives and contracted with Daymark Energy Advisors, Inc. (RFP Consultant) to aid in the development of a request for proposal (RFP) and the execution of a competitive solicitation to secure PC Electric's future resource needs. The RFP received a broad and diverse range of responses from bidders

Following a comprehensive multi-phase qualitative and quantitative evaluation of the bids received, PC Electric selected two contracts as the least cost options to deliver a reliable and flexible portfolio of supply resources to its members. The first contract is with NextEra Energy Marketing, LLC, which is a full requirements purchase supply agreement ("NEM PSA") with regular market-based adjustments to maintain price competitiveness in the market The second contract is with Mondu Solar, LLC, a subsidiary of NextEra Energy Resources, LLC, for an offtake agreement for 25 MW from the 150 MW Mondu Solar project which is under development. PC Electric also plans to renew its SWPA contract upon its expiration in 2032. These

[1] LPSC General Order dated September 20, 1983 (In re: In the Matter of the Expansion of Utility Power Plant: Proposed Certification of New Plant by the LPSC,) as amended by LPSC General Order (Corrected) dated May 27, 2009 (In re: Possible Modifications to the September 20, 1983 General Order to allow (1) for more expeditious certificates of limited-term resource procurements and (2) an exception or annual and seasonal liquidated damages block energy purchases) ("1983 General Order").

three resources were determined to provide the least-cost solutions for meeting PC Electric's energy needs over the next nine-plus years. Both of the NextEra contracts have been submitted to and approved by the LPSC in Order Nos. U-36515 and U-36515-A.

Finally, Section 7 of this report discusses PC Electric's plans for developing a Full IRP, which will provide a more detailed framework for meeting long-term energy supply and demand requirements.

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1 Introduction

1.1 Purpose

In the August 14, 2024, General Order amending and superseding the Corrected General Order dated April 18, 2012 (Docket No. R-30031 "IRP Order"), the Louisiana Public Service Commission (LPSC, the Commission) removed the exemption of electric cooperatives from the requirement to file an Integrated Resource Plan (IRP) with the Commission. This order effectively requires all Louisiana Cooperatives to begin filing regular IRPs with the Commission

In the August 14, 2024 IRP Order the Commission allowed that any electric utility that has not previously filed an IRP or is not currently in the process of complying with these rules be required to file a Simplified IRP Report that describes its most recently developed long-range resource plan based on whatever resource planning process the utility currently relies on. The Simplified IRP Report must be filed within 120 days of the August 14, 2024 IRP order. The initial Simplified IRP Report must include the following:

1. A description of the load forecast and forecasting methodology.
2. A summary of existing resources and transactions.
3. A description of key input data assumptions.
4. An explanation of the method that had been used to develop the long-range resource plan, including a discussion of the modeling tools that had been used and the studies that had been performed to arrive at the resulting long-range resource plan.
5. A summary of the key results, including the resulting long-range expansion plan.

This Simplified IRP Report is intended to comply with the requirements of the August 14, 2024, Commission General Order.

1.2 Description of PC Electric

PC Electric provides electric service to approximately 10,600 meters in the parishes of Pointe Coupee, West Baton Rouge, and Iberville in the state of Louisiana. A map of the PC Electric service territory is shown in Figure 1-1.

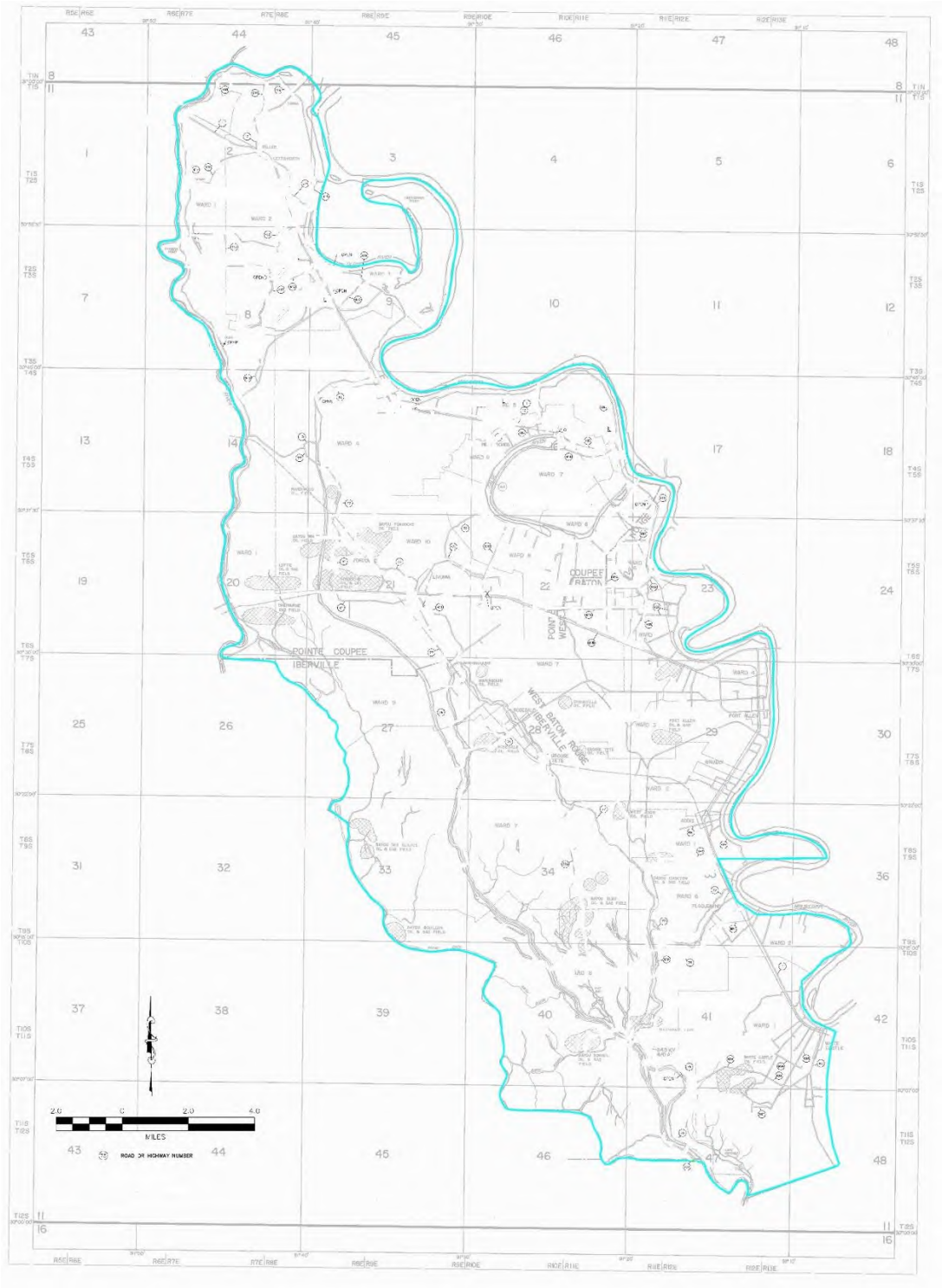

Figure 1-1. PC Electric Service Territory

PC Electric's year-end 2023 customer data is summarized in Table 1-1.

Table 1-1. PC Electric Customers, Sales, Energy Purchases and Peak System Demand

CUSTOMER CLASS	NUMBER OF CONSUMERS	ENERGY SALES (MWH)	ENERGY REQUIREMENT INCLUSIVE OF LOSSES (MWH)	PEAK SYSTEM DEMAND (MW)
Residential	7,409	118,202		
Seasonal Residential	847	4,673		
Small Commercial	2,245	47,838		
Large Commercial	7	44,168		
Street and Highway Lighting	96	1,049		
Public Authorities	58	2,018		
Own Use	1	389		
Total	**10,663**	**218,337**	**226,759**	**54**

Currently, PC Electric serves its members through a full requirements Power Supply and Service Agreement (PSSA) with Louisiana Generating, LLC (LaGen), a subsidiary of Pelican Power LLC that expires on March 31, 2025, and a wholesale power purchase contract for hydroelectric power through the Southwestern Power Administration (SWPA) on behalf of the United States Department of Energy (US DOE) that is expected to be renewed when it expires in 2032.

2 Key Inputs and Assumptions

The key assumptions used by PC Electric and its consultants to perform the analysis and reach the results discussed include:

1. Historical energy and system peak demand data provided by PC Electric and others.
2. Historical weather data provided by NOAA.
3. Econometric data was provided by Woods & Poole.
4. Three forecasts of natural gas prices at the Henry Hub location sourced from the US Energy Information Administration's Annual Energy Outlook.
5. Forecasts of electricity market prices for energy and capacity developed by PC Electric's RFP consultant for Aurora generated monthly average locational marginal prices for the Midcontinent Independent System Operator's (MISO) Zone 9 (which covers Louisiana and parts of Texas).
6. Reference Consumer Price Index (CPI) of 2% annually selected by PC Electric's RFP consultant for the RFP bid evaluations.
7. Weighted average cost of capital (WACC) of 6.7% calculated based on input from PC Electric and its RFP consultant.

3 Load Forecast

3.1 Methodology

3.1.1 Historical Data

PC Electric contracted with an energy consultant to provide a 30-year forecast[2] of:

1. Base case annual energy consumption by customer class
2. Base case annual energy purchases
3. Base case annual system peak demand
4. Alternate forecasts for annual energy purchases based on weather and economic variations
5. Alternate forecasts for annual system peak demand based on weather and economic variations
6. Annual (8,760) hourly load profile

The forecast was based on 30 years of historical data (i.e., 1994–2023) on the number of customers, energy sales, energy purchases, and system peak demands. The historical number of customers by class is shown in Figure 3-1.

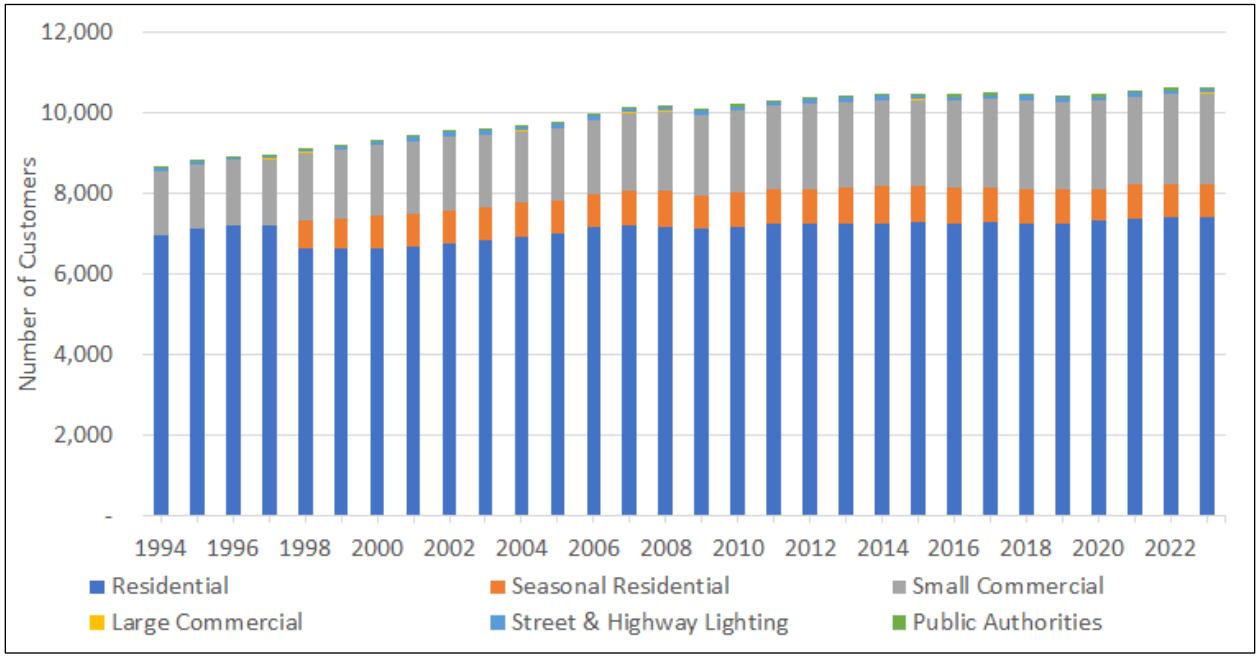

Figure 3-1. Number of Customers by Class

The historical energy sale by customer class is shown in Table 3-1.

[2] While PC Electric contracted for a 30-year forecast of data (2024–2053), only the first 20 years of that forecast (2024–2043) are presented in this report.

Table 3-1. Historical Energy Sales/Consumption by Class

YEAR	RESIDENTIAL (MWH)	SEASONAL RESIDENTIAL (MWH)	SMALL COMMERCIAL (MWH)	LARGE COMMERCIAL (MWH)	STREET AND HIGHWAY LIGHTING (MWH)	PUBLIC AUTHORITIES (MWH)	OWN USE (MWH)	TOTAL (MWH)
1994	79,007	-	28,824	64,057	705	679	636	173,908
1995	86,476	-	29,820	65,596	649	1,198	739	184,477
1996	86,859	-	32,290	74,748	658	1,073	519	196,148
1997	89,717	-	34,151	80,653	682	1,266	439	206,907
1998	96,569	3,003	37,614	86,791	573	1,186	491	226,227
1999	94,403	4,019	36,982	88,993	648	1,022	535	226,603
2000	100,055	4,145	36,647	86,271	500	1,059	523	229,200
2001	96,088	4,015	38,804	76,240	944	1,013	531	217,636
2002	103,615	4,217	39,941	80,582	910	1,237	487	230,990
2003	104,561	4,406	39,049	82,886	968	1,133	464	233,468
2004	108,585	4,625	40,048	81,330	1,025	1,292	449	237,354
2005	109,741	4,540	40,062	77,888	1,027	1,180	537	234,975
2006	113,464	5,268	42,930	73,179	1,144	1,240	508	237,732
2007	115,013	5,302	46,143	82,509	1,189	1,206	497	251,858
2008	110,914	4,624	46,440	72,189	1,194	1,216	474	237,051
2009	117,888	4,984	50,197	64,406	1,254	1,355	453	240,537
2010	125,924	5,430	48,795	64,364	1,140	1,217	531	247,402
2011	119,930	5,400	49,945	60,725	1,076	1,141	507	238,724
2012	113,490	5,314	49,757	58,248	1,073	1,280	467	229,630
2013	115,804	5,376	54,263	64,392	1,087	1,504	460	242,886
2014	118,084	5,464	54,799	56,345	1,077	1,642	437	237,848
2015	118,782	5,410	55,852	53,764	1,083	1,843	482	237,216
2016	111,915	5,300	50,494	50,002	1,072	1,819	380	220,982
2017	110,045	5,184	45,407	50,576	1,080	1,922	379	214,593
2018	119,796	5,756	47,145	48,877	1,088	1,583	470	224,714
2019	113,796	4,309	44,262	55,189	1,017	1,700	391	220,663
2020	112,308	3,847	43,785	51,448	1,043	1,646	400	214,477
2021	114,657	4,294	45,651	50,489	1,055	1,784	357	218,288
2022	117,278	4,348	46,667	51,875	1,081	1,765	369	223,383
2023	118,202	4,673	47,838	44,168	1,049	2,018	389	218,336

The historical total energy requirements, inclusive of losses, are shown in Table 3-2.

Table 3-2. Historical Total Annual Consumption, Losses, and Energy Requirement

YEAR	ENERGY SALES/ CONSUMPTION (MWH)	LOSSES	ENERGY REQUIREMENT - INCLUSIVE OF LOSSES (MWH)
1994	173,908	+6.7%	185,553
1995	184,477	+5.3%	194,340
1996	196,148	+6.6%	209,055
1997	206,907	+6.2%	219,647
1998	226,227	+5.6%	238,968
1999	226,603	+5.5%	239,142
2000	229,200	+6.2%	243,370
2001	217,636	+5.6%	229,815
2002	230,990	+6.2%	245,255
2003	233,468	+5.7%	246,729
2004	237,354	+5.7%	250,765
2005	234,975	+6.5%	250,194
2006	237,732	+5.6%	251,158
2007	251,858	+4.8%	264,041
2008	237,051	+6.0%	251,275
2009	240,537	+4.8%	252,052
2010	247,402	+7.3%	265,515
2011	238,724	+6.0%	253,105
2012	229,630	+6.6%	244,785
2013	242,886	+5.8%	256,944
2014	237,848	+6.2%	252,507
2015	237,216	+4.6%	248,182
2016	220,982	+7.1%	236,605
2017	214,593	+6.1%	227,766
2018	224,714	+5.9%	237,908
2019	220,663	+6.1%	234,077
2020	214,477	+5.8%	226,931
2021	218,288	+4.9%	228,986
2022	223,383	+5.1%	234,737
2023	218,336	+3.9%	226,759

The historical system peak demand is shown in Table 3-3.

Table 3-3. Historical Annual System Peak Demand

YEAR	SYSTEM PEAK DEMAND (MW)
1994	36.27
1995	41.36
1996	41.61
1997	44.32
1998	47.95
1999	47.69
2000	49.47
2001	45.66
2002	49.81
2003	49.25
2004	50.19
2005	50.00
2006	52.78
2007	54.76
2008	52.41
2009	51.77
2010	54.73
2011	51.75
2012	50.98
2013	51.38
2014	51.24
2015	52.04
2016	50.43
2017	48.31
2018	52.19
2019	48.86
2020	50.07
2021	51.64
2022	52.44
2023	54.02

3.1.2 Variable Data

Econometric data was provided by Woods & Poole for both historical (1994–2023) and forecast periods (2024–2043) for each parish in PC Electric's service territory. The historic weather data was obtained via the Applied Climate Information System (ACIS), operated by the National Oceanic and Atmospheric Administration (NOAA). Daily and monthly weather data for the entire historical study period were collected for each parish and converted into annual values. Future weather was assumed to equal the average of the historical weather values for each year of the forecast study period.

3.1.3 Adjustment to Data

Several adjustments were made to historical data prior to its use in regressions. The adjustments included:

- **Seasonal residential:** The seasonal residential class was developed in 1998 by reclassifying residential consumers. An adjustment to class consumers and sales was made to both the residential and seasonal residential classes to reflect this reclassification.
- **Large commercial:** PC Electric anticipates that two new large commercial-class customers[3] will begin service in 2025. An adjustment was made to consumers, sales, and demand to account for these expected new customers.

3.1.4 Weather Normalization

The historical load data was weather-normalized prior to the regression analysis. Daily weather variable data was collected for a 30-year historical period aligning with the historical load data (1994–2023). Separate regression analyses were performed on the historical daily energy and daily demand to determine the weather variables best able to explain system load patterns. The variable coefficients of the selected models, along with the actual weather variable annual value, were then used to determine an annual weather impact. Finally, this impact was combined with the actual annual load to calculate a weather-normalized value for the historical data set.

3.1.4.1 Demand Weather Normalization Development

The Daily Demand regression was performed for both the summer (June–August) and winter (November–February) months, as PC Electric has seen annual peaks in both seasons over the historical study period. Historical weather and daily peak data were reviewed to determine "Threshold Temperatures," or temperatures above or below which higher daily peaks can be expected:

- When the daily maximum temperature rose above 78 °F, higher daily peaks occurred.
- When the daily minimum temperature dropped below 44 °F, higher daily peaks occurred.

A custom weather variable (referred to as "CV2") was developed, calculated as the greater of the spread between the daily maximum and minimum temperatures and their respective Temperature Thresholds.

A single-day example is as follows:

- Maximum temperature:
  - Actual weather: 60 °F
  - Distance from Temperature Threshold: -18 °F
- Minimum temperature:
  - Actual weather: 31 °F
  - Distance from Temperature Threshold: 13 °F

In this example, the minimum temperature was farther from its Temperature Threshold than the maximum temperature. Therefore, CV2's value for this day would be 13 °F. CV2 was the variable used in the Daily Demand regressions.

[3] PC Electric Large Power Service are loads in excess of 1,000 kilowatts.

3.1.4.2 *Energy Weather Normalization Development*

Daily Energy regressions were performed on summer, winter, and shoulder months separately, due to the varying relationship between weather and load throughout the year. The variables used for the daily Energy regressions were:

- Summer (May–August): Daily maximum temperature
- Winter (November–February): Daily average temperature
- Shoulder (March–April and September–October): CV2[4]

3.1.5 Regression Analysis

Multivariable regression modeling was used to test and select the combination of variables and forecast formulas that provided the best fit to the 30 years of historical data for consumption of each of the customer classes and for the system demand. The inputs to the analysis were as follows:

- Historical data:
  - Load components
    - Consumers
    - Usage per consumer
    - Demand
  - Variable data (regression X variables)
    - Economic variable data
    - Weather variable data
- Forecasted data:
  - Variable data (regression X variables)
    - Economic variable data
    - Weather variable data

Each forecast was assessed with separate regression modeling assessments comprising testing of at least 50,000 different regression models. Each regression model was a combination of the various economic and weather variables. The models were tested using Python programs to determine the combination of variables that best fit the historic load data trends. The regression model statistics, primarily adjusted R-squared, were used to output up to 100 models for further review. One model was selected based on the statistical fit criteria such as adjusted R-squared, deviation from an average of the models, and variables used.

A listing of the 98 econometric and weather variables tested in the regression analysis is provided in Appendix A: Econometric and Weather Variables (Table A). A list of the variables ultimately selected for a model for each forecasted element is provided in Appendix A: Econometric and Weather Variables (Table A).

Both a base case version and multiple sensitivity versions of the energy and system peak demand forecasts were developed. The base case forecast represents the most likely forecast using the base case or most likely

[4] 2024 Load Forecast Report, prepared for Pointe Coupee Electric Membership Cooperative, by Guernsey.

values of the forecast model econometric variables. The sensitivity versions of the forecast represent the forecasted energy and system peak demand under extremes of weather or economic conditions, which are plausible very vary upward or downward from the most likely conditions.

3.1.6 Forecast Results

The forecasted base case energy sales/consumption by customer class is shown in Figure 3-2.

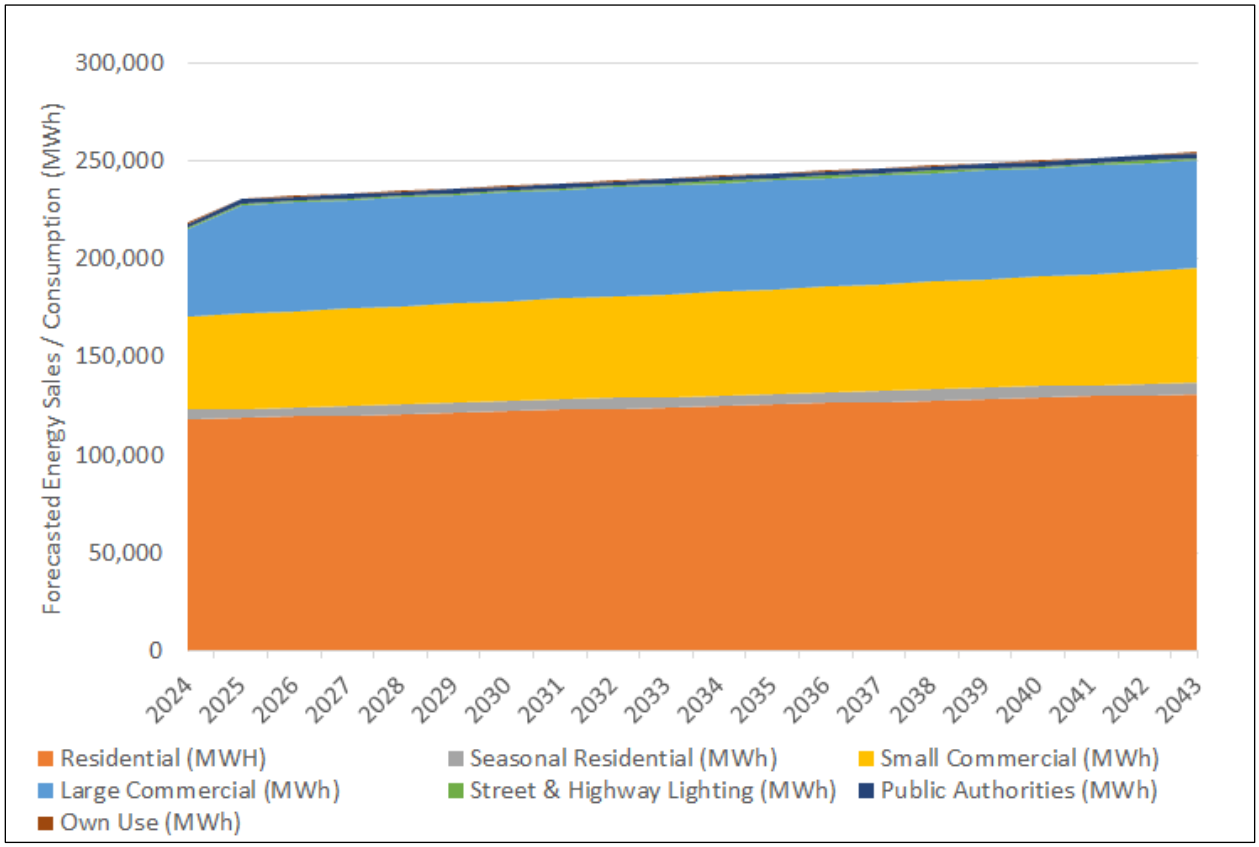

Figure 3-2. Forecast Base Case Energy Sales/Consumption by Customer Class

The forecasted energy sales/consumption by customer class is shown in Table 3-4.

Table 3-4. Forecasted Energy Sales/Consumption by Class

YEAR	RESIDENTIAL (MWH)	SEASONAL RESIDENTIAL (MWH)	SMALL COMMERCIAL (MWH)	LARGE COMMERCIAL (MWH)	STREET AND HIGHWAY LIGHTING (MWH)	PUBLIC AUTHORITIES (MWH)	OWN USE (MWH)	TOTAL (MWH)
2024	118,403	4,698	47,799	44,168	1,013	1,905	388	218,374
2025	118,893	4,782	48,301	55,483	1,003	1,952	382	230,797
2026	119,592	4,875	48,818	55,483	1,004	1,991	381	232,143
2027	120,284	4,968	49,349	55,483	1,005	2,025	374	233,488
2028	120,988	5,050	49,888	55,483	1,006	2,057	374	234,845
2029	121,672	5,133	50,415	55,483	1,007	2,086	373	236,169
2030	122,348	5,206	50,919	55,483	1,009	2,115	373	237,452
2031	123,035	5,278	51,424	55,483	1,010	2,143	368	238,741

YEAR	RESIDENTIAL (MWH)	SEASONAL RESIDENTIAL (MWH)	SMALL COMMERCIAL (MWH)	LARGE COMMERCIAL (MWH)	STREET AND HIGHWAY LIGHTING (MWH)	PUBLIC AUTHORITIES (MWH)	OWN USE (MWH)	TOTAL (MWH)
2032	123,701	5,346	51,903	55,483	1,011	2,171	368	239,983
2033	124,378	5,406	52,388	55,483	1,012	2,199	368	241,235
2034	125,058	5,472	52,876	55,483	1,014	2,227	373	242,502
2035	125,745	5,532	53,363	55,483	1,015	2,254	373	243,765
2036	126,433	5,593	53,856	55,483	1,017	2,282	373	245,037
2037	127,130	5,654	54,371	55,483	1,018	2,310	373	246,338
2038	127,837	5,719	54,885	55,483	1,020	2,338	373	247,654
2039	128,531	5,778	55,400	55,483	1,021	2,366	374	248,953
2040	129,236	5,821	55,932	55,483	1,023	2,394	374	250,262
2041	129,955	5,885	56,486	55,483	1,025	2,423	375	251,631
2042	130,682	5,946	57,096	55,483	1,026	2,451	375	253,060
2043	131,415	6,016	57,734	55,483	1,028	2,480	380	254,535

The forecasted total energy requirements, inclusive of losses, are shown in Table 3-5.

Table 3-5. Forecasted Total Annual Consumption, Losses, and Energy Requirement

YEAR	ENERGY SALES/ CONSUMPTION (MWH)	LOSSES	ENERGY REQUIREMENT - INCLUSIVE OF LOSSES (MWH)
2024	218,374	+4.6%	228,449
2025	230,797	+4.6%	241,446
2026	232,143	+4.6%	242,854
2027	233,488	+4.6%	244,261
2028	234,845	+4.6%	245,681
2029	236,169	+4.6%	247,066
2030	237,452	+4.6%	248,408
2031	238,741	+4.6%	249,756
2032	239,983	+4.6%	251,056
2033	241,235	+4.6%	252,365
2034	242,502	+4.6%	253,691
2035	243,765	+4.6%	255,012
2036	245,037	+4.6%	256,342
2037	246,338	+4.6%	257,704
2038	247,654	+4.6%	259,081
2039	248,953	+4.6%	260,439
2040	250,262	+4.6%	261,809
2041	251,631	+4.6%	263,241
2042	253,060	+4.6%	264,736
2043	254,535	+4.6%	266,279

The forecasted system peak demand is shown in Table 3-6.

Table 3-6. Forecasted Annual System Peak Demand

YEAR	SYSTEM PEAK DEMAND (MW)
2024	54.70
2025	56.19
2026	56.56
2027	56.88
2028	57.15
2029	57.40
2030	57.63
2031	57.85
2032	58.07
2033	58.28
2034	58.50
2035	58.72
2036	58.94
2037	59.16
2038	59.39
2039	59.61
2040	59.83
2041	60.06
2042	60.29
2043	60.53

A chart of the actual and forecasted energy sales/consumption and system peak load is provided in Figure 3-3.

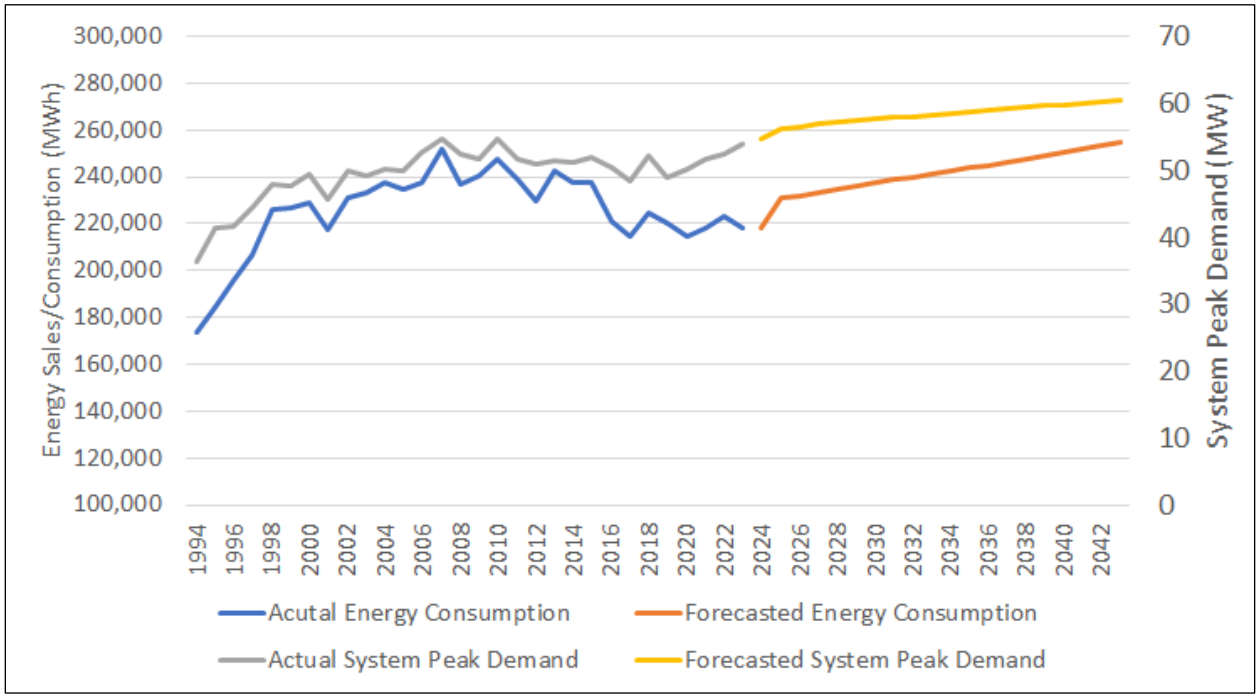

Figure 3-3. Actual and Forecasted Energy Sales/Consumption and System Peak Load

3.1.7 Hourly Load Forecast

An hourly load profile and hourly load forecast were also developed by PC Electric's forecast consultant. A pattern year of hourly load was developed based on an assessment of the last 5 years of hourly system load (2019–2023). As described by the PC Electric forecast consultant, "the data was distributed into seasons based on load characteristics." The year determined to be the most representative of system load shapes and future load patterns, the Pattern Year, was 2019.

After the Pattern Year was established, the Ranked Order Averaging Analysis was performed using the following steps:

1. For each of the five years, the hourly load was sorted, or ranked, from highest load to lowest load within each season.
2. The hourly loads were then averaged across the five years by ranking (i.e., all five hour rank one load within the first season were averaged together).

The averaged results were re-sorted to produce the Hourly Profile using the shape of the Pattern Year (i.e., the average hour rank one load created in the step above was re-sorted into the hour in which rank one occurred in the Pattern Year).

The Ranked Order Averaging Analysis works to avoid undesirable reduction of volatility within the hourly loads that can occur when a simple average is used. The result of the re-sorting was an Hourly Profile using a 2024 calendar year.

Production cost model software (PLEXOS) was used to develop the hourly load forecast, using the hourly profile and the Energy and Demand from the base case forecast as inputs. The production cost model

software ensures that both the energy and demand are met, even if the two components are growing at different rates."[5]

3.1.8 Forecast Sensitivity

Since forecasting is an inexact science, base cases, or the most likely forecasts, are often accompanied by additional forecasts that represent plausible forecasts under conditions that vary from the expected or most likely conditions. The PC Electric forecast multiple alternative forecasts were developed that represent:

1. High Economic Growth [Base Case + economic variable impact]
2. Low Economic Growth [Base Case - economic variable impact]
3. Extreme Weather [Base Case + weather variable impact]
4. Mild Weather [Base Case – weather variable impact]

The system Base Case Energy was calculated using the sum of the customer class forecasts. To simplify the processes associated with creating alternate sensitivity forecasts, the PC Electric forecast consultant developed a regression analysis for the total system base case energy forecast. The base case regression models for both total system energy and total peak system demand were then used to determine the system's sensitivity to changes in economic and weather conditions.

For the weather variables, variable standard deviations were calculated based on the last 30 years of historical data from 1994–2023. For the economic variables used, the PC Electric forecasting consultant chose to calculate the standard deviation of the percent change in the variables as opposed to the standard deviation of the variables themselves. For the economic variables, only the most recent 10 years of historical data were used to calculate the standard deviation for the economic variables. The forecast consultant explained that using only ten years of history helped to avoid fundamental shifts in economic conditions from prior decades dictating future volatility.

Two standard deviations were applied to the base case regression models using each variable's coefficient. The individual variable impacts were aggregated separately for economic and weather to create the four sensitivity variations listed at the beginning of this subsection.

The results of the four sensitivities on total system energy are shown in Figure 3-4.

[5] Ibid, page 9.

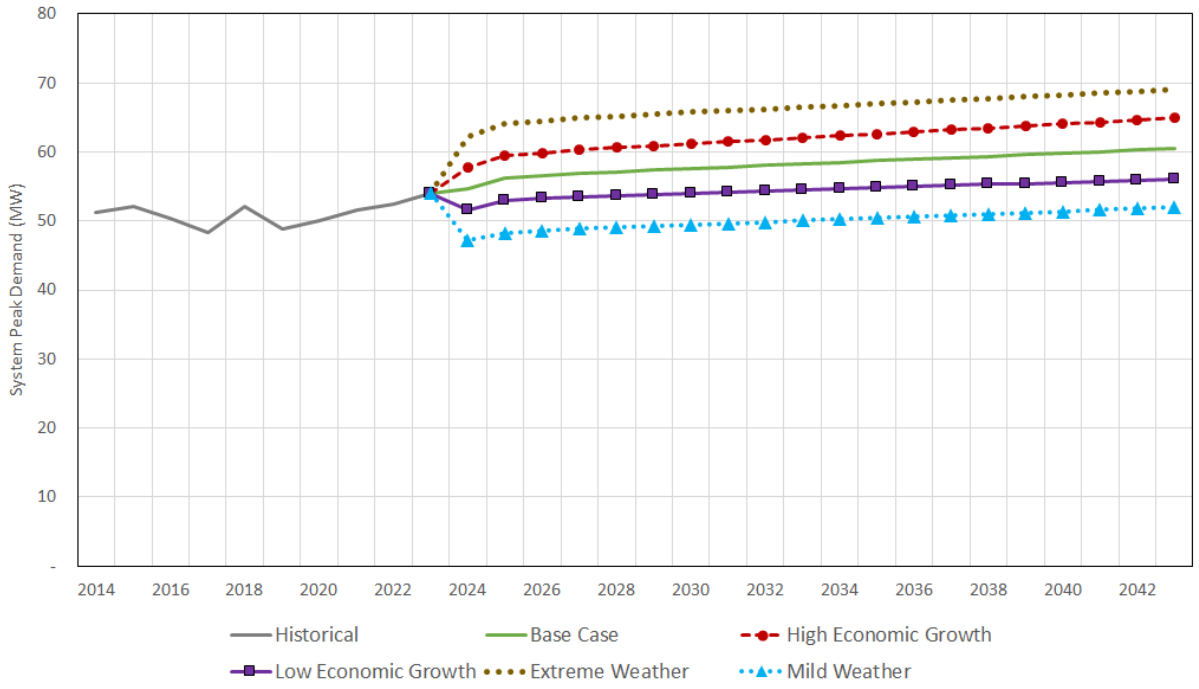

Figure 3-4. System Energy Sensitivities

The results of the four sensitivities on system peak demand are shown in Figure 3-5.

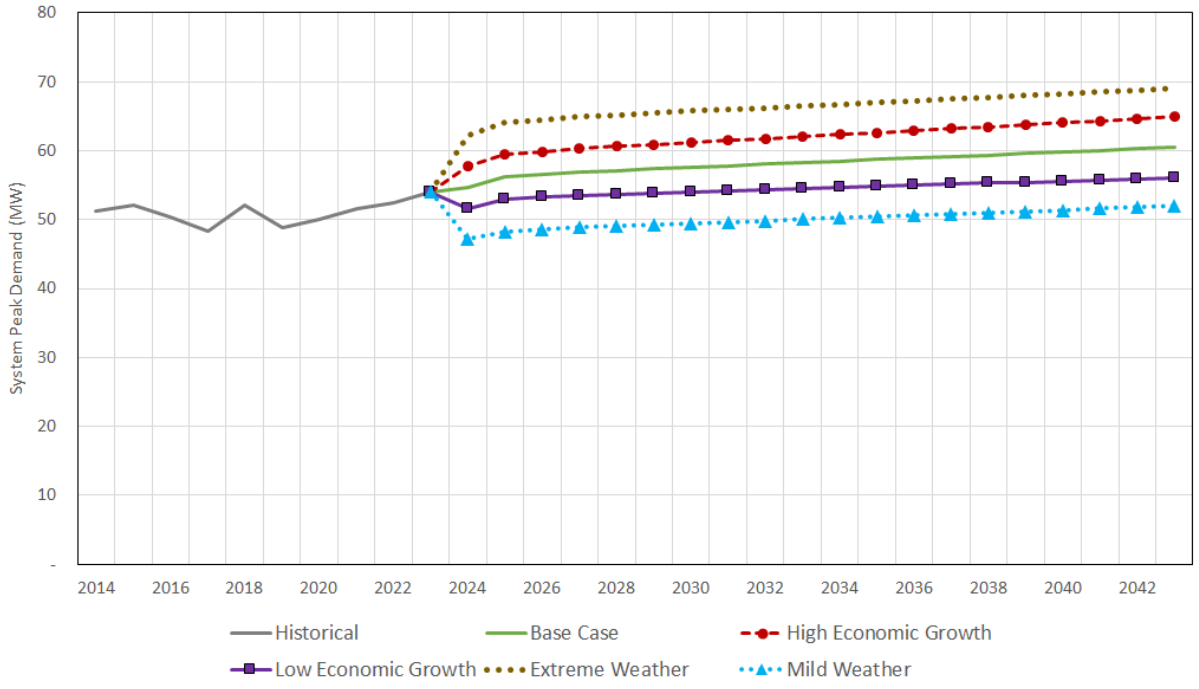

Figure 3-5. System Peak Demand Sensitivities

4 Existing Resources

4.1 Current Resource Plan

PC Electric is a transmission-dependent utility that does not own any generation assets. It meets the power needs of its members by purchasing electricity through multiple PPAs. At present, PC Electric maintains active wholesale power purchase agreements with two wholesale providers.

4.1.1 Louisiana Generating, LLC PPA

A full requirements PPA with LaGen, a subsidiary of Pelican Power, that expires on March 31, 2025, and has the following characteristics:

1. **Capacity:** Full requirements
2. **Duration:** 25 years
3. **Generation technology:** Mixed based on owned generation and market purchases
4. **Location:** Delivered to six Pointe Coupee substations
5. **Service end date: March 31, 2025**

4.1.2 Southwestern Power Administration PPA

A wholesale power purchase contract for hydroelectric power with the SWPA on behalf of the United States Department of Energy ("US DOE") is expected to be renewed when it expires in 2032. The PPA has the following characteristics:

1. **Capacity:** 3,600 KW
2. **Duration:** 25 years
3. **Generation technology:** Hydroelectric
4. **Location:** Nominal point of delivery
5. **Service end date: May 31, 2032**

4.1.3 Transmission and Distribution Assets

Currently, PC Electric's transmission and distribution services involve ownership and operational responsibilities shared between LaGen and PC Electric itself. Over the 25-year term of the PSSA, certain transmission equipment owned by LaGen for the sole purpose of serving the PC Electric load has been maintained and/or operated by LaGen ("Specific Delivery Facilities".) The terms of the PSSA require LaGen to transfer ownership of those specific delivery facilities to PC Electric at the end of the contract term.

PC Electric has no existing programs for energy efficiency or demand response. However, PC Electric has recently reached substantial completion of the installation of an advanced metering system.

5 Resource Planning Methodology

5.1 Background

PC Electric has been a part of a full-requirements wholesale power contract since 2000. The current full-requirement contract with LaGen was set to expire in March 2025. To replace its expiring power contract, in the Fall of 2020, PC Electric joined with Concordia Electric Cooperative Inc. (Concordia) and Southwest Louisiana Electric Membership Corporation (SLEMCO) (collectively, "the LREA Cooperatives") to conduct an RFP process in accordance with the Commission's Market-based Mechanism (MBM) Order, with the assistance of Daymark Energy Advisors, Inc. (Daymark), acting as the RFP consultant, for the purpose of replacing their long-term full requirements contracts. PC Electric's goal in defining future resource providers was to identify one or more suppliers that would enable PC Electric to continue reliably serving its members at the lowest reasonable cost.

The LREA Cooperatives initiated a competitive public RFP process, which was filed with the Commission in September 2020 under Docket No. X-35741. In response to the RFP, PC Electric received approximately 41 proposals for 15 unique suppliers. With the help of its RFP Consultant, PC Electric performed a comprehensive evaluation process that included both qualitative and quantitative elements spread across three phases of the evaluation process. The Phase 1 and 2 evaluations resulted in 6 suppliers being selected to move into Phase 3.

A description of the qualitative and quantitative assessment that was performed for the resource bid received that were organized across a three-phase process:

- **Phase 1:** Addressed bid completeness, which afforded bidders the opportunity to provide information that was missing within the first few days after bid receipt.
- **Phase 2:** An in-depth review of the bids to assess like bids for their pricing, benefits, and risks. At the phase's conclusion, a short list of bids was assembled that could independently (or in combination) provide the full requirements needed for PC Electric's members to move into the Phase 3 evaluation.
- **Phase 3:** Incorporated both a detailed quantitative assessment in combination with qualitative assessments of the remaining bids ending in a short list of full requirements approaches to supply. PC Electric, supported by Daymark, refined contract terms and assessed the services included so that PC Electric could select the preferred solution that provided reliable power at least reasonable cost to customers.

5.2 Qualitative Assessment of Resource Alternatives

The qualitative review of the RFP responses focused on seven categories of evaluation, including:

1. **Project development feasibility (as applicable):** For proposals tied to new, to-be-developed generation, the review process assessed bidder experience to determine whether there was a reasonable expectation that the bidder could successfully develop the project.
2. **Other resource-specific risks (as applicable):** For proposals tied to specific resources, PC Electric assessed whether the project faced uncertainty in its ability to interconnect and/or provide capacity. Further, risks to unit maintenance were also considered.
3. **Bidder qualifications:** This category focused on assessing bidders as potential counterparties, including their financial strength, their experience, and considerations of customer experience and reputation.
4. **Community and environmental impacts:** The review process assessed whether the proposed resources would have either positive or negative environmental and community impacts.

5. **Flexibility:** The review process assessed how proposed contracts would or would not accommodate changes in market conditions, market rules, and other regulations, changes in load, and changing energy technologies.
6. **Optionality:** In this category, PC Electric assessed the extent to which contracts provided optionality for PC Electric, including the ability to accommodate increases in load, the ability to specify resources to target for procurement, support for PC Electric operations and customer programs, willingness to engage in partnerships with other providers, and ability to incorporate renewable resources.
7. **Other risks:** This category included consideration of whether energy would be reliably delivered and whether it would enable PC Electric as a load-serving utility to meet its capacity obligations, assessing the proposal's exposure to changing fuel costs, price stability benefits offered by resource diversity, review of potential issues related to resource performance, and contract performance risks.

The RFP response evaluation categories incorporated three different aspects of assessing the reliability of the proposed resources:

8. **Risk evaluation:** For resource-specific bids, the first two qualitative evaluation categories evaluated the risk associated with expected construction, maintenance, fuel source, and contracts and the status of the project in the MISO interconnection process.
9. **Reliability assessment:** PC Electric assessed reliability through the dependability of bidders as potential contractual partners and their demonstrated capability to deliver the products and services proposed.
10. **Resource adequacy:** PC Electric addressed reliability in the sense of resource adequacy by considering whether selected bids would enable PC Electric to meet its MISO-established resource adequacy obligations and whether they had the necessary flexibility to accommodate any changes in these obligations and/or new rules that might be adopted by the LPSC.

5.3 Quantitative Assessment of Resource Alternatives

The quantitative review of the RFP responses in Phase 2 of the evaluation focused on:

- **Pricing:** Renewables, energy-only, and capacity-only bids were analyzed within a pricing model designed to provide metrics used in the quantitative bid comparison, primarily:
  - Net present value (NPV)
  - Levelized cost of energy (LCOE)
  - Levelized cost of capacity (LCOC)
- **Metrics:** Energy-only bids were only evaluated based on NPV and LCOE metrics. Likewise, capacity bids were only evaluated using NPV and LCOC.
- **Benefits:** For capacity-only bids, the location of the projects within MISO's capacity zones was noted for their potential benefit in ongoing MISO reliability reforms. Still, it was otherwise not differentiated during this phase.

As each bid type provides a different set of products, bids were only compared to others within their category (i.e., solar projects could only be compared to solar projects).

The Phase 3 quantitative evaluation evaluated the portfolios across the key decision criteria for PC Electric (e.g., cost-competitive, reliable, and of sufficient duration) to meet their long-term planning needs. Given the volatility and constantly shifting nature of power markets, PC Electric also sought flexibility in its power supply to either hedge against unfavorable conditions or to take advantage of more economic sources of

power. The Phase 3 evaluation was designed to provide PC Electric with key metrics to inform its decision on the best combination of reliability, price, and resilience to risk in the context of a long-term procurement.

Phase 3 of the analysis included the use of Aurora, which is a well-established, industry-standard simulation model sold by Energy Exemplar that is used to simulate production resource portfolios and electricity markets. Aurora can be used to approximate the formation of hourly energy market clearing prices on a zonal basis using all key market drivers, including fuel and generation unit operating characteristics, unit additions and retirements, and transmission congestion and losses.

The RFP consultant used Aurora to generate monthly average locational marginal prices (LMP) for MISO Zone 9 (which covers Louisiana and parts of Texas). The resulting LMP price strips were used as inputs to the portfolio evaluation model. The NPV of each portfolio was generated using a spreadsheet model designed to capture the various pricing structures of all tested portfolios while also allowing for testing of various sensitivities to illustrate the range of uncertainty for each portfolio.

For the sensitivity portion of the analysis of the bids, the RFP consultant included variations of gas price, capacity price, and non-fixed bid-specific price elements. Additionally, sensitivity assessments incorporated the impact of changes to PC Electric's system, such as peak demand and annual load derived from the load forecast sensitivities developed by PC Electric's Load Forecast Consultant. Finally, various levels of CPI were used as a sensitivity.

For each sensitivity, all other factors are held constant. For example, when modeling the high gas sensitivity for all bids, the peak shape, annual load, MISO capacity price, and CPI were all held at the reference or most likely values.

6 Results and Resource Plan

6.1 Final Resource Plan

The results of the PC Electric RFP process to replace its expiring full requirements contract with LaGen resulted in two proposed supply contracts being selected as the least cost bids, based on the NPV of the bids assessed, to supply PC Electric's customers with reliable and cost-effective energy supply. The two contracts selected through the RFP process are provided below.

6.1.1 Mondu Solar Purchase Power Agreement

Mondu Solar is a brand-new solar photovoltaic (PV) project that will be owned and operated by Mondu Solar, which is a subsidiary of NextEra Energy Resources, LLC. The Commission approved the Mondu Solar PPA in Docket No. U-36515, Order No. U-36515-A. The key characteristics of the Mondu Solar PPA are provided below:

- **Capacity:** 25 MW offtake from a new 150 MW Mondu Solar Project
- **Duration:** 25 years
- **Generation technology:** Solar PV
- **Location:** Pointe Coupee Parish, Louisiana
- **Service start date:** First quarter of 2026

6.1.2 NextEra Energy Marketing Power Service Agreement

The NEM PSA is a full requirements contract that will serve the remaining energy and demand not provided by PC Electric's other contracted resources. The Commission approved the NEM PSA in Docket No. U-36515, Order No. U-36515. For the period from April 1 to the commercial operation date of Mondu Solar, the NEM PSA will deliver firm power for the full requirements of PC Electric that remain after receipt of any power from SWPA. For the period after the planned start date of Mondu Solar, the NEM PSA will deliver firm power for the full requirements of PC Electric that remain after receipt of any power from SWPA and Mondu Solar PPA. The key characteristics of the NEM PSA are provided below:

- **Capacity:** Full requirements
- **Duration:** 9.75 years starting
- **Generation technology:** Mixed, based on regular solicitations
- **Location:** Delivered to Pointe Coupee substations
- **Service start date:** April 1, 2025
- **Service end date:** December 31, 2034

With the combination of SWPA and the 2 contracts above, PC Electric's pricing will be locked in for approximately 30% of its energy and capacity needs for the full term of the NEM PSA. The remainder of the supply will have varying degrees of fuel and or market pricing influences that evolve as contracts are added and expired from the NEM contract supply resources.

As described in the NEM PSA, the agreement will have a portion of its energy and capacity locked in for the term of the NEM PSA. The remaining supply for PC Electric under the NEM PSA, will be provided by NEM from a combination of multi-year, laddered PPAs and market purchases.

The combination of the Mondu Solar PPA with the NEM PSA provides PC Electric's members with a blend of price certainty and access to a changing market for power supply with the flexibility to modify the purchasing approach to take advantage of lower-cost opportunities and to diversify the resource mix as it changes during the contract period. These new wholesale power purchase agreements offer PC Electric's members access to renewable energy, new technologies, and the benefits of access to competitive supply.

In addition, NEM PSA requires that NEM develop short-term and long-term energy and capacity forecasting to meet PC Electric's power supply needs, interact with MISO requirements, ensure reliable supply, and lock-in pricing for energy and capacity according to the laddered plan, but with the flexibility to adapt that plan should market activity offer an opportunity or require a realignment to manage market price volatility or meet reliability needs.

6.1.3 Southwestern Power Administration Purchase Power Agreement

As explained in Section 4.1.2, this contract currently provides the following:

- **Capacity:** 3,600 KW
- **Duration:** 25 years
- **Generation technology:** Hydroelectricity
- **Location:** Nominal point of delivery
- **Service end date:** May 31, 2032

PC Electric intends to renew SWPA when the PPA expires.

6.1.4 1803 Electric Cooperative, Inc.

1803 Cooperative (1803) is a member-owned electric cooperative serving customers with generation and transmission services in LA. On July 1, 2024, 1803 and PC Electric filed a petition (Docket Number: S-37321) seeking approval for the transfer of certain assets from PC Electric to 1803 and for 1803 to operate specific transmission facilities. Currently, the assets of PC Electric are owned, operated, and managed either by LaGen or by PC Electric itself.

As stipulated by the original LaGen PSSA, the assets owned by LaGen would have transferred to PC Electric upon the conclusion of the PSSA. In compliance with LPSC's General Order of March 18, 1994, 1803, PC Electric has submitted an 18-point analysis in support of their application for approval of the transfer of ownership and management of certain delivery assets. These include assets and facilities will now transfer ownership from LaGen to 1803 at the end of the LaGen PSSA.

Such assets may encompass (but are not limited to) the high side of substations, delivery points, meter points, electric lines, meters, equipment associated with meters, and other similar facilities (collectively referred to as the "Assets"). PC Electric has determined that a conveyance of those assets to 1803 is likewise in its best interest and the best interest of its member-consumers.

7 Future Integrated Resource Plan Development Process

7.1 Plans for a Full Integrated Resource Plan

PC Electric recognizes that this Simplified IRP is the first step in embarking on a continuous process to improve the rigor of its resource planning activities. PC Electric is committed to developing a Full IRP in compliance with the Commission IRP order. While there is some alignment with the requirements of the Full IRP and activities reflected in this document, PC Electric understands that the completion of a full IRP, as described in the Commission Order, will entail a significant expansion to the scope and detail of PC Electric's future resource planning. Key expansions to PC Electric's current processes will include, among others:

- Expand the focus of resource planning to a 20-year horizon.
- Assess energy efficiency and demand response programs as potential resources in a more comprehensive manner.
- Comply with the Minimum Capacity Order (MCO) to supply a portfolio dominated by generation unit-specific commitments.
- Assess ways to leverage PC Electric's investments in advanced metering infrastructure.
- Expanding the input and participation of stakeholders.
- Assess the inclusion of a Green Tariff for its members.
- Expanding the use of reliability planning criteria such as loss of load probability (LOLP).

PC Electric has prepared the preceding preliminary list required to combine diverse elements in a truly integrated resource plan. In anticipation of the extensive effort that will be needed to develop a Full IRP, PC Electric has already engaged the assistance of a national consulting firm, Quanta Technology, that possesses deep experience in developing comprehensive IRPs for utilities of various sizes across the U.S. Quanta Technology and PC Electric have already begun discussions for preparation of the Full IRP while jointly working to prepare this Simplified IRP report.

Based on IRP Order, Table 7-1 summarizes PC Electric initial estimates the key filing dates anticipated for the Full IRP.

Table 7-1. Estimated Schedule for Full IRP

Task	Description	IRP Schedule
1	Initiate Full IRP development process	03/02/2026
2	Submit draft of Full IRP to the Commission	03/02/2027
3	Submit final Full IRP to the Commission	09/27/2027

PC Electric enthusiastically supports the Commission's goals to bring the benefits of a comprehensive resource planning process to all electric customers in Louisiana, including our members and those of other cooperatives and looks forward to continuing on the next steps of the journey.

Appendix A: Econometric and Weather Variables

Table A provides a list of econometric variables that were tested in the development of the forecast models for energy and peak demand.

Table A-1. List of Econometric and Weather Variables Tested

NUMBER	VARIABLE NAME	VARIABLE DESCRIPTION	CATEGORY
1	TOTPOP	Total Population (in Thousands)	Economic
2	TOTEMP	Total Employment (in Thousands of Jobs)	Economic
3	FARMEMP	Farm Employment (in Thousands of Jobs)	Economic
4	MINEEMP	Mining Employment (in Thousands of Jobs)	Economic
5	UTILEMP	Utilities Employment (in Thousands of Jobs)	Economic
6	CONSEMP	Construction Employment (in Thousands of Jobs)	Economic
7	MANUEMP	Manufacturing Employment (in Thousands of Jobs)	Economic
8	WHTRDEMP	Wholesale Trade Employment (in Thousands of Jobs)	Economic
9	RTLEMP	Retail Trade Employment (in Thousands of Jobs)	Economic
10	TRANSEMP	Transportation And Warehousing Employment (in Thousands of Jobs)	Economic
11	INFOEMP	Information Employment (in Thousands of Jobs)	Economic
12	FINEMP	Finance and Insurance Employment (in Thousands of Jobs)	Economic
13	RRLEMP	Real Estate and Rental and Lease Employment (in Thousands of Jobs)	Economic
14	PROFEMP	Professional and Technical Services Employment (in Thousands of Jobs)	Economic
15	MNGTEMP	Management of Companies and Enterprises Employment (in Thousands of Jobs)	Economic
16	ADMEMP	Administrative and Waste Services Employment (in Thousands of Jobs)	Economic
17	EDUEMP	Educational Services Employment (in Thousands of Jobs)	Economic
18	HLTHEMP	Health Care and Social Assistance Employment (in Thousands of Jobs)	Economic
19	FUNEMP	Arts, Entertainment, and Recreation Employment (in Thousands of Jobs)	Economic
20	ACCMDEMP	Accommodation and Food Services Employment (in Thousands of Jobs)	Economic
21	OTHEREMP	Other Services, Except Public Administration Employment (in Thousands of Jobs)	Economic
22	FEDEMP	Federal Civilian Government Employment (in Thousands of Jobs)	Economic
23	MILTREMP	Federal Military Employment (in Thousands of Jobs)	Economic
24	SLGVTEMP	State And Local Government Employment (in Thousands of Jobs)	Economic
25	TOTEARN	Total Earnings (Millions of Base Year $)	Economic
26	FARMEARN	Farm Earnings (Millions of Base Year $)	Economic
27	MINEEARN	Mining Earnings (Millions of Base Year $)	Economic
28	UTILEARN	Utility Earnings (Millions of Base Year $)	Economic
29	CONSEARN	Construction Earnings (Millions of Base Year $)	Economic
30	MANUEARN	Manufacturing Earnings (Millions of Base Year $)	Economic
31	WHTREARN	Wholesale Trade Earnings (Millions of Base Year $)	Economic
32	RTLEARN	Retail Trade Earnings (Millions of Base Year $)	Economic
33	TRANEARN	Transportation and Warehousing Earnings (Millions of Base Year $)	Economic
34	INFOEARN	Information Earnings (Millions of Base Year $)	Economic
35	FINEARN	Finance and Insurance Earnings (Millions of Base Year $)	Economic

NUMBER	VARIABLE NAME	VARIABLE DESCRIPTION	CATEGORY
36	RRLEARN	Real Estate and Rental and Lease Earnings (Millions of Base Year $)	Economic
37	PROFEARN	Professional and Technical Services Earnings (Millions of Base Year $)	Economic
38	MNGTEARN	Management of Companies and Enterprises Earnings (Millions of Base Year $)	Economic
39	ADMEARN	Administrative and Waste Services Earnings (Millions of Base Year $)	Economic
40	EDUEARN	Educational Services Earnings (Millions of Base Year $)	Economic
41	HLTHEARN	Health Care and Social Assistance Earnings (Millions of Base Year $)	Economic
42	FUNEARN	Arts, Entertainment, and Recreation Earnings (Millions of Base Year $)	Economic
43	ACCMEARN	Accommodation and Food Services Earnings (Millions of Base Year $)	Economic
44	OTHREARN	Other Services, Except Public Administration Earnings (Millions of Base Year $)	Economic
45	FEDEARN	Federal Civilian Government Earnings (Millions of Base Year $)	Economic
46	MLTREARN	Federal Military Earnings (Millions of Base Year $)	Economic
47	SLGVEARN	State and Local Government Earnings (Millions of Base Year $)	Economic
48	TOTINC	Total Personal Income (Millions of Base Year $)	Economic
49	NETINC	Net Earnings (Millions of Base Year $)	Economic
50	PERSINC	Total Personal Income per Capita (in Base Year $)	Economic
51	CURRINC	Total Personal Income per Capita (in Current $)	Economic
52	WPINDEX	Woods & Poole Economics Wealth Index (US = 100)	Economic
53	GROSSREG	Gross Regional Product (Millions of Base Year $)	Economic
54	PPHH	Persons per Household (in Number of People)	Economic
55	RTLPHH	Total Retail Sales per Household (in Base Year $)	Economic
56	HHINC	Mean Household Total Personal Income (in Base Year $)	Economic
57	CURRHHIN	Mean Household Total Personal Income (in Current $)	Economic
58	HHNUM	Total Number of Households (in Thousands)	Economic
59	RTLSALES	Total Retail Sales, Including Eating and Drinking Places Sales (Millions of Base Year $)	Economic
60	CARSALES	Motor Vehicles and Parts Dealers Retail Sales (Millions of Base Year $)	Economic
61	FRNSALES	Furniture and Home Furnishing Stores Retail Sales (Millions of Base Year $)	Economic
62	APPSALES	Electronics and Appliance Stores Retail Sales (Millions of Base Year $)	Economic
63	BLDSALES	Building Materials, Garden Equip, Supplies Dealers Retail Sales (Millions of Base Year $)	Economic
64	EATSTORE	Food and Beverage Stores Retail Sales (Millions of Base Year $)	Economic
65	HLTHSALE	Health and Personal Care Retail Sales (Millions of Base Year $)	Economic
66	GASSALES	Gasoline Stations Retail Sales (Millions of Base Year $)	Economic
67	CLTHSALE	Clothing and Clothing Accessories Stores Retail Sales (Millions of Base Year $)	Economic
68	SPORSALE	Sporting Goods, Hobby, Book, and Music Stores Retail Sales (Millions of Base Year $)	Economic
69	GENSALES	General Merchandise Stores Retail Sales (Millions of Base Year $)	Economic
70	MISCSALE	Miscellaneous Store Retail Sales (Millions of Base Year $)	Economic
71	NONSTORE	Nonstory Retailers Retail Sales (Millions of Base Year $)	Economic

NUMBER	VARIABLE NAME	VARIABLE DESCRIPTION	CATEGORY
72	EATSALES	Eating and Drinking Places Sales (Millions of Base Year $)	Economic
73	CPI	Consumer Price Index	Economic
74	Semimat	Summer Maximum Temperature	Weather
75	Summer Mint	Summer Minimum Temperature	Weather
76	Summer_AvgMaxT	Summer Average Maximum Temperature	Weather
77	Summer_AvgMinT	Summer Average Minimum Temperature	Weather
78	Summer_AvgT	Summer Average Temperature	Weather
79	Summer_HDD	Summer Heating Degree Days Temperature	Weather
80	Summer_CDD	Summer Cooling Degree Days Temperature	Weather
81	Summer_PRCP	Summer Precipitation	Weather
82	Winter_MaxT	Winter Maximum Temperature	Weather
83	Winter_MinT	Winter Minimum Temperature	Weather
84	Winter_AvgMaxT	Winter Average Maximum Temperature	Weather
85	Winter_AvgMinT	Winter Average Minimum Temperature	Weather
86	Winter_AvgT	Winter Average Temperature	Weather
87	Winter_HDD	Winter Heating Degree Days Temperature	Weather
88	Winter_CDD	Winter Cooling Degree Days Temperature	Weather
89	Winter_PRCP	Winter Precipitation	Weather
90	Shoulder_MaxT	Shoulder Maximum Temperature	Weather
91	Shoulder_MinT	Shoulder Minimum Temperature	Weather
92	Shoulder_AvgMaxT	Shoulder Average Maximum Temperature	Weather
93	Shoulder_AvgMinT	Shoulder Average Minimum Temperature	Weather
94	Shoulder_AvgT	Shoulder Average Temperature	Weather
95	Shoulder_HDD	Shoulder Heating Degree Days Temperature	Weather
96	Shoulder_CDD	Shoulder Cooling Degree Days Temperature	Weather
97	Shoulder_PRCP	Shoulder Precipitation	Weather
98	CV2	Extreme Weather Swing (Custom Weather Variable)	Weather

Table A provides a list of econometric variables and their stats that were selected for use in the load forecast models.

Table A-2. Variables and Regression Statistics Selected for Load Forecast Models

CLASS	COMPONENT	LABEL	FULL NAME	P VALUE VARIABLE	STD. ERROR VARIABLE	STD DEV VARIABLE	COEFFICIENT NUMBER	COEFFICIENT STD DEV	IMPORTANCE
System	Demand	mltrearn	Federal Military Earnings (Millions of Base Year $)	0.01211	0.90049	1	2	0.50	23%
System	Demand	bldsales	Building Materials, Garden Equip, Supplies Dealers Retail Sales (Millions of Base Year $)	0.00025	0.19030	4	1	0.74	35%
System	Demand	CV2	Extreme Weather Swing (Custom Weather Variable)	-	0.00113	4	1	0.91	42%
Resid.	Consumers	bldsales	Building Materials, Garden Equip, Supplies Dealers Retail Sales (Millions of Base Year $)	0.00000	2.58156	4	16	0.17	15%
Resid.	Consumers	hhinc	Mean Household Total Personal Income (in Base Year $)	0.00000	0.00081	17,594	0	0.31	26%
Resid.	Consumers	hlthemp	Health Care and Social Assistance Employment (in Thousands of Jobs)	0.00000	133.87813	0	919	0.34	29%
Resid.	Consumers	hhnum	Total Number of Households (in Thousands)	0.00000	40.02812	0	245	0.23	19%
Resid.	Consumers	clthsale	Clothing and Clothing Accessories Stores Retail Sales (Millions of Base Year $)	0.00438	3.27163	3	10	0.08	7%
Resid.	Consumers	mngtearn	Management of Companies and Enterprises Earnings (Millions of Base Year $)	0.01438	18.55328	0	49	0.04	3%
Resid.	Usage	winter_hdd	Winter Heating Degree Days Temperature	0.00045	0.00035	229	0	0.28	35%
Resid.	Usage	y_var_lag		0.00000	0.08168		1		
Resid.	Usage	summer_avgmaxt	Summer Average Maximum Temperature	0.00440	0.04231	2	0	0.25	31%
Resid.	Usage	consemp	Construction Employment (in Thousands of Jobs)	0.00237	0.40680	0	1	0.28	35%
Season. Resid.	Consumers	rrlemp	Real Estate and Rental and Lease Employment (in Thousands of Jobs)	0.00320	55.83762	0	182	0.48	48%
Season. Resid.	Consumers	y_var_lag		0.00920	0.13920		0		

CLASS	COMPONENT	LABEL	FULL NAME	P VALUE VARIABLE	STD. ERROR VARIABLE	STD DEV VARIABLE	COEFFICIENT NUMBER	COEFFICIENT STD DEV	IMPORTANCE
Season. Resid.	Consumers	miscsale	Miscellaneous Store Retail Sales (Millions of Base Year $)	0.01607	2.27827	2	6	0.25	25%
Season. Resid.	Consumers	infoearn	Information Earnings (Millions of Base Year $)	0.00937	7.70587	1	22	0.26	27%
Season. Resid.	Usage	hlthemp	Health Care and Social Assistance Employment (in Thousands of Jobs)	0.00195	0.96162	0	3	0.47	30%
Season. Resid.	Usage	hhnum	Total Number of Households (in Thousands)	0.00000	0.29400	0	2	0.65	41%
Season. Resid.	Usage	rtlearn	Retail Trade Earnings (Millions of Base Year $)	0.04142	0.01868	4	0	0.17	11%
Season. Resid.	Usage	infoemp	Information Employment (in Thousands of Jobs)	0.00972	9.12396	0	26	0.30	19%
Small Comm.	Consumers	totpop	Total Population (in Thousands)	0.00050	11.29677	1	45	0.11	29%
Small Comm.	Consumers	manuearn	Manufacturing Earnings (Millions of Base Year $)	0.00898	0.53472	22	2	0.16	39%
Small Comm.	Consumers	rtlsales	Total Retail Sales, Including Eating and Drinking Places Sales (Millions of Base Year $)	0.00004	0.18814	30	1	0.13	32%
Small Comm.	Consumers	y_var_lag		0.00000	0.04902		1		
Small Comm.	Usage	hhnum	Total Number of Households (in Thousands)	0.00000	0.54947	0	5	0.87	67%
Small Comm.	Usage	winter_hdd	Winter Heating Degree Days Temperature	0.02261	0.00077	229	0	0.22	17%
Small Comm.	Usage	infoearn	Information Earnings (Millions of Base Year $)	0.03158	0.30664	1	1	0.21	16%
Lighting	Consumers	miscsale	Miscellaneous Store Retail Sales (Millions of Base Year $)	0.00000	0.88534	2	5	0.73	100%

CLASS	COMPONENT	LABEL	FULL NAME	P VALUE VARIABLE	STD. ERROR VARIABLE	STD DEV VARIABLE	COEFFICIENT NUMBER	COEFFICIENT STD DEV	IMPORTANCE
Lighting	Usage	sporsale	Sporting Goods, Hobby, Book, and Music Stores Retail Sales (Millions of Base Year $)	0.01743	0.29708	0	1	0.30	25%
Lighting	Usage	manuearn	Manufacturing Earnings (Millions of Base Year $)	0.00093	0.00543	22	0	0.38	32%
Lighting	Usage	appsales	Electronics and Appliance Stores Retail Sales (Millions of Base Year $)	0.00013	0.10801	1	0	0.52	43%
Pub. Author.	Consumers	y_var_lag		0.00005	0.09644		0		
Pub. Author.	Consumers	gensales	General Merchandise Stores Retail Sales (Millions of Base Year $)	0.00872	0.05498	14	0	0.22	35%
Pub. Author.	Consumers	eduemp	Educational Services Employment (in Thousands of Jobs)	0.00214	13.22507	0	45	0.29	45%
Pub. Author.	Consumers	clthsale	Clothing and Clothing Accessories Stores Retail Sales (Millions of Base Year $)	0.03447	0.20486	3	0	0.13	20%
Pub. Author.	Usage	y_var_lag		0.00120	0.13810		0		
Pub. Author.	Usage	shoulder_prcp	Shoulder Precipitation	0.02643	0.08383	7	0	0.36	100%
Pub. Author.	Usage	summer_hdd	Summer Heating Degree Days Temperature			-			
Own Use	Usage	summer_avgmaxt	Summer Average Maximum Temperature	0.01752	4.82747	2	12	0.34	27%
Own Use	Usage	pphh	Persons per Household (in Number of People)	0.00000	102.66415	0	694	0.90	73%