Jackson Energy Cooperative

2020 Load Forecast
November 2020
Prepared by: EKPC's Load Forecasting Department

JACKSON ENERGY COOPERATIVE
A Touchstone Energy® Cooperative

EAST KENTUCKY POWER COOPERATIVE
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Introduction
Executive Summary

Jackson Energy Cooperative, located in McKee, Kentucky, is an electric distribution cooperative that serves members in 15 counties. This load forecast report contains Jackson Energy Cooperative's long-range forecast of energy and peak demand.

Jackson Energy Cooperative and its power supplier, East Kentucky Power Cooperative (EKPC), worked jointly to prepare the load forecast. Factors considered in preparing the forecast include the national and local economy, population and housing trends, service area industrial development, electric price, household income, weather, and appliance efficiency changes.

EKPC prepared a preliminary load forecast, which was reviewed by Jackson Energy Cooperative for reasonability. Final projections reflect a rigorous analysis of historical data combined with the experience and judgment of the President/CEO and staff of Jackson Energy Cooperative. Key assumptions are reported beginning on page 14.

Executive Summary *(continued)*

The load forecast is prepared once every two years as specified in the EKPC Board approved Load Forecast work plan. Cooperation helps to ensure that the forecast meets both parties' needs. Jackson Energy Cooperative uses the forecast in developing four-year work plans, long-range work plans, and financial forecasts. EKPC uses the forecast in areas of generation planning, transmission planning, demand-side planning, marketing analysis, and financial forecasting.

The complete load forecast for Jackson Energy Cooperative is reported in Table 1-1 on pages 5 and 6. Residential and commercial sales, total purchases, winter and summer peak demands, and load factor are presented for the years 2010 through 2040.

Table 1-1
MWh Summary

Year	Residential Sales (MWh)	Small Comm. Sales (MWh)	Large Comm. Sales (MWh)	Total Sales (MWh)	Office Use (MWh)	% Loss	Purchased Power (MWh)
2010	761,946	159,802	67,589	989,337	1,137	5.8	1,051,579
2011	695,905	137,801	63,214	896,920	1,055	6.3	958,005
2012	663,785	137,525	60,755	862,064	1,085	5.4	912,831
2013	702,958	140,479	68,087	911,524	1,099	4.2	952,671
2014	708,879	140,224	67,166	916,270	1,094	5.5	970,662
2015	634,503	133,175	63,128	830,807	980	9.9	923,471
2016	681,628	132,583	71,531	885,741	1,096	5.0	933,142
2017	638,874	128,923	70,386	838,183	1,013	5.1	884,344
2018	705,384	137,137	72,953	915,474	1,047	4.9	964,216
2019	677,262	134,285	73,100	884,646	966	4.9	931,455
2020	672,427	125,902	70,266	868,595	1,020	4.9	914,629
2021	682,756	130,964	86,043	899,762	1,020	4.9	947,410
2022	682,656	134,302	86,129	903,087	1,020	4.9	950,907
2023	680,198	135,698	86,215	902,111	1,020	4.9	949,880
2024	680,135	135,779	86,301	902,216	1,020	4.9	949,991
2025	677,094	136,934	86,388	900,416	1,020	4.9	948,098
2026	676,938	137,154	86,474	900,566	1,020	4.9	948,256
2027	677,370	137,200	86,561	901,131	1,020	4.9	948,849
2028	680,894	136,945	86,647	904,486	1,020	4.9	952,379
2029	679,841	136,988	86,734	903,563	1,020	4.9	951,408
2030	678,489	136,657	86,820	901,966	1,020	4.9	949,728
2031	677,684	136,694	86,907	901,285	1,020	4.9	949,012
2032	681,182	136,363	86,994	904,539	1,020	4.9	952,435
2033	680,566	135,614	87,081	903,261	1,020	4.9	951,091
2034	683,216	135,890	87,168	906,274	1,020	4.9	954,259
2035	686,043	136,207	87,255	909,505	1,020	4.9	957,658
2036	691,942	136,986	87,343	916,271	1,020	4.9	964,774
2037	693,313	137,019	87,430	917,763	1,020	4.9	966,342
2038	696,803	137,423	87,517	921,743	1,020	4.9	970,529
2039	700,402	137,816	87,605	925,823	1,020	4.9	974,820
2040	706,109	138,325	87,693	932,127	1,020	4.9	981,450

Note: 2015 loss partially due to billing change

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Table 1-1 *(continued)*
Peaks Summary

Winter		*Summer*						
Season	Non-Coincident Peak Demand (MW)	Year	Non-Coincident Peak Demand (MW)	Year	Purchased Power (MWh)	Average Monthly Load Factor (%)	Temperature at time of Winter Peak	Temperature at time of Summer Peak
2009 - 10	271.0	2010	196.8	2010	1,051,579	44.3%	5° F	95° F
2010 - 11	281.8	2011	186.2	2011	958,005	38.8%	-3° F	91° F
2011 - 12	225.4	2012	188.8	2012	912,831	56.0%	12° F	97° F
2012 - 13	233.3	2013	172.5	2013	952,671	58.0%	10° F	88° F
2013 - 14	313.9	2014	167.3	2014	970,662	58.0%	-7° F	91° F
2014 - 15	335.2	2015	170.8	2015	923,471	55.0%	-21° F	88° F
2015 - 16	252.2	2016	182.2	2016	933,145	60.0%	3° F	90° F
2016 - 17	239.7	2017	175.0	2017	884,344	56.0%	6° F	89° F
2017 - 18	299.7	2018	181.1	2018	964,216	60.0%	-4° F	91° F
2018 - 19	259.7	2019	175.8	2019	931,455	57.0%	4° F	91° F
2019 - 20	239.9	2020	182.6	2020	914,629	59.0%	11° F	89° F
2020 - 21	285.6	2021	192.2	2021	947,410	59.0%		
2021 - 22	285.7	2022	192.3	2022	950,907	59.0%		
2022 - 23	285.8	2023	192.4	2023	949,880	59.0%		
2023 - 24	286.0	2024	192.4	2024	949,991	59.0%		
2024 - 25	286.1	2025	192.5	2025	948,098	59.0%		
2025 - 26	286.3	2026	192.6	2026	948,256	59.0%		
2026 - 27	286.4	2027	192.7	2027	948,849	59.0%		
2027 - 28	286.6	2028	192.7	2028	952,379	59.0%		
2028 - 29	286.7	2029	192.8	2029	951,408	59.0%		
2029 - 30	286.8	2030	192.9	2030	949,728	59.0%		
2030 - 31	287.0	2031	193.0	2031	949,012	59.0%		
2031 - 32	287.1	2032	193.1	2032	952,435	59.0%		
2032 - 33	287.3	2033	193.1	2033	951,091	59.0%		
2033 - 34	287.4	2034	193.2	2034	954,259	59.0%		
2034 - 35	287.6	2035	193.3	2035	957,658	59.0%		
2035 - 36	287.7	2036	193.4	2036	964,774	59.0%		
2036 - 37	287.8	2037	193.4	2037	966,342	59.0%		
2037 - 38	288.0	2038	193.5	2038	970,529	59.0%		
2038 - 39	288.1	2039	193.6	2039	974,820	59.0%		
2039 - 40	288.3	2040	193.7	2040	981,450	59.0%		

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Executive Summary *(continued)*

Overall Results

- Total sales are projected to grow by 0.4 percent a year for the period 2020-2040, compared to a 0.2 percent growth projected in the 2018 load forecast for the period 2018-2038. Results shown in Table 1-2.

- Winter peak demands are projected to increase 0.1 percent over the 20 year forecast. Summer peak demands for the same period indicate growth of 0.1 percent.

- Load factor remains at 59% for the forecast period.

Executive Summary *(continued)*

Overall Results – Table 1-2

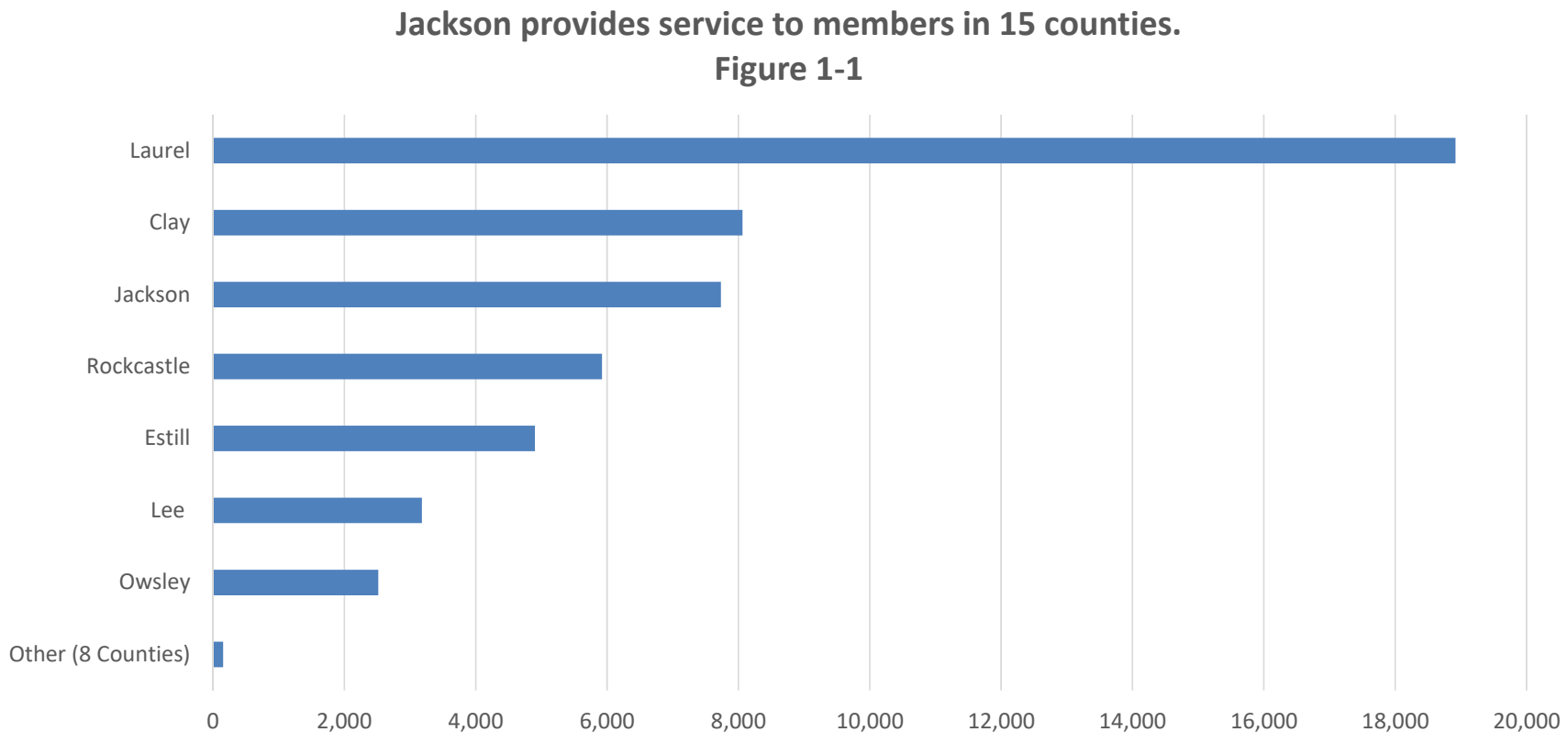
	Time Period	Residential	Small Commercial	Large Commercial	Total Sales
5 Year Growth Rates	2014-2019	-0.9%	-0.9%	1.7%	-0.7%
	2020-2025	0.1%	1.7%	4.2%	0.7%
10 Year Growth Rates	2009-2019	-0.4%	-0.9%	0.8%	-0.4%
	2020-2030	0.1%	0.8%	2.1%	0.4%
15 Year Growth Rates	2004-2019	0.0%	-0.2%	-0.7%	-0.1%
	2020-2035	0.1%	0.5%	1.5%	0.3%
20 Year Growth Rates	1999-2019	0.7%	0.5%	-0.6%	0.6%
	2020-2040	0.2%	0.5%	1.1%	0.4%

Narrative

Jackson Energy Cooperative is located in McKee, Kentucky. It serves members in the rural areas of Jackson, Rockcastle, Laurel, Clay, Owsley, Lee, and Estill counties. It also serves small sections of Madison, Pulaski, Wolfe, Powell, Lincoln, Leslie, Breathitt, and Garrard counties. See Figure 1-1. Jackson Energy Cooperative serves the major part of the rural areas, with Kentucky Utilities serving most of the towns and small rural sections along certain roads. Jackson Energy Cooperative's service area boundaries are fixed, and are filed with Kentucky's Public Service Commission. This service area is located in the heart of the Daniel Boone National Forest and also lies partly in Kentucky's eastern coal fields.

Narrative *(continued)*

Counties Served



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Narrative *(continued)*

Jackson Energy Cooperative's largest area of growth continues to be in Laurel County. London is in the center of the county and Corbin is at its southern tip. These two cities, combined with I-75 running through the area, have acted to make Laurel County a crossroads area. The Hal Rogers Parkway begins at London and goes east to Hazard. The Cumberland Parkway, which runs from Somerset to Bowling Green, is linked to the Hal Rogers Parkway via a four-lane section of Kentucky Highway 80 between Somerset and London. The London-Corbin Airport serves the region.

Narrative *(continued)*

Jackson Energy Cooperative primarily services residential load. In 2019, residential customers accounted for 93 percent of total customers, and residential sales accounted for 77 percent of total retail kWh sales. There is an average of 2.23 people per household. 76% of all homes are headed by someone age 55 or greater. Residential sales are expected to grow at less than 1% for the next 20 years due to poor economic conditions. In 2019 Jackson Energy had 95 fewer residential customers than it did before the beginning of the recession in 2008.

Small commercial sales have historically tracked residential sales. Small commercial customers provide goods and services for the residences in the region. Since the residential population growth has slowed, both residential and small commercial sales are expected to slow as well.

Narrative *(continued)*

Jackson Energy Cooperative has active Industrial Development Authorities in each of the seven primary counties being served. Industrial development has been slow over the past 5 years.

In summary, Jackson Energy Cooperative has experienced small growth over the past five years. This has been due to the rising fuel costs, poor economic conditions, population decline and the lack of industrial growth in the region. The continued influence of these factors will impact the amount of growth over the next 5 years.

Key Assumptions

Eastern Economic Region History and Forecast
Table 1-3

	Time Period	Population	Households	Total Employment	Total Real Personal Income
5 Year Growth Rates	2014-2019	0.0%	0.1%	0.8%	2.7%
	2020-2025	-0.1%	0.4%	2.5%	2.4%
10 Year Growth Rates	2009-2019	-0.1%	0.0%	0.7%	2.7%
	2020-2030	-0.1%	0.4%	1.5%	3.3%
15 Year Growth Rates	2004-2019	0.0%	0.1%	0.0%	3.3%
	2020-2035	-0.1%	0.3%	1.1%	3.5%
20 Year Growth Rates	1999-2019	0.1%	0.2%	0.2%	3.6%
	2020-2040	-0.1%	0.3%	1.0%	3.5%

- *EKPC's source for economic forecasts is IHS Global Insight. Total Real Personal Income is reported in millions of 2005 dollars. Growth rates shown are Compound Annual Growth Rates.*

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Key Assumptions *(continued)*
Appliance Saturations

- 71% of customers use electric as a primary fuel for heating, while 16% use it as a secondary fuel.
  - 11% use electric furnaces and 51% use electric heat pumps.
- 77% of customers use central air and 21% use electric/window units.
- 92% of customers use electric water heaters.
- These saturations are not expected to change significantly by 2040.

Key Assumptions *(continued)*

Saturation Rates – Percent of Homes with One or More Non-HVAC Appliances

- Electric Range 94%
- Freezer 57%
- Smart TV 68%

Appliance Efficiency Projections

- Energy Information Association (EIA) projects appliance efficiencies each year.
- Similar to last year's projections, heating and cooling equipment show slow but steady increase.
- Water heater efficiency is remaining relatively flat.

Key Assumptions *(continued)*

Weather

- Weather data is from the Kentucky Mesonet for Jackson County.

- Normal weather, a 20-year average of historical temperatures, is assumed for the forecast years.

Methodology and Results

Introduction

This section briefly describes the methodology used to develop the load forecast and presents results in tabular form for residential and commercial classifications. Table 1-4 shows historical data for Jackson Energy Cooperative as reported on RUS Form 7.

Typically preliminary forecasts are prepared during the first quarter depending on when Jackson Energy Cooperative experiences its winter peak. The first step is modeling the regional economy. Households, employment, and real gross county product are among the areas analyzed. The regional model results are used in combination with the historical billing information, appliance saturation data, appliance efficiency data, and weather data to develop the long range forecast.

Table 1-4 Jackson Energy Comparative Annual Operating Data

Year	kWh Purchased And Generated	Change	kWh Sold	Change	kWh Loss	% Loss	Peak Demand (MW)	Average Load Factor	Average Number Of Consumers	Miles Of Line	Consumers Per Mile	Cost Of Purchased Power	Cents / kWh
2010	1,051,578,569	7.8%	989,337,131	7.4%	61,104,781	5.8%	279.5	42.9%	51,338	5,664	9.1	$68,363,836	6.5
2011	958,004,946	-8.9%	896,919,631	-9.3%	60,030,738	6.3%	270.3	40.5%	51,224	5,676	9.0	$68,306,508	7.1
2012	912,831,100	-4.7%	862,064,480	-3.9%	49,681,746	5.4%	221.8	56.0%	51,250	5,668	9.0	$66,412,945	7.3
2013	952,671,344	4.4%	911,523,520	5.7%	40,048,518	4.2%	231.2	58.0%	51,360	5,673	9.1	$69,375,039	7.3
2014	970,662,437	1.9%	916,269,717	0.5%	53,298,598	5.5%	309.5	58.0%	51,435	5,685	9.0	$71,077,140	7.3
2015*	923,471,224	-4.9%	830,807,078	-9.3%	91,683,778	9.9%	328.8	55.0%	51,359	5,701	9.0	$65,401,388	7.1
2016	933,144,743	1.0%	885,741,298	6.6%	46,307,243	5.0%	245.0	60.0%	51,356	5,714	9.0	$64,053,118	6.9
2017	884,343,501	-5.2%	838,183,236	-5.4%	45,147,582	5.1%	240.8	56.0%	51,391	5,728	9.0	$61,109,367	6.9
2018	964,216,134	9.0%	915,473,832	9.2%	47,695,415	4.9%	297.5	60.0%	51,493	5,742	9.0	$65,445,293	6.8
2019	931,454,608	-3.4%	884,646,143	-3.4%	45,842,260	4.9%	244.2	57.0%	51,584	5,755	9.0	$62,896,567	6.8
Average						5.0%							

*Abnormal loss due to change in billing cycle.

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Methodology and Results *(continued)*

Introduction

The preliminary forecast was presented to Jackson Energy Cooperative staff. Changes were made to the forecast as needed based on new information, such as new large loads or subdivisions. In some cases, other assumptions were based on insights from Jackson Energy Cooperative staff.

Methodology and Results *(continued)*

Residential Forecast

Residential customers are analyzed by means of regression analysis with resulting coefficients used to prepare customer projections. Regressions for residential customers are typically a function of regional economic and demographic variables. Two variables that are very significant are the numbers of households by county and the percent of total households served by the member cooperative. Table 1-5 report Jackson Energy Cooperative's customer forecast.

The residential energy sales were analyzed by means of regression analysis, as a function of residential customers, base 60 heating degree days, base 65 cooling degree days and projected residential rates. Table 1-5 reports Jackson Energy Cooperative's energy forecast.

Table 1-5
Residential Summary

	Customers			Use Per Customer			Class Sales		
	Annual Average	Annual Change	% Change	Monthly Average (kWh)	Change (kWh)	% Change	Total (MWh)	Annual Change (MWh)	% Change
2010	47,689	-4	0.0	1,331	96	7.7	761,946	54,703	7.7
2011	47,627	-62	-0.1	1,218	-114	-8.5	695,905	-66,041	-8.7
2012	47,647	20	0.0	1,161	-57	-4.7	663,785	-32,120	-4.6
2013	47,692	45	0.1	1,228	67	5.8	702,958	39,173	5.9
2014	47,723	31	0.1	1,238	10	0.8	708,879	5,921	0.8
2015	47,664	-59	-0.1	1,109	-129	-10.4	634,503	-74,376	-10.5
2016	47,690	26	0.1	1,191	82	7.4	681,628	47,124	7.4
2017	47,728	38	0.1	1,115	-76	-6.3	638,874	-42,754	-6.3
2018	47,834	106	0.2	1,229	113	10.2	705,384	66,510	10.4
2019	47,913	79	0.2	1,178	-51	-4.1	677,262	-28,123	-4.0
2020	47,964	51	0.1	1,168	-10	-0.8	672,427	-4,834	-0.7
2021	48,014	50	0.1	1,185	17	1.4	682,756	10,328	1.5
2022	48,044	30	0.1	1,184	-1	-0.1	682,656	-100	0.0
2023	48,074	30	0.1	1,179	-5	-0.4	680,198	-2,458	-0.4
2024	48,104	30	0.1	1,178	-1	-0.1	680,135	-63	0.0
2025	48,134	30	0.1	1,172	-6	-0.5	677,094	-3,041	-0.4
2026	48,164	30	0.1	1,171	-1	-0.1	676,938	-156	0.0
2027	48,194	30	0.1	1,171	0	0.0	677,370	432	0.1
2028	48,224	30	0.1	1,177	5	0.5	680,894	3,524	0.5
2029	48,254	30	0.1	1,174	-3	-0.2	679,841	-1,053	-0.2
2030	48,284	30	0.1	1,171	-3	-0.3	678,489	-1,353	-0.2
2031	48,314	30	0.1	1,169	-2	-0.2	677,684	-805	-0.1
2032	48,344	30	0.1	1,174	5	0.5	681,182	3,498	0.5
2033	48,374	30	0.1	1,172	-2	-0.2	680,566	-616	-0.1
2034	48,404	30	0.1	1,176	4	0.3	683,216	2,650	0.4
2035	48,434	30	0.1	1,180	4	0.4	686,043	2,827	0.4
2036	48,464	30	0.1	1,190	9	0.8	691,942	5,899	0.9
2037	48,494	30	0.1	1,191	2	0.1	693,313	1,371	0.2
2038	48,524	30	0.1	1,197	5	0.4	696,803	3,490	0.5
2039	48,554	30	0.1	1,202	5	0.5	700,402	3,600	0.5
2040	48,584	30	0.1	1,211	9	0.8	706,109	5,707	0.8

Note: 2015 loss partially due to billing change

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Average Residential Rates

- The 2018 forecast assumed the distribution portion increased 0% per year. The 2020 assumption is 0.1%.

- The 2018 average residential rate increased an average of 1.6% per year. The 2020 average increases 1.9% per year.

Methodology and Results *(continued)*

Small Commercial Forecast

Small commercial sales are projected using two equations: a customer equation and a small commercial sales equation. Both are determined through regression analysis and utilize inputs relating to the economy, electric price, and the residential customer forecast. Small commercial projections are reported in Table 1-6.

Table 1-6
Small Commercial Summary

	Customers			*Use Per Customer*			*Class Sales*		
	Annual Average	Annual Change	% Change	Annual Average (MWh)	Change (MWh)	% Change	Total (MWh)	Annual Change (MWh)	% Change
2010	3,644	5	0.1	44	4	8.7	159,802	12,997	8.9
2011	3,592	-52	-1.4	38	-5	-12.5	137,801	-22,001	-13.8
2012	3,598	6	0.2	38	0	-0.4	137,525	-276	-0.2
2013	3,662	64	1.8	38	0	0.4	140,479	2,954	2.1
2014	3,706	44	1.2	38	-1	-1.4	140,224	-255	-0.2
2015	3,690	-16	-0.4	36	-2	-4.6	133,175	-7,049	-5.0
2016	3,659	-31	-0.8	36	0	0.4	132,583	-593	-0.4
2017	3,656	-3	-0.1	35	-1	-2.7	128,923	-3,660	-2.8
2018	3,652	-4	-0.1	38	2	6.5	137,137	8,214	6.4
2019	3,664	12	0.3	37	-1	-2.4	134,285	-2,852	-2.1
2020	3,666	2	0.1	34	-2	-6.3	125,902	-8,383	-6.2
2021	3,668	2	0.1	36	1	4.0	130,964	5,062	4.0
2022	3,669	1	0.0	37	1	2.5	134,302	3,338	2.5
2023	3,670	1	0.0	37	0	1.0	135,698	1,396	1.0
2024	3,673	3	0.1	37	0	0.0	135,779	81	0.1
2025	3,675	2	0.1	37	0	0.8	136,934	1,155	0.9
2026	3,677	2	0.1	37	0	0.1	137,154	220	0.2
2027	3,679	2	0.1	37	0	0.0	137,200	45	0.0
2028	3,681	2	0.1	37	0	-0.2	136,945	-255	-0.2
2029	3,682	1	0.0	37	0	0.0	136,988	43	0.0
2030	3,683	1	0.0	37	0	-0.3	136,657	-331	-0.2
2031	3,684	1	0.0	37	0	0.0	136,694	37	0.0
2032	3,685	1	0.0	37	0	-0.3	136,363	-331	-0.2
2033	3,686	1	0.0	37	0	-0.6	135,614	-748	-0.5
2034	3,687	1	0.0	37	0	0.2	135,890	275	0.2
2035	3,688	1	0.0	37	0	0.2	136,207	318	0.2
2036	3,689	1	0.0	37	0	0.5	136,986	779	0.6
2037	3,690	1	0.0	37	0	0.0	137,019	33	0.0
2038	3,691	1	0.0	37	0	0.3	137,423	404	0.3
2039	3,692	1	0.0	37	0	0.3	137,816	393	0.3
2040	3,693	1	0.0	37	0	0.3	138,325	509	0.4

Note: 2015 loss partially due to billing change

Methodology and Results *(continued)*

Large Commercial Forecast

Large commercial customers are those with loads 1 MW or greater. Jackson Energy Cooperative currently has 7 customers in this class and is projected to increase to 8 customers by 2040. Large commercial results are reported in Table 1-7.

Table 1-7
Large Commercial Summary

	Customers			*Use Per Customer*			*Class Sales*		
	Annual Average	Annual Change	% Change	Annual Average (MWh)	Change (MWh)	% Change	Total (MWh)	Annual Change (MWh)	% Change
2010	5	-1	-16.7	13,518	2,311	20.6	67,589	351	0.5
2011	5	0	0.0	12,643	-875	-6.5	63,214	-4,376	-6.5
2012	5	0	0.0	12,151	-492	-3.9	60,755	-2,459	-3.9
2013	6	1	20.0	11,348	-803	-6.6	68,087	7,332	12.1
2014	6	0	0.0	11,194	-153	-1.4	67,166	-921	-1.4
2015	5	-1	-16.7	12,626	1,431	12.8	63,128	-4,038	-6.0
2016	7	2	40.0	10,219	-2,407	-19.1	71,531	8,403	13.3
2017	7	0	0.0	10,055	-164	-1.6	70,386	-1,145	-1.6
2018	7	0	0.0	10,422	367	3.6	72,953	2,567	3.6
2019	7	0	0.0	10,443	21	0.2	73,100	147	0.2
2020	7	0	0.0	10,038	-405	-3.9	70,266	-2,834	-3.9
2021	8	1	14.3	10,755	717	7.1	86,043	15,777	22.5
2022	8	0	0.0	10,766	11	0.1	86,129	86	0.1
2023	8	0	0.0	10,777	11	0.1	86,215	86	0.1
2024	8	0	0.0	10,788	11	0.1	86,301	86	0.1
2025	8	0	0.0	10,798	11	0.1	86,388	86	0.1
2026	8	0	0.0	10,809	11	0.1	86,474	86	0.1
2027	8	0	0.0	10,820	11	0.1	86,561	86	0.1
2028	8	0	0.0	10,831	11	0.1	86,647	87	0.1
2029	8	0	0.0	10,842	11	0.1	86,734	87	0.1
2030	8	0	0.0	10,853	11	0.1	86,820	87	0.1
2031	8	0	0.0	10,863	11	0.1	86,907	87	0.1
2032	8	0	0.0	10,874	11	0.1	86,994	87	0.1
2033	8	0	0.0	10,885	11	0.1	87,081	87	0.1
2034	8	0	0.0	10,896	11	0.1	87,168	87	0.1
2035	8	0	0.0	10,907	11	0.1	87,255	87	0.1
2036	8	0	0.0	10,918	11	0.1	87,343	87	0.1
2037	8	0	0.0	10,929	11	0.1	87,430	87	0.1
2038	8	0	0.0	10,940	11	0.1	87,517	87	0.1
2039	8	0	0.0	10,951	11	0.1	87,605	88	0.1
2040	8	0	0.0	10,962	11	0.1	87,693	88	0.1

Note: 2015 loss partially due to billing change

Methodology and Results *(continued)*

Peak Day Weather Scenarios

Extreme temperatures can dramatically influence Jackson Energy's peak demands. Table 1-8 reports the impact of extreme weather on system demands.

Table 1-8: Seasonal Peaks by Weather Scenario

Winter Peak Day Minimum Temperatures				
	Normal		**Extreme**	
Degrees F	-2	-10	-14	-20
Probability	*50%*	*20%*	*10%*	*3%*
Occurs Once in ...	2 Years	5 Years	10 Years	30 Years

Summer Peak Day Maximum Temperatures				
	Normal		**Extreme**	
Degrees F	94	97	99	101
Probability	*50%*	*20%*	*10%*	*3%*
Occurs Once in ...	2 Years	5 Years	10 Years	30 Years

Winter Non-Coincident Peak (MW)

Season	Normal	Extreme		
2020 - 21	286	307	318	334
2021 - 22	286	307	318	335
2022 - 23	286	308	318	335
2023 - 24	286	308	319	335
2024 - 25	286	308	319	335
2025 - 26	286	308	319	335
2026 - 27	286	308	319	335
2027 - 28	287	308	319	336
2028 - 29	287	309	319	336
2029 - 30	287	309	320	336
2030 - 31	287	309	320	336
2031 - 32	287	309	320	336
2032 - 33	287	309	320	337
2033 - 34	287	309	320	337
2034 - 35	288	309	320	337
2035 - 36	288	310	321	337
2036 - 37	288	310	321	337
2037 - 38	288	310	321	337
2038 - 39	288	310	321	338
2039 - 40	288	310	321	338

Summer Non-Coincident Peak (MW)

Year	Normal	Extreme		
2021	192	202	209	216
2022	192	203	210	216
2023	192	203	210	217
2024	192	203	210	217
2025	193	203	210	217
2026	193	203	210	217
2027	193	203	210	217
2028	193	203	210	217
2029	193	203	210	217
2030	193	203	210	217
2031	193	203	210	217
2032	193	203	210	217
2033	193	203	211	217
2034	193	204	211	218
2035	193	204	211	218
2036	193	204	211	218
2037	193	204	211	218
2038	194	204	211	218
2039	194	204	211	218
2040	194	204	211	218

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