Inter-County Energy Cooperative

2020 Load Forecast

November 2020

Prepared by: EKPC's Load Forecasting Department

Inter County Energy Cooperative
A Touchstone Energy Cooperative

East Kentucky Power Cooperative
A Touchstone Energy Cooperative

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EAST KENTUCKY POWER COOPERATIVE
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Introduction
Executive Summary

Inter-County Energy Cooperative (Inter-County Energy), located in Danville, Kentucky, is an electric distribution cooperative that serves members in 12 counties. This load forecast report contains Inter-County Energy's long-range forecast of energy and peak demand.

Inter-County Energy 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 Inter-County Energy for reasonability. Final projections reflect a rigorous analysis of historical data combined with the experience and judgment of the President/CEO and staff of Inter-County Energy. Key assumptions are reported beginning on page 14.

Executive Summary *(continued)*

The load forecast is prepared every two years as part of the overall planning cycle at EKPC and Inter-County Energy. Cooperation helps to ensure that the forecast meets both parties' needs. Inter-County Energy uses the forecast in developing three-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 Inter-County Energy 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)	Seasonal Sales (MWh)	Small Comm. Sales (MWh)	Public Buildings Sales (MWh)	Large Comm. Sales (MWh)	Other Sales (MWh)	Total Sales (MWh)	Office Use (MWh)	% Loss	Purchased Power (MWh)
2010	365,350	0	73,308	0	24,183	0	462,841	702	6.7	496,746
2011	354,194	0	71,539	0	23,189	0	448,922	692	2.6	461,677
2012	327,931	0	70,382	0	22,173	0	420,486	637	5.1	443,848
2013	338,248	0	60,061	0	34,530	0	432,839	645	6.6	463,897
2014	369,316	0	56,221	0	46,310	0	471,847	637	3.1	487,468
2015	341,423	0	73,989	0	31,515	0	446,926	709	4.8	470,443
2016	345,572	0	68,623	0	45,707	0	459,901	727	4.8	484,106
2017	325,775	0	52,843	0	61,850	0	440,469	601	3.9	458,938
2018	375,003	0	48,392	0	61,905	0	485,300	598	4.9	510,842
2019	358,982	0	47,009	0	63,671	0	469,662	573	4.9	494,381
2020	364,324	0	43,542	0	58,477	0	466,343	642	5.0	491,563
2021	364,631	0	49,607	0	168,666	0	582,905	642	4.2	609,130
2022	365,247	0	51,927	0	211,878	0	629,052	642	4.1	656,615
2023	365,970	0	53,743	0	244,391	0	664,104	642	4.0	692,444
2024	367,746	0	54,976	0	246,565	0	669,287	642	4.0	697,843
2025	368,068	0	56,074	0	256,816	0	680,958	642	4.0	710,000
2026	369,217	0	57,189	0	258,543	0	684,949	642	4.0	714,157
2027	369,915	0	58,230	0	260,154	0	688,300	642	4.0	717,648
2028	370,816	0	59,142	0	262,032	0	691,989	642	4.0	721,491
2029	372,187	0	60,046	0	272,163	0	704,396	642	4.0	734,414
2030	372,625	0	61,061	0	273,890	0	707,576	642	4.0	737,727
2031	374,791	0	62,148	0	275,741	0	712,680	642	4.0	743,043
2032	379,223	0	63,265	0	278,107	0	720,595	642	4.0	751,289
2033	382,010	0	64,375	0	279,530	0	725,915	642	4.0	756,830
2034	386,648	0	65,537	0	281,506	0	733,691	642	4.0	764,930
2035	391,427	0	66,670	0	292,633	0	750,730	642	4.0	782,679
2036	394,969	0	67,757	0	295,097	0	757,823	642	4.0	790,067
2037	399,231	0	68,833	0	296,610	0	764,674	642	4.0	797,204
2038	404,575	0	69,935	0	298,637	0	773,147	642	4.0	806,030
2039	409,910	0	71,046	0	300,681	0	781,637	642	4.0	814,873
2040	415,413	0	72,223	0	303,313	0	790,949	642	4.0	824,574

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Table 1-1 *(continued)*

Peaks Summary

Winter		Summer						
Season	Non-Coincident Peak Demand	Year	Non-Coincident Peak Demand	Year	Purchased Power (MWh)	Load Factor (%)	Temperature at time of Winter Peak	Temperature at time of Summer Peak
2009 - 10	137.1	2010	99.2	2010	496,746	41.4%	2° F	91° F
2010 - 11	137.2	2011	98.2	2011	461,677	38.4%	10° F	94° F
2011 - 12	114.4	2012	99.4	2012	443,848	44.2%	15° F	103° F
2012 - 13	121.5	2013	89.6	2013	463,897	43.6%	10° F	93° F
2013 - 14	168.4	2014	93.0	2014	487,468	33.0%	0° F	91° F
2014 - 15	176.0	2015	91.5	2015	470,443	30.5%	-18° F	91° F
2015- 16	135.4	2016	96.9	2016	484,106	40.7%	4° F	95° F
2016 - 17	141.0	2017	100.4	2017	458,938	37.2%	4° F	94° F
2017 - 18	167.5	2018	100.4	2018	510,842	34.8%	-3° F	97° F
2018 - 19	142.0	2019	100.5	2019	494,381	39.8%	2° F	97° F
2019 - 20	125.7	2020	98.7	2020	491,563	44.5%	12° F	93° F
2020 - 21	155.9	2021	135.5	2021	609,130	44.6%		
2021 - 22	190.7	2022	136.3	2022	656,615	39.3%		
2022 - 23	191.7	2023	137.1	2023	692,444	41.2%		
2023 - 24	192.7	2024	137.9	2024	697,843	41.2%		
2024 - 25	194.7	2025	140.2	2025	710,000	41.6%		
2025 - 26	195.7	2026	141.0	2026	714,157	41.7%		
2026 - 27	196.7	2027	141.9	2027	717,648	41.6%		
2027 - 28	197.8	2028	142.7	2028	721,491	41.5%		
2028 - 29	199.8	2029	145.1	2029	734,414	42.0%		
2029 - 30	200.9	2030	145.9	2030	737,727	41.9%		
2030 - 31	201.9	2031	146.8	2031	743,043	42.0%		
2031 - 32	203.0	2032	147.7	2032	751,289	42.1%		
2032 - 33	204.1	2033	148.6	2033	756,830	42.3%		
2033 - 34	205.2	2034	149.5	2034	764,930	42.6%		
2034 - 35	207.3	2035	151.9	2035	782,679	43.1%		
2035 - 36	208.4	2036	152.8	2036	790,067	43.2%		
2036 - 37	209.5	2037	153.7	2037	797,204	43.4%		
2037 - 38	210.6	2038	154.6	2038	806,030	43.7%		
2038 - 39	211.7	2039	155.5	2039	814,873	43.9%		
2039 - 40	212.9	2040	156.5	2040	824,574	44.1%		

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Executive Summary *(continued)*

Overall Results

- Total sales are projected to grow by 2.7 percent a year for the period 2020-2040, compared to a 1.1 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 1.7 percent over the 19 year forecast (2021-2040). Summer peak demands for the same period indicate growth of 0.8 percent.

- Load factor decreases from 44.5% to 44.1% through the forecast period.

Executive Summary *(continued)*

Overall Results – Table 1-2

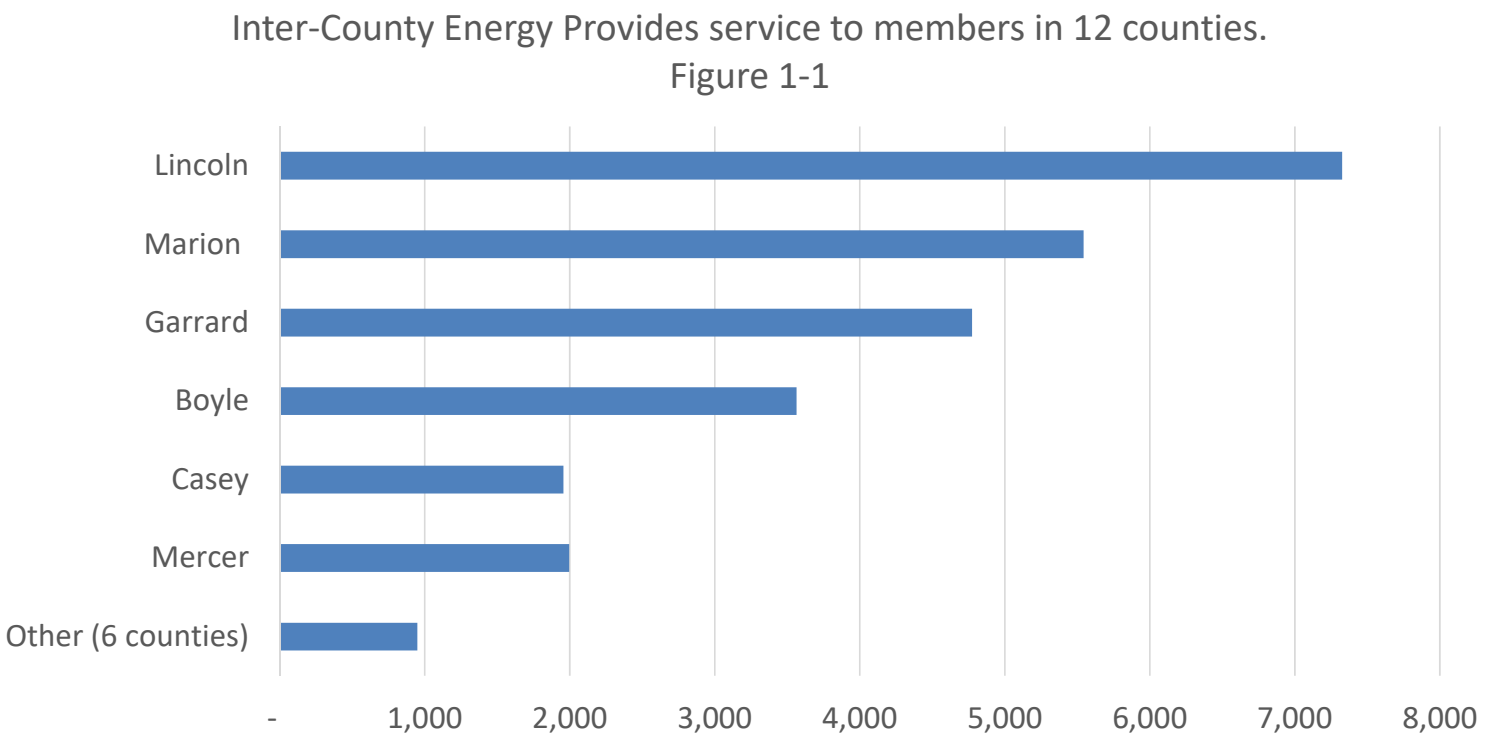
Average Growth Rates	Time Period	Residential	Small Commercial	Large Commercial	Total
5-Year	2014-2019	-0.6%	-3.5%	6.6%	-0.1%
	2020-2025	0.2%	5.2%	34.4%	7.9%
10-Year	2009-2019	0.7%	-3.8%	10.2%	0.9%
	2020-2030	0.2%	3.4%	16.7%	4.3%
15-Year	2004-2019	0.3%	-0.8%	9.1%	0.9%
	2020-2035	0.5%	2.9%	11.3%	3.2%
20-Year	1999-2019	1.2%	1.9%	7.4%	1.8%
	2020-2040	0.7%	2.6%	8.6%	2.7%

Narrative

Inter-County Energy is a Touchstone Energy Cooperative with its headquarters in Danville, Kentucky and a district office in Lebanon, Kentucky. With over 3,900 miles of distribution lines, the cooperative serves over 26,107 customers in the rural areas of the following central Kentucky counties: Boyle, Garrard, Lincoln, Casey, Marion, Mercer, Washington, Taylor, Madison, Rockcastle, Larue, and Nelson. Kentucky Utilities Company, an investor owned utility, provides electric service to most of the urban and small towns in the area.

Narrative *(continued)*

Counties Served



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Narrative *(continued)*

In recent years, changes have taken place in the economy of the area. Traditionally, tobacco, dairy and beef cattle farming were the financial backbone of the communities served by the cooperative. Hardwood timber, fruits and vegetables supplemented the agricultural base of the area. As a result several area businesses have closed and new residential construction has slowed. Recent studies predict this is a temporary situation and that steady system growth will continue over the next several years.

Most of the counties served by Inter-County Energy have one or more industrial parks. The Danville/Boyle County Industrial Park functions as a regional hub for employment in the area served by Inter-County Energy. The Danville/Boyle County Industrial Foundation has been successful in attracting light industry as well as Fortune 500 Companies to the park. The majority of existing industry in the Danville/Boyle County Park is served by Kentucky Utilities. However, the park has numerous available properties that will be served by the cooperative when they are developed.

The Lebanon/Marion County Industrial Foundation also has been successful in recruiting commercial and industrial customers to Marion County. The largest industrial customers served by Inter-County Energy have facilities in the Lebanon/Marion County Industrial Park. Those industries are: NSU, Morton Plastics, Montebello, TBMK, and Joy Mining.

Narrative *(continued)*

There is a new industrial park in Lincoln County. Inter-County Energy, working closely with the Industrial Development Director of Lincoln County, has been very active in recruiting customers to this area. A speculative building is still being considered for this park.

Makers Mark Distillery is another major commercial customer of Inter-County Energy and is currently increasing their overall capacity with additional production expansions. Located in Loretta, Kentucky, Makers Mark Distillery has been a customer since 1958.

Narrative *(continued)*

Several new highway projects have been completed in the cooperative's service area that should benefit the cooperative. Improvements in the Highway 68 from Danville to Lebanon provide a much safer route to the western portion of Inter-County Energy's service area. A new section of Highway 127 from Danville into Casey County has created a good corridor to the south and a new section of Highway 150 is complete in Eastern Lincoln County offering better access to I-75 in Mt. Vernon. And finally, a new section of Highway 27 from Jessamine County through Garrard County and into Lincoln County has been completed. An improved highway system will enhance and grow the economy of the area.

Inter-County Energy's rate of growth in sales and consumers has decreased from earlier projections. However, based upon recent studies, growth should resume and continue at a steady rate. Efforts by the cooperative and local industrial leaders to promote economic development in the area served by the cooperative will result in greater power sales to all classes of customers including the commercial and industrial sectors.

Narrative *(continued)*

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Key Assumptions

Economic History and Forecast
Table 1-3

	Time Period	Population	Households	Total Employment	Total Real Personal Income
5 Year Growth Rates	2014-2019	0.3%	0.4%	0.9%	3.2%
	2020-2025	0.2%	0.6%	2.5%	3.1%
10 Year Growth Rates	2009-2019	0.2%	0.3%	0.8%	3.5%
	2020-2030	0.2%	0.5%	1.4%	3.7%
15 Year Growth Rates	2004-2019	0.3%	0.4%	0.3%	3.4%
	2020-2035	0.1%	0.5%	1.1%	3.8%
20 Year Growth Rates	1999-2019	0.5%	0.6%	0.3%	3.7%
	2020-2040	0.1%	0.4%	0.9%	3.8%

- *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

- 73% of customers use electric as a primary fuel for heating, while 19% use it as a secondary fuel.
  - 14% use electric furnaces and 68% use electric heat pumps.
- 78% of customers use central air and 22% use electric/window units.
- 92% of customers use electric water heaters.
- These saturations are not expected to change significantly by 2040.

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Key Assumptions *(continued)*

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

- Electric Range 93%
- Freezer 62%
- Smart TV 70%

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 Lexington Blue Grass Airport weather station.

- 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 Inter-County Energy as reported on RUS Form 7.

Typically, a preliminary forecast is prepared during the first quarter depending on when Inter-County Energy experiences its winter peak. The first step is modeling the regional economy. 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 Inter-County Energy Comparative Annual Operating Data

Year	kWh Purchased And Generated	Change	kWh Sold	Change	kWh Loss	% Loss	Billing Peak Demand (MW)	Average Number Of Consumers	Miles Of Line	Consumers Per Mile	Cost Of Purchased Power	Cents Per kWh
2010	496,746,109	10.2%	462,841,449	8.3%	33,202,893	6.7%	136.4	25,256	3,748	6.7	$32,154,679	6.5
2011	461,676,523	-7.1%	448,921,637	-3.0%	12,063,155	2.6%	132.3	25,250	3,765	6.7	$32,725,937	7.1
2012	443,847,609	-3.9%	420,485,716	-6.3%	22,724,951	5.1%	112.4	25,338	3,779	6.7	$32,248,546	7.3
2013	463,897,306	4.5%	432,838,546	2.9%	30,414,089	6.6%	119.2	25,328	3,803	6.7	$34,101,047	7.4
2014	487,468,438	5.1%	471,846,532	9.0%	14,984,867	3.1%	158.4	25,568	3,834	6.7	$36,394,601	7.5
2015	470,443,362	-3.5%	446,926,324	-5.3%	22,807,818	4.8%	172.0	25,686	3,875	6.6	$33,200,218	7.1
2016	484,106,405	2.9%	459,901,085	2.9%	23,478,328	4.8%	127.0	25,908	3,935	6.6	$33,246,100	6.9
2017	458,938,301	-5.2%	440,468,512	-4.2%	17,868,401	3.9%	139.3	26,141	3,978	6.6	$32,070,679	7.0
2018	510,842,152	11.3%	485,300,045	10.2%	24,944,467	4.9%	161.6	26,307	4,016	6.6	$34,718,745	6.8
2019	494,380,809	-3.2%	469,661,768	-3.2%	24,146,185	4.9%	135.4	26,449	3,928	6.7	$33,461,944	6.8
Average						4.7%						

Methodology and Results *(continued)*

Introduction

The preliminary forecast was presented to Inter-County Energy staff. Changes were made to the forecast as needed based on new information, such as new large loads or subdivisions. In some instances, other assumptions were based on insights from Inter-County Energy 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 Inter-County Energy'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 Inter-County Energy's energy forecast.

Table 1-5
Residential Summary

	Customers				Use Per Customer			Class Sales		
	Annual Average	Annual Change	w/o Reclass	% Change	Monthly Average (kWh)	Change (kWh)	% Change	Total (MWh)	Annual Change (MWh)	% Change
2010	23,843	-221		-0.9	1,277	120	10.4	365,350	31,365	9.4
2011	23,846	3		0.0	1,238	-39	-3.1	354,194	-11,156	-3.1
2012	23,919	73		0.3	1,143	-95	-7.7	327,931	-26,263	-7.4
2013	23,911	-8		0.0	1,179	36	3.2	338,248	10,317	3.1
2014	24,094	183		0.8	1,277	99	8.4	369,316	31,068	9.2
2015	24,170	76		0.3	1,177	-100	-7.8	341,423	-27,893	-7.6
2016	24,369	199		0.8	1,182	5	0.4	345,572	4,149	1.2
2017	24,581	212		0.9	1,104	-77	-6.5	325,775	-19,796	-5.7
2018	25,329	748	203	3.0	1,234	129	11.7	375,003	49,227	15.1
2019	25,397	68		0.3	1,178	-56	-4.5	358,982	-16,021	-4.3
2020	25,593	196		0.8	1,186	8	0.7	364,324	5,342	1.5
2021	25,747	154		0.6	1,180	-6	-0.5	364,631	307	0.1
2022	25,901	154		0.6	1,175	-5	-0.4	365,247	616	0.2
2023	26,057	156		0.6	1,170	-5	-0.4	365,970	724	0.2
2024	26,213	156		0.6	1,169	-1	-0.1	367,746	1,776	0.5
2025	26,370	157		0.6	1,163	-6	-0.5	368,068	321	0.1
2026	26,528	158		0.6	1,160	-3	-0.3	369,217	1,150	0.3
2027	26,688	160		0.6	1,155	-5	-0.4	369,915	698	0.2
2028	26,848	160		0.6	1,151	-4	-0.4	370,816	900	0.2
2029	27,009	161		0.6	1,148	-3	-0.2	372,187	1,371	0.4
2030	27,171	162		0.6	1,143	-6	-0.5	372,625	438	0.1
2031	27,334	163		0.6	1,143	0	0.0	374,791	2,165	0.6
2032	27,498	164		0.6	1,149	7	0.6	379,223	4,432	1.2
2033	27,663	165		0.6	1,151	2	0.1	382,010	2,787	0.7
2034	27,829	166		0.6	1,158	7	0.6	386,648	4,638	1.2
2035	27,996	167		0.6	1,165	7	0.6	391,427	4,779	1.2
2036	28,164	168		0.6	1,169	4	0.3	394,969	3,542	0.9
2037	28,333	169		0.6	1,174	6	0.5	399,231	4,262	1.1
2038	28,503	170		0.6	1,183	9	0.7	404,575	5,343	1.3
2039	28,674	171		0.6	1,191	8	0.7	409,910	5,336	1.3
2040	28,846	172		0.6	1,200	9	0.7	415,413	5,503	1.3

Note: Reclassification beginning 2018

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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	w/o Reclass	% Change	Annual Average (MWh)	Change (MWh)	% Change	Total (MWh)	Annual Change (MWh)	% Change
2010	1,410	16		1.1	52	2	4.8	73,308	4,164	6.0
2011	1,401	-9		-0.6	51	-1	-1.8	71,539	-1,769	-2.4
2012	1,416	15		1.1	50	-1	-2.7	70,382	-1,158	-1.6
2013	1,414	-2		-0.1	42	-7	-14.5	60,061	-10,321	-14.7
2014	1,467	53		3.7	38	-4	-9.8	56,221	-3,840	-6.4
2015	1,513	46		3.1	49	11	27.6	73,989	17,768	31.6
2016	1,535	22		1.5	45	-4	-8.6	68,623	-5,366	-7.3
2017	1,552	17		1.1	34	-11	-23.8	52,843	-15,780	-23.0
2018	970	-582	20	-37.5	50	16	46.5	48,392	-4,451	-8.4
2019	1,043	73		7.5	45	-5	-9.7	47,009	-1,383	-2.9
2020	1,114	71		6.8	39	-6	-13.3	43,542	-3,466	-7.4
2021	1,130	16		1.4	44	5	12.3	49,607	6,065	13.9
2022	1,147	17		1.5	45	1	3.1	51,927	2,320	4.7
2023	1,164	17		1.5	46	1	2.0	53,743	1,815	3.5
2024	1,182	18		1.5	47	0	0.7	54,976	1,234	2.3
2025	1,200	18		1.5	47	0	0.5	56,074	1,098	2.0
2026	1,218	18		1.5	47	0	0.5	57,189	1,115	2.0
2027	1,236	18		1.5	47	0	0.3	58,230	1,041	1.8
2028	1,254	18		1.5	47	0	0.1	59,142	912	1.6
2029	1,273	19		1.5	47	0	0.0	60,046	904	1.5
2030	1,292	19		1.5	47	0	0.2	61,061	1,015	1.7
2031	1,312	20		1.5	47	0	0.2	62,148	1,088	1.8
2032	1,331	19		1.4	48	0	0.3	63,265	1,117	1.8
2033	1,351	20		1.5	48	0	0.2	64,375	1,110	1.8
2034	1,372	21		1.6	48	0	0.2	65,537	1,162	1.8
2035	1,392	20		1.5	48	0	0.3	66,670	1,133	1.7
2036	1,413	21		1.5	48	0	0.1	67,757	1,086	1.6
2037	1,434	21		1.5	48	0	0.1	68,833	1,076	1.6
2038	1,456	22		1.5	48	0	0.1	69,935	1,102	1.6
2039	1,478	22		1.5	48	0	0.1	71,046	1,111	1.6
2040	1,500	22		1.5	48	0	0.2	72,223	1,178	1.7

Note: Recalssification beginning 2018

EAST KENTUCKY POWER COOPERATIVE
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Methodology and Results *(continued)*

Large Commercial Forecast

Large commercial customers are those with loads 1 MW or greater. Inter-County Energy currently has 9 customers in this class and is projected to increase to 14 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	3	0	0.0	8,061	-3	0.0	24,183	-9	0.0
2011	3	0	0.0	7,730	-331	-4.1	23,189	-994	-4.1
2012	3	0	0.0	7,391	-339	-4.4	22,173	-1,016	-4.4
2013	3	0	0.0	11,510	4,119	55.7	34,530	12,357	55.7
2014	3	0	0.0	15,437	3,927	34.1	46,310	11,780	34.1
2015	3	0	0.0	10,505	-4,932	-31.9	31,515	-14,795	-31.9
2016	4	1	33.3	11,427	922	8.8	45,707	14,192	45.0
2017	8	4	100.0	7,731	-3,695	-32.3	61,850	16,143	35.3
2018	8	0	0.0	7,738	7	0.1	61,905	55	0.1
2019	9	1	12.5	7,075	-664	-8.6	63,671	1,766	2.9
2020	9	0	0.0	6,497	-577	-8.2	58,477	-5,194	-8.2
2021	11	2	22.2	15,333	8,836	136.0	168,666	110,190	188.4
2022	11	0	0.0	19,262	3,928	25.6	211,878	43,212	25.6
2023	11	0	0.0	22,217	2,956	15.3	244,391	32,513	15.3
2024	11	0	0.0	22,415	198	0.9	246,565	2,174	0.9
2025	12	1	9.1	21,401	-1,014	-4.5	256,816	10,252	4.2
2026	12	0	0.0	21,545	144	0.7	258,543	1,727	0.7
2027	12	0	0.0	21,680	134	0.6	260,154	1,612	0.6
2028	12	0	0.0	21,836	156	0.7	262,032	1,877	0.7
2029	13	1	8.3	20,936	-900	-4.1	272,163	10,131	3.9
2030	13	0	0.0	21,068	133	0.6	273,890	1,727	0.6
2031	13	0	0.0	21,211	142	0.7	275,741	1,851	0.7
2032	13	0	0.0	21,393	182	0.9	278,107	2,366	0.9
2033	13	0	0.0	21,502	109	0.5	279,530	1,423	0.5
2034	13	0	0.0	21,654	152	0.7	281,506	1,977	0.7
2035	14	1	7.7	20,902	-752	-3.5	292,633	11,126	4.0
2036	14	0	0.0	21,078	176	0.8	295,097	2,464	0.8
2037	14	0	0.0	21,186	108	0.5	296,610	1,514	0.5
2038	14	0	0.0	21,331	145	0.7	298,637	2,027	0.7
2039	14	0	0.0	21,477	146	0.7	300,681	2,043	0.7
2040	14	0	0.0	21,665	188	0.9	303,313	2,632	0.9

Methodology and Results *(continued)*

Peak Day Weather Scenarios

Extreme temperatures can dramatically influence Inter-County 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					
	Mild	Normal		**Extreme**	
Degrees	10	-2	-10	-14	-17
Probability	*99%*	*50%*	*20%*	*10%*	*3%*
Occurs Once Every		**2 Years**	**5 Years**	**10 Years**	**30 Years**
Non-Coincident Winter Peak Demand - MW					
Season	Mild	Normal		Extreme	
2020 - 21	132	156	172	180	186
2021 - 22	166	191	207	215	221
2022 - 23	167	192	208	216	222
2023 - 24	168	193	209	217	224
2024 - 25	170	195	211	220	226
2025 - 26	171	196	212	221	227
2026 - 27	172	197	213	222	228
2027 - 28	172	198	215	223	229
2028 - 29	174	200	217	225	232
2029 - 30	175	201	218	226	233
2030 - 31	176	202	219	228	234
2031 - 32	177	203	220	229	235
2032 - 33	178	204	221	230	237
2033 - 34	179	205	223	231	238
2034 - 35	181	207	225	234	240
2035 - 36	182	208	226	235	242
2036 - 37	183	209	227	236	243
2037 - 38	184	211	228	237	244
2038 - 39	185	212	230	239	245
2039 - 40	186	213	231	240	247

Summer Peak Day Maximum Temperatures				
	Normal		**Extreme**	
Degrees	96	99	101	103
Probability	*50%*	*20%*	*10%*	*3%*
	2 Years	**5 Years**	**10 Years**	**30 Years**
Non-Coincident Summer Peak Demand - MW				
Year	Normal		Extreme	
2021	135	141	144	148
2022	136	141	145	149
2023	137	142	146	149
2024	138	143	147	150
2025	140	145	149	153
2026	141	146	150	154
2027	142	147	151	155
2028	143	148	152	155
2029	145	150	154	158
2030	146	151	155	159
2031	147	152	156	160
2032	148	153	157	161
2033	149	154	158	162
2034	149	155	159	163
2035	152	157	161	165
2036	153	158	162	166
2037	154	159	163	167
2038	155	160	164	168
2039	156	161	165	169
2040	156	162	166	170