Salt River Electric Cooperative Corporation

2020 Load Forecast

November 2020

Prepared by: EKPC's Load Forecasting Department

SALT RIVER ELECTRIC
A Touchstone Energy Cooperative

EAST KENTUCKY POWER COOPERATIVE
A Touchstone Energy Cooperative

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Introduction
Executive Summary

Salt River Electric (Salt River) located in Bardstown, Kentucky, is an electric distribution cooperative that serves members in 10 counties. This load forecast report contains Salt River's long-range forecast of energy and peak demand.

Salt River 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 Salt River for reasonability. Final projections reflect a rigorous analysis of historical data combined with the experience and judgment of the President/CEO and staff of Salt River. Key assumptions are reported beginning on page 17.

Executive Summary *(continued)*

The load forecast is prepared every two years as part of the overall planning cycle at EKPC and Salt River. Cooperation helps to ensure that the forecast meets both parties' needs. Salt River 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 Salt River 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)	Public Street / Highway Lighting Sales (MWh)	Total Sales (MWh)	Office Use (MWh)	% Loss	Purchased Power (MWh)
2010	747,757	198,449	158,272	2,541	1,107,018	697	4.4	1,158,519
2011	708,165	197,107	171,428	2,587	1,079,287	696	4.0	1,124,480
2012	684,231	203,005	185,077	2,625	1,074,939	577	4.1	1,120,983
2013	717,901	203,902	191,622	2,650	1,116,075	669	3.7	1,159,149
2014	737,235	211,633	196,946	2,667	1,148,482	822	4.0	1,196,920
2015	713,266	214,066	200,418	2,727	1,130,478	711	3.9	1,176,520
2016	723,572	215,141	215,466	2,693	1,156,873	523	4.1	1,207,066
2017	699,038	215,343	223,818	2,684	1,140,882	414	3.6	1,184,476
2018	778,672	227,406	234,811	2,677	1,243,565	472	3.9	1,294,364
2019	762,415	223,397	236,780	2,712	1,225,304	436	3.5	1,269,903
2020	750,834	205,520	234,877	2,703	1,193,934	511	3.8	1,241,574
2021	786,091	234,802	262,407	2,756	1,286,055	511	3.8	1,337,330
2022	796,041	240,821	313,161	2,781	1,352,804	511	3.8	1,406,712
2023	808,072	245,689	343,809	2,806	1,400,375	511	3.8	1,456,160
2024	820,157	248,935	348,352	2,831	1,420,274	511	3.8	1,476,845
2025	831,073	251,670	361,377	2,856	1,446,976	511	3.8	1,504,599
2026	842,829	254,430	374,539	2,871	1,474,668	511	3.8	1,533,384
2027	855,068	257,015	378,343	2,885	1,493,311	511	3.8	1,552,763
2028	866,652	259,259	390,846	2,899	1,519,656	511	3.8	1,580,148
2029	878,174	261,420	394,103	2,914	1,536,612	511	3.8	1,597,773
2030	888,453	263,672	406,696	2,928	1,561,749	511	3.8	1,623,902
2031	898,615	266,000	419,485	2,943	1,587,043	511	3.8	1,650,193
2032	913,680	268,397	423,264	2,958	1,608,299	511	3.8	1,672,288
2033	923,797	270,773	436,209	2,973	1,633,751	511	3.8	1,698,745
2034	937,482	273,155	449,246	2,987	1,662,870	511	3.8	1,729,013
2035	951,746	275,535	453,160	3,002	1,683,444	511	3.8	1,750,398
2036	970,301	277,982	466,381	3,017	1,717,682	511	3.8	1,785,987
2037	983,385	280,525	479,846	3,032	1,746,788	511	3.8	1,816,241
2038	999,968	283,158	493,547	3,048	1,779,720	511	3.8	1,850,473
2039	1,016,979	285,809	498,168	3,063	1,804,019	511	3.8	1,875,730
2040	1,036,859	288,589	512,213	3,078	1,840,740	511	3.8	1,913,900

Table 1-1 *(continued)*

Peaks Summary

	Winter		***Summer***					
Season	Non-Coincident Peak Demand (MW)	Year	Non-Coincident Peak Demand (MW)	Year	Purchased Power (MWh)	Load Factor (%)	Temperature at time of Winter Peak	Temperature at time of Summer Peak
2009 - 10	250.9	2010	252.3	2010	1,158,519	52.4%	11° F	102° F
2010 - 11	266.5	2011	252.9	2011	1,124,480	48.2%	14° F	97° F
2011 - 12	232.0	2012	261.1	2012	1,120,983	48.9%	17° F	104° F
2012 - 13	242.3	2013	241.2	2013	1,159,149	54.6%	11° F	94° F
2013 - 14	328.1	2014	245.5	2014	1,196,920	41.6%	4° F	94° F
2014 - 15	333.8	2015	253.2	2015	1,176,520	40.2%	-6° F	94° F
2015 - 16	277.4	2016	258.5	2016	1,207,066	49.5%	7° F	95° F
2016 - 17	277.0	2017	256.9	2017	1,184,476	48.8%	9° F	97° F
2017 - 18	322.5	2018	264.4	2018	1,294,364	45.8%	0° F	98° F
2018 - 19	300.9	2019	279.0	2019	1,269,903	48.2%	3° F	98° F
2019 - 20	265.0	2020	268.8	2020	1,241,574	52.6%	17° F	95° F
2020 - 21	302.0	2021	283.8	2021	1,337,330	50.6%		
2021 - 22	311.7	2022	294.0	2022	1,406,712	51.5%		
2022 - 23	318.9	2023	300.7	2023	1,456,160	52.1%		
2023 - 24	323.5	2024	303.6	2024	1,476,845	52.0%		
2024 - 25	326.9	2025	307.3	2025	1,504,599	52.5%		
2025 - 26	331.4	2026	311.4	2026	1,533,384	52.8%		
2026 - 27	334.9	2027	314.1	2027	1,552,763	52.9%		
2027 - 28	340.4	2028	318.6	2028	1,580,148	52.8%		
2028 - 29	342.6	2029	320.7	2029	1,597,773	53.2%		
2029 - 30	345.5	2030	324.1	2030	1,623,902	53.7%		
2030 - 31	348.5	2031	327.5	2031	1,650,193	54.1%		
2031 - 32	352.0	2032	330.1	2032	1,672,288	54.1%		
2032 - 33	354.8	2033	333.7	2033	1,698,745	54.7%		
2033 - 34	358.7	2034	337.7	2034	1,729,013	55.0%		
2034 - 35	361.8	2035	340.3	2035	1,750,398	55.2%		
2035 - 36	367.3	2036	345.0	2036	1,785,987	55.4%		
2036 - 37	370.8	2037	349.4	2037	1,816,241	55.9%		
2037 - 38	375.6	2038	354.1	2038	1,850,473	56.2%		
2038 - 39	379.4	2039	357.4	2039	1,875,730	56.4%		
2039 - 40	385.1	2040	362.4	2040	1,913,900	56.6%		

Executive Summary *(continued)*

Overall Results

- Total sales are projected to grow by 2.2 percent a year for the period 2020-2040, compared to a 1.9 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 1.9 percent over the 20 year forecast. Summer peak demands for the same period indicate growth of 1.5 percent.

- Load factor increases from 52.6% to 56.6% through the forecast period.

Executive Summary *(continued)*

Overall Results – Table 1-2

	Time Period	Residential	Small Commercial	Large Commercial	Public Street / Highway Lighting	Total Sales
5-Year	2014-2019	0.7%	1.1%	3.8%	0.3%	1.3%
	2020-2025	2.1%	4.1%	9.0%	1.1%	3.9%
10-Year	2009-2019	1.3%	1.9%	5.3%	0.8%	2.1%
	2020-2030	1.7%	2.5%	5.6%	0.8%	2.7%
15-Year	2004-2019	1.5%	3.1%	5.5%	1.4%	2.4%
	2020-2035	1.6%	2.0%	4.5%	0.7%	2.3%
20-Year	1999-2019	2.3%	4.1%	5.9%	2.9%	3.1%
	2020-2040	1.6%	1.7%	4.0%	0.7%	2.2%

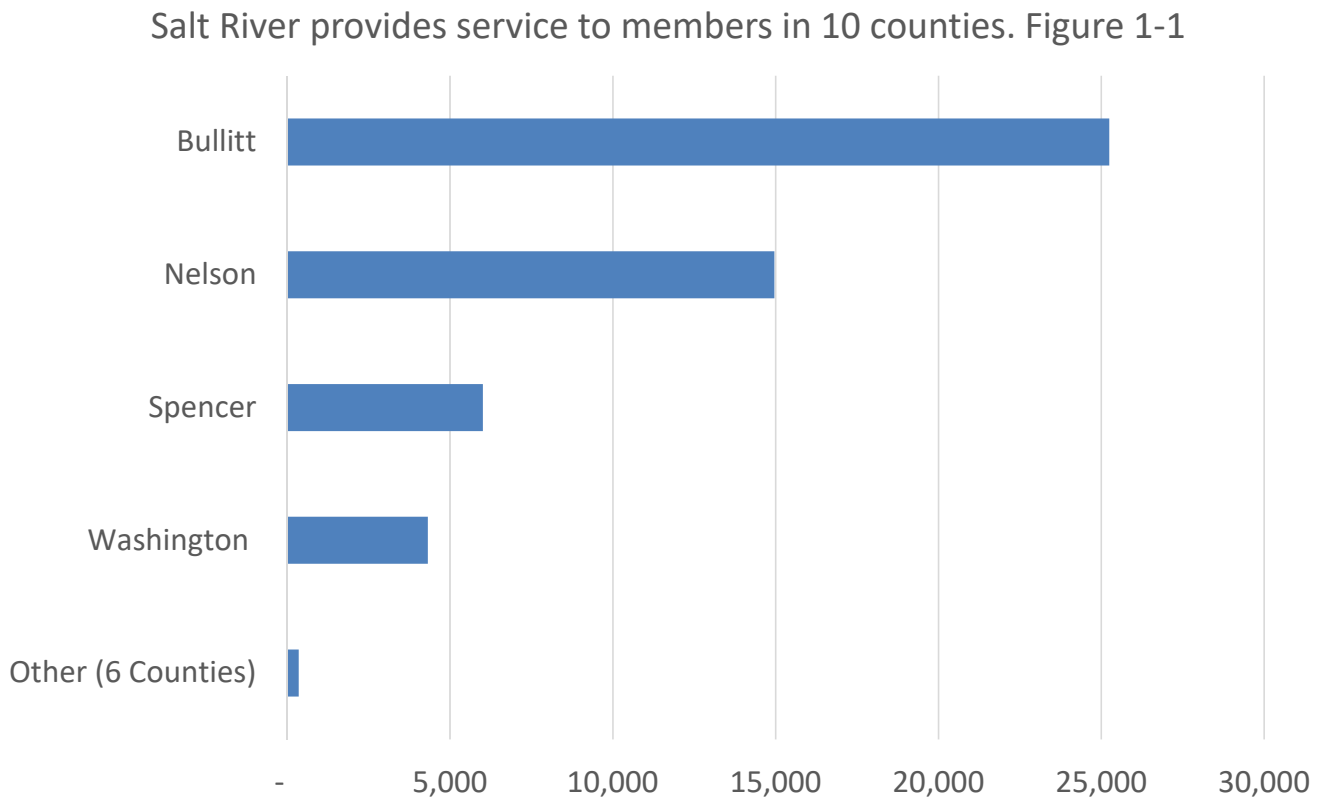
Narrative

Territory

Salt River ECC headquarters is located in Bardstown, Kentucky. The cooperative furnishes electric service to Anderson, Bullitt, Jefferson, LaRue, Marion, Mercer, Nelson, Shelby, Spencer, and Washington counties. Because Kentucky has certified service boundaries, there is little possibility of a change in service territory. See Figure 1-1 to see the number of members in each county. There are no plans for merger, consolidation or reorganization.

Narrative *(continued)*

Counties Served



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Narrative *(continued)*

Interstate 65 has six lanes through Bullitt County, providing a major transportation route through the service area. A total of five interchanges exist in or near our service area with an additional opening in December 2020. Associated growth activity is expected in these areas.

Additional load related to travel and tourism, such as hotels/motels, convenience stores and restaurants will continue to come on line during the upcoming year at the Brooks I-65 interchange in northern Bullitt County.

Distribution Warehousing development continues to be strong along the I-65 corridor between KY 44 & KY 245.

Narrative *(continued)*

Future improvements will extend from the Bullitt/Jefferson County line to a point south of the Mt. Washington City at the Spencer County line during the next three to four years. This will accelerate growth in western Spencer County and northeastern Nelson County. Construction is underway to improve US 31E from South of Mt. Washington in Bullitt County to Bardstown in Nelson County.

The average residence has 2.39 people per household. 66% of all homes are headed by someone age 55 or greater.

Narrative *(continued)*

An existing rail connector connects Bardstown in Nelson County with the southern line in central Bullitt County.

The Southern Rail Line from Nashville penetrates Bullitt County for twenty-plus miles and serves several businesses in and near Shepherdsville and Lebanon Junction.

Other than several rock and sand quarries, no mining exists in our service area.

No substantial irrigation occurs in our service area.

The bourbon distillery industry which serves as the region's industrial base is a mature industry and its rate will probably continue to grow due to the export trade in Europe and the Far East.

Narrative *(continued)*

Several industrial parks are now operating: (1) Brooks interchange (Bullitt County); (2) Cedar Grove (Bullitt County); (3) Clermont area (Bullitt County); (4) Mt. Washington (Bullitt County); (5) Springfield (Washington County); (6) Blue Grass Parkway in northeastern Nelson County.

Several new distribution warehouses have located in the Bullitt County Industrial Parks, while others are planned.

Narrative *(continued)*

Taylorsville Lake, a Corp of Engineers flood control impoundment, was completed in 1984. This 3,000-acre lake has 10,000 acres of associated lakeside public land devoted to wildlife preservation and recreational uses. A small resort, including condominiums and a golf course, was opened in 1984.

The major remaining land areas are devoted to farming, mainly tobacco and soybean crops, and dairies; and woodland areas.

The increasing importance of tourism in Bardstown continues to fuel development within our service territory.

Narrative *(continued)*

Highway 555 has been extended from the Willisburg/Springfield exit of the Bluegrass Parkway to the Taylorsville Lake area in southern Spencer County. This route follows the easterly boundary of the Salt River Electric territory and opens up a corridor (over fifteen miles) of new area for residential, commercial and seasonal development relative to the recreational nature of the region.

The US highway from Perryville to Springfield has been upgraded and straightened providing potential for growth.

Key Assumptions

Economic Region History and Forecast
Table 1-3

	Time Period	Population	Households	Total Employment	Total Personal Income
5 Year Growth Rates	2014-2019	0.9%	1.0%	2.8%	4.9%
	2020-2025	1.0%	1.4%	2.4%	3.7%
10 Year Growth Rates	2009-2019	0.9%	1.0%	3.3%	4.4%
	2020-2030	0.9%	1.3%	1.3%	4.2%
15 Year Growth Rates	2004-2019	1.2%	1.3%	2.8%	4.5%
	2020-2035	0.9%	1.2%	1.0%	4.1%
20 Year Growth Rates	1999-2019	1.5%	1.6%	2.5%	5.0%
	2020-2040	0.8%	1.2%	0.8%	4.1%

- *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

- 58% of customers use electric as a primary fuel for heating, while 16% use it as a secondary fuel.
  - 15% use electric furnaces and 47% use electric heat pumps.
- 93% of customers use central air and 10% use electric/window units.
- 82% 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 89%
- Freezer 54%
- Smart TV 74%

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 Louisville 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 and graphical form for residential and commercial classifications. Table 1-4 shows historical data for Salt River Electric as reported on RUS Form 7.

Typically, a preliminary forecast is prepared during the first quarter depending on when Salt River 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 Salt River Electric 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 / kWh
2010	1,158,519,415	11.2%	1,107,017,590	10.8%	50,804,733	4.4%	255.2	47,046	4,016	11.7	$73,959,784	6.4
2011	1,124,480,062	-2.9%	1,079,287,313	-2.5%	44,497,246	4.0%	241.5	47,411	4,040	11.7	$78,451,169	7.0
2012	1,120,983,263	-0.3%	1,074,938,783	-0.4%	45,467,591	4.1%	243.5	47,805	4,068	11.8	$79,316,414	7.1
2013	1,159,149,288	3.4%	1,116,075,070	3.8%	42,405,097	3.7%	233.0	48,320	4,095	11.8	$82,927,495	7.2
2014	1,196,920,394	3.3%	1,148,481,812	2.9%	47,616,280	4.0%	295.5	48,851	4,123	11.8	$86,580,590	7.2
2015	1,176,519,957	-1.7%	1,130,477,773	-1.6%	45,331,020	3.9%	315.3	49,401	4,151	11.9	$80,649,188	6.9
2016	1,207,066,266	2.6%	1,156,872,693	2.3%	49,670,835	4.1%	249.3	50,051	4,185	12.0	$81,187,942	6.7
2017	1,184,476,084	-1.9%	1,140,881,532	-1.4%	43,180,254	3.6%	264.2	50,935	4,232	12.0	$79,252,908	6.7
2018	1,294,364,367	9.3%	1,243,565,081	9.0%	50,327,332	3.9%	309.5	51,667	4,273	12.1	$85,851,419	6.6
2019	1,269,902,880	-1.9%	1,225,304,176	-1.5%	44,162,395	3.5%	280.7	52,455	4,325	12.1	$83,747,055	6.6
Average						4.1%						

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Methodology and Results *(continued)*

Introduction

The preliminary forecast was presented to Salt River 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 Salt River 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 reports Salt River Electric'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 Salt River Electric'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	44,092	496	1.1	1,413	131	10.2	747,757	76,838	11.5
2011	44,449	357	0.8	1,328	-86	-6.1	708,165	-39,592	-5.3
2012	44,777	328	0.7	1,273	-54	-4.1	684,231	-23,934	-3.4
2013	45,287	510	1.1	1,321	48	3.7	717,901	33,670	4.9
2014	45,790	503	1.1	1,342	21	1.6	737,235	19,334	2.7
2015	46,290	500	1.1	1,284	-58	-4.3	713,266	-23,969	-3.3
2016	46,901	611	1.3	1,286	2	0.1	723,572	10,306	1.4
2017	47,725	824	1.8	1,221	-65	-5.1	699,038	-24,535	-3.4
2018	48,395	670	1.4	1,341	120	9.8	778,672	79,634	11.4
2019	49,113	718	1.5	1,294	-47	-3.5	762,415	-16,257	-2.1
2020	50,020	907	1.8	1,251	-43	-3.3	750,834	-11,581	-1.5
2021	50,870	850	1.7	1,288	37	2.9	786,091	35,257	4.7
2022	51,735	865	1.7	1,282	-6	-0.4	796,041	9,950	1.3
2023	52,563	828	1.6	1,281	-1	-0.1	808,072	12,031	1.5
2024	53,404	841	1.6	1,280	-1	-0.1	820,157	12,085	1.5
2025	54,258	854	1.6	1,276	-3	-0.3	831,073	10,916	1.3
2026	55,127	869	1.6	1,274	-2	-0.2	842,829	11,755	1.4
2027	55,954	827	1.5	1,273	-1	0.0	855,068	12,240	1.5
2028	56,793	839	1.5	1,272	-2	-0.1	866,652	11,583	1.4
2029	57,645	852	1.5	1,270	-2	-0.2	878,174	11,523	1.3
2030	58,509	864	1.5	1,265	-4	-0.3	888,453	10,279	1.2
2031	59,329	820	1.4	1,262	-3	-0.3	898,615	10,162	1.1
2032	60,159	830	1.4	1,266	3	0.3	913,680	15,066	1.7
2033	61,001	842	1.4	1,262	-4	-0.3	923,797	10,117	1.1
2034	61,855	854	1.4	1,263	1	0.1	937,482	13,685	1.5
2035	62,721	866	1.4	1,265	2	0.1	951,746	14,264	1.5
2036	63,537	816	1.3	1,273	8	0.6	970,301	18,555	1.9
2037	64,363	826	1.3	1,273	1	0.0	983,385	13,083	1.3
2038	65,199	836	1.3	1,278	5	0.4	999,968	16,583	1.7
2039	66,047	848	1.3	1,283	5	0.4	1,016,979	17,011	1.7
2040	66,906	859	1.3	1,291	8	0.6	1,036,859	19,880	2.0

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 2.0% per year. The 2020 average increases 1.5% 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	2,722	49	1.8	73	4	5.3	198,449	13,463	7.3
2011	2,735	13	0.5	72	-1	-1.1	197,107	-1,341	-0.7
2012	2,798	63	2.3	73	0	0.7	203,005	5,898	3.0
2013	2,804	6	0.2	73	0	0.2	203,902	897	0.4
2014	2,833	29	1.0	75	2	2.7	211,633	7,731	3.8
2015	2,875	42	1.5	74	0	-0.3	214,066	2,433	1.1
2016	2,916	41	1.4	74	-1	-0.9	215,141	1,075	0.5
2017	2,972	56	1.9	72	-1	-1.8	215,343	201	0.1
2018	3,028	56	1.9	75	3	3.6	227,406	12,063	5.6
2019	3,089	61	2.0	72	-3	-3.7	223,397	-4,009	-1.8
2020	3,148	59	1.9	65	-7	-9.7	205,520	-17,877	-8.0
2021	3,203	55	1.7	73	8	12.3	234,802	29,282	14.2
2022	3,257	54	1.7	74	1	0.9	240,821	6,019	2.6
2023	3,315	58	1.8	74	0	0.2	245,689	4,867	2.0
2024	3,376	61	1.8	74	0	-0.5	248,935	3,246	1.3
2025	3,438	62	1.8	73	-1	-0.7	251,670	2,735	1.1
2026	3,497	59	1.7	73	0	-0.6	254,430	2,761	1.1
2027	3,556	59	1.7	72	0	-0.7	257,015	2,584	1.0
2028	3,614	58	1.6	72	-1	-0.7	259,259	2,245	0.9
2029	3,665	51	1.4	71	0	-0.6	261,420	2,161	0.8
2030	3,713	48	1.3	71	0	-0.4	263,672	2,252	0.9
2031	3,759	46	1.2	71	0	-0.4	266,000	2,328	0.9
2032	3,807	48	1.3	71	0	-0.4	268,397	2,397	0.9
2033	3,854	47	1.2	70	0	-0.3	270,773	2,376	0.9
2034	3,899	45	1.2	70	0	-0.3	273,155	2,383	0.9
2035	3,942	43	1.1	70	0	-0.2	275,535	2,380	0.9
2036	3,988	46	1.2	70	0	-0.3	277,982	2,446	0.9
2037	4,037	49	1.2	69	0	-0.3	280,525	2,543	0.9
2038	4,086	49	1.2	69	0	-0.3	283,158	2,633	0.9
2039	4,135	49	1.2	69	0	-0.3	285,809	2,651	0.9
2040	4,183	48	1.2	69	0	-0.2	288,589	2,781	1.0

Methodology and Results *(continued)*

Large Commercial Forecast

Large commercial customers are those with loads 1 MW or greater. Salt River currently has 22 customers in this class and is projected to increase to 39 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	14	1	7.7	11,305	456	4.2	158,272	17,231	12.2
2011	14	0	0.0	12,245	940	8.3	171,428	13,157	8.3
2012	15	1	7.1	12,338	94	0.8	185,077	13,649	8.0
2013	16	1	6.7	11,976	-362	-2.9	191,622	6,545	3.5
2014	16	0	0.0	12,309	333	2.8	196,946	5,324	2.8
2015	17	1	6.3	11,789	-520	-4.2	200,418	3,472	1.8
2016	18	1	5.9	11,970	181	1.5	215,466	15,048	7.5
2017	21	3	16.7	10,658	-1,312	-11.0	223,818	8,352	3.9
2018	22	1	4.8	10,673	15	0.1	234,811	10,993	4.9
2019	22	0	0.0	10,763	90	0.8	236,780	1,969	0.8
2020	22	0	0.0	10,676	-87	-0.8	234,877	-1,903	-0.8
2021	24	2	9.1	10,934	257	2.4	262,407	27,530	11.7
2022	26	2	8.3	12,045	1,111	10.2	313,161	50,755	19.3
2023	28	2	7.7	12,279	234	1.9	343,809	30,648	9.8
2024	28	0	0.0	12,441	162	1.3	348,352	4,543	1.3
2025	29	1	3.6	12,461	20	0.2	361,377	13,025	3.7
2026	30	1	3.4	12,485	23	0.2	374,539	13,162	3.6
2027	30	0	0.0	12,611	127	1.0	378,343	3,804	1.0
2028	31	1	3.3	12,608	-4	0.0	390,846	12,503	3.3
2029	31	0	0.0	12,713	105	0.8	394,103	3,258	0.8
2030	32	1	3.2	12,709	-4	0.0	406,696	12,592	3.2
2031	33	1	3.1	12,712	2	0.0	419,485	12,789	3.1
2032	33	0	0.0	12,826	115	0.9	423,264	3,780	0.9
2033	34	1	3.0	12,830	3	0.0	436,209	12,945	3.1
2034	35	1	2.9	12,836	6	0.0	449,246	13,036	3.0
2035	35	0	0.0	12,947	112	0.9	453,160	3,914	0.9
2036	36	1	2.9	12,955	8	0.1	466,381	13,222	2.9
2037	37	1	2.8	12,969	14	0.1	479,846	13,464	2.9
2038	38	1	2.7	12,988	19	0.1	493,547	13,702	2.9
2039	38	0	0.0	13,110	122	0.9	498,168	4,621	0.9
2040	39	1	2.6	13,134	24	0.2	512,213	14,045	2.8

Methodology and Results *(continued)*

Public Street & Highway Lighting Forecast

Salt River serves street light accounts which are classified in the 'Public Street & Highway Lighting' category. This class is modeled separately. Results are reported in Table 1-8.

Table 1-8

Public Street & Highway Lighting 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	218	-1	-0.5	12	0	2.4	2,541	49	2.0
2011	213	-5	-2.3	12	0	4.2	2,587	46	1.8
2012	215	2	0.9	12	0	0.5	2,625	39	1.5
2013	213	-2	-0.9	12	0	1.9	2,650	24	0.9
2014	212	-1	-0.5	13	0	1.1	2,667	18	0.7
2015	219	7	3.3	12	0	-1.0	2,727	59	2.2
2016	216	-3	-1.4	12	0	0.1	2,693	-34	-1.2
2017	217	1	0.5	12	0	-0.8	2,684	-9	-0.3
2018	222	5	2.3	12	0	-2.5	2,677	-7	-0.3
2019	231	9	4.1	12	0	-2.6	2,712	35	1.3
2020	233	2	0.9	12	0	-1.2	2,703	-9	-0.3
2021	235	2	0.9	12	0	1.1	2,756	53	1.9
2022	237	2	0.9	12	0	0.0	2,781	25	0.9
2023	239	2	0.8	12	0	0.1	2,806	25	0.9
2024	241	2	0.8	12	0	0.1	2,831	25	0.9
2025	243	2	0.8	12	0	0.1	2,856	25	0.9
2026	245	2	0.8	12	0	-0.3	2,871	14	0.5
2027	246	1	0.4	12	0	0.1	2,885	14	0.5
2028	247	1	0.4	12	0	0.1	2,899	14	0.5
2029	248	1	0.4	12	0	0.1	2,914	14	0.5
2030	249	1	0.4	12	0	0.1	2,928	15	0.5
2031	251	2	0.8	12	0	-0.3	2,943	15	0.5
2032	252	1	0.4	12	0	0.1	2,958	15	0.5
2033	253	1	0.4	12	0	0.1	2,973	15	0.5
2034	254	1	0.4	12	0	0.1	2,987	15	0.5
2035	256	2	0.8	12	0	-0.3	3,002	15	0.5
2036	257	1	0.4	12	0	0.1	3,017	15	0.5
2037	258	1	0.4	12	0	0.1	3,032	15	0.5
2038	260	2	0.8	12	0	-0.3	3,048	15	0.5
2039	261	1	0.4	12	0	0.1	3,063	15	0.5
2040	262	1	0.4	12	0	0.1	3,078	15	0.5

Methodology and Results *(continued)*

Peak Day Weather Scenarios

Extreme temperatures can dramatically influence Salt River Electric's peak demands. Table 1-9 reports the impact of extreme weather on system demands.

Table 1-9: Seasonal Peaks by Weather Scenario

Winter Peak Day Minimum Temperatures				
	Normal	Extreme		
Degrees	5	0	-2	-6
Probability	*50%*	*20%*	*10%*	*3%*
Occurs Once in ...	2 Years	5 Years	10 Years	30 Years
Non-Coincident Winter Peak Demand - MW				
Season	Normal	Extreme		
2020 - 21	302	314	319	328
2021 - 22	312	324	329	338
2022 - 23	319	331	336	346
2023 - 24	323	336	341	351
2024 - 25	327	340	345	355
2025 - 26	331	344	349	360
2026 - 27	335	348	353	364
2027 - 28	340	354	359	370
2028 - 29	343	356	361	372
2029 - 30	346	359	365	376
2030 - 31	348	362	368	379
2031 - 32	352	366	372	383
2032 - 33	355	369	375	386
2033 - 34	359	373	379	390
2034 - 35	362	376	382	394
2035 - 36	367	382	388	400
2036 - 37	371	386	392	404
2037 - 38	376	391	397	409
2038 - 39	379	395	401	413
2039 - 40	385	401	407	419

Summer Peak Day Maximum Temperatures				
	Normal	Extreme		
Degrees	98	101	103	105
Probability	*50%*	*20%*	*10%*	*3%*
Occurs Once in ...	2 Years	5 Years	10 Years	30 Years
Non-Coincident Summer Peak Demand - MW				
Year	Normal	Extreme		
2021	284	291	296	301
2022	294	301	306	311
2023	301	308	313	318
2024	304	311	316	322
2025	307	315	320	326
2026	311	319	325	330
2027	314	322	328	333
2028	319	327	332	338
2029	321	329	335	340
2030	324	332	338	344
2031	327	336	342	347
2032	330	339	345	350
2033	334	342	348	354
2034	338	347	353	359
2035	340	349	355	361
2036	345	354	360	366
2037	349	359	365	371
2038	354	363	370	376
2039	357	367	373	380
2040	362	372	379	385

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