



ELECTRIC SUPPLY & DEMAND

BIENNIAL REPORT | 2021
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Serving the people of Kansas by regulating the State's energy infrastructure, oil and gas production and commercial trucking to ensure public safety.



Introduction

K.S.A. 2011 Supp. 66-1282 became effective July 1, 2011, and requires the Kansas Corporation Commission (KCC or Commission) to compile a report regarding electric supply and demand for all electric utilities in Kansas. The statute requires this report to include, but not be limited to: (1) Generation capacity needs and (2) system peak capacity needs and (3) renewable generation needs associated with the 2009 Kansas renewable energy standards.

To ensure that the KCC Staff has the information it needs to compile these reports, the KCC issued an Order on October 29, 2012, requiring Westar Energy, Kansas City Power & Light Company, Empire District Electric Company, Kansas Power Pool, Kansas Municipal Energy Agency, Kansas Electric Power Cooperatives, Midwest Energy, Sunflower Electric Power Corporation, Mid-Kansas Electric Company, and Kansas City Board of Public Utilities to file annually, the data required to compile this report with the Commission under Docket 13-GIME-256-CPL.

Sections 1 and 2 of this report provide the data required by the statute. Appendices A through D provide additional information that supports the compilation of Sections 1 and 2. In some cases, the utility providing the information has requested that some or all of the information contained in the appendices remain confidential because public dissemination of the data may affect Company strategies to procure generation supply and could affect future contract negotiations.

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Section 1: Generation Capacity Needs and System Peak Capacity Planning

All major utilities¹ in Kansas are members of the Southwest Power Pool (SPP), which operates as the Regional Transmission Organization (RTO) throughout the State, as well as in the states of North Dakota, South Dakota, Nebraska, Oklahoma, and parts of Iowa, Missouri, Texas, Arkansas, Louisiana, Mississippi, and New Mexico. SPP additionally serves as the Regional Entity of the North American Electric Reliability Corporation (NERC), and is mandated by the Federal Energy Regulatory Commission (FERC) to ensure reliable operation of the electric grid within the region, including ensuring adequate power supplies and reserves are maintained by its members.

In furtherance of the FERC mandate, SPP publishes a series of regulations—called the SPP Criteria—governing the system operations of its members. SPP additionally requires its members to annually submit 10 year capacity and load projections to show how the utility will meet its ongoing system peak capacity responsibility (System Peak Responsibility), including the 12% reserve margin requirement outlined in the Criteria.² System Peak Responsibility may be satisfied by capacity from owned generation units, capacity purchased through long-term wholesale power contracts (often called Power Purchase Agreements (PPAs)), full or partial requirements contracts, and short-term capacity contracts.³

Table 1 (page three) shows the current and 20 year forecasted capacity and System Peak Responsibility (system peak load plus SPP's 12% required reserve margin) for utilities operating in Kansas. This includes smaller municipal and cooperatives utilities that purchase electricity wholesale from larger state utilities through full requirements contracts, wherein these municipal and cooperative utilities' peak loads are incorporated into the larger utility's system requirements. Finally, two of the State's investor-owned utilities Evergy Inc. (legacy Westar and KCP&L) and Liberty Utilities (legacy Empire District Electric Company), are multi-jurisdictional; therefore, the data shown in this report represents only their Kansas loads (peak demand) and their system capacity has been scaled to represent the capacity allocated to serving their Kansas load.

¹ Specifically, all utilities listed in this report are members of SPP.

² SPP Tariff Attachment AA defines Planning Reserve Margin to be twelve percent (12%) and that each utility maintain capacity required to meet its load and planning reserve obligations.

³ Note Table 1.1 and the tables listed in Appendix A are intended to represent a utility's long-term position, and thus do not include short-term capacity contracts. Short-term capacity contracts are defined as a capacity contract greater than three months but less than a year in duration.

Table 1—Overview of Current and Projected Total System Capacity and System Capacity Responsibility for Utilities Operating in Kansas

		Investor Owned Utilities (IOUs)			Cooperatives		Municipal Utilities			
		Liberty Utilities (legacy Empire)	Evergy Kansas Metro (legacy KCP&L)	Evergy Kansas Central (Legacy Westar)	Kansas Electric Power Coop. (KEPCo)	Midwest Energy (Midwest)	Sunflower Electric Power Corporation (Sunflower)	Kansas City Board of Public Utilities (KC-BPU)	Kansas Municipal Energy Agency (KMEA)	Kansas Power Pool (KPP)
2018 Historical	Total System Capacity (MW)	76	2,008	13,541	484	401	1,250	754	494	313
	System Peak Responsibility (MW)	74	1,856	5,552	470	360	1,073	564	451	243
	System Capacity Surplus (Deficit)	2	152	7,989	14	41	177	190	42	70
2023 Projected	Total System Capacity (MW)	70	1,725	11,531	464	522	1,176	599	458	360
	System Peak Responsibility (MW)	63	1,842	5,616	448	433	1,092	552	440	246
	System Capacity Surplus (Deficit)	7	(117)	5,915	16	89	84	47	19	113
2028 Projected	Total System Capacity (MW)	64	1,694	11,531	475	522	1,152	599	378	344
	System Peak Responsibility (MW)	65	1,758	5,718	458	462	1,083	560	458	252
	System Capacity Surplus (Deficit)	(1)	(64)	5,813	17	60	69	39	(80)	92
2033 Projected	Total System Capacity (MW)	63	1,677	8,490	480	508	1,003	599	378	332
	System Peak Responsibility (MW)	67	1,741	5,835	468	484	1,070	568	482	259
	System Capacity Surplus (Deficit)	(4)	(64)	2,655	12	24	(67)	31	(104)	72
2038 Projected	Total System Capacity (MW)	62	1,744	5,119	485	488	996	599	378	307
	System Peak Responsibility (MW)	69	1,775	6,014	478	489	1,063	573	507	265
	System Capacity Surplus (Deficit)	(7)	(31)	(895)	7	(1)	(67)	26	(129)	42

Section 2: Renewable Energy Planning

In May 2009, the Kansas Legislature passed Senate Substitute bill for H. 2369, in part creating the Renewable Energy Standard Act (RESA) which requires all non-municipal utilities in Kansas to satisfy a portion of the utility's generation needs through renewable generation sources. In particular, the RESA—incorporated into statute as K.S.A. 66-1256 through 66-1262—required all utilities subject to its requirements to own or purchase renewable generation such that the nameplate capacity¹ of these generators was equal to 10% of the utility's average prior three-year annual peak retail sales for the years 2011 through 2015, 15% for the years 2016 through 2019, and 20% for all years after 2020.

Effective January 1, 2016, the Renewable Energy Standard Act was amended and the requirement to own or purchase renewable generation became a voluntary initiative. While most of the affected utilities continue to invest in renewable generation, it is no longer a requirement under state law. Table 2 (page five) shows each RESA affected utility's forecasted renewable capacity and the percentage of the utility's capacity that is due to renewable generation.

¹The KCC, through K.A.R. 82-16-1(e), has interpreted renewable generation capacity as being nameplate capacity.

Table 2—Overview of Voluntary Renewable Capacity for Utilities Operating in Kansas

		Liberty Utilities (legacy Empire)	Evergy Kansas Metro (legacy KCP&L)	Evergy Kansas Central (Legacy Westar)	Kansas Electric Power Coop. (KEPCo)	Midwest Energy (Midwest)	Sunflower Electric Power Corporation (Sunflower)	Kansas City Board of Public Utilities (KC-BPU)	Kansas Municipal Energy Agency (KMEA)	Kansas Power Pool (KPP)
2018 Historical	Kansas System Renewable Capacity (MW)	13	492	1,500	41	106	177	305	27	38
	Total Retail System Peak (MW)	63	1,657	4,590	414 ¹	335	708	496	397 ¹	214 ¹
	Renewable Capacity (% of Peak Capacity)	21%	30%	33%	10%	32%	25%	61%	7%	18%
2023 Projected	Kansas System Renewable Capacity (MW)	29	732	2,026	43	106	197	305	3	38
	Total System Retail Peak (MW)	56	1,679	4,674	394 ¹	375	765	486	387 ¹	217 ¹
	Renewable Capacity (% of Peak Capacity)	52%	44%	43%	11%	28%	26%	63%	.86%	18%
2028 Projected	Kansas System Renewable Capacity (MW)	21	672	2,026	43	106	197	305	3	38
	Total System Retail Peak (MW)	58	1,704	4,742	403 ¹	401	804	493	403 ¹	222 ¹
	Renewable Capacity (% of Peak Capacity)	36%	39%	43%	11%	26%	25%	62%	.7%	17%
2033 Projected	Kansas System Renewable Capacity (MW)	16	562	1,377	43	57	20	305	3	50
	Total System Retail Peak (MW)	59	1,731	4,832	412 ¹	420	845	500	425 ¹	228 ¹
	Renewable Capacity (% of Peak Capacity)	27%	32%	28%	10%	14%	2%	61%	.7%	22%
2038 Projected	Kansas System Renewable Capacity (MW)	16	237	810	43	0	20	280	1	.08
	Total System Retail Peak (MW)	61	1,774	5,582	421 ¹	425	888	501	446 ¹	233 ¹
	Renewable Capacity (% of Peak Capacity)	26%	13%	15%	10%	0%	2%	56%	.2%	.03%

¹ KPP, KMEA, KEPCo serve no retail load. Capacity values represent total peak load obligations.

Appendix A: Utility System Capacities and Peak Responsibilities

Appendix A-1: Liberty Utilities (legacy Empire District Electric Company)

Liberty Utilities is a regulated investor-owned utility operating in the states of Kansas, Missouri, Arkansas, and Oklahoma. Only a very small portion of Liberty Utilities' overall service territory falls within Kansas, consisting of approximately 9,928 retail customers in Cherokee county (located in the extreme southeastern corner of the state).

		System Peak ¹			System Capacity ²			System Capacity Surplus (Deficit)
		Total System Peak Load	12% Capacity Margin ³	System Peak Responsibility	Accredited Generation	Net Contracts	Total System Capacity	
Historical	2015	70	8	70	66	4	71	0
	2016	63	8	63	72	4	76	13
	2017	63	8	63	72	4	76	13
	2018	74	9	74	72	4	76	2
	2019	65	8	65	70	4	76	10
Projected	2020	65	8	65	70	2	72	6
	2021	62	7	62	60	2	69	7
	2022	62	7	62	61	2	70	7
	2023	63	8	63	61	2	70	7
	2024	63	8	63	61	2	70	7
	2025	64	8	64	61	6	74	11
	2026	64	8	64	61	4	72	8
	2027	64	8	64	53	4	64	0
	2028	65	8	65	53	4	64	(1)
	2029	65	8	65	53	3	63	(2)
	2030	66	8	66	53	3	63	(2)
	2031	66	8	66	53	3	63	(3)
	2032	67	8	67	53	3	63	(3)
	2033	67	8	67	53	3	63	(4)
	2034	67	8	67	51	3	62	(5)
2035	68	8	68	51	3	62	(6)	
2036	68	8	68	51	3	62	(6)	
2037	69	8	69	51	3	62	(7)	
2038	69	8	69	51	3	62	(7)	
2039	70	8	70	51	3	62	(8)	

¹ Liberty Utilities' system peak is scaled in this table to reflect the Kansas portion of Liberty Utilities' service territory (demand created by customers).

² Liberty Utilities' system capacity is scaled in this table to reflect the Kansas portion of Liberty Utilities' service territory; approximately 5.2% of Empire's overall system peak.

³ The formula for the SPP Required 12% Reserves changed in 2016. Prior to 2016, the 12% minimum reserve margin was based on reserve margin being calculated as (Capacity-Peak Demand)/CAPACITY. In 2016 SPP reduced the reserve margin requirement by modifying the calculation of reserve margin to (Capacity-Peak Demand/PEAK DEMAND).

Appendix A-2: Evergy Kansas Metro (legacy Kansas City Power & Light Company)

(Information designated as confidential by the company is show as an *)

In 2018, Kansas City Power and Light Company (KCP&L) merged with Westar Energy to form Evergy, Inc. As a wholly owned subsidiary of Evergy, Inc., Evergy Kansas Metro (EKM) operates in northeast Kansas and western Missouri. System-wide EKM, including its GMO territory, is responsible for serving more than 800,000 retail customers, approximately 250,000 of which are located in Kansas.

		System Peak ¹			System Capacity ²			System Capacity Surplus (Deficit)
		Total System Peak Load	12% Capacity Margin ³	System Peak Responsibility ⁴	Accredited Generation	Net Contracts	Total System Capacity	
Historical	2015	1,623	195	1,818	1,904	21	1,925	107
	2016	1,700	204	1,904	1,904	(47)	1,857	(47)
	2017	1,648	198	1,846	1,896	77	1,973	127
	2018	1,657	199	1,856	1,896	112	2,008	152
	2019	1,629	195	1,824	1,896	33	1,929	104
Projected	2020	*	*	*	*	*	*	*
	2021	*	*	*	*	*	*	*
	2022	*	*	*	*	*	*	*
	2023	*	*	*	*	*	*	*
	2024	*	*	*	*	*	*	*
	2025	*	*	*	*	*	*	*
	2026	*	*	*	*	*	*	*
	2027	*	*	*	*	*	*	*
	2028	*	*	*	*	*	*	*
	2029	*	*	*	*	*	*	*
	2030	*	*	*	*	*	*	*
	2031	*	*	*	*	*	*	*
	2032	*	*	*	*	*	*	*
	2033	*	*	*	*	*	*	*
	2034	*	*	*	*	*	*	*
2035	*	*	*	*	*	*	*	
2036	*	*	*	*	*	*	*	
2037	*	*	*	*	*	*	*	
2038	*	*	*	*	*	*	*	
2039	*	*	*	*	*	*	*	

¹ Evergy's system peak is scaled in this table to reflect EKM's service territory (demand created by customers).

² Evergy's system capacity is scaled in this table to reflect EKM's service territory; approximately 47% of Evergy's overall system.

³ The formula for the SPP Required 12% Reserves changed in 2016. Prior to 2016, the 12% minimum reserve margin was based on reserve margin being calculated as (Capacity-Peak Demand)/CAPACITY. In 2016 SPP reduced the reserve margin requirement by modifying the calculation of reserve margin to (Capacity-Peak Demand/PEAK DEMAND).

⁴ The System Peak Responsibility is the sum of the Total System Peak Load plus the 12% Capacity Margin less any interruptible load not included in this table.

Appendix A-3: Evergy Kansas Central (legacy Westar Energy, Inc.)

*(Information designated as confidential by the company is show as an *)*

In 2018, Westar Energy, Inc. merged with Kansas City Power & Light to form Evergy, Inc. As a wholly owned subsidiary of Evergy, Inc., Evergy Kansas Central (EKC) operates in south-central and northeast Kansas. EKC is responsible for providing electric service to approximately 700,000 retail customers.

		System Peak			System Capacity			System Capacity Surplus (Deficit)
		Total System Peak Load	12% Capacity Margin ¹	System Peak Responsibility ²	Accredited Generation	Net Contracts	Total System Capacity	
Historical	2015	5,167	614	5,732	6,506	6,661	13,167	7,435
	2016	5,184	616	5,751	6,135	6,459	12,594	6,843
	2017	5,242	623	5,816	6,181	6,553	12,734	6,917
	2018	5,204	595	5,552	6,337	7,204	13,541	7,988
	2019	5,111	585	5,463	5,556	6,654	12,210	6,747
Projected	2020	*	*	*	*	*	*	*
	2021	*	*	*	*	*	*	*
	2022	*	*	*	*	*	*	*
	2023	*	*	*	*	*	*	*
	2024	*	*	*	*	*	*	*
	2025	*	*	*	*	*	*	*
	2026	*	*	*	*	*	*	*
	2027	*	*	*	*	*	*	*
	2028	*	*	*	*	*	*	*
	2029	*	*	*	*	*	*	*
	2030	*	*	*	*	*	*	*
	2031	*	*	*	*	*	*	*
	2073	*	*	*	*	*	*	*
	2033	*	*	*	*	*	*	*
	2034	*	*	*	*	*	*	*
2035	*	*	*	*	*	*	*	
2036	*	*	*	*	*	*	*	
2037	*	*	*	*	*	*	*	
2038	*	*	*	*	*	*	*	
2039	*	*	*	*	*	*	*	

¹ The formula for the SPP Required 12% Reserves changed in 2016. Prior to 2016, the 12% minimum reserve margin was based on reserve margin being calculated as (Capacity-Peak Demand)/CAPACITY. In 2016 SPP reduced the reserve margin requirement by modifying the calculation of reserve margin to (Capacity-Peak Demand/PEAK DEMAND).

² The System Peak Responsibility is the sum of the Total System Peak Load plus the 12% Capacity Margin less any interruptible load not included in this table.

Appendix A-4: Kansas Electric Power Cooperative, Inc. (KEPCo)

*(Information designated as confidential by the company is show as an *)*

The Kansas Electric Power Cooperative, Inc. (KEPCo) is a deregulated Generation and Transmission Cooperative whose membership is composed of 18 rural distribution cooperatives located throughout central and eastern Kansas.¹ KEPCo’s 18 member cooperatives collectively serve approximately 110,000 customers—as indicated by number of meters.

		System Peak			System Capacity			System Capacity Surplus (Deficit)
		Total System Peak Load	12% Capacity Margin ²	Accredited Generation	Total System Capacity	Net Contracts	Total System Capacity	
Historical	2015	432	58	491	*	*	508	17
	2016	425	58	483	*	*	494	11
	2017	427	58	485	*	*	501	16
	2018	414	56	470	*	*	484	14
	2019	418	57	475	*	*	492	17
Projected	2020	398	54	452	*	*	478	26
	2021	370	50	420	*	*	433	13
	2022	393	54	446	*	*	462	16
	2023	394	54	448	*	*	464	16
	2024	396	54	450	*	*	466	16
	2025	398	54	452	*	*	469	17
	2026	399	54	454	*	*	471	17
	2027	401	55	456	*	*	473	17
	2028	403	55	458	*	*	475	17
	2029	405	55	460	*	*	476	16
	2030	406	55	462	*	*	477	15
	2031	408	56	464	*	*	478	14
	2032	410	56	466	*	*	479	13
	2033	412	56	468	*	*	480	12
	2034	413	56	470	*	*	481	11
	2035	415	57	472	*	*	482	10
	2036	417	57	474	*	*	483	9
	2037	419	57	476	*	*	484	8
	2038	421	57	478	*	*	485	7
2039	422	58	480	*	*	486	6	

¹ Member cooperatives of KEPCo are: Prairie Land, Rolling Hills, Bluestem, Brown-Atchison, FreeState, DS&O Electric, 4 Rivers, Victory, Ninnescah, Ark Valley, Sedgwick County, Butler, Heartland, Radiant, CMS Electric, Sumner-Cowley, Caney Valley, and Twin Valley.

² The formula for the SPP Required 12% Reserves changed in 2016. Prior to 2016, the 12% minimum reserve margin was based on reserve margin being calculated as (Capacity-Peak Demand)/CAPACITY. In 2016 SPP reduced the reserve margin requirement by modifying the calculation of reserve margin to (Capacity-Peak Demand/PEAK DEMAND).

Appendix A-5: Midwest Energy, Inc. (Midwest)

Midwest Energy Inc. (Midwest) is a regulated electric and natural gas distribution cooperative operating in central and western Kansas. Unique in Kansas among the State's cooperatives, the electric utility is vertically-integrated, possessing generation and transmission assets and providing retail service. Headquartered in Hays, Midwest provides electric service to approximately 48,750 retail customers.

THIS SECTION WAS INTENTIONALLY LEFT BLANK DUE TO
MIDWEST ENERGY'S REQUEST THAT THE INFORMATION REMAIN CONFIDENTIAL

Appendix A-6: Sunflower Electric Power Company (Sunflower)

Sunflower Electric Power Company (Sunflower) is a deregulated generation and transmission cooperative owned by six member rural distribution cooperatives in Western Kansas (Lane-Scott, Prairie Land, Southern Pioneer, Victory, Western, and Wheatland) In 2007, the six member distribution cooperatives comprising Sunflower formed the Mid-Kansas Electric Company (Mid-Kansas). Although Mid-Kansas has distinct assets and distinct customers from Sunflower, the two companies employ the same individuals; and therefore, for the purposes of this report these two entities are combined as a single system.

THIS SECTION WAS INTENTIONALLY LEFT BLANK DUE TO
SUNFLOWER ELECTRIC POWER COMPANY'S REQUEST THAT THE INFORMATION REMAIN CONFIDENTIAL

Appendix A-7: Kansas City Board of Public Utilities (KC-BPU)

The Kansas City Board of Public Utilities (KC-BPU) is a non-KCC jurisdictional municipal utility serving water customers in the Kansas City, Kansas Metropolitan areas of Wyandotte and Johnson Counties, and electric customers in the whole of Wyandotte County. In all, KC-BPU provides electric service to approximately 63,000 customers.

		System Peak			System Capacity			System Capacity Surplus (Deficit)
		Total System Peak Load	12% Capacity Margin ¹	System Peak Responsibility ²	Accredited Generation	Net Contracts	Total System Capacity	
Historical	2015	485	66	551	713	56	769	218
	2016	480	65	545	675	56	730	185
	2017	494	67	561	662	92	754	193
	2018	496	68	564	662	92	754	190
	2019	483	66	549	676	92	767	218
Projected	2020	443	60	503	526	92	618	115
	2021	485	66	551	507	92	599	48
	2022	484	66	550	507	92	599	49
	2023	486	66	552	507	92	599	47
	2024	488	67	555	507	92	599	44
	2025	487	66	553	507	92	599	46
	2026	489	67	556	507	92	599	43
	2027	491	67	558	507	92	599	41
	2028	493	67	560	507	92	599	39
	2029	492	67	559	507	92	599	40
	2030	494	67	561	507	92	599	38
	2031	496	68	566	507	92	599	33
	2032	498	68	566	507	92	599	33
	2033	500	68	568	507	92	599	31
	2034	599	68	567	507	92	599	32
	2035	501	68	569	507	92	599	30
	2036	503	69	572	507	92	599	27
	2037	505	69	574	507	92	599	25
	2038	501	69	573	507	92	599	26
2039	506	69	575	507	92	599	24	

¹ The formula for the SPP Required 12% Reserves changed in 2016. Prior to 2016, the 12% minimum reserve margin was based on reserve margin being calculated as (Capacity-Peak Demand)/CAPACITY. In 2016 SPP reduced the reserve margin requirement by modifying the calculation of reserve margin to (Capacity-Peak Demand/PEAK DEMAND).

² The System Peak Responsibility is the sum of the Total System Peak Load plus the 12% Capacity Margin less any interruptible load not included in this table.

Appendix A-8: Kansas Municipal Energy Agency (KMEA)

The Kansas Municipal Energy Agency (KMEA) is an organization that finances projects for the purchase, sale, generation, and transmission of electricity on behalf of its 77 member municipal electric utilities. In addition to these functions, KMEA also manages the Mutual Aid Program where municipalities assist one another in the event of emergencies that affect the electric system, conducts power supply and transmission feasibility studies, and advocates members' positions before industry bodies, regulatory agencies and legislative bodies.

		System Peak			System Capacity			System Capacity Surplus (Deficit)
		Total System Peak Load	12% Capacity Margin ¹	System Peak Responsibility ²	Accredited Generation	Net Contracts	Total System Capacity	
Historical	2015	375	51	426	292	227	519	93
	2016	399	54	454	302	205	507	53
	2017	422	58	479	304	205	509	29
	2018	397	54	451	304	190	494	42
	2019	385	53	438	304	193	497	59
Projected	2020	362	49	412	304	193	497	85
	2021	380	52	432	292	166	458	26
	2022	384	52	436	292	166	458	22
	2023	387	53	440	292	166	458	19
	2024	390	53	443	292	166	458	15
	2025	393	54	447	292	166	458	11
	2026	397	54	451	292	86	378	(73)
	2027	400	55	454	292	86	378	(76)
	2028	403	55	458	292	86	378	(80)
	2029	407	55	462	292	86	378	(84)
	2030	410	56	466	292	86	378	(88)
	2031	418	57	475	292	86	378	(97)
	2032	420	57	478	292	86	378	(99)
	2033	425	58	482	292	86	378	(104)
	2034	429	58	487	292	86	378	(109)
2035	433	59	492	292	86	378	(114)	
2036	437	60	497	292	86	378	(119)	
2037	442	60	502	292	86	378	(124)	
2038	446	61	507	292	86	378	(129)	
2039	450	61	511	292	86	378	(133)	

¹ The formula for the SPP Required 12% Reserves changed in 2016. Prior to 2016, the 12% minimum reserve margin was based on reserve margin being calculated as (Capacity-Peak Demand)/CAPACITY. In 2016 SPP reduced the reserve margin requirement by modifying the calculation of reserve margin to (Capacity-Peak Demand)/PEAK DEMAND.

² The System Peak Responsibility is the sum of the Total System Peak Load plus the 12% Capacity Margin less any interruptible load not included in this table.

Appendix A-9: Kansas Power Pool (KPP)

The Kansas Power Pool (KPP), created in May of 2005, is an organization that provides wholesale electric power, reserve sharing, collective resource planning and acquisition, network transmission service, and cost sharing of operations to its member municipal utilities. The KPP has continuously added new municipal electric utilities since its founding. Because of this, historical comparisons to previous years are inherently misleading and have been omitted from this report. KPP is comprised of 41 municipally-owned retail electric systems and is responsible for a total system capacity of approximately 586 MWs.

		System Peak			System Capacity			System Capacity Surplus (Deficit)
		Total System Peak Load	12% Capacity Margin ¹	System Peak Responsibility ²	Accredited Generation	Net Contracts	Total System Capacity	
Historical	2015	211	29	240	267	95	362	121
	2016	216	29	246	248	95	343	97
	2017	219	30	249	268	45	313	64
	2018	214	29	243	268	45	313	70
	2019	210	29	239	268	70	338	99
Projected	2020	215	29	244	268	70	338	93
	2021	214	29	244	269	70	339	95
	2022	215	29	244	269	45	314	69
	2023	217	30	246	324	36	360	113
	2024	218	30	247	324	36	360	112
	2025	219	30	249	324	36	360	111
	2026	220	30	250	324	21	344	94
	2027	221	30	251	324	21	344	93
	2028	222	30	252	324	21	344	92
	2029	223	30	254	324	21	344	91
	2030	224	31	255	324	8	332	77
	2031	225	31	256	324	8	332	76
	2032	227	31	257	324	8	332	74
	2033	228	31	259	324	8	332	73
	2034	229	31	260	324	8	332	72
	2035	230	31	261	324	8	332	71
	2036	231	32	263	299	8	307	44
	2037	232	32	264	299	8	307	43
	2038	233	32	265	299	8	307	42
2039	235	32	267	299	8	307	40	

¹ The formula for the SPP Required 12% Reserves changed in 2016. Prior to 2016, the 12% minimum reserve margin was based on reserve margin being calculated as (Capacity-Peak Demand)/CAPACITY. In 2016 SPP reduced the reserve margin requirement by modifying the calculation of reserve margin to (Capacity-Peak Demand/PEAK DEMAND).

² The System Peak Responsibility is the sum of the Total System Peak Load plus the 12% Capacity Margin less any interruptible load not included in this table.

Appendix B: Renewable Capacity Requirements

Appendix B-1: Liberty Utilities (legacy Empire District Electric Company)

Liberty Utilities currently has two long-term power purchase agreements with two wind farms operating in Kansas. Liberty Utilities also operates a hydro-electric dam in Missouri. Liberty Utilities is a multi-jurisdictional utility operating in the states of Missouri, Kansas, Arkansas, and Oklahoma. Empire currently satisfies an RES in Missouri.

	Renewable Capacity		Renewable Capacity Inventory		Renewable Capacity Required for Other Jurisdictions	Total Renewable Capacity
	Renewable Energy Standard	Kansas Renewable Capacity	Wind	Hydro		
2015	10%	15	13	1	3	12
2016		15	13	1	3	12
2017		15	13	1	3	12
2018	15%	15	13	1	7	9
2019		15	13	1	6	9
2020		15	13	1	6	9
2021		48	13	1	8	41
2022		48	13	1	8	41
2023		51	13	1	29	22
2024		51	13	1	29	22
2025		51	13	1	29	16
2026		42	5	1	29	15
2027		45	5	1	29	15
2028		45	5	1	29	15
2029		39		1	30	9
2030		39		1	30	9
2031		30		1	30	9
2032		30		1	30	9
2033		30		1	30	8
2034		29		1	9	29
2035		29			9	29
2036		29			9	29
2037		29			9	29
2038		29			9	29
2039	29			9	29	

Appendix B-2: Evergy Kansas Metro

*(Information designated as confidential by the company is show as an *)*

	Renewable Capacity		Renewable Capacity Inventory		Renewable Capacity Required for Other Jurisdictions	Total Renewable Capacity
	Renewable Energy Standard	Kansas Renewable Capacity	Wind	Hydro		
2015	10%	241	181	60	0	241
2016		407	347	60	0	407
2017		464	404	60	0	524
2018	15%	549	489	60	0	609
2019		602	542	60	0	662
2020		644	584	60	0	704
2021		692	632	60	0	752
2022		*	*	*	*	*
2023		*	*	*	*	*
2024		*	*	*	*	*
2025		*	*	*	*	*
2026		*	*	*	*	*
2027		*	*	*	*	*
2028		*	*	*	*	*
2029		*	*	*	*	*
2030		*	*	*	*	*
2031		*	*	*	*	*
2032		*	*	*	*	*
2033		*	*	*	*	*
2034		*	*	*	*	*
2035		*	*	*	*	*
2036		*	*	*	*	*
2037		*	*	*	*	*
2038	*	*	*	*	*	
2039	*	*	*	*	*	

Appendix B-3: Evergy Kansas Central

(Information designated as confidential by the company is show as an *)

Evergy Kansas Central currently partially or wholly owns 15 wind farms located throughout Kansas. Evergy Kansas Central additionally has long-term power purchase agreement with Ironwood, Post Rock, Kingman, Cedar Bluff, Ninnescah, and Meridian Way wind farms. In addition to wind and biomass renewables, the utility also has a community solar project.

	Renewable Capacity		Renewable Capacity Inventory			Total Renewable Capacity
	Renewable Energy Standard	Kansas Renewable Capacity	Wind	Solar	Other	
2015	10%	670	664	0	6	670
2016		1,069	1,063	0	6	1,069
2017		1,699	1,692	1	6	1,699
2018	15%	1,700	1,692	2	6	1,700
2019		1,700	1,692	2	6	1,700
2020		1,700	1,692	2	6	1,700
2021		2,226	2,218	2	6	2,226
2022		*	*	*	*	*
2023		*	*	*	*	*
2024		*	*	*	*	*
2025		*	*	*	*	*
2026		*	*	*	*	*
2027		*	*	*	*	*
2028		*	*	*	*	*
2029		*	*	*	*	*
2030		*	*	*	*	*
2031		*	*	*	*	*
2032		*	*	*	*	*
2033		*	*	*	*	*
2034		*	*	*	*	*
2035	*	*	*	*	*	
2036	*	*	*	*	*	
2037	*	*	*	*	*	
2038	*	*	*	*	*	

Appendix B-4: Kansas Electric Power Cooperative, Inc. (KEPCo)

Kansas Electric Power Cooperative, Inc. (KEPCo), a federally defined rural non-profit utility, has received discounted power allocations from federally managed hydro-electric power marketers since the utility's inception. Western Area Power Administration is likewise, a series of 56 hydro-electric dams operated by the Bureau of Reclamation, U.S. Army Corps of Engineers, and International Boundary and Water Commission in a 15-state region.

THIS SECTION WAS INTENTIONALLY LEFT BLANK DUE TO
KANSAS ELECTRIC POWER COOPERATIVE'S REQUEST THAT THE INFORMATION REMAIN CONFIDENTIAL

Appendix B-5: Midwest Energy (Midwest)

THIS SECTION WAS INTENTIONALLY LEFT BLANK DUE TO
MIDWEST ENERGY'S REQUEST THAT THE INFORMATION REMAIN CONFIDENTIAL

Appendix B-6: Sunflower Electric Power Company (Sunflower)

Sunflower Electric Power Company (Sunflower) and the Mid-Kansas Electric Company (Mid-Kansas) currently have long-term power purchase agreements with four wind farms in Kansas and Johnson County Solar Project. As federally defined non-profit rural utilities, Sunflower also receives electricity from the federally managed hydro-electric power marketer.

THIS SECTION WAS INTENTIONALLY LEFT BLANK DUE TO
SUNFLOWER ELECTRIC POWER COMPANY'S REQUEST THAT THE INFORMATION REMAIN CONFIDENTIAL

Appendix B-7: Kansas City Board of Public Utilities (KC-BPU)

Kansas City Board of Public Utilities currently has long-term power purchase agreements with wind farms, as well as federally managed hydro-electric power marketers. The Company also has agreements for biomass and additional hydro.

	Renewable Capacity		Renewable Capacity Inventory				Total Renewable Capacity
	Renewable Energy Standard	Kansas Renewable Capacity	Wind	Hydro	Solar	Biomass	
2015	10%	104	50	50	0	4	104
2016		104	50	50	0	4	104
2017		305	250	50	1	4	305
2018	15%	305	250	50	1	4	305
2019		305	250	50	1	4	305
2020		305	250	50	1	4	305
2021		305	250	50	1	4	305
2022		305	250	50	1	4	305
2023		305	250	50	1	4	305
2024		305	250	50	1	4	305
2025		305	250	50	1	4	305
2026		305	250	50	1	4	305
2027		305	250	50	1	4	305
2028		305	250	50	1	4	305
2029		305	250	50	1	4	305
2030		305	250	50	1	4	305
2031		305	250	50	1	4	305
2032		305	250	50	1	4	305
2033		305	250	50	1	4	305
2034		305	250	50	1	4	305
2035		305	250	50	1	4	305
2036	280	225	50	1	4	280	
2037	280	225	50	1	4	280	
2038	280	225	50	1	4	280	
2039	280	225	50	1	4	280	

Appendix B-8: Kansas Municipal Energy Agency (KMEA)

	Renewable Capacity		Renewable Capacity Inventory	Total Renewable Capacity
	Renewable Energy Standard	Kansas Renewable Capacity	Wind	
2015	10%	52	52	52
2016		37	37	37
2017		27	27	27
2018	15%	27	27	27
2019		29	29	29
2020		30	30	30
2021		3	3	3
2022		3	3	3
2023		3	3	3
2024		3	3	3
2025		3	3	3
2026		3	3	3
2027		3	3	3
2028		3	3	3
2029		3	3	3
2030		3	3	3
2031		3	3	3
2032		3	3	3
2033		3	3	3
2034		3	3	3
2035		3	3	3
2036		3	3	3
2037		3	3	3
2038		1	1	1
2039	1	1	1	

Appendix B-9: Kansas Power Pool (KPP)

	Renewable Capacity		Renewable Capacity Inventory		Renewable Capacity Surplus
	Renewable Energy Standard	Kansas Renewable Capacity	Wind	Hydro	
2015	10%	28	15	10	23
2016		53	40	10	48
2017		53	40	10	48
2018	15%	53	40	10	48
2019		53	40	10	48
2020		53	40	10	48
2021		53	40	10	48
2022		53	40	10	48
2023		53	40	10	48
2024		53	40	10	48
2025		53	40	10	48
2026		46	38	8	43
2027		46	38	8	43
2028		46	38	8	43
2029		46	38	8	43
2030		33	25	8	31
2031		33	25	8	31
2032		33	25	8	31
2033		33	25	8	31
2034		33	25	8	31
2035		33	25	8	31
2036	8	0	8	6	
2037	8	0	8	6	
2038	8	0	8	6	
2039	8	0	8	6	

Appendix C: Commercial-Size Renewable Energy Generation¹
Appendix C-1: Existing Renewable Generators within Kansas²

Renewable Generator (Total Nameplate Capacity)	County	Developer	Initial Month and Year of Operation	Utility Purchaser	Size
Prairie Queen Wind Farm (200 MW)	Allen	EDP Renewables	May 2019	KCP&L	200 MW
East Kansas Agri-Energy (2 MW)	Anderson	East Kansas Agri-Energy	June 2005	-----	2 MW
Flat Ridge Wind Farm (100 MW)	Barber	BP Alternative Energy	March 2009	Westar Energy	100 MW
Elk River Wind Facility (150 MW)	Butler	PPM Energy (Ibedrola SA)	December 2005	Empire District Electric	150 MW
Prairie Sky Solar Farm (1 MW)	Butler	Kansas Electric Power Coop Inc.	February 2017	Kansas Electric Power Coop Inc.	1 MW
Bloom Wind (178 MW)	Clark and Ford	Norvento	June 2017	Capital Power (IPP)	178 MW
Cimarron Bend Wind Project I (200 MW)	Clark	Tradewind Energy for Enel Green Power North America (EGPNA)	December 2016	Kansas City Board of Public Utilities	100 MW
				Google	100 MW
Cimarron Bend Wind Project II (200 MW)	Clark	Tradewind Energy for Enel Green Power North America (EGPNA)	March 2017	Kansas City Board of Public Utilities	100 MW
				Google	100 MW
Cloud County (Meridian Way) Wind Farm (201 MW)	Cloud	Horizon Wind Energy	November 2008	Empire District Electric	105 MW
				Westar Energy	96 MW
Meridan Way I Wind Farm (105 MW)	Cloud	EDP Renewables North America LLC	December 2008	Empire District Electric Co.	105 MW
Meridan Way II Wind Farm (96 MW)	Cloud	EDP Renewables North America LLC	December 2008	Westar Energy Inc.	96 MW
Waverly Wind (199.5 MW)	Coffey	EDP Renewables	2016	KCP&L	199.5 MW
Oak Grove Landfill (1.6 MW)	Crawford	Waste Corporation of Kansas	March 2010	Kansas City Board of Public Utilities	1.6 MW
Diamond Vista (300 MW)	Dickenson and Marion	Enel Green Power North America	December 2018	Kohler, City of Springfield, Tri-County Electric Coop	300 MW
Bowersock Hydro-electric Dam (7.1 MW)	Douglas	Kansas River Hydro Project	1922/2012	Kansas City Board of Public Utilities	7.1 MW
Caney River (200 MW)	Elk	Trade Wind Energy	December 2011	Tennessee Valley Authority	200 MW
Buckeye Wind Energy	Ellis	Invenergy, LLC	December 2015	-----	200 MW

¹ Based on Energy Information Administration Reports 923 and 860, dated July 2020.

² Based on information in footnote 1 and Kansas Corporation Commission Docket filings.

Appendix C-1: Existing Renewable Generators within Kansas

Renewable Generator (Total Nameplate Capacity)	County	Developer	Initial Month and Year of Operation	Utility Purchaser	Size
(200 MW)					
Fort Hays State University Wind Farm I (2 MW)	Ellis	Harvest the Wind Network, LLC	November 2013		2 MW
Fort Hays State University Wind Farm II (2 MW)	Ellis	Harvest the Wind Network, LLC	November 2013		2 MW
Post Rock (201 MW)	Ellsworth and Lincoln	Wind Capital Group	November 2012	Westar	201 MW
Smoky Hills Phase 1 (100.8 MW)	Ellsworth and Lincoln	Trade Wind Energy	January 2008	Sunflower Electric	50.4 MW
				Kansas City Board of Public Utilities	25.2 MW
				Midwest Energy	25.2 MW
Smoky Hills Phase 2 (148.5 MW)	Ellsworth and Lincoln	Trade Wind Energy	January 2009	Sunflower Electric (allocated to MKEC system)	24 MW
				Midwest Energy	24 MW
				City Power and Light (Independence, Mo.)	15 MW
				City Utilities of Springfield, Mo.	50 MW
				<i>Unallocated (SPP EIM)¹</i>	35.5 MW
Spearville Wind Energy Facility Phase I (100.5 MW)	Ford	enXco (EDF Renewable Energy)	August 2006	Kansas City Power and Light	100.5 MW
Spearville Wind Energy Facility Phase II (48 MW)	Ford	enXco (EDF Renewable Energy)	December 2010	Kansas City Power and Light	48 MW
Spearville Wind Energy Facility Phase III (101 MW)	Ford	enXco (EDF Renewable Energy)	October 2012	Kansas City Power and Light	101 MW
Western Plains Wind Farm (280 MW)	Ford	Infinity Wind	March 2017	Evergy	280 MW
Ironwood (168 MW)	Ford and Hodgeman	Duke Energy Generation Services	October 2012	Westar	168 MW
Buffalo Dunes (250 MW)	Grant and Haskell	Trade Wind Energy	December 2013	Enel Green Power	187 MW
				Alabama Power Company	63 MW
Cimarron Energy Project (Cimarron I) (165 MW)	Gray	CPV Renewable Energy	November 2012	Tennessee Valley Authority	165 MW
Cimarron Energy Project (Cimarron II) (131 MW)	Gray	Duke Energy Generation Services	June 2012	Kansas City Power & Light	131 MW
Ensign Wind Energy (99 MW)	Gray	NextEra Energy Resources	November 2012	Kansas City Power and Light – Greater Missouri Operations	99 MW
Gray County Wind Farm (112.2 MW)	Gray	NextEra (Florida Power & Light)	November 2001	Sunflower Electric (allocated to MKEC system)	51 MW
				Kansas City Power and Light – Greater Missouri Operations	60 MW

¹ Unallocated wind energy can be sold through the Southwest Power Pool’s Energy Imbalance Market place.

Appendix C-1: Existing Renewable Generators within Kansas

Renewable Generator (Total Nameplate Capacity)	County	Developer	Initial Month and Year of Operation	Utility Purchaser	Size
				<i>Unallocated</i>	1 MW
Flat Ridge 2 Wind Farm (470.2 MW)	Harper, Kingman, Barber, and Sumner	BP Alternative Energy	December 2012	Associated Electric Cooperative	310.4 MW
				Arkansas Electric Coop Corp	51.2 MW
				Southwestern Electric Power Company	108.8 MW
Flat Ridge III	Kingman				128 MW
Kingman Wind Energy I (200 MW)	Kingman	NextEra Energy Resources, LLC	December 2016	Westar Energy Inc.	200 MW
Shooting Star (105 MW)	Kiowa	Infinity Wind Power	September 2012	Sunflower	105 MW
Greensburg (12.5 MW)	Kiowa	John Deere / Exelon	March 2010	Kansas Power Pool	12.5 MW
Reading Wind Farm (200 MW)	Lyon Osage	Southern Power	June 2020	Royal Caribbean	200 MW
Marshall Energy (74 MW)	Marshall	RPM Access	May 2016	Missouri Joint Municipal Electric Utility Commission	74 MW
Marshall Wind Farm (72 MW)	Marshall	BHE Renewables, LLC	May 2016	Kansas Municipal Energy Agency	7 MW
				Missouri Joint Municipal Electric Utility Commission	20 MW
				Kansas Power Pool	25 MW
				City of Independence, MO	20 MW
Neosho Ridge Wind Farm	Neosho	Apex Clean Energy	October 2020	Liberty Utilities	301 MW
Cedar Bluff Wind Farm (200 MW)	Ness	NextEra Energy Resources	December 2015	Westar Energy, Inc.	200 MW
Ninnescah Wind Energy (208 MW)	Pratt	NextEra Energy Resources, LLC	December 2016	Westar Energy Inc.	208 MW
Pratt Wind Energy Center (244 MW)	Pratt	NextEra Energy Resources, LLC	December 2018	Evergy	244 MW
Pretty Prairie Wind Farm (220 MW)	Reno		2019	Iron Mountain	220 MW
Westar Community Solar (1.2 MW)	Reno	SoCore Energy	July 2017	Westar Energy Inc.	1.2 MW
Alexander Wind Farm (50 MW)	Rush	New Jersey Resources Corp.	October 2015	Kansas City Board of Public Utilities & Yahoo! Inc.	48.3 MW
Rolling Meadows Landfill (5.6 MW)	Shawnee	Waste Management	January 2010	Westar Energy	5.6 MW
Johnson Corner Solar Project (20 MW)	Stanton	Lightsource BP	December 2019	Mid-Kansas Electric Company, Inc., Sunflower Electric Power Corporation, lightsourcebp, National Renewables Coop.	20 MW

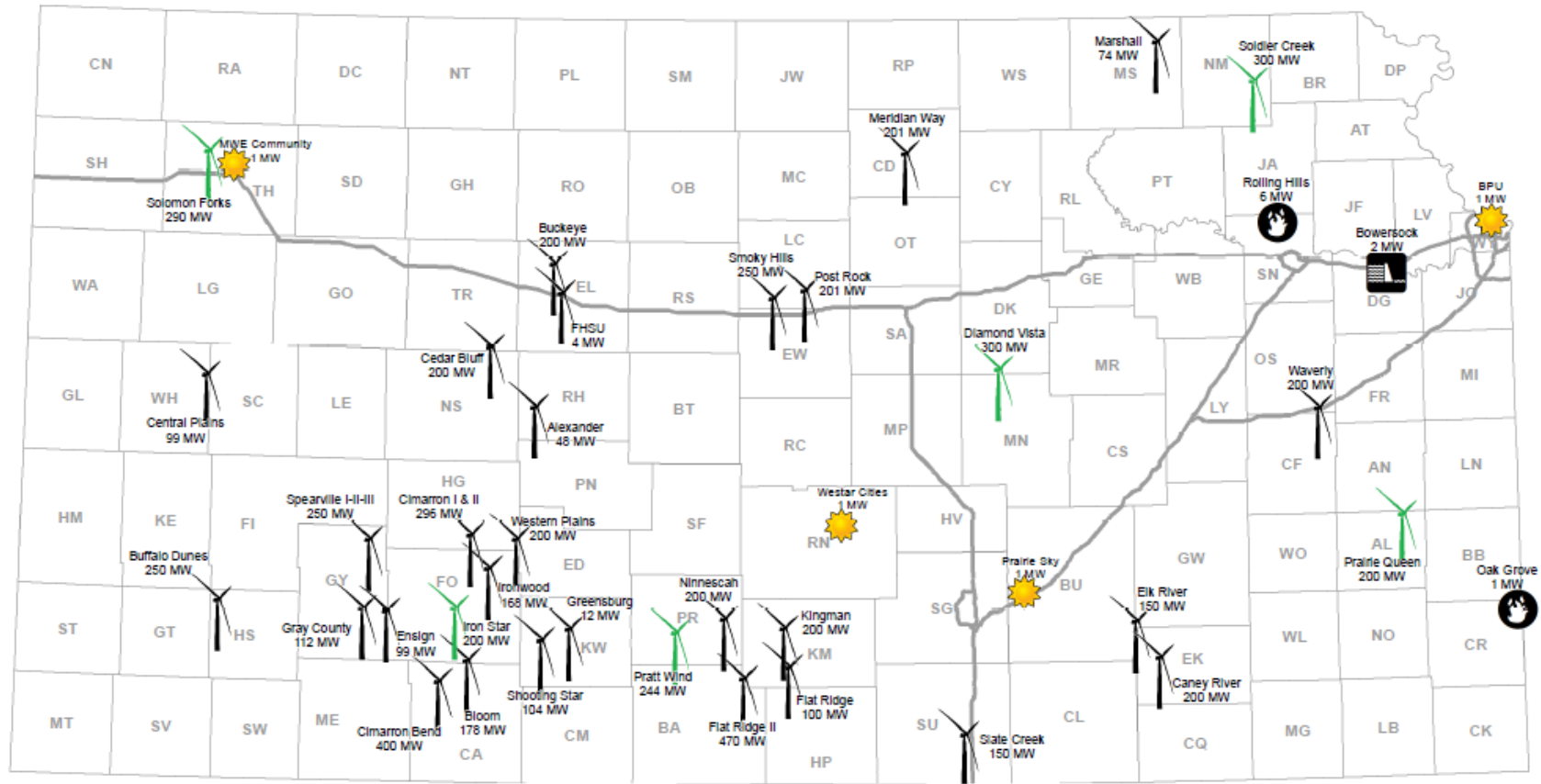
Appendix C-1: Existing Renewable Generators within Kansas






Renewable Generator (Total Nameplate Capacity)	County	Developer	Initial Month and Year of Operation	Utility Purchaser	Size
Slate Creek Wind Project (150 MW)	Sumner	EDF Renewable Energy	December 2015	Great Plains Energy Inc.	150 MW
East Fork Wind Farm	Thomas	ENGIE North America	April 2020	Brown-Forman	196 MW
Midwest Energy Community Solar Garden (1 MW)	Thomas	Clean Energy Collective	February 2015	Midwest Energy	1 MW
Solomon Forks and Solomon Forks East (474 MW)	Thomas	Infinity Renewables and MAP© Energy	July 2019	T-Mobile, Target	276 MW
Central Plains Wind Farm (99 MW)	Wichita	RES America	March 2009	Westar	99 MW
Board of Public Utilities Solar Farm (1 MW)	Wyandotte	Board of Public Utilities	September 2017	Board of Public Utilities	1 MW

Appendix C-2: Announced New Renewable Generation within Kansas

Renewable Generator (Total Nameplate Capacity)	County	Developer	Initial Month and Year of Operation	Utility Purchaser	Size
Jayhawk Wind Farm	Bourbon and Crawford	Apex Clean Energy		Evergy	155 MW
				---	38 MW
Iron Star (200 MW)	Ford	Infinity Renewables	-----	Missouri Joint Municipal Electric Utility Commission	200 MW
Ringneck Prairie Wind Farm (70 MW)	Graham	Apex Clean Energy	2020	-----	70 MW
Flat Ridge III	Kingman	AEP	December 2020	Evergy	128 MW
Expedition Wind Farm	Marion	National Renewable Solutions	2021	Evergy	150 MW
Soldier Creek Wind Farm (300 MW)	Nemaha	NextEra energy Resources, LLC	December 2020	Evergy	300 MW
Johnson Corner Solar Project (20 MW)	Stanton		December 2019	Mid-Kansas Electric Company, Inc., Sunflower Electric Power Corporation, lightsourcebp, National Renewables Coop.	20 MW

Commercial-Size Renewable Generation in Kansas



-  Solar
-  Wind, Existing
-  Hydro
-  Wind, Under Construction
-  Landfill Gas

Appendix D: Inventory of Major Power Plants Serving Kansas Loads

Operating Utility	Power Plant Name Unit / Primary Fuel Source (B-Base, I-Intermediate, P-Peaking)	County	Ownership	Nameplate Capacity (MW)	Initial Year of Operation	2019 Net Generation (MWh)
Wolf Creek Nuclear Operating Corporation	Wolf Creek Nuclear (B)	Coffey	KCP&L (47%) Westar (47%) KEPCo (6%)	1,205	1985	9,247,734
Evergy Kansas Central (Evergy)	Jeffrey Energy Center Coal (B)	Pottawatomie	Evergy (92%) Mid-Kansas (8%)	2,179	1978 - 1983	6,060,312
	Lawrence Energy Center Coal (B)	Douglas	Evergy (100%)	531	1955 - 1971	2,421,593
	Hutchinson Natural gas (P)	Reno	Evergy (100%)	396	1965	7,930
	Gordon Evans Natural gas (P) Diesel (P)	Sedgwick	Evergy (100%)	821	1961 - 2001	303,336
	Emporia Energy Center Natural gas (LF) and Natural gas (P)	Lyon	Evergy (100%)	660	2008-2009	701,397
	Spring Creek Energy Center Natural gas (P)	Logan, Oklahoma	Evergy (100%)	279	2001	171,217
	Central Plains Wind Farm Wind	Wichita	Evergy (100%)	99	2009	236,922
	Flat Ridge 1 Wind Farm Wind	Barber	Evergy (100%)	100	2009	153,571
	Western Plains Wind Farm Wind	Ford	Evergy (100%)	2281	2017	1,129,806
Evergy Kansas Metro (KCP&L)	LaCygne Coal (B)	Linn	KCP&L (50%) Evergy (50%)	1,421.2	1973 - 1977	917,061
	Osawatomie Natural gas (P)	Miami	KCP&L (100%)	186	2003	1,540
	West Gardner Natural gas (P)	Johnson	KCP&L (100%)	360	2003	14,228
	Iatan I Coal (B)	Platte, Missouri	KCP&L (70%) KCP&L-GMO (18%) Empire (12%)	704.7	1980	1,266,686

Operating Utility	Power Plant Name Unit / Primary Fuel Source (B-Base, I-Intermediate, P-Peaking)	County	Ownership	Nameplate Capacity (MW)	Initial Year of Operation	2019 Net Generation (MWh)
	Iatan II Coal (B)	Platte, Missouri	KCP&L (54.71%) KCP&L-GMO (18%) Empire (12%) MJMEUC (11.76%) KEPCo (3.53%)	881	2010	1,597,184
	Montrose Coal (B)	Henry, Missouri	KCP&L (100%)	510	1958	154,607
	Hawthorn Coal (B)	Jackson, Missouri	KCP&L (100%)	564	1969	112,788
	Hawthorn Combine Cycle Natural gas (P)	Jackson, Missouri	KCP&L (100%)	306	1997 - 2000	29,202
	Hawthorn Combustion Turbine Natural gas (P)	Jackson, Missouri	KCP&L (100%)	180	2000	9,418
	Northeast Station Natural gas (P) and Distillate fuel oil (P)	Jackson, Missouri	KCP&L (100%)	520	1972	(46)
	Spearville Wind Farm Wind	Ford	KCP&L (100%)	249	2006 - 2012	133,114
Kansas City Board of Public Utilities (KC-BPU)	Quindaro Coal (B)	Wyandotte	KC-BPU (100%)	10	1965 - 1971	0
	Quindaro Combustion Turbine Natural gas (P) and Distillate fuel oil (P)	Wyandotte	KC-BPU (100%)	176	1969 - 1977	7,929
	Nearman Creek Coal (B)	Wyandotte	KC-BPU (100%)	238	1981	952,612
	Nearman Creek Combustion Turbine Natural gas (P)	Wyandotte	KC-BPU (100%)	76 <i>(with 45MW additional announced)</i>	2006	6,635
Kansas Electric Power Cooperative, Inc. (KEPCo)	Sharpe Distillate fuel oil (I)	Coffey	KEPCo (100%)	20	2002	25
Sunflower Electric Power Corporation (Sunflower)	Holcomb Station Coal (B)	Finney	Sunflower (100%)	359	1983	1,575,463

Operating Utility	Power Plant Name Unit / Primary Fuel Source (B-Base, I-Intermediate, P-Peaking)	County	Ownership	Nameplate Capacity (MW)	Initial Year of Operation	2019 Net Generation (MWh)
	Garden City Station Natural gas (I) and Natural gas (P)	Finney	Sunflower (100%)	201	1962 - 1979	76,912
	Fort Dodge 4	Ford	Mid-Kansas (100%)	149	1968	5,358
	Great Bend 3	Barton	Mid-Kansas (100%)	82	1963	2,215
	Cimarron River 1 Natural Gas (B)	Seward	Mid-Kansas (100%)	50	1963	663
	Clifton 1 Natural Gas (P)	Washington	Mid-Kansas (100%)	85	1974	5,675
	Rubart Station Natural Gas (I)	Grant	Sunflower (100%)	110	2014	19,551
Mid-Kansas Electric Company (Mid-Kansas)	Colby Natural gas (I)	Barton	Mid-Kansas (100%)	13	1970	879
	Clifton Station Natural gas (P) and Distillate fuel oil (P)	Washington	Mid-Kansas (100%)	75.5	1974	3,107
	Goodman Energy Center Natural gas (P) <i>(formerly Judson Large)</i>	Ford	Mid-Kansas (100%)	50	73.8	68,892
	Great Bend Station Natural gas (I) <i>(formerly Arthur Mullergren)</i>	Barton	Mid-Kansas (100%)	0	1963	(51)
	Bird City Distillate fuel oil(P)	Cheyenne		4		(10)
Liberty Utilities (Empire)	Riverton Natural gas (P)	Cherokee	Empire (100%)	92	1950	0
	Riverton Combustion Turbine Natural gas (P)	Cherokee	Empire (100%)	283	1964	1,034,616
	Asbury Coal (B)	Jasper, Missouri	Empire (100%)	189	1970 - 1986	1,079,076
	Empire Energy Center Natural gas (P)	Jasper, Missouri	Empire (100%)	300	1978 - 2003	27,722
	Ozark Beach Hydro (B)	Taney, Missouri	Empire (100%)	16	1931	41,927
	State Line Combine Cycle Natural gas (P)	Jasper, Missouri	Empire (60%) Evegy (40%)	499	2001	1,827,310

Operating Utility	Power Plant Name Unit / Primary Fuel Source (B-Base, I-Intermediate, P-Peaking)	County	Ownership	Nameplate Capacity (MW)	Initial Year of Operation	2019 Net Generation (MWh)
	State Line Combustion Turbine Natural gas (P)	Jasper, Missouri	Empire (100%)	96	1995	18,633
Plum Point Energy Associates, LLC	Plum Point Energy Coal (B)	Mississippi, Arkansas	EIF Plum Point (29.6%) John Hancock (27.25%) MJMEUC (22.11%) Empire (7.52%) East Texas Coop. (7.52%) Mississippi Municipal Energy Agency (6%)	670	2010	3,716,051
Midwest Energy, Inc. (Midwest)	Colby Dual Fuel (P)	Thomas	Midwest (100%)	13	1970	79
	Great Bend Dual Fuel (P)	Barton	Midwest (100%)	10	1948 - 1956	(51)
	Bird City Distillate fuel oil (P)	Cheyenne	Midwest (100%)	4	1965	0
	Goodman Energy Center Natural gas (P)	Ellis	Midwest (100%)	73.8	2008	34,446



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