

# 2010 Kansas Generation Planning Survey

Kansas Corporation Commission (KCC) Staff Summary, Prepared for the Kansas Electric Transmission Authority (KETA)

The report below was originally compiled for Kansas Energy Council (KEC) Electricity Committee in 2008 as “Kansas Electric Generation: Capacity and Peak Load, 2008 to 2028,” and presented a twenty-year snapshot of projected future generation needs for utilities operating in Kansas. In early 2009 Representative Carl Holmes, in his capacity as the chairman of the Kansas Electric Transmission Authority (KETA), asked the Kansas Corporation Commission (KCC) to update the original KEC report to be presented to the Kansas Legislature. The KCC plans to continue updating this report on an annual basis in future years.

The current version of the Forecasted Capacity and Peak Load Summary, renamed the Kansas Generation Planning Survey, has been modified and expanded from the original report in both style and substance to incorporate relevant changes in Kansas Statutes, primarily the 2009 adoption of the State’s Renewable Energy Standard (RES). The current report is divided into two sections. Section 1 below provides twenty years worth of projected information on system peak capacity needs for utilities operating in Kansas.<sup>1</sup> Section 2 likewise provides twenty years worth of projected information on Utility compliance with Kansas’ recently passed RES outlined in K.S.A. 66-1258.

In addition to Sections 1 and 2, the report includes four appendixes providing in-depth information and KCC Staff calculations used in the preparation of Sections 1 and 2. Appendix A provides detailed year-by-year information on system capacity needs for each utility listed in Section 1. Appendix B likewise provides detailed year-by-year information on current forecasted compliance with Kansas’ RES for each utility subject to K.S.A. 66-1258 and presented in Section 2. Appendix C provides information on renewable generation in Kansas, including location, developer, month of initial operations, and final utility purchaser. Finally, Appendix D provides a detailed listing of major electrical generation facilities currently serving Kansans.

Detailed information on individual generation units was obtained by Staff from the U.S. Department of Energy’s Energy Information Administration (EIA) Form 923 and from the databases maintained by Regulatory Research Associates<sup>®</sup>. All other information was provided to KCC by the utilities themselves. The KCC thanks all utilities for their cooperation and assistance in the compiling of this report.

---

<sup>1</sup> Due to time constraints, this report does not including the following two municipal utilities: McPherson Board of Public Utilities, and the City of Anthony. These municipal utilities will be included in future versions of this report.

## Section 1: System Peak Capacity Planning

All major utilities<sup>1</sup> 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 Nebraska, Oklahoma, and parts of Missouri, Texas, Arkansas, Louisiana, and New Mexico. SPP additionally serves as the Regional Entity of the North American Electric Reliability Corporation (NERC), as 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 are maintained by its members.

In furtherance of this mandate, SPP publishes a series of regulations—called the SPP Criteria—governing system operations of its members, and additionally requires its members submit annual 10 year capacity and load projections to show how the utility will meet its ongoing system obligations, including the 12% reserve margin requirement outlined in the Criteria.<sup>2</sup> System obligations 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.<sup>3</sup>

The table presented below shows the current and 20 year forecasted capacity and system peak responsibility (system peak load plus SPP 12% required capacity margin) for utilities operating in Kansas.<sup>4</sup> 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, capacity and system peak responsibility for the State's two multi-jurisdictional utilities—Kansas City Power & Light, and Empire District Electric Company—represent only Kansas peak load, with their system capacity scaled to represent capacity allocated to serving this load.

---

<sup>1</sup> Specifically, all utilities listed in this report exclusive of the Kansas Power Pool are members of SPP. Kansas Power Pool, while not a member of SPP, is registered customer of SPP.

<sup>2</sup> See SPP Criteria section 2.1.9; "Each Load Serving Member's Minimum Required Capacity Margin shall be twelve percent." Capacity margin is calculated as  $\{(1/0.88)-1\}$ \*estimated peak load}. Additionally, margin responsibility for firm power contracts (contracts which included reserve responsibility as an element) are not included in Staff's calculations.

<sup>3</sup> 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.

<sup>4</sup> Peak-load data presented was provided by the individual utilities based on internal system planning forecasts, with the two exceptions. Westar Energy provided 10-year peak-load forecasts—through 2018. Subsequent years' peak demands were calculated by Staff assuming a 1.8% growth rate per year. Likewise, Kansas City Power and Light provided information through 2028, which Staff extended to 2029 assuming a 1% growth rate.

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

		Investor Owned Utilities (IOUs)			Cooperatives				Municipal Utilities		
		Empire District Electric Company	Kansas City Power & Light (KCP&L)	Westar Energy	Kansas Electric Power Coop. (KEPCo)	Midwest Energy	Mid-Kansas Electric Corporation (MKEC)	Sunflower Electric Power Corporation	Kansas City Board of Public Utilities (KC-BPU)	Kansas Municipal Energy Agency (KMEA)	Kansas Power Pool (KPP)
2009 Historical	Total System Capacity (MW)	81	1,832	6,334	465	349	517	676	628	303	434
	System Responsibility (MW)	80	1,782	5,430	420	332	653	549	535	227	432
2014 Projected	Total System Capacity (MW)	84	2,266	6,512	525	376	787	658	603	323	521
	System Planning Responsibility (MW)	82	2,064	6,093	505	337	690	630	594	251	472
2019 Projected	Total System Capacity (MW)	84	2,278	7,007	479	366	738	658	668	294	467
	System Planning Responsibility (MW)	91	2,218	6,288	565	365	701	623	606	272	511
2024 Projected	Total System Capacity (MW)	84	2,294	7,040	504	366	738	658	546	279	397
	System Planning Responsibility (MW)	100	2,356	6,597	584	370	713	642	618	293	552
2029 Projected	Total System Capacity (MW)	84	2,298	7308	532	366	738	658	435	231	397
	System Planning Responsibility (MW)	111	2,474	7770	645	378	725	663	631	314	598

## Section 2: Renewable Energy Planning

In May 2009, the Kansas Legislature passed Senate Substitute for H. 2369, a legislative compromise designed to in part resolve the disputed construction of a new coal-fired generator in western Kansas, Holcomb 2, which had been a disputed issue in three consecutive legislative sessions. As part of H. 2369, the bill included the Renewable Energy Standard (RES) Act requiring all non-municipal utilities in Kansas to satisfy a portion of the utility's generation needs through renewable generation sources.

Kansas' RES, passed into statute as K.S.A. 66-1256 through 66-1262, differs from most RES Standards in the nation in that renewable generation is not defined as energy generation, but rather as generation capacity. In particular, K.S.A.66-1258 requires utilities subject to its requirements to own or purchase renewable generation such that the nameplate capacity<sup>1</sup> of these generators is equal to 10% of the utility's annual peak demand for the years 2011 through 2015, 15% for the years 2016 through 2019, and 20% for all years after 2020.

K.S.A. 66-1258 also stipulated that the KCC would establish rules and regulation governing specifics of the RES not covered within the statutes. In October 2010, the KCC finalized K.A.R. 82-16-1 through 82-16-6 establishing these rules and regulations. Of note within these administrative regulations is the KCC's modification of how the State's RES would be measured for the many electric distribution cooperative utilities operating in the State. Electric cooperative distribution utilities, while engaging in the retail sale and distribution of electricity from the transmission system to their customer's homes or businesses, do not own any generation or wholesale transmission facilities themselves. Instead these utilities either enter into wholesale purchase contracts with Investor Owned Utilities, or often a Generation and Transmission (G&T) Cooperative<sup>2</sup> formed with other electric distribution cooperative utilities for the purposes of acting as a wholesale supplier. K.A.R. 82-16-2(b) indicates that compliance with the RES may be met by the G&T Cooperative on behalf of its members, rather than each individual distribution cooperative.

The table below shows each RES affected utility's forecasted renewable capacity responsibility and nameplate renewable capacity (multiplied by a factor of 1.1 for renewable generators located within the State as defined by K.S.A. 66-1258(c)), with the exclusion of three independent distribution cooperatives who purchase power wholesale from Westar Energy (Nemaha-Marshall, Doniphan, and Kaw Valley electric cooperatives). Finally, it should be noted that calculations of renewable capacity do not include estimates of capacity from net metering as defined by K.S.A. 66-1258.

---

<sup>1</sup> K.S.A. 66-1257(c) defines 'net renewable generation capacity' as the gross generation capacity of a renewable generation resource over a four-hour period free from limitations including ambient conditions. As renewable generation is completely driven by ambient weather conditions (i.e. if and to what degree the wind is blowing), it is hard to apply the defined statute in its strictest sense. However, the KCC in K.A.R. 82-16-1(e) has interpreted this definition as implying nameplate capacity as the given definition would be the correct definition of nameplate capacity for non-renewable generation sources.

<sup>2</sup> G&T Cooperatives operating in Kansas are Kansas Electric Power Cooperatives (KEPCo) and Sunflower Electric Power Corporation, though Mid-Kansas Electric Corporation (MKEC) additionally acts as a similar entity.

**Table 2—Overview of Renewable Capacity and Renewable Capacity Requirements for Utilities Operating in Kansas.**

		Utilities Subject to Renewable Energy Standard (RES) under K.S.A. 66-1258							
		Empire District Electric Company	Kansas City Power & Light (KCP&L)	Westar Energy	Kansas Electric Power Coop. (KEPCo)	Midwest Energy	Mid-Kansas Electric Corporation (MKEC)	Sunflower Electric Power Corporation	Kansas City Board of Public Utilities (KC-BPU) <sup>1</sup>
2010 Historical	Renewable Capacity Responsibility (MW)	--	--	--	--	--	--	--	--
	System Renewable Capacity (MW)	286.5	176.4	333.3	114	54.1	110	68.8	71.7
2011 Projected	Renewable Capacity Responsibility—10% (MW)	6	166	464	42	30	58	49	49
	System Renewable Capacity (MW)	286.5	286.4	333.3	114	54.1	110.3	68.8	71.7
2016 Projected	Renewable Capacity Responsibility—15% (MW)	10	288	774	72	48	91	83	78
	System Renewable Capacity (MW)	286.5	286.4	739.2	114	54.1	216.5	68.8	71.7
2020 Projected	Renewable Capacity Responsibility—20% (MW)	15	407	1061	103	65	123	113	106
	System Renewable Capacity (MW)	286.5	286.4	739.2	114	54.1	215.8	68.8	71.7
2025 Projected	Renewable Capacity Responsibility—20% (MW)	16	433	1150	107	67	125	112	108
	System Renewable Capacity (MW)	286.5	286.4	739.2	114	54.1	215.8	68.8	71.7
2029 Projected	Renewable Capacity Responsibility—20% (MW)	18	449	1238	115	68	127	115	110
	System Renewable Capacity (MW)	286.5	286.4	739.2	114	54.1	215.8	68.8	71.7

<sup>1</sup> KC-BPU is a municipal utility not subject to K.S.A. 66-1258. However, the utility has stated that it will voluntarily attempt to comply with the Renewable Energy Standard (RES) contained within the statute.

## Appendix A: Utility System Capacities and Load Responsibilities

### Appendix A-1—Empire District Electric Company

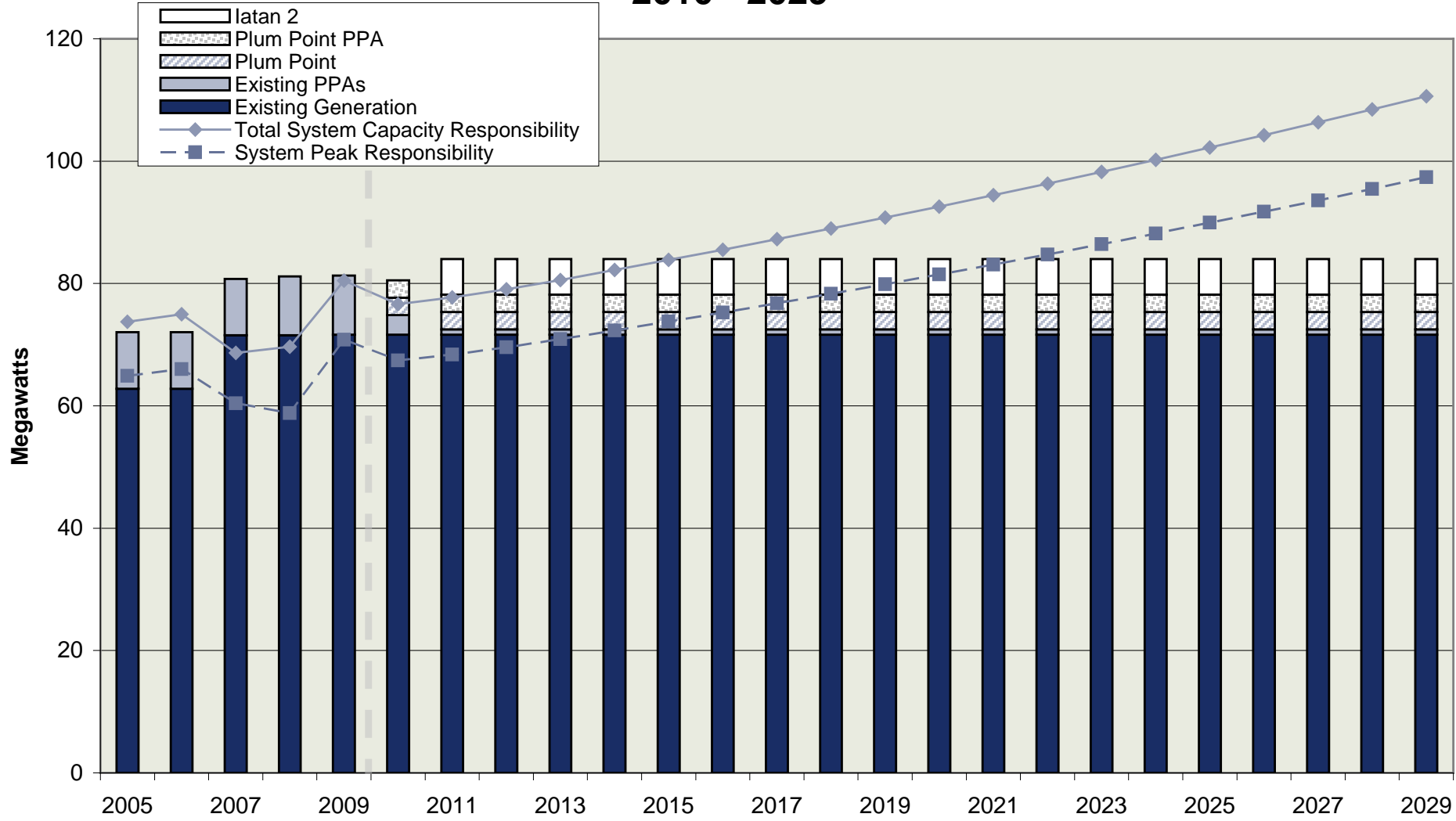
The Empire District Electric Company (Empire) is a regulated multi-jurisdictional investor-owned utility operating in the states of Kansas, Missouri, Arkansas, and Oklahoma. Only a very small portion of Empire’s overall service territory falls within Kansas, consisting of approximately 10,102 retail customers in Cherokee county (located in the extreme southeastern corner of the state).

Empire acquired partial ownership of two coal-fired power plants recently built in Arkansas and Missouri, Plum Point and Iatan II, respectively. Plum Point and Iatan II, with Empire-designated operating capacities of 100MW and 102MW (Empire’s Plum Point capacity is divided between a 50MW ownership and 50MW power purchase agreement), meets Empire’s generating capacity needs through 2015.

		System Peak				12% Reserve Margin	System Planning Responsibility	System Capacity <sup>1</sup>		
		Retail Load	Wholesale Load	Total System Peak Load	Accredited Generation			Net Contracts	Total System Capacity	
Historical	2005	61	4	65	9	74	63	9	72	
	2006	62	4	66	9	75	63	9	72	
	2007	57	3	60	8	69	72	9	81	
	2008	55	4	59	8	67	72	7	78	
	2009	67	4	71	10	80	72	10	81	
Projected	2010	64	4	67	9	77	74	6	81	
	2011	65	4	68	9	78	80	4	84	
	2012	66	4	70	9	79	80	4	84	
	2013	67	4	71	10	81	80	4	84	
	2014	68	4	72	10	82	80	4	84	
	2015	70	4	74	10	84	80	4	84	
	2016	71	4	75	10	86	80	4	84	
	2017	72	4	77	10	87	80	4	84	
	2018	74	4	78	11	89	80	4	84	
	2019	75	4	80	11	91	80	4	84	
	2020	77	5	81	11	93	80	4	84	
	2021	78	5	83	11	94	80	4	84	
	2022	80	5	85	12	96	80	4	84	
	2023	82	5	86	12	98	80	4	84	
	2024	83	5	88	12	100	80	4	84	
2025	85	5	90	12	102	80	4	84		
2026	87	5	92	13	104	80	4	84		
2027	88	5	94	13	106	80	4	84		
2028	90	5	95	13	108	80	4	84		
2029	92	5	97	13	111	80	4	84		

<sup>1</sup> Empire’s system capacity is scaled in this table to reflect the Kansas portion of Empire’s service territory; approximately 6.5% of Empire’s overall system peak.

## Forecasted Demand and System Capacity, Empire District Electric Company - Kansas Service Area, 2010 - 2029



2010 Generation Survey  
 Updated September 1, 2010

**Appendix A-2—Kansas City Power & Light Company**

The Kansas City Power and Light Company (KCP&L) is a wholly owned subsidiary of Great Plains Energy Inc. It is a regulated multi-jurisdictional investor-owned utility that operates in the states of Kansas and Missouri. KCP&L is responsible for serving approximately 518,196 retail customers in both Kansas and Missouri, with approximately 242,441 customers in northeastern Kansas.

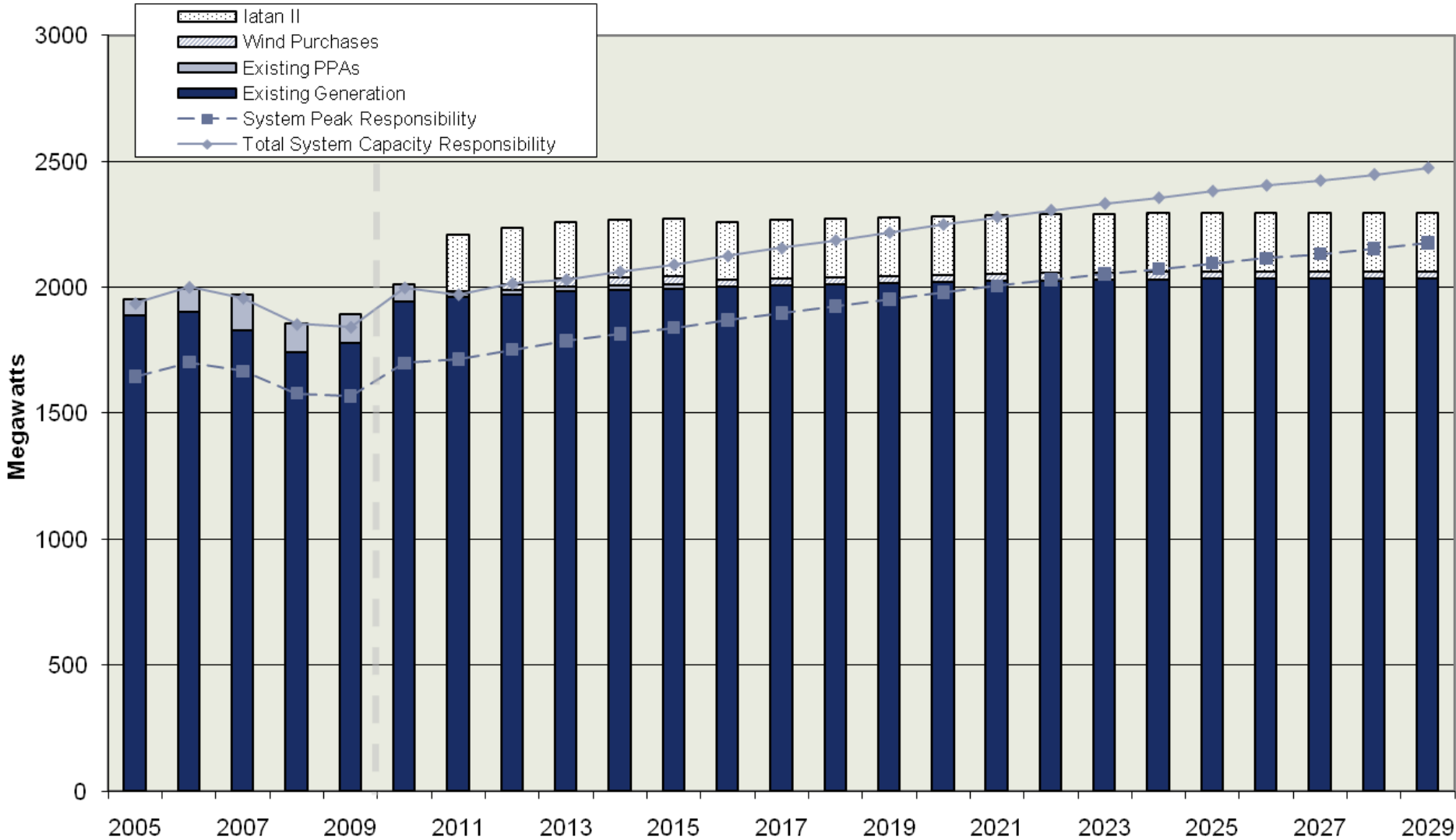
KCP&L recently finished construction on a new coal-fired generator Iatan II—located adjacent to an existing coal-fired generator Iatan I, built in the early 1980s. With the construction of Iatan II, KCP&L has enough generating capacity to fulfill its system needs through the early 2020s.

		System Peak				System Planning Responsibility	System Capacity		
		Retail Load	Wholesale Load	Total System Peak Load	12% Reserve Margin		Accredited Generation	Net Contracts	Total System Capacity <sup>1</sup>
Historical	2005	1628	19	<b>1647</b>	225	<b>1872</b>	1891	-4	<b>1886</b>
	2006	1697	18	<b>1703</b>	232	<b>1935</b>	1904	23	<b>1927</b>
	2007	1666	19	<b>1668</b>	227	<b>1895</b>	1830	79	<b>1909</b>
	2008	1603	17	<b>1579</b>	215	<b>1794</b>	1744	50	<b>1794</b>
	2009	1614	17	<b>1568</b>	214	<b>1782</b>	1781	51	<b>1832</b>
Projected	2010	1773	18	<b>1700</b>	232	<b>1932</b>	1946	-2	<b>1943</b>
	2011	1794	18	<b>1714</b>	234	<b>1948</b>	2185	0	<b>2185</b>
	2012	1841	18	<b>1753</b>	239	<b>1992</b>	2200	14	<b>2214</b>
	2013	1884	18	<b>1788</b>	244	<b>2032</b>	2214	46	<b>2261</b>
	2014	1918	19	<b>1816</b>	248	<b>2064</b>	2220	47	<b>2266</b>
	2015	1952	18	<b>1840</b>	251	<b>2091</b>	2225	47	<b>2272</b>
	2016	1981	19	<b>1870</b>	255	<b>2125</b>	2232	30	<b>2261</b>
	2017	2009	19	<b>1898</b>	259	<b>2157</b>	2237	30	<b>2267</b>
	2018	2037	18	<b>1925</b>	263	<b>2188</b>	2242	30	<b>2272</b>
	2019	2065	18	<b>1952</b>	266	<b>2218</b>	2248	30	<b>2278</b>
	2020	2092	19	<b>1980</b>	270	<b>2250</b>	2253	30	<b>2283</b>
	2021	2118	20	<b>2006</b>	274	<b>2280</b>	2257	30	<b>2287</b>
	2022	2141	20	<b>2030</b>	277	<b>2307</b>	2260	30	<b>2290</b>
	2023	2164	20	<b>2053</b>	280	<b>2333</b>	2263	30	<b>2293</b>
	2024	2186	19	<b>2073</b>	283	<b>2356</b>	2264	30	<b>2294</b>
2025	2208	20	<b>2096</b>	286	<b>2382</b>	2268	30	<b>2298</b>	
2026	2228	20	<b>2116</b>	289	<b>2405</b>	2267	30	<b>2297</b>	
2027	2245	20	<b>2133</b>	291	<b>2424</b>	2267	30	<b>2297</b>	
2028	2265	21	<b>2154</b>	294	<b>2448</b>	2268	30	<b>2298</b>	
2029 <sup>2</sup>	2309	21	<b>2177</b>	297	<b>2474</b>	2268	30	<b>2298</b>	

<sup>1</sup> KCP&L’s system capacity is scaled in this table to reflect the Kansas portion of KCP&L’s service territory; approximately 47% of KCP&L’s overall system peak.

<sup>2</sup> System Load for 2029 was calculated by Staff assuming a 1% load growth from 2028.

## Forecasted Demand and System Capacity, Kansas City Power & Light Company 2010 - 2029



2010 Generation Survey  
 Updated September 1, 2010

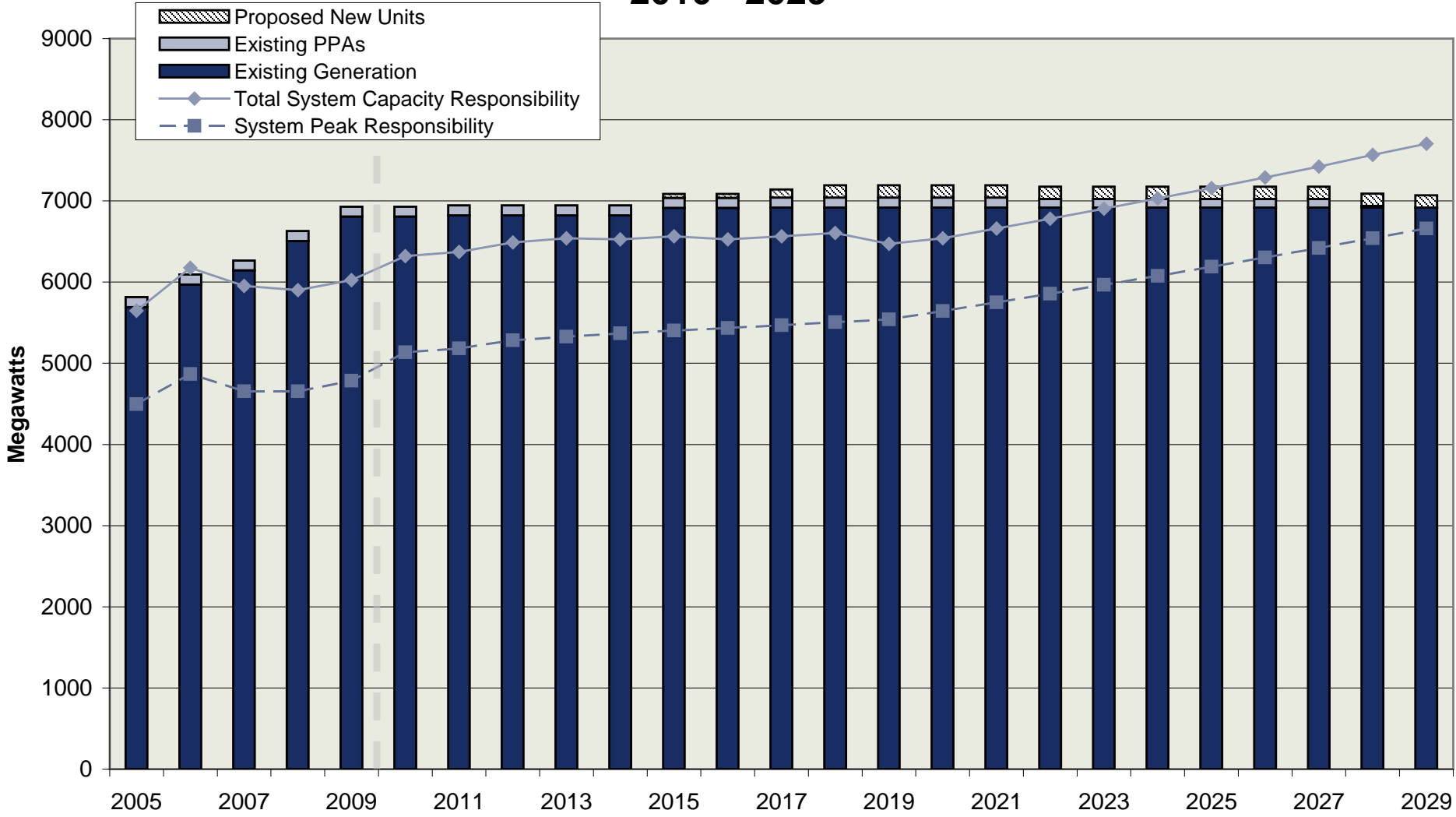
**Appendix A-3—Westar Energy, Inc.**

Westar Energy Inc. (Westar) is a regulated vertically-integrated investor-owned utility operating in south central and northeast Kansas. In the south central portion of the state, Westar operates as the Kansas Gas and Electric Company (Westar South). In the northeastern portion of the state, Westar operates under its corporate name of Westar Energy, Inc (Westar North). Although technically composed of two separate companies, Westar’s entire system is dispatched as one system unit. Because of these and other factors there has been a movement by the KCC to consolidate electric rates with the ultimate goal of uniform rates across the two entities. Westar is responsible for providing electric service to approximately 687,000 retail customers across both systems.

In June of 2008, Westar finished construction of a series of four 42MW and one 150MW natural gas combustion turbines (CTs) at Westar’s Emporia Energy Center (Emporia) located in Lyon county Kansas. In February of 2009, an additional two 150MW CTs were added to the existing natural gas generators at the facility. With the finished construction of Emporia, Westar has enough generating capacity to satisfy its system capacities needs through 2024, through Westar does include the small purchase or construction of new generation in the 2015-2018 time horizon.

		System Peak				System Capacity			
		Retail Load	Wholesale Load	Total System Peak Load	12% Reserve Margin	System Planning Responsibility	Accredited Generation	Net Contracts	Total System Capacity
<b>Historical</b>	2005	4096	400	<b>4496</b>	604	<b>5100</b>	5692	-423	<b>5269</b>
	2006	4467	400	<b>4867</b>	655	<b>5522</b>	5970	-533	<b>5437</b>
	2007	4255	400	<b>4655</b>	626	<b>5281</b>	6144	-548	<b>5596</b>
	2008	4255	400	<b>4655</b>	626	<b>5281</b>	6507	-498	<b>6009</b>
	2009	4375	411	<b>4786</b>	644	<b>5430</b>	6807	-473	<b>6334</b>
<b>Projected</b>	2010	4902	400	<b>5136</b>	691	<b>5827</b>	6807	-371	<b>6436</b>
	2011	4968	387	<b>5182</b>	698	<b>5880</b>	6823	-371	<b>6452</b>
	2012	5071	391	<b>5284</b>	712	<b>5996</b>	6823	-371	<b>6452</b>
	2013	5118	393	<b>5327</b>	718	<b>6045</b>	6823	-371	<b>6452</b>
	2014	5163	394	<b>5370</b>	723	<b>6093</b>	6823	-311	<b>6512</b>
	2015	5200	396	<b>5404</b>	728	<b>6132</b>	6781	-311	<b>6470</b>
	2016	5235	397	<b>5436</b>	732	<b>6168</b>	6739	-236	<b>6503</b>
	2017	5271	398	<b>5470</b>	737	<b>6207</b>	6747	-236	<b>6511</b>
	2018	5306	398	<b>5505</b>	742	<b>6247</b>	6805	-236	<b>6569</b>
	2019	5342	399	<b>5541</b>	747	<b>6288</b>	6863	-62	<b>6801</b>
	2020	5441	403	<b>5644</b>	761	<b>6405</b>	6921	-12	<b>6909</b>
	2021	5542	407	<b>5750</b>	775	<b>6525</b>	6979	-12	<b>6967</b>
	2022	5645	411	<b>5857</b>	790	<b>6647</b>	7037	-29	<b>7008</b>
	2023	5750	415	<b>5966</b>	805	<b>6771</b>	7095	-29	<b>7066</b>
	2024	5857	419	<b>6077</b>	520	<b>6597</b>	7153	-29	<b>7124</b>
2025	5966	423	<b>6190</b>	835	<b>7025</b>	7211	-29	<b>7182</b>	
2026	6076	428	<b>6305</b>	851	<b>7156</b>	7269	-29	<b>7240</b>	
2027	6189	432	<b>6422</b>	867	<b>7289</b>	7327	-29	<b>7298</b>	
2028	6304	436	<b>6541</b>	892	<b>7433</b>	7385	-115	<b>7270</b>	
2029	6421	441	<b>6862</b>	908	<b>7770</b>	7443	-135	<b>7308</b>	

## Forecasted Demand and System Capacity, Westar Energy, Inc. 2010 - 2029



2010 Generation Survey  
 Updated September 1, 2010

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

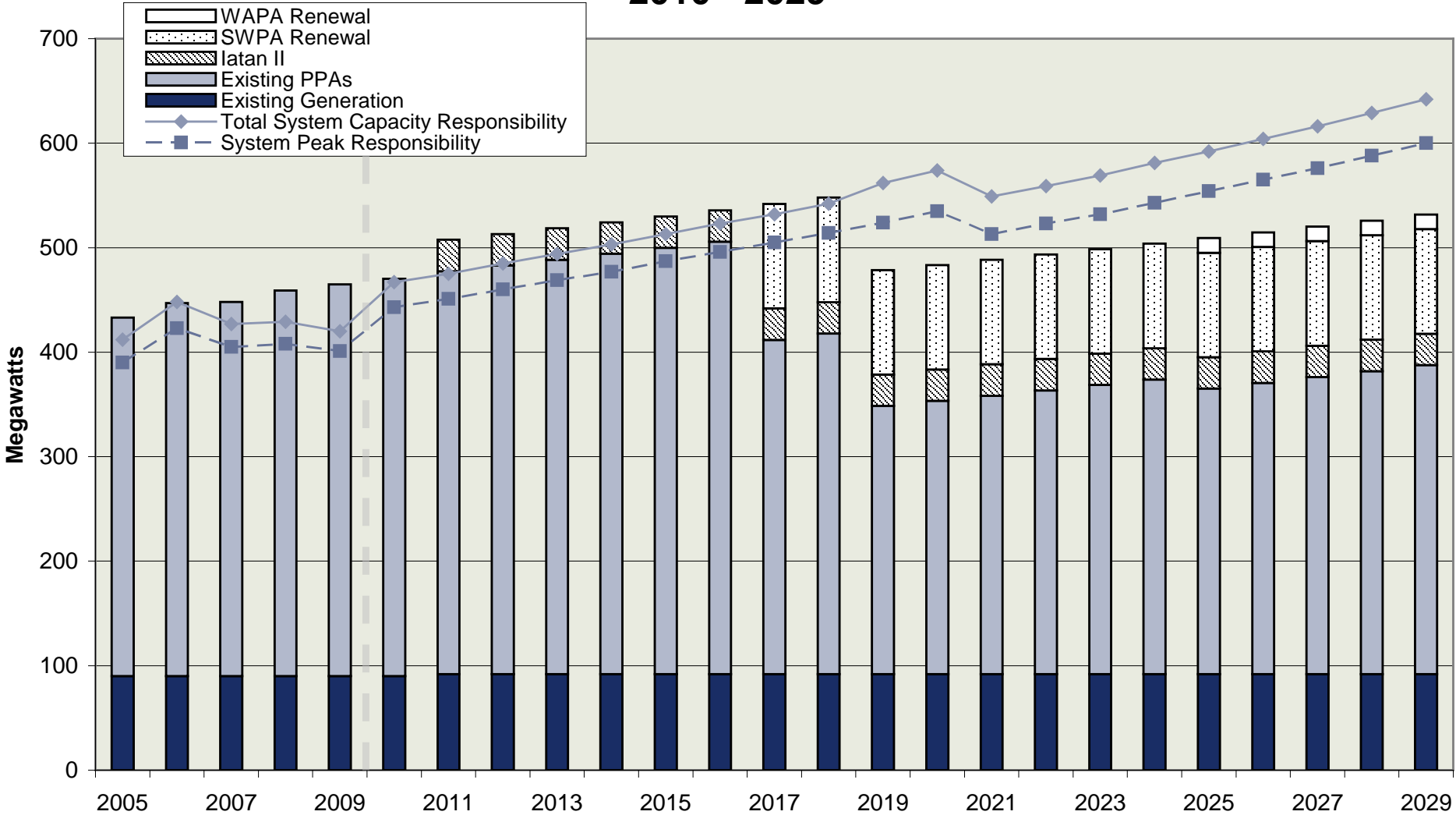
The Kansas Electric Power Cooperatives, Inc. (KEPCo) is a deregulated generation and transmission cooperative utility whose membership is composed of 19 distribution rural cooperatives<sup>1</sup>. KEPCo’s 19 member cooperatives serve approximately 110,000 customers—as indicated by number of meters—throughout the state.

KEPCo acquired a 3.5% (30MW) partial ownership of Iatan II recently constructed by Kansas City Power & Light. The addition of Iatan II satisfies KEPCo’s generation capacity needs until 2019, when the expiration of a full requirements contract with Sunflower Electric Power Company renders KEPCo capacity deficient.

		System Peak				12% Reserve Margin	System Planning Responsibility	System Capacity		
		Retail Load	Wholesale Load	Total System Peak Load	Accredited Generation			Net Contracts	Total System Capacity	
Historical	2005	390	0	390	22	412		90	343	433
	2006	423	0	423	25	448		90	357	447
	2007	405	0	405	22	427		90	358	448
	2008	408	0	408	21	429		90	369	459
	2009	401	0	401	19	420		90	375	465
Projected	2010	443	0	443	24	467		90	380	470
	2011	451	0	451	24	475		122	386	508
	2012	460	0	460	27	487		122	391	513
	2013	469	0	469	28	497		122	397	519
	2014	477	0	477	28	505		122	402	524
	2015	487	0	487	29	516		122	408	530
	2016	496	0	496	29	525		122	414	536
	2017	505	0	505	30	535		122	320	542
	2018	514	0	514	30	544		122	326	548
	2019	524	0	524	41	565		122	257	479
	2020	535	0	535	42	577		122	261	483
	2021	513	0	513	38	551		122	266	488
	2022	523	0	523	39	562		122	271	493
	2023	532	0	532	40	572		122	277	499
	2024	543	0	543	41	584		122	282	504
2025	554	0	554	41	595		122	273	509	
2026	565	0	565	42	607		122	279	515	
2027	576	0	576	43	619		122	284	520	
2028	588	0	588	44	632		122	290	526	
2029	600	0	600	45	645		122	296	532	

<sup>1</sup> Member cooperatives of KEPCo are: Prairie Land, Rolling Hills, Bluestem, Brown-Atchison, Leavenworth-Jefferson, DS&O Electric, Flint Hills, Lyon-Coffey, Victory, Ninnescah, Ark Valley, Sedgwick County, Butler, Heartland, Radiant, CMS Electric, Sumner County, Caney Valley, and Twin Valley

## Forecasted Demand and System Capacity, Kansas Electrical Power Cooperatives, LLC 2010 - 2029



2010 Generation Survey  
 Updated September 1, 2010

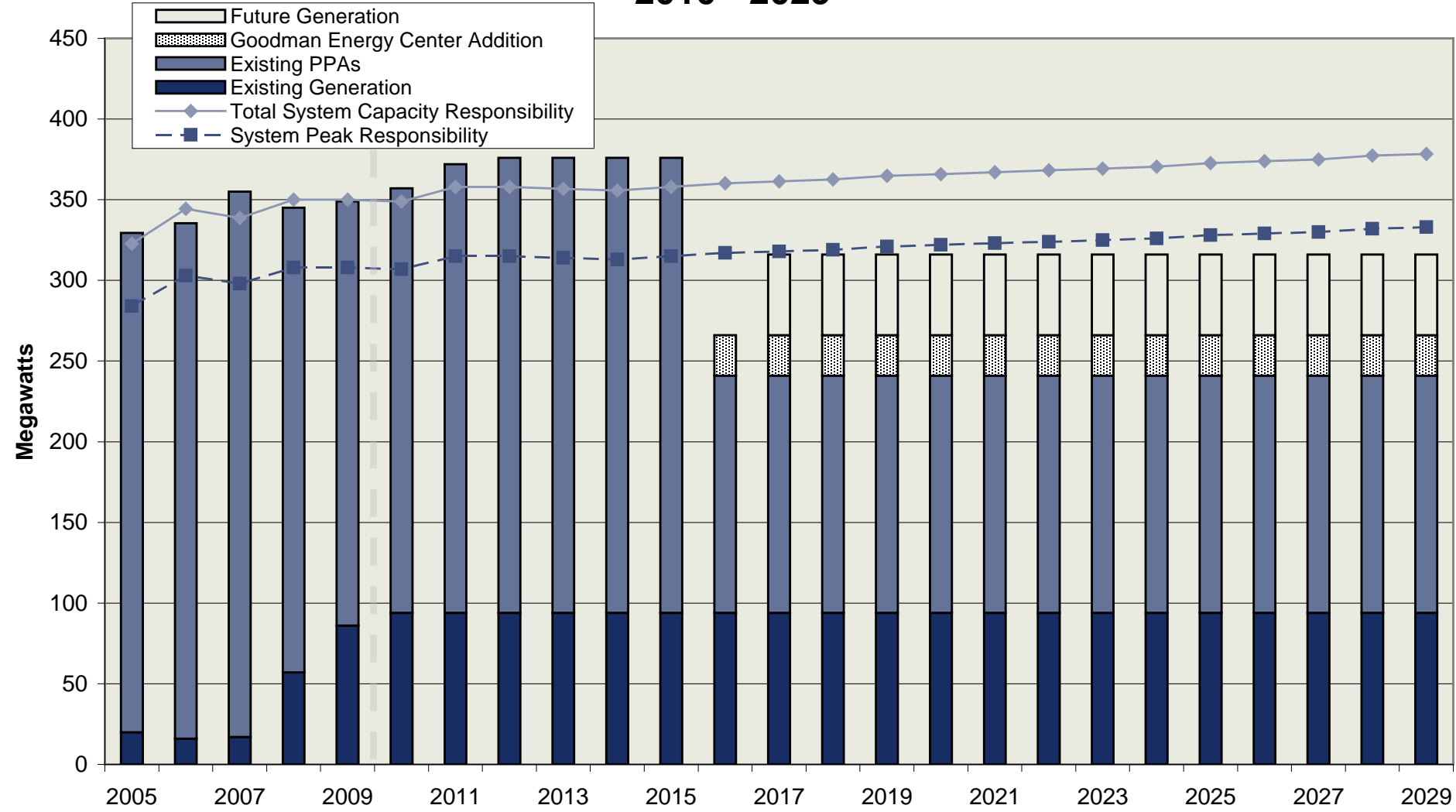
**Appendix A-5—Midwest Energy, Inc.**

Midwest Energy Inc. (Midwest) is a regulated vertically integrated cooperative electric natural gas distribution utility operating in western Kansas. Headquartered in Hays, Midwest provides electric service to approximately 48,353 retail customers.

In 2008 Midwest finished construction on a series of nine 8.3 MW natural gas combustion turbines at the Midwest’s Goodman Energy Center site (three being completed in September of 2008, and thus not included in Midwest’s 2008 total system capacity). With the addition of 75 MW of capacity at Goodman, and the renegotiation of existing power purchase agreements with Westar Energy, Midwest has enough generating capacity to meet its system needs through 2016, when a portion of its renegotiated power purchase agreement with Westar Energy expires. Midwest indicates it is in the initial planning stages of an extension to its Goodman energy center and a new generation facility in the 2016 time frame to meet a portion of its shortfall. Midwest also indicates it is currently reviewing the feasibility of continued operation of its small diesel generating units in Bird City and Great Bend (4 and 9 MW respectively) due to recent new regulations by the Environmental Protection Agency.

		System Peak				System Capacity				
		Retail Load	Wholesale Load	Total System Peak Load	12% Reserve Margin	System Planning Responsibility	Accredited Generation	Net Contracts	Total System Capacity	
Historical	2005	278	42	<b>284</b>	21	<b>305</b>		26	305	<b>331</b>
	2006	293	32	<b>303</b>	24	<b>327</b>		26	310	<b>336</b>
	2007	289	47	<b>298</b>	23	<b>321</b>		26	329	<b>355</b>
	2008	294	35	<b>308</b>	24	<b>332</b>		71	274	<b>345</b>
	2009	296	33	<b>308</b>	24	<b>332</b>		98	251	<b>349</b>
Projected	2010	303	35	<b>307</b>	26	<b>333</b>		101	256	<b>357</b>
	2011	314	35	<b>315</b>	25	<b>340</b>		101	271	<b>372</b>
	2012	317	36	<b>315</b>	25	<b>340</b>		101	275	<b>376</b>
	2013	319	36	<b>314</b>	24	<b>338</b>		101	275	<b>376</b>
	2014	321	36	<b>313</b>	24	<b>337</b>		101	275	<b>376</b>
	2015	323	37	<b>315</b>	25	<b>340</b>		101	275	<b>376</b>
	2016	325	37	<b>317</b>	43	<b>360</b>		126	240	<b>366</b>
	2017	326	37	<b>318</b>	43	<b>361</b>		176	190	<b>366</b>
	2018	327	38	<b>319</b>	44	<b>363</b>		176	190	<b>366</b>
	2019	329	38	<b>321</b>	44	<b>365</b>		176	190	<b>366</b>
	2020	330	38	<b>322</b>	44	<b>366</b>		176	190	<b>366</b>
	2021	331	38	<b>323</b>	44	<b>367</b>		176	190	<b>366</b>
	2022	332	39	<b>324</b>	44	<b>368</b>		176	190	<b>366</b>
	2023	333	39	<b>325</b>	44	<b>369</b>		176	190	<b>366</b>
	2024	334	39	<b>326</b>	44	<b>370</b>		176	190	<b>366</b>
2025	336	39	<b>328</b>	45	<b>373</b>		176	190	<b>366</b>	
2026	337	40	<b>329</b>	45	<b>374</b>		176	190	<b>366</b>	
2027	338	40	<b>330</b>	45	<b>375</b>		176	190	<b>366</b>	
2028	340	40	<b>332</b>	45	<b>377</b>		176	190	<b>366</b>	
2029	341	40	<b>333</b>	45	<b>378</b>		176	190	<b>366</b>	

## Forecasted Demand and System Capacity, Midwest Energy, Inc. 2010 - 2029



2010 Generation Survey  
 Updated September 1, 2010

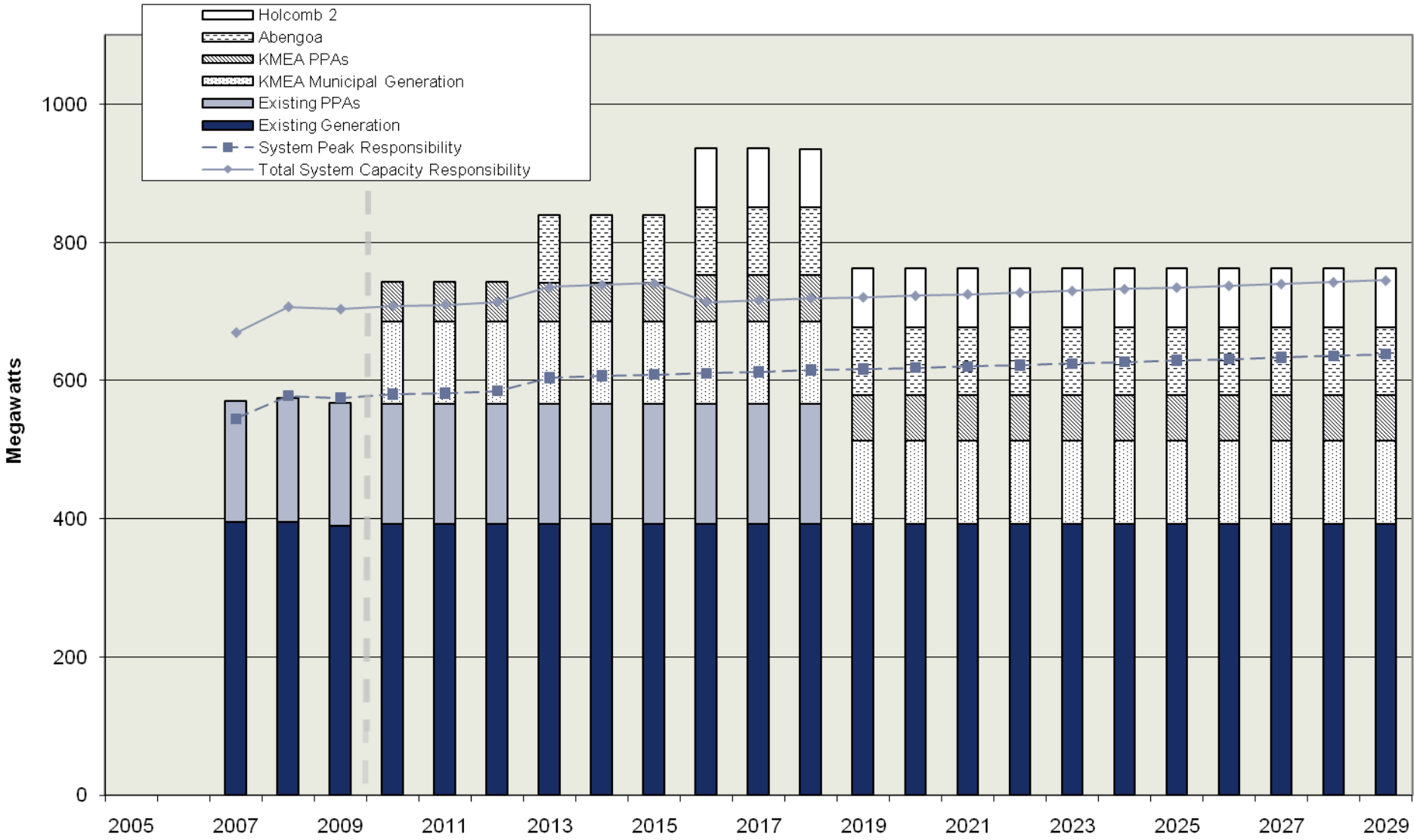
**Appendix A-6—Mid-Kansas Electric Company, LLC (MKEC)**

Mid-Kansas Electric Company, LLC (MKEC) is a regulated limited liability corporation that was created by six distribution cooperatives with the purpose of acquiring the assets of Aquila’s defunct Kansas Electric Network. MKEC owns both generation and transmission on behalf of Lane-Scott, Prairie Land, Southern Pioneer, Victory, Western, and Wheatland. MKEC serves both retail and wholesale customers and has a current total system capacity responsibility of approximately 653.4 MWs.

The recent energy bill compromise resolved the disputed Holcomb 2 coal-fired generator, and now makes its construction appear to be near certainty (the Kansas Department of Health and the Environment (KDHE) recently granted environmental permits for the plant’s construction). As part of the compromise, Sunflower Electric (whose owners are the same as MKEC’s) is required to meet a stricter renewable generation requirement. In furtherance of this requirement, MKEC is funding a new plant being constructed by Abengoa bioenergy, a biofuels subsidiary of the Spanish multinational corporation Abengoa. This new plant will be a biomass-fired steam generator fueled by local crop residue, with waste heat being recycled in a cogeneration manner for use in an adjacent cellulosic ethanol facility.

		System Peak				12% Reserve Margin	System Planning Responsibility	System Capacity		
		Retail Load	Wholesale Load	Total System Peak Load	Accredited Generation			Net Contracts	Total System Capacity	
<b>Historical</b>	2005	480	0	<b>480</b>	65	<b>545</b>		0	0	<b>0</b>
	2006	519	0	<b>519</b>	71	<b>590</b>		0	0	<b>0</b>
	2007	545	0	<b>545</b>	74	<b>619</b>		395	125	<b>520</b>
	2008	578	0	<b>578</b>	79	<b>657</b>		395	130	<b>525</b>
	2009	575	0	<b>575</b>	78	<b>653</b>		389	129	<b>517</b>
<b>Projected</b>	2010	580	0	<b>580</b>	79	<b>659</b>		508	182	<b>690</b>
	2011	582	0	<b>582</b>	79	<b>661</b>		508	182	<b>690</b>
	2012	585	0	<b>585</b>	80	<b>665</b>		508	182	<b>690</b>
	2013	604	0	<b>604</b>	82	<b>686</b>		606	181	<b>787</b>
	2014	607	0	<b>607</b>	83	<b>690</b>		606	181	<b>787</b>
	2015	609	0	<b>609</b>	83	<b>692</b>		606	181	<b>786</b>
	2016	611	0	<b>611</b>	83	<b>694</b>		691	221	<b>911</b>
	2017	613	0	<b>613</b>	84	<b>696</b>		691	221	<b>911</b>
	2018	616	0	<b>616</b>	84	<b>700</b>		691	220	<b>911</b>
	2019	617	0	<b>617</b>	84	<b>701</b>		691	47	<b>738</b>
	2020	619	0	<b>619</b>	84	<b>703</b>		691	47	<b>738</b>
	2021	621	0	<b>621</b>	85	<b>705</b>		691	47	<b>738</b>
	2022	623	0	<b>623</b>	85	<b>708</b>		691	47	<b>738</b>
	2023	625	0	<b>625</b>	85	<b>710</b>		691	47	<b>738</b>
	2024	627	0	<b>627</b>	86	<b>713</b>		691	47	<b>738</b>
2025	629	0	<b>629</b>	86	<b>715</b>		691	47	<b>738</b>	
2026	631	0	<b>631</b>	86	<b>718</b>		691	47	<b>738</b>	
2027	634	0	<b>634</b>	86	<b>720</b>		691	47	<b>738</b>	
2028	636	0	<b>636</b>	87	<b>723</b>		691	47	<b>738</b>	
2029	638	0	<b>638</b>	87	<b>725</b>		691	47	<b>738</b>	

## Forecasted Demand and System Capacity, Mid-Kansas Electric Company, LLC 2010 - 2029



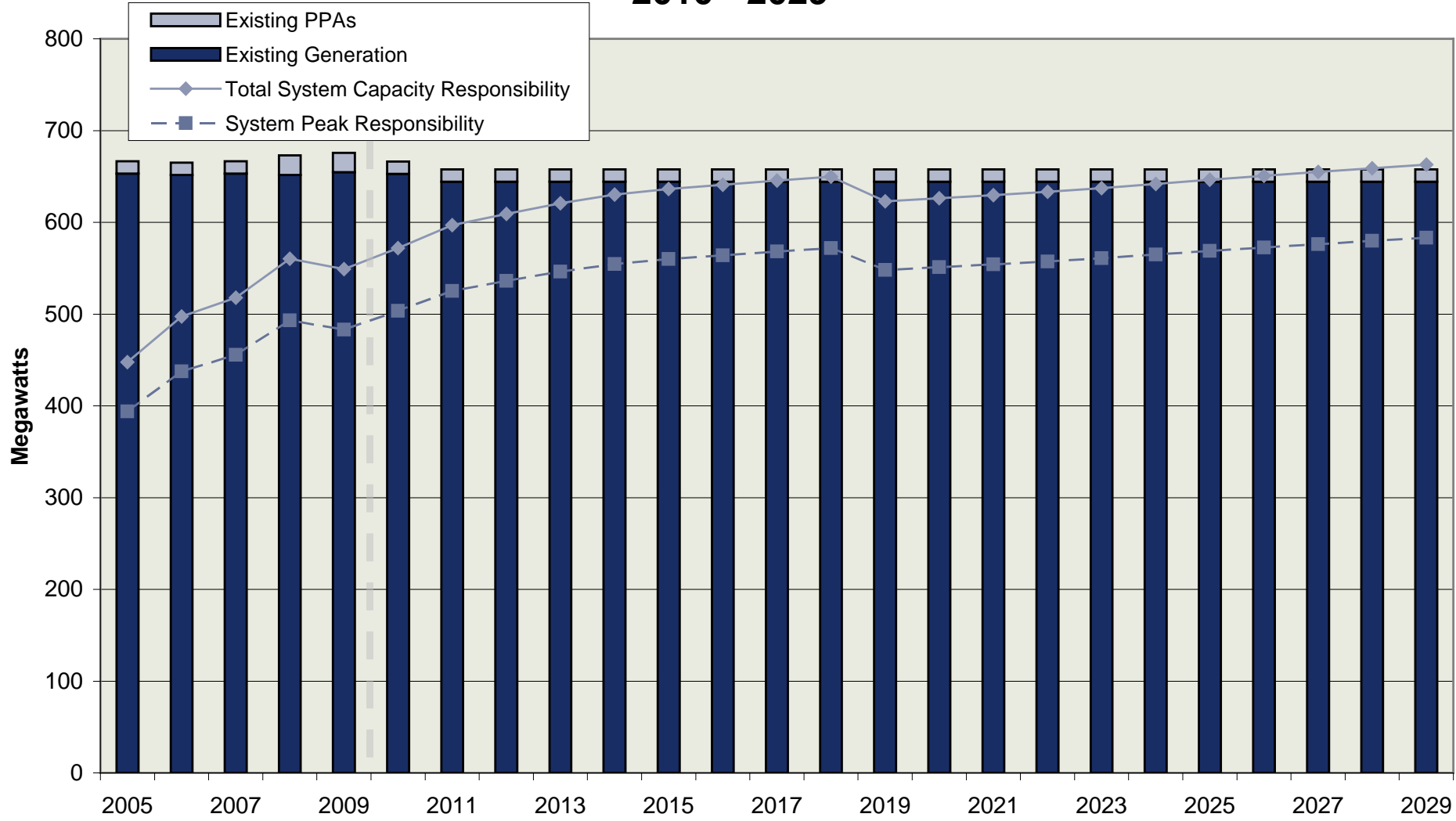
2010 Generation Survey  
 Updated September 1, 2010

**Appendix A-7—Sunflower Electric Power Company**

Sunflower Electric Power Company (Sunflower) is a recently deregulated generation and transmission cooperative utility owned by the same members comprising Mid-Kansas Electric Company (MKEC) (Lane-Scott, Prairie Land, Southern Pioneer, Victory, Western, and Wheatland). Although owned and operated by the same owners/operators of MKEC, the two entities have distinct generation and transmission assets, as well as distinct customers. Sunflower currently has a total system capacity responsibility of approximately 549 MWs.

		System Peak				System Planning Responsibility	System Capacity		
		Retail Load	Wholesale Load	Total System Peak Load	12% Reserve Margin		Accredited Generation	Net Contracts	Total System Capacity
Historical	2005	394	0	<b>394</b>	54	<b>448</b>	653	13	<b>667</b>
	2006	438	0	<b>438</b>	60	<b>497</b>	652	13	<b>665</b>
	2007	456	0	<b>456</b>	62	<b>518</b>	653	13	<b>666</b>
	2008	493	0	<b>493</b>	67	<b>560</b>	652	21	<b>673</b>
	2009	483	0	<b>483</b>	66	<b>549</b>	655	21	<b>676</b>
Projected	2010	503	0	<b>503</b>	69	<b>572</b>	653	13	<b>666</b>
	2011	525	0	<b>525</b>	72	<b>597</b>	644	13	<b>658</b>
	2012	536	0	<b>536</b>	73	<b>609</b>	644	13	<b>658</b>
	2013	546	0	<b>546</b>	74	<b>621</b>	644	13	<b>658</b>
	2014	555	0	<b>555</b>	76	<b>630</b>	644	13	<b>658</b>
	2015	560	0	<b>560</b>	76	<b>636</b>	644	13	<b>658</b>
	2016	564	0	<b>564</b>	77	<b>641</b>	644	13	<b>658</b>
	2017	568	0	<b>568</b>	77	<b>646</b>	644	13	<b>658</b>
	2018	572	0	<b>572</b>	78	<b>650</b>	644	13	<b>658</b>
	2019	548	0	<b>548</b>	75	<b>623</b>	644	13	<b>658</b>
	2020	551	0	<b>551</b>	75	<b>626</b>	644	13	<b>658</b>
	2021	554	0	<b>554</b>	76	<b>630</b>	644	13	<b>658</b>
	2022	557	0	<b>557</b>	76	<b>633</b>	644	13	<b>658</b>
	2023	561	0	<b>561</b>	76	<b>637</b>	644	13	<b>658</b>
	2024	565	0	<b>565</b>	77	<b>642</b>	644	13	<b>658</b>
2025	569	0	<b>569</b>	78	<b>646</b>	644	13	<b>658</b>	
2026	573	0	<b>573</b>	78	<b>651</b>	644	13	<b>658</b>	
2027	576	0	<b>576</b>	79	<b>655</b>	644	13	<b>658</b>	
2028	580	0	<b>580</b>	79	<b>659</b>	644	13	<b>658</b>	
2029	583	0	<b>583</b>	80	<b>663</b>	644	13	<b>658</b>	

## Forecasted Demand and System Capacity, Sunflower Electric Power Cooperative, LLC 2010 - 2029



2010 Generation Survey  
 Updated September 1, 2010

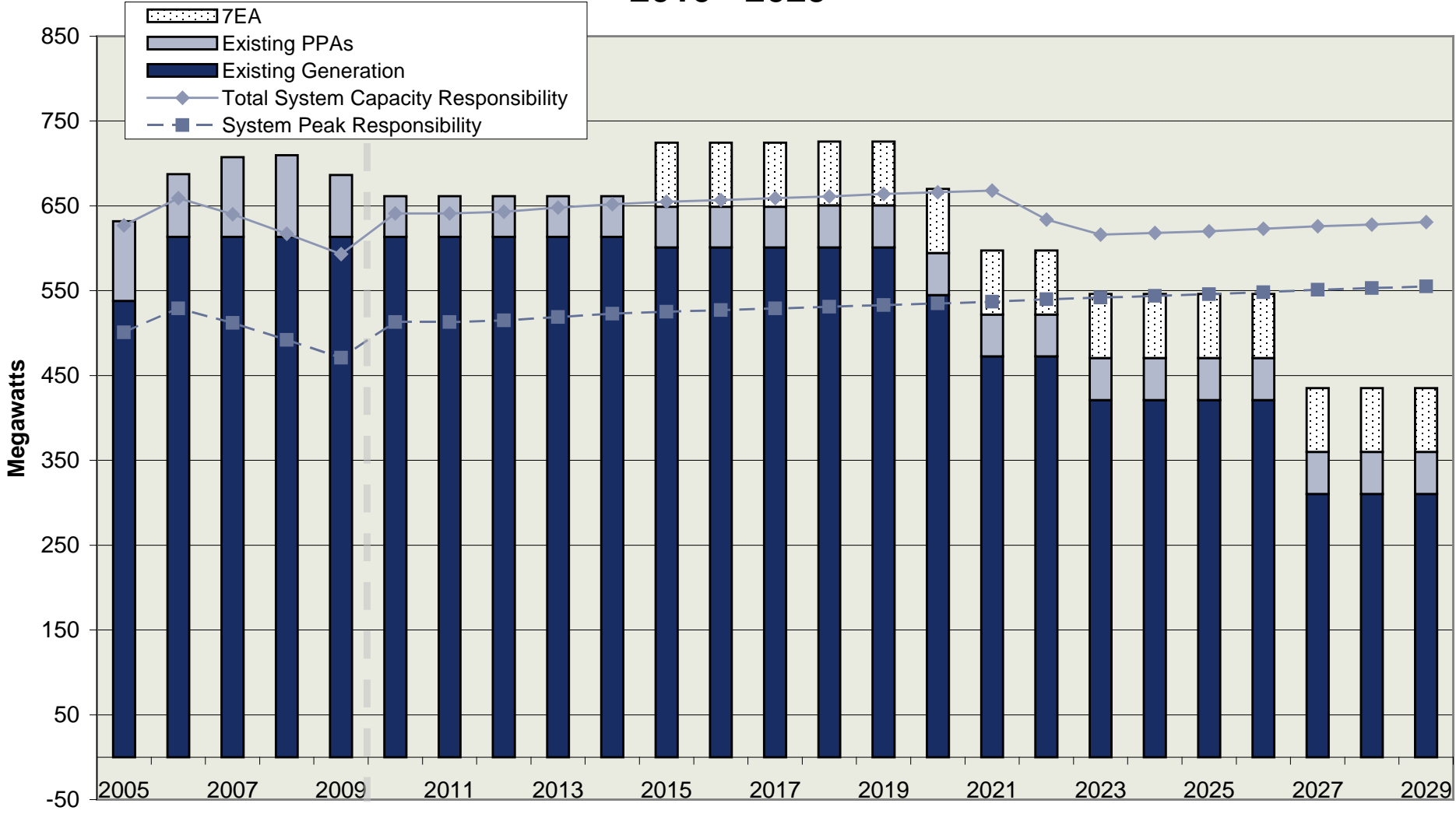
**Appendix A-8—Kansas City Board of Public Utilities (KC-BPU)**

The Kansas City Board of Public Utilities (KC-BPU) is a deregulated municipal utility serving water customers in the Kansas City, Kansas Metropolitan areas in Wyandotte and Johnson Counties, and electric customers in the whole of Wyandotte County. In all, KC-BPU provides electric service to approximately 65,000 customers.

KC-BPU currently has enough generating capacity to satisfy its system needs through 2015, with the addition of a new 80MW natural gas combustion turbine at the utility’s existing Nearman Creek facility, KC-BPU will continue to meet its system needs through 2020. After 2020 KC-BPU contends with the problems of an aging generation fleet, with a substantial portion of the utility’s existing generation capacity scheduled to be retired within the 2020 decade. This creates a near 200MW capacity deficit by 2029.

		System Peak				System Planning Responsibility	System Capacity		
		Retail Load	Wholesale Load	Total System Peak Load	12% Reserve Margin		Accredited Generation	Net Contracts	Total System Capacity
Historical	2005	501	0	<b>501</b>	68	<b>569</b>	538	36	<b>574</b>
	2006	529	0	<b>529</b>	72	<b>601</b>	613	16	<b>629</b>
	2007	512	0	<b>512</b>	70	<b>582</b>	613	36	<b>649</b>
	2008	492	0	<b>492</b>	67	<b>559</b>	613	39	<b>652</b>
	2009	471	0	<b>471</b>	64	<b>535</b>	613	15	<b>628</b>
Projected	2010	513	0	<b>513</b>	70	<b>583</b>	613	-10	<b>603</b>
	2011	513	0	<b>513</b>	70	<b>583</b>	613	-10	<b>603</b>
	2012	515	0	<b>515</b>	70	<b>585</b>	613	-10	<b>603</b>
	2013	519	0	<b>519</b>	71	<b>590</b>	613	-10	<b>603</b>
	2014	523	0	<b>523</b>	71	<b>594</b>	613	-10	<b>603</b>
	2015	525	0	<b>525</b>	72	<b>597</b>	677	-10	<b>667</b>
	2016	527	0	<b>527</b>	72	<b>599</b>	677	-10	<b>667</b>
	2017	529	0	<b>529</b>	72	<b>601</b>	677	-10	<b>667</b>
	2018	531	0	<b>531</b>	72	<b>603</b>	677	-9	<b>668</b>
	2019	533	0	<b>533</b>	73	<b>606</b>	677	-9	<b>668</b>
	2020	535	0	<b>535</b>	73	<b>608</b>	621	-9	<b>612</b>
	2021	537	0	<b>537</b>	73	<b>610</b>	548	-9	<b>540</b>
	2022	540	0	<b>540</b>	74	<b>614</b>	548	30	<b>578</b>
	2023	542	0	<b>542</b>	74	<b>616</b>	497	50	<b>546</b>
	2024	544	0	<b>544</b>	74	<b>618</b>	497	50	<b>546</b>
2025	546	0	<b>546</b>	74	<b>620</b>	497	50	<b>546</b>	
2026	548	0	<b>548</b>	75	<b>623</b>	497	50	<b>546</b>	
2027	551	0	<b>551</b>	75	<b>626</b>	386	50	<b>435</b>	
2028	553	0	<b>553</b>	75	<b>628</b>	386	50	<b>435</b>	
2029	555	0	<b>555</b>	76	<b>631</b>	386	50	<b>435</b>	

## Forecasted Demand and System Capacity, Kansas City Board of Public Utilities 2010 - 2029



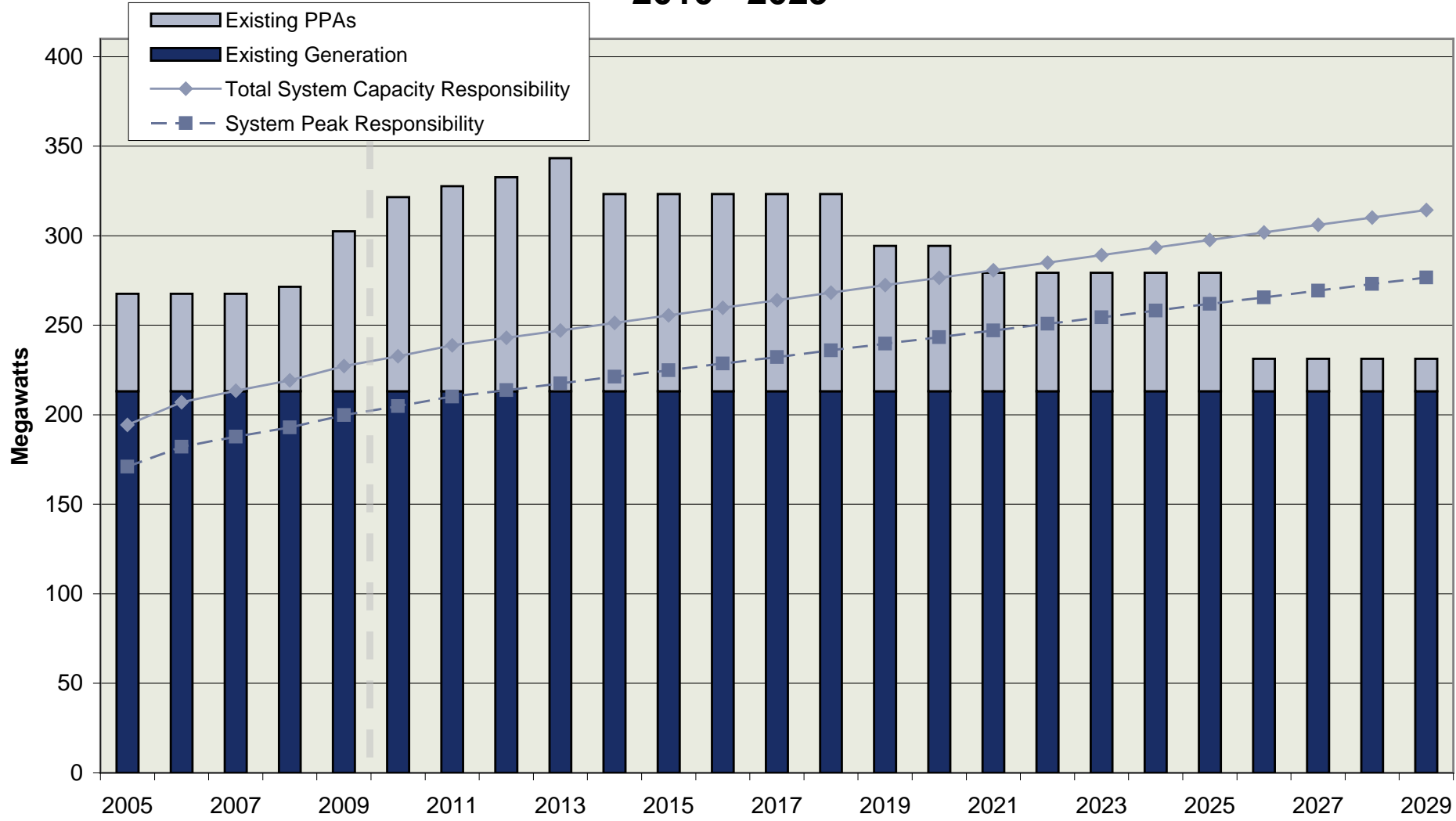
2010 Generation Survey  
 Updated September 1, 2010

**Appendix A-9—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 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. KMEA has 70 member municipal electric utilities, and has a current total system capacity responsibility across all member utilities of approximately 125.6 MWs.

		System Peak			12% Reserve Margin	System Planning Responsibility		System Capacity		
		Retail Load	Wholesale Load	Total System Peak Load				Accredited Generation	Net Contracts	Total System Capacity
Historical	2005	171	0	<b>171</b>	23	<b>194</b>		213	54	<b>268</b>
	2006	182	0	<b>182</b>	25	<b>207</b>		213	54	<b>268</b>
	2007	188	0	<b>188</b>	26	<b>213</b>		213	54	<b>268</b>
	2008	193	0	<b>193</b>	26	<b>219</b>		213	58	<b>272</b>
	2009	200	0	<b>200</b>	27	<b>227</b>		213	89	<b>303</b>
Projected	2010	205	0	<b>205</b>	28	<b>233</b>		213	109	<b>322</b>
	2011	210	0	<b>210</b>	29	<b>239</b>		213	115	<b>328</b>
	2012	214	0	<b>214</b>	29	<b>243</b>		213	120	<b>333</b>
	2013	218	0	<b>218</b>	30	<b>247</b>		213	130	<b>343</b>
	2014	221	0	<b>221</b>	30	<b>251</b>		213	110	<b>323</b>
	2015	225	0	<b>225</b>	31	<b>256</b>		213	110	<b>323</b>
	2016	229	0	<b>229</b>	31	<b>260</b>		213	110	<b>323</b>
	2017	232	0	<b>232</b>	32	<b>264</b>		213	110	<b>323</b>
	2018	236	0	<b>236</b>	32	<b>268</b>		213	110	<b>323</b>
	2019	240	0	<b>240</b>	33	<b>272</b>		213	81	<b>294</b>
	2020	243	0	<b>243</b>	33	<b>277</b>		213	81	<b>294</b>
	2021	247	0	<b>247</b>	34	<b>281</b>		213	66	<b>279</b>
	2022	251	0	<b>251</b>	34	<b>285</b>		213	66	<b>279</b>
	2023	255	0	<b>255</b>	35	<b>289</b>		213	66	<b>279</b>
	2024	258	0	<b>258</b>	35	<b>293</b>		213	66	<b>279</b>
2025	262	0	<b>262</b>	36	<b>298</b>		213	66	<b>279</b>	
2026	266	0	<b>266</b>	36	<b>302</b>		213	18	<b>231</b>	
2027	269	0	<b>269</b>	37	<b>306</b>		213	18	<b>231</b>	
2028	273	0	<b>273</b>	37	<b>310</b>		213	18	<b>231</b>	
2029	277	0	<b>277</b>	38	<b>314</b>		213	18	<b>231</b>	

## Forecasted Demand and System Capacity, Kansas Municipal Energy Agency 2010 - 2029



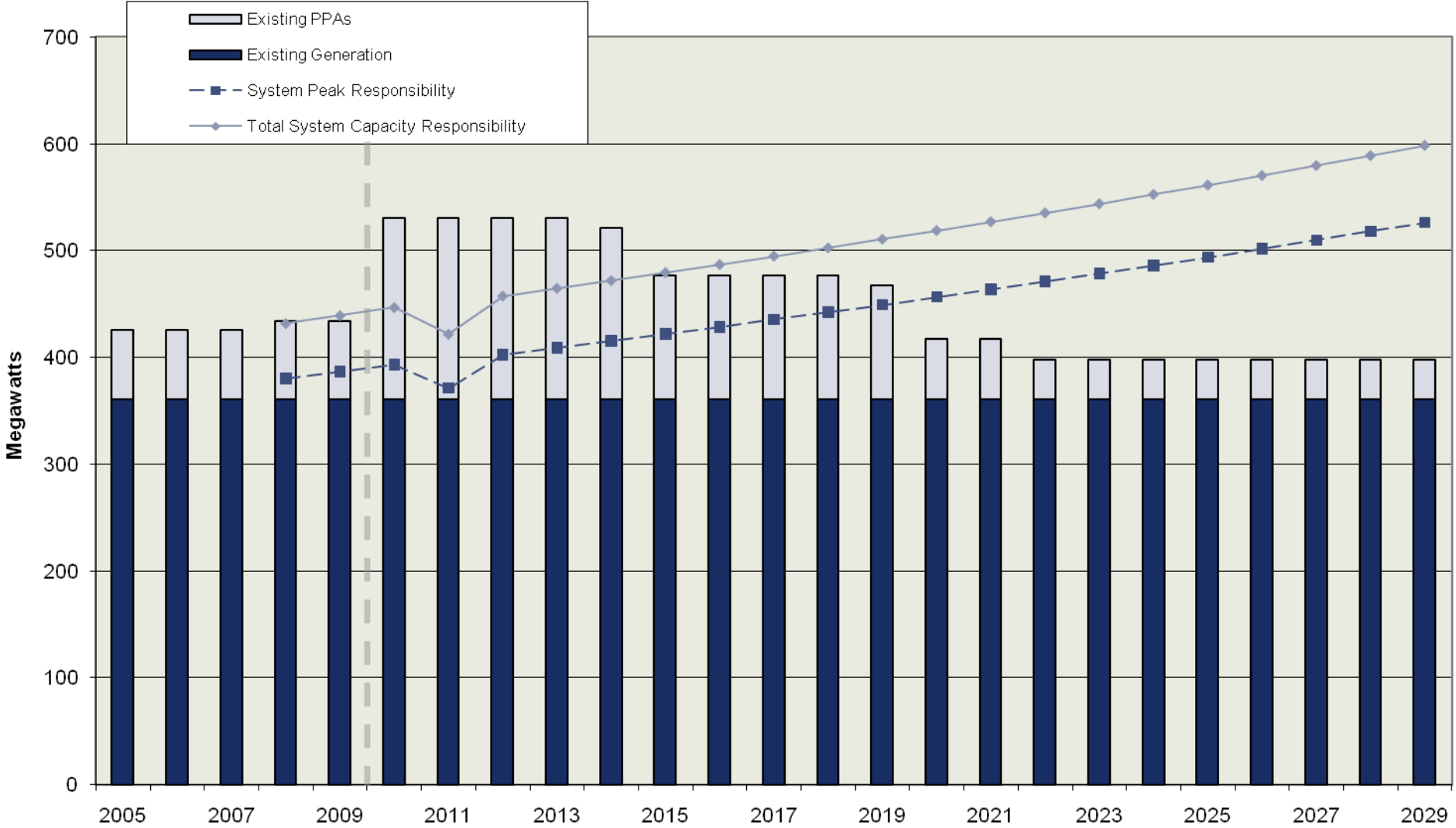
2010 Generation Survey  
 Updated September 1, 2010

**Appendix A-10—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 is comprised of 41 municipal electric utilities and is responsible for a total system capacity of approximately 439.8 MWs.

		System Peak				System Planning Responsibility	System Capacity		
		Retail Load	Wholesale Load	Total System Peak Load	12% Reserve Margin		Accredited Generation	Net Contracts	Total System Capacity
Historical	2005	NA	NA	NA	NA	NA	360	64	425
	2006	NA	NA	NA	NA	NA	360	64	425
	2007	NA	NA	NA	NA	NA	360	64	425
	2008	380	0	380	52	432	360	73	434
	2009	387	0	387	53	439	360	73	434
Projected	2010	393	0	393	54	447	360	170	530
	2011	371	0	371	51	422	360	170	530
	2012	403	0	403	55	458	360	170	530
	2013	409	0	409	56	465	360	170	530
	2014	415	0	415	57	472	360	161	521
	2015	422	0	422	58	480	360	116	476
	2016	429	0	429	58	487	360	116	476
	2017	435	0	435	59	495	360	116	476
	2018	442	0	442	60	503	360	116	476
	2019	449	0	449	61	511	360	106	467
	2020	457	0	457	62	519	360	56	417
	2021	464	0	464	63	527	360	56	417
	2022	471	0	471	64	535	360	37	397
	2023	479	0	479	65	544	360	37	397
	2024	486	0	486	66	552	360	37	397
2025	494	0	494	67	561	360	37	397	
2026	502	0	502	68	570	360	37	397	
2027	510	0	510	70	579	360	37	397	
2028	518	0	518	71	589	360	37	397	
2029	526	0	526	72	598	360	37	397	

### Forecasted Demand and System Capacity, Kansas Power Pool 2010 - 2029



2010 Generation Survey  
 Updated December 31, 2010

**Appendix B—Renewable Capacity Requirements**

**Appendix B-1—Empire District Electric Company**

Empire District Electric Company (Empire) currently has two long-term power purchase agreements with two wind farms operating in Kansas, Meridian Way in Cloud County and Elk River in Barber County. Empire also operates a small hydro-electric dam in Missouri called Ozark Beach. A very small portion of Empire’s overall service territory resides in Kansas, meaning the utility’s required renewable capacity under the Renewable Energy Standard is small relative to the utility’s existing renewable capacity. This makes it unlikely the utility will ever not be in compliance with K.S.A. 66-1258, as clearly shown below.

	Renewable Capacity Required under Renewable Energy Standard (K.S.A. 66-1258)		Renewable Capacity			Total Renewable Capacity	Additional Required Renewable Capacity
	Renewable Energy Standard	Renewable Capacity Needed for Compliance	Cloud County (Meridian Way) Wind Farm	Elk River Wind Facility	Ozark Beach		
<b>2010</b>	--	--	105	150	16	<b>286.5</b>	--
<b>2011</b>	<b>10%</b>	<b>6</b>	105	150	16	<b>286.5</b>	0
<b>2012</b>		<b>7</b>	105	150	16	<b>286.5</b>	0
<b>2013</b>		<b>6</b>	105	150	16	<b>286.5</b>	0
<b>2014</b>		<b>7</b>	105	150	16	<b>286.5</b>	0
<b>2015</b>		<b>7</b>	105	150	16	<b>286.5</b>	0
<b>2016</b>	<b>15%</b>	<b>10</b>	105	150	16	<b>268.5</b>	0
<b>2017</b>		<b>10</b>	105	150	16	<b>268.5</b>	0
<b>2018</b>		<b>11</b>	105	150	16	<b>268.5</b>	0
<b>2019</b>		<b>11</b>	105	150	16	<b>286.5</b>	0
<b>2020</b>	<b>20%</b>	<b>15</b>	105	150	16	<b>286.5</b>	0
<b>2021</b>		<b>15</b>	105	150	16	<b>286.5</b>	0
<b>2022</b>		<b>15</b>	105	150	16	<b>286.5</b>	0
<b>2023</b>		<b>16</b>	105	150	16	<b>286.5</b>	0
<b>2024</b>		<b>16</b>	105	150	16	<b>286.5</b>	0
<b>2025</b>		<b>16</b>	105	150	16	<b>286.5</b>	0
<b>2026</b>		<b>17</b>	105	150	16	<b>286.5</b>	0
<b>2027</b>		<b>17</b>	105	150	16	<b>286.5</b>	0
<b>2028</b>		<b>17</b>	105	150	16	<b>286.5</b>	0
<b>2029</b>		<b>18</b>	105	150	16	<b>286.5</b>	0

**Appendix B-2—Kansas City Power & Light (KCP&L)**

KCP&L currently owns two wind farms in the state of Kansas, Gray County and Spearville, the latter of which the utility is currently in the process of adding an additional 100MW expansion to. With the expansion of Spearville, KCP&L has enough renewable capacity to satisfy the utility’s requirement under the Renewable Energy Standard until 2016, when the Standard’s 15% requirement leaves the utility with a minor renewable capacity deficit. This deficit increases to 100 to 150MWs with the Standards 20% requirement after 2020.

	Renewable Capacity Required under Renewable Energy Standard (K.S.A. 66-1258)		Renewable Capacity			Total Renewable Capacity	Additional Required Renewable Capacity
	Renewable Energy Standard	Renewable Capacity Needed for Compliance	Gray County Wind Farm	Spearville Wind Energy Facility Phase I	Spearville Wind Energy Facility Phase II		
2010	--	--	60	100.5		176.7	--
2011	10%	166	60	100.5	48	229.4	0
2012		173	60	100.5	48	229.4	0
2013		180	60	100.5	48	229.4	0
2014		184	60	100.5	48	229.4	0
2015		188	60	100.5	48	229.4	0
2016	15%	288	60	100.5	48	229.4	58.6
2017		293	60	100.5	48	229.4	63.6
2018		297	60	100.5	48	229.4	67.7
2019		301	60	100.5	48	229.4	71.7
2020	20%	407	60	100.5	48	229.4	177.6
2021		413	60	100.5	48	229.4	183.6
2022		418	60	100.5	48	229.4	188.6
2023		423	60	100.5	48	229.4	193.6
2024		428	60	100.5	48	229.4	198.6
2025		433	60	100.5	48	229.4	203.6
2026		437	60	100.5	48	229.4	207.6
2027		441	60	100.5	48	229.4	211.6
2028		445	60	100.5	48	229.4	215.6
2029		449	60	100.5	48	229.4	219.6

**Appendix B-3—Westar Energy**

Westar Energy (Westar) currently owns Central Plains wind farm, and 50% of Flat Ridge wind farm in Wichita and Barber counties, respectively. Westar additionally has long-term power purchase agreements with the remainder of the Flat Ridge not own by the utility and Meridian Way in Cloud County (Meridian Way is reported on EIA form 923 as Cloud County). The utility also recently acquired a long-term power purchase agreement with Waste Management to receive electricity from that company’s Rolling Meadows landfill-gas generation facility just north of Topeka in Shawnee County. Finally, Westar recently announced the selected recipients of a 2010 request for proposals for new renewable energy generation. These two recipients, Post Rock and Ironwood—Ellsworth and Ford counties, respectively—are slated to be in service in late 2012.<sup>1</sup>

	Renewable Capacity Required under Renewable Energy Standard (K.S.A. 66-1258)		Renewable Capacity						Total Renewable Capacity	Additional Required Renewable Capacity
	Renewable Energy Standard	Renewable Capacity Needed for Compliance	Cloud County Meridian Way) Wind Farm	Flat Ridge Wind Farm	Central Plains Wind Farm	Rolling Meadows	Post Rock Wind Farm	Ironwood Wind Power Project		
2010	--	--	96	100	99	8	--	--	333.3	--
2011	10%	464	96	100	99	8	--	--	333.3	130.7 <sup>2</sup>
2012		475	96	100	99	8	--	--	333.3	141.7 <sup>v</sup>
2013		498	96	100	99	8	201	168	739.2	0
2014		505	96	100	99	8	201	168	739.2	0
2015		512	96	100	99	8	201	168	739.2	0
2016	15%	774	96	100	99	8	201	168	739.2	34.8
2017		780	96	100	99	8	201	168	739.2	40.8
2018		785	96	100	99	8	201	168	739.2	45.8
2019		791	96	100	99	8	201	168	739.2	51.8
2020	20%	1061	96	100	99	8	201	168	739.2	321.8
2021		1073	96	100	99	8	201	168	739.2	333.8
2022		1088	96	100	99	8	201	168	739.2	348.8
2023		1109	96	100	99	8	201	168	739.2	369.8
2024		1129	96	100	99	8	201	168	739.2	389.8
2025		1150	96	100	99	8	201	168	739.2	410.8
2026		1171	96	100	99	8	201	168	739.2	431.8
2027		1193	96	100	99	8	201	168	739.2	453.8
2028		1215	96	100	99	8	201	168	739.2	475.8
2029		1238	96	100	99	8	201	168	739.2	498.8

<sup>1</sup> Westar’s predetermination docket for wind 2013 wind acquisitions, Docket 11-WSEE-377-PRE, is still active, thus information regarding Post Rock and Ironwood wind farms is preliminary.

<sup>2,v</sup> In an active Docket before the Commission, Docket 11-WSEE-438-MIS, Westar Energy indicates it intends to fulfill its 2011 and 2012 RES requirements through the use of Renewable Energy Credits (RECs). The Commission has yet to give guidance to Westar Energy as to whether or not this would be allowable.

**Appendix B-4—Kansas Electric Power Cooperatives (KEPCo)**

KEPCo, being a federally defined rural non-profit utility, has received discounted power allocations from federally managed hydro-electric power marketers since the utility’s inception. In particular, KEPCo currently has contracts to receive 100MW of capacity from the Southwestern Power Administration (SWPA) through 2016 and 14MW of capacity from the Western Area Power Administration (WAPA) through 2024. SWPA is a series of 24 U.S. Army Corps of Engineer hydro-electric dams throughout the States of Missouri, Oklahoma, Arkansas, and Texas. WAPA is likewise a series 57 hydro-electric dams operated by the Bureau of Reclamation, U.S. Army Corps of Engineers, and International Boundary and Water Commission in the states of Colorado and New Mexico. Both of KEPCo’s current power purchase contracts with WAPA and SWPA are expected to be renewed, and satisfy KEPCo’s member’s requirement under the Renewable Energy Standard through at least 2029.

	Renewable Capacity Required under Renewable Energy Standard (K.S.A. 66-1258)		Renewable Capacity		Total Renewable Capacity	Additional Required Renewable Capacity
	Renewable Energy Standard	Renewable Capacity Needed for Compliance	Western Area Power Administration (WAPA)	Southwestern Power Administration (SWPA)		
2010	--	--	14	100	114	--
2011	10%	42	14	100	114	0
2012		43	14	100	114	0
2013		45	14	100	114	0
2014		46	14	100	114	0
2015		47	14	100	114	0
2016	15%	72	14	100	114	0
2017		73	14	100	114	0
2018		74	14	100	114	0
2019		76	14	100	114	0
2020	20%	103	14	100	114	0
2021		105	14	100	114	0
2022		105	14	100	114	0
2023		105	14	100	114	0
2024		105	14	100	114	0
2025		107	14	100	114	0
2026		109	14	100	114	0
2027		111	14	100	114	0
2028		113	14	100	114	0
2029		115	14	100	114	1

**Appendix B-5—Midwest Energy**

Midwest Energy currently has long-term power purchase agreement for 49.2 MW of capacity from the 250MW Smoky Hills Wind Farm in Lincoln and Ellsworth counties—25.2MW designated from Phase 1 of the wind farm, and 24MW designated from phase 2. Capacity from Smoky Hills should satisfy Midwest Energy’s requirement under the Renewable Energy Standard through 2020, when the standard’s 20% requirement will require the utility to purchase or build an additional 10 to 15MW of renewable capacity.

	Renewable Capacity Required under Renewable Energy Standard (K.S.A. 66-1258)		Renewable Capacity		Total Renewable Capacity	Additional Required Renewable Capacity
	Renewable Energy Standard	Renewable Capacity Needed for Compliance	Smoky Hills Phase 1	Smoky Hills Phase 2		
2010	--	--	25.2	24	54.1	--
2011	10%	30	25.2	24	54.1	0
2012		30	25.2	24	54.1	0
2013		31	25.2	24	54.1	0
2014		32	25.2	24	54.1	0
2015		32	25.2	24	54.1	0
2016	15%	48	25.2	24	54.1	0
2017		48	25.2	24	54.1	0
2018		49	25.2	24	54.1	0
2019		49	25.2	24	54.1	0
2020	20%	65	25.2	24	54.1	10.9
2021		66	25.2	24	54.1	11.9
2022		66	25.2	24	54.1	11.9
2023		66	25.2	24	54.1	11.9
2024		66	25.2	24	54.1	11.9
2025		67	25.2	24	54.1	12.9
2026		67	25.2	24	54.1	12.9
2027		67	25.2	24	54.1	12.9
2028		67	25.2	24	54.1	12.9
2029		68	25.2	24	54.1	13.9

**Appendix B-6—Mid-Kansas Electric Company (MKEC)**

MKEC currently has two long-term power purchase agreements with two wind farms operating in Kansas, Grey County and Smoky Hills located in Lincoln and Ellsworth (in particular phase 2 of Smoky Hills). Additionally, MKEC receives portions of federal hydro-electric allocations (Western Area Power Administration and Great River Dam Authority) through members of Kansas Municipal Energy Agency (KMEA) that MKEC has partial requirement contracts with. Finally, MKEC is funding a portion of a new plant being constructed by Abengoa bioenergy in () county. This new plant will be a biomass-fired steam generator fueled by local crop residue, with waste heat being recycled in a cogeneration manner for use in an adjacent cellulosic ethanol facility. With the addition of Abengoa, MKEC is expected to fulfill its requirement under the Renewable Energy Standard through the scope of this survey.

	Renewable Capacity Required under Renewable Energy Standard (K.S.A. 66-1258)		Renewable Capacity					Total Renewable Capacity	Additional Required Renewable Capacity
	Renewable Energy Standard	Renewable Capacity Needed for Compliance	Grey County Wind Farm	Smoky Hills Phase 2	Abengoa	KMEA – Western Area Power Administration (WAPA)	KMEA – Great River Dam Authority (GRDA)		
2010	--	--	50	24	--	10.61	18	110	--
2011	10%	58	50	24	--	10.86	18	110.3	0
2012		58	50	24	--	10.86	18	110.3	0
2013		58	50	24	98	9.4	18	216.6	0
2014		59	50	24	98	9.4	18	216.6	0
2015		61	50	24	98	9.31	18	216.5	0
2016	15%	91	50	24	98	9.31	18	216.5	0
2017		91	50	24	98	9.31	18	216.5	0
2018		92	50	24	98	8.63	18	215.8	0
2019		92	50	24	98	8.63	18	215.8	0
2020	20%	123	50	24	98	8.63	18	215.8	0
2021		123	50	24	98	8.63	18	215.8	0
2022		124	50	24	98	8.63	18	215.8	0
2023		124	50	24	98	8.63	18	215.8	0
2024		125	50	24	98	8.63	18	215.8	0
2025		125	50	24	98	8.63	18	215.8	0
2026		125	50	24	98	8.63	18	215.8	0
2027		126	50	24	98	8.63	18	215.8	0
2028		126	50	24	98	8.63	18	215.8	0
2029		127	50	24	98	8.63	18	215.8	0

**Appendix B-7—Sunflower Electric Power Company**

Sunflower Electric Power Company (Sunflower) currently has a long-term power purchase agreement to purchase 50.4MW of capacity from the Smoky Hills Wind Farm located in Lincoln and Ellsworth counties—in particular phase 1 of the wind farm. Additionally, being a federally defined non-profit rural utility, Sunflower receives 13.4MW from the federally managed hydro-electric power marketer Western Area Power Administration (WAPA)—WAPA being a series 57 hydro-electric dams operated by the Bureau of Reclamation, U.S. Army Corps of Engineers, and International Boundary and Water Commission in the states of Colorado and New Mexico. Sunflower’s current renewable capacity meets its requirement under the Renewable Energy Standard through 2016, when the utility has an approximate 15MW deficit to meet the Standard’s 15% requirement. This deficit increases to approximately 45MW after the Standard’s 20% requirement comes into effect in 2020.

	Renewable Capacity Required under Renewable Energy Standard (K.S.A. 66-1258)		Renewable Capacity			Total Renewable Capacity	Additional Required Renewable Capacity
	Renewable Energy Standard	Renewable Capacity Needed for Compliance	Smoky Hills Phase 1	Western Area Power Administration (WAPA)	Municipals – Western Area Power Administration (WAPA)		
<b>2010</b>	--	--	50.4	5.4	8	<b>68.8</b>	--
<b>2011</b>	<b>10%</b>	<b>49</b>	50.4	5.4	8	<b>68.8</b>	0
<b>2012</b>		<b>50</b>	50.4	5.4	8	<b>68.8</b>	0
<b>2013</b>		<b>52</b>	50.4	5.4	8	<b>68.8</b>	0
<b>2014</b>		<b>54</b>	50.4	5.4	8	<b>68.8</b>	0
<b>2015</b>		<b>55</b>	50.4	5.4	8	<b>68.8</b>	0
<b>2016</b>	<b>15%</b>	<b>83</b>	50.4	5.4	8	<b>68.8</b>	<b>14.2</b>
<b>2017</b>		<b>84</b>	50.4	5.4	8	<b>68.8</b>	<b>15.2</b>
<b>2018</b>		<b>85</b>	50.4	5.4	8	<b>68.8</b>	<b>16.2</b>
<b>2019</b>		<b>85</b>	50.4	5.4	8	<b>68.8</b>	<b>16.2</b>
<b>2020</b>	<b>20%</b>	<b>113</b>	50.4	5.4	8	<b>68.8</b>	<b>44.2</b>
<b>2021</b>		<b>111</b>	50.4	5.4	8	<b>68.8</b>	<b>42.2</b>
<b>2022</b>		<b>110</b>	50.4	5.4	8	<b>68.8</b>	<b>41.2</b>
<b>2023</b>		<b>111</b>	50.4	5.4	8	<b>68.8</b>	<b>42.2</b>
<b>2024</b>		<b>111</b>	50.4	5.4	8	<b>68.8</b>	<b>42.2</b>
<b>2025</b>		<b>112</b>	50.4	5.4	8	<b>68.8</b>	<b>43.2</b>
<b>2026</b>		<b>113</b>	50.4	5.4	8	<b>68.8</b>	<b>44.2</b>
<b>2027</b>		<b>114</b>	50.4	5.4	8	<b>68.8</b>	<b>45.2</b>
<b>2028</b>		<b>115</b>	50.4	5.4	8	<b>68.8</b>	<b>46.2</b>
<b>2029</b>		<b>115</b>	50.4	5.4	8	<b>68.8</b>	<b>46.2</b>

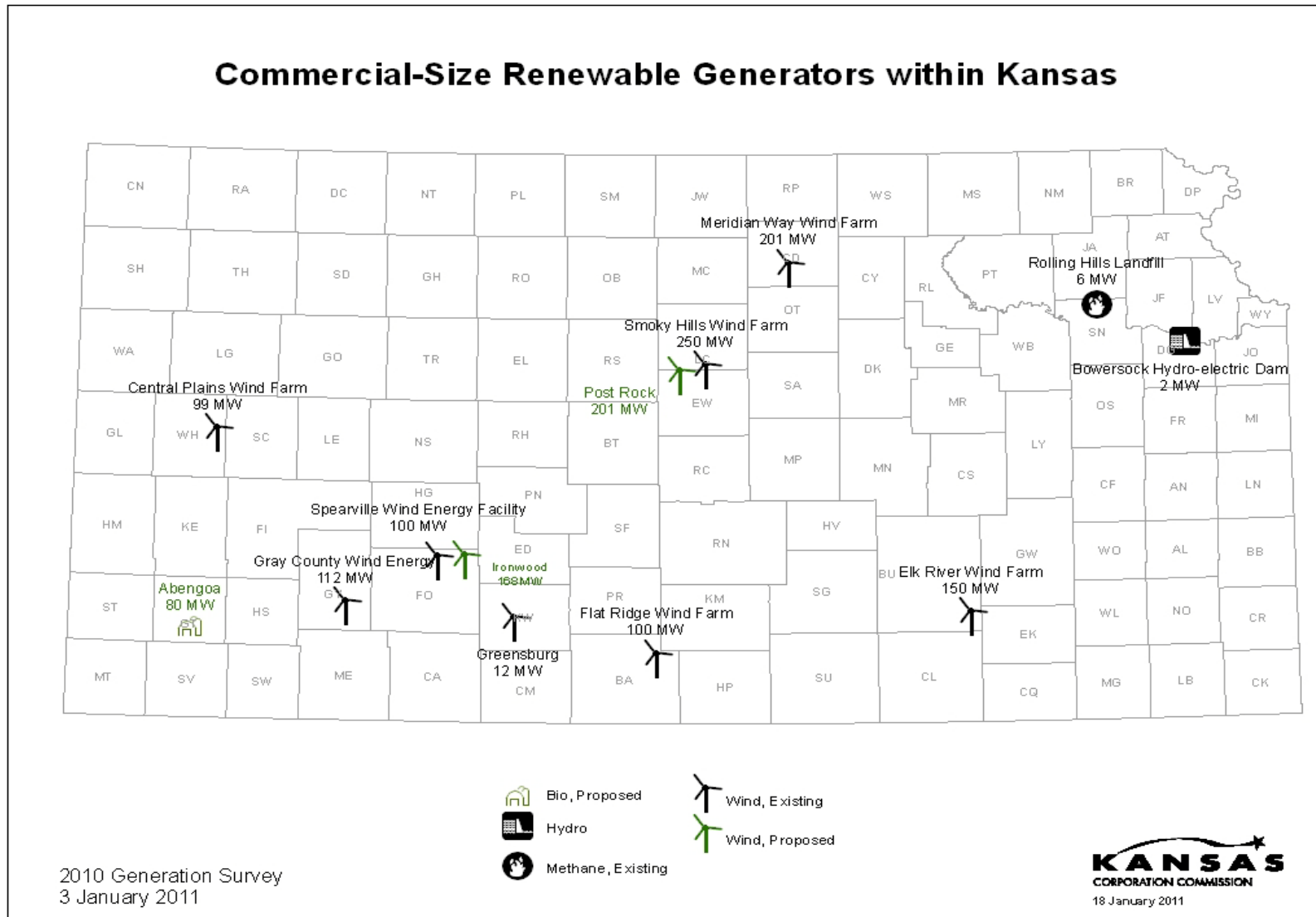
**Appendix B-8—Kansas City Board of Public Utilities (KC-BPU)**

KC-BPU is a municipal utility not statutorily subject to the State’s Renewable Energy Standard outlined in K.S.A. 66-1258. However, the utility participated in the KCC’s roundtable discussions concerning KCC administrative regulations governing the Renewable Energy Standard’s (RES) implementation, and has stated that it will voluntarily comply with the State’s RES.

KC-BPU currently has long-term power purchase agreements with the Smoky Hills wind farm in Lincoln and Ellsworth counties (in particular phase 1 of the wind farm), as well as the federally managed hydro-electric power marketers Southwestern Power Authority (SWPA) and Western Area Power Authority (WAPA). KC-BPU’s current renewable capacity meets the State’s RES through 2016, when the utility is estimated to have an approximate 7MW deficit to meet the Standard’s 15% requirement. This deficit grows to approximately 35 to 40MW after the Standard’s 20% requirement comes into effect in 2020.

	Renewable Capacity Required under Renewable Energy Standard (K.S.A. 66-1258)		Renewable Capacity			Total Renewable Capacity	Additional Required Renewable Capacity
	Renewable Energy Standard	Renewable Capacity Needed for Compliance	Smoky Hills Phase 1	Southwestern Power Authority (SWPA)	Western Area Power Authority (WAPA)		
2010	--	--	25.2	39	5	71.7	--
2011	10%	49	25.2	39	5	71.7	0
2012		50	25.2	39	5	71.7	0
2013		51	25.2	39	5	71.7	0
2014		52	25.2	39	5	71.7	0
2015		52	25.2	39	5	71.7	0
2016	15%	78	25.2	39	5	71.7	6.3
2017		79	25.2	39	5	71.7	7.3
2018		79	25.2	39	5	71.7	7.3
2019		79	25.2	39	5	71.7	7.3
2020	20%	106	25.2	39	5	71.7	34.3
2021		107	25.2	39	5	71.7	35.3
2022		107	25.2	39	5	71.7	35.3
2023		107	25.2	39	5	71.7	35.3
2024		108	25.2	39	5	71.7	36.3
2025		108	25.2	39	5	71.7	36.3
2026		109	25.2	39	5	71.7	37.3
2027		109	25.2	39	5	71.7	37.3
2028		110	25.2	39	5	71.7	38.3
2029		110	25.2	39	5	71.7	38.3

## Appendix C—Renewable Energy Generation

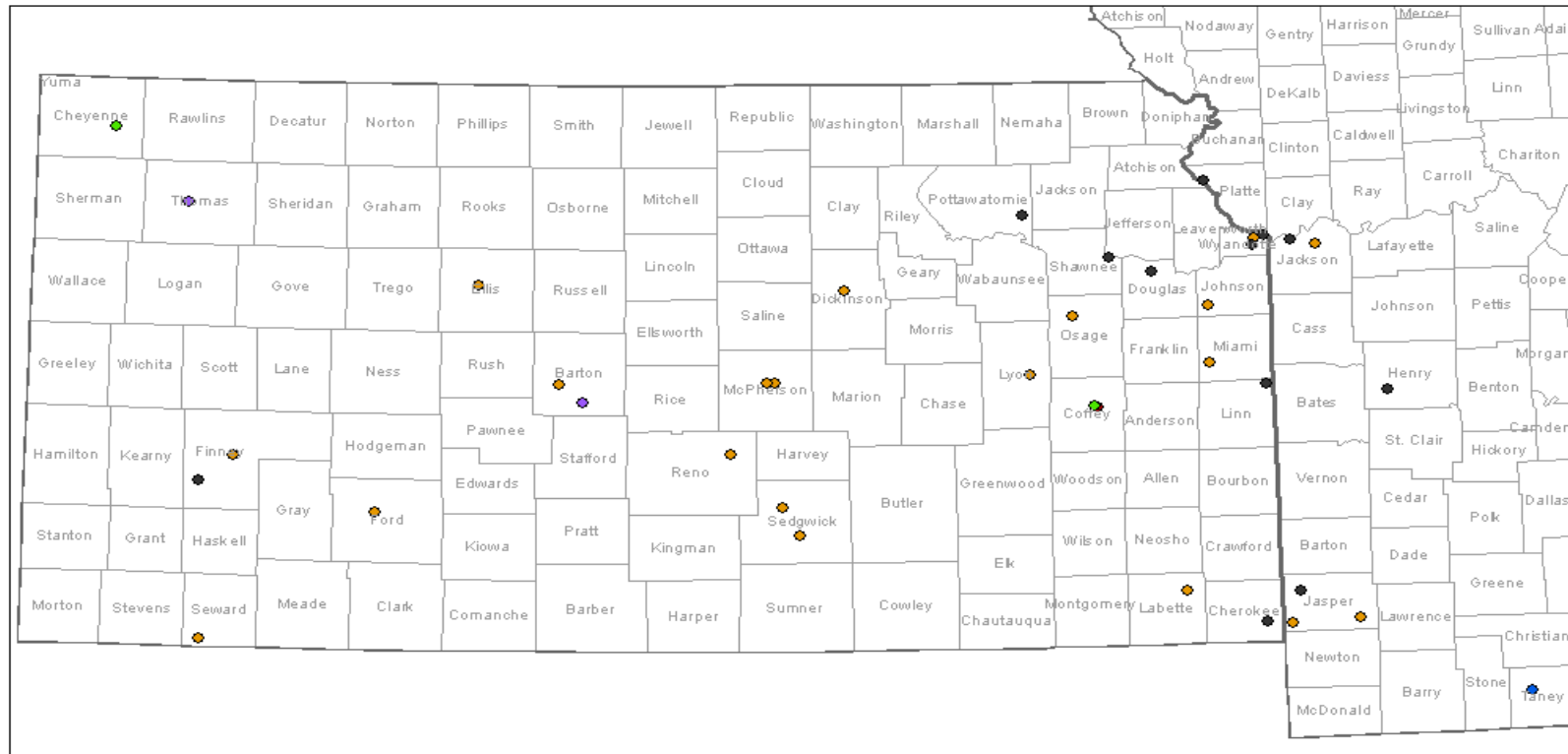


**Appendix C—List of Commercial-Size Renewable Generators within Kansas**

<b>Renewable Generator (Total Nameplate Capacity)</b>	<b>County</b>	<b>Developer</b>	<b>Initial Month and Year of Operation</b>	<b>Utility Purchaser</b>	<b>Size</b>
<b>Grey County Wind Farm (112.2 MW)</b>	Gray	NextEra (Florida Power & Light)	November 2001	Sunflower (allocated to Mid-Kansas Electric Company system)	50 MW
				Kansas City Power and Light	60 MW
				<i>Unallocated</i>	2.2 MW
<b>Elk River Wind Facility (150 MW)</b>	Butler	PPM Energy (Ibedrola)	December 2005	Empire District Electric	150 MW
<b>Spearville Wind Energy Facility Phase I (100.5 MW)</b>	Ford	enXco	August 2006	Kansas City Power and Light	100.5 MW
<b>Spearville Wind Energy Facility Phase II (48 MW)</b>	Ford	enXco	December 2010	Kansas City Power and Light	48 MW
<b>Smoky Hills Phase 1 (100.8 MW)</b>	Lincoln and Ellsworth	TradeWind Energy	January 2008	Sunflower Electric	50.4 MW
				Kansas City Board of Public Utilities	25.2 MW
				Midwest Energy	25.2 MW
<b>Smoky Hills Phase 2 (148.5 MW)</b>	Lincoln and Ellsworth	TradeWind Energy	January 2009	Sunflower (allocated to Mid-Kansas Electric Company system)	24 MW
				Midwest Energy	24 MW
				City Power and Light (Independence, Mo.)	15 MW
				City Utilities of Springfield, Mo.	50 MW
				SPP EIM ( <i>Unallocated</i> )	35.5 MW
<b>Cloud County (Meridian Way) Wind Farm (105 MW)</b>	Cloud	Horizon Wind Energy	November 2008	Empire District Electric	105 MW
				Westar Energy	96 MW
<b>Flat Ridge Wind Farm (100 MW)</b>	Barber	BP Alternative Energy	March 2009	Westar Energy	100 MW
<b>Central Plains Wind Farm (99 MW)</b>	Wichita	RES America	March 2009	Westar Energy	99 MW
<b>Greensburg (12.5 MW)</b>	Kiowa	John Deere	September 2009	Kansas Power Pool	12.5 MW
<b>Bowersock Hydro-electric Dam</b>	Douglas	Kansas River Hydro Project	1922	Kansas Power Pool	2.7 MW
<b>Rolling Hills Landfill (8 MW)</b>	Shawnee	Waste Management	January 2009	Westar Energy	8 MW

## Appendix D—Traditional Fossil-Fuel Generation

### Inventory of Existing Power Plants Serving Kansas Loads



2010 Generation Survey  
3 January 2011

- Primary Fuel**
- Coal
  - Diesel
  - Dual Fuel
  - Hydro
  - Natural gas
  - Nuclear



**Appendix D—Inventory of Major Power Plants Serving Kansas Loads**

<b>Operating Utility</b>	<b>Power Plant Name Unit / Primary Fuel Source (B-Base, I-Intermediate, P-Peaking)</b>	<b>County</b>	<b>Ownership</b>	<b>Nameplate Capacity (MW)</b>	<b>Initial Year of Operation</b>	<b>2009 Net Generation (MWh)</b>
<b>Wolf Creek Nuclear Generating Corporation</b>	<b>Wolf Creek Nuclear (B)</b>	Coffey	KCPL (47%) Westar (47%) KEPCo (6%)	1,160	1985	8,768,548
<b>Westar Energy, Inc.</b>	<b>Jeffrey Energy Center Coal (B)</b>	Pottawatomie	Westar (92%) MKEC (8%)	2,164	1978 - 1983	12,921,850
	<b>Lawrence Energy Center Coal (B)</b>	Douglas	Westar (100%)	529	1955 - 1971	3,318,128
	<b>Hutchinson Natural gas (P)</b>	Reno	Westar (100%)	395	1965 - 1983	64,461
	<b>Abilene Natural gas (P)</b>	Dickinson	Westar (100%)	64	1973	17,087
	<b>Tecumseh Coal (B) and Natural gas (P)</b>	Shawnee	Westar (100%)	239	1957 - 1972	1,397,547
	<b>Gordon Evans Natural gas (P)</b>	Sedgwick	Westar (100%)	835	1961 - 2001	614,110
	<b>Murray Gill Natural gas (P)</b>	Sedgwick	Westar (100%)	293	1952 - 1959	233,892
	<b>Neosho Natural gas (P)</b>	Labette	Westar (100%)	67	1954	-1,181
	<b>Emporia Energy Center Natural gas (LF) and Natural gas (P)</b>	Lyon	Westar (100%)	663	2008-2009	435,062
	<b>Spring Creek Energy Center Natural gas (P)</b>	Logan, Oklahoma	Westar (100%)	278	2001	220,037
<b>Kansas City Power and Light (KCP&amp;L)</b>	<b>LaCygne Coal (B)</b>	Linn	KCPL (50%) Westar (50%)	1,418	1973 - 1977	9,244,848

Operating Utility	Power Plant Name Unit / Primary Fuel Source (B-Base, I-Intermediate, P-Peaking)	County	Ownership	Nameplate Capacity (MW)	Initial Year of Operation	2009 Net Generation (MWh)
	<b>Osawatomie</b> Natural gas (P)	Miami	KCPL (100%)	90	2003	NA
	<b>West Gardner</b> Natural gas (P)	Johnson	KCPL (100%)	360	2003	35,792
	<b>Iatan I</b> Coal (B)	Platte, Missouri	KCPL (70%) KCPL-GMO (18%) Empire (12%)	651	1980	3,825,377
	<b>Iatan II</b> Coal (B)	Platte, Missouri	KCPL (54.71%) KCPL-GMO (18%) Empire (12%) MJMEUC (11.76%) KEPCo (3.53%)	850	2010	NA
	<b>Montrose</b> Coal (B)	Henry, Missouri	KCPL (100%)	510	1958 - 1964	3,211,592
	<b>Hawthorn</b> Coal (B)	Jackson, Missouri	KCPL (100%)	563	1969	4,174,936
	<b>Hawthorn Combine Cycle</b> Natural gas (P)	Jackson, Missouri	KCPL (100%)	292	1997 - 2000	
	<b>Hawthorn Combustion Turbine</b> Natural gas (P)	Jackson, Missouri	KCPL (100%)	180	2000	
	<b>Northeast Station</b> Natural gas (P) and Distillate fuel oil (P)	Jackson, Missouri	KCPL (100%)	522	1972 - 1985	-930
<b>Kansas City Board of Public Utilities (KC-BPU)</b>	<b>Quindaro</b> Coal (B)	Wyandotte	KC-BPU (100%)	183	1965 - 1971	1,103,686
	<b>Quindaro Combustion Turbine</b> Natural gas (P) and Distillate fuel oil (P)	Wyandotte	KC-BPU (100%)	115	1969 - 1977	
	<b>Nearman Creek</b> Coal (B)	Wyandotte	KC-BPU (100%)	229	1981	1,342,694

Operating Utility	Power Plant Name Unit / Primary Fuel Source (B-Base, I-Intermediate, P-Peaking)	County	Ownership	Nameplate Capacity (MW)	Initial Year of Operation	2009 Net Generation (MWh)
	<b>Nearman Creek Combustion Turbine</b> Natural gas (P)	Wyandotte	KC-BPU (100%)	76 <i>(with 45MW additional announced)</i>	2006 <i>(addition planned 2012)</i>	
	<b>Kaw</b> Natural gas (P)	Wyandotte	KC-BPU (100%)		1955 - 1962	NA
<b>Kansas Electric Power Cooperatives (KEPCo)</b>	<b>Sharpe</b> Distillate fuel oil (I)	Coffey	KEPCo (100%)	20	2002	NA
<b>Sunflower Electric Power Corporation</b>	<b>Holcomb Station</b> Coal (B)	Finney	Sunflower (100%)	360	1983	2,655,821
	<b>Garden City Station</b> Natural gas (I) and Natural gas (P)	Finney	Sunflower (100%)	239.2	1962 - 1979	65,576
<b>Mid-Kansas Electric Company (MKEC)</b>	<b>Cimarron River Station</b> Natural gas (I) and Natural gas (P)	Seward	MKEC (100%)	75	1963 - 1967	NA
	<b>Clifton Station</b> Natural gas (P) and Distillate fuel oil (P)	Washington	MKEC (100%)	75.5	1974	NA
	<b>Fort Dodge Station</b> Natural gas (LF) <i>(formerly Judson Large)</i>	Ford	MKEC (100%)	144.6	1968	411,051
	<b>Great Bend Station</b> Natural gas (I) <i>(formerly Arthur Mullergren)</i>	Barton	MKEC (100%)	96	1963	NA
<b>Empire District Electric Company</b>	<b>Riverton</b> Coal (B)	Cherokee	Empire (100%)	92	1950	593,035
	<b>Riverton Combustion Turbine</b> Natural gas (P)	Cherokee	Empire (100%)	236	1964 - 2007	
	<b>Asbury</b> Coal (B)	Jasper, Missouri	Empire (100%)	210	1970 - 1986	1,343,898

<b>Operating Utility</b>	<b>Power Plant Name Unit / Primary Fuel Source</b> (B-Base, I-Intermediate, P-Peaking)	<b>County</b>	<b>Ownership</b>	<b>Nameplate Capacity (MW)</b>	<b>Initial Year of Operation</b>	<b>2009 Net Generation (MWh)</b>
	<b>Empire Energy Center</b> Natural gas (P)	Jasper, Missouri	Empire (100%)	272	1978 - 2003	96,312
	<b>Ozark Beach</b> Hydro (B)	Taney, Missouri	Empire (100%)	16	1931	NA
	<b>State Line Combine Cycle</b> Natural gas (P)	Jasper, Missouri	Empire (60%) Westar (40%)	499		1,077,259
	<b>State Line Combustion Turbine</b> Natural gas (P)	Jasper, Missouri	Empire (100%)	89	1995	
<b>Plum Point Energy Associates, LLC</b>	<b>Plum Point Energy</b> 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%)	665	2010	NA
<b>McPherson Board of Public Utilities</b>	<b>McPherson 2</b> Natural gas (P) and Distillate fuel oil (P)	McPherson	McPherson-BPU (100%)	180	1973 - 1979	4,019
	<b>McPherson 3</b> Natural gas (P)	McPherson	McPherson-BPU (100%)	99.9	1998	NA
<b>Midwest Energy, Inc.</b>	<b>Colby</b> Dual Fuel (P)	Thomas	Midwest (100%)	13	1970	NA
	<b>Great Bend</b> Dual Fuel (P)	Barton	Midwest (100%)	10	1948 - 1956	NA
	<b>Bird City</b> Distillate fuel oil (P)	Cheyenne	Midwest (100%)	4	1965	NA
	<b>Goodman Energy Center</b> Natural gas (P)	Ellis	Midwest (100%)	74.7	2008	NA