

2022 Annual Report of the Electric System

City of Osawatomie, Kansas

Presented to the City Council

August 10th 2023



**2022 ANNUAL REPORT
OSAWATOMIE ELECTRIC SYSTEM**

Description of the System

The City’s electric system (the “System”) was established in 1939 to provide electricity to the residents of the City, with numerous improvements and expansions occurring over the years. The System currently has 2,020 meters, an average hourly peak of 4.0 megawatts and a peak load of approximately 8.5 megawatts. In 2011, the system hit its historical peak of approximately 9.9 megawatts. The city distributes power on a 2400/4160, and 7200/12470 voltages through two interconnects with Evergy and three substations. The current power plant is comprised of the original power plant which was built in 1939, with a major addition added in 1968. In 2020, the electric system served approximately 4,300 residents of Osawatomie plus numerous businesses and industries.

As of the end of 2022, the city currently owns and operates 5.6 megawatts of onsite diesel generators and 12.0 megawatts of new onsite diesel generation, which primarily serve as emergency back-up and as capacity coverage for power the City purchases at wholesale pursuant to several purchase contracts described below. The existing purchase contracts provide the City with 4.3 megawatts of electricity during summer months and 3.3 megawatts during other times of the year. Between generating capabilities and purchase contracts, the City currently has the ability to provide up to 21.9 megawatts of power during summer months and 20.9 megawatts at other times.

Description of Existing Facilities of the System

The Electric Utility System consists of one plant building, a network of distribution facilities, necessary transformers and switch stations, and three generating units with the following capacities:

<u>Unit</u>	<u>Capacity</u>	<u>Manufacturer</u>	<u>Installation</u>
2	1800 KW	Nordberg	1957
4	1000 KW	Nordberg	1952
5	2800 KW	Nordberg	1967
11	2000 KW	Caterpillar	2016
12	2000 KW	Caterpillar	2016
13	2000 KW	Caterpillar	2016
14	2000 KW	Caterpillar	2016
15	2000 KW	Caterpillar	2016
16	2000 KW	Caterpillar	2016

New Generation Project

In December 2015, the City of Osawatomie issued \$6,095,000 in revenue bonds for a \$5.9 million project which will increase the capacity of the System, provide for a more secure source of power and reduce operating costs. The project includes the acquisition and installation of six 2-megawatt diesel powered generators, each of which has approximately two thousand hours (more or less) of run time. The generators are 2006 Caterpillar 3516 generators with diesel engines. The generators come with 480-volt step-up transformers and switch gear. As of the end of 2018, all six of the project generators were online and operable.

The project also provided for an upgrade to the 7th Street Substation and, the construction of a new 9th Street substation to replace the current power plant substation. These upgrades have allowed the city to begin a self-funded, staff-performed upgrade of the entire distribution system so the community can operate at the more efficient 12470 volts. The project also provided for the construction of a new 7,500 sq. ft., \$450,000 electric distribution building which was completed in the summer of 2019.

Now fully operational, the project generators have more than replaced the electricity capacity provided by the Nearman contract, by increasing to 21.9 megawatts. The capacity from the new generators alone will be sufficient for the System to provide all current necessary power to the City even if loses its connection to the regional electric distribution grid. The additional capacity will also allow the System to provide future service to a large area in the northern portion of the City that is currently undeveloped as well as potentially allow the System to sell electricity to other communities. Furthermore, due to the relatively high fixed and variable costs of the Nearman contract, the City has realized a net operating savings of at approximately \$240,000 a year by purchasing power elsewhere or generating power itself.

Generation Project Budget

	Updated Budget
PROJECT COSTS	
Generators	
Generator Units/Delivery	\$ 1,876,600
Warranty/Service Agreement (3 yrs.)	110,000
Load Testing & Startup	137,000
Substations	
7 th Street Substation Modifications	718,609
9 th Street Substation	1,823,712
New Electric Shop	450,000
Engineering/Permitting	366,050
Contingencies	403,819
TOTAL PROJECT COSTS	\$ 5,886,390
FINANCING	
Bond Proceeds	\$ 5,848,570
(Over)/Under Budget	\$ (37,820)

Electric Production

The following table shows the System’s production and sales for the past five years.

<u>Year</u>	<u>kWh Generated</u>	<u>kWh Purchased</u>	<u>kWh Sold</u>
2022	16,200	35,882,641	30,614,267
2021	182,300	34,520,345	29,546,809
2020	37,250	34,221,132	28,277,049
2019	65,000	34,714,675	30,163,850
2018	20,000	36,149,320	30,707,378

Note: The difference between kWh Generated and kWh Purchased less kWh Sold is primarily due to line loss and power provided for street lighting. As a result of undertaking the project and future improvements, the City anticipates eventually upgrading the system to a more efficient 12470 volts and reducing line loss to approximately 6-8%.

Power Supply Requirements

Peak demands and average energy loads are depicted in the following table. The City’s staff believes that variation in peak and average is attributable to a number of factors including seasonal weather conditions.

<u>Year</u>	<u>Net Peak Demand</u>		<u>Average Load</u>	
	<u>MW</u>	<u>% Increase</u>	<u>MW</u>	<u>% of Peak</u>
2022	8.5	0	4.095	48.1
2021	8.5	1.25	3.961	46.6
2020	6.8	-1.82	4.428	65.1
2019	8.3	-2.3	2.899	34.9
2018	8.5	0	4.127	48.6
2017	8.5	-4.5	3.862	45.4
2016	8.9	0	4.053	45.5

Electric Power Supply Resources

The city meets its supply obligations to its electric customers through a combination of resources including the operation of its own power production facilities and through purchasing power under the Supply Agreements described below.

Supply Agreements

The ability of the System to service its Debt Service Requirements is in part contingent on the availability of a supply of electric energy. The following outlines agreements the City has for supply of electric energy. All of these contracts, with the exception of the arrangement with EMP1, are of a “take or pay” nature. However, there is no guarantee that the suppliers will not default on the obligation to supply electric energy to the System or that circumstances will not prevent the supply of electric energy to the System.

Available Capacity	2017	2018	2019	2020	2021	2022
On-site Generation	11.6	17.6	17.6	17.6	17.6	17.6
GRDA	3.0	3.0	3.0	3.0	3.0	3.0
SPA	0.4	0.4	0.4	0.4	0.4	0.4
WAPA	0.9	0.9	0.9	0.9	0.9	0.9
Subtotal	15.9	21.9	21.9	21.9	21.9	21.9

Grand River Dam Authority of Oklahoma (GRDA) – The City has a wholesale power agreement with the Grand River Dam Authority of Oklahoma (“GRDA”) via the Kansas Power Pool (“KPP”) in effect as of 2000 and expires in the year 2026. Under the terms of the agreement, GRDA agrees to supply 3.0 MW during summer months and 2.2 MW for all other months during a contract year at a formula-based rate. The City is actively looking to enter into another PPA to replace all or a part of this source.

Southern Power Administration (SPA) – A Hydro Power Pooling Contract from SPA, originally signed with the Kansas Municipal Energy Agency (KMEA) on December 20, 1983, was extended until midnight, December 31, 2018. In June 2019, the city agreed to an extension of the SPA agreement to June 1, 2034. The hydro peaking power is obtained from the Southwestern Power Administration (SWPA) through KMEA subject to the terms of a contract between those agencies. The City is allocated 400 kW capacity under this contractual arrangement.

Western Area Power Administration (WAPA)- A Hydro Power Pooling Contract between WAPA and KMEA provides power to 47 participating Kansas cities, including the City, through the KMEA. Power under this contract is scheduled to allow the City and other participants to avoid demand charges and replace high-cost peak-hour energy. The pooling contract between WAPA and KMEA is effective until 2054. The City is allocated 852 kW during the summer months and 742 kW during the winter months under this arrangement.

Energy Management Project No. 1 (EMP1) Under the EMP1 arrangement, six participating Kansas cities of KMEA—Osawatomie, Baldwin, Gardner, Garnett, Ottawa and Pomona—have combined their electric systems for the purpose of purchasing power as a centrally dispatched group and to manage power resources in the Nearman, GRDA, SPA and WAPA projects. EMP1 is also used to jointly purchase load following service from Evergy. The EMP1 arrangement does not involve a minimum purchase amount or price.

Solar Array- The City signed a Power Purchase Agreement with Evergy on September 15 2022 to purchase energy produced by the proposed single axis tracking system with a nameplate rating of 6.435 MWDC. This array is scheduled to begin construction in October of 2023, with an online date of November 2024. This will increase Osawatomie’s available capacity from 21.9 to approximately 28.3 MW.

2021			2022		
SOURCE	KWH	TOTAL COST	SOURCE	KWH	TOTAL COST
GRDA	21,906,000	\$1,036,455.35	GRDA	22,968,000	\$1,429,711.14
SPA	919,737	\$32,625.98	SPA	754,875	\$31,070.55
WAPA	2,802,925	\$89,955.87	WAPA	2,802,925	\$90,747.09
EMP1	-	\$9,575.47	EMP1	-	(\$43,076.98)
SPP CHARGES	34,520,300	\$2,620,260.26	SPP CHARGES	35,880,400	\$1,898,660.90
SPP CREDITS	25,628,617	(\$1,672,429.79)	SPP CREDITS	26,532,559	(\$1,314,196.64)
SPP Resettlements	-	(\$65,144.56)	SPP Resettlements	-	(\$188,247.00)
TRANSMISSION	-	\$186,921.78	TRANSMISSION	-	\$229,388.28
TOTAL	34,520,345	\$2,241,220.36	TOTAL	35,882,641	\$2,134,057.34

Cost of Electricity by Source

Note: Total annual cost figure shown above do not exactly match contractual costs of electric production shown in the City's audited financial statements due to timing of billing by power providers and payment by the City.

Largest Electric Utility Customers

The following table lists the top 10 largest users of the System for 2022

<u>Customer</u>	<u>Product or Service</u>	<u>Purchased kWh</u>	<u>Billing</u>	<u>Percentage of Total System Charges</u>
USD #367	School District	2,853,083	\$ 401,913	9.31%
Life Care	Nursing Home	1,436,409	157,821	4.69%
City of Osawatomie	Government Utilities	1,434,906	175,348	4.68%
Caseys General x 2	2 Convenience Stores	779,971	89,033	2.54%
TRI-KO	Community Service Provider	373,997	49,524	1.22%
Vintage Park	Assisted Living	287,222	33,143	.9 %
Sonic Drive-in	Restaurant	224,494	25,245	.7%
Crystal/Justin Metcalf	Long/Short Term rental rooms	217,442	44,195	.7%
UPRR	Transportation	194,327	27,522	.6%
Dollar Tree stores	Discount Store	159,344	19,587	.5%
Subtotal		7,961,193	\$1,026,337	26%

Sales

The following table indicates the sales by type of customer for 2021 and 2022.

<u>Type</u>	<u>2021 Sales</u>	<u>Active Meters</u>	<u>2022 Sales</u>	<u>Active Meters</u>
Residential	\$2,297,599	1,773	\$2,620,823	1,764
Commercial	1,240,437	192	1,164,240	196
Industrial	18,168	2	11,821	2
City	<u>84,669</u>	<u>60</u>	<u>165,135</u>	<u>58</u>
Total	\$ 3,834,140	2,027	\$3,962,022	2,020
Total kWh	29,546,809		30,614,267	

Historical Customers

The following table sets forth the historic number of customers served by the System for the years indicated

<u>Year</u>	<u>Customers</u>
2022	2,020
2021	2,027
2020	2,053
2019	2,097
2018	2,074
2017	2,097
2016	2,085

Note: Increase in customers is a result from how multiple meters at an address are counted. Only minor changes in the number of meters.

RATES AND CHARGES

Utility System Billings and Collections

The System bills customers monthly on an individual basis. Under present policies, utility bills are due when received, but contain a delinquency date which provides ten days for payments. Service is terminated if full payment is not received within 20 days after notice of termination is given. Customers can request a hearing after notice of termination is given and termination may be postponed under certain circumstances.

State and Federal Regulation

The rates, fees and charges for electric service through the System as currently constructed and operated will be exempt from rate regulation by the Kansas Corporation Commission. The precise nature and extent future government regulation and the resulting impact of such regulation on the operation and profitability of the System cannot now be determined. The City has covenanted in the Resolution to comply with all such governmental regulation.

Electric Service Rates

In May of 2022, the city implemented an effective average rate increase of .008 per kilowatt hour.

In August of 2019, the city implemented an effective average rate increase of approximately \$0.005 per kWh to again bridge the gap between the current operating costs and expected excess capacity sales to occur in 2021 and forward. Those increases are reflected in the projected financials below. The City maintains the right and has covenanted in the Ordinance authorizing the issuance of the Bonds to increase fees and charges as needed to ensure adequate revenues to operate the utility, pay debt service on outstanding bonds, and provide required reserves.

For 2018, the city raised rates by an average of 3.95%, which would have generated an additional \$135,000 if applied to 2017 sales. The need for the increase was the result of increased operational costs, mild weather for several years, the loss of the grocery store in 2016, which was a major customer, and delays in selling some of the system's excess capacity.

Prior to 2018, the City's rates had not been increased since, September 25, 2008. In 2010 rates were reduced slightly and in 2012 the monthly Residential and Small General meter charges were reduced by \$1. In 2015, the City made a change in the ECA calculation method to capture the savings from the termination of the Nearman contract and the application of that savings to the bond payments for the project.

Residential* Meter	
Charge	\$11.75
First 500 kWh per month	\$0.119
All kWh over 500 kWh per month	\$0.093
Small General*	
Meter Charge	\$15.00
First 500 kwh per month	\$0.119
Next 4,500 kwh per month	\$0.108
All over 5,000 kwh per month	\$0.093
Large General (Demand Meters) *	
Monthly Customer Charge	\$80.00
Demand	Minimum kW demand or 60% of highest
Demand Charge per kW of Demand	\$5.858
Usage Rate for first 150 demand kWh (150 x demand)	\$0.078
Usage Rate for next 150 demand kWh (150 x demand)	\$0.072
Usage Rate for all additional kWh	\$0.063
Minimum bill	demand + customer charge
School District*	
Demand Meters	
Monthly Customer Charge	\$80.00
Demand	Minimum kW demand or 60% of highest summer kW demand
Demand Charge per kW of Demand	\$5.858
Usage Rate for first 150 demand kWh (150 x demand)	\$0.074
Usage Rate for next 150 demand kWh (150 x demand)	\$0.068
Usage Rate for all additional kWh	\$0.063
Minimum bill	demand + customer chg.
City Use & School District Non-Demand*	
Usage Rate kWh per month	\$0.101
Outside City limits	50% over rates listed above
Energy Cost Adjustment (ECA) Charge*	
Base Rate for Calculation (Calculation in Ordinance)	\$.048/kWh beg May 2021
ECA Calculation Period	Based on energy costs for actual billing period

* ECA applied to all electric rates.

Note: 15-312. Energy Cost Adjustment (ECA).

- (a) All electric bills are subject to a monthly Energy Cost Adjustment (ECA) and shall be calculated as follows:
 The rate for energy to which this adjustment is applicable shall be adjusted by \$.0001 per kilowatt-hour (kWh) in the aggregate cost of energy as computed by the following formula:

$$\frac{((P + G + O) / (K + C)) \times L}{(B)} = \text{Adjustment}$$

 P = The current month actual total cost of power purchased.
 G = The current month actual total cost of City generation.
 O = The current month actual total cost of any other associated power supply expenses.
 K = The current month actual total kWh of the delivered purchased power.
 C = The current month actual total kWh of the delivered City generation power.
 L = The current City losses determined annually $((\text{Purchased Power} + \text{City Generation}) - \text{City Billed}) / \text{City Billed}$.
 B = The Base will be established by a fee resolution, as specified in Section 15-308

Future Rate Increases

In December of 2020, the City complete an electric rate review which will include a transformer impact fee to accounts for the increasing number of service upgrades being done in our residential areas. The City maintains the right and has covenanted in the Ordinance authorizing the issuance of the Bonds to increase fees and charges as needed to ensure adequate revenues to operate the utility, pay debt service on outstanding bonds, and provide required reserves.

Electric System Competition

The city has authority to provide electric service to customers within the boundaries of the City. The city is singly certificated and it alone is authorized to provide electric service in the city, except that the Osawatomie State Hospital and a small residential area that was annexed into the city within the last 10 years, are certificated by Evergy. The city has not purchased the rights to those existing services at this time. The certificated area is surrounded by areas certificated to Evergy.

2022 Annual Rate Comparisons to Evergy

<u>Customer Examples</u>	<u>kWh</u>	<u>Osawatomie</u>		<u>Evergy</u>		
		<u>Total Cost</u>	<u>\$/kWh</u>	<u>Total Cost</u>	<u>\$/kWh</u>	<u>% Diff</u>
Residential (non-demand)	864	\$ 105	\$ 0.122	\$106	\$ 0.123	1.32%
Small General Service (non-demand)	1,500	182	0.122	117	0.079	43.0%
Medium General Service (demand)	100,000	8,271	0.083	4,907	0.049	51.0%

DEBT STRUCTURE OF THE SYSTEM

Current Indebtedness of the System

The following table sets forth all of the outstanding obligations of the System as of December 31, 2022:

<u>Project</u>	<u>Series</u>	<u>Original Amount</u>	<u>Principal Outstanding</u>	<u>Final Maturity</u>
Electric Utility System Revenue	2015-A	\$6,230,000	\$4,480,000	09-01-35

Historical & Projected Financials

The following is a summary of the historical *revenues*, operating expenditures, and payments of bonds for the System.

	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>
Revenues	\$ 3,941,249	\$ 3,748,846	\$ 3,653,841	\$ 4,980,860	\$4,416,631
Operation & Maintenance Expense (1)	<u>3,053,363</u>	<u>2,539,762</u>	<u>2,225,028</u>	<u>3,745,489</u>	<u>3,454,629</u>
Net Income	887,886	1,209,084	1,428,813	1,235,371	1,235,371
Debt Service	\$ 435,725	\$ 432,501	\$ 434,100	\$ 435,353	\$353,126
Debt Service Coverage	2.04x	2.80x	3.29x	2.83x	3.49x

The following is a projected summary of the *future* revenues, operating expenditures, and payments of Bonds for the System.

	<u>2023</u>	<u>2024</u>
Revenues	\$4,263,155	\$4,415,067
Operation & Maintenance Expense	3,080,952	3,153,778
Net Income	\$1,182,203	\$1,261,289
Debt Service	\$ 431,525	\$ 431,525
Debt Service Coverage	2.74x	2.92x

- (1) Excludes capital outlay expenditures and discretionary transfers out of the System for non-utility related purposes (e.g., recreation, golf course, tourism, general capital improvements). Such transfers are subordinate to the repayment of the Bonds and may only be made from the Surplus Fund.
- (2) As a result of completion of the Project and termination of its purchase contract with Nearman Creek Power Plant, the City experienced a net decrease in operation and maintenance costs of approximately \$240,000 per year. Additionally, the City anticipates lower production costs due to reduction of line loss and future potential revenue growth from the sale of power made possible by the Project.

Sources: Historical Financials - Audited Financial Statements
Revenue & Expense Projections – City of Osawatomie Debt Service Requirements - 2015-A Issuance Debt Service Schedule

