

ELECTRIC RATE AND USAGE ANALYSIS

Westar Direct Renewable Participation Service Agreement

B&V PROJECT NO. 180984

PREPARED FOR

City of Lawrence, Kansas

3 MAY 2019



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1.0 Introduction

The City of Lawrence, Kansas (“City”) has requested Black & Veatch Corporation (Black & Veatch) review the energy usage of the City’s facilities to better understand if future participation in Westar Energy’s (Westar) proposed Direct Renewable Participation Service Agreement (the “Agreement” or “DRPS”) would be advantageous for the City. The Agreement allows the City to purchase blocks of renewable energy generated from Westar’s 300 MW Soldier Creek Wind Farm (the “Resource”) at a fixed price for a 20-year term. This report presents the results of the analysis.

Black & Veatch’s analysis includes the following steps:

1. Review Westar Energy’s proposed Direct Renewable Participation Service Agreement.
2. Review the City’s monthly historical energy usage at their major facilities and analyze monthly usage patterns that may impact the amount of wind energy the City could potentially contract for.
3. Work with the City to estimate and project what future energy usage may be based on known changes to its infrastructure (i.e. Wakarusa treatment plant coming online, blower going offline at Kansas River Plant).
4. Review the City’s current electric rates applicable to each major City facility including all applicable Westar riders and base rate charges.
5. Make a recommendation on an appropriate amount of energy to contract for should a similar Agreement become available in the future.

2.0 Direct Renewable Participation Service Agreement

The City was approached by Westar with an opportunity to participate in a renewable energy program offered through a rider in its standard rate tariffs. The Agreement is for a 20-year term and requires a contract with Westar for a fixed amount of energy purchased on an annual basis. The program is only open for new participation at certain times and Westar is not currently offering additional participation in DRPS; however, this analysis is being prepared under the assumption that it will be opened up for additional participation in the future.

The basic structure of the DRPS replaces Westar’s surcharge for recovery of fuel and related power supply costs (the Retail Energy Cost Adjustment or "RECA") with a fixed rate of \$0.018/per kilowatt-hour (kWh). In months where the RECA is more than 1.8 cents per kWh, the City would have cost savings and in months where the RECA is less than 1.8 cents per kWh, the City would pay more. Based on a review of historic RECA levels (presented in more detail later in this report) the recent average rate has been 2.1 cents per kWh, which would result in projected overall savings by participating in the program.

The general structure and payment terms of the Agreement are summarized below:

1. Substitution of the Retail Energy Cost Adjustment ("RECA") Surcharge with a fixed charge of \$0.018 per kWh generated by the Customer's pro rata share from the Resource and billed as the Renewable Participation Charge ("RPC").
2. The amount of energy subscribed to above will be a pro rata share based upon a fixed kW amount in 500 kW increments up to 2,000 kW and with additional increments in 1,000 kW thereafter, which will be converted to a pro rata share of the Resource. The Customer will receive no additional capacity credit for their subscription.
3. All charges, adjustments and surcharges, except the RECA, will be billed at the standard rates applicable to the customer's rate class.
4. Customers will receive a forecasted RPC credit, based on the Resource's generating forecast, of their pro rata share's expected annual production spread evenly across each month of the year. The Customer's usage and corresponding RPC substitution of the RECA will be true-up at the end of the year with any additional RECA recovery billed to the customer. Any true-up will be applied to the first bill, occurring after January 15, of each calendar year. This bill may also reflect an RPC annual credit adjustment based on the Resource's year-prior actual generation.
5. Excess energy generated by the Customer's pro rata share from the Resource and unused by the Customer in calendar year will be credited to the Customer's bill at 80% of the RPC.
6. Should the Customer choose to aggregate accounts, information pertaining to all accounts will be provided.
7. Customers with recurring excess generation from this Agreement will have their contracted amount reduced to better match their usage at the Company's discretion.

The key points to highlight in this language are:

- For customers with peak demand over 2,000 kW, such as the City, you must subscribe in 1,000 kW blocks
- The amount you subscribe to will be "converted to a pro rata share of the Resource." In other words, the kW demand that is contracted for will be converted to kWh energy based on the expected capacity factor of the wind farm.
 - Based on information provided by the City from communication with Westar, we understand the capacity factor assumed by Westar is 46%. For example, a 5,000 kW block would equate to 20,148,000 kWh¹. The 46% value is not directly identified in the DRPS tariff language.
- The Agreement only applies to the RECA; all other rate component, which comprise about 80% of the total bill, will continue to be billed at standard Westar rates.
- The expected savings, or "RPC Credit" as it is referred to in the Agreement, are projected a year in advance and applied to each monthly bill.

¹ 5,000 kW times 8,760 hours in a year times 46% capacity factor

- If the amount of kWh purchased in a year is less than the amount contracted for under the Agreement, Westar will “buy back” the difference at 80% of the RPC (1.44 cents per kWh).
- The terms of the Agreement allow for the City to aggregate its accounts for participation in the program. Based on our understanding of the terms, this means the City may evaluate the savings impact of participation on all City accounts and not limit participation to a select number of larger accounts.

2.1 ANALYSIS OF VARIOUS PARTICIPATION LEVELS

To evaluate the potential savings under the Agreement, we first compiled the annual energy usage (in kWh) and annual RECA cost for 2014 through 2018 from the City’s electric bills. Table 2-1 presents this information as well as the calculated average RECA for each year. The average RECA is above \$0.018/kWh in each year.

Table 2-1 Summary of Historic Lawrence Usage (All City Accounts)

LINE	DESCRIPTION	2014	2015	2016	2017	2018
1	Annual kWh	34,258,253	34,621,533	35,041,807	33,772,189	33,993,734
2	Annual RECA Cost	\$831,053	\$678,405	\$668,924	\$721,464	\$735,242
3	Average RECA (\$/kWh)	\$0.02426	\$0.01959	\$0.01909	\$0.02136	\$0.02163

Table 2-2 shows the amount of energy the City would contract for under participation levels between 5,000 kW and 9,000 kW. Using an assumed 46% capacity factor, this equates to a range of 20.1 million kWh to 36.3 million kWh.

Table 2-2 Conversion of DRPS Participation to kWh

LINE	DESCRIPTION	2014	2015	2016	2017	2018
1	Participation Level (kW)	5,000	6,000	7,000	8,000	9,000
2	Assumed Capacity Factor	46%	46%	46%	46%	46%
3	Annual kWh Equivalent	20,148,000	24,177,600	28,207,200	32,236,800	36,266,400

Table 2-3 shows the annual savings estimate for each year under participation levels from 6 MW² to 9 MW. The DRPS Cost is the amount of energy purchased under the contract at \$0.018/kWh (Table 2-2, line 3 * 0.018). The RECA Cost is the difference between the total energy purchased (Table 2-1, line 1) and the amount purchased under the DRPS (Table 2-2, line 3) times the average RECA rate for the year (Table 2-1, line 3). The sum of these two numbers is the total energy cost under the contract. The Annual Savings is the difference between this total and the Annual RECA Cost before the contract (Table 2-1, line 2).

Table 2-3 Projected Savings at Various Participation Levels

DESCRIPTION	2014	2015	2016	2017	2018
Savings at 6 MW Participation					
DRPS Cost	\$435,197	\$435,197	\$435,197	\$435,197	\$435,197
RECA Cost	\$244,541	\$204,648	\$207,390	\$204,966	\$212,311
Total	\$679,738	\$639,844	\$642,587	\$640,163	\$647,508
Annual Savings	\$151,315	\$38,560	\$26,337	\$81,301	\$87,734
Savings at 7 MW Participation					
DRPS Cost	\$507,730	\$507,730	\$507,730	\$507,730	\$507,730
RECA Cost	\$146,789	\$125,688	\$130,468	\$118,883	\$125,156
Total	\$654,519	\$633,418	\$638,198	\$626,613	\$632,885
Annual Savings	\$176,534	\$44,987	\$30,727	\$94,852	\$102,357
Savings at 8 MW Participation					
DRPS Cost	\$580,262	\$580,262	\$580,262	\$580,262	\$580,262
RECA Cost	\$49,037	\$46,729	\$53,546	\$32,800	\$38,000
Total	\$629,300	\$626,991	\$633,808	\$613,062	\$618,263
Annual Savings	\$201,754	\$51,414	\$35,116	\$108,402	\$116,979

² 6 MW = 6,000 kW

DESCRIPTION	2014	2015	2016	2017	2018
Savings at 9 MW Participation					
DRPS Cost	\$652,795	\$652,795	\$652,795	\$652,795	\$652,795
RECA Cost	\$0	\$0	\$0	\$0	\$0
Buyback Excess @ 80%	\$(28,917)	\$(23,686)	\$(17,634)	\$(35,917)	\$(32,726)
Total	\$623,878	\$629,109	\$635,161	\$616,879	\$620,069
Annual Savings	\$207,176	\$49,296	\$33,763	\$104,586	\$115,173

The 9 MW scenario shown above is slightly different than other three scenarios presented in that at 9 MW participation, you are contracting for more kWh that you expect use. Under the 9MW scenario you purchase 36.3 million kWh at \$0.018/kWh and then sell back the difference between the amount purchased and the amount used at 80% of the contract rate. Below is an example of the annual bill for 2018:

- 36,266,400 kWh purchased at \$0.018/kWh = \$652,795
- Excess is purchased back by Westar at 80% of rate (\$0.0144): (36,266,400 - 33,993,734) * \$0.0144 = \$32,726 credit
- Annual Cost is: \$652,795 - \$32,726 = \$620,069

Note that despite purchasing more energy than needed under the 9 MW scenario, the annual savings are greater than the 7 MW scenario, and is the ranks second to the 8 MW scenario for maximum savings.

2.2 SUMMARY OF SAVINGS ANALYSIS

Based on the savings values shown in Table 2-3, the optimal savings scenario based on historic usage from 2014 through 2018 is an 8,000 kW share of the Resource. A close second was the 9,000 kW scenario where you contract for more than you consume and then buy back the excess at 80% of the contract rate.

Using Asset360™, the City has the ability to track and monitor the energy demands of their four largest accounts (Kansas River, Wakarusa, KAW, and Clinton). This software has the potential to identify energy savings opportunities, and later quantify the impact on overall energy usage once implemented. This information will allow the City’s overall energy demands to be revisited periodically to determine if any significant changes have occurred which might influence the recommendation from this report.

Ultimately, the level of participation the City chooses will be a policy decision that should be adjusted for potential risk factors inherent in locking in a power supply rate for 20 years and its projection of power supply needs in the future. Below are some points for consideration when making a decision about the appropriate level of participation for the City of Lawrence:

- How are energy needs expected to change in the coming years? We know there will be an impact from the Wakarusa treatment plant coming online and a blower going offline at Kansas River Plant. What other changes are anticipated?
- How does the projected output of the Resource compare to similar wind resources in Kansas? While a 46% capacity factor has been used for the purposes of this report based on Westar's assumption, is the assumption in line with the output of similar wind resources?
- How important is energy efficiency to the City and what steps have been taken to date? Is there an opportunity to reduce your future usage through efficiency measures? If so, that should factor into the DRPS decision.
- Should emerging energy technology impact your decision? Consider the potential impact of City-owned onsite generation such as photovoltaic (PV) solar. Renewable resources such as solar combined with battery storage have the potential to significantly reduce the total amount of energy purchased from Westar.
- Considering the Agreement is for a term of 20 years, what if there is a significant step change in energy technology that changes the traditional model of purchasing energy from a utility. The City will be locked in to a set number of kWh purchased annually for 20 years. While this scenario is unlikely, it warrants consideration when evaluating all risks.

3.0 Review of Current Electric Rates

In addition to evaluating the City's electric usage on an aggregate basis, we also reviewed the City's six largest loads on an individual basis. The six largest accounts are:

- Kansas River Wastewater Treatment Plant
- Kaw Water Treatment Plant
- Clinton Water Treatment Plant
- Wakarusa River Wastewater Treatment Plant
- Lawrence Indoor Aquatic Center
- KU Athletic Complex

Black & Veatch reviewed each account to ensure it is being billed by Westar on the appropriate rate class based on its load profile. The Kansas River WTP is the largest city account and the only account on Westar's Large General Service (LGS) rate. The next five largest accounts are on the Medium General Service (MGS) rate. All of these locations are on the appropriate Westar rate based on their load profile and usage.

Appendix A shows the historic usage from 2014 through 2018 for each of six largest customers. For each account we show the monthly kWh, the billed kW demand, and the average RECA rate for the month. Note that the billed demand is not always the same as the actual peak demand for the month. Both the LGS and MGS rates have demand ratchets built into the determination of monthly billed demand. For LGS, the monthly billed demand is the maximum of:

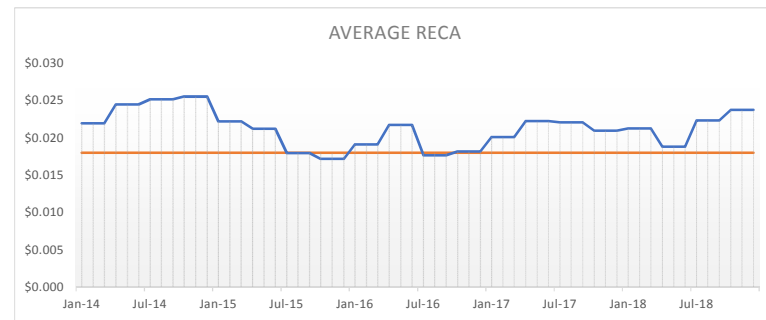
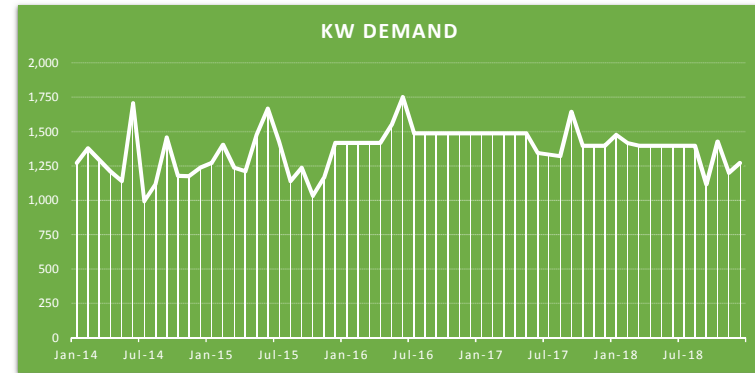
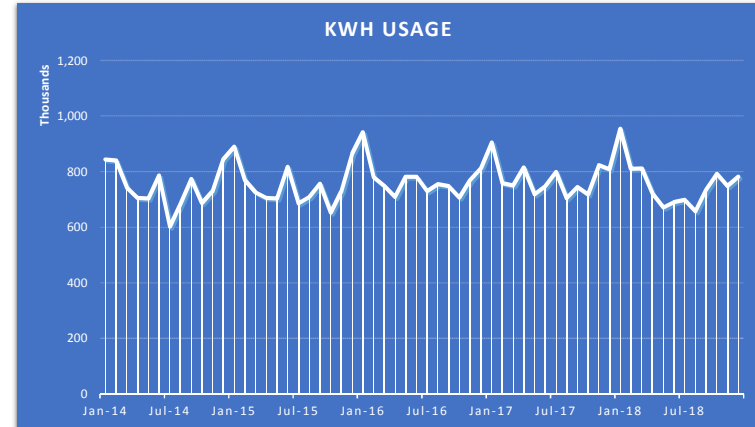
- 1,000 kW,
- The maximum 15-minute kW load during the month, or
- 85% of the highest billing demand during the prior summer months of June, July, August or September.

This essentially puts a billed demand floor during the non-summer months whereas the City may be paying a billed demand that is greater than its actual demand. This is noticeable on the first page of Appendix A for the Kansas River WWTP. The KW DEMAND chart shows multiple areas where the billed demand is the same for multiple consecutive months. This is likely due to the demand ratchet. Making an effort to reduce peak demands during the summer months will lessen or eliminate this issue. The demand ratchet for the MGS rate is much lower at 50% of the prior summer peak, so this less impactful to other accounts.

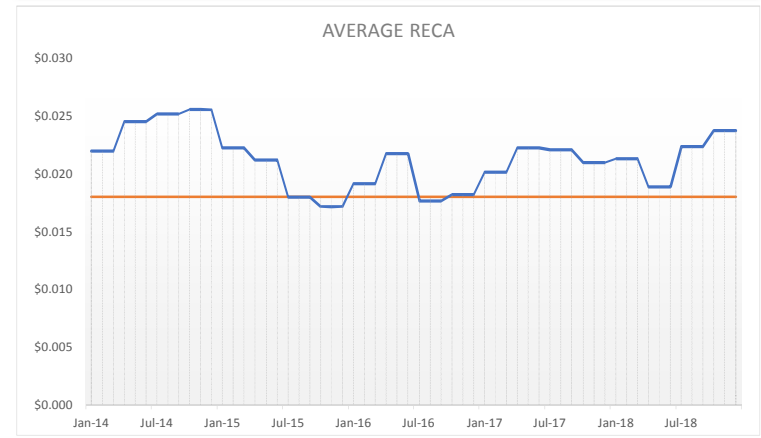
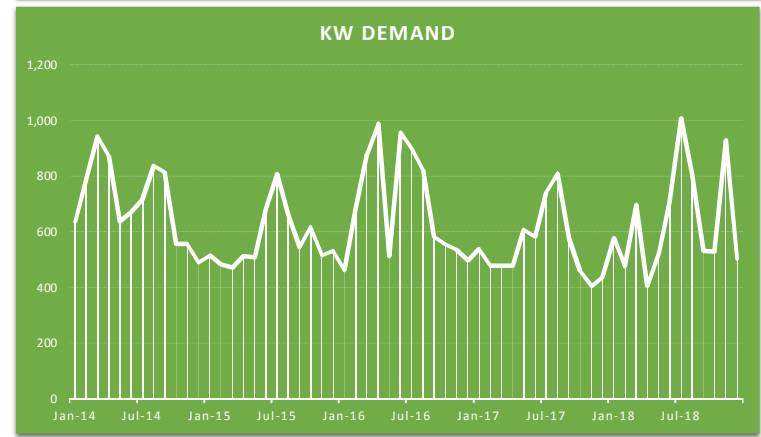
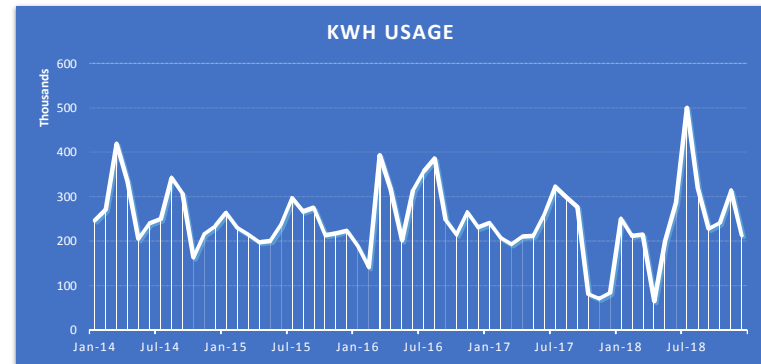
Appendix A – Large Account Analysis

City of Lawrence, KS
 Electric Usage Analysis
Kansas River WWTP
 1400 East 8th Street
 - note: billing data shows 901 E. 8th Street

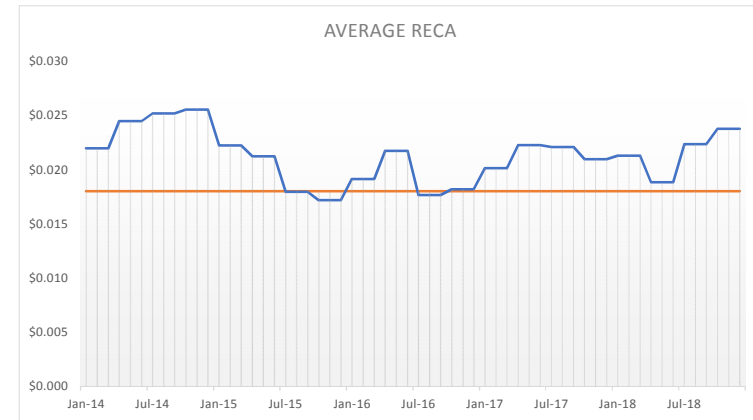
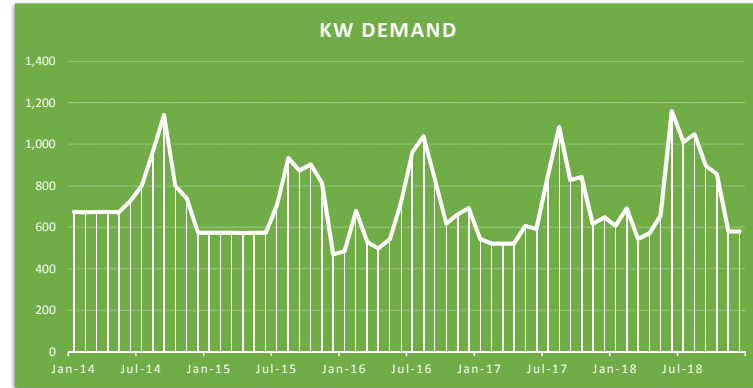
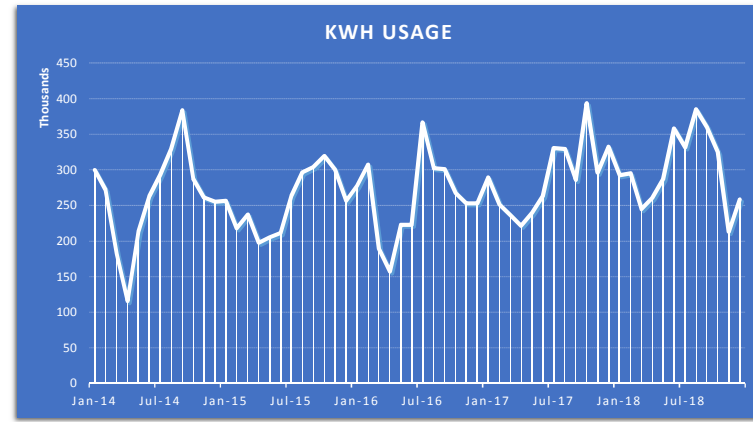
Month	kWh Usage	kW Demand	Load Factor	RECA Charge \$	Average RECA	DRPS	Potential Savings
Jan-14	843,600.00	1,272.00	91%	\$18,525.46	\$0.02196	\$0.01800	\$3,340.66
Feb-14	840,000.00	1,380.00	83%	\$18,446.40	\$0.02196	\$0.01800	\$3,326.40
Mar-14	742,800.00	1,296.00	79%	\$16,311.89	\$0.02196	\$0.01800	\$2,941.49
Apr-14	705,600.00	1,212.00	80%	\$17,270.27	\$0.02448	\$0.01800	\$4,569.47
May-14	703,200.00	1,140.00	84%	\$17,211.52	\$0.02448	\$0.01800	\$4,553.92
Jun-14	786,000.00	1,707.00	63%	\$19,238.14	\$0.02448	\$0.01800	\$5,090.14
Jul-14	602,400.00	993.00	83%	\$15,155.18	\$0.02516	\$0.01800	\$4,311.98
Aug-14	684,000.00	1,118.00	84%	\$17,208.07	\$0.02516	\$0.01800	\$4,896.07
Sep-14	774,000.00	1,458.00	73%	\$19,472.29	\$0.02516	\$0.01800	\$5,540.29
Oct-14	687,600.00	1,180.00	80%	\$17,552.37	\$0.02553	\$0.01800	\$5,175.57
Nov-14	730,800.00	1,176.00	85%	\$18,655.13	\$0.02553	\$0.01800	\$5,500.73
Dec-14	844,800.00	1,236.00	94%	\$21,565.21	\$0.02553	\$0.01800	\$6,358.81
Jan-15	890,400.00	1,272.00	96%	\$19,786.47	\$0.02222	\$0.01800	\$3,759.27
Feb-15	770,400.00	1,404.00	75%	\$17,119.83	\$0.02222	\$0.01800	\$3,252.63
Mar-15	724,800.00	1,236.00	80%	\$16,106.51	\$0.02222	\$0.01800	\$3,060.11
Apr-15	705,600.00	1,212.00	80%	\$14,959.43	\$0.02120	\$0.01800	\$2,258.63
May-15	703,200.00	1,476.00	65%	\$14,908.54	\$0.02120	\$0.01800	\$2,250.94
Jun-15	817,200.00	1,668.00	67%	\$17,325.46	\$0.02120	\$0.01800	\$2,615.86
Jul-15	686,400.00	1,428.00	66%	\$12,314.02	\$0.01794	\$0.01800	(\$41.18)
Aug-15	709,200.00	1,140.00	85%	\$12,723.05	\$0.01794	\$0.01800	(\$42.55)
Sep-15	756,000.00	1,236.00	84%	\$13,562.64	\$0.01794	\$0.01800	(\$45.36)
Oct-15	652,800.00	1,032.00	87%	\$11,202.70	\$0.01716	\$0.01800	(\$547.70)
Nov-15	729,600.00	1,164.00	86%	\$12,520.67	\$0.01716	\$0.01800	(\$612.13)
Dec-15	865,200.00	1,418.00	84%	\$14,847.70	\$0.01716	\$0.01800	(\$725.90)
Jan-16	942,000.00	1,418.00	91%	\$17,998.79	\$0.01911	\$0.01800	\$1,042.79
Feb-16	778,800.00	1,418.00	75%	\$14,880.53	\$0.01911	\$0.01800	\$862.13
Mar-16	748,800.00	1,418.00	72%	\$14,307.32	\$0.01911	\$0.01800	\$828.92
Apr-16	709,200.00	1,418.00	69%	\$15,401.70	\$0.02172	\$0.01800	\$2,636.10
May-16	781,200.00	1,548.00	69%	\$16,965.32	\$0.02172	\$0.01800	\$2,903.72
Jun-16	781,200.00	1,752.00	61%	\$16,965.32	\$0.02172	\$0.01800	\$2,903.72
Jul-16	729,600.00	1,489.00	67%	\$12,876.71	\$0.01765	\$0.01800	(\$256.09)
Aug-16	754,800.00	1,489.00	69%	\$13,321.47	\$0.01765	\$0.01800	(\$264.93)
Sep-16	748,800.00	1,489.00	69%	\$13,215.57	\$0.01765	\$0.01800	(\$262.83)
Oct-16	706,800.00	1,489.00	65%	\$12,838.32	\$0.01816	\$0.01800	\$115.92
Nov-16	769,200.00	1,489.00	71%	\$13,971.75	\$0.01816	\$0.01800	\$126.15
Dec-16	811,200.00	1,489.00	75%	\$14,734.64	\$0.01816	\$0.01800	\$133.04
Jan-17	904,800.00	1,489.00	83%	\$18,199.15	\$0.02011	\$0.01800	\$1,912.75
Feb-17	758,400.00	1,489.00	70%	\$15,254.46	\$0.02011	\$0.01800	\$1,603.26
Mar-17	750,000.00	1,489.00	69%	\$15,085.50	\$0.02011	\$0.01800	\$1,585.50
Apr-17	814,800.00	1,489.00	75%	\$18,126.04	\$0.02225	\$0.01800	\$3,459.64
May-17	718,800.00	1,489.00	66%	\$15,990.42	\$0.02225	\$0.01800	\$3,052.02
Jun-17	747,600.00	1,344.00	76%	\$16,631.11	\$0.02225	\$0.01800	\$3,174.31
Jul-17	799,200.00	1,332.00	82%	\$17,643.14	\$0.02208	\$0.01800	\$3,257.54
Aug-17	704,400.00	1,320.00	73%	\$15,550.33	\$0.02208	\$0.01800	\$2,871.13
Sep-17	745,200.00	1,644.00	62%	\$16,451.04	\$0.02208	\$0.01800	\$3,037.44
Oct-17	718,800.00	1,397.00	70%	\$15,055.27	\$0.02095	\$0.01800	\$2,116.87
Nov-17	823,200.00	1,397.00	81%	\$17,241.92	\$0.02094	\$0.01800	\$2,424.32
Dec-17	807,600.00	1,397.00	79%	\$16,915.18	\$0.02094	\$0.01800	\$2,378.38
Jan-18	954,000.00	1,476.00	89%	\$20,286.81	\$0.02127	\$0.01800	\$3,114.81
Feb-18	810,000.00	1,416.00	78%	\$17,224.65	\$0.02127	\$0.01800	\$2,644.65
Mar-18	811,200.00	1,397.00	80%	\$17,250.17	\$0.02127	\$0.01800	\$2,648.57
Apr-18	720,000.00	1,397.00	71%	\$13,558.32	\$0.01883	\$0.01800	\$598.32
May-18	670,800.00	1,397.00	66%	\$12,631.83	\$0.01883	\$0.01800	\$557.43
Jun-18	691,200.00	1,397.00	68%	\$13,015.99	\$0.01883	\$0.01800	\$574.39
Jul-18	698,400.00	1,397.00	68%	\$15,604.35	\$0.02234	\$0.01800	\$3,033.15
Aug-18	657,600.00	1,397.00	64%	\$14,692.76	\$0.02234	\$0.01800	\$2,855.96
Sep-18	734,400.00	1,116.00	90%	\$16,408.70	\$0.02234	\$0.01800	\$3,189.50
Oct-18	792,000.00	1,428.00	76%	\$18,806.83	\$0.02375	\$0.01800	\$4,550.83
Nov-18	748,800.00	1,200.00	85%	\$17,781.00	\$0.02375	\$0.01800	\$4,302.60
Dec-18	781,200.00	1,272.00	84%	\$18,550.38	\$0.02375	\$0.01800	\$4,488.78



Month	kWh Usage	kW Demand	Load Factor	RECA Charge \$	Average RECA	DRPS	Potential Savings
Jan-14	247,000.00	637.00	53%	\$5,424.12	\$0.02196	\$0.01800	\$978.12
Feb-14	271,000.00	792.00	47%	\$5,951.16	\$0.02196	\$0.01800	\$1,073.16
Mar-14	419,000.00	943.00	61%	\$9,201.24	\$0.02196	\$0.01800	\$1,659.24
Apr-14	334,000.00	871.00	53%	\$8,174.98	\$0.02448	\$0.01800	\$2,162.98
May-14	205,000.00	637.00	44%	\$5,017.58	\$0.02448	\$0.01800	\$1,327.58
Jun-14	239,000.00	671.00	49%	\$5,849.76	\$0.02448	\$0.01800	\$1,547.76
Jul-14	249,000.00	715.00	48%	\$6,264.34	\$0.02516	\$0.01800	\$1,782.34
Aug-14	343,000.00	836.00	56%	\$8,629.19	\$0.02516	\$0.01800	\$2,455.19
Sep-14	307,000.00	813.00	52%	\$7,723.51	\$0.02516	\$0.01800	\$2,197.51
Oct-14	163,000.00	556.00	40%	\$4,160.90	\$0.02553	\$0.01800	\$1,226.90
Nov-14	216,000.00	557.00	53%	\$5,513.83	\$0.02553	\$0.01800	\$1,625.83
Dec-14	234,000.00	490.00	65%	\$5,973.32	\$0.02553	\$0.01800	\$1,761.32
Jan-15	263,000.00	514.00	70%	\$5,844.39	\$0.02222	\$0.01800	\$1,110.39
Feb-15	231,000.00	482.00	66%	\$5,133.28	\$0.02222	\$0.01800	\$975.28
Mar-15	215,000.00	472.00	62%	\$4,777.73	\$0.02222	\$0.01800	\$907.73
Apr-15	198,000.00	513.00	53%	\$4,197.80	\$0.02120	\$0.01800	\$633.80
May-15	200,000.00	509.00	54%	\$4,240.20	\$0.02120	\$0.01800	\$640.20
Jun-15	238,000.00	681.00	48%	\$5,045.84	\$0.02120	\$0.01800	\$761.84
Jul-15	297,000.00	807.00	50%	\$5,328.18	\$0.01794	\$0.01800	(\$17.82)
Aug-15	266,000.00	662.00	55%	\$4,772.04	\$0.01794	\$0.01800	(\$15.96)
Sep-15	275,000.00	545.00	69%	\$4,933.50	\$0.01794	\$0.01800	(\$16.50)
Oct-15	213,000.00	617.00	47%	\$3,655.29	\$0.01716	\$0.01800	(\$178.71)
Nov-15	217,000.00	514.00	58%	\$3,723.94	\$0.01716	\$0.01800	(\$182.06)
Dec-15	223,000.00	531.00	58%	\$3,826.90	\$0.01716	\$0.01800	(\$187.10)
Jan-16	189,000.00	462.00	56%	\$3,611.22	\$0.01911	\$0.01800	\$209.22
Feb-16	141,000.00	677.00	29%	\$2,694.09	\$0.01911	\$0.01800	\$156.09
Mar-16	394,000.00	878.00	61%	\$7,528.16	\$0.01911	\$0.01800	\$436.16
Apr-16	317,000.00	989.00	44%	\$6,884.29	\$0.02172	\$0.01800	\$1,178.29
May-16	201,000.00	513.00	54%	\$4,365.12	\$0.02172	\$0.01800	\$747.12
Jun-16	314,000.00	956.00	45%	\$6,819.14	\$0.02172	\$0.01800	\$1,167.14
Jul-16	358,000.00	898.00	55%	\$6,318.34	\$0.01765	\$0.01800	(\$125.66)
Aug-16	386,000.00	820.00	64%	\$6,812.51	\$0.01765	\$0.01800	(\$135.49)
Sep-16	248,000.00	582.00	58%	\$4,376.95	\$0.01765	\$0.01800	(\$87.05)
Oct-16	215,000.00	553.00	53%	\$3,905.26	\$0.01816	\$0.01800	\$35.26
Nov-16	265,000.00	536.00	68%	\$4,813.46	\$0.01816	\$0.01800	\$43.46
Dec-16	230,000.00	497.00	63%	\$4,177.72	\$0.01816	\$0.01800	\$37.72
Jan-17	241,000.00	537.00	61%	\$4,847.47	\$0.02011	\$0.01800	\$509.47
Feb-17	207,000.00	478.00	59%	\$4,163.60	\$0.02011	\$0.01800	\$437.60
Mar-17	193,000.00	478.00	55%	\$3,882.00	\$0.02011	\$0.01800	\$408.00
Apr-17	211,000.00	478.00	60%	\$4,693.91	\$0.02225	\$0.01800	\$895.91
May-17	212,000.00	606.00	48%	\$4,716.15	\$0.02225	\$0.01800	\$900.15
Jun-17	259,000.00	582.00	61%	\$5,761.71	\$0.02225	\$0.01800	\$1,099.71
Jul-17	323,000.00	741.00	60%	\$7,130.55	\$0.02208	\$0.01800	\$1,316.55
Aug-17	298,000.00	809.00	50%	\$6,578.65	\$0.02208	\$0.01800	\$1,214.65
Sep-17	277,000.00	575.00	66%	\$6,115.05	\$0.02208	\$0.01800	\$1,129.05
Oct-17	80,000.00	459.00	24%	\$1,675.60	\$0.02095	\$0.01800	\$235.60
Nov-17	70,000.00	405.00	24%	\$1,466.15	\$0.02095	\$0.01800	\$206.15
Dec-17	84,000.00	436.00	26%	\$1,759.38	\$0.02095	\$0.01800	\$247.38
Jan-18	250,000.00	577.00	59%	\$5,316.25	\$0.02127	\$0.01800	\$816.25
Feb-18	212,000.00	475.00	61%	\$4,508.18	\$0.02127	\$0.01800	\$692.18
Mar-18	215,000.00	697.00	42%	\$4,571.98	\$0.02127	\$0.01800	\$701.98
Apr-18	64,000.00	405.00	22%	\$1,205.18	\$0.01883	\$0.01800	\$53.18
May-18	200,000.00	523.00	52%	\$3,766.20	\$0.01883	\$0.01800	\$166.20
Jun-18	287,000.00	709.00	55%	\$5,404.50	\$0.01883	\$0.01800	\$238.50
Jul-18	501,000.00	1,008.00	68%	\$11,193.84	\$0.02234	\$0.01800	\$2,175.84
Aug-18	320,000.00	810.00	54%	\$7,149.76	\$0.02234	\$0.01800	\$1,389.76
Sep-18	227,000.00	531.00	59%	\$5,071.86	\$0.02234	\$0.01800	\$985.86
Oct-18	241,000.00	528.00	63%	\$5,722.79	\$0.02375	\$0.01800	\$1,384.79
Nov-18	314,000.00	929.00	46%	\$7,456.24	\$0.02375	\$0.01800	\$1,804.24
Dec-18	213,000.00	504.00	58%	\$5,057.90	\$0.02375	\$0.01800	\$1,223.90

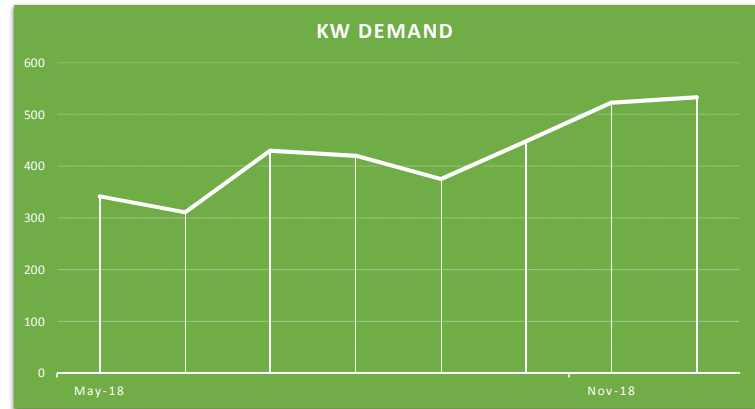
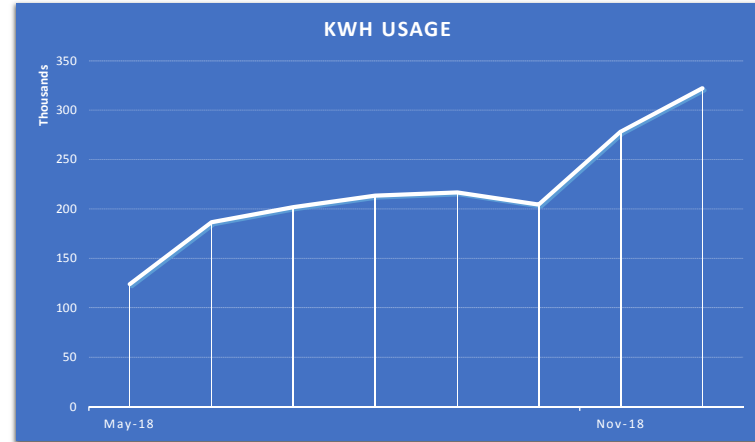


Month	kWh Usage	kW Demand	Load Factor	RECA Charge \$	Average RECA	DRPS	Potential Savings
Jan-14	299,490.00	674.00	61%	\$6,576.80	\$0.02196	\$0.01800	\$1,185.98
Feb-14	271,682.00	673.00	55%	\$5,966.14	\$0.02196	\$0.01800	\$1,075.86
Mar-14	182,017.00	674.00	37%	\$3,997.09	\$0.02196	\$0.01800	\$720.78
Apr-14	115,591.00	674.00	23%	\$2,829.20	\$0.02448	\$0.01800	\$748.56
May-14	213,303.00	673.00	43%	\$5,220.80	\$0.02448	\$0.01800	\$1,381.35
Jun-14	262,756.00	725.00	50%	\$6,431.22	\$0.02448	\$0.01800	\$1,701.61
Jul-14	292,836.00	800.00	50%	\$7,367.17	\$0.02516	\$0.01800	\$2,096.12
Aug-14	329,521.00	964.00	47%	\$8,290.09	\$0.02516	\$0.01800	\$2,358.71
Sep-14	383,629.00	1,142.00	46%	\$9,651.34	\$0.02516	\$0.01800	\$2,746.02
Oct-14	287,791.00	799.00	49%	\$7,346.45	\$0.02553	\$0.01800	\$2,166.21
Nov-14	260,844.00	739.00	48%	\$6,658.57	\$0.02553	\$0.01800	\$1,963.38
Dec-14	255,159.00	574.00	61%	\$6,513.44	\$0.02553	\$0.01800	\$1,920.58
Jan-15	256,666.00	575.00	61%	\$5,703.63	\$0.02222	\$0.01800	\$1,083.64
Feb-15	217,858.00	575.00	52%	\$4,841.24	\$0.02222	\$0.01800	\$919.80
Mar-15	237,121.00	575.00	56%	\$5,269.30	\$0.02222	\$0.01800	\$1,001.12
Apr-15	197,652.00	573.00	47%	\$4,190.42	\$0.02120	\$0.01800	\$632.68
May-15	205,056.00	574.00	49%	\$4,347.39	\$0.02120	\$0.01800	\$656.38
Jun-15	211,094.00	574.00	50%	\$4,475.40	\$0.02120	\$0.01800	\$675.71
Jul-15	263,467.00	709.00	51%	\$4,726.60	\$0.01794	\$0.01800	(\$15.81)
Aug-15	296,488.00	933.00	44%	\$5,318.99	\$0.01794	\$0.01800	(\$17.79)
Sep-15	304,043.00	874.00	48%	\$5,454.53	\$0.01794	\$0.01800	(\$18.24)
Oct-15	319,257.00	903.00	48%	\$5,478.77	\$0.01716	\$0.01800	(\$267.86)
Nov-15	299,659.00	813.00	50%	\$5,142.45	\$0.01716	\$0.01800	(\$251.41)
Dec-15	256,691.00	470.00	75%	\$4,405.08	\$0.01716	\$0.01800	(\$215.36)
Jan-16	277,653.00	485.00	78%	\$5,305.11	\$0.01911	\$0.01800	\$307.36
Feb-16	307,420.00	679.00	62%	\$5,873.87	\$0.01911	\$0.01800	\$340.31
Mar-16	188,778.00	529.00	49%	\$3,606.98	\$0.01911	\$0.01800	\$208.98
Apr-16	156,991.00	498.00	43%	\$3,409.37	\$0.02172	\$0.01800	\$583.53
May-16	222,914.00	543.00	56%	\$4,841.02	\$0.02172	\$0.01800	\$828.57
Jun-16	222,891.00	723.00	42%	\$4,840.52	\$0.02172	\$0.01800	\$828.48
Jul-16	366,741.00	963.00	52%	\$6,472.61	\$0.01765	\$0.01800	(\$128.73)
Aug-16	302,252.00	1,038.00	40%	\$5,334.44	\$0.01765	\$0.01800	(\$106.10)
Sep-16	300,797.00	827.00	50%	\$5,308.77	\$0.01765	\$0.01800	(\$105.58)
Oct-16	267,702.00	617.00	59%	\$4,862.54	\$0.01816	\$0.01800	\$43.90
Nov-16	252,774.00	662.00	52%	\$4,591.39	\$0.01816	\$0.01800	\$41.46
Dec-16	253,018.00	693.00	50%	\$4,595.82	\$0.01816	\$0.01800	\$41.50
Jan-17	289,432.00	544.00	73%	\$5,821.63	\$0.02011	\$0.01800	\$611.85
Feb-17	251,589.00	522.00	66%	\$5,060.46	\$0.02011	\$0.01800	\$531.86
Mar-17	236,521.00	522.00	62%	\$4,757.39	\$0.02011	\$0.01800	\$500.01
Apr-17	221,507.00	522.00	58%	\$4,927.64	\$0.02225	\$0.01800	\$940.51
May-17	239,338.00	606.00	54%	\$5,324.31	\$0.02225	\$0.01800	\$1,016.23
Jun-17	263,253.00	592.00	61%	\$5,856.33	\$0.02225	\$0.01800	\$1,117.78
Jul-17	330,715.00	842.00	54%	\$7,300.86	\$0.02208	\$0.01800	\$1,347.99
Aug-17	329,256.00	1,083.00	42%	\$7,268.66	\$0.02208	\$0.01800	\$1,342.05
Sep-17	285,564.00	827.00	47%	\$6,304.11	\$0.02208	\$0.01800	\$1,163.96
Oct-17	393,517.00	842.00	64%	\$8,242.22	\$0.02095	\$0.01800	\$1,158.91
Nov-17	296,015.00	617.00	66%	\$6,200.04	\$0.02095	\$0.01800	\$871.77
Dec-17	332,524.00	649.00	70%	\$6,964.72	\$0.02095	\$0.01800	\$979.29
Jan-18	292,561.00	607.00	66%	\$6,221.31	\$0.02127	\$0.01800	\$955.21
Feb-18	295,229.00	692.00	58%	\$6,278.05	\$0.02127	\$0.01800	\$963.93
Mar-18	244,749.00	543.00	62%	\$5,204.59	\$0.02127	\$0.01800	\$799.11
Apr-18	260,332.00	571.00	62%	\$4,902.31	\$0.01883	\$0.01800	\$216.33
May-18	286,848.00	656.00	60%	\$5,401.64	\$0.01883	\$0.01800	\$238.38
Jun-18	358,257.00	1,159.00	42%	\$6,746.34	\$0.01883	\$0.01800	\$297.71
Jul-18	331,786.00	1,010.00	45%	\$7,413.10	\$0.02234	\$0.01800	\$1,440.95
Aug-18	385,259.00	1,047.00	50%	\$8,607.84	\$0.02234	\$0.01800	\$1,673.18
Sep-18	359,743.00	896.00	55%	\$8,037.74	\$0.02234	\$0.01800	\$1,562.37
Oct-18	324,218.00	856.00	52%	\$7,698.88	\$0.02375	\$0.01800	\$1,862.96
Nov-18	212,931.00	581.00	50%	\$5,056.26	\$0.02375	\$0.01800	\$1,223.50
Dec-18	258,188.00	581.00	61%	\$6,130.93	\$0.02375	\$0.01800	\$1,483.55



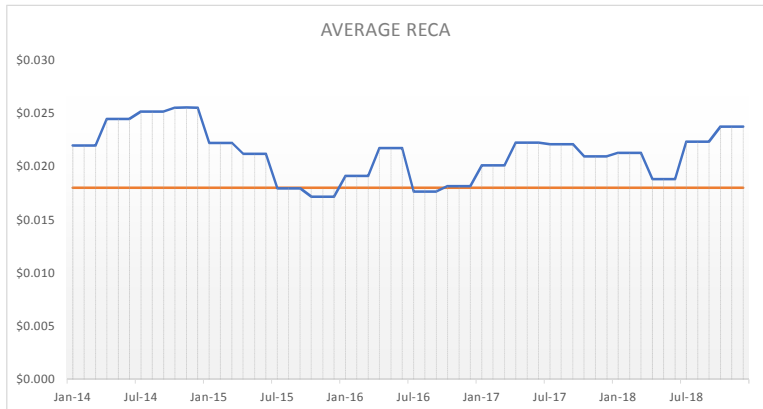
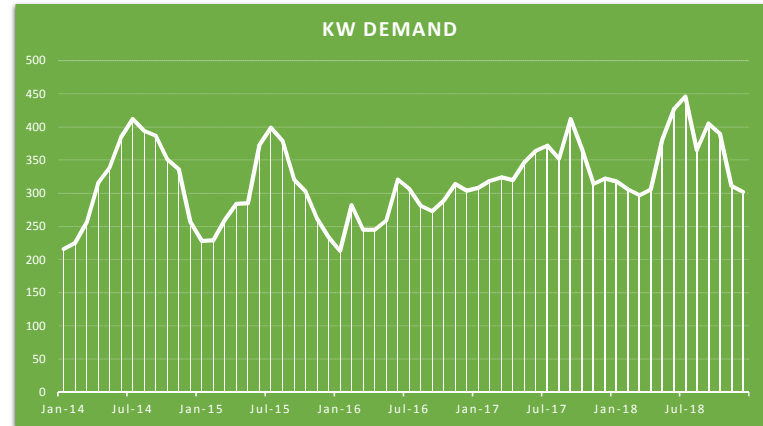
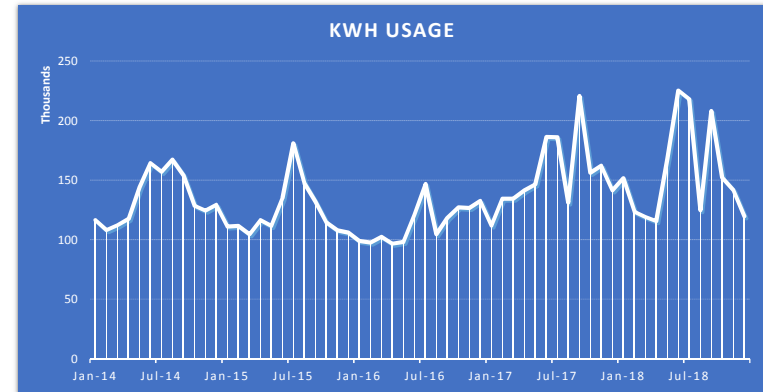
City of Lawrence, KS
 Electric Usage Analysis
Wakarusa River WWTP
 2300 E 41ST ST WWTP

Month	kWh Usage	kW Demand	Load Factor	RECA Charge \$	Average RECA	DRPS	Potential Savings
Apr-18	-	-	#DIV/0!	\$0.00	#DIV/0!	\$0.01800	
May-18	123,920.00	342.00	50%	\$2,333.54	\$0.01883	\$0.01800	\$102.98
Jun-18	186,560.00	311.00	82%	\$3,513.11	\$0.01883	\$0.01800	\$155.03
Jul-18	201,840.00	430.00	64%	\$4,509.71	\$0.02234	\$0.01800	\$876.59
Aug-18	213,360.00	420.00	70%	\$4,767.10	\$0.02234	\$0.01800	\$926.62
Sep-18	216,800.00	375.00	79%	\$4,843.96	\$0.02234	\$0.01800	\$941.56
Oct-18	204,480.00	448.00	63%	\$4,855.58	\$0.02375	\$0.01800	\$1,174.94
Nov-18	278,160.00	523.00	73%	\$6,605.19	\$0.02375	\$0.01800	\$1,598.31
Dec-18	322,160.00	533.00	83%	\$7,650.01	\$0.02375	\$0.01800	\$1,851.13

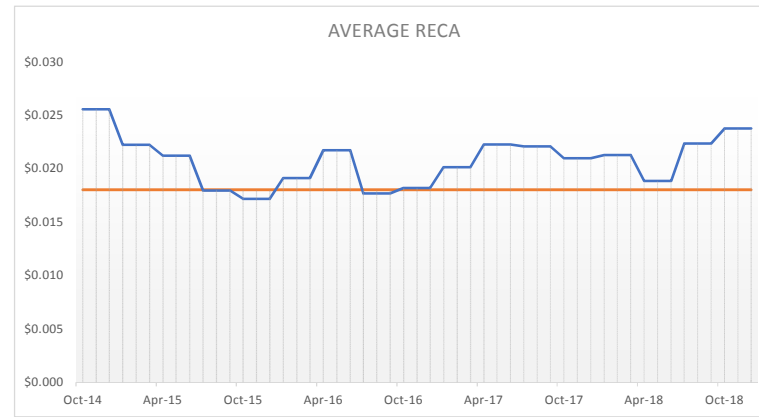
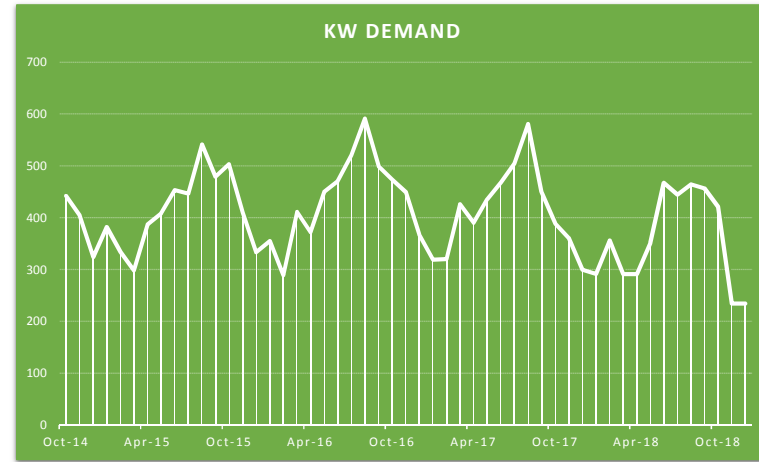
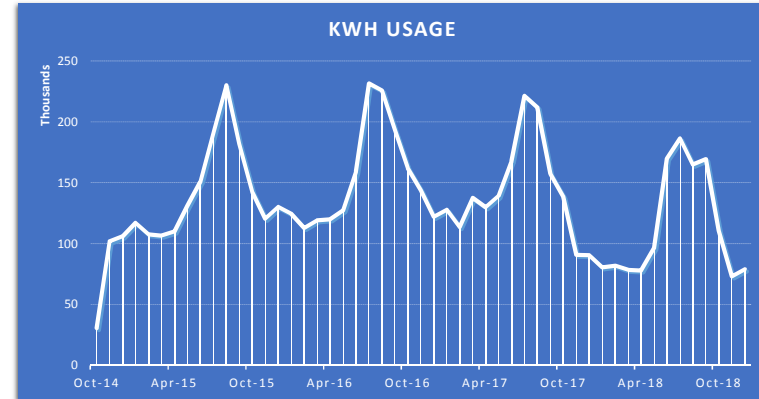


Month	kWh Usage	kW Demand	Load Factor	RECA Charge \$	Average RECA	DRPS	Potential Savings
Jan-14	116,397.00	216.00	74%	\$2,556.08	\$0.02196	\$0.01800	\$460.93
Feb-14	108,167.00	225.00	66%	\$2,375.35	\$0.02196	\$0.01800	\$428.34
Mar-14	112,257.00	256.00	60%	\$2,465.16	\$0.02196	\$0.01800	\$444.53
Apr-14	117,528.00	316.00	51%	\$2,876.62	\$0.02448	\$0.01800	\$761.12
May-14	144,161.00	339.00	58%	\$3,528.48	\$0.02448	\$0.01800	\$933.58
Jun-14	164,423.00	385.00	59%	\$4,024.42	\$0.02448	\$0.01800	\$1,064.81
Jul-14	157,035.00	412.00	52%	\$3,950.69	\$0.02516	\$0.01800	\$1,124.06
Aug-14	167,393.00	394.00	58%	\$4,211.27	\$0.02516	\$0.01800	\$1,198.20
Sep-14	154,362.00	387.00	55%	\$3,883.44	\$0.02516	\$0.01800	\$1,104.92
Oct-14	128,482.00	351.00	50%	\$3,279.76	\$0.02553	\$0.01800	\$967.08
Nov-14	124,481.00	336.00	51%	\$3,177.63	\$0.02553	\$0.01800	\$936.97
Dec-14	129,401.00	257.00	69%	\$3,303.22	\$0.02553	\$0.01800	\$974.00
Jan-15	111,243.00	228.00	67%	\$2,472.04	\$0.02222	\$0.01800	\$469.67
Feb-15	111,541.00	229.00	67%	\$2,478.66	\$0.02222	\$0.01800	\$470.92
Mar-15	104,727.00	260.00	55%	\$2,327.24	\$0.02222	\$0.01800	\$442.15
Apr-15	116,478.00	284.00	56%	\$2,469.45	\$0.02120	\$0.01800	\$372.85
May-15	111,580.00	285.00	54%	\$2,365.61	\$0.02120	\$0.01800	\$357.17
Jun-15	134,948.00	373.00	50%	\$2,861.03	\$0.02120	\$0.01800	\$431.97
Jul-15	180,910.00	399.00	62%	\$3,245.53	\$0.01794	\$0.01800	(\$10.85)
Aug-15	147,579.00	379.00	53%	\$2,647.57	\$0.01794	\$0.01800	(\$8.85)
Sep-15	132,107.00	321.00	56%	\$2,370.00	\$0.01794	\$0.01800	(\$7.93)
Oct-15	114,687.00	303.00	52%	\$1,968.14	\$0.01716	\$0.01800	(\$96.23)
Nov-15	107,871.00	262.00	56%	\$1,851.17	\$0.01716	\$0.01800	(\$90.51)
Dec-15	106,033.00	234.00	62%	\$1,819.63	\$0.01716	\$0.01800	(\$88.96)
Jan-16	98,922.00	213.00	64%	\$1,890.10	\$0.01911	\$0.01800	\$109.50
Feb-16	97,774.00	282.00	47%	\$1,868.17	\$0.01911	\$0.01800	\$108.24
Mar-16	102,471.00	245.00	57%	\$1,957.91	\$0.01911	\$0.01800	\$113.43
Apr-16	96,748.00	245.00	54%	\$2,101.08	\$0.02172	\$0.01800	\$359.62
May-16	98,102.00	259.00	52%	\$2,130.48	\$0.02172	\$0.01800	\$364.64
Jun-16	120,924.00	321.00	52%	\$2,626.11	\$0.02172	\$0.01800	\$449.48
Jul-16	146,921.00	307.00	66%	\$2,593.01	\$0.01765	\$0.01800	(\$51.57)
Aug-16	104,754.00	281.00	51%	\$1,848.80	\$0.01765	\$0.01800	(\$36.77)
Sep-16	118,485.00	273.00	59%	\$2,091.14	\$0.01765	\$0.01800	(\$41.59)
Oct-16	127,151.00	289.00	60%	\$2,309.57	\$0.01816	\$0.01800	\$20.85
Nov-16	126,808.00	314.00	55%	\$2,303.34	\$0.01816	\$0.01800	\$20.80
Dec-16	132,539.00	304.00	60%	\$2,407.44	\$0.01816	\$0.01800	\$21.74
Jan-17	111,944.00	308.00	50%	\$2,251.64	\$0.02011	\$0.01800	\$236.65
Feb-17	134,422.00	319.00	58%	\$2,703.76	\$0.02011	\$0.01800	\$284.16
Mar-17	134,396.00	324.00	57%	\$2,703.24	\$0.02011	\$0.01800	\$284.11
Apr-17	141,604.00	320.00	61%	\$3,150.12	\$0.02225	\$0.01800	\$601.25
May-17	146,686.00	347.00	58%	\$3,263.18	\$0.02225	\$0.01800	\$622.83
Jun-17	186,335.00	364.00	70%	\$4,145.21	\$0.02225	\$0.01800	\$791.18
Jul-17	186,185.00	372.00	69%	\$4,110.22	\$0.02208	\$0.01800	\$758.89
Aug-17	131,197.00	352.00	51%	\$2,896.30	\$0.02208	\$0.01800	\$534.75
Sep-17	220,687.00	412.00	73%	\$4,871.89	\$0.02208	\$0.01800	\$899.52
Oct-17	156,190.00	366.00	58%	\$3,271.40	\$0.02095	\$0.01800	\$459.98
Nov-17	162,263.00	314.00	71%	\$3,398.60	\$0.02095	\$0.01800	\$477.87
Dec-17	141,593.00	322.00	60%	\$2,965.67	\$0.02095	\$0.01800	\$417.00
Jan-18	151,717.00	318.00	65%	\$3,226.26	\$0.02126	\$0.01800	\$495.35
Feb-18	123,366.00	306.00	55%	\$2,623.38	\$0.02127	\$0.01800	\$402.79
Mar-18	119,091.00	297.00	55%	\$2,532.47	\$0.02126	\$0.01800	\$388.83
Apr-18	115,622.00	306.00	52%	\$2,177.28	\$0.01883	\$0.01800	\$96.08
May-18	168,404.00	381.00	61%	\$3,171.22	\$0.01883	\$0.01800	\$139.95
Jun-18	225,358.00	427.00	72%	\$4,243.72	\$0.01883	\$0.01800	\$187.28
Jul-18	218,022.00	446.00	67%	\$4,871.27	\$0.02234	\$0.01800	\$946.87
Aug-18	124,955.00	365.00	47%	\$2,791.87	\$0.02234	\$0.01800	\$542.68
Sep-18	208,044.00	405.00	70%	\$4,648.33	\$0.02234	\$0.01800	\$903.54
Oct-18	152,330.00	390.00	54%	\$3,617.23	\$0.02375	\$0.01800	\$875.29
Nov-18	141,752.00	311.00	62%	\$3,366.04	\$0.02375	\$0.01800	\$814.50
Dec-18	119,610.00	302.00	54%	\$2,840.26	\$0.02375	\$0.01800	\$687.28

Last 12 Months: \$6,480.45



Month	kWh Usage	kW Demand	Load Factor	RECA Charge \$	Average RECA	DRPS	Potential Savings
Jan-14	-	-	#DIV/0!	\$0.00	#DIV/0!	\$0.01800	#DIV/0!
Feb-14	-	-	#DIV/0!	\$0.00	#DIV/0!	\$0.01800	#DIV/0!
Mar-14	-	-	#DIV/0!	\$0.00	#DIV/0!	\$0.01800	#DIV/0!
Apr-14	-	-	#DIV/0!	\$0.00	#DIV/0!	\$0.01800	#DIV/0!
May-14	-	-	#DIV/0!	\$0.00	#DIV/0!	\$0.01800	#DIV/0!
Jun-14	-	-	#DIV/0!	\$0.00	#DIV/0!	\$0.01800	#DIV/0!
Jul-14	-	-	#DIV/0!	\$0.00	#DIV/0!	\$0.01800	#DIV/0!
Aug-14	-	-	#DIV/0!	\$0.00	#DIV/0!	\$0.01800	#DIV/0!
Sep-14	-	-	#DIV/0!	\$0.00	#DIV/0!	\$0.01800	#DIV/0!
Oct-14	30,630.00	442.00	9%	\$781.89	\$0.02553	\$0.01800	\$230.55
Nov-14	101,638.00	405.00	34%	\$2,594.51	\$0.02553	\$0.01800	\$765.03
Dec-14	106,078.00	324.00	45%	\$2,707.85	\$0.02553	\$0.01800	\$798.45
Jan-15	117,068.00	382.00	42%	\$2,601.49	\$0.02222	\$0.01800	\$494.27
Feb-15	107,419.00	334.00	44%	\$2,387.07	\$0.02222	\$0.01800	\$453.53
Mar-15	106,372.00	298.00	49%	\$2,363.80	\$0.02222	\$0.01800	\$449.10
Apr-15	110,035.00	387.00	39%	\$2,332.85	\$0.02120	\$0.01800	\$352.22
May-15	130,956.00	408.00	44%	\$2,776.40	\$0.02120	\$0.01800	\$419.19
Jun-15	150,755.00	453.00	46%	\$3,196.16	\$0.02120	\$0.01800	\$482.57
Jul-15	190,331.00	446.00	58%	\$3,414.54	\$0.01794	\$0.01800	(\$11.42)
Aug-15	229,880.00	541.00	58%	\$4,124.05	\$0.01794	\$0.01800	(\$13.79)
Sep-15	181,819.00	479.00	52%	\$3,261.83	\$0.01794	\$0.01800	(\$10.91)
Oct-15	142,326.00	503.00	39%	\$2,442.46	\$0.01716	\$0.01800	(\$119.41)
Nov-15	120,409.00	410.00	40%	\$2,066.34	\$0.01716	\$0.01800	(\$101.02)
Dec-15	130,046.00	333.00	53%	\$2,231.72	\$0.01716	\$0.01800	(\$109.11)
Jan-16	124,698.00	355.00	48%	\$2,382.60	\$0.01911	\$0.01800	\$138.04
Feb-16	112,850.00	289.00	53%	\$2,156.22	\$0.01911	\$0.01800	\$124.92
Mar-16	119,075.00	411.00	40%	\$2,275.17	\$0.01911	\$0.01800	\$131.82
Apr-16	119,961.00	372.00	44%	\$2,605.19	\$0.02172	\$0.01800	\$445.89
May-16	127,358.00	450.00	39%	\$2,765.83	\$0.02172	\$0.01800	\$473.39
Jun-16	158,743.00	470.00	46%	\$3,447.42	\$0.02172	\$0.01800	\$590.05
Jul-16	231,313.00	520.00	61%	\$4,082.44	\$0.01765	\$0.01800	(\$81.19)
Aug-16	225,806.00	591.00	52%	\$3,985.25	\$0.01765	\$0.01800	(\$79.26)
Sep-16	192,962.00	499.00	53%	\$3,405.59	\$0.01765	\$0.01800	(\$67.73)
Oct-16	161,791.00	474.00	47%	\$2,938.77	\$0.01816	\$0.01800	\$26.53
Nov-16	143,803.00	449.00	44%	\$2,612.04	\$0.01816	\$0.01800	\$23.59
Dec-16	121,992.00	367.00	46%	\$2,215.86	\$0.01816	\$0.01800	\$20.00
Jan-17	127,653.00	319.00	55%	\$2,567.61	\$0.02011	\$0.01800	\$269.86
Feb-17	113,464.00	320.00	49%	\$2,282.21	\$0.02011	\$0.01800	\$239.86
Mar-17	137,545.00	426.00	44%	\$2,766.58	\$0.02011	\$0.01800	\$290.77
Apr-17	129,833.00	390.00	46%	\$2,888.26	\$0.02225	\$0.01800	\$551.27
May-17	139,255.00	435.00	44%	\$3,097.87	\$0.02225	\$0.01800	\$591.28
Jun-17	167,446.00	468.00	49%	\$3,725.00	\$0.02225	\$0.01800	\$710.97
Jul-17	221,292.00	504.00	60%	\$4,885.24	\$0.02208	\$0.01800	\$901.98
Aug-17	211,892.00	581.00	50%	\$4,677.73	\$0.02208	\$0.01800	\$863.67
Sep-17	157,122.00	449.00	48%	\$3,468.63	\$0.02208	\$0.01800	\$640.43
Oct-17	138,492.00	389.00	49%	\$2,900.71	\$0.02094	\$0.01800	\$407.85
Nov-17	90,682.00	361.00	34%	\$1,899.33	\$0.02094	\$0.01800	\$267.05
Dec-17	90,527.00	299.00	41%	\$1,896.09	\$0.02095	\$0.01800	\$266.60
Jan-18	80,388.00	291.00	38%	\$1,709.45	\$0.02126	\$0.01800	\$262.47
Feb-18	81,806.00	356.00	31%	\$1,739.60	\$0.02126	\$0.01800	\$267.09
Mar-18	78,440.00	291.00	37%	\$1,668.03	\$0.02127	\$0.01800	\$256.11
Apr-18	77,863.00	291.00	37%	\$1,466.24	\$0.01883	\$0.01800	\$64.71
May-18	96,548.00	351.00	38%	\$1,818.10	\$0.01883	\$0.01800	\$80.24
Jun-18	169,703.00	467.00	50%	\$3,195.68	\$0.01883	\$0.01800	\$141.03
Jul-18	186,370.00	444.00	58%	\$4,164.06	\$0.02234	\$0.01800	\$809.40
Aug-18	164,684.00	464.00	49%	\$3,679.53	\$0.02234	\$0.01800	\$715.22
Sep-18	169,227.00	456.00	51%	\$3,781.04	\$0.02234	\$0.01800	\$734.95
Oct-18	110,475.00	421.00	36%	\$2,623.34	\$0.02375	\$0.01800	\$634.79
Nov-18	73,257.00	234.00	43%	\$1,739.56	\$0.02375	\$0.01800	\$420.93
Dec-18	78,960.00	234.00	46%	\$1,874.98	\$0.02375	\$0.01800	\$453.70



Appendix B – Westar Tariffs

Index _____

THE STATE CORPORATION COMMISSION OF KANSAS

WESTAR ENERGY, INC & KANSAS GAS & ELECTRIC COMPANY, d.b.a. WESTAR ENERGY

SCHEDULE _____ DRPS _____

(Name of Issuing Utility)

Replacing Schedule Initial Sheet 1

WESTAR RATE AREA

(Territory to which schedule is applicable)

which was filed Initial

No supplement or separate understanding shall modify the tariff as shown hereon.

Sheet 1 of 3 Sheets

DIRECT RENEWABLE PARTICIPATION SERVICE

AVAILABLE

This service is available at points on the Company's existing distribution facilities for customers wishing to be served with renewable energy resources. Direct Renewable Participation Service shall be available on a first-come, first-served basis until the Company's allocation of renewable generating capacity and its associated green attributes has been assigned. All customers receiving service under this schedule must enter into a written Application / Agreement for this service.

APPLICABLE

Direct Renewable participation service is available for customers with an average monthly peak demand of greater than 500 kW accepting service under any tariff subject to the Retail Energy Cost Adjustment (RECA).

This schedule is not available to restricted rate schedules or backup, breakdown, standby, supplemental, short term, resale or shared electric service.

CHARACTER OF SERVICE

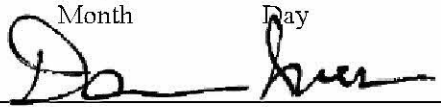
Customers participating in this service will pay a fixed rate for the term of the agreement as a substitute for charges under the Retail Energy Cost Adjustment (RECA) Surcharge for the renewable energy purchased. Any usage beyond the agreed amount under this service will be billed at the current authorized RECA rate. The monthly amount subscribed will be a fixed kW amount in 500 kW increments up to 2,000 kW, and in 1,000 kW increments thereafter.

Westar will work with the customer to determine an appropriate amount of renewable energy to place under contract and will carry over any excess generation to the customers' next bill on a monthly basis. At the end of each calendar year, any excess generation will be credited to the customers' bill at 80% of the Renewable Participation Charge rate. Those customers with recurring excess generation will have their contracted amount reduced to better match their usage.

Alternating current, 60 hertz, at the voltage and phase of the Company's established transmission or distribution system most available to the service location.

Issued _____
Month Day Year

Effective July 10 2018
Month Day Year

By 
Darrin Ives, Vice President

18-WSEE-190-TAR
Approved
Kansas Corporation Commission
July 10, 2018
/S/ Lynn M. Retz

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THE STATE CORPORATION COMMISSION OF KANSAS

WESTAR ENERGY, INC & KANSAS GAS & ELECTRIC COMPANY, d.b.a. WESTAR ENERGY

SCHEDULE _____ DRPS _____

(Name of Issuing Utility)

Replacing Schedule Initial Sheet 2

WESTAR RATE AREA

(Territory to which schedule is applicable)

which was filed Initial

No supplement or separate understanding shall modify the tariff as shown hereon.

Sheet 2 of 3 Sheets

DIRECT RENEWABLE PARTICIPATION SERVICE

NET MONTHLY BILL

Energy purchased under this service will be billed at the Renewable Participation Charge as a substitute for the RECA. Customer usage exceeding the customer selected volume of usage purchased through the renewable direct service tariff will be subject to the then current RECA surcharge.

Renewable Participation Charge Defined by Project (Appendix A)


All charges, adjustments, and surcharges, except the RECA, will be billed at the standard rates applicable to the customer's rate class.

DEFINITIONS AND CONDITIONS

1. Service hereunder is subject to the Company's General Terms and Conditions as approved by the Kansas Corporation Commission and any modification subsequently approved.
2. All provisions of this rate schedule are subject to changes made by order of the regulatory authority having jurisdiction.
3. The term of the agreement is determined by each project as defined in Appendix A.
4. Customers may maintain participation in this program when relocating facilities or service within Westar Energy's territory.
5. This price is fixed and will not rise or fall with changes to RECA.
6. Certification of renewable energy associated with the purchased wind energy under this service will be delivered to the customer.

Issued _____
Month Day Year

Effective July 10 2018
Month Day Year

By 
Darrin Ives, Vice President

18-WSEE-190-TAR
Approved
Kansas Corporation Commission
July 10, 2018
/S/ Lynn M. Retz

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THE STATE CORPORATION COMMISSION OF KANSAS

WESTAR ENERGY, INC & KANSAS GAS & ELECTRIC COMPANY, d.b.a. WESTAR ENERGY

(Name of Issuing Utility)

WESTAR RATE AREA

(Territory to which schedule is applicable)

SCHEDULE _____ DRPS _____

Replacing Schedule Initial Sheet 3

which was filed Initial

No supplement or separate understanding shall modify the tariff as shown hereon.

Sheet 3 of 3 Sheets


DIRECT RENEWABLE PARTICIPATION SERVICE

Appendix A

<u>Project Name</u>	<u>Capacity Available</u>	<u>Contract Term</u>	<u>Fixed Price</u>
Soldier Creek Wind Farm	200 MW	20 year	1.800¢ per kWh

Issued _____
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18-WSEE-190-TAR
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July 10, 2018
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THE STATE CORPORATION COMMISSION OF KANSAS

WESTAR ENERGY, INC & KANSAS GAS & ELECTRIC COMPANY, d.b.a. WESTAR ENERGY

(Name of Issuing Utility)

WESTAR RATE AREA

(Territory to which schedule is applicable)

SCHEDULE LGS

Replacing Schedule LGS Sheet 1

which was filed June 8, 2017

No supplement or separate understanding shall modify the tariff as shown hereon.

Sheet 1 of 3 Sheets

LARGE GENERAL SERVICE

AVAILABLE

Electric service is available under this rate schedule at points on the company's existing distribution facilities.

APPLICABLE

To any customer using electric service supplied at one point of delivery and with a minimum Billing Demand greater than 1,000 kW. This rate schedule is not applicable to backup, breakdown, standby, supplemental, short term, resale or shared electric service.

If the customer billing demand exceeds 25,000 kW in any one billing month, the customer will be reclassified and will prospectively take service pursuant to the rates, terms and conditions of the Industrial and Large Power rate schedule.

NET MONTHLY BILL

BASIC SERVICE FEE \$320.00
ENERGY CHARGE 1.3295¢ per kWh
DEMAND CHARGE \$14.199799 per kW


Plus all applicable adjustments and surcharges.

MINIMUM MONTHLY BILL

The greater of the Demand Charge for 1,000 kW of Billing Demand, or the minimum specified in the Electric Service Agreement, plus all applicable adjustments and surcharges.

Issued _____
Month Day Year

Effective September 27 2018
Month Day Year

By 
Darrin Ives, Vice President

18-WSEE-328-RTS
Approved *JRF*
Kansas Corporation Commission
September 27, 2018
/S/ Lynn M. Retz

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THE STATE CORPORATION COMMISSION OF KANSAS

WESTAR ENERGY, INC & KANSAS GAS & ELECTRIC COMPANY, d.b.a. WESTAR ENERGY

(Name of Issuing Utility)

WESTAR RATE AREA

(Territory to which schedule is applicable)

SCHEDULE _____ LGS _____

Replacing Schedule _____ LGS _____ Sheet _____ 2 _____

which was filed _____ June 8, 2017 _____

No supplement or separate understanding shall modify the tariff as shown hereon.

Sheet 2 of 3 Sheets

LARGE GENERAL SERVICE

BILLING DEMAND

Billing Demand shall be the greatest of:

1. 1,000 kW, or
2. the average kW load supplied during the 15-minute period of maximum use during the month, adjusted for excessive lagging power factor, as described below, or
3. 85 percent of the highest Billing Demand, as adjusted for power factor, established during the previous billing months of June, July, August or September, within the most recent 11 months, or
4. the minimum demand specified in the Electric Service Agreement.

ADJUSTMENTS AND SURCHARGES

Power Factor Adjustment

If the power factor for the month is less than 0.90 at the point of delivery, Billing Demand will be increased by multiplying by 0.90 and dividing by the power factor.

Other Adjustments and Surcharges


The rates hereunder are subject to adjustment as provided in the following schedules:

1. Retail Energy Cost Adjustment
2. Property Tax Surcharge
3. Transmission Delivery Charge
4. Environmental Cost Recovery Rider
5. Renewable Energy Program Rider
6. Energy Efficiency Rider
7. Tax Adjustment

Plus all applicable adjustments and surcharges.

Issued _____
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18-WSEE-328-RTS
Approved 
Kansas Corporation Commission
September 27, 2018
/S/ Lynn M. Retz

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THE STATE CORPORATION COMMISSION OF KANSAS

WESTAR ENERGY, INC & KANSAS GAS & ELECTRIC COMPANY, d.b.a. WESTAR ENERGY

SCHEDULE _____ LGS _____

(Name of Issuing Utility)

Replacing Schedule _____ LGS _____ Sheet 3

WESTAR RATE AREA

(Territory to which schedule is applicable)

which was filed _____ June 8, 2017 _____

No supplement or separate understanding shall modify the tariff as shown hereon.

Sheet 3 of 3 Sheets

LARGE GENERAL SERVICE

DEFINITIONS AND CONDITIONS

1. Alternating current, at approximately 60 hertz, at the standard phase and voltage available, shall be supplied to a single location at points on Company's existing transmission or distribution facilities having sufficient capacity. The Demand Charge applies to service provided at primary distribution voltage.
2. Service shall normally be measured at delivery voltage; however, Company reserves the right to measure service at other than delivery voltage and adjust such measurements accordingly.
3. The initial term of service under this rate schedule shall be one year. Company reserves the right to require the customer to execute an Electric Service Agreement with an additional charge, or special minimum and/or a longer initial term when additional facilities are required to serve the customer.
4. When electric service is taken at a secondary distribution voltage, the Demand Charge shall be increased by \$1.006812 per kW and the Energy Charge shall be increased by \$0.001030 per kWh.
5. When electric service is taken at 34.5 kV or above, the Demand Charge shall be decreased by \$2.082738 per kW and the Energy Charge shall be decreased by \$0.000690 per kWh.
6. Service under this rate schedule is subject to Company's General Terms and Conditions presently on file with the State Corporation Commission of Kansas and any modifications subsequently approved.
7. All provisions of this rate schedule are subject to changes made by order of the regulatory authority having jurisdiction.

Issued _____
Month Day Year

Effective September 27 2018
Month Day Year

By 
Darrin Ives, Vice President

18-WSEE-328-RTS
Approved *JRF*
Kansas Corporation Commission
September 27, 2018
/S/ Lynn M. Retz

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THE STATE CORPORATION COMMISSION OF KANSAS

WESTAR ENERGY, INC & KANSAS GAS & ELECTRIC COMPANY, d.b.a. WESTAR ENERGY

(Name of Issuing Utility)

WESTAR RATE AREA

(Territory to which schedule is applicable)

SCHEDULE MGS

Replacing Schedule MGS Sheet 1

which was filed June 8, 2017

No supplement or separate understanding shall modify the tariff as shown hereon.

Sheet 1 of 3 Sheets

MEDIUM GENERAL SERVICE

AVAILABLE

Electric service is available under this rate schedule at points on Company's existing distribution facilities.

APPLICABLE

To any customer using electric service supplied at one point of delivery and with a minimum Billing Demand greater than 200 kW. This rate schedule is not applicable to backup, breakdown, standby, supplemental, short term, resale or shared electric service.

If the customer billing demand reaches or exceeds a 1,100 kW 12-month average, or 1,500 kW in any one billing month, the customer will be reclassified and will prospectively take service pursuant to the rates, terms and conditions of the Large General Service rate schedule.

NET MONTHLY BILL

BASIC SERVICE FEE \$118.40

ENERGY CHARGE

Winter Period - Energy used during the billing months of October through May.
1.1839¢ per kWh

Summer Period - Energy used during the billing months of June through September.
1.5590¢ per kWh

DEMAND CHARGE \$16.150000 per kW

Plus all applicable adjustments and surcharges.

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THE STATE CORPORATION COMMISSION OF KANSAS

WESTAR ENERGY, INC & KANSAS GAS & ELECTRIC COMPANY, d.b.a. WESTAR ENERGY

SCHEDULE _____ MGS _____

(Name of Issuing Utility)

Replacing Schedule _____ MGS _____ Sheet _____ 2 _____

WESTAR RATE AREA

(Territory to which schedule is applicable)

which was filed _____ June 8, 2017 _____

No supplement or separate understanding shall modify the tariff as shown hereon.

Sheet 2 of 3 Sheets

MEDIUM GENERAL SERVICE

MINIMUM MONTHLY BILL

The greater of the Basic Service Fee plus the Demand Charge for 200 kW of Billing Demand, or the minimum specified in the electric Service Agreement, plus all applicable adjustments and surcharges.

BILLING DEMAND

Billing Demand shall be the greatest of:

1. 200 kW, or
2. The average kW load supplied during the 15-minute period of maximum use during the month, adjusted for excessive lagging power factor, as described below, or
3. 50 percent of the highest Billing Demand, as adjusted for power factor, established during the previous billing months of June, July, August or September, within the most recent 11 months, or
4. The minimum demand specified in the Electric Service Agreement.

ADJUSTMENTS AND SURCHARGES

Power Factor Adjustment


The Company may determine, by permanent measurement or by test of not less than 30 minutes duration under conditions which the Company determines to be normal, the power factor of a customer. If the power factor for the month is less than 0.90 at the point of delivery, the Billing Demand will be increased by multiplying by 0.90 and dividing by the power factor.

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18-WSEE-328-RTS
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September 27, 2018
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THE STATE CORPORATION COMMISSION OF KANSAS

WESTAR ENERGY, INC & KANSAS GAS & ELECTRIC COMPANY, d.b.a. WESTAR ENERGY

(Name of Issuing Utility)

WESTAR RATE AREA

(Territory to which schedule is applicable)

SCHEDULE MGS

Replacing Schedule MGS Sheet 3

which was filed June 8, 2017

No supplement or separate understanding shall modify the tariff as shown hereon.

Sheet 3 of 3 Sheets

MEDIUM GENERAL SERVICE

Other Adjustments and Surcharges

The rates hereunder are subject to adjustment as provided in the following schedules:

1. Retail Energy Cost Adjustment
2. Property Tax Surcharge
3. Transmission Delivery Charge
4. Environmental Cost Recovery Rider
5. Renewable Energy Program Rider
6. Energy Efficiency Rider
7. Tax Adjustment


Plus all applicable adjustments and surcharges.

DEFINITIONS AND CONDITIONS

1. Alternating current, at approximately 60 hertz, at the standard phase and voltage available shall be supplied to a single location at points on Company's existing distribution facilities having sufficient capacity.
2. Service shall normally be measured at delivery voltage; however, Company reserves the right to measure service at other than delivery voltage and adjust such measurements accordingly.
3. The initial term of service under this rate schedule shall be one year. Company reserves the right to require the customer to execute an Electric Service Agreement with an additional charge, or special minimum and/or a longer initial term when additional facilities are required to serve the customer.
4. Service under this rate schedule is subject to Company's General Terms and Conditions presently on file with the State Corporation Commission of Kansas and any modifications subsequently approved.
5. All provisions of this rate schedule are subject to changes made by order of the regulatory authority having jurisdiction.

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