



## Rate Impact of Renewable sources

### Calculation of Compliance with Kansas Renewable Energy Standard

Year	2017 Actual	2018 Actual	2019 Projected	2020 Projected
<b>Actual Peak Demand</b>	494	496	496	497
Peak Demand Requirement (Based on prior 3 Year Avg)	475	486	490	495
Standard (% of Peak Demand)	15.0%	15.0%	15.0%	20.0%
<b>Renewable Energy Standard Goal</b>	<b>71.2</b>	<b>73.0</b>	<b>73.5</b>	<b>99.1</b>
<b>Renewable Portfolio (MW)</b>				
<b>Total From Generation</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>From Purchased Energy</b>				
<b>Existing Hydropower</b>				
SWPA	38.6	38.6	38.6	38.6
WAPA	4.8	4.8	4.8	4.8
Bowersock Mill South	2.3	2.3	2.3	2.3
Bowersock Mill North plant (A)	4.7	4.7	4.7	4.7
<b>Total Hydropower</b>	<b>50.4</b>	<b>50.4</b>	<b>50.4</b>	<b>50.4</b>
<b>New Photovoltaic (Solar)</b>				
<b>Community Solar</b>	1	1	1	1
<b>Total Solar</b>	<b>1.0</b>	<b>1.0</b>	<b>1.0</b>	<b>1.0</b>
<b>Wind</b>				
Smoky Hill Wind Farm (A)	25.2	25.2	25.2	25.2
Alexander Wind Farm (A)	25.0	25.0	25.0	25.0
Cimmaron Wind Farm	200.0	200.0	200.0	200.0
Add'l added for Kansas Capacity (A)	0.0	0.0	0.0	0.0
<b>Total Wind</b>	<b>250.2</b>	<b>250.2</b>	<b>250.2</b>	<b>250.2</b>
<b>Methane from landfills</b>				
Oak Grove (A)	1.6	1.6	1.6	1.6
Oak Grove expansion (A)	2.0	2.0	2.0	2.0
Add'l added for Kansas Capacity (A)	0.0	0.0	0.0	0.0
<b>Landfill Gas</b>	<b>3.6</b>	<b>3.6</b>	<b>3.6</b>	<b>3.6</b>
<b>Total From Purchased Energy</b>	<b>305.1</b>	<b>305.1</b>	<b>305.1</b>	<b>305.1</b>
<b>Total From RECs</b>	<b>(233.6)</b>	<b>(231.1)</b>	<b>0.0</b>	<b>0.0</b>
<b>Total From Net Metering Systems</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>Total Renewable Portfolio</b>	<b>71.5</b>	<b>74.0</b>	<b>305.1</b>	<b>305.1</b>
% Renewable achieved	15.1%	15.2%	62.3%	61.6%
<b>Excess (Shortage) of KS Standard</b>	<b>0.3</b>	<b>1.0</b>	<b>231.6</b>	<b>206.0</b>

(A) Total Purchased energy renewable energy capacity from a facility constructed in Kansas after January 1, 2000

Add'l amount shown includes 10 % of installed capacity. These count as 1.1 MW per MW per KSA 66-1258

As of 2016 RES, Senate Bill 91 removed KSA 66-1258 and therefore add'l capacity is no longer applied