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PUBLIC SERVICE  
COMMISSION

The Kentucky Public Service Commission  
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Frankfort  
KY 40602-0615

**Case No. 2019-00256**

November 12, 2019

Following comments to the Public Service Commission are for its consideration of the broad issues of implementation of the "Net Metering Act" as they apply to individual utilities.

Net metering is the difference between the dollar value of excess distributed energy generation by a customer-generator that is fed back to the electric grid over a billing period at prices established by the Commission through the ratemaking process (the compensation rate); and the dollar value of all electricity consumed by the same customer-generator over the same billing period that is priced under retail electric utility's tariff rate. This compensation rate is established for each retail electric-utility during a ratemaking proceeding initiated by the electric utility.

**Following comments covers two key areas:**

1. According to the Energy Information Administration: "Kentucky has both utility-scale (1 megawatt or larger) and distributed (customer-sited, small-scale) solar power generation facilities, which together accounted for 0.1% of the state's electricity generation in 2018".

<https://www.eia.gov/state/analysis.php?sid=KY#92>

With reference to findings in the report from Lawrence Berkeley National Laboratory, funded by Office of Energy Efficiency and Renewable Energy of the U.S. Department of Energy: "For the vast majority of states and utilities, the effect of distributed solar on retail electricity prices will likely remain negligible for the foreseeable future. At current penetration levels (0.4% of total U.S. retail electricity sales), distributed solar likely entails no more than a 0.03 cent/kWh long-run increase in U.S. average retail electricity prices, and far smaller than that for most utilities. Even at projected penetration levels in 2030, distributed solar would likely yield no more than roughly a 0.2 cent/kWh (in 2015 dollar) increase in U.S. average retail electricity prices, and less than 0.1 cent/kWh increase in most states, where distributed solar penetration is projected to remain below 1% of electricity sales."

<https://emp.lbl.gov/sites/all/files/lbnl-1007060-es.pdf>

Kentucky's Office of Energy Policy and Kentucky Solar Energy Industries Association estimate that Kentucky's distributed solar generation is not more than half of the state's total 0.1% solar electricity generation, or around 0.05%.

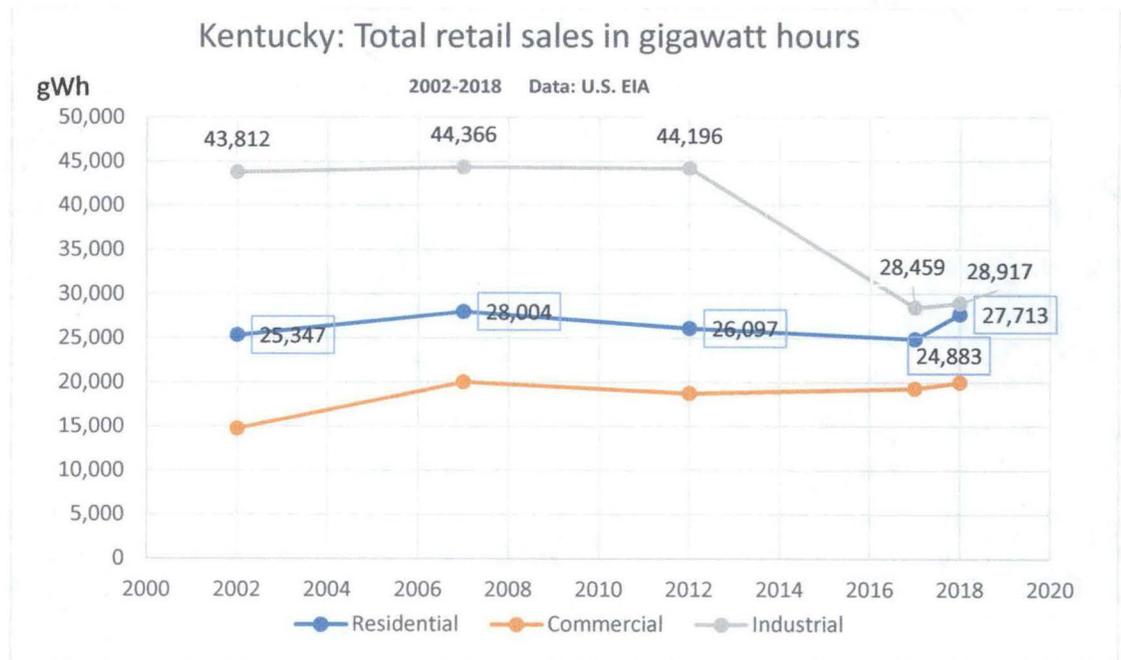
It's estimated, that with the present version of net-metering (phasing out December 31, 2019), it'll take around 10 years for the state to reach 1% of the state's electricity generation.

**Conclusion:** Solar customer-generated electricity in Kentucky is in its infancy, around 0.05% of total electricity generation, the 45<sup>th</sup> lowest in the Country. According to detailed National studies under the U.S. Department of Energy, at this level, the effect of customer-generated electricity on retail electricity prices will likely remain negligible for the foreseeable future.

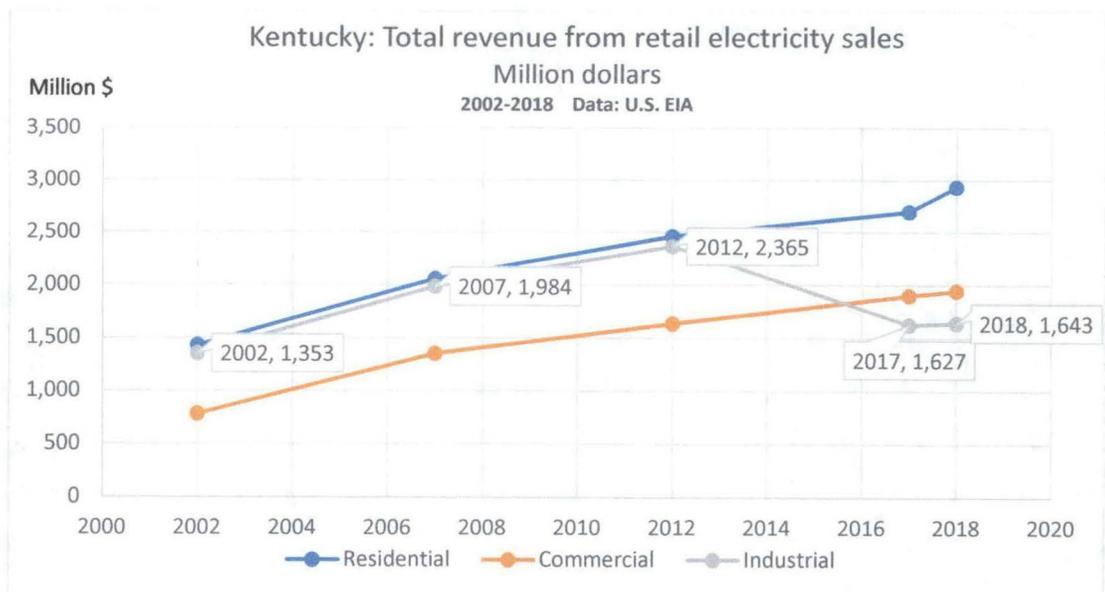
Customer-generated electricity is distributed generation. This is electricity plus service added.

2. Following is of great concern to ratepayers as they might fear higher rates in future as electric utility retail sales to industrial customers plummeted from 2012 to 2017 and are likely to affect the electric utilities overall ability to stay competitive. Kentucky could change from a low-cost to a high-cost electricity provider.

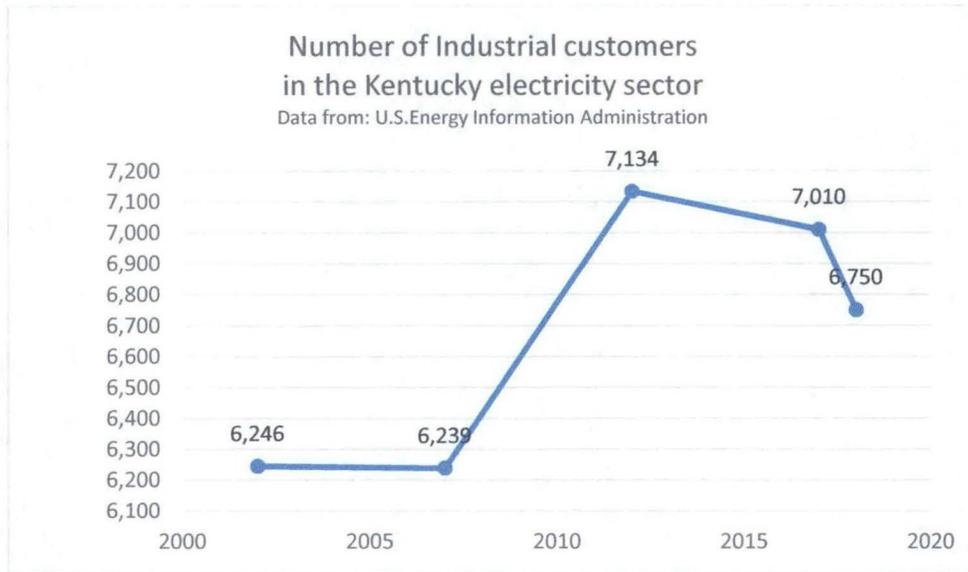
- a. Total retail sales to Industrial customers in gigawatt hours dropped from 44,196 in 2012 to 28,459 in 2017, a 36% drop. The 21 Rural Electric Cooperatives (REC) retail sales went down from 12,131 gigawatt hours in 2012 to 9,986 in 2017. A good 17% drop.



- b. Total retail revenue industry sales plummeted \$738 million over the 5-year period from \$2,365 million in 2012 to \$1,627 million in 2017. The 21 RECs' lost \$167 million in retail revenue.



- c. Total number of industrial customers keeps going down. This customer group used to be the biggest and about the size of residential and commercial customers together. Looking at figures for 2018, industrial customers keep shrinking.

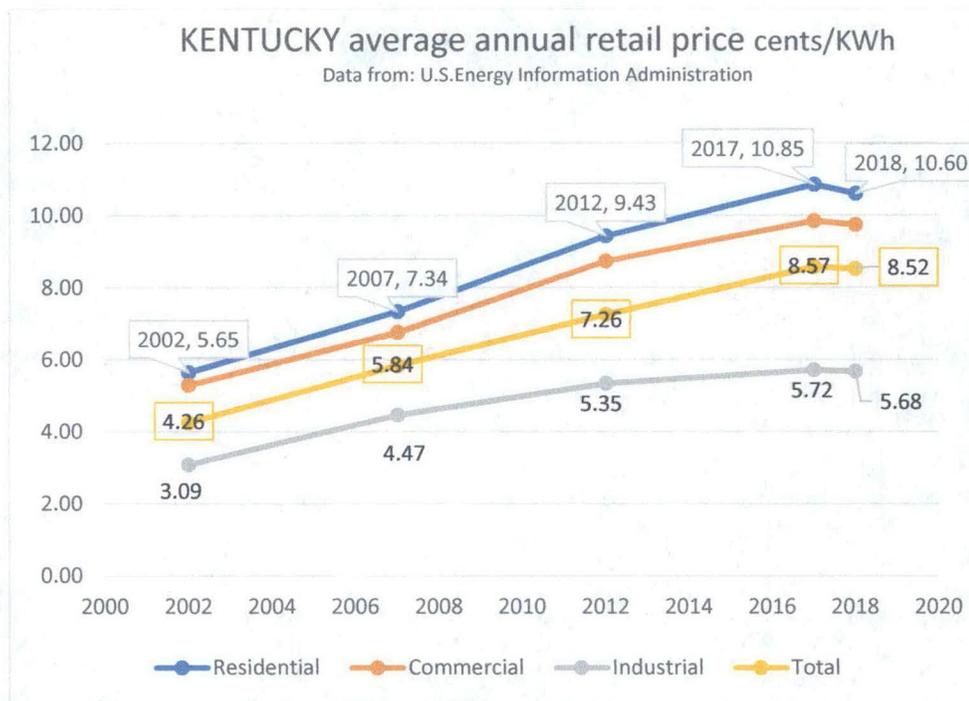


- d. With such a significant loss in revenue and at the same time underutilized power production, this might affect future capital expenditures and the electric utilities ability to pay back debt and ability to attract new investment. This is part of the revenue requirement formula going into the ratemaking calculation and could affect rates to go up over the next years.
- e. The utilities' intangible value is also part of the revenue requirement formula going into the ratemaking calculation. This is likely to go down. Stockholders of Investor-owned utilities are being denied the very profitable performance of companies like NextEra energy, Terraform Power and other power companies, that focus on renewable energy. By not providing renewable energy in timely manner for Industrial customers, the utilities have become uncompetitive. It's very clear from below, that renewable energy companies stock value like NextEra Energy far surpasses companies like Duke Energy.



- f. All electric utilities will need to be able to attract investors, based on progressive business conduct. Losing a huge chunk of its core customer business would be judged poor business performance and informed investors might turn away, also affecting rates.
- g. In 2017-2018, the electric utilities seemingly tried to compensate for their lost sale to Industry customers by lowering energy retail price for the first time since 2002, encouraging existing customers to use more electricity. All groups used slightly more between 2017-2018 as shown in the table under point 1.a.

Lowering the retail price to residential customers from 10.85 to 10.60 cents/kWh seems like a contradiction of their long-standing claim, that roof-top solar customers (customer-generators) are causing a shift in cost to regular ratepayers.



**Conclusion:** Electric utilities have lost major industry customers who are turning to renewable energy resources. This is causing an underutilized generation capacity on coal-powered plants and they'll have difficulties paying down debt. Higher wholesale prices are to be expected in future.

Lost revenue leaves utilities with impaired capital and their overall ability to stay competitive is at risk without investments in renewables. Their ability to attract needed investments for this transition is declining because of more debt and less revenue.

**Following is brought to the Commission's attention**

Ratepayers have reasons for great concern:

- Despite the growing market demand for zero-carbon generation utilities, avoiding expanding and transitioning into renewables in timely manner, has left the state and its' ratepayers in a vulnerable position.
- Losing revenue leaves the utilities with impaired capital.
- Utilities can't have debt – but ratepayers have debt.
- Utilities ability to maintain the distribution infrastructure is weakened.
- Utilities in Kentucky will have difficulties to attract much needed investment.
- More companies and corporations are looking to invest in states with plans for and providing zero-carbon generation as more and more companies are setting zero-carbon energy goals. Kentucky is missing out welcoming new companies invest in the state.
- Rates are likely to go up, as there is a declining demand for coal generated power. Kentucky might go from a low-cost to a high-cost energy state.
- Many states are realizing how distributed generation is a contributor not a competitor and are upgrading the grid to effectively use surplus distributed electricity to boost grid efficiency and grid resilience.
- In a time where renewable energy will become the dominating resource for electricity, grid-infrastructure will need further expansion and investments. Distributed generation will be an aid in this added structure.

Utility rates are required to be fair, just and reasonable.

Utility service is required to be adequate, efficient and reasonable.

Kentucky and it's ratepayers will benefit from setting the compensation rate to equal the retail price.

Many thanks for your consideration.

Yours sincerely,

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<https://www.eia.gov/state/analysis.php?sid=KY#92>

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<https://www.eia.gov/state/print.php?sid=KY>

[www.eia.gov/electricity/data.php#sales](http://www.eia.gov/electricity/data.php#sales)

[psc.ky.gov/PSC\\_WebNet/ListLibrary.aspx?typ=STAT](http://psc.ky.gov/PSC_WebNet/ListLibrary.aspx?typ=STAT)

<https://www.eia.gov/state/analysis.php?sid=KY#92>

<https://www.utilitydive.com/news/northeastern-utilities-aim-to-crush-and-flatten-system-peaks-as-der-boos/562944/>