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502-699-2553

To: Doug Buresh, CEO, Kentucky Municipal Energy Agency

From: Andy McDonald, Director, Apogee – Climate & Energy Transitions

Date: September 17, 2020

Re: Open Records Request

Dear Mr. Buresh,

In accordance with the Kentucky Open Records Act, please provide me with the following information.

For the following requests, please provide responses in native, machine readable formats with formulas intact. If KYMEA provides additional information it believes would be helpful, please be sure to separate it to the extent reasonably feasible from the information requested.

Capacity and Generation

1. For each existing generation unit owned, operated, or under contract by KYMEA, please provide the following actual information by unit for each year from 2017 through 2019:
 - a. Nameplate capacity (MW)
 - b. Unforced capacity (MW)
 - c. Net generation (MWh)
 - d. Fuel consumption (MMBtu)
 - e. Fuel costs (\$)
 - f. Variable O&M costs (\$)
 - g. Fixed O&M costs (\$)
 - h. Capital costs (\$)
 - i. Equivalent Availability Factor (%)
 - j. Random Outage Factor (%)

- k. Planned Outage Factor (%)
 - l. Estimated or planned retirement date (year)
2. For each existing generation unit owned, operated, or under contract by KYMEA *that generated off-system sales*, please provide the following actual information by unit for each year from 2017 through 2019:
- a. Net generation of off-system sales (MWh)
 - b. Energy revenues (\$)
 - c. Capacity revenues (\$)
 - d. Ancillary revenues (\$)
3. For each (not-currently-owned) actual or hypothetical generation unit considered by KYMEA, please provide the following information used in capacity resource planning:
- a. Nameplate capacity (MW)
 - b. Unforced capacity (MW)
 - c. Fuel consumption rate (MMBtu/MWh)
 - d. Fuel cost rate (\$/MMBtu or \$/MWh)
 - e. Variable O&M costs (\$/MWh)
 - f. Fixed O&M costs (\$/MW)
 - g. Capital costs (\$/MW)
 - h. Equivalent Availability Factor (%)
 - i. Random Outage Factor (%)
 - j. Planned Outage Factor (%)
4. For each (not-currently-owned) actual or hypothetical energy storage unit considered by KYMEA, please provide the following information used in capacity resource planning:
- a. Nameplate capacity (MW)
 - b. Total energy capacity (MWh)
 - c. Roundtrip efficiency (%)
 - d. Variable O&M costs (\$/MWh)
 - e. Fixed O&M costs (\$/MW)
 - f. Capital costs (\$/MW)

5. Did KYMEA consider the availability of short- or long-term PPA contracts available to KYMEA?
 - a. If yes, please provide assumptions for available MW and MWh, and associated cost
 - b. If no, why not?
6. Did KYMEA consider purchasing power directly from MISO?
 - a. If yes, please provide assumptions for capacity and energy costs
 - b. If no, why not?

Fuel Contracts

7. For each coal contract to which KYMEA is a party, please provide the following information:
 - a. The annual minimum quantity (tons)
 - b. The annual maximum quantity (tons)
 - c. The price per ton (\$/ton)
 - d. The energy content (MMBtu/ton)
 - e. The date of contract expiration
 - f. The nature of the contract (e.g. take-or-pay, the percentage of spot coal purchases, the ability to alter volume at fixed intervals, seasonal deliveries, etc.)
 - g. Any narrative necessary to best understand the contract relevant to resource planning

Load Forecasting

8. Please provide a complete list and description of inputs used to generate the forecasts, such as population, macroeconomic indicators, and weather variables
9. For each forecast used for KYMEA resource planning, please provide:
 - a. The forecast itself, in the highest resolution available (e.g. hourly, weekly, etc.), including both energy and capacity requirements for each interval
 - b. A narrative describing the forecast (e.g. strong economic growth, high EE adoption, etc.)
 - c. The values of the inputs used to generate the forecast, such as population, macroeconomic indicators, and weather variables

10. Please describe the date and hour associated with the 10 hours of largest demand in each of 2017, 2018, 2019
11. Please characterize the expected peak load hours in the coming decade (e.g. summer weekday late afternoons, early morning on winter days, etc.)

Energy Efficiency

12. For each energy efficiency program deployed by KYMEA currently, please provide the following information:
 - a. The name and brief description of the program
 - b. The total MW saved or avoided in 2017, 2018, and 2019
 - c. The total MWh saved or avoided in 2017, 2018, and 2019
 - d. The expected average measure life for the program
 - e. The cost (\$) to achieve those savings
 - f. For resource planning purposes, please provide the assumptions made for energy efficiency programs possible for KYMEA to deploy, including MW, MWh, and cost information

Transmission and Losses

13. Please provide the average line losses associated with delivering power from KYMEA's generation resources to the distribution circuits in the communities for which KYMEA serves
14. Please provide an estimate for the *marginal* line losses associated with delivering power from KYMEA's generation resources to the distribution circuits at the hours of the expected peak load hours in the coming decade

Thank you very much for your assistance providing this information.

Sincerely,

Andy McDonald, Director

Apogee – Climate & Energy Transitions

Email: andyboeke@yahoo.com