

**COMMONWEATH OF KENTUCKY**  
**BEFORE THE PUBLIC SERVICE COMMISSION**

**In the Matter of:** )  
)  
**ELECTRONIC JOINT APPLICATION** )  
**OF KENTUCKY UTILITIES COMPANY** )  
**AND LOUISVILLE GAS AND** )  
**ELECTRIC COMPANY FOR** )  
**CERTIFICATES OF PUBLIC** )  
**CONVENIENCE AND NECESSITY AND** )  
**SITE COMPATIBILITY** )  
**CERTIFICATES AND APPROVAL OF A** )  
**DEMAND SIDE MANAGEMENT PLAN** )  
**AND APPROVAL OF FOSSIL FUEL-** )  
**FIREED GENERATING UNIT** )  
**RETIREMENTS** )

**CASE NO. 2022-00402**

**SIERRA CLUB’S RESPONSES TO COMMISSION STAFF’S FIRST REQUEST FOR  
INFORMATION TO SIERRA CLUB**

Sierra Club submits these responses to the Commission Staff’s First Request for Information to Sierra Club.

Dated: August 4, 2023

*Of counsel*  
(not licensed in Kentucky)

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Respectfully submitted,

/s/ Joe F. Childers

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## **CERTIFICATE OF SERVICE**

This is to certify that the foregoing copy of Sierra Club's response to the Commission Staff's First Request for Information to Sierra Club is being electronically transmitted to the Commission on August 4, 2023; and that there are currently no parties that the Commission has excused from participation by electronic means in this proceeding.

/s/ Joe F. Childers  
JOE F. CHILDERS

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**CASE NO. 2022-00402**


**AFFIDAVIT OF MICHAEL GOGGIN**

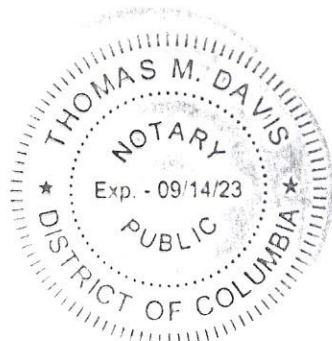
District of )  
Columbia )

Affiant Michael Goggin, being duly sworn, states that he has personal knowledge of the matters set forth in the following responses to the Commission Staff's First Request for Information to Sierra Club, and that the answers contained therein are true and correct to the best of his knowledge, information, and belief.

  
\_\_\_\_\_  
Michael Goggin

Subscribed and sworn before me on this 4 day of August, 2023.

  
\_\_\_\_\_  
Notary Public



**Commission Staff  
Case No. 2022-00402  
Sierra Club Response to  
Commission Staff's Data Requests**

**Request:**

1. Refer to the Direct Testimony of Michael Goggin (Goggin Direct Testimony), page 30, lines 18–20. Explain whether you recommend that all reliability analysis should be done with a capacity accreditation of up to 30 percent below nameplate value for gas generators. If not, what is the appropriate percentage derate?

**Response:**

As explained in the referenced section of Mr. Goggin's testimony, a 30% reduction below the net maximum winter capacity conservatively reflects the winter capacity value of the Companies' gas generators, based on the Companies' existing gas fleet generating 26-35% below its net maximum winter capacity during the peak need period of Winter Storm Elliott. Mr. Goggin does not have sufficient information to assess how this would affect the annual capacity value of gas generators. Further, during that same peak need period the Companies' existing coal generators were generating 17-19% below their net maximum winter capacity.

Mr. Goggin recommends that reliability analysis be done with a capacity accreditation below nameplate value for *both* gas units and coal units (including coal units whose retirement is at issue), consistent with these reliability considerations. For winter capacity, an appropriate percentage derate would reflect the performance below rated net winter maximum capacity of both gas and coal generation during Winter Storm Elliott—in other words, 26-35% for gas units and 17-19% for coal units. Whatever method for reliability analysis the Commission selects, Mr. Goggin recommends that that method should account for a percentage derate not solely for gas but also for coal, based on reliability failures under similar circumstances. As Mr. Goggin's testimony outlines, coal units also have reliability issues and cannot be relied upon to perform at their rated capacity at all times.

**Request:**

2. Refer to Goggin Direct Testimony, page 30, lines 18–20. With regards to KRS 278.264, explain whether the benchmark calculation of the current portfolio should use the same capacity accreditation factor referenced in question 1 when determining if the replacement generating capacity will maintain sufficient reserve margins.

**Response:**

Mr. Goggin is not a lawyer, but responds in his capacity as an expert witness: A 30% reduction below the net maximum winter capacity of the Companies' gas generators should be used to reflect their winter capacity contribution. Mr. Goggin does not have sufficient information to assess how this would affect the annual capacity value of gas generators. Similarly, an 18% reduction below the net maximum winter capacity of the Companies' coal units should be used to reflect their winter capacity contribution for the reasons outlined in question 1 and in Mr. Goggin's testimony. Mr. Goggin likewise does not have sufficient information to assess how this would affect the annual capacity value of coal units.

Mr. Goggin also notes that the reserve margins that are used in utility reliability planning are typically designed in part to protect against generator outages. As a result, accounting for generator outages by reducing the accredited capacity contribution of resources affected by those outages reduces or eliminates the need to rely on the reserve margin to protect against that risk, which allows the use of a lower reserve margin while meeting the same reliability requirement.