

1 **Q. Are the resources proposed in this CPCN application peaking resources?**

2 A. No, EKPC is proposing a baseload CPCN and modifications to maintain existing resources,
3 and not peaking resources best suited to addressing shortfalls in Winter Peak supply like
4 battery storage, solar plus storage, demand response, or even new gas combustion turbines.

5 **Q. Could EKPC instead purchase capacity from PJM or invest in alternative peaking
6 resources to meet that 1- to 8-hour per year shortfall?**

7 A. Yes. EKPC does not provide a comparison of the costs of meeting its PJM load obligations
8 and then relying on the PJM market to cover any shortfalls above those obligations to the
9 costs of its proposed investments. EKPC also fails to appropriately consider or model
10 alternative peaking resources such as storage, storage plus solar, or demand response.
11 ~~EKPC does not provide a comparison of the costs of purchasing market capacity from PJM~~
12 ~~for 1 to 8 hours per year to the costs of its proposed investments. EKPC also fails to~~
13 ~~appropriately consider or model alternative peaking resources such as storage, storage plus~~
14 ~~solar, or demand response.~~

15 **Q. Does EKPC's track record of overestimating its future Winter Peak and PJM's much
16 lower forecast of EKPC's Winter Peak raise questions regarding the accuracy of the
17 Company's forecasts?**

18 A. Yes, these issues raise the concern that EKPC may have overestimated its Winter Peak load
19 and its Winter Peak requirements and, therefore, be proposing more generation capacity than
20 necessary.

1 producing a least-cost result. EKPC’s surprising decision to skip all system optimization
2 modeling in favor of a brief written assertion that the least-cost resource is already known
3 is a serious detriment to its petition. Without access to appropriate resource comparisons and
4 optimization modeling it is not possible for the Commission, stakeholders, or their third-party
5 experts to review and evaluate EKPC’s claims, as would be appropriate and expected in a
6 public process.

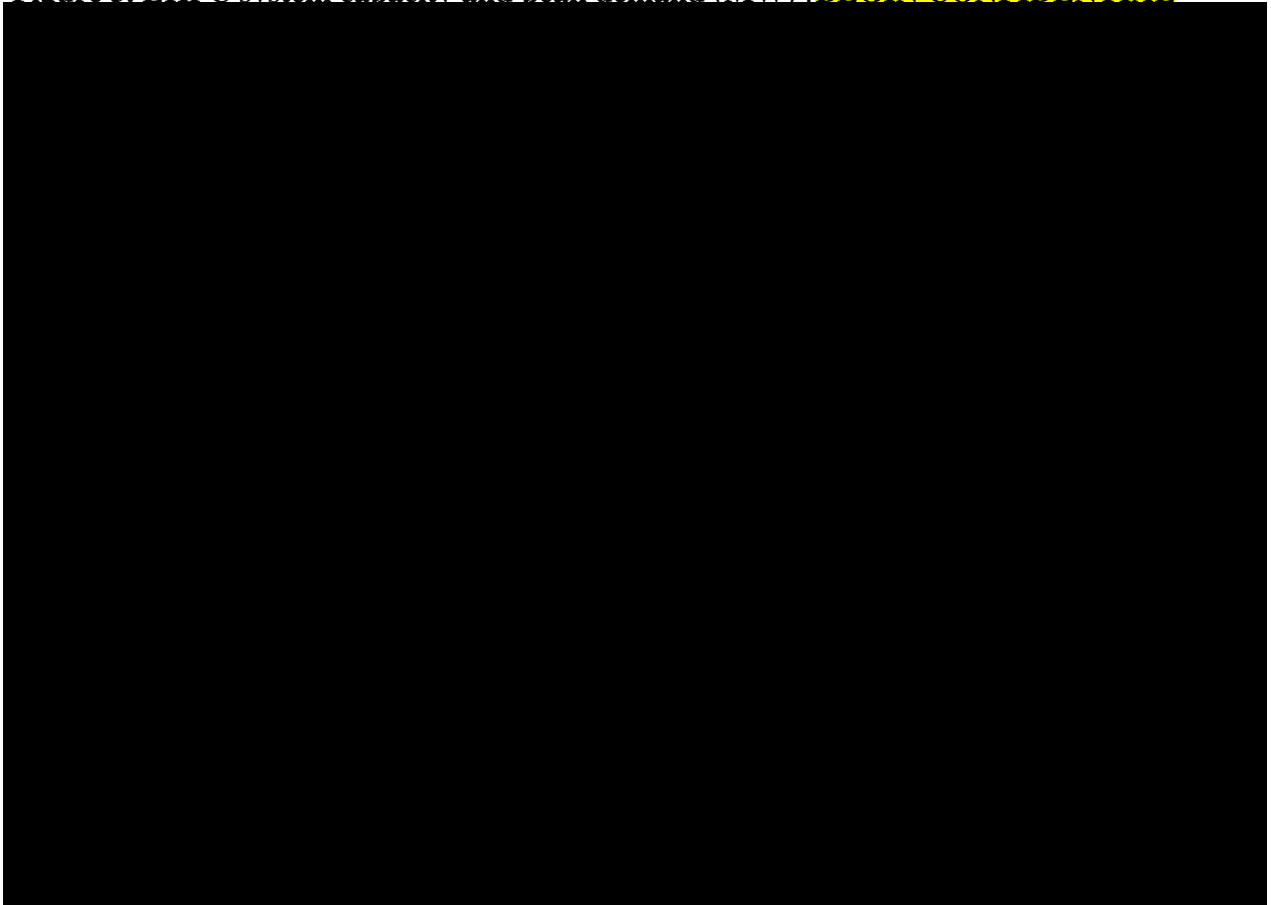
7 **Q. Is the production cost modeling conducted by EKPC for this CPCN application a**
8 **sufficient substitute to long-term optimization modeling?**

9 A. No. EKPC’s production cost modeling was conducted to establish operational costs and was
10 conducted with a new CCGT already selected (that is, as a fixed assumption and not selected
11 in an optimization process).⁵³ This modeling does not provide a systematic comparison of
12 resources or result in least-cost recommended resource additions.

13 ~~Figure 4~~ Figure 5 shows EKPC’s historical and projected future capacity additions with fixed
14 resource additions presented in this CPCN application, the Liberty RICE units proposed for
15 2029, and solar additions beginning in 2026.

⁵³ EKPC Resp. to Staff Q1-19(b) (“EKPC did not provide potential resources for the model to choose from . . .”).

1 **Figure 5. EKPC system capacity and peak demand (MW)** **BEGIN CONFIDENTIAL**



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3 **END CONFIDENTIAL** Sources: (1) Attach. JJT-2 at 3 and JJT-4, EKPC Expansion Plan
4 2024; (2) U.S. EIA 2023 Form EIA-860; (3) Case 2022-00098, EKPC 2022 IRP at 65; (4)
5 CONFIDENTIAL EKPC 2022 IRP.

6 **Q. According to EKPC’s predictions, would its winter peak load exceed its existing and**
7 **planned resources?**

8 A. Yes, but there are a few important caveats. First, I raise several concerns regarding the
9 reasonableness of EKPC winter load forecasts and reserve margin assumptions. Second, PJM
10 predicts much lower winter peak load for EKPC, as shown above in ~~Figure 4.~~Figure 5. Third,
11 as I discuss above, EKPC has not performed system-wide long-range optimization modeling
12 substantiating its conclusions. Finally, EKPC has not considered alternative supply- and

1 In addition, the \$450,000/MWh cost estimate cited by EKPC appears to be [BEGIN
2 CONFIDENTIAL] [REDACTED] [END CONFIDENTIAL] cited
3 by NRCO.⁷⁹

4 Finally, it is important to note that EKPC’s BESS cost estimate does not account for the
5 Investment Tax Credit (“ITC”) for energy storage provided under the Inflation Reduction
6 Act. Assuming prevailing wage and apprenticeship requirements are met, a BESS project
7 would be eligible for a 30 percent ITC, and the project could be eligible for 10 percent tax
8 credit adders if it is located in an energy community or meets certain domestic content.

9 EKPC, however, acknowledges that it “did not evaluate the impact of the Inflation Reduction
10 Act’s ITC on the cost of a utility-scale BESS.”⁸⁰

11 **Q. Do other sources show lower BESS costs than what EKPC assumed?**

12 A. Yes, the National Renewable Energy Laboratory (“NREL”) finds lower BESS costs than
13 EKPC’s prediction. Importantly, NREL also excludes ITC from its cost estimates.
14 EKPC’s \$450,000/MWh cost estimate is equivalent to \$1,800 per kW for a 4-hour system or
15 \$4,500 per kW for a 10-hour system (see [Figure 7](#) [Figure 6](#)). To convert EKPC's per-MWh
16 cost estimate to be on a per-kW basis, I multiplied it by the duration of the BESS system,
17 then divided by 1,000 to convert from MW to kW. For 4-hour BESS, EKPC's cost estimate
18 equates to \$1,800 per kW. Similarly, for 10-hour BESS, EKPC's cost estimate equates to
19 \$4,500 per kW. In comparison, NREL’s 2024 ATB Moderate Case presents 4-hour BESS
20 costs that range from \$1,551 per kW in 2025 down to \$899 per kW in 2050. Similarly,

⁷⁹ *Id.*

⁸⁰ EKPC Resp. to JI Q2-10.

1 **Q. Did EKPC perform integrated system modeling to identify Cooper 2 co-firing**
2 **modifications for proposal in this CPCN application?**

3 A. No.

4 **Q. Has EKPC carried out Net Present Value of Revenue Requirements (“NPVRR”)**
5 **analysis of the Cooper 2 co-firing modification proposed in this CPCN application?**

6 A. No.

7 **Q. Would a modified Cooper 2 co-firing with gas supply additional peaking resources?**

8 A. No. EKPC asserts that modification of Cooper Unit 2 to co-fire with gas will not change its
9 operational characteristics: “Electrically, the Cooper co-firing and the Spurlock co-firing
10 units will have the same operating characteristics as they do today.”⁹⁵ However, EKPC’s
11 production cost modeling providing in this CPCN application anticipates a large increase in
12 Cooper 2 capacity factors (see ~~Figure 2~~Figure 7).⁹⁶

⁹⁵ Application at 7-8.

⁹⁶ EKPC Resp. to JI Q1-27(e).

1 **Q. How would a substantially higher sales forecasts influence EKPC’s rate impact**
2 **estimates?**

3 A. A higher sales forecast would increase both system costs and revenues from customer sales.

4 On balance, a higher sales forecast would likely result in lower projected cost to member
■ systems. For example, **[BEGIN CONFIDENTIAL]** [REDACTED]

■ [REDACTED]

■ [REDACTED]

■ [REDACTED]

■ [REDACTED]

■ [REDACTED]

11 [REDACTED]

12 **[END CONFIDENTIAL]**