

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC 2024 INTEGRATED RESOURCE PLAN) Case No.
OF DUKE ENERGY KENTUCKY, INC.) 2024-00197

ATTORNEY GENERAL’S INITIAL DATA REQUESTS

The intervenor, the Attorney General of the Commonwealth of Kentucky, through his Office of Rate Intervention [“OAG”], hereby submits the following Initial Data Requests to Duke Energy Kentucky, Inx. [“DEK”], to be answered by the date specified in the Commission’s Orders of Procedure, and in accord with the following:

- (1) In each case where a request seeks data provided in response to a staff request, reference to the appropriate request item will be deemed a satisfactory response.
- (2) Identify the witness who will be prepared to answer questions concerning each request.
- (3) Repeat the question to which each response is intended to refer. The OAG can provide counsel for DEK with an electronic version of these questions in native format, upon request.
- (4) These requests shall be deemed continuing so as to require further and supplemental responses if the Companies receive or generate additional information within the scope of these requests between the time of the response and the time of any hearing conducted hereon.
- (5) Each response shall be answered under oath or, for representatives of a public or private corporation or a partnership or association, be accompanied by a signed certification of the preparer or person supervising the preparation of the response on behalf of the entity that the response is true and accurate to the best of that person’s knowledge, information, and belief formed after a reasonable inquiry.

(6) If you believe any request appears confusing, request clarification directly from Counsel for OAG.

(7) To the extent that the specific document, workpaper or information as requested does not exist, but a similar document, workpaper or information does exist, provide the similar document, workpaper, or information.

(8) To the extent that any request may be answered by way of a computer printout, identify each variable contained in the printout which would not be self-evident to a person not familiar with the printout.

(9) If the Companies have objections to any request on the grounds that the requested information is proprietary in nature, or for any other reason, notify OAG as soon as possible.

(10) As used herein, the words “document” or “documents” are to be construed broadly and shall mean the original of the same (and all non-identical copies or drafts thereof) and if the original is not available, the best copy available. These terms shall include all information recorded in any written, graphic or other tangible form and shall include, without limiting the generality of the foregoing, all reports; memoranda; books or notebooks; written or recorded statements, interviews, affidavits and depositions; all letters or correspondence; telegrams, cables and telex messages; contracts, leases, insurance policies or other agreements; warnings and caution/hazard notices or labels; mechanical and electronic recordings and all information so stored, or transcripts of such recordings; calendars, appointment books, schedules, agendas and diary entries; notes or memoranda of conversations (telephonic or otherwise), meetings or conferences; legal pleadings and transcripts of legal proceedings; maps, models, charts, diagrams, graphs and other demonstrative materials; financial statements, annual reports, balance sheets and other accounting records; quotations or offers;

bulletins, newsletters, pamphlets, brochures and all other similar publications; summaries or compilations of data; deeds, titles, or other instruments of ownership; blueprints and specifications; manuals, guidelines, regulations, procedures, policies and instructional materials of any type; photographs or pictures, film, microfilm and microfiche; videotapes; articles; announcements and notices of any type; surveys, studies, evaluations, tests and all research and development (R&D) materials; newspaper clippings and press releases; time cards, employee schedules or rosters, and other payroll records; cancelled checks, invoices, bills and receipts; and writings of any kind and all other tangible things upon which any handwriting, typing, printing, drawings, representations, graphic matter, magnetic or electrical impulses, or other forms of communication are recorded or produced, including audio and video recordings, computer stored information (whether or not in printout form), computer-readable media or other electronically maintained or transmitted information regardless of the media or format in which they are stored, and all other rough drafts, revised drafts (including all handwritten notes or other marks on the same) and copies of documents as hereinbefore defined by whatever means made.

(11) For any document withheld on the basis of privilege, state the following: date; author; addressee; indicated or blind copies; all persons to whom distributed, shown, or explained; and, the nature and legal basis for the privilege asserted.

(12) In the event any document called for has been destroyed or transferred beyond the control of the Companies, state: the identity of the person by whom it was destroyed or transferred, and the person authorizing the destruction or transfer; the time, place, and method of destruction or transfer; and, the reason(s) for its destruction or transfer. If destroyed or disposed of by operation of a retention policy, state the retention policy.

(13) Provide written responses, together with any and all exhibits pertaining thereto, in one or more bound electronic volumes, separately indexed and tabbed by each response, in compliance with Kentucky Public Service Commission Regulations and Orders.

(14) “And” and “or” should be considered to be both conjunctive and disjunctive, unless specifically stated otherwise.

(15) “Each” and “any” should be considered to be both singular and plural, unless specifically stated otherwise.

Respectfully submitted,

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ATTORNEY GENERAL



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Certificate of Service

Pursuant to the Commission's Orders in Case No. 2020-00085, and in accord with all other applicable law, Counsel certifies that an electronic copy of the forgoing was served and filed by e-mail to the parties of record.

This 14th day of August, 2024



Assistant Attorney General

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1. Reference the Integrated Resource Plan ["IRP"], p. 6, paragraph 2. Confirm that the IRP is essentially a snap-shot in time, and does not represent firm resource commitments.
2. Explain whether DEK can confirm that the projected retirement date for the East Bend plant has changed over the period 2018 – present. If so confirmed, provide the year and case number in which that retirement data was changed, and the projected retirement date set in each such case.
 - a. Confirm that in the IRP, DEK's preferred portfolio projects East Bend converting from solely coal-fired to coal-firing with gas co-firing, otherwise referred to as dual-fuel operation ["DFO"] in approximately 2030, and its projected retirement date will be 2038.
 - b. Explain whether a DFO conversion would cause any derates in East Bend's power output. Include in your response a discussion of whether 100% gas-firing would cause any derates in East Bend's power output. If so, explain also whether DEK projects any increase in market power purchases.
 - c. Discuss and explain whether the proposed DFO of East Bend could have any effect upon DEK's FRR requirements in PJM.
 - d. Provide the amount of any potential stranded cost that will result from a projected retirement date of 2038. If any, then explain what measures DEK will take, or plans to take to mitigate the extent to which its ratepayers will be required to pay for the stranded costs. Include in your discussion any federal government programs the Company is tracking that might prove helpful in this regard.
3. Confirm that the 2024 IRP does not set a projected retirement date for the Woodsdale CT units.
4. Confirm that in the 2024 IRP, DEK anticipates adding approximately: (i) 50 MW of solar generation beginning in 2029; and (ii) adding an additional 50 MW of solar generation every two years through 2040.
 - a. If so confirmed, then confirm further that under the Company's preferred portfolio, by 2040 DEK will have added a total of 300 MW of new solar generation.
 - b. Under PJM's updated Effective Load Carrying Capability ["ELCC"] rules, explain how much of this solar generation will be eligible to apply toward the Company's PJM planning reserve requirements and the Company's FRR requirement.
 - c. Explain whether any of the Company's proposed solar projects will qualify for various federal incentives, including tax incentives. If so, confirm that any such incentives would inure to the favor of ratepayers.

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5. Provide a discussion regarding whether DEK has any concerns for coal fuel supply for the East Bend plant. Include in your response a discussion of whether the proposed gas-firing of East Bend will decrease the amount of coal used at East Bend.
6. Regarding the proposed DFO of East Bend, explain whether coal and gas could be used on a combined basis simultaneously, or whether the fueling of the unit at any given time would have to be done with either coal or gas separately, but not on a combined basis.
7. Regarding the proposed DFO of East Bend, explain whether the installation of gas burners and other facilities required for gas-firing would require an outage of East Bend. If so, provide the estimated duration of this outage.
8. Explain whether the proposed DFO of East Bend would require the Company to obtain any additional air quality permits.
9. Explain whether the DFO of East Bend will assist the Company with meeting air quality permits governing East Bend's operation.
10. Explain whether the proposed DFO of East Bend will lead to any O&M savings from reduced operation of the station's pollution control equipment. If DEK has conducted any studies / analyses in this regard, please provide them.
11. Regarding the proposed DFO of East Bend, explain whether the gas supply would be derived from a pipeline. Explain also whether on-site (or near-site) storage could be a cost-effective option.
12. Confirm that the Company's preferred portfolio does not select any wind generation as a resource. If so confirmed, confirm further that the cost of transmission to wheel any such power into the Company's service territory is one of the factors the Company took into consideration.
13. Explain whether the East Bend plant may at some point require an SCR performance upgrade. In your discussion, explain also whether the Cincinnati area has been found in attainment status regarding the Ozone NAAQS.
14. Provide a discussion of the capabilities and additional efficiencies that a J or H class combined-cycle ("CC") unit would provide as compared with the proposed DFO at the East Bend facility. Include in your discussion any enhanced load-following capabilities.

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- a. Given that the proposed CC would not be commercially operable until 2039, confirm the following: (i) there is an approximate 5-year lead time needed between the date that plans are finalized until the unit would be commercially operable; and (ii) it is likely that CC manufacturers will find additional efficiencies that will further enhance the current state-of-the-art for CC units.
15. Can DEK confirm that distributed resources do not make a significant contribution under the Company's preferred portfolio?
16. Regarding DEK's load forecast, as discussed on IRP p. 26, confirm that through the forecast period: (i) the residential class outlook shows modest growth; and (ii) the non-residential classes show strong growth.
17. Reference the IRP document at p. 28. Explain the meaning of the phrase, "Modeling also assumes that all projects eligible for IRA will qualify for five-year modified accelerated cost recovery system (MACRS)."
18. Reference the IRP document, § 4 Supply-Side Management Resources, B. Existing Resources, at p. 35. Explain the source of the 24 MW of demand response.
 - a. Explain also whether this resource is dispatchable into PJM. If not, explain: (i) what actions would be necessary to make it dispatchable; (ii) whether the Company could earn any revenue on its dispatch; and (iii) whether any revenue so earned would inure to the benefit of ratepayers.
19. Reference the IRP at p. 35. Provide a discussion regarding whether there could be any potential benefit from utilizing gas storage to fuel either the Woodsdale CTs or the East Bend plant, or potentially both.
20. Reference the IRP document, Table 4.2 "Effective Load Carrying Capability Class Ratings."
 - a. Discuss whether hydro power could become a viable resource for DEK, and include in your response a discussion regarding any potential transmission costs.
 - b. Confirm that under PJM's ELCC ratings, intermittent hydro power is ascribed a rating of only 37% of a hydro generator's nameplate capacity.
21. Reference the IRP document generally. Explain whether the CC plant DEK is considering would be dual-fueled.
 - a. Explain also whether any site selection process for the CC has been undertaken.

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- b. Discuss whether there could be any advantage to locating the CC in close proximity to the Woodsdale plant, which already has dual-fueling facilities in place.
22. In light of PJM's growing concerns regarding system reliability, explain whether PJM's reserve margins have changed in the past two years. Discuss also how any such changes will impact DEK.
23. Given the fact that DEK's neighboring utility (and parent company), Duke Energy Ohio ["DEO"], is located in a non-vertically integrated state, explain whether DEO is required to submit to its state regulator any plans or studies outlining its power resources. If that plan is a public document, provide a copy or link to it.
24. Confirm that DEK's neighboring utility and affiliate, Duke Energy Indiana ["DEI"], is a member of the Midcontinent Independent System Operator ["MISO"]. Explain whether PJM is discussing any potential future seams projects with MISO that would involve both DEK and DEI and provide benefit to DEK.
25. Reference the IRP document at p. 38. Confirm that in order to sequester any carbon dioxide ["CO₂"] captured from DEK's fossil-fuel fired generation plants, the Company would be required to either inject it deep into the earth, or construct an entirely new and discrete pipeline for the transport of CO₂ to a site where the CO₂ could be safely stored.
 - a. Explain whether the Company has conducted any studies regarding potential sites for CO₂ storage, and if so, provide any associated cost estimates and any assessments of whether local / regional rock formations would be conducive and cost-effective to allow for CO₂ storage.
26. Explain the permitting that would be required for the construction of a CO₂ pipeline. Confirm also that several states have denied permitting for the construction of a CO₂ pipeline.
27. Reference the IRP document at p. 39, regarding the discussion of how DEK is required to meet certain requirements as a Fixed Resource Requirements ["FRR"] participant in PJM. Explain whether there any discussions underway in PJM to increase the minimum FRR requirement.
 - a. Confirm that the Woodsdale units are physically located within the DEOK zone.
 - b. Confirm that if DEK proceeds with future plans to construct a new CC, it would have to be physically located within the DEOK zone.

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28. Refer to IRP § 5 generally, and refer also to Duke Energy's 2nd Qtr. 2024 Earnings Presentation, accessible at the link referenced in the footnote below.¹ In that document, refer specifically to Appendix, 2024 Supplemental Financial Information, p. 23. Confirm that the DEK/DEO weather normalized volume trend, as of 6-30-2024 is down 5.4% for the C&I classes, and is up 0.4% for the residential class. Explain also whether there is any way to provide the data applicable solely and discretely to DEK.
29. Refer to IRP § 5, p. 41. Regarding the projected 62 MW reduction in total peak power consumption by 2038, explain whether any portion of these savings can be dispatched into PJM to earn revenue.
30. Reference the IRP document Table 6.17 at p. 42. Confirm that without the CAA Sec. 111 Update, East Bend does not retire as a coal-burning unit until 2042.
 - a. If CCS does not move forward or is stricken, explain why the Company in Table 6.6 models a CC with CCS.
31. Provide the following information regarding projected retirement date(s) for East Bend.
 - a. In the event CCS is implemented, projected retirement dates for East Bend:
 - (i) As a coal-fired unit only;
 - (ii) As a DFO unit;
 - (iii) As a gas-fired unit only.
 - b. In the event CCS is not implemented, projected retirement dates for East Bend:
 - (i) As a coal-fired unit only;
 - (ii) As a DFO unit;
 - (iii) As a gas-fired unit only.
32. Reference the IRP document, Fig. 6.1 on p. 49. Confirm that DEK's existing supply-side resources are sufficient to handle near-term load, as it is currently known.
33. Reference the IRP document at pp. 55-56, "Observations from Optimized and Alternate Portfolio." Can the Company generally confirm that all potential scenarios in which East Bend is converted to DFO will result in both: (i) decreased power generation; and (ii) more market purchases? If not, why not?

¹ https://s201.q4cdn.com/583395453/files/doc_financials/2024/q2/Q2-2024-Earnings-Presentation_vF-w-Reg-G.pdf

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34. Reference the IRP document at p. 56. Confirm that although the future CC replacement option resulted in a slightly higher revenue requirement than a gas conversion of East Bend, it also lowered dependence on fluctuating PJM market prices. Confirm further that a gas-converted East Bend plant would be much less efficient than a new CC, thus increasing costs for fuel and potentially other items.
35. Referencing the IRP document at p. 57, can the Company confirm that:
 - a. CCS increases the PVRR of all resource plans; and
 - b. In the event CCS is stricken or otherwise not implemented, a DFO conversion of East Bend would result in higher PVRR, but which would require a 2035 retirement of East Bend?
36. Does the Company confirm that:
 - a. In the event the EPA CAA Sec. 111 Update moves forward, the DFO conversion of East Bend represents the most cost-effective solution, and that by the time the plant is ready for retirement, at this time it appears that a CC would be the most cost-effective solution for replacing East Bend?; and
 - b. In the event the EPA CAA Sec. 111 Update is repealed, a DFO at East Bend still remains the most cost-effective option, given its fuel flexibility?
37. Please provide copies of any DEK policy or policy statements regarding carbon free or net-zero emission goals.
38. Please provide copies of any Duke Energy policy or policy statements regarding carbon free or net-zero emission goals.
39. Confirm that DEK does not rely on solar or wind-generated electricity exclusively to provide power to any single customer twenty-four hours per day, seven days per week, three hundred sixty-five days per year. If unable to confirm, please identify these customers by name and location, and provide the location of the generating facility.
 - a. Regarding this question, explain also whether any DEK affiliate or parent entity serves any single customer exclusively with solar or wind generated electricity on a continuous basis (i.e., 24-hours per day, 7 days per week and 365 days per year).
40. Explain whether DEK, or its affiliates including the parent entity Duke Energy, have filed legal challenges to any of the following rules. If so, please provide a copy of the petition(s) challenging the applicable rule. If not, please explain why not:

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- a. EPA's Greenhouse Gas (GHG) Emission rule for fossil fuel power plants, published in the Federal Register May 9, 2024;
- b. EPA's Coal Combustion Residual (CCR) rule for fossil fuel power plants, published in the Federal Register May 8, 2024;
- c. EPA's Effluent Limit Guidelines (ELG) rule for fossil fuel power plants that was published in the Federal Register May 9, 2024;
- d. EPA's Mercury and Air Toxic Standards (MATS) rule for fossil fuel power plants that was published in the Federal Register May 7, 2024.