

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of Duke Energy Kentucky,)
Inc.'s Integrated Resource Plan) Case No. 2021-00245
)

**PETITION OF DUKE ENERGY KENTUCKY, INC.
FOR CONFIDENTIAL TREATMENT OF INFORMATION
CONTAINED IN ITS RESPONSES TO COMMISSION STAFF'S
AND SIERRA CLUB'S FIRST SET OF DATA REQUESTS**

Duke Energy Kentucky, Inc. (Duke Energy Kentucky or Company), pursuant to 807 KAR 5:001, Section 13, respectfully requests the Commission to classify and protect certain information provided by Duke Energy Kentucky in its Responses to Commission Staff (Staff)'s First Request for Information and Sierra Club (Sierra)'s First Request for Information both issued on October 1, 2021. The information that Duke Energy Kentucky seeks confidential treatment on generally includes: (1) information related to operations and management (O&M) costs, projected fuel and environmental compliance forecasted costs, forecasted power market prices, and projected capacity and resource alternative capital costs; (2) supply side screening curves and resource evaluations; and (3) third party owned and licensed modeling tools. The information which the Company is requesting to remain confidential includes the attachments to items 38, 39, and 41 of Staff's First Request for Information and the attachments to items 2 and 4 of Sierra's First Request for Information.

The public disclosure of the information described would place Duke Energy Kentucky at a commercial disadvantage as it manages its business in the wholesale power markets, negotiates contracts with various suppliers and vendors, and could potentially harm

Duke Energy Kentucky's competitive position in the marketplace, to the detriment of Duke Energy Kentucky and its customers. Moreover, to the extent the requested information is subject to licensing agreements, disclosure of the information would be in violation of such agreements and could put the Company in an adverse legal position to the detriment of its customers.

In support of this Petition, Duke Energy Kentucky states:

1. The Kentucky Open Records Act exempts from disclosure certain commercial information. KRS 61.878 (1)(c). To qualify for this exemption and, therefore, maintain the confidentiality of the information, a party must establish that disclosure of the commercial information would permit an unfair advantage to competitors of that party. Public disclosure of the information identified herein would, in fact, prompt such a result for the reasons set forth below.

2. The information regarding power production costs that Duke Energy Kentucky wishes to protect from public disclosure - including supply side screening curves, projected costs of fuel and various compliance and other O&M expenses, capital costs, power market prices, and projected capacity cost - as identified in the responses. This information was developed internally by Duke Energy Kentucky personnel, is not on file with any public agency, and is not available from any commercial or other source outside Duke Energy Kentucky. The aforementioned information is distributed within Duke Energy Kentucky only to those employees who must have access for business reasons. If publicly disclosed, this information setting forth Duke Energy Kentucky's costs of operation, strategies for managing its operations in the wholesale power markets, including projected prices, expected need for fuel and allowances and projected capacity could give competitors

an advantage in bidding for and securing new resources. Similarly, disclosure would afford an undue advantage to Duke Energy Kentucky's vendors and suppliers as they would enjoy an obvious advantage in any contractual negotiations to the extent they could calculate Duke Energy Kentucky's requirements, how it values certain resources, and what Duke Energy Kentucky anticipates those requirements to cost. Finally, public disclosure of this information, particularly as it relates to supply-side alternatives, would reveal the business model Duke Energy Kentucky uses - the procedure it follows and the factors and inputs it considers - in evaluating the economic viability of various generation related projects. Public disclosure would give Duke Energy Kentucky's contractors, vendors and competitor's access to Duke Energy Kentucky's cost and operational parameters, as well as insight into its contracting practices. Such access would impair Duke Energy Kentucky's ability to negotiate with prospective contractors and vendors and could harm Duke Energy Kentucky's competitive position in the power market, ultimately affecting the costs to serve customers.

3. Duke Energy Kentucky requests confidential protections for certain third-party data contained in its responses. Duke Energy Kentucky used certain confidential and proprietary data consisting of confidential information belonging to third parties who take reasonable steps to protect their confidential information, such as only releasing such information subject to confidentiality agreements. Duke Energy Kentucky used forecasts of various commodities and inputs such as power market data and fuel price forecasts (coal prices and gas prices) developed by independent third parties, ABB and IHS Markit, subject to confidentiality restrictions. Burns and McDonnell provided operating specifications and costs for potential future generating units, and Moody's Analytics provided economic forecasts, both subject to confidentiality agreements. Duke Energy Kentucky is contractually

bound to maintain such information confidential. Moreover, this information is deserving of protection to protect Duke Energy Kentucky's customers. If allowance brokers or equipment vendors knew Duke Energy Kentucky's forecasted emissions and fuel prices, by station or otherwise, such brokers or vendors would have an unfair advantage in negotiating future emission allowance or emission control equipment sales, to the detriment of Duke Energy Kentucky and its customers. Furthermore, if competitors of Duke Energy Kentucky knew such forecasts, they could have an advantage in competing for new business against Duke Energy Kentucky.

4. The information contained in its responses include various forecasts depicting the Company's view of power prices, facility operations, and fuel consumption respectfully. This information is considered proprietary to Duke Energy Kentucky and depicts its views of operations in the future. The Company would be placed at a competitive disadvantage if such information is released publicly as it would provide the competitors and potential counterparties and vendors for Duke Energy Kentucky with a competitive advantage that would prevent the Company from having the ability to manage its costs. It would also allow such counterparties and/or competitors to make decisions regarding pricing they otherwise would not have done, thereby making Duke Energy Kentucky and, in turn, its customers pay more than they otherwise would absent such information.

5. Duke Energy Kentucky does not object to limited disclosure of the confidential information described herein, pursuant to an acceptable protective agreement, with the Attorney General or other intervenors with a legitimate interest in reviewing the same for the purpose of participating in this case.

6. This information was, and remains, integral to Duke Energy Kentucky's effective execution of business decisions. And such information is generally regarded as confidential or proprietary. Indeed, as the Kentucky Supreme Court has found, "information concerning the inner workings of a corporation is 'generally accepted as confidential or proprietary.'" *Hoy v. Kentucky Industrial Revitalization Authority*, Ky., 904 S.W.2d 766, 768 (Ky. 1995).

7. In accordance with the provisions of 807 KAR 5:001, Section 13(3), the Company is filing one copy of the Confidential Information separately under seal, and eleven copies without the confidential information included.

8. Duke Energy Kentucky respectfully requests that the Confidential Information be withheld from public disclosure for a period of ten years. This will assure that the Confidential Information – if disclosed after that time – will no longer be commercially sensitive so as to likely impair the interests of the Company or its customers if publicly disclosed.

9. To the extent the Confidential information becomes generally available to the public, whether through filings required by other agencies or otherwise, Duke Energy Kentucky will notify the Commission and have its confidential status removed pursuant to 807 KAR 5:001 Section 13(10)(a).

WHEREFORE, Duke Energy Kentucky, Inc. respectfully requests the Commission classify and protect as confidential the specific information described herein.

Respectfully submitted,

DUKE ENERGY KENTUCKY, INC.

/s/Rocco D'Ascenzo

Rocco O. D'Ascenzo (92796)

Deputy General Counsel
Duke Energy Business Services LLC
139 East Fourth Street, 1303-Main
Cincinnati, Ohio 45202
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Fax: (513) 287-4385
E-mail: rocco.d'ascenzo@duke-energy.com
Counsel for Duke Energy Kentucky, Inc.

CERTIFICATE OF SERVICE

This is to certify that the foregoing electronic filing is a true and accurate copy of the document being filed in paper medium; that the electronic filing was transmitted to the Commission on October 22, 2021; and, that there are currently no parties that the Commission has excused from participation by electronic means in this proceeding.

John G. Horne, II
The Office of the Attorney General
Utility Intervention and Rate Division
700 Capital Avenue, Ste 118
Frankfort, Kentucky 40601
John.Horne@ky.gov

Matthew E. Miller
Sierra Club
2528 California Street
Denver, CO 80205
matthew.miller@sierraclub.org

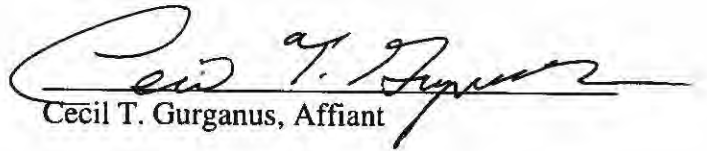
/s/Rocco D'Ascenzo

Rocco D'Ascenzo

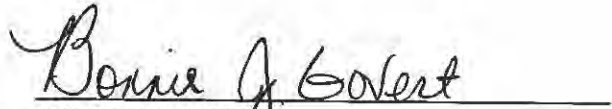
VERIFICATION

STATE OF INDIANA)
)
COUNTY OF HENDRICKS) **SS:**

The undersigned, Cecil T. Gurganus, Vice President Midwest Generation, being duly sworn, deposes and says that he has personal knowledge of the matters set forth in the foregoing data requests and that it is true and correct to the best of his knowledge, information and belief.


Cecil T. Gurganus, Affiant

Subscribed and sworn to before me by Cecil T. Gurganus on this 12th day of October, 2021.

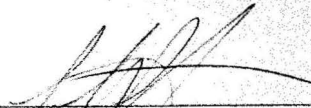

NOTARY PUBLIC

My Commission Expires:



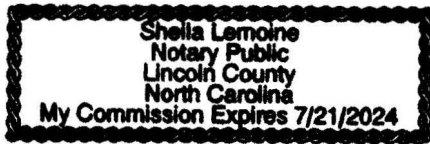
STATE OF NORTH CAROLINA)
)
COUNTY OF ~~MECKLENBURG~~ *Lincoln*) SS:

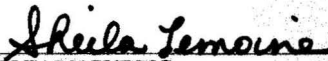
The undersigned, Scott Park, Director IRP & Analytics-Midwest, being duly sworn, deposes and says that he has personal knowledge of the matters set forth in the foregoing data requests, and that the answers contained therein are true and correct to the best of his knowledge, information and belief.



Scott Park, Affiant

Subscribed and sworn to before me by Scott Park on this 11 day of October 2021.





NOTARY PUBLIC

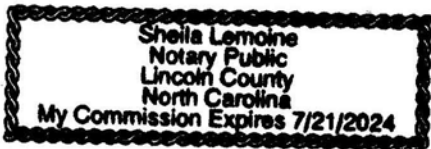
My Commission Expires:
July 21, 2024

**G.S. § 10B-41 NOTARIAL CERTIFICATE
FOR ACKNOWLEDGMENT**

Lincoln County, North Carolina

I certify that the following person(s) personally appeared before me this day, each acknowledging to me that he or she signed the foregoing document: Tim Duff

Date: October 11, 2021



Sheila Lemoine
Official Signature of Notary

Sheila Lemoine, Notary Public

My commission expires: July 21, 2024

I signed this notarial certificate on October 11, 2021 according to the emergency video notarization requirements contained in G.S. 10B-25.

Notary Public location during video notarization: Lincoln County

Stated physical location of principal during video notarization: Mecklenburg County

This certificate is attached to a Verification signed by Scott Park on October 11, 2021.

KyPSC Case No. 2021-00245
TABLE OF CONTENTS

| <u>DATA REQUEST</u> | <u>WITNESS</u> | <u>TAB NO.</u> |
|----------------------------|-----------------------|-----------------------|
| SIERRA-DR-01-001 | Legal | 1 |
| SIERRA-DR-01-002 | Chris Hixson | 2 |
| SIERRA-DR-01-003 | Scott Park | 3 |
| SIERRA-DR-01-004 | Cecil Gurganus | 4 |
| SIERRA-DR-01-005 | Robert McMurry | 5 |
| SIERRA-DR-01-006 | Chris Hixson | 6 |

**Duke Energy Kentucky
Case No. 2021-00245
SIERRA First Set Data Requests
Date Received: October 1, 2021**

SIERRA-DR-01-001

REQUEST:

Please provide an unredacted copy of the IRP.

RESPONSE:

Duke Energy Kentucky will provide an unredacted version of the IRP upon Sierra Club's execution of a confidentiality agreement with the Company.

PERSON RESPONSIBLE: Legal

**Duke Energy Kentucky
Case No. 2021-00245
SIERRA First Set Data Requests
Date Received: October 1, 2021**

**PUBLIC SIERRA-DR-01-002
(As to Attachments only)**

REQUEST:

With respect to the EnCompass model, please provide the following output workbooks for all scenarios:

- a. Resource Annual
- b. Plan Costs
- c. Company Annual
- d. Company Annual Fuel (and Fixed Fuel, if applicable)
- e. Company Annual Technology
- f. Company Capital
- g. Company Base Financials

RESPONSE:

CONFIDENTIAL PROPRIETARY TRADE SECRET (As to Attachments only)

Please see SIERRA-DR-01-002 Confidential Attachments 1 through 90 for the EnCompass outputs.

PERSON RESPONSIBLE: Chris Hixson

**CONFIDENTIAL PROPRIETARY TRADE
SECRET**

**SIERRA-DR-01-002 CONFIDENTIAL
ATTACHMENTS 1-90**

FILED UNDER SEAL

**Duke Energy Kentucky
Case No. 2021-00245
SIERRA First Set Data Requests
Date Received: October 1, 2021**

SIERRA-DR-01-003

REQUEST:

Refer to IRP pp. 42-43, Section 6.B. With respect to the East Bend power plant in optimized portfolios, please explain whether the dates of retirement selected in various scenarios are endogenously derived. In other words, discuss whether Duke allows the model to select an optimal retirement year in each optimized portfolio, or whether the resulting retirement years are calculated externally to the EnCompass model. If the latter, please describe how retirement years are selected, and provided the workpapers associated with that calculation.

RESPONSE:

The optimized portfolios were developed by allowing the Encompass model to economically retire East Bend 2 based on the economics of that particular scenario.

PERSON RESPONSIBLE: Scott Park

**Duke Energy Kentucky
Case No. 2021-00245
SIERRA First Set Data Requests
Date Received: October 1, 2021**

**PUBLIC SIERRA-DR-01-004
(As to Attachment only)**

REQUEST:

With respect to East Bend, please explain whether duke assesses reduced capital requirements at the plant in years prior to retirement. If so, please provide Duke's assumptions with respect to reduced capital requirements; or if not, please explain why not.

- a. Please provide annual capital incurred at East Bend in each optimized portfolio.

RESPONSE:

CONFIDENTIAL PROPRIETARY TRADE SECRET (As to Attachment only)

Yes, we assess reduced capital in the years prior to retirement. For East Bend we use a 4-year approach to retirement. Within 4 years of retirement, the model will avoid minor and major outage capex that it would have otherwise incurred if the unit continued to operate. It will also reduce annual base CAPEX spend if capacity factors are low in approach to retirement. Other lump sum projects (environmental capex, SCR catalyst, landfill) etc. cannot be avoided before retirement.

- a. Please see SIERRA-DR-01-004(a) Confidential Attachment.

PERSON RESPONSIBLE: Cecil Gurganus

**CONFIDENTIAL PROPRIETARY TRADE
SECRET**

**SIERRA-DR-01-004(a) CONFIDENTIAL
ATTACHMENT**

FILED UNDER SEAL

Duke Energy Kentucky
Case No. 2021-00245
SIERRA First Set Data Requests
Date Received: October 1, 2021

SIERRA-DR-01-005

REQUEST:

Refer to IRP p. 16, statin: “to develop a more accurate forecast for rapidly developing technologies (e.g. solar PV and battery storage), the Company blended the AEO forecast factors with additional third-party capital cost projections.”

- a. Please state which third-party capital cost projections were employed;
- b. Provide workpapers used by DEP to blend AEO and third-party capital cost projections;
- c. If the National Renewable Energy Laboratory’s (NREL) Annual Technology Baseline (ATB) was not assessed or employed in assessing future capital costs or performance, please explain why.
- d. Provide the effective load carrying capacity (ELCC) or UCAP of solar and wind facilities as employed in the study. If another method was used to assess capacity contribution, please describe the method and provide supporting workpapers.

RESPONSE:

- a. Burns and McDonald was used for the estimation of conventional and wind generation options and Guidehouse was used for estimations of solar and storage options that declines over a 10 year period. The EIA AEO technology specific escalation rates were applied to the different technology types.
- b. Not applicable to the 2021 Duke Energy Kentucky IRP.

- c. Third party engineering studies were reviewed for both solar and storage against information presented in the 2020 NREL ATB tool since the 2021 tool was not yet available when the spring data was finalized. While NREL information is typically based on general data from the entire country, the third party studies specifically look at the jurisdictions of concern for Duke Energy. The solar price forecasts are specific to the Kentucky service territory and include a DC/AC panel ratio based on related projects in that region. Similarly, the storage costs are based on utility installations they may have enhanced fire protection standards, control schemes, and other features that increase costs compared to typical PPA-style battery installations. The Duke Energy costs were reviewed against the 2020 NREL ATB costs (along with other publicly available resources) to ensure costs appeared to be reasonable for use in the models. After reviewing against 2020 NREL ATB and other sources we believe the costs for all technologies, including solar and storage, are reasonable estimates of new supply side resources for each technology considered.
- d. Wind has a constant ELCC throughout the planning horizon – 13% contribution to peak. Solar has incremental ELCC reductions based on installed nameplate capacity. The first 70 MW (nameplate) installed has 50% contribution to summer peak. The next 70 MW (nameplate) installed has 35% contribution to summer peak. Any installed capacity above 140 MW (nameplate) have 10% contribution to summer peak.

PERSON RESPONSIBLE: Robert A. McMurry

**Duke Energy Kentucky
Case No. 2021-00245
SIERRA First Set Data Requests
Date Received: October 1, 2021**

SIERRA-DR-01-006

REQUEST:

Please specify any constraints used on new resource builds or existing resource retirements in any optimized scenario considered (e.g., MW of new resource per year, maximum resource availability).

RESPONSE:

Please see SIERRA-DR-01-006 Attachment for the project build constraints.

PERSON RESPONSIBLE: Chris Hixson

| Project Name | Max Annual Project Additions | Max Active Projects | Maximum Units to Retire |
|---------------------------|-------------------------------------|----------------------------|--------------------------------|
| Proj New Battery DEK | 10 Beginning 2021 | | |
| Proj New CC DEK | Beginning 2025 | 10 | |
| Proj New CC DF DEK | Beginning 2025 | 10 | |
| Proj New CHP DEK | Beginning 2024 | | |
| Proj New Coal DEK | 10 Beginning 2027 | 30 | |
| Proj New CT DEKY | Beginning 2024 | | |
| Proj New Nuclear DEK | Beginning 2035 | 1 | |
| Proj New Nuclear SMR DEK | Beginning 2035 | 1 | |
| Proj New Recip DEK | Beginning 2024 | | |
| Proj New Solar (50MW) DEK | | 0 DEK Solar Limit | |
| Proj New Solar DEK | 10 Beginning 2021 | DEK Solar Limit | |
| Proj New Wind DEK | 10 Beginning 2022 | | |
| East Bend 2 | | | 1 Beginning 2025 |

Time Series

| Name | Effective Date | Ending Date | Value |
|-----------------|-----------------------|--------------------|--------------|
| DEK Solar Limit | 1/1/2021 | | 9 |
| DEK Solar Limit | 1/1/2022 | | 14 |
| DEK Solar Limit | 1/1/2023 | | 18 |
| DEK Solar Limit | 1/1/2024 | | 20 |
| DEK Solar Limit | 1/1/2025 | | 23 |
| DEK Solar Limit | 1/1/2026 | | 24 |
| DEK Solar Limit | 1/1/2027 | | 26 |
| DEK Solar Limit | 1/1/2028 | | 27 |
| DEK Solar Limit | 1/1/2029 | | 29 |
| DEK Solar Limit | 1/1/2030 | | 31 |
| DEK Solar Limit | 1/1/2031 | | 31 |
| DEK Solar Limit | 1/1/2032 | | 32 |
| DEK Solar Limit | 1/1/2033 | | 33 |
| DEK Solar Limit | 1/1/2034 | | 35 |
| DEK Solar Limit | 1/1/2035 | | 37 |
| DEK Solar Limit | 1/1/2036 | | 41 |
| DEK Solar Limit | 1/1/2037 | | 44 |
| DEK Solar Limit | 1/1/2038 | | 48 |
| DEK Solar Limit | 1/1/2039 | | 53 |
| DEK Solar Limit | 1/1/2040 | | 60 |
| DEK Solar Limit | 1/1/2041 | | 67 |
| DEK Solar Limit | 1/1/2042 | | 75 |
| DEK Solar Limit | 1/1/2043 | | 83 |
| DEK Solar Limit | 1/1/2044 | | 90 |
| DEK Solar Limit | 1/1/2045 | | 96 |
| DEK Solar Limit | 1/1/2046 | | 101 |
| DEK Solar Limit | 1/1/2047 | | 106 |
| DEK Solar Limit | 1/1/2048 | | 109 |

| | | |
|-------------------|----------|------|
| DEK Solar Limit | 1/1/2049 | 112 |
| DEK Solar Limit | 1/1/2050 | 115 |
| 10 Beginning 2021 | | 0 |
| 10 Beginning 2021 | 1/1/2021 | 10 |
| Beginning 2025 | | 0 |
| Beginning 2025 | 1/1/2025 | 1000 |
| Beginning 2024 | | 0 |
| Beginning 2024 | 1/1/2024 | 1000 |
| 10 Beginning 2027 | | 0 |
| 10 Beginning 2027 | 1/1/2027 | 10 |
| Beginning 2035 | | 0 |
| Beginning 2035 | 1/1/2035 | 1000 |
| 10 Beginning 2022 | | 0 |
| 10 Beginning 2022 | 1/1/2022 | 10 |
| 1 Beginning 2025 | | 0 |
| 1 Beginning 2025 | 1/1/2025 | 1 |

| Project Name | Max Annual Project Additions | Max Active Projects | Maximum Units to Retire |
|---------------------------|-------------------------------------|----------------------------|--------------------------------|
| Proj New Battery DEK | 10 Beginning 2021 | | |
| Proj New CC DEK | Beginning 2025 | 10 | |
| Proj New CC DF DEK | Beginning 2025 | 10 | |
| Proj New CHP DEK | Beginning 2024 | | |
| Proj New Coal DEK | 10 Beginning 2027 | 30 | |
| Proj New CT DEKY | Beginning 2024 | | |
| Proj New Nuclear DEK | Beginning 2035 | 1 | |
| Proj New Nuclear SMR DEK | Beginning 2035 | 1 | |
| Proj New Recip DEK | Beginning 2024 | | |
| Proj New Solar (50MW) DEK | | 0 DEK Solar Limit | |
| Proj New Solar DEK | 10 Beginning 2021 | DEK Solar Limit | |
| Proj New Wind DEK | 10 Beginning 2022 | | |
| East Bend 2 | | | 1 Beginning 2025 |

Time Series

| Name | Effective Date | Ending Date | Value |
|-----------------|-----------------------|--------------------|--------------|
| DEK Solar Limit | 1/1/2021 | | 9 |
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| DEK Solar Limit | 1/1/2023 | | 18 |
| DEK Solar Limit | 1/1/2024 | | 20 |
| DEK Solar Limit | 1/1/2025 | | 23 |
| DEK Solar Limit | 1/1/2026 | | 25 |
| DEK Solar Limit | 1/1/2027 | | 27 |
| DEK Solar Limit | 1/1/2028 | | 28 |
| DEK Solar Limit | 1/1/2029 | | 29 |
| DEK Solar Limit | 1/1/2030 | | 32 |
| DEK Solar Limit | 1/1/2031 | | 35 |
| DEK Solar Limit | 1/1/2032 | | 37 |
| DEK Solar Limit | 1/1/2033 | | 41 |
| DEK Solar Limit | 1/1/2034 | | 45 |
| DEK Solar Limit | 1/1/2035 | | 50 |
| DEK Solar Limit | 1/1/2036 | | 56 |
| DEK Solar Limit | 1/1/2037 | | 61 |
| DEK Solar Limit | 1/1/2038 | | 66 |
| DEK Solar Limit | 1/1/2039 | | 73 |
| DEK Solar Limit | 1/1/2040 | | 79 |
| DEK Solar Limit | 1/1/2041 | | 83 |
| DEK Solar Limit | 1/1/2042 | | 85 |
| DEK Solar Limit | 1/1/2043 | | 87 |
| DEK Solar Limit | 1/1/2044 | | 90 |
| DEK Solar Limit | 1/1/2045 | | 92 |
| DEK Solar Limit | 1/1/2046 | | 92 |
| DEK Solar Limit | 1/1/2047 | | 93 |
| DEK Solar Limit | 1/1/2048 | | 94 |

| | | |
|-------------------|----------|------|
| DEK Solar Limit | 1/1/2049 | 96 |
| DEK Solar Limit | 1/1/2050 | 99 |
| 10 Beginning 2021 | | 0 |
| 10 Beginning 2021 | 1/1/2021 | 10 |
| Beginning 2025 | | 0 |
| Beginning 2025 | 1/1/2025 | 1000 |
| Beginning 2024 | | 0 |
| Beginning 2024 | 1/1/2024 | 1000 |
| 10 Beginning 2027 | | 0 |
| 10 Beginning 2027 | 1/1/2027 | 10 |
| Beginning 2035 | | 0 |
| Beginning 2035 | 1/1/2035 | 1000 |
| 10 Beginning 2022 | | 0 |
| 10 Beginning 2022 | 1/1/2022 | 10 |
| 1 Beginning 2025 | | 0 |
| 1 Beginning 2025 | 1/1/2025 | 1 |

| Project Name | Max Annual Project Additions | Max Active Projects | Maximum Units to Retire |
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| East Bend 2 | | | 1 Beginning 2025 |

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| DEK Solar Limit | 1/1/2034 | | 45 |
| DEK Solar Limit | 1/1/2035 | | 50 |
| DEK Solar Limit | 1/1/2036 | | 56 |
| DEK Solar Limit | 1/1/2037 | | 61 |
| DEK Solar Limit | 1/1/2038 | | 66 |
| DEK Solar Limit | 1/1/2039 | | 73 |
| DEK Solar Limit | 1/1/2040 | | 79 |
| DEK Solar Limit | 1/1/2041 | | 83 |
| DEK Solar Limit | 1/1/2042 | | 85 |
| DEK Solar Limit | 1/1/2043 | | 87 |
| DEK Solar Limit | 1/1/2044 | | 90 |
| DEK Solar Limit | 1/1/2045 | | 92 |
| DEK Solar Limit | 1/1/2046 | | 92 |
| DEK Solar Limit | 1/1/2047 | | 93 |
| DEK Solar Limit | 1/1/2048 | | 94 |

| | | |
|-------------------|----------|------|
| DEK Solar Limit | 1/1/2049 | 96 |
| DEK Solar Limit | 1/1/2050 | 99 |
| 10 Beginning 2021 | | 0 |
| 10 Beginning 2021 | 1/1/2021 | 10 |
| Beginning 2025 | | 0 |
| Beginning 2025 | 1/1/2025 | 1000 |
| Beginning 2024 | | 0 |
| Beginning 2024 | 1/1/2024 | 1000 |
| 10 Beginning 2027 | | 0 |
| 10 Beginning 2027 | 1/1/2027 | 10 |
| Beginning 2035 | | 0 |
| Beginning 2035 | 1/1/2035 | 1000 |
| 10 Beginning 2022 | | 0 |
| 10 Beginning 2022 | 1/1/2022 | 10 |
| 1 Beginning 2025 | | 0 |
| 1 Beginning 2025 | 1/1/2025 | 1 |

| Project Name | Max Annual Project Additions | Max Active Projects | Maximum Units to Retire |
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| East Bend 2 | | | 1 Beginning 2025 |

Time Series

| Name | Effective Date | Ending Date | Value |
|-----------------|----------------|-------------|-------|
| DEK Solar Limit | 1/1/2021 | | 9 |
| DEK Solar Limit | 1/1/2022 | | 14 |
| DEK Solar Limit | 1/1/2023 | | 19 |
| DEK Solar Limit | 1/1/2024 | | 22 |
| DEK Solar Limit | 1/1/2025 | | 24 |
| DEK Solar Limit | 1/1/2026 | | 26 |
| DEK Solar Limit | 1/1/2027 | | 28 |
| DEK Solar Limit | 1/1/2028 | | 29 |
| DEK Solar Limit | 1/1/2029 | | 31 |
| DEK Solar Limit | 1/1/2030 | | 34 |
| DEK Solar Limit | 1/1/2031 | | 36 |
| DEK Solar Limit | 1/1/2032 | | 39 |
| DEK Solar Limit | 1/1/2033 | | 43 |
| DEK Solar Limit | 1/1/2034 | | 47 |
| DEK Solar Limit | 1/1/2035 | | 51 |
| DEK Solar Limit | 1/1/2036 | | 56 |
| DEK Solar Limit | 1/1/2037 | | 61 |
| DEK Solar Limit | 1/1/2038 | | 66 |
| DEK Solar Limit | 1/1/2039 | | 72 |
| DEK Solar Limit | 1/1/2040 | | 79 |
| DEK Solar Limit | 1/1/2041 | | 86 |
| DEK Solar Limit | 1/1/2042 | | 92 |
| DEK Solar Limit | 1/1/2043 | | 97 |
| DEK Solar Limit | 1/1/2044 | | 104 |
| DEK Solar Limit | 1/1/2045 | | 109 |
| DEK Solar Limit | 1/1/2046 | | 114 |
| DEK Solar Limit | 1/1/2047 | | 118 |
| DEK Solar Limit | 1/1/2048 | | 122 |

| | | |
|-------------------|----------|------|
| DEK Solar Limit | 1/1/2049 | 126 |
| DEK Solar Limit | 1/1/2050 | 130 |
| 10 Beginning 2021 | | 0 |
| 10 Beginning 2021 | 1/1/2021 | 10 |
| Beginning 2025 | | 0 |
| Beginning 2025 | 1/1/2025 | 1000 |
| Beginning 2024 | | 0 |
| Beginning 2024 | 1/1/2024 | 1000 |
| 10 Beginning 2027 | | 0 |
| 10 Beginning 2027 | 1/1/2027 | 10 |
| Beginning 2035 | | 0 |
| Beginning 2035 | 1/1/2035 | 1000 |
| 10 Beginning 2022 | | 0 |
| 10 Beginning 2022 | 1/1/2022 | 10 |
| 1 Beginning 2025 | | 0 |
| 1 Beginning 2025 | 1/1/2025 | 1 |

| Project Name | Max Annual Project Additions | Max Active Projects | Maximum Units to Retire |
|---------------------------|-------------------------------------|----------------------------|--------------------------------|
| Proj New Battery DEK | 10 Beginning 2021 | | |
| Proj New CC DEK | Beginning 2025 | 10 | |
| Proj New CC DF DEK | Beginning 2025 | 10 | |
| Proj New CHP DEK | Beginning 2024 | | |
| Proj New Coal DEK | 10 Beginning 2027 | 30 | |
| Proj New CT DEKY | Beginning 2024 | | |
| Proj New Nuclear DEK | Beginning 2035 | | |
| Proj New Nuclear SMR DEK | Beginning 2035 | | |
| Proj New Recip DEK | Beginning 2024 | | |
| Proj New Solar (50MW) DEK | | 0 DEK Solar Limit | |
| Proj New Solar DEK | 10 Beginning 2021 | DEK Solar Limit | |
| Proj New Wind DEK | 10 Beginning 2022 | | |
| East Bend 2 | | | 1 Beginning 2025 |

Time Series

| Name | Effective Date | Ending Date | Value |
|-----------------|-----------------------|--------------------|--------------|
| DEK Solar Limit | 1/1/2021 | | 9 |
| DEK Solar Limit | 1/1/2022 | | 14 |
| DEK Solar Limit | 1/1/2023 | | 19 |
| DEK Solar Limit | 1/1/2024 | | 21 |
| DEK Solar Limit | 1/1/2025 | | 23 |
| DEK Solar Limit | 1/1/2026 | | 25 |
| DEK Solar Limit | 1/1/2027 | | 26 |
| DEK Solar Limit | 1/1/2028 | | 28 |
| DEK Solar Limit | 1/1/2029 | | 29 |
| DEK Solar Limit | 1/1/2030 | | 31 |
| DEK Solar Limit | 1/1/2031 | | 32 |
| DEK Solar Limit | 1/1/2032 | | 32 |
| DEK Solar Limit | 1/1/2033 | | 33 |
| DEK Solar Limit | 1/1/2034 | | 33 |
| DEK Solar Limit | 1/1/2035 | | 34 |
| DEK Solar Limit | 1/1/2036 | | 37 |
| DEK Solar Limit | 1/1/2037 | | 39 |
| DEK Solar Limit | 1/1/2038 | | 42 |
| DEK Solar Limit | 1/1/2039 | | 44 |
| DEK Solar Limit | 1/1/2040 | | 47 |
| DEK Solar Limit | 1/1/2041 | | 50 |
| DEK Solar Limit | 1/1/2042 | | 53 |
| DEK Solar Limit | 1/1/2043 | | 56 |
| DEK Solar Limit | 1/1/2044 | | 59 |
| DEK Solar Limit | 1/1/2045 | | 62 |
| DEK Solar Limit | 1/1/2046 | | 63 |
| DEK Solar Limit | 1/1/2047 | | 64 |
| DEK Solar Limit | 1/1/2048 | | 65 |

| | | |
|-------------------|----------|------|
| DEK Solar Limit | 1/1/2049 | 66 |
| DEK Solar Limit | 1/1/2050 | 67 |
| 10 Beginning 2021 | | 0 |
| 10 Beginning 2021 | 1/1/2021 | 10 |
| Beginning 2025 | | 0 |
| Beginning 2025 | 1/1/2025 | 1000 |
| Beginning 2024 | | 0 |
| Beginning 2024 | 1/1/2024 | 1000 |
| 10 Beginning 2027 | | 0 |
| 10 Beginning 2027 | 1/1/2027 | 10 |
| Beginning 2035 | | 0 |
| Beginning 2035 | 1/1/2035 | 1000 |
| 10 Beginning 2022 | | 0 |
| 10 Beginning 2022 | 1/1/2022 | 10 |
| 1 Beginning 2025 | | 0 |
| 1 Beginning 2025 | 1/1/2025 | 1 |

| Project Name | Max Annual Project Additions | Max Active Projects | Maximum Units to Retire |
|---------------------------|-------------------------------------|----------------------------|--------------------------------|
| Proj New Battery DEK | 10 Beginning 2021 | | |
| Proj New CC DEK | Beginning 2025 | 10 | |
| Proj New CC DF DEK | Beginning 2025 | 10 | |
| Proj New CHP DEK | Beginning 2024 | | |
| Proj New Coal DEK | 10 Beginning 2027 | 0 | |
| Proj New CT DEKY | Beginning 2024 | | |
| Proj New Nuclear DEK | Beginning 2035 | | |
| Proj New Nuclear SMR DEK | Beginning 2035 | | |
| Proj New Recip DEK | Beginning 2024 | | |
| Proj New Solar (50MW) DEK | | 0 DEK Solar Limit | |
| Proj New Solar DEK | 10 Beginning 2021 | DEK Solar Limit | |
| Proj New Wind DEK | 10 Beginning 2022 | | |
| East Bend 2 | | | 1 Beginning 2025 |

Time Series

| Name | Effective Date | Ending Date | Value |
|-----------------|-----------------------|--------------------|--------------|
| DEK Solar Limit | 1/1/2021 | | 9 |
| DEK Solar Limit | 1/1/2022 | | 14 |
| DEK Solar Limit | 1/1/2023 | | 19 |
| DEK Solar Limit | 1/1/2024 | | 21 |
| DEK Solar Limit | 1/1/2025 | | 23 |
| DEK Solar Limit | 1/1/2026 | | 25 |
| DEK Solar Limit | 1/1/2027 | | 27 |
| DEK Solar Limit | 1/1/2028 | | 28 |
| DEK Solar Limit | 1/1/2029 | | 30 |
| DEK Solar Limit | 1/1/2030 | | 32 |
| DEK Solar Limit | 1/1/2031 | | 32 |
| DEK Solar Limit | 1/1/2032 | | 32 |
| DEK Solar Limit | 1/1/2033 | | 32 |
| DEK Solar Limit | 1/1/2034 | | 34 |
| DEK Solar Limit | 1/1/2035 | | 36 |
| DEK Solar Limit | 1/1/2036 | | 40 |
| DEK Solar Limit | 1/1/2037 | | 44 |
| DEK Solar Limit | 1/1/2038 | | 48 |
| DEK Solar Limit | 1/1/2039 | | 52 |
| DEK Solar Limit | 1/1/2040 | | 56 |
| DEK Solar Limit | 1/1/2041 | | 61 |
| DEK Solar Limit | 1/1/2042 | | 67 |
| DEK Solar Limit | 1/1/2043 | | 73 |
| DEK Solar Limit | 1/1/2044 | | 80 |
| DEK Solar Limit | 1/1/2045 | | 86 |
| DEK Solar Limit | 1/1/2046 | | 93 |
| DEK Solar Limit | 1/1/2047 | | 100 |
| DEK Solar Limit | 1/1/2048 | | 106 |

| | | |
|-------------------|----------|------|
| DEK Solar Limit | 1/1/2049 | 112 |
| DEK Solar Limit | 1/1/2050 | 118 |
| 10 Beginning 2021 | | 0 |
| 10 Beginning 2021 | 1/1/2021 | 10 |
| Beginning 2025 | | 0 |
| Beginning 2025 | 1/1/2025 | 1000 |
| Beginning 2024 | | 0 |
| Beginning 2024 | 1/1/2024 | 1000 |
| 10 Beginning 2027 | | 0 |
| 10 Beginning 2027 | 1/1/2027 | 10 |
| Beginning 2035 | | 0 |
| Beginning 2035 | 1/1/2035 | 1000 |
| 10 Beginning 2022 | | 0 |
| 10 Beginning 2022 | 1/1/2022 | 10 |
| 1 Beginning 2025 | | 0 |
| 1 Beginning 2025 | 1/1/2025 | 1 |

| Project Name | Max Annual Project Additions | Max Active Projects | Maximum Units to Retire |
|---------------------------|-------------------------------------|----------------------------|--------------------------------|
| Proj New Battery DEK | 10 Beginning 2021 | | |
| Proj New CC DEK | Beginning 2025 | 10 | |
| Proj New CC DF DEK | Beginning 2025 | 10 | |
| Proj New CHP DEK | Beginning 2024 | | |
| Proj New Coal DEK | 10 Beginning 2027 | 30 | |
| Proj New CT DEKY | Beginning 2024 | | |
| Proj New Nuclear DEK | Beginning 2035 | | |
| Proj New Nuclear SMR DEK | Beginning 2035 | | |
| Proj New Recip DEK | Beginning 2024 | | |
| Proj New Solar (50MW) DEK | | 0 DEK Solar Limit | |
| Proj New Solar DEK | 10 Beginning 2021 | DEK Solar Limit | |
| Proj New Wind DEK | 10 Beginning 2022 | | |
| East Bend 2 | | | 1 Beginning 2025 |

Time Series

| Name | Effective Date | Ending Date | Value |
|-----------------|-----------------------|--------------------|--------------|
| DEK Solar Limit | 1/1/2021 | | 9 |
| DEK Solar Limit | 1/1/2022 | | 14 |
| DEK Solar Limit | 1/1/2023 | | 19 |
| DEK Solar Limit | 1/1/2024 | | 21 |
| DEK Solar Limit | 1/1/2025 | | 23 |
| DEK Solar Limit | 1/1/2026 | | 25 |
| DEK Solar Limit | 1/1/2027 | | 26 |
| DEK Solar Limit | 1/1/2028 | | 27 |
| DEK Solar Limit | 1/1/2029 | | 29 |
| DEK Solar Limit | 1/1/2030 | | 30 |
| DEK Solar Limit | 1/1/2031 | | 31 |
| DEK Solar Limit | 1/1/2032 | | 32 |
| DEK Solar Limit | 1/1/2033 | | 33 |
| DEK Solar Limit | 1/1/2034 | | 33 |
| DEK Solar Limit | 1/1/2035 | | 34 |
| DEK Solar Limit | 1/1/2036 | | 36 |
| DEK Solar Limit | 1/1/2037 | | 39 |
| DEK Solar Limit | 1/1/2038 | | 42 |
| DEK Solar Limit | 1/1/2039 | | 44 |
| DEK Solar Limit | 1/1/2040 | | 47 |
| DEK Solar Limit | 1/1/2041 | | 49 |
| DEK Solar Limit | 1/1/2042 | | 53 |
| DEK Solar Limit | 1/1/2043 | | 56 |
| DEK Solar Limit | 1/1/2044 | | 59 |
| DEK Solar Limit | 1/1/2045 | | 62 |
| DEK Solar Limit | 1/1/2046 | | 63 |
| DEK Solar Limit | 1/1/2047 | | 64 |
| DEK Solar Limit | 1/1/2048 | | 65 |

| | | |
|-------------------|----------|------|
| DEK Solar Limit | 1/1/2049 | 67 |
| DEK Solar Limit | 1/1/2050 | 67 |
| 10 Beginning 2021 | | 0 |
| 10 Beginning 2021 | 1/1/2021 | 10 |
| Beginning 2025 | | 0 |
| Beginning 2025 | 1/1/2025 | 1000 |
| Beginning 2024 | | 0 |
| Beginning 2024 | 1/1/2024 | 1000 |
| 10 Beginning 2027 | | 0 |
| 10 Beginning 2027 | 1/1/2027 | 10 |
| Beginning 2035 | | 0 |
| Beginning 2035 | 1/1/2035 | 1000 |
| 10 Beginning 2022 | | 0 |
| 10 Beginning 2022 | 1/1/2022 | 10 |
| 1 Beginning 2025 | | 0 |
| 1 Beginning 2025 | 1/1/2025 | 1 |

| Project Name | Max Annual Project Additions | Max Active Projects | Maximum Units to Retire |
|---------------------------|-------------------------------------|----------------------------|--------------------------------|
| Proj New Battery DEK | 10 Beginning 2021 | | |
| Proj New CC DEK | Beginning 2025 | 10 | |
| Proj New CC DF DEK | Beginning 2025 | 10 | |
| Proj New CHP DEK | Beginning 2024 | | |
| Proj New Coal DEK | 10 Beginning 2027 | 30 | |
| Proj New CT DEKY | Beginning 2024 | | |
| Proj New Nuclear DEK | Beginning 2035 | | |
| Proj New Nuclear SMR DEK | Beginning 2035 | | |
| Proj New Recip DEK | Beginning 2024 | | |
| Proj New Solar (50MW) DEK | | 0 DEK Solar Limit | |
| Proj New Solar DEK | 10 Beginning 2021 | DEK Solar Limit | |
| Proj New Wind DEK | 10 Beginning 2022 | | |
| East Bend 2 | | | 1 Beginning 2025 |

Time Series

| Name | Effective Date | Ending Date | Value |
|-----------------|-----------------------|--------------------|--------------|
| DEK Solar Limit | 1/1/2021 | | 9 |
| DEK Solar Limit | 1/1/2022 | | 14 |
| DEK Solar Limit | 1/1/2023 | | 19 |
| DEK Solar Limit | 1/1/2024 | | 21 |
| DEK Solar Limit | 1/1/2025 | | 24 |
| DEK Solar Limit | 1/1/2026 | | 26 |
| DEK Solar Limit | 1/1/2027 | | 28 |
| DEK Solar Limit | 1/1/2028 | | 29 |
| DEK Solar Limit | 1/1/2029 | | 31 |
| DEK Solar Limit | 1/1/2030 | | 32 |
| DEK Solar Limit | 1/1/2031 | | 32 |
| DEK Solar Limit | 1/1/2032 | | 32 |
| DEK Solar Limit | 1/1/2033 | | 33 |
| DEK Solar Limit | 1/1/2034 | | 33 |
| DEK Solar Limit | 1/1/2035 | | 34 |
| DEK Solar Limit | 1/1/2036 | | 36 |
| DEK Solar Limit | 1/1/2037 | | 40 |
| DEK Solar Limit | 1/1/2038 | | 42 |
| DEK Solar Limit | 1/1/2039 | | 46 |
| DEK Solar Limit | 1/1/2040 | | 50 |
| DEK Solar Limit | 1/1/2041 | | 53 |
| DEK Solar Limit | 1/1/2042 | | 58 |
| DEK Solar Limit | 1/1/2043 | | 62 |
| DEK Solar Limit | 1/1/2044 | | 67 |
| DEK Solar Limit | 1/1/2045 | | 71 |
| DEK Solar Limit | 1/1/2046 | | 74 |
| DEK Solar Limit | 1/1/2047 | | 77 |
| DEK Solar Limit | 1/1/2048 | | 80 |

| | | |
|-------------------|----------|------|
| DEK Solar Limit | 1/1/2049 | 83 |
| DEK Solar Limit | 1/1/2050 | 86 |
| 10 Beginning 2021 | | 0 |
| 10 Beginning 2021 | 1/1/2021 | 10 |
| Beginning 2025 | | 0 |
| Beginning 2025 | 1/1/2025 | 1000 |
| Beginning 2024 | | 0 |
| Beginning 2024 | 1/1/2024 | 1000 |
| 10 Beginning 2027 | | 0 |
| 10 Beginning 2027 | 1/1/2027 | 10 |
| Beginning 2035 | | 0 |
| Beginning 2035 | 1/1/2035 | 1000 |
| 10 Beginning 2022 | | 0 |
| 10 Beginning 2022 | 1/1/2022 | 10 |
| 1 Beginning 2025 | | 0 |
| 1 Beginning 2025 | 1/1/2025 | 1 |