

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC 2021 JOINT INTEGRATED)
RESOURCE PLAN OF LOUISVILLE GAS AND)
ELECTRIC COMPANY AND KENTUCKY) **CASE NO. 2021-00393**
UTILITIES COMPANY)

RESPONSE OF
LOUISVILLE GAS AND ELECTRIC COMPANY AND
KENTUCKY UTILITIES COMPANY TO
KENTUCKY INDUSTRIAL UTILITY CUSTOMERS, INC.
POST HEARING REQUESTS FOR INFORMATION
DATED JULY 18, 2022

FILED: AUGUST 8, 2022

**LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY**

**Response to Kentucky Industrial Utility Customers, Inc.
Post Hearing Request for Information
Dated July 18, 2022**

Case No. 2021-00393

Question No. 3-1

Responding Witness: Stuart A. Wilson

- Q.3-1 Please provide the present value revenue requirements by year of the IRP Preferred Plan compared to the present value revenue requirements of the Plan discussed at the hearing where a natural gas combined cycle plant without CCS replaces the combustion turbine peaking units.
- A.3-1 The table below shows a comparison of the optimal generation portfolios, present value revenue requirements (“PVRR”), annual nominal revenue requirements, and CO₂ emissions in the Base Load, Base Fuel scenario. The optimal portfolios are consistent with the Companies’ response to Commission Staff’s Second Request for Information, Question No. 1. The revenue requirements for the scenario in which NGCC requires CCS are consistent with the Companies’ update in JI 2-35 to Table 9-1 in Volume I. The CO₂ emissions for the scenario in which NGCC requires CCS are consistent with the Companies’ response to JI 2-54.

Optimal Portfolios, Revenue Requirements, and CO₂ Emissions (Base Load, Base Fuel Prices)

Year	Optimal Portfolios		Revenue Requirements (\$M)		CO ₂ Emissions (million short tons)	
	NGCC Requires CCS	NGCC Does Not Require CCS	NGCC Requires CCS	NGCC Does Not Require CCS	NGCC Requires CCS	NGCC Does Not Require CCS
PVRR			3,809	3,729		
2022			1,028	1,028	29.0	29.0
2023			1,010	1,010	29.3	29.3
2024			1,001	1,001	29.4	29.4
2025			1,016	1,016	28.3	28.3
2026			1,045	1,045	28.2	28.2
2027			1,083	1,083	27.9	27.9
2028	440 MW SCCT 500 MW Solar	513 MW NGCC	1,178	1,176	26.6	25.7
2029			1,179	1,177	26.1	25.2
2030			1,195	1,196	26.0	25.1
2031			1,218	1,217	26.0	25.1
2032			1,244	1,247	26.3	25.3
2033			1,277	1,280	26.0	25.1
2034	880 MW SCCT 1,600 MW SCCT	1,026 MW NGCC	1,522	1,485	21.2	20.2
2035	100 MW Battery		1,499	1,479	21.4	20.5
2036	100 MW Battery	100 MW Battery	1,548	1,527	21.5	20.3