

COMMONWEALTH 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)	CASE NO. 2022-00402
PUBLIC CONVENIENCE AND NECESSITY)	
AND APPROVAL OF A DEMAND SIDE)	
MANAGEMENT PLAN)	

APRIL 13, 2023 SUPPLEMENTAL RESPONSE OF
KENTUCKY UTILITIES COMPANY
AND
LOUISVILLE GAS AND ELECTRIC COMPANY
TO
THE METROPOLITAN HOUSING COALITION, KENTUCKIANS FOR THE
COMMONWEALTH, KENTUCKY SOLAR ENERGY SOCIETY AND
MOUNTAIN ASSOCIATION'S
INITIAL REQUEST FOR INFORMATION
DATED FEBRUARY 17, 2023

FILED: APRIL 13, 2023

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

**April 13, 2023 Supplemental Response to Metropolitan Housing Coalition,
Kentuckians for the Commonwealth, Kentucky Solar Energy Society and
Mountain Association's
Initial Request for Information
Dated February 17, 2023**

Case No. 2022-00402

Question No. 1.41

Responding Witness: Stuart A. Wilson

Q-1.41. Please provide a key to all acronyms used in the Companies' PLEXOS modeling for this case.

A-1.41. **Original Response**

The following acronyms are used in the Companies' PLEXOS modeling files:

Acronym	Definition
RFP	Request for Proposal
DSM	Demand Side Management
DR	Demand Reduction
SCR	Selective Catalytic Reduction
MC2	Mill Creek Unit 2
GH2	Ghent Unit 2
CCR	Coal Combustion Residuals
EFOR	Equivalent Forced Outage Rate
MW	Megawatt
FOM	Fixed Operating and Maintenance Expense
VOM	Variable Operating and Maintenance Expense
OM	Operating and Maintenance
IRA	Inflation Reduction Act
WMR	Winter Reserve Margin
SRM	Summer Reserve Margin
CC	Combined Companies
NGCC	Natural Gas Combined Cycle
CT	Combustion Turbine
SCCT	Simple Cycle Combustion Turbine

SO2	Sulfur Dioxide
VOLL	Value of Lost Load
SOC	State of Charge
PPA	Power Purchase Agreement
CTG	Coal-to-Gas Ratio as described in section 2.2 of Appendix E in Exhibit SAW-2
LGMR or LGLC	Low Gas Mid CTG Ratio fuel price forecast
LGHR	Low Gas High CTG Ratio fuel price forecast
MGMR or MGMC	Mid Gas Mid CTG Ratio fuel price forecast
HGMR or HGHC	High Gas Mid CTR Ratio fuel price forecast
HGLR	High Gas Low CTG Ratio fuel price forecast
HGH2	High Gas Current CTG Ratio fuel price forecast

April 13, 2023 Supplemental Response

See attached.

The attachment is being
provided in a separate
file.

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Case No. 2022-00402

Question No. 1.42

Responding Witness: Stuart A. Wilson

Q-1.42. Please provide a key to all acronyms used in the Companies' PROSYM modeling for this case.

A-1.42. **Original Response**
See the table below.

Acronym	Definition
2023BP	2023 Business Plan
BL	Base Load Forecast
LG	Low Gas Price Scenario
MG	Mid Gas Price Scenario
HG	High Gas Price Scenario
LGLC	Low Gas, Mid CTG Ratio Fuel Price Scenario
MGMC	Mid Gas, Mid CTG Ratio Fuel Price Scenario
HGHC	High Gas, Mid CTG Ratio Fuel Price Scenario
LGHR	Low Gas, High CTG Ratio Fuel Price Scenario
HGLR	High Gas, Low CTG Ratio Fuel Price Scenario
HGH2	High Gas, Current CTG Ratio Fuel Price Scenario
SCR_G2	Scenarios with Ghent 2 SCR
SCR_G2M2	Scenarios with Ghent 2 and Mill Creek 2 SCRs
C000	Zero CO ₂ Price Scenario
C015	\$15/ton CO ₂ Price Scenario
C025	\$25/ton CO ₂ Price Scenario
PH1	Stage One of Resource Assessment
PH2	Stage Two of Resource Assessment
PH3	Stage Three of Resource Assessment

April 13, 2023 Supplemental Response

See attachment supplemental to response to Question No. 41.

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Case No. 2022-00402

Question No. 1.43

Responding Witness: Stuart A. Wilson

Q-1.43. Please provide a key to all acronyms used in the Companies' SERVVM modeling for this case.

A-1.43. **Original Response**
See the table below.

Acronym	Definition
ATC	Available Transmission Capacity
ELCC	Effective Load Carrying Capability
ELDCM	Equivalent Load Duration Curve Model
EUE	Expected Unserved Energy
LOLE	Loss of Load Expectation
Rel_Prod_Costs	Reliability and Production Costs
RM	Reserve Margin
SERVVM	Strategic Energy & Risk Valuation Model

April 13, 2023 Supplemental Response

See attachment supplemental to response to Question No. 41.

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Case No. 2022-00402

Question No. 1.44

Responding Witness: Stuart A. Wilson

Q-1.44. Please provide a copy of the PROSYM user guide.

A-1.44. **Original Response**

The Companies are working with the PROSYM user guide copyright holder to obtain permission to provide the guide in response to this request. The Companies will supplement this response when they obtain the requisite permission.

April 13, 2023 Supplemental Response

Due to security protocols at Hitachi Energy, the Companies cannot produce the PROSYM user guide using standard confidentiality procedures. The Companies will make the PROSYM user guide available for viewing upon request and at a mutually agreeable time at the Companies' offices in Louisville or Lexington. The Companies have also provided the PROSYM user guide to the Commission.