

Kentucky Power Company
KPSC Case No. 2024-00115
Joint Intervenors' Post Hearing Data Requests
Dated December 26, 2024

DATA REQUEST

JI PHDR_1 Please provide Witness Warren Hirons' resume or curriculum vitae.

RESPONSE

Please see KPCO_R_JI_PHDR_1_Attachment1.

Witness: Warren E. Hirons

WARREN HIRONS

CONSULTANT, P. E., C. E. M.,
C. M. V. P.



CONTACT

- 770-425-8100
- Warren.hirons@gdsassociates.com
- gdsassociates.com
- Marietta GA 30067

EDUCATION

- Murdoch University, coursework in Renewable Energy
- B.S. Environmental Engineering, N.C. State University, May 2009
- B.S.E.S. Environmental Economics & Management, University of Georgia, May 2006

PROFESSIONAL AFFILIATIONS/ CERTIFICATIONS

- Licensed Professional Engineer (PE) in the state of Georgia
- Certified Energy Manager (CEM)
- Certified Measurement & Verification Professional (CMVP)
- Experienced user of REM/Rate and BEopt building energy simulation modeling software

EXPERTISE

- Engineering Feasibility Studies
- Energy Systems Modeling
- Market Research
- Cost-Effectiveness Analyses
- DSM Potential Assessments
- Regulatory Support

PROFILE

Mr. Hirons has more than 15 years' experience as a consultant in the fields of energy and engineering. He joined GDS in early 2012, and works out of the Marietta, GA office. While at GDS he has worked on projects focusing on several different facets of energy efficiency. He has worked on energy efficiency potential studies, and he has provided consulting services to the North Carolina Utilities Commission (NCUC), serving as the lead consultant reviewing the evaluation, measurement and verification (EM&V) reports submitted by the electricity utilities to the NCUC as part of their application for cost recovery in various electricity rate case proceedings. He has submitted testimony and helped prepare affidavits and data requests on behalf of the NCUC in these proceedings. He has also served on a team of advisors to help the Office of Consumer Counsel (CT) represent the state's utility customers in energy efficiency proceedings. He has provided analysis to clients in regarding proposed utility performance incentive mechanisms. He has provided analysis of utility DSM plans in several states. He has performed research into best practices for providing DSM programs and developed evaluation. Mr. Hirons previously worked as an engineer for more than 2 years at Brown and Caldwell, an environmental consulting company, out of the Virginia Beach office.

PROFESSIONAL EXPERIENCE

GDS Associates, Inc., Marietta, Georgia, 2012 to Present *Consultant*

Mr. Hirons consults on a variety of projects, primarily energy efficiency potential studies and regulatory oversight of utility program performance and evaluation results. He works for a range of client types, including investor-owned electric and natural gas utilities, electric cooperatives, regulatory agencies and other government agencies, and other types of Stakeholders such as offices of consumer counsel. He is also experienced in the areas of codes and standards, technical reference manuals (TRM), and evaluation, and measurement and verification (EM&V). The following is a sample of the types of tasks Mr. Hirons performs the following tasks as they relate to performing potential studies and advising clients in EM&V related matters:

- Baseline studies: collects data on the costs, savings, useful lives and saturation of energy efficiency and demand response measures.
- Potential studies: estimates energy efficiency and demand response potential for a variety of client types
- Completes baseline studies including sample design, survey design, collect onsite data in the field
- Conducts interviews for evaluation studies
- Constructs building energy simulation models and billing and metering data analysis to support savings estimates developed for energy efficiency potential studies and evaluation analysis.
- Conducts benefit/cost analysis of energy efficiency and demand response measures and programs.
- Conducts statistical and uncertainty/sensitivity analysis of data.
- Conducts economic feasibility studies of energy efficiency and demand response measures and programs.
- Develops and reviews engineering estimates of energy use and savings for energy efficiency and demand response measures and programs using simple and complex engineering models



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PROFESSIONAL EXPERIENCE [continued]

- Reviews utility EM&V reports and prepares data requests in an effort to require the utilities show sufficient evidence of reported savings in cost recovery proceedings. Reviews include impact, process, market effects (net-to-gross), educational, and marketing programs evaluations.
- Provides regulatory support and testimony in cost recovery proceedings
- Reviews EM&V plans for future programs to advise clients on the adequacy of the plans

Brown and Caldwell, Virginia Beach, VA

Engineer II – Business Consulting Practice

Mr. Hirons worked with multiple contractors and the City of Virginia Beach Department of Public Utilities (DPU) to complete an investigation of the City's sanitary sewer infrastructure. The job required supervising contractor fieldwork activities, analyzing fieldwork data, compiling data and generating condition assessment reports. He also worked on a project to re-write the City's DPU design standards manual, and led an investigation into the stormwater infrastructure serving a portion of the Ft. Eustis military base in Newport News, VA.

Southern Energy Management, Morrisville, NC

Building Science Plan Review Analyst

Mr. Hirons worked on residential energy savings efforts by helping builders construct homes that earned Energy Star certification. His duties included conducting plan reviews by analyzing construction design drawings and entering the results of the analysis along with builder supplied specifications into the REM/Rate software program to estimate the energy efficiency of new homes. Mr. Hirons consulted with builders to help them make decisions regarding cost effective upgrades in energy efficiency.

PROJECT EXPERIENCE

DSM POTENTIAL ASSESSMENT. Mr. Hirons has completed assessments of electric and natural gas DSM potential across all customer sectors. He specializes in developing estimates of residential sector energy efficiency potential in utility service areas or states. He has completed numerous residential sector energy efficiency potential assessments for GDS clients, including the studies for the following clients since 2021:

- Arkansas Public Service Commission
- Indiana Michigan Power
- Northern Indiana Public Service Company
- East Kentucky Power Cooperative Inc.
- Commonwealth Edison, Ameren Illinois, Nicor Gas (joint utilities study)
- Kentucky Power Company
- Ameren Missouri Company
- Montana-Dakotas Utilities
- Yampa Valley Electric Association
- CenterPoint Indiana
- CenterPoint Ohio
- AES Indiana
- Hoosier Energy Rural Electric Cooperative
- Vermont Department of Public Service
- California Municipal Utilities Association

He performs the following tasks as they relate to performing energy efficiency and demand response potential studies:

- Collects data on the costs, savings, useful lives and saturation of energy efficiency and demand response measures
- Estimates energy efficiency and demand response potential in various regions of North America



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PROJECT EXPERIENCE [continued]

- Conducts building energy simulation models and billing and metering data analysis to support energy and demand savings estimates developed for energy efficiency potential studies and evaluation analysis
- Conducts benefit/cost analysis of energy efficiency and demand response measures and programs
- Conducts statistical and uncertainty/sensitivity analysis of data
- Develops and reviews engineering estimates of energy use and savings for energy efficiency and demand response measures and programs using simple and complex engineering models and formulas

REGULATORY SUPPORT. Mr. Hirons has provided regulatory support services to GDS government and utility clients:

- Served on a team of advisors to help the Connecticut (CT) Office of Consumer Counsel represent the state's utility customers in energy efficiency proceedings.
- Provided analysis to utility and government clients regarding proposed utility shareholder incentive mechanisms
- Provided analysis of utility DSM plans in several states
- Performed research into best practices for providing DSM program
- Served as a consultant in natural gas rate case proceedings for municipalities in Texas
- Reviews utility EM&V reports and prepares data requests in an effort to require the utilities show sufficient evidence of reported savings in cost recovery proceedings. Reviews include impact, process, market effects (net-to-gross), educational, and marketing programs evaluations.
- Provides regulatory support and testimony in cost recovery proceedings
- Develops program theory models
- Reviews EM&V plans for future programs to advise clients on the adequacy of the plans

PROGRAM EVALUATION. Mr. Hirons has worked on impact and process program evaluation projects for state utility commissions and other GDS clients. He is a Certified Measurement and Verification Professional (CMVP) as well as a licensed professional engineer. He worked on the Pennsylvania Statewide Evaluator Team from 2012 to 2017 and assisted with preparing reports to the Pennsylvania PUC on gross and verified savings from the energy efficiency programs of seven investor-owned utilities in Pennsylvania. He has served as the program evaluation consultant for the North Carolina Utilities Commission (NCUC) since 2012 and is responsible for reviewing the evaluation, measurement and verification (EM&V) reports submitted by the North Carolina electric utilities to the NCUC as part of their application for cost recovery in various electric rate case proceedings. He has submitted testimony and helped prepare affidavits and data requests on behalf of the NCUC in these proceedings.

MARKET RESEARCH. Mr. Hirons has assisted with the development of telephone, web-based and on-site survey instruments and conducted on-site assessments for energy efficiency studies in several states, including Maine, Indiana, Pennsylvania and Mississippi. These market research projects also included data cleansing, data analysis, and drafting the final market assessment and baseline reports.

COST-EFFECTIVENESS ANALYSIS. Mr. Hirons has assessed the cost-effectiveness of many energy efficiency and demand response resources for a wide variety of GDS clients. This includes assessment of measures, programs, and DSM portfolios for planning, reporting, and evaluation purposes.



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JI PHDR_2 To the extent not already provided in response to Post-Hearing Data Request 1.1, please provide a list of all Market Potential Studies Mr. Hirons has contributed to over the last ten years, and specify the entity or entities that requested and paid for each Market Potential Study.

RESPONSE

Please see KPCO_R_JI_PHDR_2_Attachment1 for the requested information.

Witness: Warren E. Hirons

Year Completed	Name of Study	Entity
2024	Arkansas Energy Efficiency Potential Study	Arkansas Public Service Commission
2024	Demand-Side Management, Energy Efficiency, & Demand Response Market Potential Study	Indiana Michigan Power
2024	DSM Market Potential Study	Northern Indiana Public Service Company
2024	Electric Energy Efficiency & Demand Response Potential Study	East Kentucky Power Cooperative, Inc.
2024	Illinois Baseline and Potential Study	Commonwealth Edison, Ameren Illinois, and Nicor Gas
2023	Market Potential Study	Kentucky Power Company
2023	Energy Efficiency, Demand Response, Distributed Generation, Combined Heat and Power Potential Studies	Ameren Missouri Company
2023	Energy Efficiency Market Potential Study	Montana-Dakota Utilities
2022	Beneficial Electrification Feasibility Study	Yampa Valley Electric Association
2022	DSM Potential Study & DSM Action Plan	CenterPoint Indiana
2022	DSM Potential Study & DSM Action Plan	CenterPoint Ohio
2022	Market Potential Study	AES Indiana
2022	Market Potential Study and Electrification Study	Hoosier Energy Rural Electric Cooperative
2022	Statewide Energy Efficiency Potential Study	Vermont Department of Public Service
2021	2020 Energy Efficiency Potential Forecast	California Municipal Utilities Association
2021	Demand-Side Management, Energy Efficiency, & Demand Response Market Potential Study	Indiana Michigan Power
2021	Electric Energy Efficiency & Demand Response Potential Study	East Kentucky Power Cooperative, Inc.
2021	Energy Efficiency Potential Study	City Council of New Orleans
2021	Natural Gas Potential Study	DTE Energy
2020	Beneficial Electrification Potential Study	Colorado Energy Office
2020	DSM Market Potential Study	Northern Indiana Public Service Company
2020	Energy Efficiency & Demand Response Potential Study	Lansing Board of Water and Light
2019	DSM Potential Study & DSM Action Plan	CenterPoint Indiana
2019	Market Potential Study	AES Indiana
2019	Energy Efficiency, Demand Response, Distributed Generation, Combined Heat and Power Potential Studies	Ameren Missouri Company

Year Completed	Name of Study	Entity
2019	Statewide Energy Efficiency Potential Study	Vermont Department of Public Service
2018	Electric Energy Efficiency & Demand Response Potential Study	East Kentucky Power Cooperative, Inc.
2018	Michigan Upper Peninsula Energy Efficiency Potential Study	Michigan Electric Cooperative Association
2017	DSM/EE Study	Big Rivers Electric Corporation
2017	Energy Efficiency Potential Study	Consumers Energy
2017	Energy Efficiency Potential Study	DTE Energy
2017	Energy Efficiency & Demand Response Potential Study	Lansing Board of Water and Light
2017	Electric Energy Efficiency Potential Study	Unitil Service Corporation
2016	Energy Efficiency Potential Study	Efficiency Maine Trust
2016	Natural Gas Potential Study	Consumers Energy
2016	Energy Efficiency, Demand Response, Distributed Generation, Combined Heat and Power Potential Studies	Ameren Missouri Company
2016	Statewide Energy Efficiency Potential Study	Vermont Department of Public Service
2014	DSM/EE Study	Big Rivers Electric Corporation
2014	Statewide Energy Efficiency Potential Study	Vermont Department of Public Service

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DATA REQUEST

- JI PHDR_3** Please refer to the Company's Responses to Staff 1.5 and 1.6.
- a. Please describe what is meant by "Max incentive level" in the middle column of the two figures provided in these data responses.
 - b. Will the incentive level for the measures identified in these tables vary from customer-to-customer?
 - i. If so, please identify the criteria that will determine the level of incentive that an individual customer will qualify for, and who determines that level of incentive.

RESPONSE

- a. Max incentive level was used to convey the level of incentive paid to the qualifying customer should the Commission approve the Company's DSM portfolio without modification.
- b. The incentive level will not vary.
 - i. N/A.

Witness: Tanner S. Wolfram

Witness: Warren E. Hiron

VERIFICATION

The undersigned, Warren E. Hirons, being duly sworn, deposes and says he is a Project Manager, for GDS Associates, that he has personal knowledge of the matters set forth in the foregoing responses and the information contained therein is true and correct to the best of his information, knowledge, and belief.

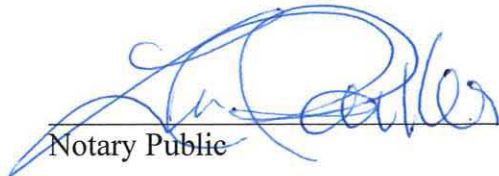


Warren E. Hirons

State of Georgia)
County of Cobb)

Case No. 2024-00115

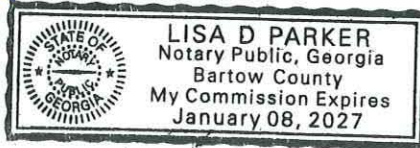
Subscribed and sworn to before me, a Notary Public in and before said County and State, by Warren E. Hirons, on January 7, 2025.



Notary Public

My Commission Expires January 8, 2027

Notary ID Number W-00584942



VERIFICATION

The undersigned, Tanner S. Wolffram, being duly sworn, deposes and says he is the Director of Regulatory Services for Kentucky Power, that he has personal knowledge of the matters set forth in the foregoing responses and the information contained therein is true and correct to the best of his information, knowledge, and belief.

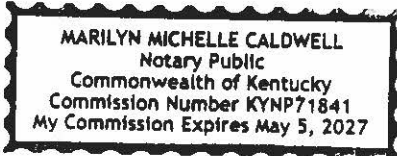
Tanner S. Wolffram
Tanner S. Wolffram

Commonwealth of Kentucky)
)
County of Boyd)

Case No. 2024-00115

Subscribed and sworn to before me, a Notary Public in and before said County and State, by Tanner S. Wolffram, on January 14, 2025.

Marilyn Michelle Caldwell
Notary Public



My Commission Expires May 5, 2027

Notary ID Number KYNP71841