DUKE ENERGY® FLORIDA

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July 17, 2026

VIA ELECTRONIC FILING

Adam J. Teitzman, Commission Clerk
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, Florida 32399-0850

Re: *Duke Energy Florida, LLC's Load Research Sampling Plan; Undocketed*

Dear Mr. Teitzman:

Please find attached Duke Energy Florida, LLC's ("DEF"), response to Staff's First Data Request, dated April 27, 2026, regarding Compliance Practices Related to Rule 25-6.0437 - Cost of Service Load Research.

Thank you for your assistance in this matter. Please feel free to call me at (850) 521-1428 should you have any questions concerning this filing.

Respectfully,

/s/ Matthew R. Bernier

Matthew R. Bernier

MRB/mh

cc: Bria Pope (bpope@psc.state.fl.us); and discovery-gcl@psc.state.fl.us

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DUKE ENERGY FLORIDA, LLC'S (DEF), RESPONSE TO STAFF'S FIRST DATA REQUEST REGARDING COMPLIANCE PRACTICES RELATED TO RULE 25-6.0437 - COST OF SERVICE LOAD RESEARCH

1. DEF's most recent Cost of Service Load Research Study, dated April 27, 2026, has been filed with the Commission.

   a. Describe any challenges the utility encountered in collecting complete and usable coincident and non-coincident monthly peak demand data consistent with its 2025 Load Research Sampling Plan for this period, as well as any "lessons learned."

   b. If applicable, describe any internal processes or procedural changes the utility intends to implement before submitting its next Load Sampling Plan.

   Response:

   a. Load Research retained the methodology used in the 2022 filing and did not encounter any unexpected challenges outside of the normal process for collecting complete and usable coincident and non-coincident monthly peak demand data in the 2025 filing.

   b. Not applicable

2. Provide the current status of Advanced Metering Infrastructure (AMI) deployment as of 2026 in subparts a through c below. Provide all responses in total and disaggregated format by rate class (e.g., residential, GS Non-Demand, etc.), where applicable. Specifically:

   a. Identify the number of customers in the utility's service area.

   b. Identify the number and percentage of customers with AMI meters installed and available.

   c. Of customers with AMI meters, identify the number and percentage for whom interval data is actively collected and available.

   Response:

   a. Approximate number of customers in the utility service area:
      - 113,485 – GS non-demand
      - 94,269 – GS demand
      - 1,832,056 – RS
      - 163 – IS

      Total of above rate classes: 2,039,973

   b. Approximate number and percentage of customers with AMI meters:
      - 113,461 (99.98%) – GS non-demand

- 94,264 (99.99%) – GS demand
- 1,829,693 (99.87%) – RS
- 163 (100%) – IS

Total of above rate classes: 2,037,581

c. Load Research anticipates the number of customers and percentages would be approximately the same as stated above.

3. Describe the methodologies used to ensure the accuracy and reliability of coincident peak demand data. Specifically:

a. Explain how the utility verifies the accuracy and completeness of AMI interval data used to calculate coincident peak demand (e.g., identification of missing, anomalous, or erroneous interval values).

b. Explain how DEF ensures its load sampling plan measurements of its summer and winter peak demand estimates by class are not materially affected by missing, anomalous, or erroneous interval values, and are sufficiently accurate and reliable for planning and regulatory purposes.

c. State whether any post hoc analyses have been performed (e.g., recently collected peak demand study data by customer class compared to post-study actual peak demand results) to evaluate the predictive accuracy of coincident peak demand estimates. In particular, indicate whether the use of full interval (AMI) data results in greater or lesser predictive accuracy compared to the historical use of load sampling data. If so, explain such comparisons and provide summary results documents.

Response:

a. Load Research relies on an upstream interval data collection process that operates automatically to gather interval data on a continuous basis. To support the reliability of this process, a quality control step is in place to monitor overall performance and effectiveness.

If any issues are identified, the quality control process initiates additional efforts to improve completeness and quality of data within a reasonable timeframe. This helps to ensure that the data used for Load Research analysis remains as accurate and comprehensive as possible.

b. The protocol explained in Response 3a is, also, deployed in ensuring summer and winter peak demands are sufficiently accurate and reliable for planning and regulatory purposes.

With the full population methodology, approximately every hour of the year has 99% of data available. Having interval data available for nearly all meters reduces estimation of usage which will achieve better results for all hours.

c. Load Research no longer executes sample analysis. Therefore, there are no sample statistics available for comparison. The results from the full population will inherently have less error than sample analysis.

4. Refer to DEF's response to Staff's First Data Request regarding DEF's 2025 Load Research Sampling Plan, dated July 23, 2025. In question 3, the utility states that its Regulated Solutions Analytics (RSA) organization developed an internal platform that combines customer interval data and additional characteristics to enable advanced analytics, including full population analysis.

a. Identify the "industry standard software" previously utilized by the utility and describe any limitations associated with that software that contributed to DEF's decision to develop and implement the internal platform.

b. Describe how the internal platform was developed, including whether the platform was developed solely by DEF or in collaboration with any third-party entities.

c. Explain whether the internal platform RSA developed is currently utilized by or available to any utilities other than Duke Energy Florida, LLC, and identify such utilities.

d. Explain whether and how the internal platform assists with validating customer interval data.

e. Explain the advanced analytics, such as full population analysis, that the platform enables.

Response:

a. The industry-standard software previously used, Oracle Load Analysis, effectively supported operations during the period when sampling methodology was required. The system itself did not present any functional limitations and as such, it was not a factor in the decision to develop and implement the interval platform. Rather, the replacement of Oracle Load Analysis was a byproduct of transitioning to the internal platform, which aligned with the modernization of advanced analytics.

b. Load Research transitioned its sampling approach to focus on collecting and analyzing interval data across the available full population rather than a limited subset. This change enables better utilization of AMI metering investments while also increasing flexibility to support a broader range of analytical applications.

No third-party entities participated in the collaboration.

c. The internal platform utilized for Duke Energy Florida is, also, utilized for the following utilities:
   - Duke Energy Carolinas
   - Duke Energy Indiana
   - Duke Energy Kentucky

- Duke Energy Ohio
- Duke Energy Progress

d. The platform works in conjunction with Duke Energy's upstream interval data collection and quality control processes mentioned in Response 3a. Those upstream processes monitor interval data availability and initiate efforts to address incomplete and quality of data within a reasonable timeframe.

   The internal platform assists with validating customer interval data by organizing and processing interval usage data for the available customer population. The platform enables Load Research to review interval data at an aggregated level, typically by rate schedule or customer class. Load Research works with the internal platform by identifying and reporting any items that would maximize data quality.

e. The platform categorizes interval data, typically by rate schedule, for Load Research use. Key statistics, including coincident peak demand, are calculated based on the hourly usage by rate class. Any missing data will be estimated based on a mean per unit methodology for the rate schedule.

5. DEF utilized a traditional approach to preparing its load research sampling plan and conducting its load research study in 2019. In its 2022 and 2025 efforts, DEF instead relied on all available interval (AMI) data, thereby eliminating the need for sampling design elements it followed in the study for 2019, such as stratification and confidence interval estimation. Please provide a comparison of the relative estimated costs and advantages of DEF's more recent method (full interval data) for complying with Rule 25-6.0437, F.A.C. vis-à-vis the traditional approach, using the tabular presentation below:

Table A.

Comparison of Estimated Costs to Perform Load Research Sampling Functions

Load Research Activity	2019 Plan (traditional)	2022 Plan (interval)	2025 Plan (interval)
Staffing (specify internal and external)			
Equipment			
Development			
Other Resources (specify)			

Total			

Table B.

Advantages of the Traditional Approach to Load Sampling Plan (as used in 2019)

Function	Advantages
Resource Requirements	
Demand Measurement (data accuracy)	
Ease and Effectiveness of Data Validation	
Operational Requirements (Scheduling, work integration, etc.)	
Other	

Table C.

Advantages of Full Data Collection Approach to Load Sampling Plan (as used in 2022 and 2025)

Function	Advantages
Resource Requirements	
Demand Measurement (data accuracy)	
Ease and Effectiveness of Data Validation	
Operational Requirements (scheduling, work integration, etc.)	
Other	

Response:
Regarding Table A, DEF does not have separately tracked cost estimates for each load research sampling function identified in Table A. The activities associated with the 2019 traditional sampling approach and the 2022 and 2025 interval data approach were supported through existing internal resources, systems, and enterprise data processes, and the related costs were

not isolated specifically for Rule 25-6.0437. As a result, DEF does not have cost information available by activity and cannot provide a cost comparison at that level of detail.

In general, the transition to the full interval data approach reduced the need for traditional sampling-specific activities, such as sample design, stratification, confidence interval estimation, and separate sample maintenance. However, the interval data approach relies on broader AMI infrastructure, upstream interval data collection processes, and data quality controls that support multiple business purposes beyond Load Research. Therefore, while the full interval data approach provides operational and analytical advantages, the associated costs are not readily separable from other AMI and enterprise analytics functions.

Regarding Table B and C, DEF continues to support that the Full Data Collection Approach has more advantages than the Traditional Approach.

Table B.

Advantages of the Traditional Approach to Load Sampling Plan (as used in 2019)

Function	Advantages
Resource Requirements	There are no advantages.
Demand Measurement (data accuracy)	There are no advantages.
Ease and Effectiveness of Data Validation	There are no advantages.
Operational Requirements (Scheduling, work integration, etc.)	There are no advantages.
Other	

Table C.

Advantages of Full Data Collection Approach to Load Sampling Plan (as used in 2022 and 2025)

Function	Advantages
Resource Requirements	Load Research has become one of many recipients benefiting from Duke Energy leveraging AMI data such as the full population analysis.
Demand Measurement (data accuracy)	Data accuracy is inherently improved going from sample interval data collection to full interval data collection.
Ease and Effectiveness of Data Validation	Load Research has less direct involvement in reviewing interval data at an individual meter level because the review occurs through upstream interval data collection process.
Operational Requirements (scheduling, work integration, etc.)	Load Research is less directly involved in acquiring interval data at an individual meter level because that task is primarily overseen through the upstream interval data collection process.
Other	

6. Describe whether and how the utility uses artificial intelligence (AI) or advanced analytics in its data processing for satisfying the requirements of Rule 25-6.0437, F.A.C. Specifically:

   a. Explain any current or planned use of AI for validating or improving the quality of load research data.

   b. If such technologies are used or under consideration, explain their potential to improve data validation and reduce costs, including any quantified or estimated impacts.

Response:

a. Load Research continues to use the same reliable core methodology for demands analysis and validation, without any specific AI assistance.

b. Not applicable

7. In general, please provide any reasons why Rule 25-6.0437, F.A.C., should or should not be modified at this time.

Response:
DEF Load Research holds a neutral position regarding Rule 25-6.0437.