BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

IN RE: REVIEW OF STORM PROTECTION PLAN, PURSUANT TO RULE 25-6.030, F.A.C., DUKE ENERGY FLORIDA, LLC.

DOCKET NO. 20220050-EI

DIRECT TESTIMONY OF AMY HOWE

ON BEHALF OF DUKE ENERGY FLORIDA, LLC

APRIL 11, 2022

I. INTRODUCTION AND QUALIFICATIONS.

Q. Please state your name and business address.

A. My name is Amy M. Howe. My current business address is 13338 Interlaken Road, Odessa, FL 33556.

Q. By whom are you employed and in what capacity?

A. I am employed by Duke Energy Carolinas, LLC ("DEC") as Director, Transmission and Substation Performance within Asset Management. DEC is an affiliate of Duke Energy Florida ("DEF" or the "Company") that provides various services to DEF and other affiliated companies of Duke Energy Corporation ("Duke Energy"). Both DEC and DEF are wholly owned subsidiaries of Duke Energy.

Q. What are your responsibilities as Director, Transmission Asset Management?

A. My duties and responsibilities as Transmission and Substation Performance Director within Asset Management include strategic planning for Transmission Grid reliability improvement projects and programs across the Duke Energy enterprise.

Q. Please summarize your educational background and work experience.

A. I have a Bachelor of Science degree in Electrical Engineering from University of Washington and am a registered Professional Engineer in the state of Florida. Throughout my 14 years at Duke Energy, I have held various positions within transmission and distribution ranging from Engineer to Director focusing on Distribution Asset Management, Distribution Design, Distribution Power Quality, and Transmission Asset Management. My current position as Director of Transmission Asset Management began in August 2021.

II. PURPOSE AND SUMMARY OF TESTIMONY.

Q. What is the purpose of your direct testimony?

A. The purpose of my direct testimony is to support the Company's filing of its Storm Protection Plan 2023-2032 ("SPP 2023") and will provide details of the Transmission investments in Transmission lines and substations.

Q. Do you have any exhibits to your testimony?

A. No, but I am co-sponsoring the Transmission Programs portions of Exhibit No. __ (BML-1) and Exhibit No. __ (BML-2).

Q. Please summarize your testimony.

A. My testimony presents the Transmission portion of the Company's SPP for the planning period 2023 through 2032. The Transmission Programs included in DEF's SPP 2023 build upon the foundation established in DEF's Storm Hardening Plans ("SHP") instituted under the since repealed Storm Hardening Rule and DEF's SPP 2020. The Programs present a holistic approach to further strengthening the Company's infrastructure with the goal of reducing outage frequency and duration during extreme weather events and enhancing overall reliability.

III. OVERVIEW OF TRANSMISSION SPP

Q. Please provide an overview of Duke Energy Florida's Transmission System.

A. DEF's Transmission system is part of a nationwide and Florida interconnected power network that enables utilities to exchange power. As a result, the Company's Transmission system is subject to both state and federal regulation. The Company's Transmission system includes approximately 5,200 circuit miles of Transmission lines, including 500 kV, 230 kV, 115 kV and 69 kV lines, and more than 500 substations. These assets cover approximately 13,000 square miles in north Florida, west central Florida, and the densely populated areas around Orlando, St. Petersburg, and Clearwater. Within Florida, the Company's system is interconnected with other investor-owned utilities, municipal electric utilities, and rural electric cooperatives. By maintaining and improving its Transmission system,

the Company reliably delivers power from generation resources for distribution to customers' homes and businesses.

Q. Please provide an overview of the Transmission SPP 2023 plan.

A. Duke Energy Florida's Transmission plan addresses defined grid investment through hardening programs to withstand the impacts of extreme weather events to reduce restoration costs and customer minutes interrupted.

The Transmission Programs referenced in Mr. Brian Lloyd's testimony and Exhibit No. __ (BML-1) are categorized into 5 main programs (with associated sub-programs): Transmission Structure Hardening, Substation Hardening, Substation Flood Mitigation, Loop Radially Fed Substations, and Transmission Vegetation Management.

IV. OVERVIEW OF PROGRAMS EVALUATED IN THE SPP

Q. How did DEF develop the list of Programs for the SPP?

A. DEF first started with the existing SPP 2020 Programs and sub-programs as previously approved in Docket No. 20200069-EI. DEF consulted subject matter experts ("SMEs") with knowledge of the Transmission system and asset performance to evaluate whether any new system performance trends were observed that would meet the intent and requirements of Section 366.096, Florida Statutes and Rule 25-6.030, F.A.C. DEF also benchmarked with other utilities to identify and validate potential programs. A complete list of the Program names and

descriptions selected for inclusion in SPP 2023 can be found in Exhibit No.__ (BML-1).

Q. Are there any new transmission Programs included in DEF's SPP 2023 when compared to DEF's SPP 2020?

A. No.

Q. Are there other potential programs that DEF may consider in the future for inclusion in the SPP?

A. Yes, DEF will continue to monitor emergent technologies and system performance that may warrant further review and consideration.

V. PROGRAM EVALUATION, PRIORITIZATION, AND SELECTION

Q. How were the Transmission projects selected to provide the greatest value to Duke Energy Florida customers?

A. Utilizing the Guidehouse benefits to cost prioritized list of projects to select the highest ranked project, DEF's Transmission SMEs then evaluated Programs for targeted opportunities for optimization. The optimization process involves evaluating Programs for remaining projects either on the same line segment or at the same substation to determine if there are any other projects with scheduled deployment within the next two years that would require the same outage. If a project or projects on the line segment or at the substation met this criterion, DEF selected this work to be completed alongside the initiating project. This targeted optimization provides synergies to minimize disruptions to our communities and

customers, improve resource utilization and efficiency, and reduce the cost of execution. DEF continuously works to identify efficiencies and other available means to lower costs related to all Programs. If efficiencies can be identified and costs lowered, those lower costs may allow for DEF to identify and complete additional Program scope within the Planning horizon.

Q. Are there any modifications to the transmission Programs included in DEF's SPP 2023 when compared to DEF's SPP 2020?

A. Structurally, no, the SPP 2023 Transmission Programs are the same as those approved in DEF's SPP 2020. However, DEF now has the benefit of additional project execution experience, and that experience has been translated into updates and modifications to the modelling used to identify and prioritize projects within Programs. Some of these cost updates have resulted in reduced costs, while other updates have recognized that original cost estimates did not include the full cost of a given activity. For example, DEF has been able to identify efficiencies that have reduced the per-unit cost of wood to non-wood pole replacement activity within the Structure Hardening Program, while within the Substation Hardening Program, DEF has updated the unit cost associated with replacing electromechanical relay groups with electronic relays in the present filing versus the estimate included in SPP 2020. DEF has determined that the unit costs used to identify relay projects in SPP 2020 incorporated primarily the relay material costs only, i.e., it was a unit cost that was not indicative of the work required (which can vary greatly from substation to substation due to the location of the

relay within the substation as well as the complexity and function of the relay) and therefore SPP 2023 shows a reduction in the number of proposed projects versus the previous filing. This update does not indicate an increase in actual costs to perform this work, but rather shows a more complete average unit cost and therefore an updated projection of the number of projects that can be performed within the planning horizon utilizing the same budget as included in SPP 2020. DEF has determined it is appropriate and cost-effective to target an approach of moving forward with relay replacements that can be completed as part of a breaker/relay replacement (rather than relays in isolation); this is a consistent replacement approach that Transmission applies where applicable for other Transmission work and aligns with industry practice to increase efficiencies and cost effectiveness.

VI. BENEFITS THAT DEF'S SPP WILL BRING TO DEF'S CUSTOMERS

Q. What benefits does DEF intend its SPP 2023 to deliver to its customers?

A. DEF proposes to implement activities included in Exhibit No. __ (BML-1) and anticipates the Programs will deliver the benefits discussed in that exhibit. DEF is confident that the activities included in this 10-Year plan will strengthen its infrastructure, reduce outage times associated with extreme weather events, reduce restoration costs, and improve overall service reliability.

Q. Does this conclude your testimony?

A. Yes, it does.