

1 **BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

2 DIRECT TESTIMONY OF

3 KIM SPENCE McDANIEL

4 ON BEHALF OF

5 DUKE ENERGY FLORIDA, LLC

6 DOCKET NO. 20210007-EI

7 August 27, 2021

8

9 **Q. Please state your name and business address.**

10 A. My name is Kim Spence McDaniel. My business address is 299 1st Avenue North,
11 St. Petersburg, FL 33701.

12

13 **Q. Have you previously filed testimony before this Commission in Docket No.**
14 **20210007-EI?**

15 A. Yes. I provided direct testimony on April 1, 2021, and July 30, 2021.

16

17 **Q. Has your job description, education, background or professional experience**
18 **changed since that time?**

19 A. No.

20

21 **Q. What is the purpose of your testimony?**

22 A. The purpose of my testimony is to provide estimates of the costs that will be
23 incurred in 2022 for Duke Energy Florida, LLC's ("DEF" or "the Company")
24 Substation Environmental Investigation, Remediation and Pollution Prevention

1 Program (Project 1 & 1a), Distribution Environmental Investigation, Remediation
2 and Pollution Prevention Program (Project 2), Pipeline Integrity Management
3 (“PIM”) Program (Project 3), Above Ground Storage Tanks (“AST”) Program
4 (Project 4), Phase II Cooling Water Intake 316(b) Program (Project 6),
5 CAIR/CAMR Continuous Mercury Monitoring System (“CMMS”) Program
6 (Projects 7.2 & 7.3), Best Available Retrofit Technology (“BART”) Program
7 (Project 7.5), Arsenic Groundwater Standard Program (Project 8), Sea Turtle –
8 Coastal Street Lighting Program (Project 9), Underground Storage Tanks
9 (“UST”) Program (Project 10), Modular Cooling Towers (Project 11), Thermal
10 Discharge Permanent Compliance (Project 11.1), Greenhouse Gas Inventory and
11 Reporting (Project 12), Mercury Total Maximum Loads Monitoring (“TMDL”)
12 (Project 13), Hazardous Air Pollutants (“HAPs”) Information Collection Request
13 (“ICR”) (Project 14), Effluent Limitation Guidelines CRN (Project 15.1) and
14 National Pollutant Discharge Elimination System (“NPDES”) Program (Project
15 16).

16
17 **Q. Have you prepared or caused to be prepared under your direction,**
18 **supervision or control any exhibits in this proceeding?**

19 **A.** Yes. I am co-sponsoring the following portions of Exhibit No. __ (GPD-5) to Gary
20 P. Dean’s Direct Testimony:

- 21 • 42-5P, p. 1 of 23 – Substation Environmental Investigation, Remediation
22 and Pollution Prevention Program
- 23 • 42-5P, p. 2 of 23 - Distribution System Environmental Investigation,
24 Remediation and Pollution Prevention Program

- 1 • 42-5P, p. of 23 – PIM
- 2 • 42-5P, p. 4 of 23 - AST
- 3 • 42-5P, p. 6 of 23 - Phase II Cooling Water Intake
- 4 • 42-5P, p.7 of 23 – Clean Air Interstate Rule (“CAIR”)
- 5 • 42-5P, p. 8 of 23 – BART
- 6 • 42-5P, p. 9 of 23 - Arsenic Groundwater Standard
- 7 • 42-5P, p. 10 of 23 – Sea Turtle – Coastal Street Lighting Program
- 8 • 42-5P, p.11 of 23 - UST
- 9 • 42-5P, p. 12 of 23 - Modular Cooling Towers
- 10 • 42-5P, p. 13 of 23 - Thermal Discharge Permanent Cooling Tower
- 11 • 42-5P, p. 14 of 23 - Greenhouse Gas Inventory and Reporting
- 12 • 42-5P, p. 15 of 23 - Mercury TMDL
- 13 • 42-5P, p. 16 of 23 - HAPs ICR
- 14 • 42-5P, p. 17 of 23 - Effluent Limitation Guidelines ICR Program
- 15 • 42-5P, p.18 of 23 - Effluent Limitation Guidelines CRN Program
- 16 • 42-5P, p. 19 of 23 - NPDES

17

18 **Q. What O&M costs does DEF expect to incur in 2022 for the Phase II Cooling**
19 **Water Intake 316(b) Program for Anclote and Bartow CC stations (Projects**
20 **6 and 6a)?**

21 A. DEF is forecasting a total of \$280k in O&M costs for the Phase II Cooling Water
22 Intake Program 316(b) projects in 2022.

23

1 DEF estimates approximately \$260k of O&M costs for the Anclote Station to
2 develop and begin implementation of a Plan of Study (“Study”). DEF anticipates
3 receiving the final NPDES permit renewal from the Florida Department of
4 Environmental Protection (“FDEP”) by year end 2021. If the permit requirements
5 reflect what was proposed in the application, the permit will require DEF to
6 prepare and implement a Study that evaluates organism mortality associated with
7 the cooling water intake system. The Study will be conducted for a period of one
8 to two years, potentially longer, depending upon results of the Study and FDEP
9 response. The results of the Study will determine whether any future capital
10 investments are necessary. The full extent of compliance activities and associated
11 expenditures could change depending on the conditions of the final NPDES
12 permit when issued.

13

14 DEF estimates approximately \$20k of O&M for Crystal River North to support
15 consultations related to 316(b) topics, including source waterbody data,
16 impingement, or entrainment data, and/or any threatened or endangered species.
17 This estimate is provided in the event FDEP requests additional information.

18

19 **Q. What Capital costs does DEF expect to incur in 2022 for the Phase II Cooling**
20 **Water Intake 316(b) Program for Anclote and Bartow CC stations (Projects**
21 **6.1 and 6.2)?**

22 A. DEF estimates the potential for \$1.1M of capital costs in 2022 for the Bartow
23 station 316(b) compliance plan for preliminary engineering and design of
24 modified traveling screens and an organism return system. This estimate is

1 preliminary as DEF does not currently have a final NPDES permit renewal, and
2 therefore the compliance strategy and schedule that the permit will require is
3 unknown. The full extent of compliance activities and associated expenditures
4 could change depending on the conditions of the final NPDES permit when
5 issued.

6
7 As this estimate is preliminary and dependent on final approval from FDEP, the
8 project scope and associated timeline are still undetermined and may change
9 depending on the conditions required when the final NPDES permit is issued.

10 However, based on assumptions used in the initial permit application, it is likely
11 that the first two years after permit approval will involve selection of an
12 engineering firm and detailed engineering work, along with initiation and
13 selection of the screen vendor bid process, and initiation of procurement of
14 screens and associated components.

15
16 Years three through six will likely include procurement of remaining components,
17 contractor mobilization, installation of screens, contractor demobilization,
18 development, submittal and implementation of an impingement optimization
19 study plan and development and submission of the interim report. This is
20 expected to conclude with the final report submittal. This schedule is high-level,
21 and subject to the final permit from FDEP.

22
23 No Capital costs are projected for the Anclothe Station for 2022, however this
24 estimate is preliminary as DEF does not currently have a final NPDES permit

1 renewal, and therefore the compliance requirements of the permit are unknown.

2

3 **Q. What costs does DEF expect to incur in 2022 for the Arsenic Groundwater**
4 **Standard Program (Project 8)?**

5 A. DEF forecasts 2022 O&M expenditures to be \$74k. Anticipated costs are
6 associated with post-remediation groundwater monitoring, implementation of a
7 deed restriction and restrictive covenant for the affected area, final analysis and
8 reporting of results to the agency and also monitoring well abandonment.

9

10 In accordance with FDEP Consent Order No. 09-3463D executed on March 22,
11 2016, and FDEP Consent Order No. 09-3463E executed on November 17, 2017,
12 DEF's investigation has identified potential sources of arsenic exceedances in
13 groundwater monitoring wells addressed in the Consent Order. The original
14 Consent Order was issued by the FDEP for exceedance of the arsenic groundwater
15 limit following the 2005 revision of the State's groundwater standard that lowered
16 the arsenic maximum contaminant level from 50 ppb to 10 ppb. As discussed in
17 the prior testimony of DEF Witness Patricia Q. West¹, the results of DEF's
18 monitoring and assessment identified the need for additional compliance
19 activities. On July 26, 2019, DEF submitted a Site Assessment Report Addendum
20 ("SARA") addressing FDEP comments to the Site Assessment Report ("SAR")
21 submitted on August 31, 2018. The SAR and SARA documents all assessment
22 work done under the Consent Order to identify the nature and extent of arsenic in

¹ Please see Ms. West's direct testimony provided in Docket Nos. 2005007-EI, 20080007-EI, 20090007-EI and 20150007-EI.

1 groundwater. On October 15, 2019, FDEP notified DEF that sediment and soil
2 assessment was complete and that additional ground water delineation was
3 needed. On June 24, 2020, DEF submitted to FDEP a Site Assessment Status
4 Report (“SASR”) with additional ground water sampling results to complete the
5 ground water delineation and a Soils and Sediment Management Plan to be
6 implemented for remediation of soils and sediments in the former North Ash Pond
7 area. FDEP approved the plan on August 4, 2020. Remediation of soils and
8 sediments in the North Ash Pond area was completed on January 7, 2021, and
9 completion of the soil cap installation completed on April 6, 2021. On May 26,
10 2021, DEF submitted to FDEP a Site Assessment Report Addendum No. 2 and
11 Natural Attenuation Monitoring Plan (“NAM”). The purpose of the NAM is to
12 confirm that the arsenic concentrations in the former North Ash Pond Area are
13 stable and/or decreasing after installation of the soil cap. The NAM was approved
14 by FDEP and is being implemented by DEF. The report also included ground
15 water monitoring conducted during March 2021. DEF and FDEP are in the
16 process of amending the Consent Order to change the final date of compliance
17 from December 31, 2021, to December 31, 2023, to allow additional time to
18 obtain a Site Rehabilitation Completion Order (“SRCO”) for the former North
19 Ash Pond area.

20
21 **Q. What costs does DEF expect to incur in 2022 for the NPDES Program**
22 **(Project No. 16)?**

23 A. DEF estimates \$31k of O&M costs for Whole Effluent Toxicity (“WET”) testing
24 as required at DEF stations with NPDES permits.

1 **Q. Does this conclude your testimony?**

2 **A. Yes.**

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24