

State of Florida



## Public Service Commission

CAPITAL CIRCLE OFFICE CENTER • 2540 SHUMARD OAK BOULEVARD  
TALLAHASSEE, FLORIDA 32399-0850

**-M-E-M-O-R-A-N-D-U-M-**

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**DATE:** September 21, 2023

**TO:** Office of Commission Clerk (Teitzman)

**FROM:** Division of Economics (Ward, Hampson) *EJD*  
Office of the General Counsel (Brownless) *JSC*

**RE:** Docket No. 20230068-EI – Petition for approval of smart outdoor lighting services pilot program by Duke Energy Florida, LLC.

**AGENDA:** 10/03/23 – Regular Agenda – Tariff Filing – Interested Persons May Participate

**COMMISSIONERS ASSIGNED:** All Commissioners

**PREHEARING OFFICER:** Administrative

**CRITICAL DATES:** 01/15/24 (8-Month Effective Date)

**SPECIAL INSTRUCTIONS:** None

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### Case Background

On May 15, 2023, Duke Energy Florida, LLC (Duke or utility) filed a petition for approval of the smart outdoor lighting services pilot program (pilot program). Specifically, Duke is proposing to make modifications to Tariff Sheet Nos. 6.280 and 6.281 to allow certain customers who take service under the existing LS-1 lighting tariff to set their own personal lighting schedule and to dim the lights. Currently, all lights offered under the tariff operate from dusk to dawn.

In Order No. PSC-2023-0182-PCO-EI, the Commission suspended Duke's proposed modifications to Tariff Sheet Nos. 6.280 and 6.281 to allow staff time to gather additional data.<sup>1</sup> On June 26, 2023, staff issued its first data request, to which Duke responded on July 17, 2023. Staff issued a second data request on July 28, 2023, to which Duke responded on August 11, 2023. Staff noticed a scrivener's error in the tariff sheets filed with the petition, and Duke

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<sup>1</sup> Order No. PSC-2023-0182-PCO-EI, issued June 26, 2023, in Docket No. 20230068-EI, *In re: Petition for approval of smart outdoor lighting services pilot program by Duke Energy Florida, LLC.*

Docket No. 20230068-EI  
Date: September 21, 2023

included updated legislative and clean versions of the tariff sheets in response to staff's first data request. The proposed legislative tariffs are included in this recommendation as Attachment A. This recommendation addresses the proposed smart outdoor lighting services pilot program. The Commission has jurisdiction over this matter pursuant to Sections 366.03, 366.04, 366.05, and 366.06, Florida Statutes (F.S.).

## Discussion of Issues

**Issue 1:** Should the Commission approve Duke's smart outdoor lighting services pilot program?

**Recommendation:** Yes, the Commission should approve Duke's smart outdoor lighting services pilot program and the associated revised Tariff Sheet Nos. 6.280 and 6.281 effective on the date of the final Commission order approving the pilot. The pilot program would allow Duke to gather data on energy usage changes from participating customers so that it may develop a future program that is appropriately priced. Participating customers would be able to customize the operating and dimming schedule of their lights. (Ward)

### **Staff Analysis:**

#### **Rate Schedule LS-1**

Rate schedule LS-1, Lighting Service, is available to any customer for the sole purpose of lighting roadways or other land use areas. Currently, the energy rates for the LS-1 tariff are set for all customers based on the same lighting schedule (dusk to dawn), with no option to dim the lights. Customers taking service under the LS-1 tariff pay a fixed monthly customer charge, a non-fuel energy charge based on per kWh usage, cost recovery factors, as well as per unit fixture and maintenance charges. Service is available to both metered and unmetered customers.

#### **Proposed Pilot Program**

Under the proposed pilot program, Duke would offer certain customers taking service under rate schedule LS-1 the option to set their own lighting schedules and dim the lights. The rates offered under the current tariff would remain the same. Customers would be able to schedule lighting service during the time period from 30 minutes prior to dusk until 30 minutes after dawn. The terms and conditions of the pilot program state that customers would be able to request brightness between 50 and 100 percent of the standard output of the fixture. Additionally, the terms and conditions state that participating customers would be able to request changes to their lighting schedules during the pilot program. The processing time for normal schedule changes would be five business days and the processing time for "emergent special events" would be three business days. Examples of these special events given by Duke in response to staff's first data request include turning off desired lights for a fireworks show, community concerts, or outdoor movie events.

If approved, the pilot would run for a period of 18 months beginning on the date of the final Commission order approving the petition. In response to staff's first data request, the utility stated that customers would be enrolled in the pilot program for a period of 12 consecutive months, with enrollment ending after the sixth month of the pilot program. In its petition, the utility stated that it would file an amendment to its LS-1 tariff to remove references to the pilot program no less than sixty days before its expiration.

#### **Pilot Program Participation and Availability**

In its petition, Duke stated that customers would be able to participate if they take service for at least five light-emitting diode (LED) lights with company installed smart nodes. In response to staff's first data request, Duke stated that it has begun installing the smart nodes on all

compatible LEDs through its typical installation and maintenance work. In response to staff's second data request, Duke stated that there are no incremental costs associated with the installation of a smart node. Additionally, the utility asserted that, as of July 2023, 250 customers have LED light fixtures with smart nodes installed. The utility estimates that approximately 25 to 50 customers would participate in the pilot program. Duke proposes to limit participation in the pilot program to 10,000 lights, while also reserving the right to allow additional participation.

The pilot program would be available to both metered and unmetered customers. In response to staff's first data request, Duke stated that pilot program participants on LS-1 with metered accounts would be charged based on their actual kWh usage, so their actual energy consumption would be charged based on their energy usage (which may be higher or lower). In response to staff's second data request, the utility stated that it would measure the impact of the program on unmetered customers by utilizing vendor provided software that tracks street light usage based on being on/off or dimmed and compare that to data from a normal streetlight that turns the light on from dusk to dawn.

In its petition, Duke stated that the purpose of the pilot program is to gather data on energy usage changes from participating customers so that it can develop a future permanent program that is appropriately priced. Examples of customers who might participate in the pilot include a sporting arena that may only need lights on until the late evening or a parking lot that may need to light the lot for slightly longer than dusk to dawn.

### **Pilot Program Costs**

In response to staff's second data request, the utility stated that the marketing cost of the pilot program is estimated to be between \$3,320 and \$5,320. These costs include the one time cost for the development of a customer website and the one time cost for 500 color printouts of a pilot program factsheet. Duke stated that these costs are not included in rate base and would be included in future rate cases if applicable.

### **Conclusion**

Having reviewed the petition and staff data request responses, staff recommends that the Commission approve Duke's proposed smart outdoor lighting services pilot program and associated revised Tariff Sheet Nos. 6.280 and 6.281 effective the date of the final Commission order approving the pilot. The proposed pilot program would allow Duke to gather data on energy usage changes from participating customers so that it may develop a permanent future program that is appropriately priced. Participating customers would be able to customize the operating and dimming schedules of their lights.

**Issue 2:** Should this docket be closed?

**Recommendation:** If Issue 1 is approved and a protest is filed within 21 days of the issuance of the order, the tariff should not go into effect pending resolution of the protest. If no timely protest is filed, this docket should be closed upon the issuance of a consummating order. (Brownless)

**Staff Analysis:** If Issue 1 is approved and a protest is filed within 21 days of the issuance of the order, the tariff should not go into effect pending resolution of the protest. If no timely protest is filed, this docket should be closed upon the issuance of a consummating order.



6.280

SECTION NO. VI  
~~FORTIETH-FORTY-FIRST~~ REVISED SHEET NO. 6.280  
CANCELS ~~THIRTY-NINTH~~~~FORTIETH~~ REVISED SHEET NO.

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RATE SCHEDULE LS-1  
LIGHTING SERVICE

**Availability:**

Available throughout the entire territory served by the Company.

**Applicable:**

To any customer for the sole purpose of lighting roadways or other outdoor land use areas; served from either Company or customer owned fixtures of the type available under this rate schedule. Service hereunder is provided for the sole and exclusive benefit of the customer, and nothing herein or in the contract executed hereunder is intended to benefit any third party or to impose any obligation on the Company to any such third party.

**Character of Service:**

Continuous dusk to dawn automatically controlled lighting service (i.e. photoelectric cell); alternating current, 60 cycle, single phase, at the Company's standard voltage available; provided, however, that Customers electing to participate in the Smart Outdoor Lighting Service Pilot Program may choose a different period of time.

**Smart Outdoor Lighting Services Pilot Program:**

Any customer, who is in good financial standing and takes service under LS-1 for certain LED fixtures with Company-installed smart nodes, may apply to participate in the Smart Outdoor Lighting Services Pilot Program ("Smart Pilot"). During the 18-month Smart Pilot period, customers can schedule lighting service during the time period from 30 minutes prior to dusk until 30 minutes after dawn. Participants in the Smart Pilot will agree to the Smart Pilot's Terms and Conditions and will continue to be billed through the LS-1 rates. Participation in the Smart Pilot is limited to 10,000 lights, but the Company reserves the right to allow additional participation.

**Limitation of Service:**

Availability of certain fixture or pole types at a location may be restricted due to accessibility.

Standby or resale service not permitted hereunder. Service under this rate is subject to the Company's currently effective and filed "General Rules and Regulations Governing Electric Service."

**Rate Per Month:**

**Customer Charge:**

Unmetered:	\$ 1.65 per line of billing
Metered:	\$ 4.71 per line of billing

**Energy and Demand Charge:**

Non-Fuel Energy Charge:	2.852¢ per kWh
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Plus the Cost Recovery Factors listed in Rate Schedule BA-1, <i>Billing Adjustments</i> , except the Fuel Cost Recovery Factor and Asset Securitization Charge Factor:	See Sheet No. 6.105 and 6.106
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**Per Unit Charges:**

I. Fixtures:

(Continued on Page No. 2)

ISSUED BY: Thomas G. Foster, Vice President, Rates & Regulatory Strategy – FL

EFFECTIVE: **January 1, 2023**



6.280

SECTION NO. VI  
**FORTIETH-FORTY-FIRST** REVISED SHEET NO. 6.280  
 CANCELS ~~THIRTY-NINTH~~~~FORTIETH~~ REVISED SHEET NO.

Page 1 of 8							
BILLING TYPE	DESCRIPTION	LAMP SIZE <sup>2</sup>			CHARGES PER UNIT		
		INITIAL LUMENS OUTPUT	LAMP WATTAGE	kWh	FIXTURE	MAINTENANCE	NON-FUEL ENERGY <sup>3</sup>
<b>Incandescent: <sup>1</sup></b>							
110	Roadway	1,000	105	32	\$1.02	\$4.70	\$0.91
115	Roadway	2,500	205	66	1.60	4.32	1.88
170	Post Top	2,500	205	72	20.01	4.32	2.05
<b>Mercury Vapor: <sup>1</sup></b>							
205	Open Bottom	4,000	100	44	\$2.38	\$1.80	\$1.25
210	Roadway	4,000	100	44	3.06	1.80	1.25
215	Post Top	4,000	100	44	3.60	1.80	1.25
220	Roadway	8,000	175	71	3.10	1.77	2.02
225	Open Bottom	8,000	175	71	2.45	1.77	2.02
<del>235</del>	<del>Roadway</del>	<del>21,000</del>	<del>400</del>	<del>158</del>	<del>3.75</del>	<del>1.79</del>	<del>4.54</del>
<del>240</del>	<del>Roadway</del>	<del>62,000</del>	<del>1,000</del>	<del>386</del>	<del>5.49</del>	<del>2.07</del>	<del>11.04</del>
<del>245</del>	<del>Flood</del>	<del>21,000</del>	<del>400</del>	<del>158</del>	<del>4.92</del>	<del>1.79</del>	<del>4.54</del>
<del>250</del>	<del>Flood</del>	<del>62,000</del>	<del>1,000</del>	<del>386</del>	<del>5.77</del>	<del>2.07</del>	<del>11.04</del>

(Continued on Page No. 2)

ISSUED BY: Thomas G. Foster, Vice President, Rates & Regulatory Strategy – FL

EFFECTIVE: **January 1, 2023**



6.281

**SECTION NO. VI**  
**THIRTY-FIFTH-SIXTH REVISED SHEET NO. 6.281**  
**CANCELS THIRTY-FOURTH-FIFTH REVISED SHEET NO.**

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RATE SCHEDULE LS-1 LIGHTING SERVICE (Continued from Page No. 1)							
I. Fixtures: (Continued)							
BILLING TYPE	DESCRIPTION	LAMP SIZE <sup>2</sup>			CHARGES PER UNIT		
		INITIAL LUMENS OUTPUT	LAMP WATTAGE	kWh	FIXTURE	MAINTENANCE	NON-FUEL ENERGY <sup>3</sup>
	<u>Mercury Vapor: <sup>1</sup> Continued</u>						
<u>235</u>	<u>Roadway</u>	<u>21,000</u>	<u>400</u>	<u>158</u>	<u>3.75</u>	<u>1.79</u>	<u>4.51</u>
<u>240</u>	<u>Roadway</u>	<u>62,000</u>	<u>1,000</u>	<u>386</u>	<u>5.49</u>	<u>2.07</u>	<u>11.01</u>
<u>245</u>	<u>Flood</u>	<u>21,000</u>	<u>400</u>	<u>158</u>	<u>4.92</u>	<u>1.79</u>	<u>4.51</u>
<u>250</u>	<u>Flood</u>	<u>62,000</u>	<u>1,000</u>	<u>386</u>	<u>5.77</u>	<u>2.07</u>	<u>11.01</u>
	<u>Sodium Vapor: <sup>1</sup></u>						
300	HPS Deco Rdwy White	50,000	400	168	\$10.50	\$1.87	\$4.79
301	Sandpiper HPS Deco Roadway	27,500	250	104	13.61	1.85	2.97
302	Sandpiper HPS Deco Rdwy Blk	9,500	100	42	13.16	1.84	1.20
305	Open Bottom	4,000	50	21	2.49	1.86	0.60
306	100W HS Deco Rdwy Blk	9,500	100	42	10.19	1.84	1.20
310	Roadway	4,000	50	21	3.06	1.86	0.60
313	Open Bottom	6,500	70	29	4.11	1.84	0.83
314	Hometown II	9,500	100	42	3.83	1.84	1.20
315	Post Top - Colonial/Contemp	4,000	50	21	4.95	1.86	0.60
316	Colonial Post Top	4,000	50	34	3.97	1.86	0.97
318	Post Top	9,500	100	42	2.45	1.84	1.20
320	Roadway-Overhead Only	9,500	100	42	4.04	1.84	1.20
321	Deco Post Top - Monticello	9,500	100	49	12.59	1.84	1.40
322	Deco Post Top - Flagler	9,500	100	49	15.53	1.84	1.40
323	Roadway-Turtle OH Only	9,500	100	42	4.84	1.84	1.20
325	Roadway-Overhead Only	16,000	150	65	4.57	1.85	1.85
326	Deco Post Top - Sanibel	9,500	100	49	18.69	1.84	1.40
330	Roadway-Overhead Only	22,000	200	87	3.40	1.85	2.48
335	Roadway-Overhead Only	27,500	250	104	5.68	1.85	2.97
336	Roadway-Bridge	27,500	250	104	6.28	1.85	2.97
337	Roadway-DOT	27,500	250	104	5.47	1.85	2.97
338	Deco Roadway-Maitland	27,500	250	104	9.65	1.85	2.97
340	Roadway-Overhead Only	50,000	400	169	5.79	1.87	4.82
341	HPS Flood-City of Sebring only	16,000	150	65	3.78	1.85	3.08
342	Roadway-Turnpike	50,000	400	168	8.33	1.87	4.79
343	Roadway-Turnpike	27,500	250	108	8.50	1.85	3.08
345	Flood-Overhead Only	27,500	250	103	5.18	1.85	2.94
347	Clemont	9,500	100	49	20.49	1.84	1.40
348	Clemont	27,500	250	104	21.51	1.85	2.97
350	Flood-Overhead Only	50,000	400	170	5.36	1.87	4.85
351	Underground Roadway	9,500	100	42	5.68	1.84	1.20
352	Underground Roadway	16,000	150	65	6.21	1.85	1.85
353	Underground Roadway	22,000	200	87	6.21	1.85	2.48
354	Underground Roadway	27,500	250	108	7.33	1.85	3.08
356	Underground Roadway	50,000	400	168	7.44	1.87	4.79
357	Underground Flood	27,500	250	108	8.83	1.85	3.05
358	Underground Flood	50,000	400	168	9.01	1.87	4.79
359	Underground Turtle Roadway	9,500	100	42	6.59	1.84	1.20
360	Deco Roadway Rectangular	9,500	100	47	11.93	1.84	1.34
365	Deco Roadway Rectangular	27,500	250	108	11.39	1.85	3.08
366	Deco Roadway Rectangular	50,000	400	168	11.39	1.87	4.79
370	Deco Roadway Round	27,500	250	108	16.48	1.85	3.08
375	Deco Roadway Round	50,000	400	168	16.48	1.87	4.79
380	Deco Post Top - Ocala	9,500	100	49	10.42	1.84	1.40
381	Deco Post Top	9,500	100	49	3.77	1.84	1.40
383	Deco Post Top-Biscayne	9,500	100	49	13.21	1.84	1.40
385	Deco Post Top - Sebring	9,500	100	49	6.67	1.84	1.40
393	Deco Post Top	4,000	50	21	8.13	1.86	0.60
394	Deco Post Top	9,500	100	49	16.92	1.84	1.40

(Continued on Page No. 3)

ISSUED BY: Thomas G. Foster, Vice President, Rates & Regulatory Strategy - FL

EFFECTIVE: January 1, 2023