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July 21, 2022

**VIA ELECTRONIC FILING**

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

Re: *Petition for approval of new my energy bill+ program with income qualified component, by Duke Energy Florida, LLC; Docket No. 20220106-EI*

Dear Mr. Teitzman:

On behalf of Duke Energy Florida, LLC ("DEF"), please find enclosed for electronic filing DEF's Response to Staff's First Data Request regarding the above-referenced Docket.

Thank you for your assistance in this matter. Should have any questions, please feel free to contact me at (727) 820-4692.

Sincerely,

/s/ Dianne M. Triplett

Dianne M. Triplett

DMT/vr  
Enclosures

cc: Suzanne Brownless, Office of General Counsel, FPSC

**Duke Energy Florida, LLC’s (“DEF”) Response to Florida Public Service Commission’s First Data Request (Nos. 1-12) re. Petition for approval of new My Energy Bill+ Program with income qualified component  
by Duke Energy Florida, LLC**

**Docket No. 20220106-EI**

1. In Order PSC-2021-0082-TRF-EI the Commission approved modifications to rate schedule FB-1. The pilot was approved to terminate on December 31, 2021. The petition on page 5, in the instant docket, states that the pilot program started in September 2021. Does the December 2021 termination date referenced on tariff sheet No. 6.391 need to be modified?

**Response:**

The tariff sheet does not need to be modified. It states that the company will provide prepaid credit cards through December 31, 2021. The intent was to have customers enroll in the 12-month program by December 31, 2021. The pilot customer enrollment period began in September 2021 and is running for one year with expected end date of September 2022.

2. Please discuss the differences between the pilot approved in Order PSC-2021-0082-TRF-EI and the proposed My Energy Bill+ Program (Program) tariffs.

**Response:**

In the pilot, customers would enroll in the traditional Your FixedBill Program and had the option to enroll their thermostats into thermostat optimization in exchange for a one-time gift card. However, by enrolling in the new My Energy Bill+ Program, the customer will be required to enroll their thermostat into thermostat optimization, and in exchange, they will receive a flat monthly bill with a lower risk premium than the traditional Your FixedBill Program.

The My Energy Bill+ Program also includes an income qualified component in which DEF will offer 1,000 income qualified (IQ) customers a free smart thermostat to expand accessibility for households to participate in new programs. After the initial 1,000 IQ customers participate, DEF will offer IQ customers heavily discounted thermostats and installations to continue its focus on the vulnerable customer population.

3. Could a current Your FixedBill customer transfer, before expiration of the 12-month agreement, to the proposed new Program? Please explain

**Response:**

No, a current Your FixedBill Program customer would not be able to transfer before the expiration of the 12-month agreement to the proposed new program. The 12-month flat monthly amount would be different between Your FixedBill Program and the My Energy Bill+ Program since the risk premium in the My Energy Bill+ Program is lower.

If a current Your FixedBill Program customer would like to transfer to the proposed new program, they will be able to do so upon expiration of the 12-month agreement.

4. In addition to the 1,000 income qualified participants, how many participants does Duke expect to take service under the proposed Program?

**Response:**

In addition to the 1,000 income qualified participants, we estimate an additional 1,700 participants in the first year of program service based on a 1% take rate of eligible customers who may already have a smart thermostat.

5. Please state if any ratepayer money will be used to fund the free thermostats.

**Response:**

No ratepayer money will be used to fund the free thermostats. The free thermostats will be funded partly by DEF’s Share the Light fund as well as donations from various thermostat partners.

6. Please provide a hypothetical My Energy Bill+ Amount calculation. Show and explain each step of the calculation.

**Response:**

The My Energy Bill+ Amount will be identical to the YFB Amount regarding calculations and process. The key difference is the reduced risk premium in the My Energy Bill+ Program.

Using the predicted weather normalized kWh Usage, the 6% usage adder is added to arrive at a new kWh Usage amount. The Bill charge is then based on the increased usage. The average of expected Bill Charges is the My Energy Bill+ monthly amount, which does not include applicable taxes and other charges such as service charges, lighting, and non-regulated products and services. Please see below for a hypothetical example:

	Predicted Weather Normalized Monthly kWh Usage	kWh Usage with 6% Usage Adder	1st 1,000 kWh of Usage with Adder	>1,000 kWh of Usage with adder	Expected Bill Charge based on increased usage with risk adder*
Jan	2,429	2,575	1,000	1,575	\$426.85
Feb	1,844	1,955	1,000	955	\$321.49
Mar	1,350	1,431	1,000	431	\$215.85
Apr	836	886	886	-	\$132.96
May	718	761	761	-	\$116.01
Jun	1,014	1,075	1,000	75	\$160.20
July	1,263	1,339	1,000	339	\$201.45
Aug	1,188	1,260	1,000	260	\$189.10

Sep	773	820	820	-	\$123.96
Oct	816	865	865	-	\$130.12
Nov	1,286	1,363	1,000	363	\$205.35
Dec	2,113	2,240	1,000	1,240	\$370.00
Annual	15,630	16,568			\$2,593.36
			<b>My Energy Bill+ Charge (1<sup>st</sup> year)</b>		<b>\$216.11</b>

Bill Charge calculated using the following inputs:

	Customer Charge	\$12.45
Dec - Feb	1st 1,000 kWh	\$0.07623
	All additional kWh	\$0.08773
Mar - Nov	1st 1,000 kWh	\$0.06587
	All additional kWh	\$0.07474
Cost Recovery Factors	ECCR	\$0.00283
	CCR	\$0.01181
	ECRC	\$0.00028
	ASC	\$0.00234
	SPPCRC	\$0.00300
Fuel Cost Recovery	1st 1,000 kWh	\$0.04469
	All additional kWh	\$0.05539

Example: January Charge

[1,000 kWh \* (\$0.07623 non-fuel energy charge + \$0.04469 fuel cost recovery charge)  
+ 1,575 kWh \* (\$0.08773 non-fuel energy charge + \$0.05539 fuel cost recovery charge)  
+ 2,575 kWh \* (\$0.00283 + \$0.01181 + \$0.00028 + \$0.00234 + \$0.003 cost recovery factors)]  
\*1.04 Risk Premium  
+ \$12.45 Customer Charge  
\$426.85

The usage adder is applied only in the first year that the customer is on the program.

7. Please explain the unit cost mechanism (UCM) discussed in paragraph 10 of the petition and how it is applied to the proposed Program.

**Response:**

The unit cost mechanism (UCM) is consistent with Minimum Filing Requirement Schedule E-14, Attachment H, in Docket No. 20210016. Specifically, the UCM reflects cost causation through discreet charges designed to recover targeted system costs in a much more accurate and granular manner than the standard RS rate design (e.g. Customer Max Demand Charge recovers Secondary Distribution costs). Importantly, the UCM price structure defines and determines the amount of remittance revenue from the My Energy Bill+ Program to the above-the-line utility. The remittance is closely reflective of system costs (per the UCM) to ensure non-participants do not experience undue cost-shifts while also creating an incentive to shape load based on the highly complex price signals. Those signals, combined with

the ability to manage participants' thermostat and shape usage, enable DEF to offer reduced risk premiums and incentives for participants.

8. Please explain this statement "through the UCM, the utility has an incentive to shape load based on highly complex price signals while ensuring non-participants do not experience undue cost-shift."

**Response:**

The UCM is comprised of complex charges for both energy and demand that reflect system cost causation more discreetly than simpler retail rates. Accordingly, consumption tailoring through thermostat controls can be targeted specifically to reduce burdens on the grid reflective of cost causation. The close alignment of UCM price signals to cost-causation protects against undue cost-shifts by tightly aligning system benefits and demand management activities. Importantly, by managing customer load during monthly peaks and reducing the cost to serve, the program will ultimately be able to translate savings into lower rates for all customers.

9. Please explain how Duke determined that 4 percent (vs. 6 percent) is an appropriate risk adder.

**Response:**

DEF modeled different sensitivities and determined that 4 percent appropriately balances value to customers with program risk. Additionally, the lower risk premium should be sufficient to encourage enrollment into thermostat optimization. In the pilot, we offered participants a one-time \$50 gift card, but the reduced risk premium in the My Energy Bill+ Program will provide consistent, monthly savings for customers in exchange for 3-4 peak load management events run each month. As an example, for an average residential customer, the Your FixedBill Program monthly amount would be \$220.03 (before taxes), based on the usage in the table in question 6. Alternatively, by enrolling in My Energy Bill+ Program, which includes a 4% risk adder rather than a 6% risk adder, the customer's monthly bill amount would be \$216.11 (before taxes). This translates into savings of \$3.92 per month or \$47.04 over the year. The customer would continue to benefit from the monthly savings (when compared to the traditional Your FixedBill Program) every year that they are enrolled in the program, though the magnitude of "savings" may change due to various factors, such as their usage which will directly affect their repriced 12-month amount upon renewal.

10. What suppliers has Duke contracted with in order to supply the smart thermostats to be used in this Program?

**Response:**

DEF is currently having discussions with various thermostat and sourcing partners but have not contracted with any of them.

11. Please explain how Duke will track and monitor the demand savings associated with the control of the smart thermostats.

**Response:**

Demand savings associated with the control of smart thermostats will be estimated through a counterfactual impact estimation process.

First, a predictive model will be trained with data from enrolled customers on non-event days using historical hourly usage, weather data, and seasonality variables.

To estimate demand impact from smart thermostat control event days, the predictive model will be used to generate average hourly usage forecasts across the participating customer population using actual weather measurements as inputs. This provides estimates of what hourly average usage would have been in absence of a smart thermostat control event (a counterfactual estimate).

The counterfactual estimates generated from the predictive model are then compared to actual average hourly usage among the participating customer population during event days. The difference between the forecasted usage from the predictive model and actual usage from AMI interval data is used to establish hourly demand impact estimates on event days. Confidence intervals derived from the predictive model forecasts are also used to estimate whether the hourly demand impact is statistically significant.

This analysis will be run each month of the program to evaluate the impact of smart thermostat control days during the prior month. A summary report will be generated which provides hourly estimates of demand impact including pre-cooling hours, event hours, and post-event snap back hours for each event run in the previous month.

12. Please explain how the demand response events, as described in Exhibit C of the petition, differ from the control events under the currently approved Your FixedBill pilot.

**Response:**

There will be no differences in the demand response events between the current pilot and proposed My Energy Bill+ Program. Exhibit C showcases that the frequency, duration, thermostat adjustment, and notifications associated with demand response events are not different from the current pilot.