City of Tallahassee
Your Own Utilities

ENERGY SMART PLUS
SAVE ENERGY SAVE WATER SAVE MONEY

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January 18, 2018

Mr. Braulio Baez, Executive Director
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, Florida 32399-0850

Re: Docket No. 20170215-EU – Review of Electric Utility Preparedness and Restoration Actions - Staff's Second Data Request – December 18, 2017

Dear Mr. Baez:

In response to the Staff's Second Data Request dated December 18, 2017, The City of Tallahassee is submitting the following information. As the City's electric service territory was only directly impacted by Hurricanes Hermine and Irma, the information provided below is focused on those two storms.

Underground Facilities

1. **For each year, please complete the following tables summarizing the number of miles of transmission and distribution underground facilities by county from 2006 through 2017.**

Transmission			
Year			
County	**Overhead to Underground**	**New Construction**	**Total Miles**
Leon (2006-2010)	0	0	4.26
Leon (2011-2017)	0	1.97	6.23

Distribution			
Year			
County	Overhead to Underground	New Construction	Total Miles
Leon (2006)	0	79	1612
Leon (2007)	0	69	1681
Leon (2008)	0	22	1703
Leon (2009)	0	13	1716
Leon (2010)	0	4	1720
Leon (2011)	0	0	1719
Leon (2012)	0	6	1725
Leon (2013)	0.563	9.4	1735
Leon (2014)	1.843	8.4	1745
Leon (2015)	1.053	9.8	850.2 (note 1)
Leon (2016)	0.563	18.9	871
Leon (2017)	0.563	12.8	883

Note 1 – After completing a system wide inventory a new methodology was instituted for reporting line miles. Only primary is now reported. This accounts for the change in line miles.

Forensic Data

2. **For Hurricanes Hermine, Matthew, Irma, Maria, and Nate, please provide a complete copy of the utility's post-storm forensic review of damaged infrastructure. If a forensic review was not performed or not documented, please explain why.**

   The City did not perform a formal forensic review of the infrastructure that was damaged during the storm. The damages incurred on the City's system were primarily the result of tree and tree related issues. This included both trees down and tree limbs, both of which damaged the overhead distribution system. These damages include wire down and poles being damaged. The damage on the transmission system was all related to trees from outside of the rights of way falling on the transmission system. There was minimal damage to transmission structures. Had the damage pattern been different, the City would have conducted a more formal forensic review.

Coordination

3. **For Hurricanes Hermine, Matthew, Irma, Maria, and Nate, please provide the name, frequency, and description of non-Emergency Operations Centers related coordination efforts with local governments before, during, and after restoration, including the following.**
   a. **Storm preparation**
   b. **Critical infrastructure**
   c. **Tree trimming, planting or relocation of trees**
   d. **Hardening and underground projects**
   e. **Shared facilities**
   f. **Other**

The City of Tallahassee is the local government for most of its electric service territory. A portion of the City's Electric service territory is outside of the City's corporate limits within Leon County. The City's Purdom generating facility is in the City of St. Marks within Wakulla County. In all aspects of the City's electric operations, it coordinates on a routine basis with the appropriate City department or County. Other than routine permitting issues, this contact is primarily via the Leon County Emergency Operations organization.

4. **Please complete the following tables on county and state Emergency Operations Centers staffing for Hurricanes Hermine, Matthew, Irma, Maria, and Nate.**

Staffing for Leon County Emergency Operations Centers - Hermine		
Number of Utility Personnel	**Function**	**Total Man-Hours**
4	Utility Coordination with EOC	312
Staffing for State Emergency Operations Center - Hermine		
Number of Utility Personnel	**Function**	**Total Man-Hours**
0	N/A	N/A

Staffing for Leon County Emergency Operations Centers - IRMA		
Number of Utility Personnel	**Function**	**Total Man-Hours**
10	Utility Coordination with EOC	364
Staffing for State Emergency Operations Center - IRMA		
Number of Utility Personnel	**Function**	**Total Man-Hours**
0	N/A	N/A

Solar

5. **Please provide the following information for utility interconnections with customer-owned solar generation that did not operate as designed and consistent with the tariff during the extreme weather events that occurred in 2015 through 2017.**
   a. **The number of failures.**
   b. **A description of the cause or causes of such failures.**
   c. **Possible failure remediation and associated cost.**
   d. **Discuss whether the failures contributed to an increase or decrease in the utility's service restoration time and, if possible, provide an estimate of the duration impact.**
   e. **Discuss whether the failures contributed to an increase or decrease in the utility's service restoration costs and, if possible, provide an estimate of the restoration cost impact.**

   The City is not aware of any customer-owned generation that did not operate as designed[1]. There were no reports of any inadvertent back-feed on to the City's system.

6. **Please provide the following information for utility interconnections with customer-owned solar generation that operated as designed and consistent with the tariff during the extreme weather events that occurred in 2015 through 2017.**
   a. **Discuss whether these interconnections contributed to an increase or decrease in the utility's service restoration time and, if possible, provide an estimate of the duration impact.**
   b. **Discuss whether these interconnections increased or decreased the utility's service restoration costs and, if possible, provide an estimate of the restoration cost impact.**

   The City has no records indicating that customer-owner solar resulted in any impacts to the service restoration time.

7. **Without compromising safety, are there changes to the utility's interconnection with customer-owned solar generation that would enable the customer's facilities to be energized by its solar generation should the utility be unable to provide electric service due to a future storm damaging utility infrastructure?**
   a. **If yes, please provide the following information:**
      - **Please describe the suggested changes to the utility's interconnection.**
      - **If the utility is not pursuing the interconnection changes please explain why.**

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[1] In accordance with the National Electric Code and UL and NFPA standards, customer owned solar generation is installed such that it will not operate without grid power.

The primary concern with customer-owned solar operating during a storm restoration is the inadvertent back-feed of energy onto the City's distribution system. To meet the National Electric Code and UL and NFPA standards, customer-owned generation is installed such that it will not operate without grid power. In addition, the City's net metering agreements provide for a manual disconnect if deemed necessary by the utility to isolate a customer-owned solar facility for safety purposes. The City provides the customer with two options to meet this requirement. The two options are either installing a manual lockable disconnect accessible to the City or allow for the customer meter to be removed. Due to the code requirements, the use of the manual disconnects are minimal.

Should there be a move to allow for customer-owned solar generation to operate during system outages, there will need to be means to ensure there is no back-feed from the customer-owned solar onto the grid.

8. **Without compromising safety, please describe potential changes to a customer's facilities that the customer can implement to enable the customer's facilities to be energized by its solar generation should the utility be unable to provide electric service due to a future storm event that damages utility infrastructure. Include in your response whether the utility makes it a practice to inform the customer of such options.**

A customer-owned solar facility that is installed in accordance with the National Electric Code and meets the standards for UL and NFPA, is designed such that it will not operate without grid power. This is a safety feature.

9. **Without compromising safety, please describe any potential changes to rules or tariffs pertaining to utility interconnections with customer-owned solar generation that would enable the customer's facilities to be energized by its solar generation should the utility be unable to provide electric service due to a future storm event that damages utility infrastructure.**

See answer above

10. **Please provide the following information for utility interconnections with utility-scale solar generation that did not operate as designed during the extreme weather events that occurred in 2015 through 2017.**
    a. **The number of failures.**
    b. **A description of the cause or causes of such failures.**
    c. **Possible failure remediation and associated cost.**
    d. **Discuss whether the failures contributed to an increase or decrease in the utility's service restoration time and, if possible, provide an estimate of the duration impact.**
    e. **Discuss whether the failures contributed to an increase or decrease in the utility's service restoration costs and, if possible, provide an estimate of the restoration cost impact.**

    The City had no utility-scale solar interconnected on the system during Hermine or Irma.

11. **Please provide the following information for utility interconnections with utility-scale solar generation that operated as designed during the extreme weather events that occurred in 2015 through 2017.**
    a. **Discuss whether these interconnections contributed to an increase or increase in the utility's service restoration time and, if possible, provide an estimate of the duration impact.**
    b. **Discuss whether these interconnections increased or decreased the utility's service restoration costs and, if possible, provide an estimate of the restoration cost impact.**

    The City had no utility-scale solar interconnected on the system during Hermine or Irma.

Please feel free to let me know if there is additional information needed or if there are any questions.

Yours truly,

Robert E. McGarrah
General Manager – Electric

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