

Beaches Energy Services – PSC Storm 2nd Information Request

December 22, 2017

Allen Putnam, Director of Beaches Energy Services

Underground Facilities

- 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
2006	N/A	N/A	N/A
2007	N/A	N/A	N/A
2008	N/A	N/A	N/A
2009	N/A	N/A	N/A
2010	N/A	N/A	N/A
2011	N/A	N/A	N/A
2012	N/A	N/A	N/A
2013	N/A	N/A	N/A
2014	N/A	N/A	N/A
2015	N/A	N/A	N/A
2016	N/A	N/A	N/A
2017	N/A	N/A	N/A

Distribution			
Year			
County	Overhead to Underground	New Construction	Total Miles
2006	19.222	8.034	27.256
2007	41.876	16.016	57.892
2008	22.278	8.528	30.806
2009	14.380	5.849	20.229
2010	22.871	7.558	30.429
2011	21.851	8.378	30.229
2012	10.421	3.276	13.696
2013	20.282	10.990	31.272
2014	25.514	8.775	34.289
2015	16.697	5.235	21.932
2016	25.746	9.411	35.156
2017	18.772	7.173	25.945

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.

Beaches Energy Services was affected by both Hurricanes Matthew & Irma.

Hurricane Matthew: Post-Hurricane Matthew, Beaches Energy determined that overall, the underground system remained in good working condition & performed very well during and after the storm. No intensive forensic review was needed. We were well aware that the southwest portion of our service territory (Ponte Vedra and Palm Valley) has heavy tree canopy coverage and experienced extensive damage from trees being uprooted and limbs breaking. Damage in the remaining portions of our service territory was mainly caused by tree limbs braking and making contact with overhead electric distribution lines.

Beaches Energy Services did suffer a transmission outage which was caused by tree damage by a falling tree outside of the right-of-way. The clearances for this tree were found to comply with all regulations and standards. In addition, a transmission line that feeds the north end of our service territory also experienced tree damage and was out for an extended amount of time. We did initiate contact with JEA to understand the event to determine if and what could be done to mitigate outage length if this was to occur in a future weather event. This work is ongoing at this time. Finally, sections of the service territory were de-energized as a safety precaution due to flooding in the low lying areas. Post-storm we reviewed areas of our service territory where placing lines underground would reduce restoration times during future events. On such areas is Neck Rd. in Ponte Vedra Beach. A capital project began in October 2017 to place the lines in this area underground.

Hurricane Irma: After Irma, Beaches Energy Services again determined that overall, our underground facilities remained in good working condition and performed very well during and after the storm. Again, most of the damage was caused by trees uprooting and tree limbs breaking from trees outside of the right-of-way. The southwest section of the service territory was the most severely damaged by trees; however, the damage was somewhat mitigated due to system hardening where Beaches Energy Services has installed concrete poles with extended insulators. Urban areas had tree damage primarily from trees located on private property. Sections of the service territory were de-energized as a safety precaution due to flooding. Finally, Beaches Energy Services lost a transmission interconnects from JEA's Neptune Beach due to equipment damage on a section of the neighboring utility's transmission line.

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.

Hurricanes Matthew and Irma:

- a. Storm preparation – **Beaches Energy Services coordinated with St. John’s County Public Works and St. John’s County Police as preparations were beginning and on an as needed basis when preparations were being made.**
- b. Critical infrastructure – **Not applicable**
- c. Tree trimming, planting or relocation of trees - **Not applicable**
- d. Hardening and underground projects - **Not applicable**
- e. Shared facilities - **Not applicable**
- f. Other - **Not applicable**

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

For Hurricanes Matthew and Irma:

Staffing for County Emergency Operations Centers		
Number of Utility Personnel	Function	Total Man-Hours
0	N/A	N/A

Staffing for State Emergency Operations Center		
Number of Utility Personnel	Function	Total Man-Hours
0	N/A	N/A

*****Note – Amy Zubaly, FMEA Executive Director, acts as our presence as it relates to the State EOC.**

For Hurricanes Irma, Maria and Nate – Not applicable

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. – **We experienced no customer-owned solar generation failures during either Hurricanes Matthew or Irma**
 - b. A description of the cause or causes of such failures. – **Not applicable**
 - c. Possible failure remediation and associated cost. – **Not applicable**
 - 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. – **Not applicable**
 - 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. – **Not applicable**

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. - **These interconnections had no bearing on our restoration times.**

- 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. - **These interconnections had no bearing on our restoration costs.**
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? - **Yes**
- a. If yes, please provide the following information:
 - Please describe the suggested changes to the utility's interconnection. - **Customer could install a backup generator with a "Break before Make" automatic transfer switch.**
 - If the utility is not pursuing the interconnection changes please explain why. - **This is the customer's preference. It is a matter of customer choice. Utilities do not work behind the utility meter. Solar contractors and installers advertise this feature.**
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. - **Customers could**

**install a backup generator with a “Break before Make” automatic transfer switch.
Solar contractors and installers advertise this 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. - **We are not aware.**

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. – **Not applicable**
 - b. A description of the cause or causes of such failures. – **Not applicable**
 - c. Possible failure remediation and associated cost. – **Not applicable**
 - 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. – **Not applicable**
 - 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. – **Not applicable**

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 decrease in the utility's service restoration time and, if possible, provide an estimate of the duration impact. - **Not applicable**
- 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.
– **Not applicable**