

STATE OF FLORIDA



COMMISSIONERS:
JULIE I. BROWN, CHAIRMAN
LISA POLAK EDGAR
ART GRAHAM
RONALD A. BRISÉ
JIMMY PATRONIS

DIVISION OF ENGINEERING
TOM BALLINGER
DIRECTOR
(850) 413-6910

Public Service Commission

June 8, 2016

Mr. James D. Beasley
Ausley McMullen
Post Office Box 391
Tallahassee, FL 32302

STAFF'S FIRST DATA REQUEST

Re: Docket No. 160105-EI - Petition for approval of 2016-2018 storm hardening plan, pursuant to Rule 25-6.0342, F.A.C., by Tampa Electric Company

Dear Mr. Beasley:

Please refer to Tampa Electric Company's (TECO) 2016-2018 Storm Hardening Plan filed May 2, 2016.

1. Referring to page 9, Initiative 1: Four-year Vegetation Management, please explain:
 - a) The flexibility that the plan allows to change circuit prioritization.
 - b) TECO's reliability based methodology.
2. Referring to page 12, Initiative 5: Geographic Information System (GIS), is TECO's entire transmission and distribution system inputted in its GIS? If no, how much of TECO's transmission and distribution system has been inputted and when will the remainder of the system be inputted?
3. On pages 19 and 20, Extreme Wind Loading Standards (EWL), TECO reported that the effective wind speed of a Grade B pole is approximately 116 miles per hour (mph) and that TECO's service territory is divided into two wind regions, 120 mph and 110 mph, according to the wind-loading map that National Electrical Safety Code (NESC) provides.
 - a) Does TECO use Grade B poles for both wind regions? If no, what grade poles are used for each wind region?
 - b) If yes, please justify using Grade B poles (116 mph) in the 120 mph zone.
4. Referring to page 22, Construction Standards, are there different types of Grade B poles? If yes, please explain the difference.

5. Referring to page 23, Table 1: Named Storms Affecting TECO, please provide the dollar amount removed from TECO’s storm reserve account for the storms listed in Table 1.
6. Referring to page 25, Pole Loading, please provide the data TECO relies upon to conclude that using Grade B construction is the most cost-effective and reliable standard.
7. Referring to page 26, Pole Loading Compliance.
 - a) When did TECO first start using the “PoleForeman” software?
 - b) Have there been any updates to the “PoleForeman” software since TECO first started using the software?
 - c) If yes, please provide the dates of the updates and the associated cost of the updates.
8. Referring to page 27, Underground Facilities – Standard Design, please provide a description of a “tree-retardant” cable.
9. Referring to page 32, Critical Infrastructure (CIF), please provide data summarizing the hardening of TECO’s CIF and other types of distribution feeder hardening projects. Please provide this information in the following format for the years 2007 through 2018:

	Total	Number Hardened	O&M Cost	Capital Cost	Total Cost
Project					
Project					

10. Referring to page 33, Table 2 – Summary of Benefits and Drawbacks of Overhead and Underground Electric Service:
 - a) For the underground benefits and drawbacks, please compare the expense and process between no tree-trimming expense versus more exposure due to storm surge or flooding.
 - b) Please provide the documentation referenced in Note 2 (page 34), that supports TECO’s claim that the cost to install and maintain underground facilities is up to ten times the cost of overhead.
11. On page 37, TECO reports that a “higher wind speed has been applied” to its transmission system “when the company determined that the circuit would be very difficult to restore.” Does this practice apply to the distribution system as well?
12. Referring to page 38, Design Philosophy – Wind Strength Requirements, what is the difference between designing and implementing substation structures to withstand a wind load of 120 mph and 130 mph?

13. On page 39, Protection, TECO reported that animal protection covers are installed on all new 13 kV bushings, lightning arrestors, switches, and leads. Are animal protection covers installed on the higher kV equipment? Please explain your answer.
14. On page 50, Overhead to Underground Conversion of interstate highway crossings, TECO reported, "all remaining overhead crossings will be converted to underground..."
 - a) How many overhead interstate highway crossings has TECO already converted?
 - b) How many overhead interstate highway crossings are left to be converted?
15. Referring to page 51, Submersible Padmount Switchgear, please provide details (dates, cost, the duration of the project) on TECO's plans to install switchgears at the hospitals served by TECO.
16. Referring to page 62, Joint Use Pole Attachment Audit, since the joint use attachment audit is on an eight-year cycle, are all of the joint use attachments inspected in one year or over eight years?
17. Did TECO make any updates or modifications to its Storm Hardening Plan or Attachment Standards and Procedures?
 - a) If yes, did TECO seek input from third party attachers as required by Rule 25-6.0342(6), Florida Administrative Code (F.A.C.), Electric Infrastructure Storm Hardening?
 - a. If yes, who responded and provide a summary of their comments and/or suggestions?
 - b. If no, please explain why not.
18. Please provide the effect of TECO's electric infrastructure improvements on reducing storm restoration cost and customer outages as required by Rule 25-6.0342(4)(d), F.A.C. Please include the original 2007 analysis and any updates to the analysis. If no updates have been preformed, please explain why not.
19. Please complete the table below:

Activity	Any change from current plan. (Y/N) *	Actual Cost									Estimated Cost								
		2013			2014			2015			2016			2015			2016		
		O&M	Capital	Total	O&M	Capital	Total	O&M	Capital	Total	O&M	Capital	Total	O&M	Capital	Total	O&M	Capital	Total
8-Year Wooden Pole Inspection Program																			
10 Storm Hardening Initiatives																			
1	A Three-Year Vegetation Management Cycle for Distribution Circuits																		
2	An Audit of Joint-Use Attachment Agreements																		
3	A Six-Year Transmission Structure Inspection program																		
4	Hardening of Existing Transmission Structures																		
5	Transmission and Distribution GIS																		
6	Post-Storm Data Collection and Forensic Analysis																		
7	Collection of Detailed Outage data Differentiating Between the Reliability Performance of Overhead and Underground Systems																		
8	Increased Utility Coordination with Local Governments																		
9	Collaborative Research on Effects of Hurricane Winds and Storm Surge																		
10	A Natural Disaster Preparedness and Recovery Program																		
Totals																			
Any Other Key Elements or Proposed Initiatives																			

* Please explain any changes from the current plan.

Mr. James D. Beasley
June 8, 2016
Page 5

Please submit your responses to the Commission Clerk, Office of Commission Clerk, 2540 Shumard Oak Blvd., Tallahassee, FL 32399-0850, by July 8, 2016. If you have any questions or concerns, please contact me by phone (850) 413-6518 or by email at pbuys@psc.state.fl.us.

Sincerely,



Penelope D. Buys
Engineering Specialist
Division of Engineering

PDB:tj

cc: Office of Commission Clerk (Docket No. 160105-EI)