

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-

DATE: July 9, 2019

TO: Adam J. Teitzman, Commission Clerk, Office of Commission Clerk

FROM: Penelope D. Buys, Engineering Specialist III, Division of Engineering *PDB*

RE: Docket No: 20180146-EI – Review of 2019-2021 storm hardening plan, Duke Energy Florida, LLC.

Please add the following e-mail in the Correspondence side of the docket file.

Thank you.

Penny Buys

From: kcisarik@aol.com
Sent: Monday, July 08, 2019 4:29 PM
To: Penny Buys
Cc: Adam Teitzman
Subject: Duke Responses to Cisarik Questions re: Storm Hardening Docket # 20180146
Attachments: Questions_Ms Cisarik.pdf; 9220128346_HOWARD_Approved (002).pdf

Dear Ms. Buys,

Thanks for your follow up regarding my June 24 letter to the PSC Commissioners about Duke's 2019-2021 storm hardening plan. In that letter I included my concerns about the current underground utility project in Indian Rocks Beach. My questions parallel many of those asked by staff in the docket for Duke's storm hardening plan and I would like the commission and staff to have benefit of the detailed and candid responses that Holly Columbia, the Distribution Engineering Manager Major Projects – Coastal Customer Delivery - Duke Energy Florida provided to me.

Those questions and answers are in the body of the email below in case you are unable to open the attachments. The second attachment is a diagram of a 50 Kwa pad mounted transformer spec'd for the Indian Rocks Beach underground project which is located in a flood zone. I am grateful that Ms. Columbia was able to gather this info and I'm providing it as a way to assist the Commission for use in reviewing the Duke Storm Harding Plan.

Could you or Mr. Teitzman include this letter in the Duke Docket #20180146 to be made available to all interested parties before tomorrow morning's meeting? Sorry for the short notice, but I just found that meeting on the commission calendar.

Thank you again for responding to my concerns.

Sincerely,

Kelly Cisarik
Indian Rocks Beach, Florida

1. Does Duke have a transformer spec'd out for this current Indian Rocks Beach Gulf Blvd. project whose electrical connections are sealed in such a manner that they would NOT require disassembly and cleaning after being submerged in salt water? Transformers for this project are approved by our Standards department. Standard pad-mounted transformers are sealed designs, but are not designed to operate while submerged under water. According to our storm surge standard sheet 33.06-101 and 102, the standard to be used is a submersible secondary set screw connector on single phase pad-mounted transformers to provide a sealed and (temporarily) submersible design. We do not have a submersible set-screw connector for threephase pad-mounted transformers. We should not have to disassemble the secondary connectors for single-phase or three-phase pad-mounted transformers after submersion. However, depending on how contaminated the transformers are because of salt water submersion, they may need to be cleaned off prior to re-energizing them.

2. Duke's Storm Hardening Plans as shown in PSC documents going back to 2013, include mitigation techniques using submersible connectors and cold shrink sealing tubes. Duke stated they would analyze test results for these mitigation techniques. Is this analysis available? Following major weather events, such as Hurricanes Hermine, Matthew, Irma and Michael, Duke Energy conducts forensic reviews of Storm Hardening Projects that are impacted by the event. Since Duke Energy has moved to the submersible connectors and cold shrink sealing tubes, the projects that have been constructed to this standard have not been exposed to standing flood waters that would allow analysis to be completed. Due to this, an analysis is not available.

3. a) Who manufactures the transformers that will be used for the Indian Rocks Gulf Blvd. project? Currently our contract is with Central Maloney Inc. b) Would Duke be willing to provide the spec sheet from the transformer manufacturer? Please see the attached specification to this email for a standard 50kva transformer.

4. a) If Duke needs to disassemble and clean the transformers, connections or switching equipment after saltwater intrusion, can this be done onsite? We do not disassemble transformers on site. If substantial water intrusion has occurred, we would replace the transformer. If connectors are corroded, we can replace them on site without any issues. **b) How many weeks is it likely to take if a hundred or more of these transformers go underwater?** In a storm response event, Duke Energy has additional resources to help restore power to our customers. Estimated time of restoration is dependent on the number of resources Duke Energy receives.

5. How many pad mounted transformers is Duke planning to stock in reserve for a major hurricane with storm surge? Our inventory fluctuates daily depending on use and demand. As ROP's (ReOrder Points) are triggered and as demand is created via work orders, orders are placed with our supplier, our inventory on the 50kva transformer today is 212 ea. In the event of a storm, all our inventory would be available for restoration. Duke Energy has a very good relationship with our suppliers. If a storm impacts our service territory, our material needs become priority and all manufacturing is focused on our needs.

6. Duke Energy Florida, in 2007 completed an underground utility pilot project in St. George Island. That project was subjected to storm surge in Hurricane Michael. Duke stated "Throughout the year after a significant weather event, DEF will monitor these installations to collect and analyze data to determine how this equipment performs".

* Page 7: <http://www.psc.state.fl.us/library/filings/2013/02378-2013/02378-2013.pdf>

Is there a report available on how those transformers and switches performed after that hurricane? Following major weather events, such as Hurricanes Michael, Duke Energy has conducted forensic reviews of a sample of its Storm Hardening Projects. After Michael, Duke Energy conducted assessments on the storm surge project at St. George Island. Due to the intense storm surge from a Category 5 Hurricane, some of the transformers at St. George Island did need to be replaced or put back on their elevated pads. Duke Energy conducted inspections of the project in the months following the events as well as monitored the reliability performance. The system has performed well and there were no negative trends in reliability data for these two areas. A formal report is not available.

-----Original Message-----

From: Columbia, Holly <Holly.Columbia@duke-energy.com>

To: kcisarik@aol.com <kcisarik@aol.com>

Sent: Tue, Jul 2, 2019 3:31 pm
Subject: RE: Indian Rocks Beach - Undergrounding Project by Duke Energy

Ms. Cisarik,

I compiled the list of questions and answers in the attached pdfs. It did take a little longer to reach all the subject matter experts since some were on vacation last week. If you have any problems opening the documents, please let me know.

Have a safe and great holiday.

Thanks,

Holly Columbia
Distribution Engineering Manager
Major Projects – Coastal
Customer Delivery - Duke Energy Florida
727-562-3914 (office)
859-552-6686 (cell)

From: kcisarik@aol.com [mailto:kcisarik@aol.com]
Sent: Friday, June 28, 2019 3:16 PM
To: Columbia, Holly <Holly.Columbia@duke-energy.com>
Subject: Re: Indian Rocks Beach - Undergrounding Project by Duke Energy

Thanks for the follow up, Holly.

I'm also very interested in hearing about any new design improvements for underground systems that have originated post Hurricane Michael.

Best,

Kelly Cisarik