

(U) Hurricane Irma Infrastructure Impact Assessment: Energy – Electric Power

1830 EDT September 7, 2017

(U) Assessment

(U//FOUO) The Department of Homeland Security/Office of Cyber and Infrastructure Analysis assesses that there will be a local and regional impact to the Electricity Subsector from Hurricane Irma due to the number of electric power infrastructure assets affected. Figure 1 provides an overview of the current storm track.

- (U//FOUO) The 51- to 100 percent electric power outage zone contains 62 electric generating stations and 157 substations that operate at 230 kilovolts (kV) and above. Two of the 62 electric generating facilities are nuclear generators with a summer generating capacity of approximately 3,500 megawatts (MW). Figure 2 provides a location map of affected infrastructure.
- (U//FOUO) The total generating output at risk for interruption in the 51- to 100 percent electric power outage zone is approximately 39,585 MW. The forecast peak hourly electric demand for the 2017 summer in Florida is approximately 47,500 MW.

(U//FOUO) Since 2006, Florida's electric utilities have hardened electric infrastructure and prepared their systems to withstand strong storm events, including an emphasis on hardening activities for hurricanes.

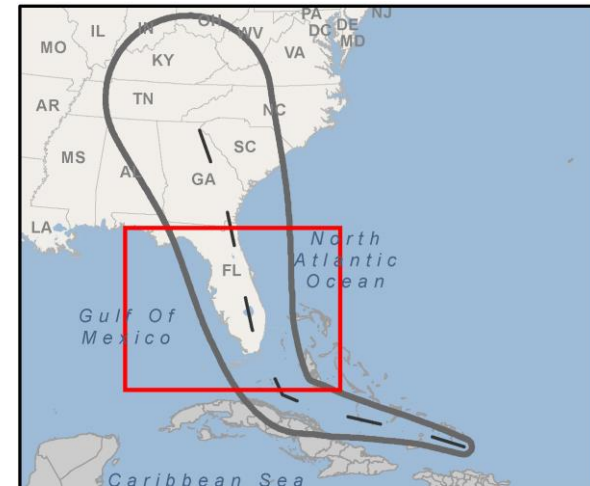
- (U//FOUO) These activities included the strengthening power circuits that serve critical infrastructure, hardening of electric distribution feeders, the completion of annual pole inspections, clearing of vegetation which may interfere with normal system operation, and public outreach to keep customers informed.
- (U//FOUO) These activities also included specific infrastructure enhancements including transitioning from wood to concrete or steel poles for transmission circuits, enhancing substations to protect against flooding and storm surge, and deploying intelligent devices (smart meters) to detect and report outages.

(U//FOUO) Florida Power and Light is the major provider of electric service within Miami-Dade, Broward, Palm Beach, and Martin Counties. Table 1 provides an overview of electric service providers on the east coast of Florida for comparison of total customers served.

(U//FOUO) OCIA does not assess or forecast restoration of electric power service from Hurricane Irma.

- (U//FOUO) Electric utilities affected by Hurricane Irma may engage the support of Regional Mutual Assistance Groups, which may offer crews, equipment, and assets to rebuild power lines, replace power poles, and restore power to customers.

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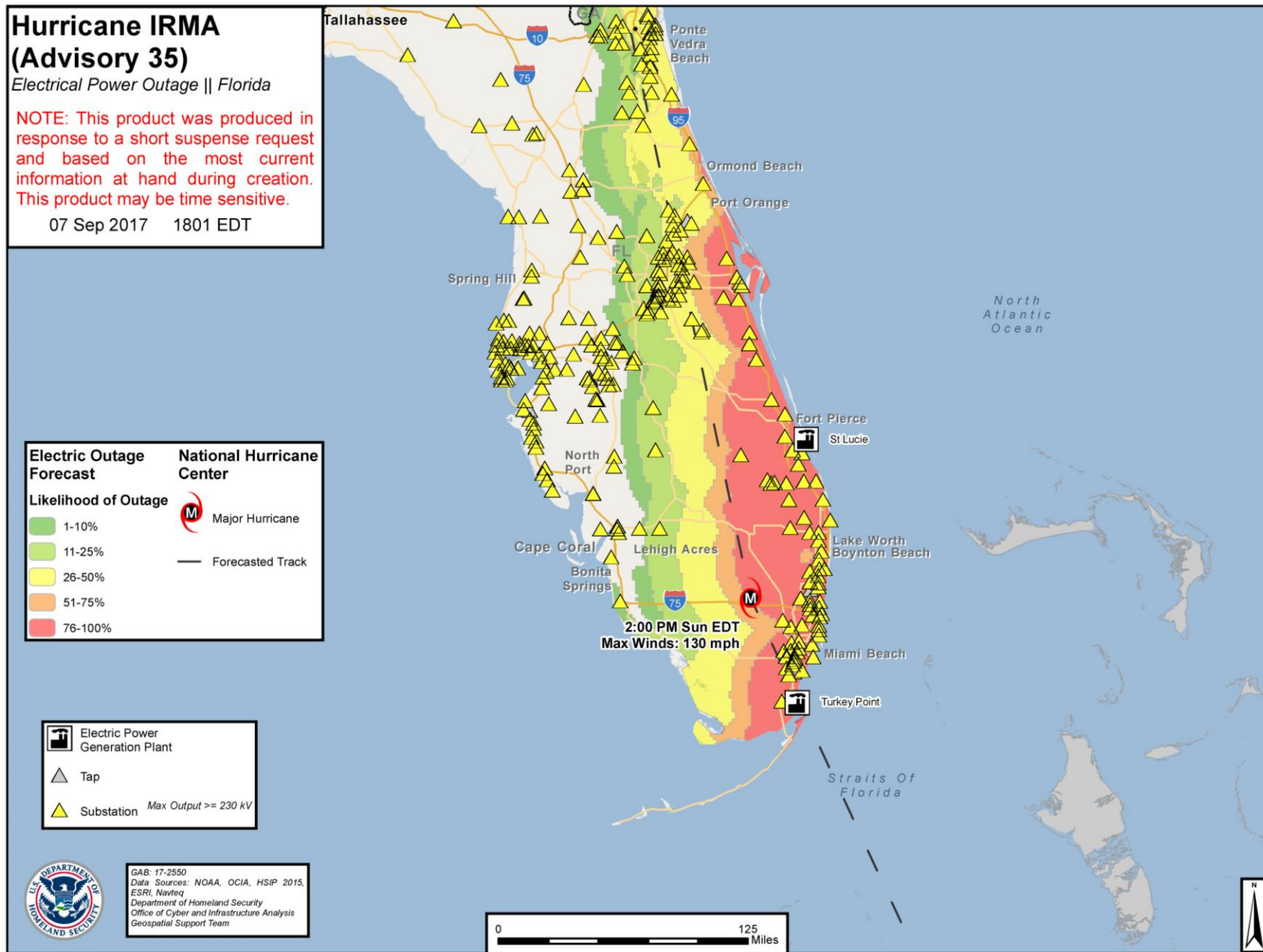
(U) FIGURE 1— HURRICANE IRMA TRACK AS 1700 EDT SEPTEMBER 7, 2017

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(U) TABLE 1—ELECTRIC SERVICE PROVIDERS IN SOUTH FLORIDA AS REPORTED TO U.S. ENERGY INFORMATION ADMINISTRATION ON EIA-861

ELECTRIC UTILITY	TOTAL CUSTOMERS AS OF 2015 (ROUNDED)
Florida Power and Light	4,700,000
City of Homestead	23,200
Florida Keys Electric Cooperative	32,400
City of Lake Worth	26,500
Fort Pierce Utilities	28,200
City of Vero Beach	35,000

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(U//FOUO) FIGURE 2—MAP OF IMPACTED ELECTRIC POWER INFRASTRUCTURE

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Homeland Security

National Protection and Programs Directorate
NPPD Customer Feedback Survey

1. Product Title:

2. Please rate your satisfaction with each of the following:

Very Satisfied (5)	Somewhat Satisfied (4)	Neither Satisfied Nor Dissatisfied (3)	Somewhat Dissatisfied (2)	Very Dissatisfied (1)
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Timeliness of product

Relevance of product

3. How do you use the information from this mission?

- Integrated into one of my own organization's information or analytic products

Yes No If so, which products?
- Used contents to improve my own organization's security or resiliency efforts or plans

Yes No If so, which efforts?
- Shared contents with government, private sector, or other partners

Yes No If so, which partners?
- Other uses (please specify)

Yes No

4. Do you have questions that this product didn't answer?

Yes No (Please specify)

5. How could this product be improved?

6. Would you like to see more on this topic?

Yes No (Please specify)

7. Are there other topics or questions you would like to see addressed by OCIA?

To help us understand more about your organization so we can better tailor future products, please provide (OPTIONAL):

Name:	Sector:
Organization:	Partner Type:
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