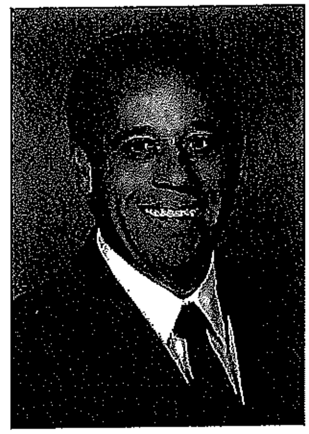
#1

FPL



Manuel B. Miranda

Vice President, Power Delivery

Manny Miranda is senior vice president of power delivery for Florida Power & Light Company (FPL). He is responsible for the planning, engineering, construction, maintenance and operations of the company's transmission, substation and distribution facilities. Mr. Miranda was named to this position in April 2013.

Prior to his current role, Mr. Miranda served as vice president of transmission & substation, and before that, as vice president of distribution system performance, where he was responsible for FPL's Storm Secure initiative to substantially strengthen the distribution infrastructure against future hurricanes. Mr. Miranda has held a variety of roles within the customer service and distribution areas of the business, including commercial and industrial manager and roles in engineering and dispatch operations. He joined FPL in 1982.

Mr. Miranda holds a Bachelor of Science degree in mechanical engineering from the University of Miami and an MBA from the Nova Southeastern University. He serves on the Board of Governors for NSU's H. Wayne Huizenga School of Business and Entrepreneurship and on the Board of Directors for the Southeastern Electric Exchange (SEE) and Association of Edison Illuminating Companies (AEIC). Previously, Mr. Miranda has served on the boards of both the Florida Reliability Coordinating Council and the North American Transmission Forum.

Mr. Miranda has won numerous industry awards throughout his career, most recently the Association of Cuban Engineers Engineer of the Year Award and the Alumnus of Distinction Award from the University of Miami College of Engineering.

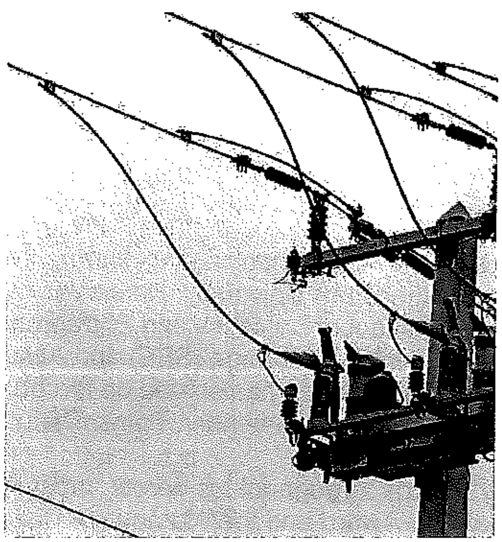
Florida Power & Light Company is the third-largest electric utility in the United States, serving approximately 4.7 million customer accounts across nearly half of the state of Florida. As of year-end 2013, FPL's typical 1,000-kWh residential customer bill is approximately 25 percent lower than the national average and the lowest in Florida among reporting utilities. FPL's service reliability is better than 99.98 percent, and its highly fuel-efficient power plant fleet is one of the cleanest among utilities nationwide. The company was recognized in 2014 as the most trusted U.S. electric utility by Market Strategies International, and has earned the national ServiceOne Award for outstanding customer service for an unprecedented 10 consecutive years. A leading Florida employer with approximately 8,900 employees, FPL is a subsidiary of Juno Beach, Fla.-based NextEra Energy, Inc. (NYSE: NEE). For more information, visit www.FPL.com.

Energy Secretary: FPL 'leads' with resilient, 'smart' power grid

3A

HIGHLIGHTS

- Sec. of Energy Ernest Muniz announces $220 million to further work on modernizing the national electrical grid
- FPL's hardening projects are 'cutting edge' and what other utilities need to do, he said
- Smart technology and use of data is key to many improvements



1 of 5

Recently hardened energy grid equipment in Fort Lauderdale. ON Thursday, Secretary of Energy Ernest Moniz tours facilities in Fort Lauderdale and Miami and examined FPL's hardening of the electrical grid. **CHARLES TRAINOR JR.** - ctrainor@miamiherald.com

BY LEILA MILLER
lmiller@miamiherald.com

Modernizing the country's electrical infrastructure is high on the U.S. Department of Energy's agenda — and the head of the agency said Thursday that Florida Power & Light has taken the lead.

At the end of a tour of FPL facilities highlighting the utility's initiatives to strengthen its electrical grid, Energy Secretary Ernest Moniz announced $220 million in federal funding for a new multiyear grid modernization program.

"Modernizing the U.S. electrical grid is essential to reducing carbon emissions, creating safeguards against attacks on our infrastructure, and keeping lights on," Moniz said in remarks to the press at an FPL facility in Miami. "This public-private partnership between our National Laboratories, industry, academia, and state and local government agencies will help us further strengthen our ongoing efforts to improve our electrical infrastructure so that it is prepared to respond to the nation's energy needs for decades to come."

DOE's National Laboratories and other partners will receive the funding, aimed at supporting research to strengthen the country's grid in light of climate-change threats.

"Climate change is certainly something we have to react to — that hardening of infrastructure is part of that," Moniz said. "Unfortunately we have to be prepared for more extreme weather, more damage from storm surges, hurricanes."

But he emphasized that FPL — which serves about half of Florida — stands out in its innovations to strengthen its grid.

"FPL really is on the cutting edge of addressing a grid for the 21st century and particularly in the area of resilience," he said. "It's really what we need."

Moniz toured the utility's newly remodeled System Control Center in Miami, as well as a substation and a nearby site in Fort Lauderdale where hardening activities are underway. He arrived in Florida two days after President Barack Obama pressed for clean energy and technological innovation in his State of the Union Address.

In the past 10 years, FPL has invested more than $2 billion in producing "smart" technology for its grid, cutting emergency response times and increasing its resilience in severe weather, including hurricanes.

"We're working to build the strongest grid in the world," said Manny Miranda, vice president of power delivery for FPL. "In 2004 and 2005, we experienced seven storms in 18 months. These programs help build a smarter and stronger grid. The benefits have provided reliability and lowered operating costs while really providing better customer service."

To strengthen or "harden" its electric grid, FPL has inspected 1.2 million utility poles, cleared vegetation from 120,000 miles of power lines, and installed flood mitigation and monitoring equipment at substations. It has created an interconnected information communication system between its equipment and its System Control Center. Vans equipped to act as "mobile command centers" can be deployed to high-profile events to relay electrical information to the center and the crews can send information to the center from iPads. During emergencies, aerial drones will be able to take photos of inaccessible areas, cutting emergency response times.

"The biggest concern with hurricanes is trees — they can take the lines out," said Kristi Baldwin, FPL's director of IT business solutions. Instead of having to send helicopters, she said, "drones can fly over substations, over lines and can determine failure if there's a power outage."

And the company has made improvements on the household level as well. It has installed 4.8 million "smart" meters that can prevent outages and restore power faster should outages occur. The meters frequently update reports on customers' power use, allowing them to make decisions that can allow them to cut electricity bills.

Stopping first at an operating substation in Fort Lauderdale, Moniz learned how FPL's flood mitigation technology protects its over 600 substations during storms. FPL has installed flood-resistant doors and has sealed windows and other openings in substation vaults, as well as water monitors that let the Control System Center know if flooding occurs.

"We're able to be preventive and know when water can take the equipment out," said FPL President and CEO Eric Silagy. "Whereas before, water would have risen and would have blown equipment. That saves customers millions of dollars."

At the second stop nearby, FPL operatives presented a hardening project featuring new automated switches on power lines that can detect and prevent "flickers" and other power interruptions that occur when tree branches fall on power lines. Instead of requiring crews to come to the scene, the switches turn off power to a line if they detect a problem, and are able to isolate the circuit so fewer people are affected by an outage. FPL has also replaced its utility poles with ones that can withstand stronger winds and falling trees during storms.

The last stop featured a tour of the new FPL System Control Center and marked the first time media were granted a visit. Completed in September, the control center features a video wall more than 188 feet wide and 14 feet high, from which operators can view the utility's power line system for the entire state and execute operations. With control of around 8,700 devices at more than 600 substations, the center can directly restore electricity transmission at substations and quickly address power outages.

"Its like a highway — they're connected all over the place," said Ed Batalla, the director of the Grid Control Systems. "Then you say, what if a big [power] line goes off? What happens to the flow? What can we do to make it better?"

Moniz emphasized the importance of improving the grid across the country.

"This is really a big focus," he said. "We are now looking squarely at electricity end to end."

RELATED CONTENT

- Video: U.S. Secretary of Energy visits FPL

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(3B)

SPMB

PA Consulting Group honours North American utilities for excellence in reliability at the 2015 ReliabilityOne™ awards ceremony

23 OCTOBER 2015

Florida Power & Light Company Takes Top Honour at the 15th Annual ReliabilityOne™ Awards Ceremony - Receives National ReliabilityOne™ Excellence Award

Last night PA Consulting Group (PA) announced the recipients of the 15th Annual ReliabilityOne™ Awards. These recognise North American utilities in a number of critical industry categories including: reliability, storm response, technology and innovation, and customer engagement. PA Consulting Group's ReliabilityOne™ Awards are widely considered one of the most prestigious honours in the electric utility industry, recognizing organisations that provide their customers with the highest levels of reliability.

For the 2014 calendar year, PA recognised six regional large investor owned utilities across the U.S. The selections were based on overall system wide performance in both outage duration and frequency. In addition, PA awarded its annual National ReliabilityOne™ Excellence Award to the one investor owned utility that demonstrated superior leadership, innovation and achievement in the area of electric reliability. PA also recognised three winners for Outstanding Reliability Performance for Midsize Utilities.

"The ReliabilityOne™ Awards program recognises electric utilities for providing customers with the highest levels of reliability in the industry," said Jeff Lewis, PA Consulting Group's ReliabilityOne™ Program Director. **"With the energy industry continuing to be challenged by new regulations and threats such as cyber-attacks, it is imperative that we recognise the leaders in this industry who are paving the way with innovative technology and superior customer engagement. Our ReliabilityOne™ recipients take great pride in protecting the reliability of the electric system."**

Additional categories selected from those honoured included the utility that had the Outstanding Response to a Major Outage Event, Outstanding System-Wide Reliability, Outstanding Customer Engagement, Outstanding Technology and Innovation, and Outstanding Outage Response Time.

PA also recognised several individuals for outstanding personal achievement in the area of electric reliability including Lisa Primeggia of Con Edison, Jorge Valdes of Florida Power & Light, and Jim Prothero of We Energies.

National ReliabilityOne™ Excellence Award recipient:

PA's National ReliabilityOne™ Excellence Award goes to a company that is a consistent top performer in the industry. The utility honoured is one that has demonstrated a tremendous commitment to maintaining reliability for their customers from every level of the organisation.

maintaining reliability for their customers from every level of the organisation.

This year's National ReliabilityOne™ Excellence Award was presented to Florida Power & Light Company.

Florida Power & Light Company (FPL) is an incredibly focused organisation that is embracing technology and innovation as they address critical issues affecting reliability for their customers. FPL is focused on all aspects of reliability including momentary outages, power quality, sustained outages and storm response. FPL's continued investment in new technology and innovation has allowed them to take significant steps towards strengthening their infrastructure, enhancing analytics, developing real time monitoring and predictive capabilities, providing field crews with extraordinary information, pushing the envelope on research and development, and maximizing efficiency. The overall result is better service quality for their customers.

This year's six regional ReliabilityOne™ Award recipients are:

Northeast Region – Consolidated Edison Company of New York
Mid-Atlantic Region – Public Service Electric & Gas Company
Southeast Region – Florida Power & Light Company
West Region – San Diego Gas & Electric (10th Anniversary)
Midwest Region – We Energies
Plains Region – Xcel Energy Minnesota

Outstanding Reliability Performance for Midsize Utility Award recipients are:

Midsize Utility – Indianapolis Power & Light Company
Midsize Utility – Mississippi Power Company
Midsize Utility – PNM, Public Service Co. of New Mexico

2015 ReliabilityOne™ Award recipients for Outstanding Performance are:

Outstanding Customer Engagement – Public Service Electric & Gas Company
Outstanding Technology & Innovation – Florida Power & Light Company
Outstanding Response to a Major Outage Event – San Diego Gas & Electric
Outstanding System-Wide Reliability – Consolidated Edison Company of New York
Outstanding Outage Response Time – Public Service Electric & Gas Company

Public Service Electric & Gas Company (PSE&G) received the award in the category of Outstanding Customer Engagement. PSE&G received the award for successfully managing multiple channels to ensure that key stakeholders including customers, regulators, government officials, and the media all receive clear and consistent messaging during both blue-sky and major events. PSE&G's corporate communications department manages amongst the industry's largest social media engagement with over 72K Twitter followers, nearly 60K Facebook followers, more than 1.2M email accounts, and a significant presence on LinkedIn. Supporting these channels PSE&G's dedicated blog, Energize, ensures that customers have access to key programs such as their Energy Strong storm resiliency and hardening effort, solar loan and energy efficiency programs reach their expansive customer base.

In addition, PSE&G has a proactive approach to communications. They harness their website, online outage map, press releases, both email and text communications, and a dedicated portal for its municipalities to ensure customers are aware of its major event and storm restoration activities. These can include outage maps, estimated time of restoration, resource allocation and status, and other key points throughout the course of an event: before, during, and after.

PA CONSULTING GROUP RECOGNISES NORTH AMERICAN UTILITIES FOR EXCELLENCE IN RELIABILITY AT THE 2014 RELIABILITYONE™ AWARDS

San Diego Gas & Electric takes top honor - National ReliabilityOne™ Excellence Award

19 November 2014

Last night (18 November) PA Consulting Group (PA) announced the recipients of its annual 2014 ReliabilityOne™ Awards that recognise North American utilities in a number of critical industry categories including: reliability, storm response, technology and innovation, and customer engagement. PA Consulting Group's ReliabilityOne™ awards are widely recognised as one of the most prestigious honors in the electric utility industry, recognising organisations that provide their customers with the highest levels of reliability.

This year PA recognised six regional ReliabilityOne™ winners from utilities across the U.S. for the 2013 calendar year. The selections were based on overall system wide performance in both outage duration and frequency. PA awarded its annual National ReliabilityOne™ Excellence Award to one of its winners that demonstrated superior leadership, innovation and achievement in the area of electric reliability. PA also selected from its group of winners, the utility that had the Best Response to a Major Outage Event and the utility with the most Outstanding System-Wide Reliability.

Of note, PA expanded its program to include Outstanding Reliability Performance for Midsize Utilities and introduced two new award categories – Outstanding Customer Engagement and Outstanding Technology and Innovation.

National ReliabilityOne™ Excellence Award recipient:

PA's National ReliabilityOne™ Excellence Award goes to a company that is a consistent top performer in the industry and is one that has demonstrated a tremendous commitment to maintaining reliability for their customers from every level of the organisation.

This year's National ReliabilityOne™ Excellence Award was presented to San Diego Gas & Electric. San Diego Gas & Electric (SDG&E) is constantly striving to optimise processes and moving towards integrating current tools with new technology to help manage information. For example, they have pioneered the use of microgrid technology in one of their most remote and difficult communities to serve. Even more notable, is the fact that they went from a pilot microgrid demonstration project to quickly leveraging the new technology to restore customers during two outages in 2013 which included windstorms and intense thunder. The microgrid utilises local power generation, energy storage, and automated switching to create a more robust, resilient grid that can dynamically react to changing conditions.

In addition to SCADA (supervisory control and data acquisition) and CIS (customer information system) integration, they deployed AMI (advanced

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(customer information system) integration, they deployed AMI (advanced metering infrastructure) to 99.9 percent of their customers – processing over 80 million reads per day and are developing new network monitoring and analytic tools to improve operational efficiency and reduce device downtime by providing analysts with near real-time results necessary for expediently troubleshooting network issues and optimising network performance.

"We look forward to our ReliabilityOne™ event every year because it gives us a chance to celebrate utilities that have clearly demonstrated a commitment to excellence in a sector that is facing constant challenges in the form of talent, technology, and increasingly severe weather events," said Jeff Lewis, PA Consulting Group Program Director for ReliabilityOne™. "Keeping reliability as a priority in this environment demonstrates a dedication to customers, and these companies have set the standard in the industry by providing the tools, responsiveness, and leadership necessary to blaze the trail."

This year's six regional ReliabilityOne™ awards recipients are:

Northeast Region - **Consolidated Edison Company of New York**

Mid-Atlantic Region - **Public Service Electric & Gas Company**

South Region - **Florida Power & Light**

West Region - **San Diego Gas & Electric**

Midwest Region - **We Energies**

Plains Region - **Kansas City Power & Light**

Outstanding Reliability Performance for Midsize Utility award recipients are:

Midsize Utility - **Vectren Energy Delivery**

Midsize Utility - **Narragansett Electric Company (operating as National Grid)**

New to the program this year, PA expanded its Outstanding Reliability Performance to include the top Midsize Utilities. Both Vectren and Narragansett (operating as National Grid) delivered exceptional results. Narragansett's (operating as National Grid) reliability programs are leading the way in National Grid's overall partnership with its customers in Rhode Island – and Vectren Energy Delivery of Indiana posted their best reliability results in the last ten years, over 60 percent better than our national average.

2014 ReliabilityOne™ award recipients for outstanding performance are:

Outstanding Customer Engagement- **San Diego Gas & Electric**

Outstanding Technology & Innovation - **Florida Power & Light**

Outstanding Response to a Major Outage Event - **Narragansett Electric Company (National Grid)**

Outstanding System Wide Reliability - **Consolidated Edison Company of New York**

San Diego Gas & Electric received the award in the new category of Outstanding Customer Engagement due to their ability to embrace communication across multiple channels to provide accurate information during both blue-sky conditions and major weather events. They have seized the opportunity to deliver a positive shift in their ability to engage with their customers directly in real-time through their optimised website, mobile application, and their presence on social media. In addition, they developed an Energy Solutions Network to partner with over 250 community-based organisations to connect customers to solutions which contribute to system reliability - and they have taken extra steps to engage with customers with medical conditions, or life sustaining equipment, and rural customers to ensure their well-being during an emergency or outage through increased communications efforts.

Florida Power & Light won this year's new Technology & Innovation award because of their leadership in embracing the benefits that new technology can provide to their overall outage restoration and management process. They have demonstrated that by breaking through the barriers to innovation organisations can achieve exceptional results.

Florida Power & Light (FPL) leveraged the considerable skills of their dedicated employees to develop an in-house mobile application, capable or running on both tablets and smart phones that provide the entire organisation with an unprecedented level of information regarding system status and outage information. Through their application, both field staff and management have the ability to instantly "ping" (query status of customers' electric supply) meters and maintain full situational awareness during any outage in real-time. Their system provides a level of reliability information to field personnel that is rarely seen in the industry.

PA awarded Narragansett Electric Company (National Grid) the achievement of Outstanding Response to a Major Event in recognition of their tremendous restoration efforts. Narragansett responded to Nor'easter "NEMO" - a major storm that brought high winds and heavy snow causing significant damage to their electric infrastructure and interrupting power to over 35 percent of their customers, as well as affecting 99 percent of the communities served.

Restoration was completed in just over four days, much faster than the six to 10 days required by many other utilities during similar sized events. Pre-mobilisation began 48 hours prior to the first outage and by anticipating the difficulties and risks associated with a winter storm of this magnitude, the Company enlisted nearly 1,200 field crews, including approximately 930 external crews, to assist with restoration.

Con Edison was awarded Outstanding System-Wide Reliability for being the utility that achieved the best system wide reliability in the U.S. - Customers served by Con Edison experienced an average outage duration of less than 20 minutes per year compared to an industry average of nearly 130 minutes. This result is not only better than the industry first quartile, but nearly 30 minutes better than even the first decile. Con Edison is looking to improve and innovate through business processes and technologies to become smarter, stronger, and more sustainable.

Lewis added, "This program began back in 1999 as a way to recognise utilities that were taking the lead in setting a whole new standard for reliability. Those utilities are still leaders, and have transformed their organisations, systems, processes, and cultures - demonstrating to the industry what tremendous improvements are achievable. We are proud and honored to present these awards to the utilities setting the gold standard in the industry every single day."

The awards reception was held at the New York Academy of Sciences at 7 World Trade Center in New York City before an audience that included senior management at leading utilities, industry regulators and energy industry experts. This year's event also included an Executive Forum where panelists from Con Edison, Ambri, Goldman Sachs and SNR Denton focused on how technology and regulatory change is driving a customer-centric transformation of the utility.

-ENDS-

For more information on PA's expertise in energy and utilities, please click here.

http://www.paconsulting.com/introducing-pas-media-site/releases/pa-consulting-group-recognises-north-americar utilities-at-the-2014-reliabilityone-awards-19-november-2014/

FLA IOU T&D SAIDI / MAIFIe

SAIDI	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2015 vs. 2006
FPL	79.8	76.2	81.0	82.5	81.3	82.9	65.8	65.6	66.6	61.4	23%
FPUC	236.7	192.0	249.8	420.2	206.5	255.6	275.1	293.3	192.0	255.1	
DEF	87.8	87.1	92.7	93.9	102.2	97.7	79.7	95.4	93.5	87.9	
TECO	83.6	95.5	83.2	100.1	100.6	94.0	95.6	95.2	95.3	94.0	
Gulf	215.2	133.7	138.4	146.5	159.5	116.5	140.9	100.1	102.7	94.9	

Other IOU SAIDI Avg.											> than FPL
Major (w/o FPUC)	128.9	105.4	104.8	113.5	120.8	102.7	105.4	96.9	97.2	92.3	50%
All	155.8	127.1	141.0	190.2	142.2	141.0	147.8	146.0	120.9	133.0	

											2015 vs. 2006
FPL T&D MAIFIe	12.0	12.1	11.2	11.6	9.5	10.7	9.3	9.7	9.3	8.1	33%

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FPL Targeted 2014 SAIDI Benchmarking Data:

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State	Utility	SAIDI	Customers	Note
Alabama	Alabama Power	N/A	1,450,784	1
Florida	Duke Energy Florida	101.22	1,697,361	
Florida	Florida Power & Light	72.10	4,729,392	
Florida	Gulf Power	N/A	444,047	1
Florida	Tampa Electric	99.51	712,169	
Georgia	Georgia Power	102.76	2,333,921	
Mississippi	Entergy Mississippi	184.40	446,673	
Mississippi	Mississippi Power	N/A	186,382	1
North Carolina	Duke Energy Carolinas, LLC	138.00	1,894,482	
North Carolina	Duke Energy Progress (NC)	124.00	1,312,953	
South Carolina	Duke Energy Carolinas, LLC	126.00	557,449	
South Carolina	Duke Energy Progress (SC)	128.00	165,121	
South Carolina	South Carolina Electric & Gas	97.33	681,515	
Virginia	Appalachian Power - VA	334.20	524,605	
Virginia	Dominion Virginia Power	113.00	2,400,000	
2014 Average	All Investor Owned Utilities (IOU's)	128.40		2

FPL 72.1
NAT'L AVG. 128.4
44%

2015 FPL IEEE 63.7

Source: PA Consulting's 2014 ReliabilityOne™ Benchmark Database

Notes: All SAIDI calculations include Transmission & Distribution and unless otherwise noted using IEEE 2.5 Beta Method excluding Major Event Days

1. Methodology used varies significantly from IEEE's 2.5 Beta Method as well as the one used by FPL and should not be used for comparison purposes
2. Straight Average for > 150 Investor Owned Utilities' (IOU's) 2014 SAIDI entries in PA Consulting's ReliabilityOne™ Benchmark Database

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2pgs

U.S. Mainland Hurricane Strikes by State, 1851-2004

The following table is derived from NOAA Technical Memorandum NWS TPC-4:

THE DEADLIEST, COSTLIEST, AND MOST INTENSE
UNITED STATES HURRICANES FROM 1851 TO 2004
(AND OTHER FREQUENTLY REQUESTED HURRICANE FACTS)
by

Eric S. Blake, Jerry D. Jarrell(retired) and Edward N. Rappaport
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Full Report available in PDF format

Hurricane direct hits on the mainland U.S. coastline and for individual states 1851-2004 by Saffir/Simpson category.

Area	Category Number					All (1-5)	Major (3-5)
	1	2	3	4	5		
U.S. (Texas to Maine)	109	72	71	18	3	273	92
Texas	23	17	12	7	0	59	19
(North)	12	6	3	4	0	25	7
(Central)	7	5	2	2	0	16	4
(South)	9	5	7	1	0	22	8
Louisiana	17	14	13	4	1	49	18
Mississippi	2	5	7	0	1	15	8
Alabama	11	5	6	0	0	22	6
Florida	43	32	27	6	2	110	35
(Northwest)	27	16	12	0	0	55	12
(Northeast)	13	8	1	0	0	22	1
(Southwest)	16	8	7	4	1	36	12
(Southeast)	13	13	11	3	1	41	15
Georgia	12	5	2	1	0	20	3
South Carolina	19	6	4	2	0	31	6
North Carolina	21	13	11	1	0	46	12
Virginia	9	2	1	0	0	12	1
Maryland	1	1	0	0	0	2	0
Delaware	2	0	0	0	0	2	0
New Jersey	2	0	0	0	0	2	0
Pennsylvania	1	0	0	0	0	1	0
New York	6	1	5	0	0	12	5
Connecticut	4	3	3	0	0	10	3
Rhode Island	3	2	4	0	0	9	4
Massachusetts	5	2	3	0	0	10	3
New Hampshire	1	1	0	0	0	2	0
Maine	5	1	0	0	0	6	0

Notes:

State totals will not necessarily equal U.S. totals, and Texas or Florida totals will not necessarily equal sum of sectional totals.

13/81

Major hurricane direct hits on the mainland U.S. coastline and for individual states 1851-2004 by month.

Area	Jun	Jul	Aug	Sep	Oct	All
U.S. (Texas to Maine)	2	4	26	43	17	92
Texas	1	1	10	7	0	19
(North)	1	1	3	2	0	7
(Central)	0	0	2	2	0	4
(South)	0	0	5	3	0	8
Louisiana	2	0	6	7	3	18
Mississippi	0	1	3	4	0	8
Alabama	0	1	1	4	0	6
Florida	0	1	6	19	9	35
(Northwest)	0	1	1	7	3	12
(Northeast)	0	0	0	1	0	1
(Southwest)	0	0	2	5	5	12
(Southeast)	0	0	4	8	3	15
Georgia	0	0	1	1	1	3
South Carolina	0	0	2	2	2	6
North Carolina	0	0	4	7	1	12
Virginia	0	0	0	1	0	1
Maryland	0	0	0	0	0	0
Delaware	0	0	0	0	0	0
New Jersey	0	0	0	0	0	0
Pennsylvania	0	0	0	0	0	0
New York	0	0	1	4	0	5
Connecticut	0	0	1	2	0	3
Rhode Island	0	0	1	3	0	4
Massachusetts	0	0	0	3	0	3
New Hampshire	0	0	0	0	0	0
Maine	0	0	0	0	0	0

Notes: State totals do not equal U.S. totals and Texas or Florida totals do not necessarily equal the sum of sectional entries.

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Distribution Feeder Hardening/UG

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	TOTAL
CIF	13	35	52	68	36	28	34	58	54	43	157	0	0	**578**
Community	0	23	36	10	5	4	13	10	9	16	55	0	0	**181**
Wind Zone		0	0	0	0	0	0	0	0	5	10	199	243	**457**
Geographic		0	0	0	0	0	0	0	0	0	3	15	0	**18**
Priority Feeder		0	0	0	0	0	0	0	29	55	17	72	57	**230**
Total Hardened per year	**13**	**58**	**88**	**78**	**41**	**32**	**47**	**68**	**92**	**119**	**242**	**286**	**300**	
Cumulatve Hardened	13	71	159	237	278	310	357	425	517	636	878	1164	1464	
Underground	388	394	406	416	419	427	433	441	446	454	462	470	478	
Cumulatve Hardened/UG	401	465	565	653	697	737	790	866	963	1090	1340	1634	1942	
Total # of Feeders	2933	3018	3071	3100	3124	3131	3142	3186	3212	3232	3240	3248	3256	
% Feeders Hardened	0%	2%	5%	8%	9%	10%	11%	13%	16%	20%	27%	36%	45%	
%Feeders Hardened/UG	14%	15%	18%	21%	22%	24%	25%	27%	30%	34%	41%	50%	60%	

CIF/Community #	13	71	159	237	278	310	357	425	488	547	759
CIF/Community %	2%	9%	21%	31%	37%	41%	47%	56%	64%	72%	100%

Hardened Feeder Performance

CURRENT MONTH	# of Feeders	Feeder Interruptions	Total Population	% Defective
Non-Hardened Feeders (OH/Hybrid)	142	160	2194	7.29%
Hardened Feeders	20	21	600	3.50%
Non- Hardened Other (100% UG Fdr)	*3*	*3*	*428*	0.70%
Non- Hardened Other (No Fdr Assigned)	*2*	*2*		

There is a statistical difference between how the Hardened feeders performed versus our Non-Hardened feeders

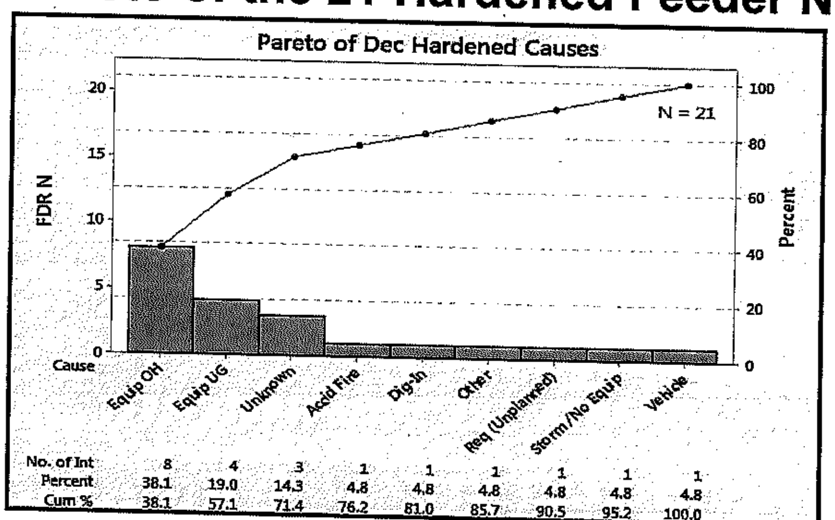
There is a statistical difference between how the Hardened feeders performed versus our Non-Hardened feeders

YTD	# of Feeders	Feeder Interruptions	Total Population	% Defective
Non-Hardened Feeders (OH/Hybrid)	1923	2157	2194	98.31%
Hardened Feeders	337	361	600	60.17%
Non- Hardened Other (100% UG Fdr)	*56*	*62*	*428*	14.49%
Non- Hardened Other (No Fdr Assigned)	*9*	*9*		

There is a statistical difference between how the Hardened feeders performed versus our Non-Hardened feeders

Hardened Feeder 39% better

Pareto of the 21 Hardened Feeder N



All Ticket Detail on Following Slide*

Hardened Feeders performed 39% better YTD versus non Hardened Feeders

FPL

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FPL POWER DELIVERY FPSC LOGGED COMPLAINTS PER 10,000 CUSTOMERS

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	
# of Logged FPSC Complaints	132	116	93	76	56	54	57	47	45	46	
Avg. Number of Customers	4409563	4496589	4509730	4499067	4520328	4547051	4576449	4626934	4708829	4775382	
Complaints per 10,000 Customers	0.299									0.096	68%

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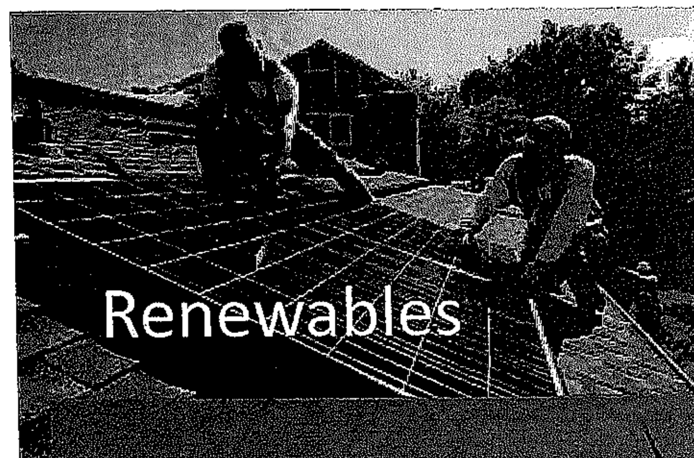
Grid Modernization Initiative

March 2015

Why Grid Modernization?

The existing U.S. power system has served us well...
but our 21st Century economy needs a 21st Century grid.



Grid Modernization Vision

*The future grid provides a critical platform for U.S. prosperity, competitiveness, and innovation in a global clean energy economy. It must deliver **reliable, affordable,** and **clean electricity** to consumers where they want it, when they want it, how they want it.*

Achieve Public Policy Objectives

- 80% clean electricity by 2035
- State RPS and EEPS mandates
- Access to reliable, affordable electricity
- Climate adaptation and resilience

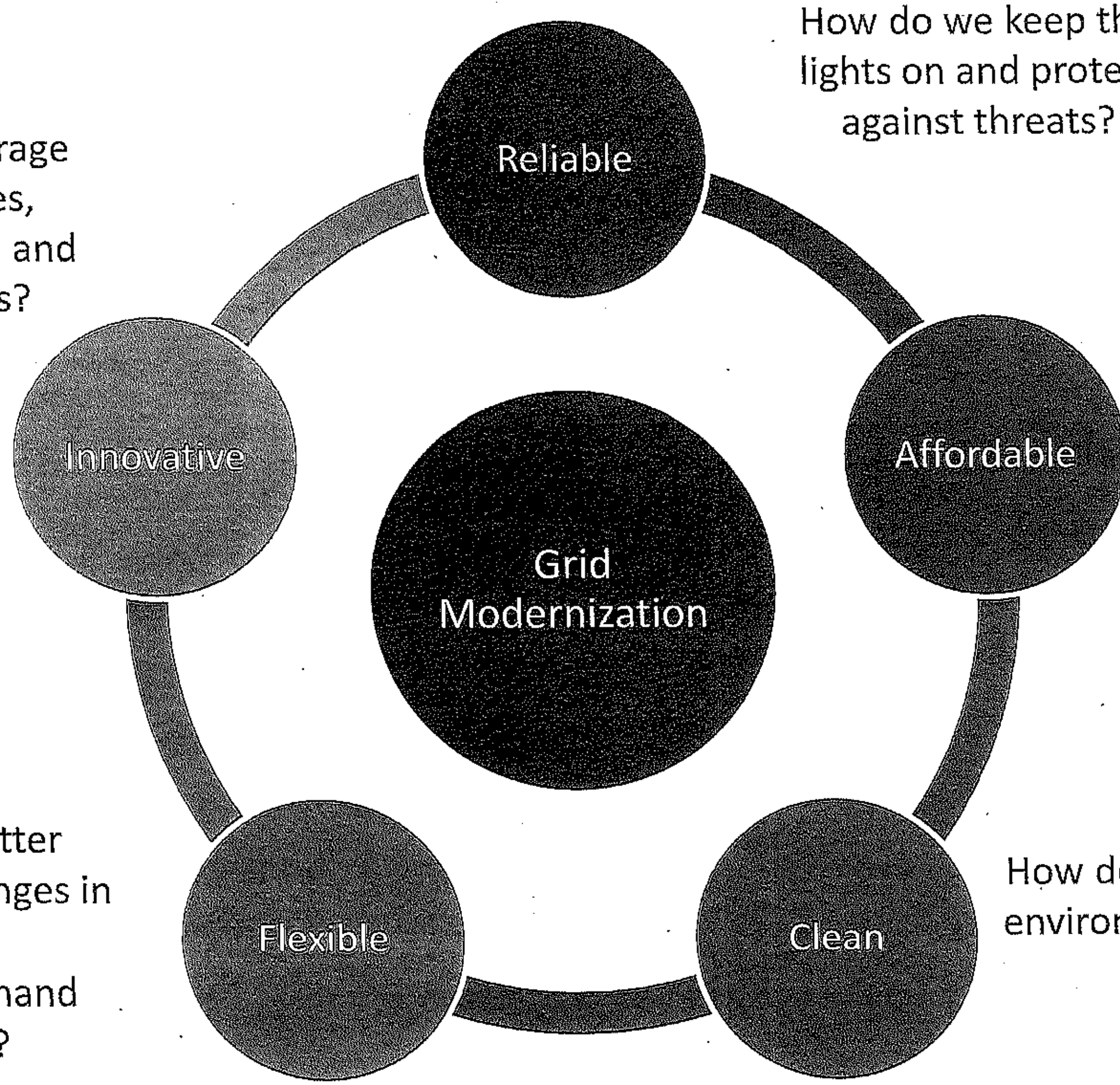
Sustain Economic Growth and Innovation

- New energy products and services
- Efficient markets
- Reduce barriers for new technologies
- Clean energy jobs

Mitigate Risks and Secure the Nation

- Extreme weather
- Cyber threats
- Physical attacks
- Natural disasters
- Fuel and supply diversity
- Aging infrastructure

Key Attributes of a Modernized Grid



How do we keep the lights on and protect against threats?

How do we keep costs reasonable for consumers?

How do we reduce our environmental impact?

How do we better absorb rapid changes in supply, delivery or demand conditions?

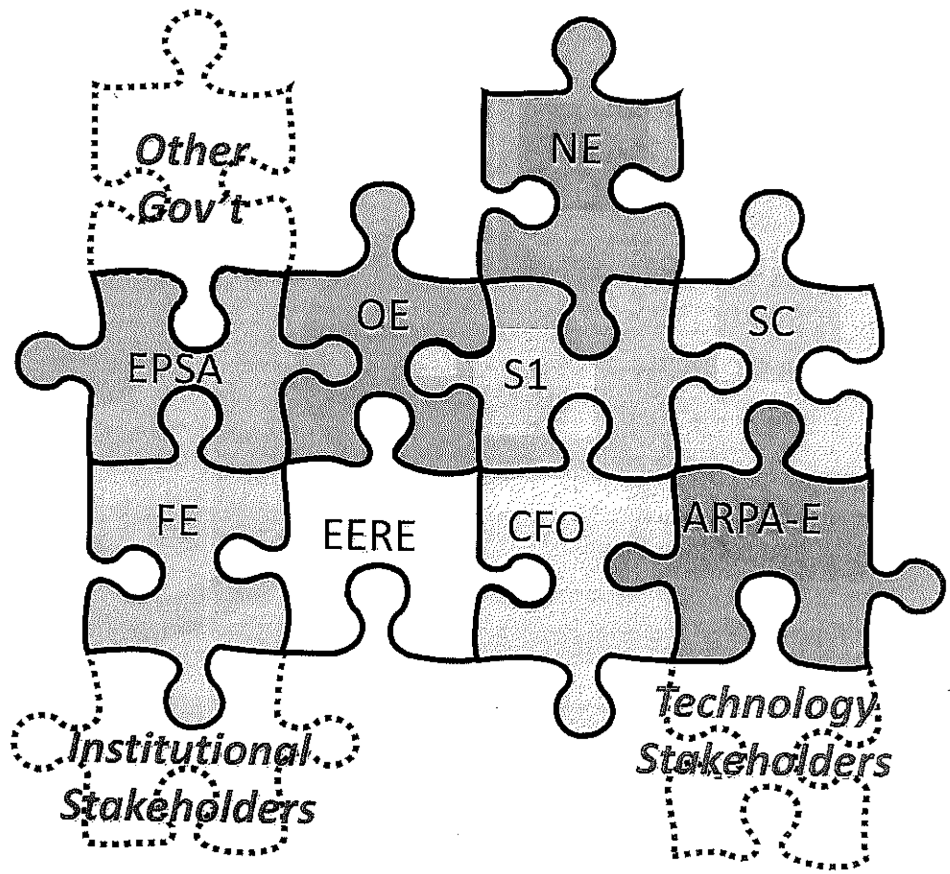
How do we encourage new technologies, products, services, and business models?

OPC 005126
FPL RC-16

Grid Modernization Initiative

An aggressive five-year grid modernization strategy for the Department of Energy that includes

- Alignment of the existing base activities among the Offices
- An integrated Multi-Year Program Plan (MYPP)
- New activities to fill major gaps in existing base
- Development of a laboratory consortium with core scientific abilities and regional outreach



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OPC 005127
FPL RC-16

Technical Areas

Sensing and Measurements	• Visualization tools that enable complete visibility of generation, loads and grid dynamics across the electric system
Devices and Integrated Systems	• Establish common test procedures and inter-operability standards for devices that can provide valuable grid services alone and/or in combination
System Operations and Power Flow	• Develop advanced real-time control technologies to enhance the reliability and asset utilization of T&D systems
Design and Planning Tools	• Create grid planning tools that integrate transmission and distribution and system dynamics over a variety of time and spatial scales
Security and Resilience	• Develop advanced security (cyber and physical) solutions and real-time incident response capabilities for emerging technologies and systems
Institutional Support	• Provide tools and data that enable more informed decisions and reduce risks on key issues that influence the future of the electric grid/power sector

Goals and Outcomes

- This new crosscutting effort will build on past successes and current activities to help the nation achieve at least three key outcomes within the next ten years:
  - **> 10% reduction in the societal costs of power outages**
  - **> 33% decrease in cost of reserve margins while maintaining reliability**
  - **> 50% cut in the costs of wind and solar and other DG integration**

- If achieved, these three key outcomes would yield more than $7 billion in annual benefit to the U.S. economy

- In addition, our efforts will ensure the future modernized grid is a flexible platform for innovation by entrepreneurs and others who can develop tools and services to empower consumers and help them make informed energy decisions.

Outputs to Deliver Outcomes

> 10% reduction in the societal costs of power outages

- Deliver new grid architecture that enable controllability across emerging fleet of microgrids and end use devices
- Deliver next gen sensing and data management platforms that enable full system visibility for adaptive wide area control
- Deliver new control theory and algorithms to enable adaptive measurement based control and faster restoration
- Deliver real-time N-K contingency tools to inform and predict outages in the face of threats

Outputs to Deliver Outcomes

> 33% decrease in cost of reserve margins while maintaining reliability

- Deliver a next gen EMS/DMS platform with attributes enabling HPC implementation, algorithms that handle uncertainty, and co-coordination across transmission and distribution
- New grid architecture that enables real-time wide area controls NOT dependent on traditional contingency analysis
- Ultra-fast state estimation (< 1sec) and state measurement to arm real-time controls
- Sensing and data management to enable real-time model validation of distribution circuits under high penetrations of microgrids and distributed resources
- Demos at LSE and balancing area levels to validate concepts

Outputs to Deliver Outcomes

> 50% cut in the costs of wind and solar and other DG integration

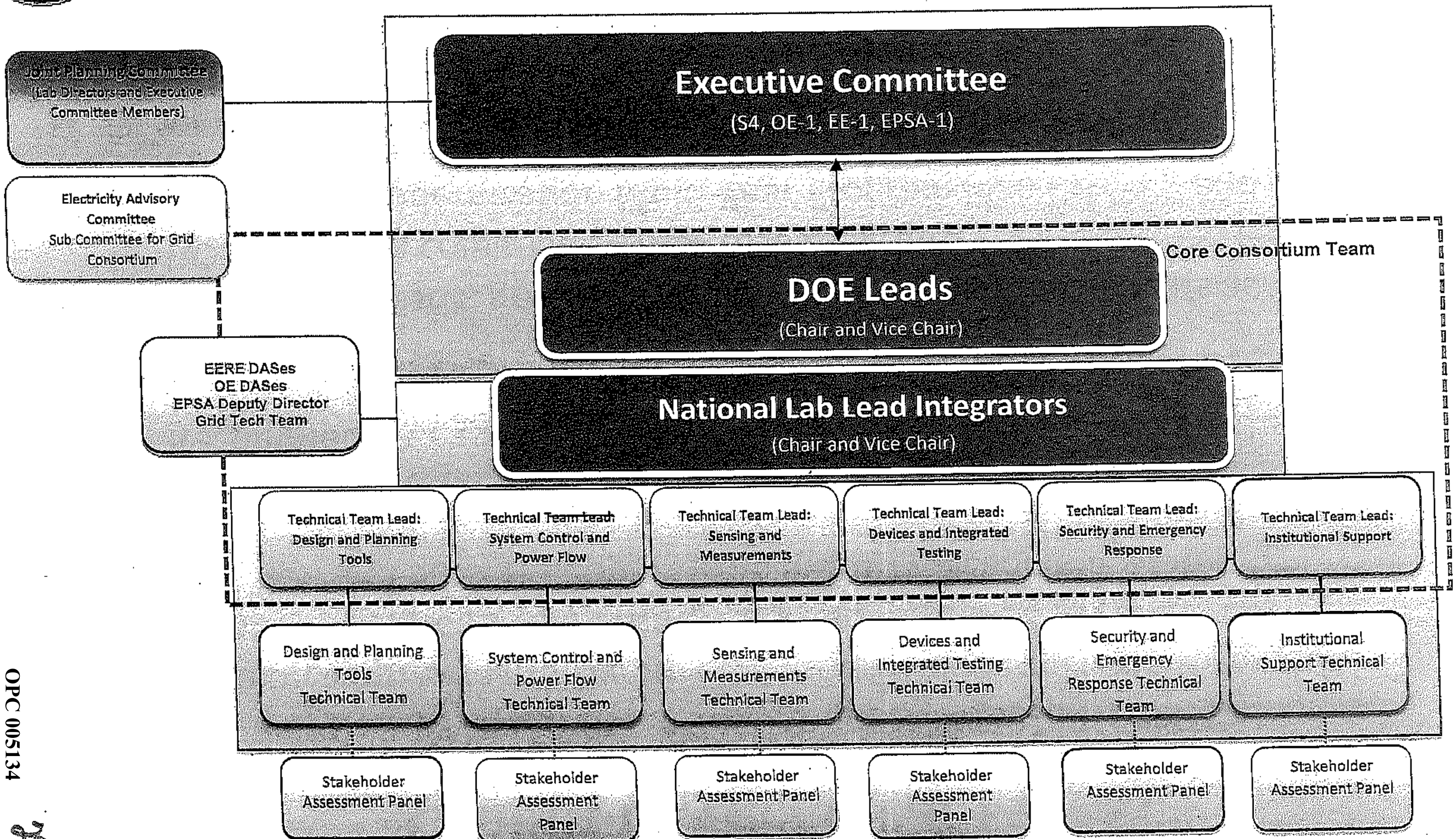
- Deliver next gen EMS/DMS platform with controllability to engage responsive loads in balancing variable gen (HPC, full system transparency for model validation and restoration)
- Planning tool platform with HPC and capacity to handle uncertainty to enable fast, risk-based planning at industry and state levels
- Deliver power flow devices (power electronics) to enable flow management at T and D levels to mitigate need for system transmission expansion
- Define and evaluate alternate market-based control concepts that enhance efficiency of variable gen integration

Implementation

We will accomplish this by

- Coordinating grid related research across the DOE, better leveraging the $300 million DOE funding (FY2015 request, actuals being assessed)
- Using the Grid Modernization Laboratory Consortium to coordinate the existing $100M+ in activities of the National Labs associated with grid research into a single, efficient and well coordinated portfolio
- Prudently applying DOE investment in Grid Modernization over the next five years and directing these new resources into gaps identified as part of a new Grid Modernization Multi-Year Program Plan (MYPP); and
- Supporting regional, state, and local groups of stakeholders from industry, academia, communities, and local regulators, that will help translate the tools and knowledge from Grid Modernization R&D into actual deployments of modernized grids.

Grid Modernization Laboratory Consortium



Charge to Technical Teams

1. Develop a multi-year program plan for grid modernization through a collaborative laboratory effort combined with DOE HQ strategic direction and outside support from industry, academia, states, consumers and other affected parties;

2. Recommend areas of improved coordination across Offices in the FY15 AOP based on the work breakdown structure (WBS);

3. Propose a holistic, grid modernization AOP for FY16 that cuts across all DOE Offices in conjunction with DOE programs;

4. Establish a DOE-Lab culture that builds on collaboration, inclusivity, transparency and communication across the entire grid portfolio.

FY 2015 Schedule

Activities	Nov/ Dec 2014	Jan 2015	Feb 2015	Mar 2015	Apr 2015	May 2015	Jun 2015	Jul/ Aug 2015
Grid Modernization Laboratory Consortium Kickoff • Hosted by S4, EE-1, OE-1 • Attended by ~70 Lab Members representing the 6 technical areas • Start of the Grid Modernization Multi-Year Program Plan (MYPP)								
First Draft of the Grid MYPP • Lab Leads present the first draft of the MYPP to the Directors at DOE • Meetings between Lab Team Leads and Program Directors across OE, EERE, and EPSA								
Draft Grid MYPP Released for Public Comment								
Outreach and Workshops with External Stakeholders								
Grid Modernization Multi-Year Program Completed								
Framework for DOE-wide FY16 Grid Annual Operating Plan • Based on Grid MYPP, start developing an AOP across DOE and the National Laboratory complex								
Write Body DOE-wide Grid Annual Operating Plan for FY16								
Grid Modernization Summit								

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Accomplishments to Date

DOE Business Model Transformation

- Six Lab Technical Teams have been established and are working effectively since the November 6 launch
- GMLC developed rev 1 messaging for DOE program engagement during the week of January 19
- EAC positively engaged and examining adjustments to its agenda to enhance engagement
- Initial discussions with selected stakeholders indicate significant interest and willingness to engage
  - NRECA and EPRI
  - Senate National Lab Caucus staff
  - House Grid Caucus staff
  - One on One discussions

Accomplishments to Date

Programmatic Benefits

- Conducted first-ever AOP review across all DOE grid programs; identified FY15 program synergies to position for FY16 launch
- EERE/BTO and OE, 4 Labs established joint transactive control agenda
- EERE/BTO, OE and BPA framing a regional campus demonstration agenda and leveraging 50% cost share from WA State
- EERE/WWPTO/SETO/OE are working together on Eastern Renewable Generation Integration Study to understand the impacts of 30% wind and solar on the Eastern Interconnect
- EERE/WWPTO/SETO/OE are working together to research the implication of stochastic unit commitment on power system operations
- FE/WWPTO/OE are performing a fleet transition study to understand flexibility needs/capabilities in coal, nuclear, and gas generation
- Four labs developing a framework for federated testing and evaluation leveraging "best in class" physical and virtual assets for enhanced grid test and evaluation (INL, ORNL, PNNL and NREL)

BACKUP SLIDES

Sensing and Measurements

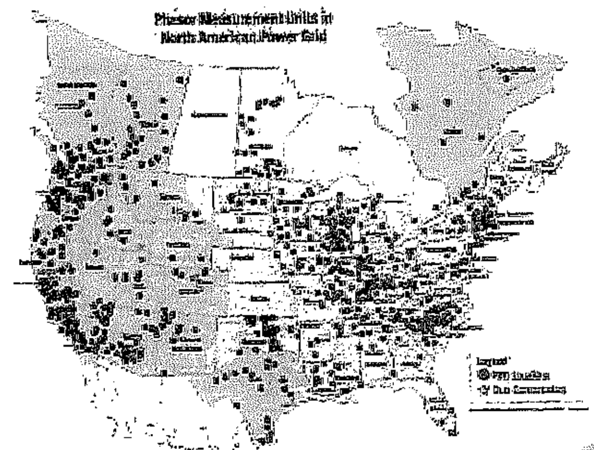
Sensor development and deployment strategies to provide complete grid system visibility for system resilience and predictive control

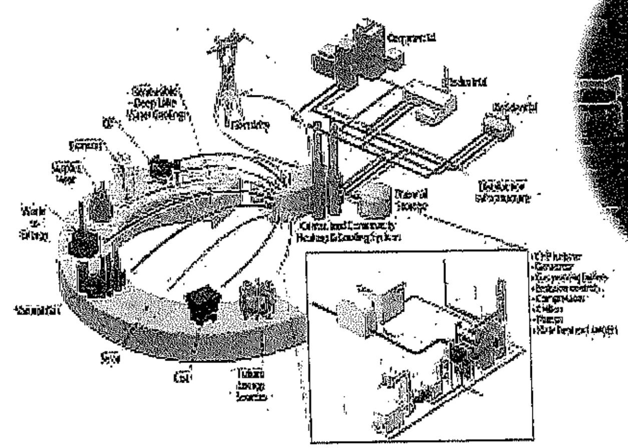
Expected Outcomes

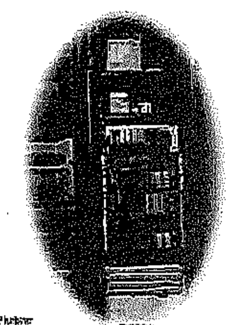
- Advance and integrate novel, low-cost sensors to provide system visibility
- Incorporate new data streams (e.g. weather
- Develop real-time data management and data exchange frameworks that enable analytics to improve prediction and reduce uncertainty
- Develop next-generation sensors that are accurate through disturbances to enable closed-loop controls and improved system resilience

Federal Role

- Common approach across labs and industry test-beds for effective validation of emerging technologies
- Develop common interoperability and interconnection standards and test procedures for industry / vendor community







OPC 005140
FPL RC-16

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Devices and Integrated Systems

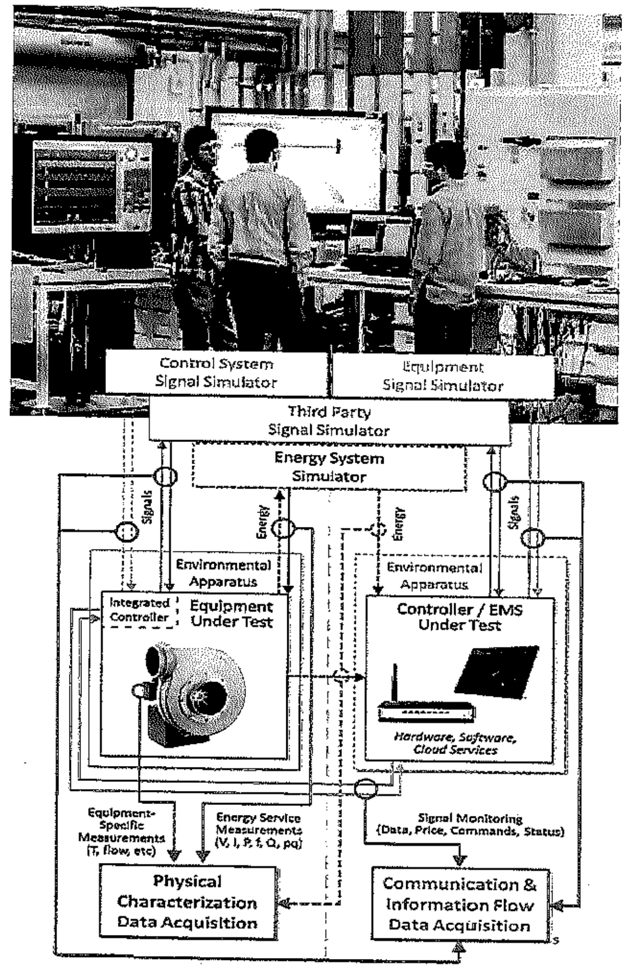
Characterization and testing of energy technologies for providing grid services to improve system affordability, reliability and clean energy use

Expected Outcomes

- Develop new grid interface devices to increase ability to provide grid services and utilization
- Coordinate and support the development of interconnection and interoperability test procedures for provision of grid services
- Validate secure and reliability grid operation with high levels of variable generation at multiple scales

Federal Role

- Common approach across labs and industry test-beds for effective validation of emerging technologies
- Develop common interoperability and interconnection standards and test procedures for industry / vendor community



OPC 005141
FPL RC-16

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System Operations and Power Flow

Advanced real-time control technologies to enhance the reliability and asset utilization of transmission and distribution systems

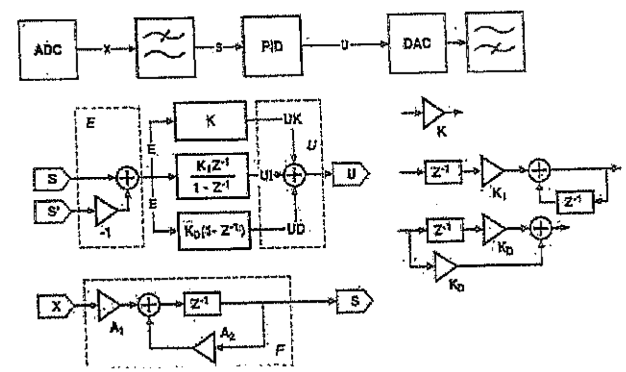
Expected Outcomes

- Deliver an architecture, algorithms, and next-gen control framework for a clean, resilient and secure grid
- Third generation of operations software platform for predictive operations & real-time adaptive control
- New class of power flow control device hardware and concepts
- Advance fundamental knowledge for new control paradigms

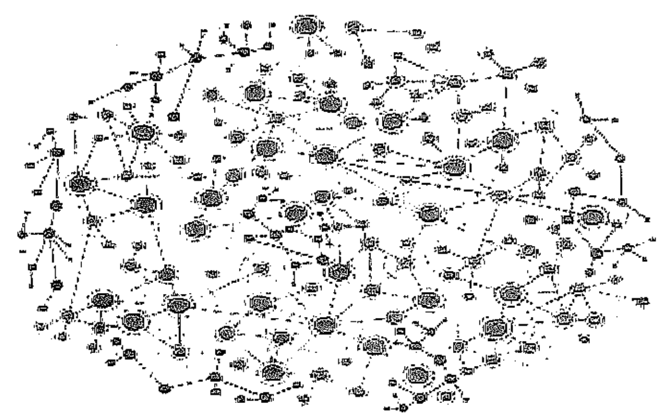
Federal Role

- Convening authority to shape vision of advanced grid architecture
- Advance fundamental knowledge for new control paradigms for emerging grid to support industry transformation
- Deliver computational science, materials science & mathematics from Natl. Lab System to develop integrated faster-than-real-time software platforms and power electronics control schemes

Conventional controls



***Distributed** controls*



OPC 005142
FPL RC-16

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Design and Planning Tools

Drive next generation of tools to accurately perform cost-benefit trade-offs and improve reliability of design for deployment new smart grid and renewables

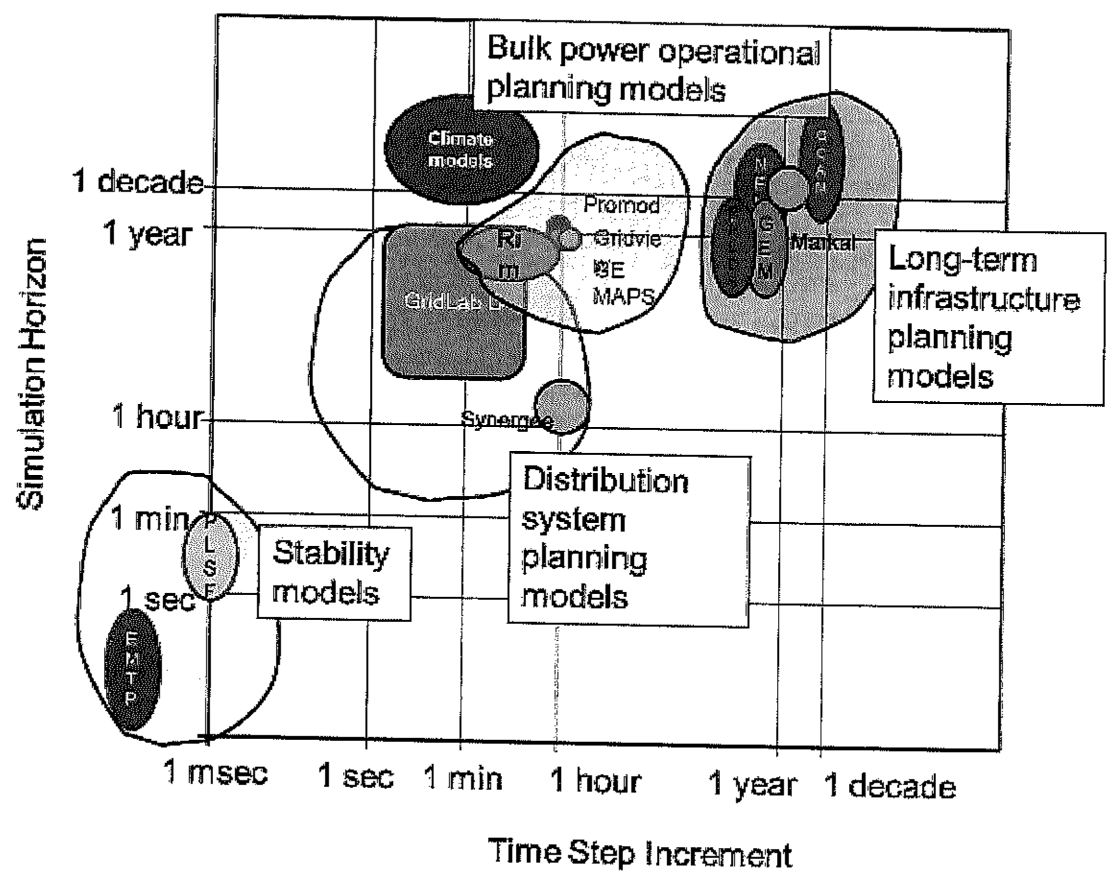
Expected Outcomes

- Incorporate uncertainty and system dynamics into planning tools to accurately capture effects of renewable generations
- Computational tools, methods and libraries that enable 1000X improvements in performance for analysis and design
- Coupling grid transmission, distribution, and communications models to understand cross-domain effects

Federal Role

- Apply Natl. Lab advanced computing expertise and capabilities to develop new tools for stakeholder utilization

Modeling and Capability Needs



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Security and Resilience

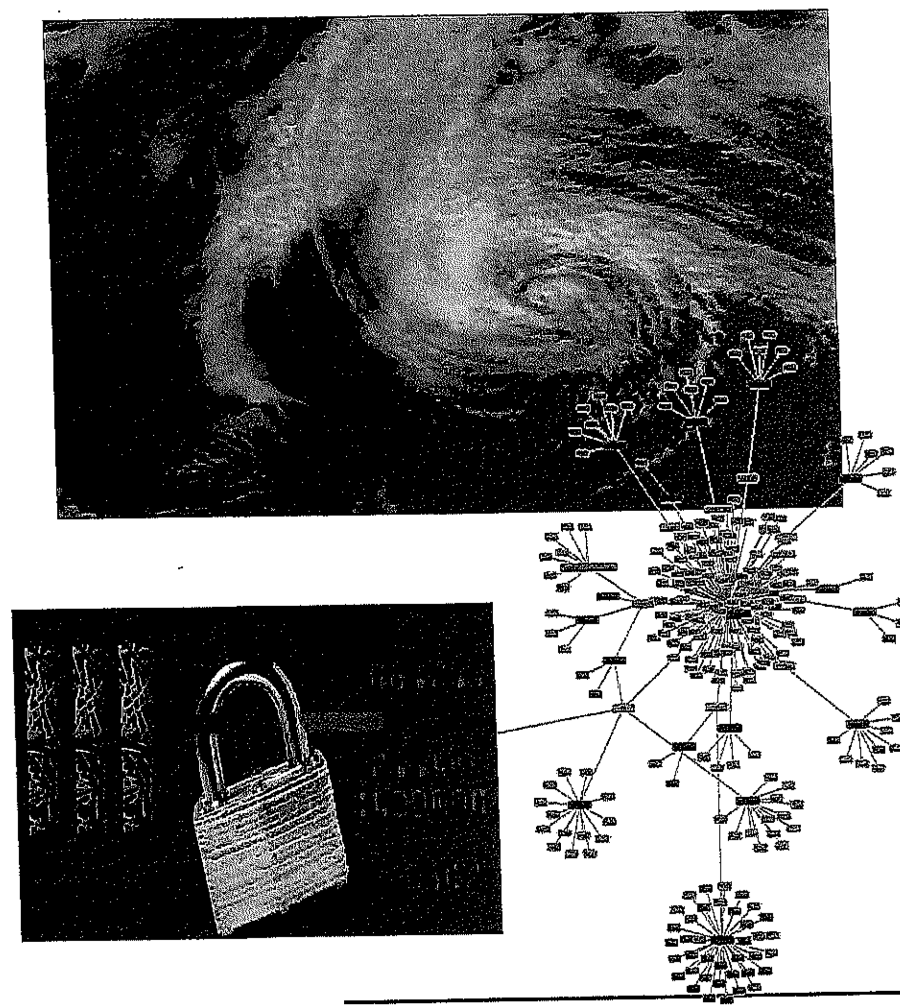
Providing a pathway to holistic and comprehensive security and resilience for the nation's power grid

Expected Outcomes

- Holistic grid security and resilience, from devices to micro-grids to systems
- Inherent security designed into components and systems, not security as an afterthought
- Security and resilience addressed throughout system lifecycle and covering the spectrum of legacy and emerging technologies

Federal Role

- Lead and establish security and resilience research programs to develop technology solutions and best practice guidance
- Improve adoption of security and resiliency practices, and provide technology-neutral guidance
- Inform stakeholders of emerging threats and help address threats appropriate for government response



OPC 005144
FPL RC-16

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Institutional Support

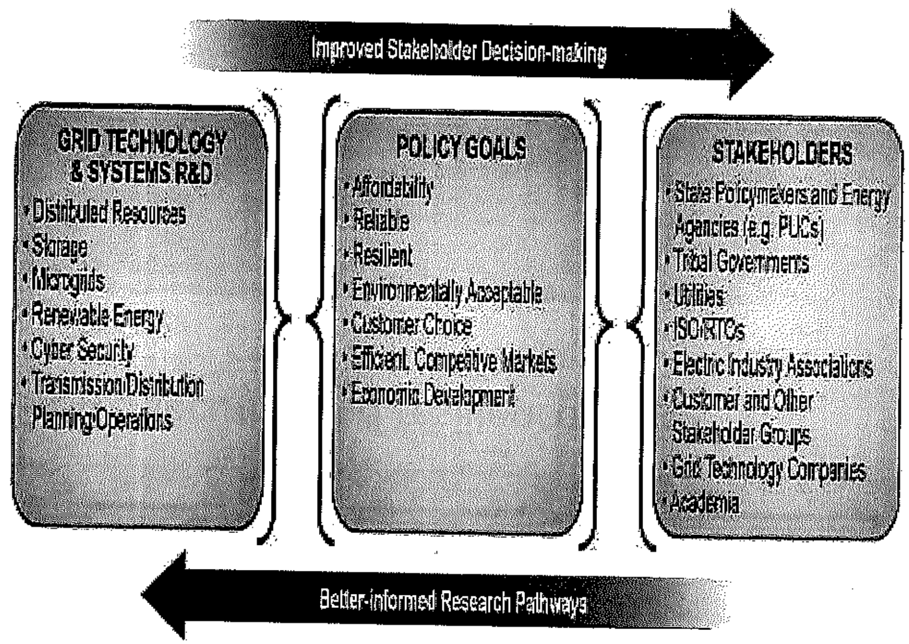
Enable regulators and utility/grid operators to make more informed decisions and reduce risks on key issues that influence the future of the electric grid/power sector

Expected Outcomes

- Accelerated state & federal policy innovation due to enhanced State and Regional technical assistance
- States adopt changes to their regulatory model that better align utility interests with grid modernization and/or clean energy policy goals
- Methods for valuation of DER technologies and services are defined and clearly understood by stakeholders to enable informed decisions on grid investments and operations

Federal Role

- Provide independent, unbiased technical assistance (e.g., information and analysis tools) that address key grid-related policy, regulatory, and market issues
- Create an over-arching stream of grid-related "institutional" analysis, workshops, and dialogues to raise awareness of the need for grid modernization



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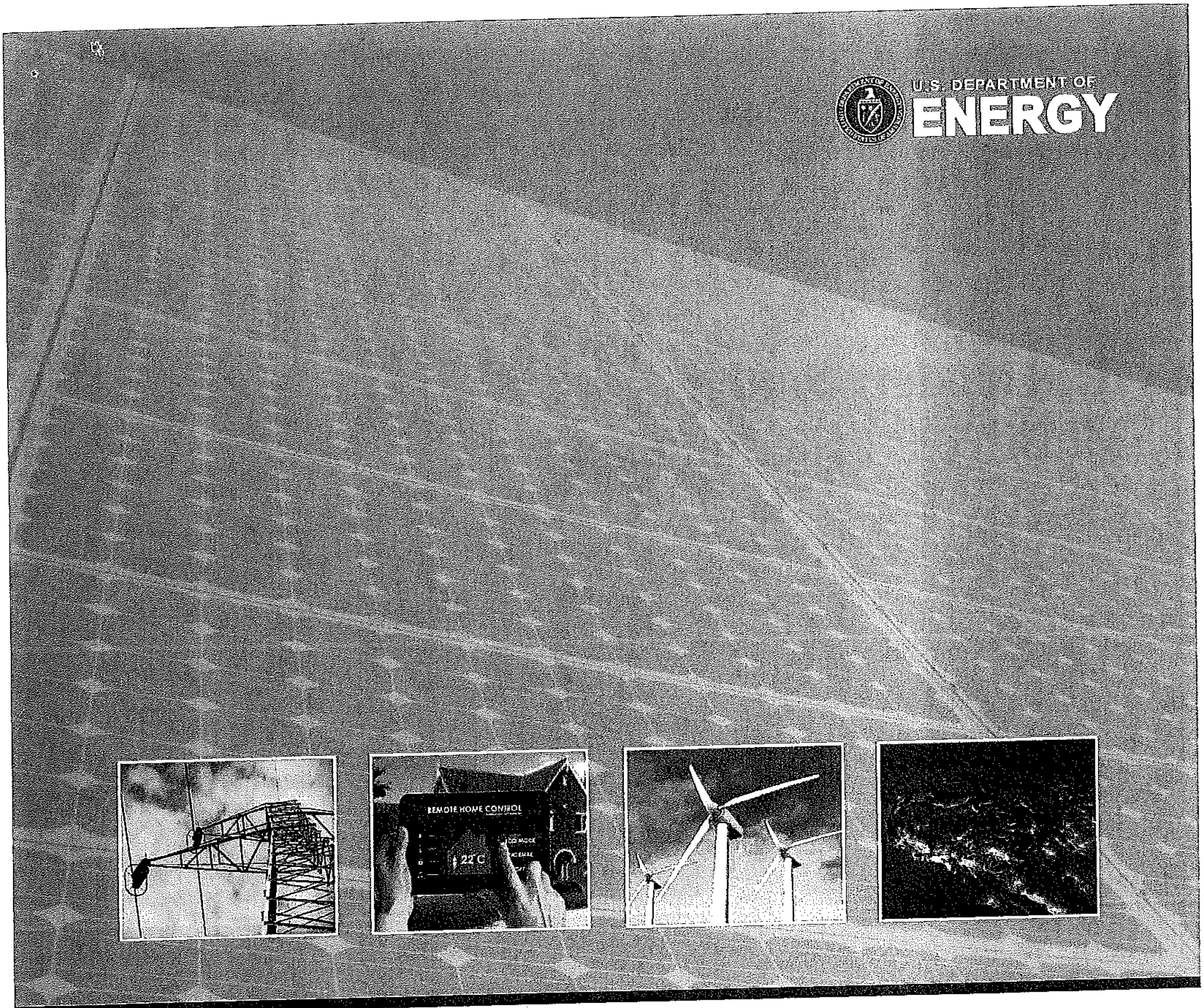
U.S. DEPARTMENT OF ENERGY



Grid Modernization Multi-Year Program Plan

Grid Modernization Multi-Year Program Plan

November 2015

Executive Summary

Our extensive, reliable power grid has fueled the nation's growth since the early 1900s. Access to electricity is such a fundamental enabler for the economy that the National Academy of Engineering named "electrification" the greatest engineering achievement of the 20th century. However, the grid we have today does not have the attributes necessary to meet the demands of the 21st century and beyond.

The traditional grid architecture is based on large-scale generation remotely located from consumers, hierarchical control structures with minimal feedback, limited energy storage, and passive loads. A modern grid must have:

- greater **resilience** to hazards of all type;
- improved **reliability** for everyday operations;
- enhanced **security** from an increasing and evolving number of threats;
- additional **affordability** to maintain our economic prosperity;
- superior **flexibility** to respond to the variability and uncertainty of conditions at one or more timescales, including a range of energy futures; and
- increased **sustainability** through additional clean energy and energy-efficient resources.

Five key trends are driving this transformation that challenges the capacity of the grid to provide us with the services we need, but also provides us with the opportunity to transform our grid into a platform for greater prosperity, growth, and innovation.

- Changing mix of types and characteristics of electric generation (in particular, distributed and clean energy)
- Growing demands for a more resilient and reliable grid (especially due to weather impacts and cyber and physical attacks)
- Growing supply- and demand-side opportunities for customers to participate in electricity markets
- Emergence of interconnected electricity information and control systems
- Aging electricity infrastructure.

"THE UNITED STATES' ENERGY SYSTEM IS GOING THROUGH DRAMATIC CHANGES. THIS PLACES A HIGH PREMIUM ON INVESTING WISELY IN THE ENERGY INFRASTRUCTURE WE NEED TO MOVE ENERGY SUPPLIES TO ENERGY CONSUMERS."

Dr. Ernest Moniz, Secretary of Energy

The current business-as-usual trajectory for the electricity industry will not result in a timely transition to a modernized grid. Innovation in the electric power sector is inhibited by regulatory, market, and business model uncertainties. Moreover, large investments initiated today may not fully come on line for ten years or more, and may remain with us for decades afterwards. Our nation finds itself at the point to make investment decisions that will create the modern grid of the future. The Federal Government recognizes this is a public good issue, and is in a unique position working with states, industry, and other stakeholders to accelerate efforts through research, development, and demonstration (RD&D), analysis, and outreach and convening initiatives.

Through its Grid Modernization Initiative (GMI) and this Grid Modernization Multi-Year Program Plan (MYPP), the U.S. Department of Energy (DOE) will coordinate a portfolio of activities to help set the nation on a cost-effective path to an resilient, secure, sustainable, and reliable grid that is flexible enough to provide an array of emerging services while remaining affordable to consumers. The scope of the GMI focuses on the development of new architectural concepts, tools, and technologies that measure, analyze, predict, protect, and control the grid of the

PUC	public utility commission
PV	photovoltaics
QER	Quadrennial Energy Review
QTR	Quadrennial Technology Review
RD&D	research, development, and demonstration
R&D	research and development
RFI	request for information
RGP	Regional Grid Partnerships
RMP	risk management plan
ROI	return on investment
RP&RO	regional planning and reliability organization
RPS	renewable portfolio standard
RTO	regional transmission organization
SC	Office of Science
SCADA	supervisory control and data acquisition
SDO	standards development organization
SETO	Solar Energy Technologies Office
SGIG	Smart Grid Investment Grant Program
SLAC	Stanford Linear Accelerator Center National Laboratory
SNL	Sandia National Laboratories
SRNL	Savannah River National Laboratory
SVC	static volt ampere reactive compensator
T&D	transmission and distribution
TA	technical assistance
TRRI	Transmission Reliability Research Investment
VAR	volt ampere reactive
VTO	Vehicle Technologies Office
WECC	Western Electricity Coordinating Council
WIEB	Western Interstate Energy Board
WWPTO	Wind and Water Power Technologies Office

future, and on enabling the institutional conditions that allow for more rapid development and widespread adoption of these tools and technologies. DOE will help frame new architecture elements, develop new planning and operations tools platforms, provide metrics and analytics, and enhance state and industry capabilities in designing the physical and regulatory models for successfully grid modernization. DOE will be supported by the National Laboratories under the Grid Modernization Lab Consortium (GMLC): a multi-year collaboration among 14 DOE National Laboratories and regional networks that will help develop and implement the MYPP.

This MYPP defines a vision for the modern grid and identifies key challenges and opportunities. The direction and priorities outlined in this MYPP draw upon DOE's ongoing work on the Quadrennial Energy Review (QER) and the Quadrennial Technology Review (QTR), as well as DOE program activities and numerous private sector inputs over the past years. It describes the RD&D activities DOE will focus on over the next five years, including opportunities for public-private partnerships.

This plan also lays the foundation for coordination across DOE, linking key programs within the Office of Science (SC), Office of Electricity Delivery and Energy Reliability (OE), Office of Energy Efficiency and Renewable Energy (EERE), Office of Fossil Energy (FE), Office of Nuclear Energy (NE), Advanced Research Projects Agency - Energy (ARPA-E), Office of Energy Policy and Systems Analysis (EPSA), and others. We recognize, however, that this intra-DOE coordination and collaboration is only the prelude to broader collaborative efforts that are needed with and among other federal agencies, regulators, legislators, utilities, vendors, consumer groups, and others.

Vision, Outcomes, and Activities

The vision of the Grid Modernization Initiative is:

*The future grid will solve the challenges of seamlessly integrating conventional and renewable sources, storage, and central and distributed generation. It will provide a critical platform for U.S. prosperity, competitiveness, and innovation in a global clean energy economy. It will deliver **resilient, reliable, flexible, secure, sustainable,** and **affordable** electricity to consumers where they want it, when they want it, how they want it.*

The Initiative will reach this vision by investing in RD&D efforts in individual technical areas and by looking at three types of integrated regional demonstrations.

Six Technical Areas

At the core of GMI are six specific technical areas that can be categorized by three thrusts:

- ***Technology*** *(i.e., hardware)*: Develop and demonstrate technologies for better measurement (e.g., sensors), integration (e.g., inverters), management and control of grid operations (e.g., transformers)
- ***Modeling and Analysis*** *(i.e., software)*: Develop and disseminate new and improved models for analysis, management and optimization of grid performance (e.g., solar and wind prediction)
- ***Institutional and Business:*** Develop the analytical methodologies and frameworks for improving business models that can deliver to consumers the value and benefits of grid modernization.

The six technical areas—equally important and in no particular order below—follow. Together they represent the key developments needed to advance the nation to a modernized grid.

1. ***Devices and Integrated Systems Testing***

New distributed devices and systems will help deliver the flexibility required by the future grid for managing variable generation, engaging consumer, and enhancing reliability and resiliency while keeping electricity affordable.

This technical area develops devices and integrated systems, coordinates integration standards and test procedures, and evaluates the grid characteristics of both individual devices and integrated systems to provide grid-friendly energy services. For example, the DOE-funded collaboration between the National Institute of Standards and Technology (NIST) and electric industry stakeholders in developing smart grid interoperability standards, begun in 2009, has laid the technical foundation for more effective grid investments today.

Specific activities that will be included are:

- Develop advanced storage systems, power electronics, and other grid devices;
- Develop precise models of emerging components and controllers;
- Develop standards and test procedures;
- Build capabilities and conduct device testing and validation; and
- Conduct multi-scale systems integration and testing.

2. ***Sensing and Measurements***

Measuring and monitoring vital parameters throughout the electric power network is necessary to assess the health of the grid in real time, predict its behavior, and respond to events effectively. Lack of visibility and accurate device- or facility-level information makes it difficult to operate the electricity system efficiently and has contributed to large-scale power disruptions and outages. Additionally, next- generation sensors will allow energy management systems to integrate buildings, electric vehicles, and distributed systems.

This technical area focuses on tools and strategies to determine the type, number, and placement of sensors to improve system visibility from individual devices to feeders, distribution systems, and regional transmission networks. This effort includes advanced methods to determine system states not directly accessible by measurement, and estimation methods for broad grid visibility. Finally, it develops frameworks to integrate sensors into grid systems to better determine and forecast solar irradiance and wind generation, integrate and estimate all generation and load uses behind the meter, and monitor and predict interfacing infrastructures such as electrified transportation.

Specific activities that will be included are:

- Develop a roadmap for achieving full electric system observability;
- Improve sensing for devices, buildings, and end-users;
- Enhance sensing for distribution system;
- Enhance sensing for the transmission system;
- Develop data analytic and visualization techniques; and
- Demonstrate unified grid-communications network.

OPC 005151
FPL RC-16

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2015 PD Employees 12/31/15

Full-Time

Exempt	1075
Non-Exempt	232
Bargaining Unit	1624
Total Full-Time	2931
Part-Time	2
Total PD Employees	**2933**

7B

I. Description of Existing Resources

FPL's service area contains approximately 27,650 square miles and has a population of approximately 9.1 million people. FPL served an average of 4,708,829 customer accounts in 35 counties during 2014. These customers were served by a variety of resources including: FPL-owned fossil-fuel, renewable, and nuclear generating units, non-utility owned generation, demand side management (DSM), and interchange/purchased power.

I.A. FPL-Owned Resources

The existing FPL generating resources are located at 14 generating sites distributed geographically around its service territory, plus one site in Georgia (partial FPL ownership of one unit) and one site in Jacksonville, Florida (partial FPL ownership of two units). As of December 31, 2014, FPL's electrical generating facilities consisted of: four nuclear units, three coal units, 15 combined cycle (CC) units, five fossil steam units, 48 combustion gas turbines, two simple cycle combustion turbines, and two photovoltaic facilities[1]. The locations of these 79 generating units are shown on Figure I.A.1 and in Table I.A.1.

FPL's bulk transmission system, including both overhead and underground lines, is comprised of 6,888 circuit miles of transmission lines. Integration of the generation, transmission, and distribution system is achieved through FPL's 596 substations in Florida.

The existing FPL system, including generating plants, major transmission stations, and transmission lines, is shown on Figure I.A.2.

1 FPL also has one 75 MW solar thermal facility at its Martin plant site. This facility does not generate electricity as the other units mentioned above do. Instead, it produces steam that reduces the use of fossil fuel to produce steam for electricity generation.

7c

Transmission and Distribution

At December 31, 2015, FPL owned and operated 601 substations and the following electric transmission and distribution lines:

Nominal Voltage		Overhead Lines Circuit/Pole Miles		Trench and Submarine Cables Miles
500	kV	1,106	(a)	—
230	kV	3,197		25
138	kV	1,581		52
115	kV	758		—
69	kV	164		14
Total circuit miles		6,806		91
Less than 69 kV (pole miles)		42,301		25,506

(a) Includes approximately 75 miles owned jointly with JEA.

6897
67807
74,704

7D

JOINT USE AUDITS **(A) Number of company owned distribution poles.** (FPL owned poles at 12/31/15)	1,168,532
(B) Number of company distribution poles leased. (Non-FPL owned poles)	234,917
(C) Number of owned distribution pole attachments. (FPL owned poles w/attachments)	844,748
(D) Number of leased distribution pole attachments. (Non-FPL owned poles w/attachments) (1)	234,917
(E) Number of authorized attachments.	1,294,809
(F) Number of unauthorized attachments.	0
POLE INSPECTIONS – JOINT USE POLES **(G) Number of distribution poles strength tested.**	72,283
(H) Number of distribution poles passing strength test. (2)	Grade C – 66,383 Grade B – 66,889
(I) Number of distribution poles failing strength test (overloaded). (2)	Grade C - 24 (0.033%) Grade B – 2,517 (3.48%)
(J) Number of distribution poles failing strength-test (other reasons). (2)	Grade C – 5,877 Grade B – 5,877
(K) Number of distribution poles corrected (strength failure).	N/A – see Note 3
(L) Number of distribution poles corrected (other reasons).	N/A – see Note 3
(M) Number of distribution poles replaced.	N/A – see Note 3
FPSC SAFETY AUDITS **(N) Number of apparent NESC violations involving electric infrastructure.**	205
(O) Number of apparent NESC violations involving third-party facilities.	106
Suggested Alternatives:	None

Notes: (1) Non-FPL owned poles with FPL and another attaching entity (e.g., CATV) = 174,085
(2) NESC required standard = Grade C; FPL Higher Standard =Grade B
(3) K, L, M not tracked at the joint use level

State whether pole rents are jurisdictional or non-jurisdictional. If pole rents are jurisdictional, then provide an estimate of lost revenue and describe the company's efforts to minimize the lost revenue.

"Pole rent" revenues are jurisdictional. There are no lost revenues since back-billings for joint use pole ownership true-ups, as well as unauthorized attachments are made retroactively back to the date of the previous audit/true-up.

FPL MAROU! FILING

7E
2 pgs

Concrete and Steel Transmission Structures

FPL performed visual ground level inspections on 100% of its concrete and steel poles/structures and bucket inspections on 1/6 of its 500kV structures and 1/10 of all other concrete and steel poles/structures in 2015. The table below provides FPL's 2014 concrete and steel transmission pole/structure inspection results.

POLE INSPECTION REPORT Company: Florida Power & Light Summary of Concrete & Steel Transmission Pole Inspections Period: January 2015 thru December 2015		
Type of Inspection:	Concrete & Steel Transmission Structures Visual / Bucket	
Type of Pole:		
Average Class:	Varies	
Materials	Concrete & Steel	
Average Vintage	2000	
Installed Population as of 1/1/2015	53,005	
	% Planned	% Completed
Percent Inspections Planned & Percent Completed:	100%	100%
Reason for Variance/Plan to Address Backlog:		
No. of inspected poles addressing a prior backlog	0	0
	No. of Structures	% of Inspection
No. of structures identified for reinforcement:	0	0.0%
No. of poles identified for replacement:	21	0.04%
No. of structures identified for a change inspection cycle::	n/a	n/a
No. of structures that required no change in inspection cycle or remediation	52,984	99.6%
No. of structures identified as overloaded	0	0.0%

53,005
11,550
64,555

FPL's March 1 Filing

9662 (wood structures @ 12/31/15)
-4950 (2016-2019)
4712 7%

51/81

OPC 005156
FPL RC-16

Loading Assessment

FPL performs a loading assessment on wood transmission poles/structures with 3rd party attachments. This assessment is based on a combination of pole/structure length, framing configuration, span length, attachment heights (including 3rd party attachments) and conductor size. If the loading does not meet NESC requirements, the pole is designated for reinforcement, replacement or relocation of the third-party attachments.

11. Explanation of the inspected pole selection criteria

FPL prioritizes its transmission pole/structure inspections based on factors such as framing configuration (structural loading), transmission components, system importance, customer count, and inspection history for a transmission line section. Other economic efficiencies, such as multiple transmission line sections within the same corridor, are also considered.

12. Inspection Summary Data for the Previous Year

Summarized in the following sections are the 2015 inspection results and causes by transmission pole/structure materials:

Wood Transmission Poles/Structures

FPL's 2015 results from its six-year cyclical wood transmission pole/structure inspections are in the table, below. In addition, FPL performed its annual ground level visual inspections on 100% of its wood poles/structures.

Florida Power & Light Company
Annual Wood Pole Inspection Report
(Reporting Year 2015)

a	b	c	d	e	f	g	h	i	j	k	l	m
Total # of Wooden Poles in the Company Inventory as of 01-2015	# of Wood Pole Inspection Planned this Annual Inspection	# of Wood Poles Inspected this Annual Inspection	# of Poles Failing Inspection this Annual Inspection	Pole Failure Rate (%) this Annual Inspection	# of Wood Poles Designated for Replacement this Annual Inspection	Total # of Wood Poles Replaced this Annual Inspection	# of Poles requiring Minor Follow-up this Annual Inspection	# of Poles Overloaded this Annual Inspection	Method(s) V=Visual E=Excavation P=Prod S=Sound B=Bore R= Resistograph	# of Wood Pole Inspections Planned for Next Annual Inspection Cycle	Total # of Wood Poles Inspected (Cumulative) in the 6-Year Cycle to Date	% of Wood Poles Inspeted (Cumulative) in the 6-Year Cycle to Date
11,550	2,273	2,294	636	27.7%	426	1,888	n/a	0	V / P / S / B	2,035	10,294	89.1%
If b - c > 0, provide explanation												
If d - g > 0, provide explanation												
Description of selection criteria for inspections	FPL prioritizes its inspections based on factors such as: framing configuration (structural loading), transmission components, system importance, customer count, and inspection history for a transmission line section. Other economic efficiencies, such as multiple transmission line sections within the same corridor, are also considered.											

52/81

* Column G represents the total number of transmission poles/structures replaced not only through its inspection program, but also from relocations, proactive rebuilds and system expansion.

WOOD TOTAL
2,142/14,555
15%
CONCRETE/STEEL
85%

STRUCTURES @ 1/1/2007 25,153
" " 12/31/2015 9,662
REPLACED 15,491

OPC 005157
FPL RC-16

7F

6-year Transmission Inspections – Results/Plans

Transmission Circuit, Substation & Other Equipment Inspections

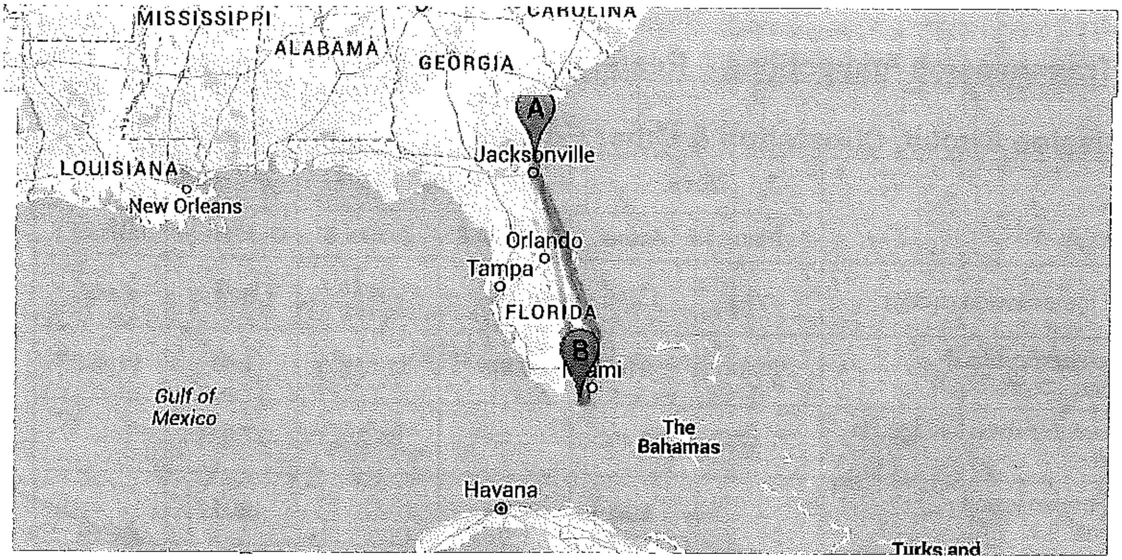
	2015		2015		2016	
	Plan	Actual	Budget $	Actual $	Plan	Budget $
(A) Total transmission circuits	n/a	1,245	n/a	n/a	n/a	n/a
(B) Transmission circuit inspections	898	914	\$1.9M(1)	\$1.6M(1)	968	\$1.4M(1)
(C) Percent transmission circuits inspected	71.4 %	73.4%	-	84.2%	77.8 %	-
(D) Total transmission substations(2)	-	596	-	-	601	-
(E) Transmission substations inspected(2)	596	596	\$0.7M	\$0.6M	601	\$0.4M
(F) Percent transmission substations inspected (2)	100%	100%	-	100%	100%	-
(G) Transmission equip. inspections (other equip)(3)	***	***	***	***	***	***
(H) Percent trans. equip inspection comp (other equip) (3)	***	***	***	***	***	***

(1) FPL does not budget or track expenditures based on structure materials. As such, the dollar amounts shown in the table above represent all transmission structure inspections regardless of materials.

(2) Values shown for D, E and F include both transmission and distribution substations. FPL does not budget or track these items separately.

(3) Items G and H are included within FPL transmission line and/or substation inspections.

8A
2??



A car with an average MPG will need **18.64** gallons of gas to cover the route between **Yulee, FL** and **Florida City, FL**.

The **estimated cost** of gas to go from Yulee to Florida City is **$43.42**.

During the route, an average car will release **365.12** pounds of **CO_2 to the atmosphere**. Your carbon footprint is **0.91** pounds of CO_2 per mile.

- US market average MPG used for calculations is 21.6 MPG.
- Average US gas price used for calculation is $1.72 per gallon of regular gas. Price last updated on March 7, 2016.
- Read more about our CO^2 calculation.

Distance conversions

Checkout the distance in miles, kilometers and nautical miles between Yulee, FL and Florida City, FL in this table:

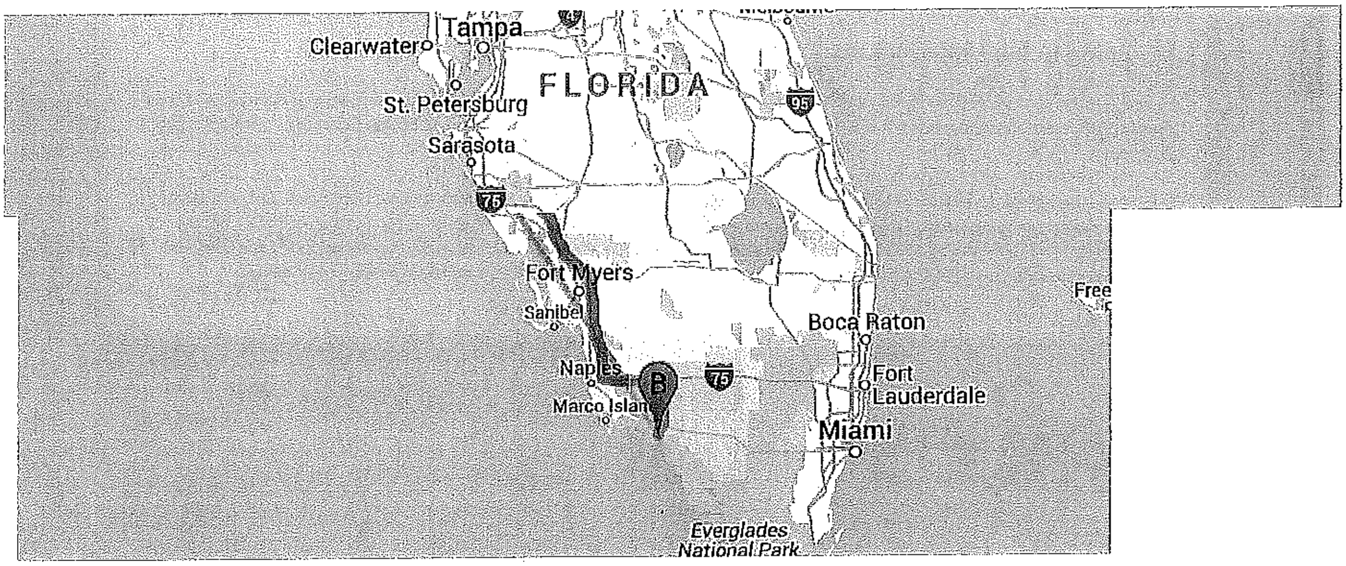
Distance type	Miles	Kilometers	Nautical miles
Straight line distance	365.12 mi	587.60 km	317.28 nautical mi
Driving distance	402.54 mi	647.82 km	349.80 nautical mi

365
+135
500

Unit conversions provided by convertnation.com

Best hotels near Florida City, FL

OPC 005159
FPL RC-16



Gas consumption and emissions

A car with an average MPG will need **7.80** gallons of gas to cover the route between **Bradenton, FL** and **Everglades City, FL.**

The **estimated cost** of gas to go from Bradenton to Everglades City is **$18.18.**

During the route, an average car will release **152.84** pounds of **CO_2 to the atmosphere**. Your carbon footprint is **0.91** pounds of CO_2 per mile.

- US market average MPG used for calculations is 21.6 MPG.
- Average US gas price used for calculation is $1.72 per gallon of regular gas. Price last updated on March 7, 2016.
- Read more about our CO^2 calculation.

Distance conversions

Checkout the distance in miles, kilometers and nautical miles between Bradenton, FL and Everglades City, FL in this table:

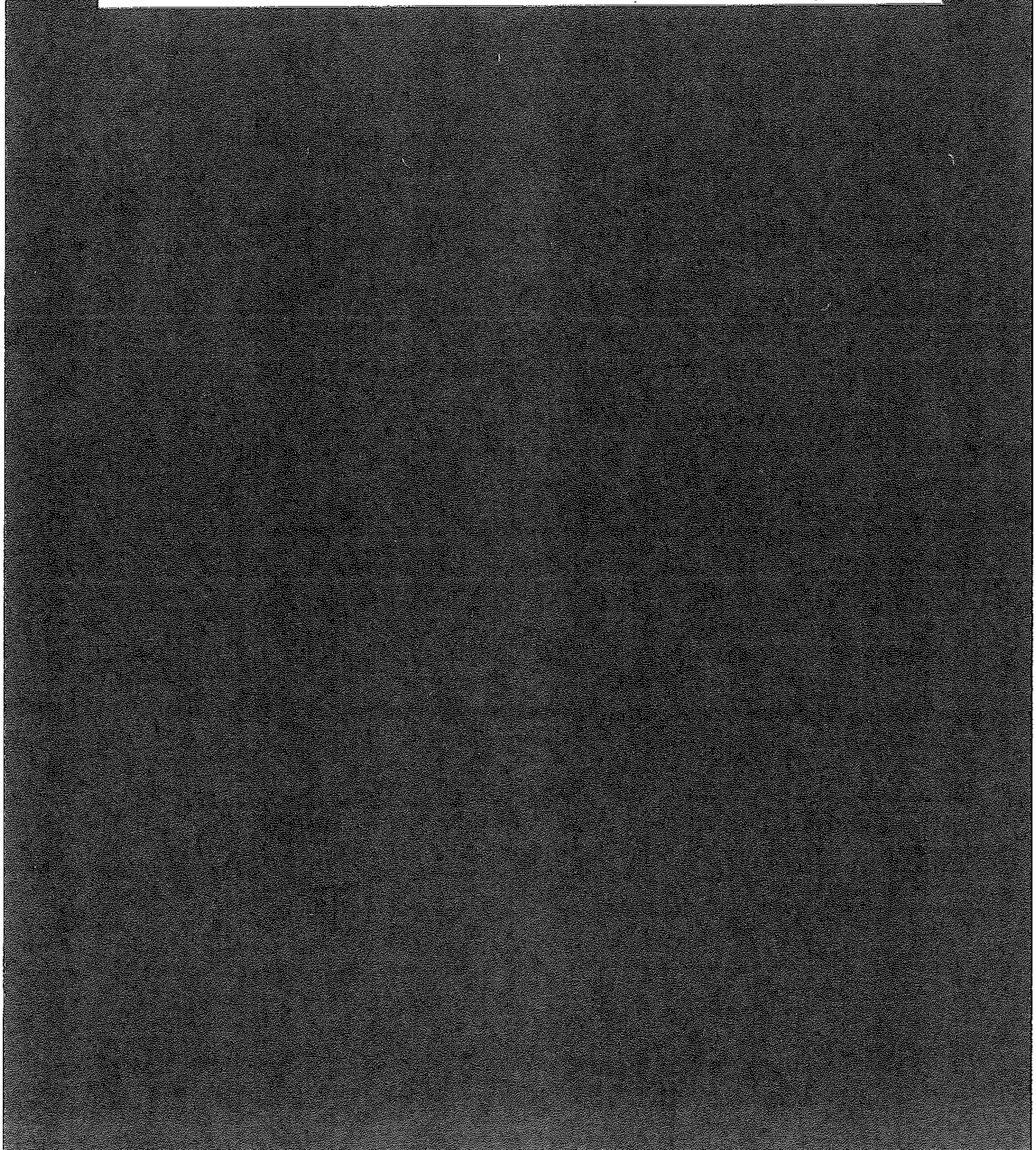
Distance type	Miles	Kilometers	Nautical miles
Straight line distance	135.22 mi	217.62 km	117.51 nautical mi
Driving distance	168.51 mi	271.19 km	146.43 nautical mi

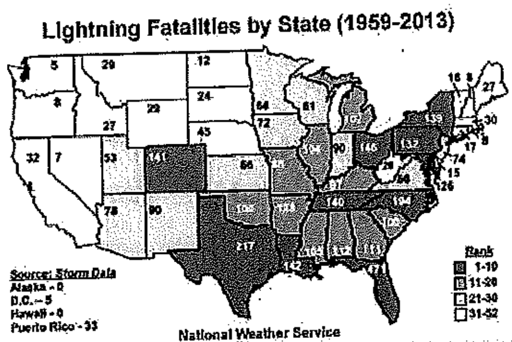
Unit conversions provided by convertnation.com

Lightning in the United States

Lightning is the second most common storm-related killer in the United States. It causes several billion dollars in property damage each year and kills several dozen people. It is a frequent cause of wildfires and costs airlines billions of dollars per year in extra operating expenses.

Florida has the highest frequency of lightning in the United States. There, sea breezes from the Atlantic Ocean and Gulf of Mexico converge over solar-heated land. This lifts the moist air masses that host thunderstorms. Florida is also the state with the highest number of deaths from lightning strikes. Other states along the Gulf of Mexico coast, such as Alabama, Mississippi, Louisiana, and Texas, also have frequent lightning. Along the Atlantic coast, South Carolina and North Carolina have frequent lightning





A map of total lightning fatalities in the United States between 1959 and 2013. With 471 deaths, Florida has more than double the number of fatalities of any other state. Image by NOAA Media Resources.

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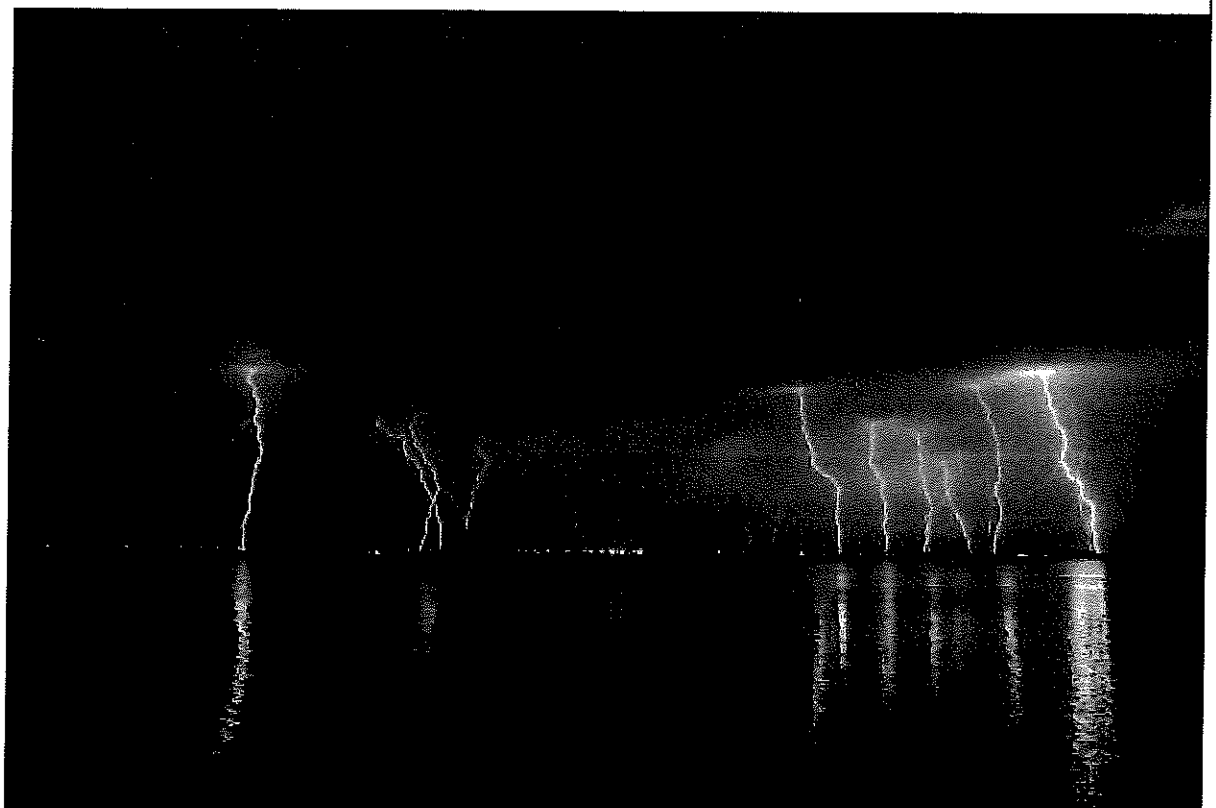
Best Places To Watch A Thunderstorm

by Amber Kanuckel | Monday, June 1st, 2015 | From: Weather



While thunderstorms can be scary and dangerous, there are many of us out there who can't help the fact that we love to watch a good storm. When we know one is coming, we look forward to the show. The *Farmers' Almanac* hears often from its readers that some of their fondest memories include watching a thunderstorm on the porch at grandma's on a hot July afternoon. There's something to be said for Mother Nature, who can elicit nostalgia even from her most ferocious events.

Throughout the United States, there are many great places to watch the black clouds, pouring rain and lightning roll in. If you're looking for great storm-watching, these 5 hotspots are considered some of the best in the world! Just remember to play it safe. If you're caught in the open, head for shelter or a vehicle as soon as possible. ***Check out these lightning safety tips here***. Better yet, find lodging with a great view so that you can watch nature's fury without putting yourself in danger.

5. Kansas
Because it's situated in the heart of Tornado Alley, Kansas offers some of the best storm watching opportunities in the United States. According to the National Oceanic and Atmospheric Administration, Kansas experiences approximately 50 thunderstorms per year, many of which happen in June and July. The great thing about Kansas is that the wide-open spaces let you watch as storms develop miles away from your storm-watching spot.

4. Arizona
People that aren't from Arizona often assume that the weather is dry and relatively calm, and in some regions of this state, that's true. However, Arizona also has a few thunderstorm hotspots.

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Chief among them are the Huachuca Mountains in southeast Arizona. Throughout the month of July, these mountains experience a thunderstorm every day – sometimes twice per day!

Fifty miles to the north, the city of Tucson averages 20 thunderstorms in July. Book a room in a high-rise motel with plenty of windows so you can catch a glimpse. You can also visit nearby Mt. Lemmon, which offers a wonderful – if unsheltered – view of Tucson's storms.

3. Texas Panhandle and Western Oklahoma
Everything is larger in Texas, and that includes the thunderstorms, particularly in the Panhandle region and western Oklahoma. As a Texan might say, "when it rains, it ain't kiddin' around!" The sky turns pitch black as rain pounds the ground. The thunderstorms in this region are often accompanied by extreme high winds, large hail and tornadoes.

In the eastern half of the Panhandle, your best chances of catching a storm are in June. If you're visiting the northwestern corner of the Panhandle or western Oklahoma, you're more likely to see a good storm in July.

2. Colorado
Colorado has extremely volatile weather patterns, which makes for some of the best storm watching in the world. On a clear day, a furious storm can develop in minutes. Book a lodge in the Rockies during August for an excellent view of lighting striking the mountains.

For even better storm watching opportunities, visit eastern Colorado. Although this region is relatively flat, the mountains to the west have a strong influence over the weather in the eastern half of the state. Cold air masses from the north sometimes clash with tropical air from the south, which results in some spectacular storms. Because of the area's turbulence, you're likely to see sudden high wind events and flash flooding in addition to ferocious thunderstorms. Eastern Colorado's storm season peaks in July, so if you plan a trip for the end of July and the first part of August, you can watch storms in both the eastern portion of the state and in the Rockies.

1. Florida
You'd think that the number one best spot to watch storms in the United States would be somewhere in Tornado Alley, but it's actually Florida, the state known for its balmy weather and sun-kissed beaches. Some areas in Florida, however, see as many as 100 thunderstorms per year, which means that on any given day, you have a one in four chance of catching a good storm. And, depending where you choose to stay, there's a great chance that you'll be able to watch storms moving in from the ocean, which means ample opportunities to catch a glimpse of lightning striking the water.

8C

LIGHTNING STRIKES

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Average
Lightning Strikes	303,096	343,288	322,686	322,250	241,492	237,575	215,457	199,303	321,919	394,966	290,203

15%	2015 vs. 2007
36%	2015 vs Avg.

Distribution Poles Reinforced/Replaced - 8-Year PIP Cycle

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total
Total Poles Reinforced / Replaced	2,334	9,936	9,621	8,437	13,699	15,642	11,402	15,718	16,243	15,999	119,031
										Total Poles 12/31/1	1,168,532
											10%

(10)

Distribution Vegetation Management - Miles Trimmed Annually

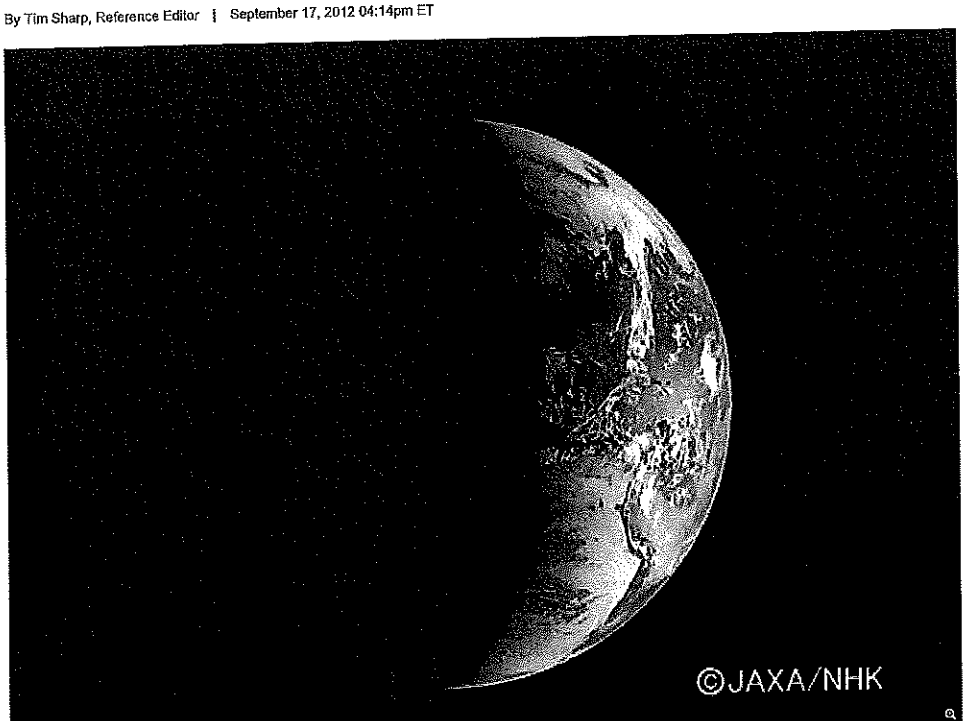
	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total
Total Miles Trimmed	11,940	11,758	12,303	13,381	14,840	15,271	15,861	15,178	15,244	**125,776**

1173

Reference:

How Big is Earth?

By Tim Sharp, Reference Editor | September 17, 2012 04:14pm ET



The high-definition video of Earth was processed into this still image. The west coast of South America is visible in the lower left portion of the planet.

Credit: JAXA/NHK

Earth, the third planet from the sun, is the fifth largest planet in the solar system; only the gas giants Jupiter, Saturn, Uranus and Neptune are bigger. Earth is the largest of the terrestrial planets of the inner solar system, bigger than Mercury, Venus and Mars.

Radius, diameter and circumference

The mean radius of Earth is 3,959 miles (6,371 kilometers). However, Earth is not quite a sphere. The planet's rotation causes it to bulge at the equator. Earth's equatorial diameter is 7,926 miles (12,756 kilometers), but from pole to pole, the diameter is 7,900 miles (12,720 km) — a difference of only 40 miles (64 km).

The circumference of Earth at the equator is about 24,902 miles (40,075 km), but from pole-to-pole — the meridional circumference — Earth is only 24,860 miles (40,008 km) around. This shape, caused by the flattening at the poles, is called an oblate spheroid.

Density, mass and volume

Earth's density is 5.52 grams per cubic centimeter. Earth is the densest planet in the solar system because of its metallic core and rocky mantle. Jupiter, which is 318 more massive than Earth, is less dense because it is made of gases, such as hydrogen.

Earth's mass is 6.6 sextillion ton (5.9722×10^{24} kilograms). It volume is 1.08321×10^{12} km.

The total surface area of Earth is about 197 million square miles (509 million square km). About 71 percent is covered by water and 29 percent by land.

Highest and lowest points

Mount Everest is the highest place on Earth above sea level, at 29,028 feet (8,848 meters), but it is not the highest point on Earth — that is, the place most distant from the center of the Earth. That distinction belongs to Mount Chimaborazo in the Andes Mountains in Ecuador. Although Chimaborazo is about 10,000 feet shorter (relative to sea level) than Everest, this mountain is about 1.5 miles (2.4 km) farther into space because of the equatorial bulge.

The lowest point on Earth is the Mariana Trench in the western Pacific Ocean. It reaches down about 36,200 feet (11,034 meters) below sea level.

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Gov't OH to UG Conversion Projects List - Completed

Data to 10-31-15

11C

	County	City/County	Initial Request Date	Customer Name
1	Broward	Ft Lauderedale	4/1/2009	Broward County - PT E - Terminal 18
2	Brevard	Cape Canaveral	12/4/2007	Canaveral Port Authority
3	Broward	Coconut Creek	8/10/2007	City of Coconut Creek
4	Volusia	Daytona Beach Shores	7/18/2008	City of Daytona Beach Shores
5	Broward	Deerfield Beach	9/13/2004	City of Deerfield Beach
6	Flagler	Flagler Beach	8/17/2007	City of Flagler Beach - 2nd St to 5th St; Shore
7	Broward	Ft Lauderdale	2/15/2009	City of Ft Lauderdale - SE 15th St
8	Broward	Hollywood	4/19/2007	City of Hollywood - Grant - Cleveland - Phase 1
9	Volusia	Ormaond Beach	4/1/2011	City of Ormond Beach
10	Flagler	Palm Coast	2/14/2007	City of Palm Coast
11	Broward	Pompano Beach	2/4/2010	City of Pompano Beach - E. Atlantic & N Pompano
12	Sarasota	Sarasota	1/1/2009	City of Sarasota - Golden Gate Point
13	Martin	Stuart	2/18/2009	City of Stuart - Stypmann Blvd
14	Miami-Dade	Sunny Isles Beach	5/2/2002	City of Sunny Isles Bch - Phase 2
15	Sarasota	Siesta Key	6/1/2005	Sarasota County - Siesta Village
16	Miami-Dade	Golden Beach	2/1/2008	Town of Golden Beach
17	Palm Beach	Jupiter Inlet	8/2/2007	Town of Jupiter Inlet Colony
18	Martin	Jupiter Island	11/28/2006	Town of Jupiter Island - Phase F
19	Palm Beach	Palm Beach	2/9/2011	Town of Palm Beach - Everglades Island
20	Martin	Sewall's Point	2/1/2007	Town of Sewall's Point - A1A Evans Crary
21				Frenchman's Creek

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(19R)

Jan 15 Event

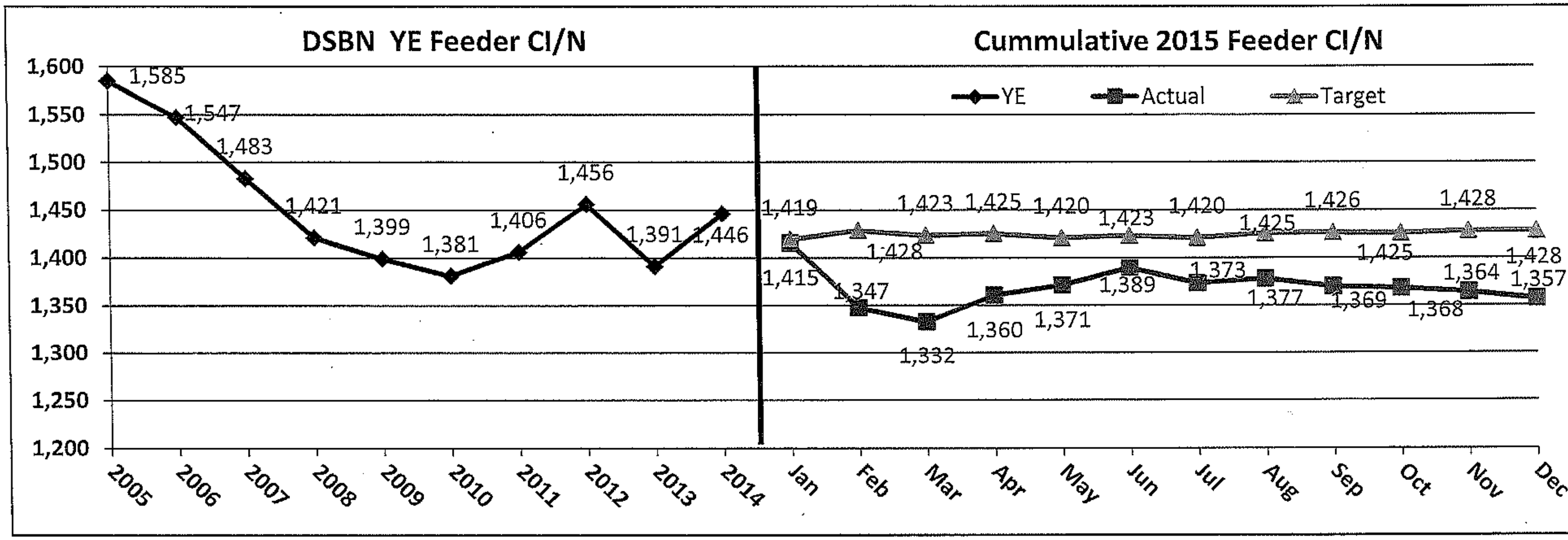
Svc Ctr	Int Typ Cd	Fdr Nbr	Substation	CI	Cust. Served Count	CI % of Premises	AFS CI avoided
WFO	FDR	500661	CORTEZ	1916	4132	0.463698	2216
CEO	FDR	805233	NATOMA	885	1777	0.49803	892
SKO	FDR	300732	LAWTEY	1320	1703	0.775103	383
CKO	FDR	508161	INTERSTATE	1300	4835	0.268873	3535
CKO	FDR	506561	GRANADA	3281	4011	0.818001	730
TBO	FDR	502066	MURDOCK	1286	2564	0.50156	1278
TBO	FDR	506862	NOTRE DAME	946	2532	0.373618	1586
GGO	FDR	506662	LIVINGSTON	2268	2653	0.854881	385
GGO	FDR	506666	LIVINGSTON	1320	1395	0.946237	75
GGO	FDR	504968	GOLDEN GATE	1647	2026	0.812932	379
GGO	FDR	502166	BONITA SPRINGS	665	2632	0.25266	1967
PMO	FDR	704565	MALLARD	2659	3557	0.74754	898
GSO	FDR	708061	WINDMILL	392	657	0.596651	265
GSO	FDR	704264	IMAGINATION	525	1802	0.291343	1277
BRO	FDR	403231	ATLANTIC	378	1768	0.213801	1390
BYO	FDR	401036	GREENACRES	1272	2443	0.520671	1171
WGO	FDR	706663	NOBHILL	2474	2875	0.860522	401
PMO	FDR	702140	CYPRESS CREEK	629	1473	0.42702	844
GSO	FDR	704264	IMAGINATION	525	1802	0.291343	1277
WEO	FDR	808166	MILAM	230	377	0.61008	147
SDO	FDR	805733	GALLOWAY	390	680	0.573529	290
CEO	FDR	800435	COCONUT GROVE	794	1252	0.634185	458
CEO	FDR	800933	40TH ST	419	664	0.631024	245
GGO	FDR	503562	ALLIGATOR	1117	3940	0.283503	2823
SLO	FDR	411561	FELLSMERE	6	2166	0.00277	2160
				28644	**55716**		**27072**

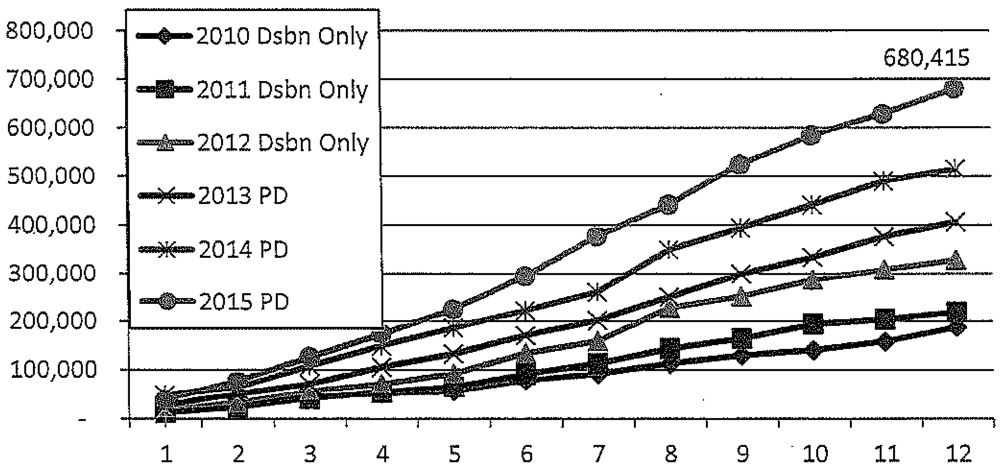
Jan 17 Event

19B

Svc Ctr	Int Typ Cd	Fdr Nbr	Substation	CI	Customer Served Count	CI % of Premises	AFS CI avoided
GLO	FDR	400935	BELLE GLADE	33	1133	0.029126	1100
SDO	FDR	802435	SOUTH MIAMI	868	987	0.879433	119
GGO	FDR	506661	LIVINGSTON	1014	2155	0.470534	1141
SNO	FDR	207262	CHULUOTA	1164	2218	0.524797	1054
GDO	FDR	503962	ESTERO	1439	3611	0.398505	2172
SNO	FDR	207261	CHULUOTA	310	1170	0.264957	860
CEO	FDR	800638	LITTLE RIVER	816	1810	0.450829	994
GGO	FDR	504365	PINE RIDGE	2079	3164	0.65708	1085
GGO	FDR	506665	LIVINGSTON	263	1217	0.216105	954
GGO	FDR	504363	PINE RIDGE	2097	3492	0.600515	1395
GGO	FDR	507362	ORANGETREE	4600	5362	0.857889	762
CEO	FDR	800139	MIAMI	1022	2179	0.469022	1157
PMO	FDR	705865	REMSBURG	453	1641	0.276051	1188
CEO	FDR	802936	GRAPELAND	1671	2334	0.715938	663
GSO	FDR	704766	STONEBRIDGE	646	1797	0.359488	1151
				18475	**34270**		**15795**

Reliability Indicator Performance – Feeder CI/N & AFS CI Avoided





AFS CI Avoided

	CM	YTD
2010 DSBN	30,159	186,810
2011 DSBN	15,353	217,822
2012 DSBN	23,281	327,499
2013 PD	29,995	405,904
2014 PD	26,143	513,764
2015 PD	70,345	680,415
2015 vs. 2014	169%	32%
Est. SAIFI Avoided 2015	0.01	0.14

Total cust 1,464,974

0.14 SAIFI avoided YTD, 32% more than Prior YTD

FPL

19C

OPC 005172
FPL RC-16

24

Panorama Tower

- Project Description
- Construction Update
- Panorama Videos
- News
- Q&A
- Live Feed
- Contact

1101 Brickell Avenue, Miami, FL 33131

When Does a Tower Become the Signature of a City?

To be the tallest residential building on the eastern seaboard south of New York, Panorama Tower will rise 83 stories over the Miami skyline, as an iconic, global landmark. The mixed-use residential development will be situated on the largest parcel of property in the epicenter of Brickell Avenue, with a depth of 500 feet to Brickell Bay Drive. In total, the existing office towers and new building will represent approximately three million square feet of construction on the site.

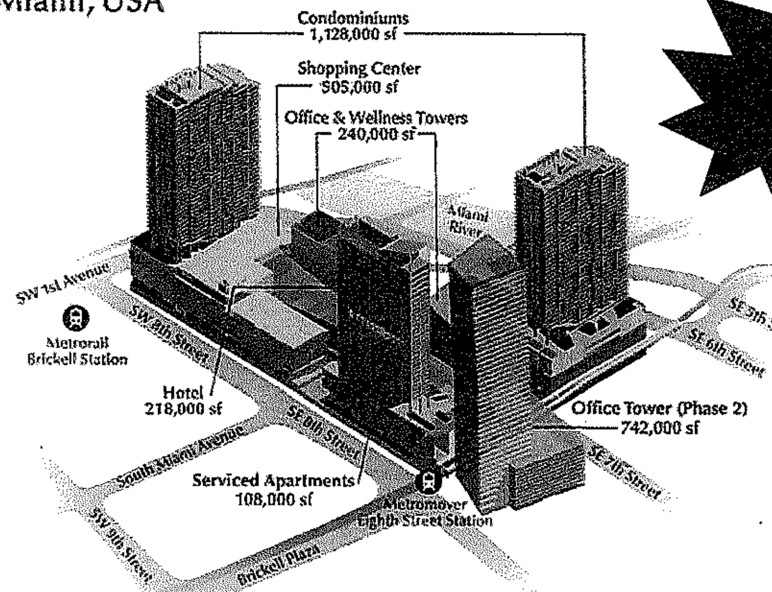
The spectacular, 83-story tower will rise to 830 feet. The 19-story pedestal will contain over 100,000 square feet of medically-oriented office space with a teaching facility. Underneath the medical facility will be a 2,000 car parking garage. Lining the garage to the east on Brickell Bay Drive will be a 208-room hotel. Further, both the ground floor and 2nd level of the pedestal will include over 50,000 square feet of high-end retail outlets and restaurant space.

Anticipated completion: End of 2017

Growth from new developments such as Brickell City Center are driving the need for additional feeders in Downtown Miami

Growth in Miami Area

Brickell CityCentre
Miami, USA



~8 MVA
2 Feeders

- Brickell City Center is a $1.05 billion mixed-use development.
- 9.1 acres along South Miami Avenue between Eighth Street and Sixth Street
- 5.4 million square feet of office, residential, hotel, retail and entertainment space, in addition to a two-level underground parking garage

- 7 vaults,
- 4 new feeders
- 10 Auto-Transfer switches
- 10 total feeders and 2 different substations for redundancy
- 20MVA demand load, 34MVA connected

Planning the system infrastructure accordingly allows for seamless continued growth and customer satisfaction

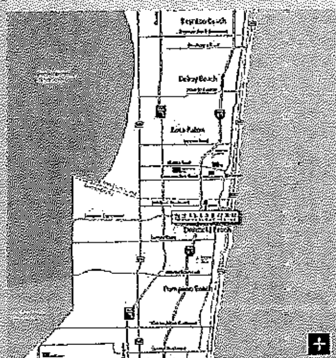
FPL

OPC 005174
FPL RC-16

25B

I-95 & HILLSBORO BOULEVARD, DEERFIELD BEACH, FLORIDA

PROJECT LOCATION



(http://www.hillsborocenter.com/wp-content/uploads/2013/11/HILLSBORO_TECH_MAP_icon.jpg)

NEWLY CONSTRUCTED STATE-OF-THE-ART WAREHOUSE AND DISTRIBUTION FACILITIES

We are pleased to present Hillsboro Technology Center. Situated on 75+/- acres, Hillsboro Technology Center will be a state-of-the-art business park comprised of industrial, office, and hotel product. Upon build-out of the entire Park, the total square footage of the constructed buildings will total around one million square feet.

The project will include on-site improvements, such as retention lakes, a public park, new roads and sidewalks. The off-site development calls for extensive improvements to the intersection of Hillsboro and Fairway Drive, including expanded driving lanes and a new traffic signal.

Hillsboro Technology Center will set the new standard of design and construction in the area with its contemporary design and unparalleled connectivity to I-95. In addition, Hillsboro Technology Center will incorporate the latest in environment design, recycled materials, and energy efficiency to achieve a sustainable development.

JEC

Plans for the proposed city of Babcock Ranch were developed with public participation through a series of meetings held in Charlotte County in early 2006. It was formally announced with the first application for development approvals. babcock ranchDesigned as a magnet for high tech companies and research and development hub for clean energy methods, Babcock Ranch is supposed to be self-contained with four villages and five hamlets. The plan is for a total of 20,000 permanent jobs would be added to sustain up to 45,000 residents in 17,870 households. Babcock Ranch is expected to include 5,000,000 square feet of light industry, retail, commerce, offices and civic space. The downtown area will be walkable and bikeable, and will include 8,000 homes as well offices, business parks, medical facilities, shopping, restaurants, entertainment and lodges.

Port Canaveral expansion full steam ahead

December 22, 2013 | By Sara K. Clarke, Orlando Sentinel

The new Norwegian Cruise Lines ship Breakaway, making its first... (Orlando Sentinel)

As Port Canaveral heads into the new year, big changes are underway to establish the port as a cargo destination and to draw more cruise ships.

In January, the port will begin work on deepening its channel to make room for cargo vessels and on widening it to accommodate ever-larger cruise ships. In addition, it's building both a new cruise terminal, to open in November, and a new cargo facility, also opening next year. The projects are part of a five-year, $587 million capital campaign.

"We're very confident these are not pie-in-the-sky ideas," said John Walsh, who in March took over as head of Port Canaveral, east of Orlando. "These are executable plans that will be successful business models."

Orlando's theme parks are a key destination for many cruisers making port-of-call visits at Port Canaveral. Starting in January, Disney Cruise Line will have three of its four ships based at the port, and cruisers have the option to pair their trip at sea with a visit to the theme parks.

The projects are a significant economic effort in Brevard County, an area that has suffered from the loss of the space shuttle program and many high-wage jobs that went with it. More cruises mean more tourists who might spend the night in Brevard hotels before their ship departs. And cargo could spawn a distribution network of warehouses and trucking throughout east Central Florida, perhaps reaching into Orange County.

"The tourism industry is crucial to our economy, but as we look to grow and diversify, increasing Port Canaveral's cargo capacity will help create manufacturing opportunities throughout the region," said Orange County Mayor Teresa Jacobs. "A strong partnership with 'our port' creates a gateway to enhanced economic opportunities for Orange County."

Canaveral hasn't been a serious cargo player in the past. It handles the equivalent of "a couple hundred" 20-foot containers a year, Walsh said. The new cargo facility will have ship-to-shore cranes that can move goods in mass and is expected to process 100,000 containers in its first year, with a maximum capacity of 600,000.

"We can save the companies that are bringing in those products and shipping out products a substantial amount of trucking," Walsh said.

In addition to cargo, Port Canaveral is targeting more cruise passengers. The port now serves about 4 million passengers a year, and in 2012 was ranked by the American Association of Port Authorities as the second-busiest cruise port in the U.S., behind PortMiami. Some begin and end their journey at the port, while others disembark from ships docked there for the day and head to attractions such as Walt Disney World and Kennedy Space Center. Officials hopes to attract more than 5 million passengers by 2016 and 6 million by late 2017.

Walsh expects growth in the industry in general, and said South Florida ports are constrained in how much they can expand. He expects the overflow will come to Port Canaveral, which he says is a "logical growth point" for carriers who want to get to the Bahamas and the Caribbean, a major destination for the industry.

Key to that growth is a new 185,000-square-foot cruise terminal, with expanded berth capacity that will accommodate bigger ships. Royal Caribbean's Quantum of the Seas, the largest ship ever to call at Port Canaveral, is scheduled to arrive next fall.

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ATTORNEY CLIENT COMMUNICATION
ATTORNEY WORK PRODUCT

31

PD CAPEX SUMMARY

	2013 Actuals $MM	2014 Actuals $MM	2015 Projected $MM	2016 Projected $MM	2017 Projected $MM	2018 Projecte d $MM	Total $MM
Regulatory	$ 33.2	$ 59.0	$ 69.4	$ 111.6	$ 85.3	$ 62.6	$ 421.1
Storm Hardening	$ 213.0	$ 300.5	$ 297.4	$ 471.8	$ 604.2	$ 868.3	2,755.1
Performance or Reliability	$ 142.4	$ 325.2	$ 614.4	$ 531.9	$ 459.5	$ 278.3	2,351.7
Growth	$ 283.1	$ 297.7	$ 343.0	$ 463.5	$ 618.1	$ 573.9	2,579.3
Run The System	$ 109.7	$ 231.1	$ 237.3	$ 166.3	$ 185.1	$ 166.5	1,096.1
Total $MM	$ 781.3	$ 1,213.6	$ 1,561.5	$ 1,745.1	$ 1,952.2	$ 1,949.6	$ 9,203.3

MM Testimony Breakdown
($'s in Billions)

	2014-2017		2018		2014-2018	
Regulatory Requirements	$ 0.33	5%	$ 0.06	3%	$ 0.39	5%
Storm Hardening	$ 1.67	26%	$ 0.87	45%	$ 2.54	30%
Reliability/Grid Modernization	$ 1.93	30%	$ 0.28	14%	$ 2.21	26%
Growth	$ 1.72	27%	$ 0.57	29%	$ 2.30	27%
Run The System	$ 0.82	13%	$ 0.17	9%	$ 0.99	12%
Total $BN	$ 6.47	100%	$ 1.95	100%	$ 8.42	100%

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Regulatory Requirements
($'s in Billions)

	2014-2017		2018		2014-2018	
Relocations	$ 0.08	25%	$ 0.03	45%	$ 0.00	0%
Other (Reg compli, major proj compli)	$ 0.24	75%	$ 0.03	55%	$ 0.39	100%
Total $BN	$ 0.33	100%	$ 0.06	100%	$ 0.39	100%

Storm Hardening
($'s in Billions)

	2014-2017		2018		2014-2018	
FPSC Hardening	$ 1.16	69%	$ 0.74	85%	$ 1.89	74%
FPSC Pole Inpsections	$ 0.31	18%	$ 0.07	9%	$ 0.38	15%
Other (T&S storm secure, OH to UG)	$ 0.21	13%	$ 0.06	7%	$ 0.27	11%
Total $BN	$ 1.67	100%	$ 0.87	100%	$ 2.54	100%

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Performance or Reliability

	2014-2017		2018		2014-2018	
Smart Grid (AFS, ALS, FCI, Smart Lights)	$ 0.64	33%	$ 0.07	26%	$ 0.71	32%
UG Cable Insp/Rehab/ Priority Fdrs	$ 0.65	34%	$ 0.07	25%	$ 0.72	33%
Other (HH/ PMT Insp/ Sub Cable/ etc.)	$ 0.25	13%	$ 0.06	21%	$ 0.31	14%
Total Distribution $BN	$ 1.54	80%	$ 0.20	72%	$ 1.74	79%
Targeted assmts/ maint/ prevention	$ 0.29	15%	$ 0.07	25%	$ 0.36	16%
Smart Grid/ modernization (subs)	$ 0.10	5%	$ 0.01	4%	$ 0.11	5%
Total Transmisison $BN	$ 0.39	20%	$ 0.08	28%	$ 0.47	21%
Total $BN	$ 1.93	100%	$ 0.28	100%	$ 2.21	100%

Growth
($'s in Billions)

	2014-2017		2018		2014-2018	
NSAs	$ 0.55	32%	$ 0.18	32%	$ 0.73	32%
T&D System/upgrades	$ 1.13	66%	$ 0.38	66%	$ 1.51	66%
New Streetlights	$ 0.04	2%	$ 0.01	2%	$ 0.05	2%
Total $BN	$ 1.72	100%	$ 0.57	100%	$ 2.30	100%

Run The System
($'s in Billions)

	2014-2017			2018			2014-2018		
Restoring Service	$	0.40	49%	$	0.11	64%	$	0.51	51%
Misc (cust reqs, comp equip, software)	$	0.24	29%	$	0.03	18%	$	0.27	27%
Fleet	$	0.18	22%	$	0.03	18%	$	0.21	21%
Total $BN	$	0.82	100%	$	0.17	100%	$	0.99	100%

BUDGETED VERSUS ACTUAL OPERATING REVENUES AND EXPENSES

FLORIDA PUBLIC SERVICE COMMISSION

COMPANY: FLORIDA POWER & LIGHT COMPANY
AND SUBSIDIARIES

DOCKET NO.: 160021-EI

EXPLANATION:
If the test year is projected, provide the budgeted versus actual operating revenues and expenses by primary account for a historical five year period and the forecasted data for the test year and the prior year.

Type of Data Shown:
___ Projected Test Year Ended __/__/__
X Prior Year Ended 12/31/17
X Historical Test Year Ended 12/31/15
X Proj. Subsequent Yr Ended 12/31/18
Witness: Kim Ousdahl, Robert E. Barrett Jr

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
			2012 YEAR 1		2013 YEAR 2		2014 YEAR 3		2015 YEAR 4		2016 YEAR 5			2018
Line No.	ACCOUNT NO.	ACCOUNT TITLE	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	2017 TEST YEAR	SUBSEQUENT YEAR
1		OPERATING REVENUES												
2														
3	440 - 446	RETAIL SALES		9,805,920		9,809,284		10,586,320		10,773,014		9,994,445	10,263,866	10,509,593
4	447	SALES FOR RESALE		157,079		212,326		504,583		500,059		447,960	447,882	471,513
5	449	PROVISION FOR REFUNDS						(42)		42				-
6	450	FORFEITED DISCOUNTS		32,762		60,543		59,892		58,299		59,439	59,902	61,610
7	451	MISCELLANEOUS SERVICE REVENUES		29,740		33,852		41,912		39,336		40,699	41,068	41,294
8	454	RENT FROM ELECTRIC PROPERTY		42,122		44,235		48,767		49,142		56,032	58,649	57,571
9	456	OTHER ELECTRIC REVENUES		41,394		129,507		29,648		153,524		79,163	90,300	93,130
10		OPERATING REVENUES	10,178,894	10,109,017	10,459,830	10,289,748	11,316,772	11,271,081	11,397,709	11,573,415	10,648,081	10,677,738	10,961,668	11,234,711
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34

OPC 005182
FPL RC-16

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BUDGETED VERSUS ACTUAL OPERATING REVENUES AND EXPENSES

FLORIDA PUBLIC SERVICE COMMISSION

COMPANY: FLORIDA POWER & LIGHT COMPANY
AND SUBSIDIARIES

DOCKET NO.: 160021-EI

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	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
			2012 YEAR 1		2013 YEAR 2		2014 YEAR 3		2015 YEAR 4		2016 YEAR 5		2017	2018
Line No.	ACCOUNT NO.	ACCOUNT TITLE	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	TEST YEAR	SUBSEQUENT YEAR
1														
2		STEAM POWER GENERATION												
3														
4	500	OPR SUPV & ENG-STEAM POWER GENERATION		3,598		7,168		3,659		7,879		4,848	7,008	5,165
5	501	FUEL-STEAM POWER GENERATION		522,417		528,778		319,069		444,864		346,236	363,800	374,483
6	502	STEAM EXP-STEAM POWER GENERATION		5,332		5,389		5,461		9,045		8,661	5,883	4,947
7	505	ELECTRIC EXPENSES-STEAM POWER GENER		2,085		2,033		1,994		1,933		1,905	1,709	1,734
8	506	MISCELL STEAM POW EXP-STEAM POWER GENER		27,657		26,153		24,270		28,655		36,379	22,159	21,393
9	507	RENTS-STEAM POWER GENERATION		74		71		86		89		65	66	67
10	509	STEAM EMISSION ALLOWANCE												
11														
12		STEAM POWER GENERATION	0	561,164	0	569,591	0	354,539	0	492,464	0	398,094	400,625	407,789
13														
14		STEAM POWER MAINTENANCE												
15														
16	511	MTCE OF STRUCTURE-STEAM POWER GENERATION		13,837		14,879		14,160		18,350		12,593	15,404	15,433
17	512	MTCE OF BOILER PLT-STEAM POWER GENER		31,456		21,741		30,625		22,858		35,537	23,765	41,499
18	513	MTCE OF ELEC PLANT-STEAM POWER GENER		7,516		8,352		4,871		6,478		8,836	4,700	6,252
19	514	MTCE MISC STEAM PLANT-STEAM POWER GENER		3,152		2,341		4,777		2,413		2,240	1,882	1,961
20		STEAM POWER MAINTENANCE	0	55,960	0	47,314	0	54,432	0	50,099	0	59,206	45,751	65,144
21														
22		NUCLEAR POWER GENERATION												
23														
24	517	OPER SUPV & ENG-NUCLEAR POWER GENER		74,298		68,307		71,991		70,995		74,553	77,980	81,568
25	518	NUCLEAR FUEL EXPENSE-NUCLEAR POWER GENER		127,100		203,774		206,983		204,616		206,605	201,796	193,702
26	519	COOLANTS & WATER-NUCLEAR POWER GENER		12,463		9,856		12,689		14,139		9,864	9,741	10,679
27	520	STEAM EXPENSES-NUCLEAR POWER GENERATION		74,609		55,557		56,814		57,720		47,657	49,339	49,803
28	523	ELECTRIC EXPENSES-NUCLEAR POWER GENER		290		(88)		585		172		383	104	244
29	524	MISC NUC PWR EXP-NUCLEAR POWER GENER		103,626		119,616		105,586		101,952		122,066	123,065	116,078
30	525	RENTS-NUCLEAR POWER GENERATION		147										
31		NUCLEAR POWER GENERATION	0	392,532	0	457,023	0	454,649	0	449,594	0	461,128	462,046	452,074
32														
33														

OPC 005183
FPL RC-16

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Supporting Schedules:

Recap Schedules: C-9, C-36, C-33

BUDGETED VERSUS ACTUAL OPERATING REVENUES AND EXPENSES

FLORIDA PUBLIC SERVICE COMMISSION

COMPANY: FLORIDA POWER & LIGHT COMPANY
AND SUBSIDIARIES

DOCKET NO.: 160021-EI

EXPLANATION:
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	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
			2012 YEAR 1		2013 YEAR 2		2014 YEAR 3		2015 YEAR 4		2016 YEAR 5			
Line No.	ACCOUNT NO.	ACCOUNT TITLE	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	2017 TEST YEAR	2018 SUBSEQUENT YEAR
1														
2		NUCLEAR POWER MAINTENANCE												
3														
4	528	MTCE SUPV & ENG-NUCLEAR POWER GENER		87,862		107,163		60,561		71,923		102,905	84,301	91,165
5	529	MTCE OF STRUCTURE-NUCLEAR POWER GENER		10,960		7,370		10,880		29,921		38,423	35,444	11,842
6	530	MTCE OF REACTOR PLT EQP-NUCLEAR POW GEN		27,885		27,189		29,599		27,193		9,650	20,983	17,147
7	531	MTCE OF ELECTRIC PLT-NUCL POW GENER		15,064		9,541		13,143		15,186		8,227	7,382	12,881
8	532	MTCE MISC NUC PLANT-NUCLEAR POWER GENER		23,317		9,769		22,569		24,757		9,867	18,015	21,131
9		NUCLEAR POWER MAINTENANCE	0	165,089	0	161,033	0	136,753	0	168,980	0	169,072	166,125	154,167
10														
11		OTHER POWER GENERATION												
12														
13	546	OP SUPV & ENG-OTHER POWER GENERATION		12,754		13,142		13,557		13,787		14,928	16,235	16,671
14	547	FUEL-OTHER POWER GENERATION		2,696,887		2,384,312		2,981,141		2,611,652		2,068,015	2,328,244	2,475,269
15	548	GENERATION EXPENSES-OTHER POWER GENERATI		20,694		21,957		21,730		22,269		19,498	19,701	19,641
16	549	MISC OTHER PWR GEN EXP-OTHER POWER GENER		36,195		38,608		37,397		43,443		79,552	97,641	110,342
17	550	RENTS-OTHER POWER GENERATION								89		0		
18		OTHER POWER GENERATION	0	2,766,530	0	2,458,019	0	3,053,825	0	2,691,241	0	2,181,993	2,461,820	2,621,923
19														
22		OTHER POWER MAINTENANCE												
23														
24	551	MTCE SUPV & ENG-OTHER POWER GENERATION		6,721		7,523		8,619		8,191		10,033	10,309	10,700
25	552	MTCE OF STRUCTURES-OTHER POWER GENER		9,190		10,085		15,175		13,536		14,321	15,785	19,113
26	553	MTCE GEN & ELEC PLT-OTHER POWER GENER		56,540		53,196		52,269		51,030		51,729	66,849	56,166
27	554	MTCE MISC OTHER PWR GEN-OTHER POWER GEN		3,444		4,606		9,266		5,426		6,959	7,863	6,990
28		OTHER POWER MAINTENANCE	0	75,895	0	75,410	0	85,329	0	78,183	0	83,042	100,806	92,970
29														
30		OTHER POWER SUPPLY												
31														
32	555	PURCHASED POWER-OTHER POWER SUPPLY EXP		836,933		732,552		776,445		688,733		384,617	362,610	357,805
33	556	SYS CONTR & LOAD DISPATCH-OTH POW SUP		3,091		2,831		2,329		2,330		3,567	3,954	4,089
34	557	OTHER EXPENSES-OTHER POWER SUPPLY EXP		53,591		(98,498)		(83,906)		229,568		158,411	92,833	92,677
35		OTHER POWER SUPPLY	0	893,615	0	636,885	0	694,868	0	920,632	0	546,595	459,397	454,571
36														

OPC 005184
FPL RC-16

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Supporting Schedules:

Recap Schedules: C-9, C-36, C-33

BUDGETED VERSUS ACTUAL OPERATING REVENUES AND EXPENSES

FLORIDA PUBLIC SERVICE COMMISSION

COMPANY: FLORIDA POWER & LIGHT COMPANY
AND SUBSIDIARIES

DOCKET NO.: 160021-EI

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			2012 YEAR 1		2013 YEAR 2		2014 YEAR 3		2015 YEAR 4		2016 YEAR 5		2017	2018 SUBSEQUENT
Line No.	ACCOUNT NO.	ACCOUNT TITLE	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	TEST YEAR	YEAR
1														
2		TRANSMISSION EXPENSES OPERATING												
3	560	OPER SUPERV & ENG-TRANSMISSION		7,171		7,591		5,667		5,476		6,664	6,918	7,371
4	561	LOAD DISPATCHING-TRANSMISSION		5,806		2,525		9,000		9,635		10,676	10,823	11,112
5	562	STATION EXPENSES-TRANSMISSION		4,619		2,517		2,502		3,893		2,133	3,325	3,252
6	563	OVERHEAD LINE EXPENSES-TRANSMISSION		571		426		477		670		375	375	375
7														
8	564	UNDERGROUND LINE EXPENSES-TRANSMISSION												
9	565	TRANSMISSION OF ELECTRICITY BY OTHERS		38,749		40,117		47,402		48,766		28,543	22,495	22,736
10	566	MISCELLANEOUS EXPENSES-TRANSMISSION		13,859		10,208		8,686		6,648		4,015	4,108	4,210
11	567	RENTS-TRANSMISSION		9		18		0		2		12	12	(12)
12		TRANSMISSION EXPENSES OPERATING	0	70,783	0	63,402	0	73,735	0	75,090	0	52,417	48,056	49,044
13														
14		TRANSMISSION EXPENSES MAINTENANCE												
15														
16	568	MTCE SUPERVISION AND ENGIN-TRANSMISSION		1,330		654		656		928		624	609	606
17	569	MAINTENANCE OF STRUCTURES-TRANSMISSION		6,515		7,030		4,828		4,156		3,826	4,126	4,197
18	570	MTCE OF STATION EQUIPMENT-TRANSMISSION		10,668		7,398		8,343		7,345		5,194	5,879	5,553
19	571	MTCE OF OVERHEAD LINES-TRANSMISSION		10,670		10,896		9,693		14,802		9,763	11,420	11,739
20	572	MTCE OF UNDERGROUND LINES-TRANSMISSION		919		960		897		1,809		1,254	1,254	1,254
21	573	MTCE OF MISC PLANT-TRANSMISSION		554		514		565		634		590	644	667
22		TRANSMISSION EXPENSES MAINTENANCE	0	30,656	0	27,451	0	24,983	0	29,673	0	21,251	23,932	24,016
23														
24		DISTRIBUTION EXPENSES OPERATING												
25														
26	580	OPERATION SUPERV AND ENGIN-DISTRIBUTION		19,368		18,091		16,970		15,288		22,115	21,702	22,179
27	581	LOAD DISPATCHING-DISTRIBUTION		1,541		1,989		5,255		4,434		5,108	5,768	5,995
28	582	STATION EXPENSES-DISTRIBUTION		2,808		2,841		2,881		3,127		2,777	2,696	2,650
29	583	OVERHEAD LINE EXPENSES-DISTRIBUTION		4,007		(11,768)		10,058		13,577		13,245	14,427	14,873
30	582	STATION EXPENSES-DISTRIBUTION		2,808		2,841		2,881		3,127		2,777	2,696	2,650
31	583	OVERHEAD LINE EXPENSES-DISTRIBUTION		4,007		(11,768)		10,058		13,577		13,245	14,427	14,873
32	584	UNDERGROUND LINE EXPENSES-DISTRIBUTION		6,664		6,329		5,227		6,648		5,530	5,793	6,437
33	585	ST LIGHTING AND SIGNAL SYST EXP-DISTRIB		1,628		269		383		121		261	268	267
34	586	METER EXPENSES-DISTRIBUTION		7,628		5,621		5,998		2,097		5,105	3,470	4,059
35	587	CUSTOMER INSTALLATIONS EXP-DISTRIBUTION		1,859		1,350		1,929		658		3,867	3,978	4,063
36														

Supporting Schedules:

OPC 005185
FPL RC-16

80/81

Recap Schedules: C-9, C-36, C-33

BUDGETED VERSUS ACTUAL OPERATING REVENUES AND EXPENSES

FLORIDA PUBLIC SERVICE COMMISSION

COMPANY: FLORIDA POWER & LIGHT COMPANY AND SUBSIDIARIES

DOCKET NO.: 160021-EI

EXPLANATION:
If the test year is projected, provide the budgeted versus actual operating revenues and expenses by primary account for a historical five year period and the forecasted data for the test year and the prior year.

Type of Data Shown:
__ Projected Test Year Ended _/_/_
X Prior Year Ended 12/31/17
X Historical Test Year Ended 12/31/15
X Proj. Subsequent Yr Ended 12/31/18
Witness: Kim Ousdahl, Robert E. Barrett Jr

Line No.	(1) ACCOUNT NO.	(2) ACCOUNT TITLE	(3) 2012 YEAR 1 BUDGET	(4) 2012 YEAR 1 ACTUAL	(5) 2013 YEAR 2 BUDGET	(6) 2013 YEAR 2 ACTUAL	(7) 2014 YEAR 3 BUDGET	(8) 2014 YEAR 3 ACTUAL	(9) 2015 YEAR 4 BUDGET	(10) 2015 YEAR 4 ACTUAL	(11) 2016 YEAR 5 BUDGET	(12) 2016 YEAR 5 ACTUAL	(13) 2017 TEST YEAR	(14) 2018 SUBSEQUENT YEAR
1														
2	588	MISCELLANEOUS EXPENSES-DISTRIBUTION		26,721		26,768		30,765		34,466		32,276	37,628	42,803
3	589	RENTS-DISTRIBUTION		9,333		9,381		9,671		9,660		10,106	10,358	10,622
4		DISTRIBUTION EXPENSES OPERATING	0	81,557	0	60,871	0	89,138	0	90,076	0	100,390	106,088	113,949
5														
6		DISTRIBUTION EXPENSES MAINTENANCE												
7														
8	590	MTCE SUPERVISION AND ENGINEERING-DISTRIB		21,920		20,760		20,120		20,141		16,903	17,360	17,882
9	591	MAINTENANCE OF STRUCTURES-DISTRIBUTION		31		53		35		36				
10	592	MTCE STATION EQUIPMENT-DISTRIBUTION		9,452		11,177		11,701		13,853		14,517	14,401	14,225
11	593	MAINTENANCE OF OVERHEAD LINES-DISTRIB		122,769		123,515		105,193		111,696		108,912	116,078	127,046
12	594	MAINTENANCE OF UNDERGROUND LINES-DISTRIB		31,452		28,809		22,100		18,809		23,419	25,091	28,532
13	595	MAINTENANCE OF LINE TRANSFORMERS-DISTRIB		42		41		42		39		38	39	(0)
14	596	MTCE ST LIGHTING & SIGNAL SYST-DISTRIB		9,460		10,211		10,233		10,209		10,745	11,158	11,803
15	597	MAINTENANCE OF METERS-DISTRIBUTION		5,409		5,694		4,060		3,675		3,773	3,999	4,142
16	598	MAINTENANCE OF MISC PLANT-DISTRIBUTION		4,272		4,680		5,962		6,237		5,439	6,471	5,636
17		DISTRIBUTION EXPENSES MAINTENANCE	0	204,807	0	204,941	0	179,448	0	184,694	0	183,746	194,297	209,265
18														
19		CUSTOMER ACCOUNTS EXPENSES												
20														
21	901	SUPERVISION-CUSTOMER ACCOUNTS		4,370		3,565		4,088		5,666		6,449	6,380	6,524
22	902	METER READING EXPENSES-CUSTOMER ACCOUNTS		35,312		29,312		18,418		15,333		11,849	12,031	12,109
23	903	RECORDS AND COLLECTION EXP-CUSTOMER ACCT		94,761		93,111		86,265		84,194		82,574	83,759	83,907
24	904	UNCOLLECTIBLE ACCOUNTS-CUSTOMER ACCOUNTS		9,561		8,773		9,644		5,381		6,708	6,552	7,112
25	905	MISCELLANEOUS EXPENSES-CUSTOMER ACCOUNTS												
26		CUSTOMER ACCOUNTS EXPENSES	0	144,003	0	134,779	0	118,415	0	110,574	0	107,580	108,723	109,652
27														
28		CUSTOMER SERVICE & INFORMATION EXPENSES												
29														
30	907	SUPERVISION-CUSTOMER SERVICE & INFORMAT		9,004		9,010		8,524		9,349		7,918	8,113	8,371
31	908	ASSISTANCE EXPENSES-CUSTMR SERV & INFORM		108,647		108,634		121,260		70,750		37,585	37,671	37,233
32	909	INFORMAT & INSTRCTL ADVTG-CUST SERV & IN		8,871		8,841		8,718		8,573		8,440	8,649	8,872
33	910	MISC EXPENSES-CUSTOMER SERVICE & INFORM		9,206		10,883		11,471		13,513		11,244	11,632	11,131
34		CUSTOMER SERVICE & INFORMATION EXPENSES	0	135,728	0	137,369	0	149,974	0	102,185	0	65,188	66,065	65,606
35														

2017
T/O $48,856
T/M $23,932
D/O $106,088
D/M $194,297
$373,373

TOTAL T&D O&M

2018
T/O — $49,044
T/M — $24,016
D/O — $113,949
D/M — $209,265
$396,274

OPC 005186
FPL RC-16

81/81

Supporting Schedules:

Recap Schedules: C-9, C-36, C-33