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June 14, 2018

-VIA ELECTRONIC FILING-

Ms. Carlotta S. Stauffer, Commission Clerk
Office of Commission Clerk
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, FL 32399-0850

Re: Docket No. 20170215-EU

Dear Ms. Stauffer:

Please find enclosed for electronic filing a copy of Florida Power & Light Company's Third Supplemental Amended response to Staff's First Data Request No. 29 in the above mentioned docket.

If you should have any questions regarding this transmittal, please contact me at (561) 691-2512.

Respectfully submitted,

/s/ Kenneth M. Rubin
Kenneth M. Rubin
Fla. Bar No. 349038

Enclosures
cc: Counsel for Parties of Record (w/encl.)

QUESTION:
Please complete the table below summarizing hardened facilities that required repair or replacement as a result of Hurricanes Matthew, Hermine, Irma, Maria, and Nate.

RESPONSE:
FPL does not maintain its accounting records at the level of detail required to provide the requested information as they do not differentiate hardened facilities from non-hardened facilities, nor do they track which assets were repaired. However, FPL does track certain assets, at the total system level, that were requested and replaced during each hurricane as reflected in the tables below. Note, FPL did not track storm repairs/replacements for Hurricanes Maria and Nate as Hurricane Maria did not impact FPL's service territory and Nate had limited impact. Also, Hurricanes Matthew and Irma capital details associated with follow-up work are not yet available by plant account as these costs have not yet been unitized from account 106 to account 101 by plant account.

Hurricane Matthew	**Number of Facilities Requiring**	
	Repair	**Replacement**
Transmission		
Structures	N/A	0
Substations	N/A	0
Total	N/A	0
Distribution		
Poles	N/A	656
Substation	N/A	0
Feeder OH	N/A	0
Feeder UG	N/A	0
Feeder Combined	N/A	0
Lateral OH	N/A	N/A
Lateral UG	N/A	N/A
Lateral Combined	N/A	N/A
Total	N/A	N/A
Service		
Service OH	N/A	N/A
Service UG	N/A	N/A
Service Combined	N/A	N/A
Total	N/A	N/A

Hurricane Hermine	**Number of Facilities Requiring**	
	Repair	**Replacement**
Transmission		
Structures	N/A	0
Substations	N/A	0
Total	N/A	0
Distribution		
Poles	N/A	19
Substation	N/A	0
Feeder OH	N/A	0
Feeder UG	N/A	0
Feeder Combined	N/A	0
Lateral OH	N/A	N/A
Lateral UG	N/A	N/A
Lateral Combined	N/A	N/A
Total	N/A	N/A
Service		
Service OH	N/A	N/A
Service UG	N/A	N/A
Service Combined	N/A	N/A
Total	N/A	N/A

Hurricane Irma	**Number of Facilities Requiring**	
	Repair	**Replacement**
Transmission		
Structures	N/A	0
Substations	N/A	0
Total	N/A	0
Distribution		
Poles	N/A	3,562
Substation	N/A	0
Feeder OH	N/A	0
Feeder UG	N/A	0
Feeder Combined	N/A	0
Lateral OH	N/A	N/A
Lateral UG	N/A	N/A
Lateral Combined	N/A	N/A
Total	N/A	N/A
Service		
Service OH	N/A	N/A
Service UG	N/A	N/A
Service Combined	N/A	N/A
Total	N/A	N/A

Notes:
For Hurricane Matthew, there is a difference of 248 poles between what is provided in this discovery response for total poles replaced (656 poles) and what is provided in FPL's post-storm forensic review report for Hurricane Matthew (provided in FPL's response to Staff's Second Data Request No. 2 in this same docket) for poles that failed and needed to be replaced to restore service (408 poles). The difference is associated with poles replaced during "follow-up" - i.e., poles that were damaged (e.g., a cracked pole) as a result of the storm and needed to be replaced to restore the pole to its pre-storm condition - but did not fail during the storm and, thus, did not need to be replaced to restore service. As mentioned above in FPL's response to this data request, FPL's accounting records do not differentiate hardened facilities from non-hardened facilities and FPL did not track or maintain forensic information on the 248 distribution poles replaced as a result of follow-up work. As a result, FPL does not have a hardened vs. non-hardened breakdown for the 248 distribution poles replaced during follow-up work.

The distribution pole and transmission structure counts provided above represent the amount of pole/structure replacements FPL has recorded on its books and records associated with Hurricane Irma as of December 31, 2017. These amounts should be considered preliminary at this time as they are subject to change (e.g., the counts do not reflect poles that will be replaced during follow-up work, which has yet to be completed).

N/A – Information is not available at this level of detail in FPL's accounting records.

For substations and feeders, FPL has stated 0 since no entire substation or feeder was replaced. However, these facilities consist of many pieces of equipment (e.g., wire, cable, breakers, transformers, cross arms and arrestors) some of which may have been replaced.

2016/2017 Hurricanes - FPL Restoration/Infrastructure Performance

FPL's infrastructure/restoration performance for Hurricanes Matthew (2016) and Irma (2017) demonstrates that the implementation and execution of its FPSC-approved (1) ten storm preparedness initiatives (which includes vegetation management): (2) pole inspection programs; (3) storm hardening plans; and (4) tariffs to incent municipal overhead to underground conversions have provided great benefits to FPL's customers and to the State of Florida.

During 2016 and 2017, FPL's service territory was threatened with massive Category 4 and 5 storms. The size and scale of these storms impacted FPL's infrastructure throughout its entire service territory (which encompasses 35 counties in the State of Florida). For both Matthew and Irma, FPL's infrastructure storm resiliency and smart grid investments resulted in improved infrastructure resiliency performance and reduced restoration times.

2016/2017 Hurricanes - Restoration Performance

FPL saw significant improvements in overall restoration results. As can be seen in the table below, restoration results for Hurricanes Matthew and Irma show significant improvement vs. Hurricane Wilma. FPL attributes these significant improvements in restoration to the investments made to make its system smarter and more storm-resilient as well as its well-tested restoration processes. This includes FPL's distribution and transmission storm hardening and storm preparedness initiatives, pole inspection programs, smart grid initiatives, vegetation management programs and continuous efforts to improve its restoration processes.

	Wilma 2005	Matthew 2016	Irma 2017
Customer Outages	3.2M	1.2M	4.4M
% Restored / days	50% / 5	99% / 2	50% /1
All restored / days	18	4	10
Avg. to restore / days	5.4	<1	2.1

2016/2017 Hurricanes – Infrastructure Performance

To assess the effectiveness of FPL's infrastructure storm hardening investments, the Company utilizes information collected through post-storm forensic data collection and various systems (e.g., FPL's outage management system) to conduct post-storm infrastructure performance analysis. These efforts and analysis allow FPL to quantify and assess its distribution and transmission infrastructure performance including the performance of: hardened and non-hardened facilities; overhead and underground facilities; and smart grid performance. For distribution, this includes reviewing the storm performance of poles, feeders and laterals. For transmission, this includes reviewing the storm performance of poles/structures, line sections and substations. The data demonstrates that hardened infrastructure performed better than non-hardened infrastructure, underground facilities performed better than overhead facilities and smart grid devices prevented a significant number of outages from occurring.

Distribution/Transmission Poles/ Structures Performance

The performance of FPL's approximately 1.2 million distribution and transmission poles/structures during Hurricanes Matthew and Irma was excellent, as hardened poles and structures performed as expected by minimizing outages and reducing restoration times. The total number of distribution/transmission poles that failed (i.e., had to be repaired/replaced in order to restore service) during Hurricanes Matthew and Irma was a mere fraction of 1% of the 1.2 million pole/structure pole population.

Additionally, hardened distribution and transmission pole performance was significantly better than non-hardened pole performance, as hardened pole failures were either non-existent (e.g., Hurricane Matthew) or significantly less than non-hardened pole failures (e.g., during Hurricane Irma, hardened feeder poles had a 0.02% failure rate, while non-hardened feeder poles had a 0.20% failure rate). Also, total poles replaced (i.e., poles that failed + poles that were replaced during follow-up work) were also a mere fraction of 1% of the total pole population and significantly less than the number of poles replaced during Hurricane Wilma.

FPL notes that for Hurricanes Matthew and Irma, while it did track hardened vs. non-hardened pole performance during restoration, it did not track poles replaced (hardened vs. non-hardened) during follow-up work, since these poles had accomplished their intended purpose of not failing during the storms. Therefore, FPL cannot provide the number of hardened poles replaced during follow up work in Hurricanes Matthew and Irma. Based on the performance of hardened poles that failed during these storms (see table below), it is highly unlikely that there would be a significant number of hardened poles, if any, that needed to be replaced during follow-up work. However, going forward, should the Commission want FPL to track replacement of hardened vs. non-hardened poles during follow-up work, FPL will begin to track this information.

FPL attributes this excellent pole performance to its FPSC-approved distribution and transmission storm hardening plan initiatives (e.g., extreme wind load construction standards for distribution poles and replacing wood transmission poles/structures) and its pole inspection programs.

Distribution Poles 12/31/17
Total Number 1,188,202
Total Hardened 124,518*

* This number is understated as it includes only poles hardened as a result of FPL's approved hardening plan projects, as FPL does not track or maintain the number of hardened poles installed as a result of new construction (e.g., new feeders or laterals) and/or daily work activities (e.g., maintenance, pole line extensions, relocation projects). There are also other existing poles throughout FPL's service territory that would currently meet the NESC's extreme wind loading criteria and therefore qualify as a hardened pole, however, FPL does not currently track or maintain that information.

Distribution Pole Failures*	Hardened	Non-Hardened	Total
Matthew - 2016	0	408	408
Irma - 2017	26	2834	2860

*Broken/Fallen poles that must be repaired/replaced to restore service

Transmission Pole/Structures 12/31/17
Total 66, 685
Concrete 60,694 (91%)
Wood 5,991 (9%)

Transmission Pole Failures*	Hardened	Non-Hardened	Total
Matthew - 2016	0	0	0
Irma - 2017	0	5	5

*Broken/Fallen poles that must be repaired/replaced to restore service

Distribution Feeders/Laterals Performance

As demonstrated below, FPL's hardened feeders performed significantly better than non-hardened feeders and underground feeders/laterals performed significantly better than overhead feeders/laterals. Performance was compared considering feeder and lateral outages that occurred during Hurricanes Matthew and Irma. It is also important to note that during Hurricane Irma, the Construction Man Hours ("CMH") to restore hardened feeders was 50% less than non-hardened feeders, primarily due to hardened feeders experiencing less damage than non-hardened feeders.

It is important to note that the majority of outages for overhead facilities resulted from trees that broke and/or fell into FPL's facilities. Many of these trees were outside of easements or public rights of way where FPL is generally allowed to trim. As a result, no additional amount of

traditional tree trimming would help mitigate this issue. Tree damage was particularly impactful on FPL laterals.

The two tables below provide feeder and lateral outage performance statistics for Hurricanes Matthew and Irma.

	Overhead non-Hardened			Overhead Hardened			Underground			Total		
Matthew	Out	Pop	% Out	Out	Pop	% Out	Out	Pop	% Out	Out	Pop	% Out
Distribution Feeders	280	2,031	14%	68	721	9%	11	493	2%	359	3,245	13%
Distribution Laterals	3,473	82,729	4%	N.A.	N.A.	N.A.	238	101,892	0.2%	3,711	184,621	2%

Pop = Population; Lateral population includes laterals with multi-stage fusing

IRMA- 2017	Overhead Non-Hardened			Overhead Hardened			Underground			Total		
	Out	Pop	% Out	Out	Pop	% Out	Out	Pop	% Out	Out	Pop	% Out
Distribution Feeders	1,609	1,958	82%	592	859	69%	85	470	18%	2,286	3,287	70%
Distribution Laterals	20,341	84,574	24%	N.A.	N.A.	N.A.	3,767	103,384	4%	24,108	187,958	13%

Pop = Population; Lateral population includes laterals with multi-stage fusing

FPL notes that, overall, for Hurricane Irma, many more laterals experienced outages compared to feeders, thus laterals required significantly more time to restore (871,000 CMH) compared to feeders (170,000 CMH). FPL continues to promote its Right Tree Right Place initiative and recommends there be changes to state laws and/or local ordinances to restrict the type and location of trees and provide utilities additional trimming rights to address existing tree conditions.[1]

Additionally, FPL notes that day-to-day, hardened feeders perform approximately 40% better than non-hardened feeders.

Transmission Line Sections/Substations Performance

The transmission system's performance was excellent during Hurricanes Matthew and Irma. Equipment and conductor damage was minimal as a result of our investments in transmission hardening and the installation of flood monitoring equipment in those substations located in flood prone areas. Substations that experienced outages were restored in one day. During Hurricanes Matthew and Irma, flood monitoring equipment operated as expected, providing notification which allowed FPL to proactively de-energize three substations (one in Matthew and two in Irma) and prevent potential serious damage from occurring at these substations.

[1] Where municipalities are not actively engaged in ensuring appropriate limitations on planting trees in public rights of way, restoration efforts are impeded and made more costly. In fact, one particular municipality is actively planting "wrong trees in the wrong place," in spite of FPL's direct communications and efforts to encourage its Right Tree Right Place initiative.

The tables below provide substation line section outage performance for Hurricanes Matthew and Irma.

MATTHEW - 2016	Overhead Non-Hardened			Overhead Hardened			Underground			Total		
	Out	Pop	% Out	Out	Pop	% Out	Out	Pop	% Out	Out	Pop	% Out
Trans. Line Sections	16	350	5%	23*	846	3%	0	49	0%	39	1,245	3%

IRMA - 2017	Overhead Non-Hardened			Overhead Hardened			Underground			Total		
	Out	Pop	% Out	Out	Pop	% Out	Out	Pop	% Out	Out	Pop	% Out
Trans. Line Sections	60	306	20%	142**	884	16%	13***	51	25%	215	1241	17%

* 2 sections were out because substation was proactively de-energized due to flooding
** 4 sections were out because substations were proactively de-energized due to flooding
*** No underground section was damaged or failed causing an outage; however, the sections were out due to line termination equipment in substations.

The table below compares substation outage and restoration performance – Irma vs, Wilma.

Substations	Wilma 2005	Irma 2017
De-energized	241	92
Restored (Days)	5	1

Smart Grid Performance

During Hurricane Matthew and Irma, smart grid devices prevented a significant amount of customer outages, assisted with restoration efforts and reduced restoration time and costs. Specifically, automated feeder switches avoided approximately 664,000 outages during Hurricanes Matthew and Irma. Additionally, FPL's restoration crews are able to "ping" smart meters before leaving an area to ensure that power is, in fact, restored. This prevents restoration crews from leaving an area, thinking all power was restored, only to be called back when the customer informs FPL that they are still without service. FPL is also enhancing an application, first utilized during Hurricanes Matthew and Irma, whereby it will be able to "bulk meter ping" smart meters to confirm whether customers have service.

Automated Feeder Switches	Avoided Customer Outages
Matthew - 2016	118,000
Irma - 2017	546,000

Estimate of Storm Restoration Cost Savings Due to Hardening based on Storm Damage Model Simulation

The attached analysis provides an estimate of transmission and distribution storm restoration savings for Hurricanes Matthew and Irma that resulted from storm hardening completed by FPL prior to the storms' impacts. To calculate these savings, FPL utilized its Storm Damage Model (the same model FPL utilizes to estimate damage when a storm approaches FPL's service territory) to simulate damage that likely would have occurred without hardening and determine the associated required construction man hours (CMH) that would have been required to restore service in the absence of hardening, days to restore in the absence of hardening and associated incremental restoration costs. Additionally, FPL calculated the 40-year net present value of these savings for two scenarios – (1) a similar storm occurs every 3 years; and (2) a similar storm occurs every 5 years.

As indicated on the attached analysis, the 40-year net present values of the savings related to storm hardening are significant. In the absence of hardening the estimated percentage increase in CMHs for Hurricane Matthew and Hurricane Irma restoration would have been significantly higher (36% and 40%, respectively), days to restore would have been increased (50% and 40%, respectively) and restoration costs would have been greater (36% and 40%, respectively).

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Estimate of Storm Restoration Cost Savings Due to Hardening based on Storm Damage Model Simulation

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]
	Construction Man-Hours (CMH)				Days to Restore				Storm Restoration Costs (Millions)				40 Yr NPV Savings (2017$)	
Storm	Actual	Modeled System Without Hardening	Additional CMH without Hardening	% Increase without Hardening	Actual	Modeled System Without Hardening	Additional Days to Restore without Hardening	% Increase without Hardening	Actual	Modeled System Without Hardening	Additional Storm Restoration Costs without Hardening	% Increase without Hardening	40 Yr NPV Savings Every 3 Years (2017$)	40 Yr NPV Savings Every 5 Years (2017$)
Matthew	257,000	350,000	93,000	36%	4	6	2	50%	$290	$395	$105	36%	$653	$406
Irma	1,195,000	1,678,000	483,000	40%	10	14	4	40%	$1,226	$1,722	$496	40%	$3,082	$1,915

Notes:

All costs and CMH are Transmission and Distribution only, and exclusive of follow-up work

[1] Calculated based on actual storm restoration requirements
[2] FPL storm damage model simulation results of CMH incurred without hardening
[3] Additional CMH without hardening (Col. 2 - Col. 1)
[4] Percent increase in CMH without hardening (Col. 3/Col. 1)
[5] Actual days to restore service
[6] Storm damage model simulation result of the days to restore service without hardening (assumes same restoration resources as actual)
[7] Additional days to restore without hardening (Col. 6 - Col. 5)
[8] Percent increase in days to restore without hardening (Col. 7/Col. 5)
[9] Actual cost of restoration. Irma costs are preliminary
[10] Storm damage model simulation result of restoration costs without hardening
[11] Additional restoration costs without hardening (Col. 10 - Col. 9)
[12] Percent increase in restoration costs without hardening ((Col. 11/Col. 9)
[13] 40 year net present value savings assuming a similar storm every three years (calculation details attached)
[14] 40 year net present value savings assuming a similar storm every five years (calculation details attached)

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Estimated Storm Restoration Costs Savings due to Hardening ($MM)

	Matthew Savings	
	Every 3 years	Every 5 years
40-Year NPV (2017$)	**$653**	**$406**

Discount Rate = 7.76%

	Matthew Savings			CPI	
Year	Every 3 years	Every 5 years	CPI	Multiplier	Matthew
1	$105	$105	2.1%	1.000	$105
2	$0	$0	2.4%	1.024	$107
3	$0	$0	2.4%	1.049	$110
4	$113	$0	2.6%	1.076	$113
5	$0	$0	2.7%	1.105	$115
6	$0	$118	1.7%	1.124	$118
7	$121	$0	2.5%	1.152	$121
8	$0	$0	2.4%	1.179	$124
9	$0	$0	2.3%	1.206	$127
10	$130	$0	2.2%	1.233	$130
11	$0	$133	2.2%	1.260	$133
12	$0	$0	2.2%	1.288	$136
13	$139	$0	2.2%	1.317	$139
14	$0	$0	2.2%	1.346	$143
15	$0	$0	2.2%	1.375	$146
16	$150	$150	2.1%	1.404	$150
17	$0	$0	2.1%	1.434	$153
18	$0	$0	2.1%	1.464	$157
19	$161	$0	2.1%	1.495	$161
20	$0	$0	2.1%	1.526	$165
21	$0	$169	2.1%	1.558	$169
22	$173	$0	2.1%	1.590	$173
23	$0	$0	2.1%	1.623	$177
24	$0	$0	2.1%	1.656	$181
25	$185	$0	2.1%	1.691	$185
26	$0	$190	2.1%	1.727	$190
27	$0	$0	2.1%	1.763	$194

28	$199	$0	2.1%	1.801	$199
29	$0	$0	2.2%	1.840	$204
30	$0	$0	2.2%	1.880	$209
31	$214	$214	2.1%	1.920	$214
32	$0	$0	2.2%	1.962	$219
33	$0	$0	2.1%	2.004	$224
34	$230	$0	2.1%	2.047	$230
35	$0	$0	2.1%	2.090	$235
36	$0	$241	2.1%	2.135	$241
37	$246	$0	2.1%	2.180	$246
38	$0	$0	2.1%	2.226	$252
39	$0	$0	2.1%	2.274	$258
40	$265	$0	2.1%	2.322	$265
NPV (2017$)	**$653**	**$406**			

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Estimated Storm Restoration Costs Savings due to Hardening ($MM)

	Irma Savings	
	Every 3 years	Every 5 years
40-Year NPV (2017$)	**$3,082**	**$1,915**

Discount Rate = 7.76%

	Matthew Savings			CPI	
Year	Every 3 years	Every 5 years	CPI	Multiplier	Irma
1	$496	$496	2.1%	1.000	$496
2	$0	$0	2.4%	1.024	$507
3	$0	$0	2.4%	1.049	$520
4	$532	$0	2.6%	1.076	$532
5	$0	$0	2.7%	1.105	$545
6	$0	$558	1.7%	1.124	$558
7	$571	$0	2.5%	1.152	$571
8	$0	$0	2.4%	1.179	$585
9	$0	$0	2.3%	1.206	$599
10	$613	$0	2.2%	1.233	$613
11	$0	$628	2.2%	1.260	$628
12	$0	$0	2.2%	1.288	$643
13	$659	$0	2.2%	1.317	$659
14	$0	$0	2.2%	1.346	$674
15	$0	$0	2.2%	1.375	$691
16	$707	$707	2.1%	1.404	$707
17	$0	$0	2.1%	1.434	$724
18	$0	$0	2.1%	1.464	$742
19	$759	$0	2.1%	1.495	$759
20	$0	$0	2.1%	1.526	$778
21	$0	$796	2.1%	1.558	$796
22	$815	$0	2.1%	1.590	$815
23	$0	$0	2.1%	1.623	$835
24	$0	$0	2.1%	1.656	$855
25	$876	$0	2.1%	1.691	$876
26	$0	$897	2.1%	1.727	$897
27	$0	$0	2.1%	1.763	$918

28	$940	$0	2.1%	1.801	$940
29	$0	$0	2.2%	1.840	$963
30	$0	$0	2.2%	1.880	$986
31	$1,009	$1,009	2.1%	1.920	$1,009
32	$0	$0	2.2%	1.962	$1,034
33	$0	$0	2.1%	2.004	$1,058
34	$1,084	$0	2.1%	2.047	$1,084
35	$0	$0	2.1%	2.090	$1,110
36	$0	$1,136	2.1%	2.135	$1,136
37	$1,164	$0	2.1%	2.180	$1,164
38	$0	$0	2.1%	2.226	$1,192
39	$0	$0	2.1%	2.274	$1,220
40	$1,250	$0	2.1%	2.322	$1,250
NPV (2017$)	**$3,082**	**$1,915**			

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FPL
WEIGHTED AVERAGE COST OF CAPITAL

STATE INCOME TAX	5.50%
FEDERAL INCOME T	21.00%
COMPOSITE INCOME TAX RAT	25.35%

MODEL DATE:	1-Jan-18

Debt Cost Based on Blue Chip Corporate Aaa and Bbb Bonds

SOURCE	WEIGHT[1]	COST[2]	/TD COST	AFTER TAX /TD COST	PRE TAX /TD COST
DEBT	40.40%	4.88%	1.97%	1.47%	1.97%
COMMON	59.60%	10.55%	6.29%	6.29%	8.42%
TOTAL	100.00%		8.26%	**7.76%**	10.39%

AFTER-TAX WACC	**7.76%**

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Consumer Prices (1982-84=1.000) All-Urban
(Forecast adjusted to match budget assumptions)

	Index	% Change	
2009	2.1454		
2010	2.1806	1.64%	
2011	2.2494	3.16%	
2012	2.2959	2.07%	
2013	2.3296	1.46%	
2014	2.3674	1.62%	
2015	2.3702	0.12%	
2016	2.4001	1.26%	
2017	2.4512	2.13%	Budget Assumptions
2018	2.5100	2.40%	2.40%
2019	2.5703	2.40%	2.40%
2020	2.6371	2.60%	2.60%
2021	2.7083	2.70%	2.70%
2022	2.7553	1.73%	
2023	2.8231	2.46%	
2024	2.8909	2.40%	
2025	2.9569	2.28%	
2026	3.0228	2.23%	
2027	3.0895	2.21%	
2028	3.1573	2.19%	
2029	3.2270	2.21%	
2030	3.2981	2.20%	
2031	3.3693	2.16%	
2032	3.4411	2.13%	
2033	3.5142	2.12%	
2034	3.5887	2.12%	
2035	3.6642	2.10%	
2036	3.7408	2.09%	
2037	3.8187	2.08%	
2038	3.8972	2.06%	
2039	3.9779	2.07%	
2040	4.0603	2.07%	
2041	4.1449	2.08%	
2042	4.2324	2.11%	
2043	4.3226	2.13%	
2044	4.4153	2.15%	
2045	4.5104	2.15%	
2046	4.6077	2.16%	

2047	4.7067	2.15%
2048	4.8099	2.19%
2049	4.9122	2.13%
2050	5.0167	2.13%
2051	5.1233	2.13%
2052	5.2323	2.13%
2053	5.3435	2.13%
2054	5.4572	2.13%
2055	5.5732	2.13%
2056	5.6917	2.13%
2057	5.8128	2.13%

Actuals thru 2017 from BLS