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September 13, 2021

VIA ELECTRONIC FILING
Adam Teitzman, Commission Clerk
Division of the Commission Clerk and Administrative Services
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, FL 32399

RE: Docket No. 20210015-EI
Petition by FPL for Base Rate Increase and Rate Unification

Dear Mr. Teitzman:

Attached for filing on behalf of Floridians Against Increased Rates, Inc. ("FAIR") in the above-referenced docket are the Supplemental Direct Testimony and Exhibits re: Proposed Settlement Agreement of FAIR witness John Thomas Herndon.

Please let me know if you should have any questions regarding this submission.

Cordially yours,

Robert Scheffel Wright

Robert Scheffel Wright

RSW:fyh
Encl.

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition by Florida Power & Light Company for Rate Unification and for Base Rate Increase	))))	DOCKET NO. 20210015-EI FILED: SEPTEMBER 13, 2021

SUPPLEMENTAL DIRECT TESTIMONY

OF JOHN THOMAS HERNDON

RE: PROPOSED SETTLEMENT AGREEMENT

On Behalf of

Floridians Against Increased Rates, Inc.,

Florida Rising, Inc.,

The League of United Latin American Citizens of Florida, and

The Environmental Confederation of Southwest Florida

IN RE: PETITION BY FLORIDA POWER & LIGHT COMPANY FOR RATE UNIFICATION AND FOR BASE RATE INCREASE, DOCKET NO. 20210015-EI

SUPPLEMENTAL DIRECT TESTIMONY OF JOHN THOMAS HERNDON REGARDING PROPOSED SETTLEMENT AGREEMENT ON BEHALF OF FLORIDIANS AGAINST INCREASED RATES, INC., FLORIDA RISING, INC., THE LEAGUE OF UNITED LATIN AMERICAN CITIZENS OF FLORIDA, AND THE ENVIRONMENTAL CONFEDERATION OF SOUTHWEST FLORIDA

INTRODUCTION

Q. Please state your name and business address.

A. My name is John Thomas Herndon, and my address is 9062 Eagles Ridge Drive, Tallahassee, Florida 32312.

Q. By whom and in what position are you employed?

A. In practical terms, I am self-employed as an independent contractor. After more than thirty years of service to two Florida governors, the Florida Legislature, the Public Service Commission, and other agencies in Florida's state government, as well as brief periods in consulting, I retired from full-time employment in 2005. Since that time, I have worked as an independent contractor, including service as a director and board member for several organizations and occasionally as a consultant on various matters, including utility issues.

Q. On whose behalf are you testifying in this proceeding?

A. I am testifying on behalf of Floridians Against Increased Rates, Inc. (FAIR), a Florida not-for-profit corporation, and FAIR's members who are customers of FPL; Florida Rising, Inc.; the League of United Latin American Citizens of Florida (LULAC); and the Environmental Confederation of Southwest Florida (ECOSWF).

Q. Have you previously submitted testimony in this proceeding?

A. Yes. I submitted direct testimony and exhibits on behalf of FAIR and its members on June 21, 2021. My June 21 testimony was subsequently co-sponsored by Florida Rising, LULAC, and ECOSWF. My June 21 testimony also included my educational background and professional experience in public service to the State of Florida, including a term as a member of the Florida PSC.

Q. Are you sponsoring any exhibits with your supplemental testimony?

A. Yes. I am sponsoring the following exhibits:

Exhibit JTH-6	FPL Test Year Notification Letter dated January 11, 2021; and
Exhibit JTH-7	U.S. Treasury Bond Yield Rates, October 2016 and August 2021;

PURPOSE AND SUMMARY OF SUPPLEMENTAL TESTIMONY

Q. What is the purpose of your supplemental direct testimony in this docket?

A. My supplemental testimony in this proceeding provides my opinions regarding the settlement agreement that FPL and certain other parties to this docket signed on August 9, 2021 and submitted to the PSC on August 10, 2021. For convenience, I refer to that agreement as the "Settlement Agreement" and to parties that have signed the Settlement Agreement as the "Settling Parties." The Settling Parties include the Office of Public Counsel, the Florida Industrial Power Users Group (FIPUG), the Florida Retail Federation (FRF), the Southern Alliance for Clean Energy (SACE), the CLEO Institute, Vote Solar, and the Federal Executive Agencies.

My supplemental testimony also specifically addresses a new primary issue in this docket, which is stated as follows:

> Should the Stipulation and Settlement Agreement dated August 9, 2021 be approved?

Q. Please summarize the main points of your supplemental testimony.

A. In my June 21 testimony regarding FPL's requests for rate increases set forth in its petition, testimony, and MFRs, I explained how and why I believe that: FPL's requests were excessive; they represent the largest rate increase request in Florida regulatory history and would, if approved, represent the largest rate increases in Florida history. If granted, they would result in unfair, unjust, and unreasonable rates being charged to FPL's customers; and, if granted, they would be contrary to the public interest of Florida and Floridians by causing an unreasonable transfer of wealth from the pockets of FPL's customers to FPL and its sole shareholder, NextEra Energy, Inc. Nothing has occurred or come to light that would change any of my opinions stated in my June 21 testimony.

Addressing the new issue framed above, the real question presented is whether the Settlement Agreement, taken as a whole, is in the public interest. In summary, while the Settlement Agreement would take slightly less money out of the pockets of FPL's customers over the next 4 years, FPL would still earn profits that are unreasonably high by any objective standard. FPL's rates would, correspondingly, still be unfair, unjust, and unreasonable because they would be dramatically higher than necessary for FPL to provide safe and reliable service while covering all of its costs and earning a ***reasonable*** return. Like FPL's original requests, the Settlement Agreement would still result in the largest rate increases in the history of Florida electric utility regulation.

Moreover, the Settlement Agreement's provisions that would allow FPL to earn even more by amortizing – i.e., "using up" – its projected depreciation reserve surplus to earn even higher returns would most likely deprive future FPL customers of the rate-reducing benefits that the depreciation reserve surplus would provide in FPL's next rate case. Based on FPL's observed practices over recent years, this impact would likely be to deprive FPL customers of somewhere between $1 billion and $1.5 billion of rate-base-reducing value in FPL's next rate case.

For these reasons, the Settlement Agreement is contrary to the public interest and should be rejected.

BACKGROUND

Q. Please summarize your understanding of the main provisions of the Settlement Agreement.

A. From the perspective of FPL's customers, the main provisions are those that affect their rates. These include the following base rate increases:

a. $692 million per year beginning in 2022;

b. $560 million per year beginning in 2023;

c. A Solar Base Rate Adjustment (SOBRA) beginning in 2024; and

d. An additional Solar Base Rate Adjustment beginning in 2025.

Assuming no growth in FPL's sales, the 2022 increase would provide FPL with approximately $2,768 million ($2.768 billion), over the proposed settlement period of 2022-2025. Assuming no growth in sales, the 2023 rate increase would provide FPL with approximately $1,680 million, or $1.68 billion, over the 2022-2025 period. If the 2024 SOBRA were implemented at the beginning of 2024, it would provide FPL with approximately $280 million over the period: $140 million per year in 2024 and another $140 million per year in 2025, based on values presented in FPL president Eric Silagy's test year notification letter to Chairman Clark dated January 11, 2021. (For reference, I have included Mr. Silagy's test year letter as Exhibit No. JTH-6 to this testimony.) And finally, if the 2025 SOBRA were implemented at the beginning of 2025, that would add another $140 million to FPL's base rate revenues over the period. In total, and again assuming no growth in sales that would also incur the higher base rates implemented in each year, these increases would give FPL total increases in its ***annual*** base rate revenues of ***$1.532 billion per year in 2025***, and ***total cumulative base rate revenues over the 2022-2025 period of approximately $4.868 billion***.

FPL would have a defined midpoint rate of return on common equity (ROE) of 10.60 percent, with a range of 9.70 percent to 11.70 percent to be applied for earnings surveillance purposes. Pursuant to provisions of the Settlement Agreement that are referred to as the "trigger" provisions, in the event that the yield on 30-year U.S. Treasury bonds increases by a defined amount, FPL would be allowed to increase its ROE for regulatory purposes to 10.80 percent and also to increase its earnings surveillance range to 9.80 percent to 11.80 percent.

The Settlement Agreement would also allow FPL to create a depreciation reserve surplus of $1.45 billion based on certain depreciation rates for certain assets that FPL would be allowed to use, effectively, to supplement its earnings over the period, so long as its monthly return on equity does not exceed 11.70 percent. This is basically the same Reserve Surplus Amortization Mechanism, or RSAM, that FPL proposed in its original petition.

The Settlement Agreement also includes a provision for rate adjustments in the event of state or federal permanent tax changes, a storm cost recovery mechanism like those in previous settlements, an agreement not to pursue natural gas financial hedging, authorization of cost recovery for certain pilot programs, and other provisions.

In return for the revenue and rate increases described above, the RSAM provision, the advance approval of the several pilot programs and projects, and other provisions in FPL's favor, and with certain exceptions, FPL would agree not to increase its base rates before 2026.

Significantly, as presented to the PSC, the Settlement Agreement is an "all or nothing" proposition, in that the provisions of the Settlement Agreement "are contingent on approval of this Agreement in its entirety by the Commission without modification."

Q. Please explain your intended meaning of the term "the public interest" as you use it in your supplemental testimony.

A. As I explained in my June 21 testimony, I believe that the "public interest" means the public welfare generally, and this includes considerations of the overall health of the Florida economy and the welfare of all Florida citizens. With respect to a specific utility such as FPL, including both the historical FPL and the new, combined FPL including Gulf Power Company, this means at least the welfare of all of the people served and directly affected by the utility's service. This includes considerations of the economic impacts of a utility's rates and rate increase requests on individuals, households, and businesses. To be completely clear, I am not advocating in any way that low-income customers should be subsidized by a utility's other customers or by the utility's shareholders, but I am saying that the PSC must consider the overall impacts on the Florida economy and on all customers in making its decisions on rate increases, whether pursuant to a rate increase petition or pursuant to a settlement agreement.

In present-day, real-world circumstances, the PSC must recognize that many Floridians, Florida households, and Florida businesses are still struggling toward recovery from the impacts of the COVID-19 pandemic. It is obvious that, as of this writing, Florida and Floridians are suffering even more from the pandemic than they were when FPL filed its original rate petition in March. Given the continuing impacts of the COVID-19 pandemic on Florida, I believe that the Commission must consider the impacts that the Settlement Agreement would impose on all Floridians through the massive transfer of spending power and wealth from FPL's customers to FPL and its sole shareholder, NextEra Energy.

THE SETTLEMENT AGREEMENT IS CONTRARY TO THE PUBLIC INTEREST

Q. In your opinion, is the Settlement Agreement in the public interest? Please explain your opinions.

A. No. The Settlement Agreement is contrary to the public interest of Florida and Floridians because, if approved, it will unnecessarily transfer unreasonable amounts of purchasing power – more than $3 billion – from the pockets and pocketbooks of hard-working Floridians and businesses to FPL and NextEra over the next four years. This will hurt the Florida economy and is particularly egregious given that our state is still suffering greatly from the COVID-19 pandemic.

Perhaps the worst aspect of the Settlement Agreement is that most, if not all, of these increases are not necessary for FPL to fulfill its obligation to provide safe and reliable service at the lowest possible cost. FPL can and should provide service in 2022 with rates no greater than its current rates. The Public Counsel's witnesses support an overall rate reduction for FPL's customers of approximately $70 million per year in 2022, and FAIR's witnesses support a similar reduction of at least $121 million per year in 2022. While the Federal Executive Agencies take no position on the ultimate revenue increase, their witness, Michael Gorman, supports an ROE of 9.40 percent and an equity ratio of 53.5 percent, which together would produce revenue requirement results similar to those advocated by the Public Counsel's witnesses and FAIR's witnesses.

Q. How do you estimate that the Settlement Agreement would produce excess revenues on the order of $3 billion for FPL and its shareholder, NextEra?

A. My estimate is based on a comparison of the additional base rate revenues that the Settlement Agreement would give FPL to what I believe is a generous estimate of what FPL might otherwise be able to justify for the years 2023 through 2025. The revenue increases set forth in the Settlement Agreement would yield total additional base rate payments to be made by Florida citizens and businesses to FPL of approximately $4.868 billion over the 2022-2025 period covered by the Settlement Agreement. (This is the simple sum of four times the 2022 increase of $692 million per year, plus three times the 2023 increase of $560 million per year, plus two times the approximate 2024 SOBRA rate increase of $140 million per year, plus the 2025 SOBRA increase of approximately $140 million per year. (The 2022 and 2023 base rate increase values are taken directly from page 5 of the Settlement Agreement. The SOBRA values were taken from FPL president Silagy's letter to Chairman Clark dated January 11, 2021, page 3.) In 2025, when all of these annual increases would be in effect, the total annual base rate increases would be more than $1.5 billion per year.

To provide a reasonable or generous estimate of what FPL might otherwise be able to justify, I start with the positions advocated by the Public Counsel's witnesses and also by FAIR's witnesses, which indicate that FPL should be required to reduce its base rates in 2022. From there, I considered whether FPL should perhaps be allowed to increase its rates in 2023. While I am not convinced that FPL needs an increase in 2023, if, for the sake of argument, one were to assume that the Public Counsel's position that FPL should be allowed to increase its rates by approximately $417 million per year in 2023, and further to assume that both the 2024 and 2025 SOBRA increases were approved, the total ***cumulative*** base rate revenues that FPL would receive over the 2022-2025 period would be approximately $1.671 billion, over the four years, and the total ***annual*** rate increases as of 2025 would be $697 million per year. These revenue increases are dramatically less than the Settlement Agreement would provide: specifically, the four-year cumulative difference is more than $3 billion ($4.868 billion minus $1.671 billion = $3.197 billion), and the difference in the cumulative annual increases is more than $800 million per year ($1.532 billion per year minus $697 million per year = $835 million per year).

Q. How can you say that the increases provided for in the Settlement Agreement are unnecessary?

A. The Settlement Agreement increases, at least for 2022, are simply unnecessary because FPL can do its job of providing safe and reliable service with no increases at all next year. The revenue ***decrease*** proposed by FAIR, like the revenue ***decrease*** proposed by the Public Counsel for 2022 (in its positions stated in the Prehearing Order for this docket, Order No. PSC-2021-0302-PHO-EI, at page 169), would still allow FPL to recover ***all*** of its O&M costs, ***all*** of its interest expense, and ***all*** of its depreciation expense, and still provide a ***reasonable return*** on a ***reasonable amount of equity capital*** in FPL's capital structure. Similarly, while the decrease recommended by the Public Counsel does include some rate base and other adjustments, it is obvious that the ROE and equity ratio values recommended by the Public Counsel's witnesses – an ROE of 8.75 percent recommended by Professor Randall Woolridge and an equity ratio of 55.0 percent recommended by OPC's witness Kevin O'Connell – would produce results nearly identical to those recommended by FAIR's witnesses even without any other adjustments. It is also obvious that, while the Federal Executive Agencies did not take a position on revenue requirements, the recommendations of its cost of capital witness, Michael Gorman, specifically an ROE of 9.40 percent and an equity ratio of 53.5 percent, would produce similar results.

The bottom line is simple: FPL can do its job of providing safe and reliable service with no increase in 2022 and still earn a reasonable return on a reasonable amount of equity capital while covering all of its other costs and expenses and making all of its planned investments for 2022. At best, the Settlement Agreement would impose ***excessive rates and charges on FPL's customers on the order of $3 billion*** over the 2022-2025 period, and the Settlement Agreement would result in annual rates as of 2025 that are ***more than $800 million per year*** higher than necessary.

The PSC should also keep in mind the fact that, if approved, the increases provided by the Settlement Agreement would be the largest electric rate increases in Florida history.

Q. You have stated that the Settlement Agreement rate increases would be the largest in Florida history. Upon what do you base this statement?

A. I base this statement on data presented in the Public Service Commission's report titled, "REVENUE REDUCTIONS AND INCREASES ORDERED BY THE FLORIDA PUBLIC SERVICE COMMISSION FOR CERTAIN INVESTOR-OWNED ELECTRIC AND NATURAL GAS UTILITIES, UTILITIES FROM 1960 TO PRESENT (All Utilities from 1968 to Present)," which is included as Exhibit No. JTH-2 to my June 21 testimony. This document shows the amounts requested and amounts approved for Florida's investor-owned electric utilities from 1960 to the present. Casual or detailed examination will readily show that the largest previous request was FPL's request in Docket No. 20080677-EI seeking a $1.043 billion annual increase in 2010 to be followed by a $247 million annual increase in 2011. These requests were nearly as large as FPL's requests in this case.

The largest base rate increases previously approved by the PSC were those approved in the settlement of FPL's 2016 rate case, in Docket No. 20160021-EI. The actual base rate increases in that case were $400 million in 2017, $211 million in 2018, a plant-specific increase of $200 million in mid-2019, and four SOBRA increases totaling approximately $210 million per year between 2017 and 2020. These are obviously much less than the increases in the current proposed Settlement Agreement.

Q. Are there other aspects of the Settlement Agreement that are contrary to the public interest?

A. Yes. The 10.60 percent ROE that the Settlement Agreement would allow is unreasonable, as is the proposed 59.6 percent equity ratio. The authorized range of allowable returns on equity, from 9.70 percent to 11.70 percent, would potentially allow FPL to earn even more excessive returns; further, if the PSC were to approve the RSAM without capping its use at the midpoint ROE, it would, based on FPL's recent observed behavior, ensure that FPL would earn returns greater than the just and reasonable midpoint return, whatever that is determined to be.

Q. Are you aware of other information that would inform the PSC as to whether the rate increases, ROE, and equity ratio in the Settlement Agreement are reasonable?

A. Yes, I am. Keeping in mind that it is FPL's job – I would argue its duty, although FPL prefers to call it a "goal" – to provide safe and reliable service at the lowest possible cost, the PSC must recognize that many other utilities provide safe and reliable service with ROEs and equity ratios significantly less than those requested by FPL in the Settlement Agreement. Relevant results for 2020 have already been presented in testimony and exhibits in this case. For the first eight months (January through August) of 2021, the available data show that, for vertically integrated electric utilities, the ROEs approved by state regulatory authorities, including the Florida PSC, have ranged from a low of 9.00 percent (in New Mexico for El Paso Electric Company) to a high of 9.85 percent, by the Florida PSC for Duke Energy Florida. The average ROE for the ten reported cases during this period was 9.47 percent. Only seven of these cases had identifiable equity ratios, and the average of those was 51.62 percent.

The Florida PSC's decision to approve the settlement agreement negotiated by Duke Energy Florida, the Florida Public Counsel, and other intervenor parties, is notable: the ROE was 9.85 percent, the highest in the U.S. so far this year, and the equity ratio was 53.0 percent. Order No. PSC-2021-0202-AS-EI, issued June 4, 2021, at pages 3 and 12. Tampa Electric

Company has also presented a settlement agreement to the PSC, also joined by the Public Counsel, with an ROE of 9.95 percent and an equity ratio or 54.0 percent. In re: Petition for Rate Increase by Tampa Electric Company, Docket No. 20210034-EI, Tampa Electric Company's Motion to Suspend Procedural Schedule and Approve 2021 Stipulation and Settlement Agreement, FPSC Document No. 08857-2021, at 2-3 (filed August 6, 2021).

The corresponding values of the key financial variables – ROE and equity ratio – translate into vast sums of customer money for FPL. Even taking the ROE alone, FPL has acknowledged that 100 basis points represents approximately $360 million per year in 2022, and $386 million per year in 2023. If FPL, the Public Counsel, and the other Settling Parties would have negotiated an ROE of 9.5 percent, which is slightly above the national average for this year, the difference in revenue requirements – customer payments to FPL – would have been $396 million in 2022 and approximately $424 million per year in 2023, 2024, and 2025. This simple difference, with no adjustment of the equity ratio, would amount to well over $1.6 billion over the proposed term of the Settlement Agreement. The difference if they had agreed to the ROE that Duke Energy Florida and the Public Counsel negotiated in the settlement approved by the PSC, again without involving the equity ratio, would have been over $1.1 billion.

These are significant amounts of money to pandemic-impacted Floridians and Florida businesses. Recognizing the objective measures of what utilities need to provide service, as shown by national data and by the Duke settlement approved by the Florida PSC, it is not in the public interest in any way to approve a deal that transfers such amounts of purchasing power from Floridians to FPL and NextEra in ordinary time, let alone when our state and her citizens continue to suffer from the COVID-19 pandemic.

Q. Isn't it true that the settlement approved by the PSC in 2016, which included both FPL and the Office of Public Counsel as signatories, had some terms that are similar to those in the 2021 Settlement Agreement? If this is true, then how can you criticize the Settlement Agreement in this case?

A. In the first place, any settlement, like any rate case proposal, must be evaluated on its own merits. For the reasons explained above, it is my strong opinion that the rate increases that the Settlement Agreement proposed in this docket would be excessive and harmful to Floridians and Florida businesses both in the short run and in the long run. In summary, the Settlement Agreement in this case is contrary to the public interest of Florida, Florida citizens, and Florida businesses.

Having made these points clear, I will agree that the ROE, the equity ratio, and the RSAM provisions of the Settlement Agreement in this case are nearly identical to those in the 2016 settlement. The ROE in this case is 10.60 percent as compared to 10.55 percent in the 2016 settlement, the equity ratio is identical, and the RSAM is similar, although the 2016 settlement had a smaller original balance, $1.25 billion as compared to $1.45 billion in the current proposed Settlement Agreement.

However, there are three significant differences between these two settlements. First, the total amounts that the current Settlement Agreement would take from Floridians are much greater than the total rate and revenue increases that resulted from the 2016 settlement. Second, the percentage of FPL's original request that the current Settlement Agreement would provide to FPL is significantly greater. And finally, the market costs of capital are significantly lower today than in 2016, indicating that the ROE that the Settling Parties have agreed to in the current Settlement Agreement is excessive. Considering all factors, the current Settlement Agreement is a very bad deal for FPL's customers and for Florida, and it should be rejected.

Q. **Please summarize the total cost impacts that would be imposed on FPL's customers by the current Settlement Agreement as compared to those under the 2016 settlement.**

A. The total amounts of money – of purchasing power otherwise in the hands, pockets, and checking accounts of Floridians – that the current Settlement Agreement would take from Floridians and Florida businesses is much greater than the corresponding amounts in the 2016 settlement. The total additional base rate revenues over four years, per the 2016 settlement as shown in Exhibit No. JTH-2 was approximately $3.126 billion, including the mid-2019 increase for FPL's Okeechobee generating unit and including SOBRA increases in 2017, 2018, 2019, and 2020, and carrying forward all increases through 2020 in order to provide a comparable four-year comparison. The total amount of customer money that FPL would take under the current proposed Settlement Agreement greatly exceeds the amount obtained under the 2016 settlement: $4.868 billion minus $3.126 billion = $1.742 billion.

Similarly, the annual rate increases in the fourth year of the 2016 settlement, including the Okeechobee increase and all of the SOBRA increases, were $1.033 billion per year, which is $500 million a year less than the $1.532 billion per year that the current Settlement Agreement would impose in its fourth year.

Q. **Please explain the differences between the amounts that the settling parties in 2016 agreed to as compared to the amounts that the Settling Parties to the current Settlement Agreement allowed FPL to take from customers.**

A. Comparing the two base rate increases requested by FPL in its 2016 case to the corresponding settlement amounts shows that the 2016 settlement deal agreed to by the Public Counsel serving at that time provided approximately 54 percent of FPL's original request in the increases approved in the 2016 settlement. Including FPL's annual Okeechobee request of $209 million per year and all four of the SOBRA increases, the percentage becomes 66.3 percent. By comparison, the percentage of the annual base rate requests agreed to in the current Settlement Agreement is 76.8 percent.

The total revenue increases over the four-year term that the current Settlement Agreement would give FPL, $4.868 billion, represents approximately 73.0 percent of the total revenues requested in FPL's original filing. By comparison, the total revenue increases to FPL per the 2016 settlement represented about 59.6 percent of FPL's original requests ($3.126 billion divided by $5.243 billion). The bottom line is simple: the current Settlement Agreement would give FPL much more outright revenues and a significantly greater percentage of its original request than did the 2016 settlement.

Q. Please explain why you believe that current capital market conditions are different from those in 2016.

A. In simple terms, the cost of capital is significantly less today than it was when the 2016 settlement was agreed to. The yield rate on 30-year U.S. Treasury bonds is widely regarded as the appropriate measure of the risk-free cost of capital. The 2016 settlement was executed on October 6, 2016, and the current Settlement Agreement was executed on August 9, 2021. My Exhibit No. JTH-7 shows the yield rates for 30-year U.S. Treasury bonds for the month of October 2016 and the month of August 2021. The average of the daily yield rates for October 2016 was 2.50 percent, which is approximately 58 basis points greater than the average of the daily yield rates for the corresponding period of August 2021. While this difference is not directly dispositive of the question as to what a reasonable return would be for FPL in this case – which, of course, is addressed extensively by witnesses in this case – it clearly indicates that overall costs of capital are less now than in 2016, which should inform the PSC that the ROE approved here should be less than the ROE in 2016.

Of course, the PSC also has readily available information regarding appropriate ROEs for electric utilities that support this same conclusion. The national average ROE for vertically integrated U.S. electric utilities in the first eight months of 2021 was only 9.47 percent, and the highest ROE approved thus far in the U.S. in 2021 is the 9.85 percent approved by the Florida PSC for Duke Energy Florida. The PSC will also note that the average equity ratio for U.S. utility decisions involving vertically integrated utilities was 51.62 percent, and that the equity ratio for Duke Energy Florida approved by the PSC is 53.0 percent (also the highest reported in the U.S. so far this year). These data strongly support what I believe is the obvious conclusion that the 10.60 percent ROE in the Settlement Agreement is grossly excessive.

Q. Please summarize your opinions regarding the comparison of the Settlement Agreement proposed in this case to the settlement agreement approved by the PSC for FPL in 2016.

A. While the ROE, equity ratio, and RSAM provisions of both settlements are similar, the current Settlement Agreement is much more generous to FPL, and as a result, much more injurious to FPL's customers, than was the 2016 settlement. The customer-adverse provisions that stand out the most are the fact that the current Settlement Agreement would give FPL much more of customers' money – more than $1.7 billion more – than the 2016 settlement, while also giving FPL significantly more as a percentage of its original requests, all while allowing FPL to earn an unreasonably high return on equity as compared to current capital market conditions vs. those that existed when the 2016 settlement was negotiated.

Q. In your opinion, are the higher rates that customers would pay under the Settlement Agreement fair and reasonable in light of the fact that FPL would agree not to further increase its base rates during the term of the Settlement Agreement?

A. No. In short, the price that customers would pay – in excessive rates and revenues – for the "rate stability" that would nominally be afforded by the Settlement Agreement is simply excessive. FPL does not need the 2022 increase that the Settlement Agreement would give it, and probably does not need all of what the Settlement Agreement would provide in 2023, 2024, or 2025. Customers should not be asked to pay more than FPL needs to provide safe and reliable service, cover its legitimate operating and interest costs, and earn a reasonable return on its investment. The excess revenues that FPL would earn under the Settlement Agreement simply do not justify over-paying for their service.

FPL'S PROPOSED "RESERVE SURPLUS AMORTIZATION MECHANISM"

Q. What is FPL's proposed "Reserve Surplus Amortization Mechanism," or "RSAM" in the Settlement Agreement?

A. Let me start by observing that the RSAM in the Settlement Agreement appears to be virtually identical to the RSAM proposed in FPL's original case; the only apparent differences are the total amount of depreciation reserve, $1.45 billion in the Settlement Agreement as compared to $1.48 billion in FPL's original filing, and a limit, only applicable in 2022, on the amount that FPL can amortize in 2022 to $200 million. (Again, this limit is only applicable in 2022; FPL otherwise has complete discretion subject to its ROE not exceeding 11.70 percent under the Settlement Agreement.)

Q. In the context of the Settlement Agreement, is this RSAM proposal in the public interest?

A. No. At a minimum, as proposed by FPL and as previously employed by FPL, it is contrary to the public interest because it allows FPL to earn returns above the fair and reasonable midpoint ROE and results in unfair, unjust, and unreasonable rates being charged to FPL's customers.

As employed by FPL, FPL can debit the RSAM or "Reserve Surplus" account in its discretion to offset amortization expense, which increases book earnings, and it can use any amount available in the RSAM account to achieve earnings up to the top of its ROE range. If FPL is allowed to use up a depreciation surplus of any amount, e.g., the $1.45 billion surplus allowed for in the Settlement Agreement, such that that surplus is fully depleted at the end of the four-year period, then FPL's customers as of that time will be deprived of the rate-reduction benefits that the surplus would provide when applied to FPL's future rate base. Whatever the amount of FPL's rate base might be in the future, if FPL is allowed to use up the surplus, then FPL's rate base in its next rate case would be $1.45 billion greater than if the surplus were not used up, and FPL's future customers would be saddled with the capital costs – return on equity and interest cost – of that much greater rate base. This is clearly intergenerational inequity!

The public interest point and the fairness point are the same: customers create any depreciation surplus by over-paying depreciation expense over time. Standard regulatory accounting and ratemaking practice is to flow back this customer-created value to the utility's customers; although the term of the amortization period (e.g., 4 years vs. 20 years) is sometimes disputed by parties in a rate case, the customer-created surplus value is always flowed back to customers. This standard treatment is fair and in the public interest. FPL's proposal, in stark contrast, would keep up to the entire $1.45 billion of customer-created value for FPL and its shareholder.

I have reviewed the testimony of FAIR's witness Tim Devlin on this subject, and I agree with Mr. Devlin that the RSAM provided for in the Settlement Agreement is contrary to the public interest. I further agree that, if any RSAM-type proposal is to be allowed in this case, FPL's ability to use it should be capped to only amounts necessary for FPL to achieve its midpoint ROE, which is the fair and reasonable return to FPL's equity investor.

Relative to my earlier discussion regarding the partial comparability of the 2016 settlement and the current proposed Settlement Agreement, I would add the following regarding the RSAM. The RSAM provision in this Settlement Agreement is also likely to harm FPL's customers in the same way that the RSAM provision in the 2016 settlement harmed them. The first harm would likely be enabling FPL to earn returns that are consistently 100 basis points above the midpoint ROE, which is supposed to be the "fair and reasonable" or the "fair, just, and reasonable" return on FPL's equity investment. This is what occurred under the 2016 settlement, and there is every reason to expect that FPL will attempt to get the same results if given the opportunity to do so. Second, the RSAM would harm FPL's customers by depriving them of the depreciation reserve that their payments of depreciation expense should and would, under normal regulatory accounting principles, create and be applied to reduce FPL's rate base in its next rate case. Rates that produce returns that are consistently 100 basis points above the fair and reasonable return level are unfair, unjust, and unreasonable, and taking customer-created surplus value for the benefit of FPL and its shareholder, NextEra Energy, is equally unfair, unjust, and unreasonable. The mere fact that the two settlement agreements are similar in this regard does not make either one of them consistent with the public interest of Florida and Floridians.

SUMMARY AND RECOMMENDATIONS

Q. Please summarize your opinions regarding the proposed Settlement Agreement.

A. In closing, my opinions regarding the rate increases that would be imposed on FPL's customers by the Settlement Agreement are substantially the same as my opinions regarding FPL's original rate increase requests: the PSC should reject the Settlement Agreement for essentially the same reasons that it should reject FPL's original requests. While the Settlement Agreement would result in modestly less money being taken from Floridians and Florida businesses unnecessarily than FPL's original request would have taken, it is my opinion that FPL has generally fulfilled its mission to provide safe, reliable, and reasonably priced energy services within the revenue parameters of its current base rates, and no further base rate increases are necessary, at least not for 2022! To the same effect, the RSAM in the Settlement Agreement is essentially the same as the RSAM in FPL's original case, and it should be rejected for the reasons discussed in my testimony above.

Given that the Settlement specifically provides that it is an "all or nothing" deal, the PSC should reject the Settlement Agreement because it is contrary to the public interest.

Q. Does this conclude your supplemental direct testimony regarding the proposed Settlement Agreement?

A. Yes, it does.

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FPSC - COMMISSION CLERK

FPL.

Eric E. Silagy
President and
Chief Executive Officer

January 11, 2021

The Honorable Gary F. Clark
Chairman
Florida Public Service Commission
2450 Shumard Oak Boulevard
Tallahassee, Florida 32399-0850

Re: Test Year Notification Pursuant to Rule 25-6.140, F.A.C.

Dear Chairman Clark:

Florida Power & Light Company ("FPL" or "the Company") provides electric service to more than 5.6 million customer accounts, or more than half of our state's population across 43 counties, including portions of Northwest Florida. Our long-term strategy of effectively managing operational costs and making smart investments to maintain and improve our infrastructure remains central to FPL's success in delivering the best energy value in America. Indeed, today we provide electric service that is cleaner, more fuel efficient and more reliable than ever before, while our typical residential 1,000 kWh customer bill continues to be well below the national average. We provide outstanding value to our fellow Floridians, supporting the strength and stability of Florida's economy while preparing responsibly to ensure we meet our state's future energy needs.

Over the last 22 years, the Florida Public Service Commission ("FPSC" or the "Commission") has approved six multi-year rate plans for FPL that have provided customers with a framework for rate stability and certainty, while at the same time enabling FPL to maintain a strong credit rating and balance sheet which allows us to consistently raise capital on attractive terms. This financial stability provides the necessary platform for the Company to continue to meet the fundamentals of day-to-day operations and customer service, the exigencies of responding to major storms or financial market disruptions and the challenges of making and executing on long-term investments, all of which provide important benefits to our customers. Multi-year rate plans have worked exceptionally well in meeting those objectives.

The Company currently is operating under a multi-year rate plan that began in January 2017 and had a minimum term through the end of December 2020. However, by aggressively controlling expenses and using the benefits of both the Tax Cuts and Jobs Act of 2017 and the current agreement's Reserve Surplus Amortization Mechanism, FPL was able to extend the rate stability offered under the current multi-year plan for an unprecedented fifth year (i.e., through the end of December 2021), and also was able to avoid additional customer charges for the restoration costs associated with Hurricanes Irma, Dorian, Isaias and Eta, which totaled in aggregate more than $1.7 billion.

In 2019, FPL's parent NextEra Energy acquired Gulf Power Company ("Gulf") from the Southern Company. Soon after the acquisition, the benefits of merging and integrating Gulf's operations into FPL for the mutual benefit of the existing FPL and Gulf customers became clear. The merger of the two companies was approved by the Federal Energy Regulatory Commission on October 15, 2020. FPL and Gulf currently are engaged in the process of integrating operations in a manner that maximizes the benefits for the unified company. Gulf formally merged into FPL in January 2021, with operational consolidation to be essentially complete by January 2022.

The consolidated company will be well positioned to continue to improve the level of service for all customers, while maintaining rates that are significantly below the national average. Consolidation offers numerous benefits over operating the FPL and Gulf systems separately, including: better optimization of generating assets, increased fuel diversity, reduced emissions, increased siting flexibility with the opportunity to improve firm capacity values for solar, improved reliability and resilience, improved asset management, improved opportunity for coordinated storm response, and opportunities for regulatory and administrative efficiencies that benefit both the Company and the Commission, including the elimination of intercompany charges, affiliate transactions and the need for intercompany agreements and related audits. As one example of the benefits of consolidation, FPL is building the North Florida Resiliency Connection ("NFRC"), a 176-mile transmission line that will strengthen Florida's transmission system as well as connect Gulf directly to FPL. The NFRC will enhance reliability and resiliency for all customers and allow customers to benefit from greater diversity in solar output from sites spread out across the state's vast peninsula spanning two time zones. In the short time since acquisition, as referenced below, significant improvements already have been realized on the Gulf system through lower cost operations and better reliability. Moreover, our joint storm preparation and response to Hurricanes Sally and Zeta resulted in faster than anticipated restoration of more than 285,000 customers, representing nearly 63% of Gulf's customers. We are excited about the prospects for further improvements in all facets of the combined set of operations.

As with the conclusion of prior multi-year rate plans, it will be necessary to file a request for a base rate increase to take effect at the end of the current FPL rate settlement agreement in December 2021. By the time new rates are approved to take effect in January 2022, four and four and a half years, respectively, will have elapsed since FPL's and Gulf's last general base rate increases. FPL's base rate proposal for the consolidated utility system – encompassing 2022 through 2025 – will build on the success of the current FPL settlement agreement, with the goal of providing longer-term cost certainty for customers. We are mindful of the potential impact of any increase – even for a low-cost provider such as FPL – and, thus, continue to work aggressively to find ways to deliver better, more efficient and more reliable service to ensure we are providing exceptional value to our customers.

Consistent with the consolidation of FPL and Gulf operations, FPL's base rate proposal reflects a consolidated cost of service and provides for unified rates that apply to all customers throughout the former FPL and Gulf service areas.[1] Unified rates are the natural and logical result of fully consolidating the operations of these two previously separate utility systems. FPL's proposal also

[1] In recognition of initial cost to serve differences between the existing FPL and Gulf service areas, FPL will propose a transition rider/credit mechanism to address those differences equitably for customers in the respective service regions. The transition rider/credit would decline to zero over a five-year period and would be reflected through a rider rather than as changes to unified base rates.

reflects a four-year plan that will continue to promote rate stability while allowing the Company to continue focusing on improving its performance for the benefit of customers. The amount of the base rate request has not been finalized; however, our preliminary estimate is a general base revenue adjustment of approximately $1,100 million, effective in January 2022; and a subsequent year adjustment of approximately $615 million, effective in January 2023.[2] The proposal also includes requested authority for a Solar Base Rate Adjustment ("SoBRA") mechanism to recover, subject to Commission review, the revenue requirements of up to 900 MW of cost-effective solar projects in 2024 and up to 900 MW in 2025, and no other base rate increases effective before January 2026. If the full amount of new solar capacity allowed under the SoBRA proposal were constructed, FPL's preliminary estimate is that it would result in base rate adjustments of approximately $140 million in 2024 and $140 million in 2025. Of course, the SoBRA adjustments would be offset, in part, by a reduction in FPL's fuel costs, a benefit that would flow through directly to customers via the fuel adjustment clause on customer bills.

The total of these base rate increase requests over the four-year period from 2022 through 2025 would result in an estimated average increase in total revenue of less than 3.7 percent per year. If the full amount of the requests were granted and assuming other utilities experience bill increases at only their historical rates of increase, FPL's typical customer bills would remain well below the national average. Based on current projected changes in fuel and other clauses, FPL's typical bills for January 2022 would be nearly 22 percent *less* in real terms than in 2006. Even in nominal terms, FPL's bills would be only about three and a half percent higher than in 2006 – a fraction of the nominal increases of 25-75 percent in the cost of groceries, medical care, health insurance and housing from 2006 through 2020. Significantly, through the consolidation of the two utility systems, even with the requested increase, by the end of FPL's proposed four-year rate plan, a typical residential customer in Northwest Florida in fact will see a bill *decrease* compared to today's bill. At the same time, FPL is delivering exceptional value:

- High reliability (FPL was presented with the ReliabilityOne® National Reliability Excellence Award, for the fifth time in six years, and FPSC Transmission and Distribution ("T&D") System Average Interruption Duration Index ("SAIDI") has been best among Florida investor-owned utilities for the last 14 years in a row. In addition, both FPL and Gulf achieved their best ever T&D SAIDIs in 2019 and improved upon that performance again in 2020).
- Clean and efficient power generation (FPL is one of the cleanest utilities in the country, with a best-in-class heat rate for its fossil generating fleet, rapidly expanding solar fleet, and an industry-first second nuclear license renewal).
- Award-winning customer service.

The premium value of FPL's service is driven home for our customers through industry-leading storm preparation and response, an attribute that has become increasingly critical to our customers and to Florida's economy as we've witnessed a dramatic increase over the last two decades in major storms impacting a state that is naturally and extraordinarily exposed to significant tropical

[2] Among other benefits provided through FPL's four-year rate proposal, customers will see significantly lower revenue requirements and base rate increases for 2022 and 2023 compared to what would be needed if the four-year proposal is not accepted.

storm and hurricane activity. This combination of value and affordability continues to be unparalleled anywhere in the country.

FPL's four-year base rate proposal will be similar to the multi-year rate plans that previously have been approved by the Commission, providing the necessary framework for FPL to continue to deliver top quality service while ensuring rate stability.

FPL is mindful of the many challenges caused by the COVID-19 pandemic, and we have taken extraordinary steps to help mitigate the economic effects of the pandemic on particular groups of customers, including the implementation of specific relief programs for low income and small business customers. Among these measures:

- Residential and small business customers past due on two or more FPL bills were eligible for up to a $200 credit;
- FPL's Main Street Recovery Credit Program, approved by the Commission, will help rebuild Florida's economy by providing financial relief to qualifying small businesses in the form of a 10 percent discount on their monthly energy consumption;
- FPL implemented shareholder funded low income initiatives that included: providing a credit of up to $20 each month on qualifying customer bills; additional advertising to enhance awareness of LIHEAP, Care To Share and weatherization programs; and a $3.25 million donation to Care To Share;
- FPL received Commission approval to fast-track annual fuel savings, providing customers a one-time decrease in May 2020 of nearly 25 percent on the typical residential bill;
- During the height of the pandemic, FPL suspended disconnects for nonpayment, waived late fees, offered payment extensions, refunded deposits after 12 months of prompt payment (versus 24 months under the tariff), and suspended service charges;
- FPL, its sister NextEra Energy companies, and their shareholders and employees have donated nearly $5 million in emergency funding to partner organizations on the frontlines providing assistance to those affected by the COVID-19 pandemic; and
- Throughout the pandemic, FPL has significantly increased customer outreach efforts to educate customers on energy efficiency measures, available aid resources and payment options.

It is important to keep in mind that FPL's continued investments are necessary to maintain the strong value proposition that customers expect today as well as in the future. Moreover, FPL's customer growth and general cost increases also have not abated during the pandemic. It is precisely because FPL provides highly reliable service at rates that are below the national average that our customers benefit in all economic conditions, good and bad, including during the pandemic.

In furtherance of FPL's request, and consistent with the requirements of Rules 25-6.140, 25-6.0425, and 26-6.0431 of the Florida Administrative Code, FPL submits the following additional information.

Test Years

For its 2022 base rate request, FPL proposes to use the projected 12-month period ending December 31, 2022 as the test year with the adjusted rates to be effective upon the first day of January 2022. FPL's proposed use of a projected test period is consistent with current Commission practice and prior Commission and Florida Supreme Court precedent. Furthermore, using the projected 12-month period ending December 31, 2022 as the test year will provide an accurate representation of costs for the purposes of setting rates effective January 1, 2022.

For the proposed 2023 subsequent year adjustment, FPL will use the projected 12-month period ending December 31, 2023 as the test year, with the adjusted rates to be effective upon the first day of January 2023.

Because Gulf will be integrated into FPL by the beginning of 2022, the minimum filing requirements ("MFR") that FPL will file for both the 2022 and 2023 test years will reflect full consolidation of the companies' operations.[3]

Major Factors Necessitating a Rate Increase and Estimate of Impact on Revenue Requirements

Over the 2019-2022 period, to better serve our customers, we will have invested more than $29 billion in smart, efficient infrastructure. The total estimated impact of these investments on the 2022 revenue requirement is approximately $1.9 billion, substantially offset by operating and maintenance ("O&M") productivity improvements, revenue growth, and the lower depreciation expense associated with FPL's four-year proposal referenced below, among other factors, resulting in a net revenue requirement increase of $1.1 billion. Similarly, our 2023 subsequent year adjustment reflects continued investment in infrastructure growth and improvements reflecting a net revenue requirement increase of $615 million.

Examples of incremental investments include the following:

- Capital requirements for growth: Since FPL's last settlement agreement was approved, the State of Florida has made substantial commitments to economic development and growth in the state. These economic development initiatives continue to benefit Florida's residents and businesses. FPL, which serves more than half of the state, similarly has experienced growth in our customer base and we expect to add approximately 498,000 customers from 2018 through 2025. While this growth has a positive impact by spreading existing fixed costs over a larger customer base, it also means that FPL must invest significant additional capital to meet the needs of these additional customers in building out infrastructure, including poles, wires, transformers and other components.

- Generation additions: FPL's high-efficiency fleet of power plants has one of the cleanest emission profiles among comparable utilities nationwide, and we continue to invest in

[3] FPL also will include with its filing a set of pro forma MFR schedules that project 2022 and 2023 results if FPL and Gulf were operated as separate ratemaking entities in their respective service areas, in support of standalone rates that should be approved if the Commission did not approve FPL's proposed unified rates.

cleaner, more fuel-efficient generation. Over the 2019-2022 period, FPL (including Gulf) will have added 2,722 MW of generation for which cost recovery is not provided under existing generation base rate adjustment or SoBRA mechanisms. These investments are expected to generate substantial savings for customers by reducing fuel and other costs. FPL's track record of making smart generation improvements, which are completed on time and on budget, is strong. For example, since 2001, the retirement of older, less efficient generation and FPL's investments in high-efficiency natural gas energy power plants and technology, along with new solar energy, are estimated to have saved customers nearly $11 billion on fuel – fuel that did not have to be purchased as a result of our cleaner, more efficient fleet – and have prevented more than 145 million tons of carbon dioxide emissions, equivalent to negating the emissions output of every registered vehicle in Florida for nearly the next four years.

- Electric service reliability: Our customers consistently tell us that the reliability of their electric service is a top priority. In fact, reliability of service is becoming even more important as our homes and businesses are increasingly digitally based and as more customers are working remotely. Moreover, beyond customer expectations, reliability-related regulatory requirements for physical and cyber security have increased substantially during the last five years. The North American Electric Reliability Corporation ("NERC") currently enforces approximately 100 reliability standards, containing more than 1,600 requirements and sub-requirements that govern the operation, maintenance, planning and security of the bulk electric system, requiring FPL to make significant investments to comply. Additionally, in October 2020, NERC began enforcing a new standard that addresses the supply chain risk management associated with cyber assets. We remain committed to building a stronger, smarter grid that customers can count on in good weather and bad. While FPL's service reliability is excellent – as recognized by numerous awards and demonstrated by our performance – we must continue to invest to make the grid stronger, smarter, more responsive and more resilient to outage conditions and to comply with new federal standards and requirements. Some investment is recoverable through the recently enacted Storm Protection Plan cost recovery mechanism; however, significant investment necessary to meet compliance obligations and maintain or improve day-to-day reliability for customers remains recoverable through base rates.

The depreciation study to be filed contemporaneously with this case reflects the changing mix of assets and their associated recoverable life spans. At the depreciation rates proposed by the Company in the four-year plan, annual depreciation expense is expected to be lower by approximately $240 million in 2022.

In addition to the major cost drivers described above, FPL will propose to set the Company's approved return on common equity ("ROE") midpoint at 11.5 percent, which reflects an estimated cost of equity of 11.0 percent and an ROE performance incentive of one-half percent. The 11.0 percent estimated cost of equity reflects capital market expectations looking forward during the term of the proposed four-year rate plan and will enable the Company to continue to access capital on competitive terms through 2025. The ability for a utility to earn a fair rate of return is crucial in obtaining capital under dynamic market conditions, enabling us to continue to meet customer needs and expectations at all times in all financial climates. Our performance is best in class or top decile across a number of key metrics and FPL is widely regarded as the top overall performer in the industry, bringing exceptional value to customers. To better reflect this performance and encourage continued future strong performance, FPL's proposed ROE midpoint includes a one-half percent performance incentive.

Actions and Measures Implemented to Avoid a Retail Base Rate Increase

As referenced earlier, with the effective date of new rates in January 2022, it will have been four, and four and a half years, respectively, since the last general base rate increase for FPL and Gulf. The multi-year plans approved for each company thus have provided stability and certainty around the level of customer bills. Throughout the term of its 2016 settlement agreement, FPL has worked aggressively to keep costs low while continuing to deliver outstanding reliability and superior performance in all areas of operations. A key element in FPL's ability to avoid the need for a base rate increase since 2018 has been our aggressive focus on controlling non-fuel O&M costs. Since 2010, FPL's non-fuel O&M cost per kWh has been the very best in the U.S. electric industry. Despite this achievement, FPL has continued to find innovative ways to build on its industry-leading performance for this important cost measure. To underscore these efforts, FPL's 2022 non-fuel O&M (the level to be reflected in FPL's upcoming filing) is projected to be lower than FPL's 2018 best-in-class level. As an example, FPL's Project Accelerate, an annual program designed to find new ways to improve efficiency and lower costs, will produce more than $390 million of annual run rate savings for customers reflected in our 2022 test year cost of service.

Another significant cost-saving measure that FPL has taken during the current rate plan is its merger and consolidation with Gulf. FPL estimates that consolidation is resulting in approximately $82 million per year in O&M savings for the combined companies. FPL also projects system benefits of approximately $1.5 billion as a result of generation upgrades already underway, the NFRC interconnection mentioned previously, and the ability to dispatch from, and plan for, a common fleet of generation resources. These are real savings for customers totaling more than $2.8 billion.[4]

These creative and aggressive cost-control measures have provided – and continue to provide – demonstrable customer benefits. As noted above, FPL currently projects that even with the requested 2022 base rate increase, typical bills for January 2022 would be nearly 22 percent less in real terms than in 2006.

Other Matters

Rule 25-6.140 requires the Company to indicate in this letter whether it will request that its petition be processed pursuant to Section 366.06(4), Florida Statutes. Because our annual sales exceed 500 gigawatt-hours, FPL is not eligible under this Section to make such a request.

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[4] This figure represents the cumulative present value of lower revenue requirements of $1.3 billion resulting from annual O&M savings and $1.5 billion of system benefit savings over a 30-year period. Nominal savings would be much greater.

Conclusion

No electric service provider in the country offers better overall value to its customers. We have worked extremely hard over many years to achieve this outcome. Better, more reliable service at low cost is a direct result of the smart investments we have made on behalf of our customers and our aggressive focus on controlling O&M costs. Consistent with this approach, we intend to propose a four-year plan that will allow us to continue to improve upon our performance, meet the increasing expectations of our customers and maintain the successful platform of high reliability, low bills, clean energy leadership, and overall outstanding service for the more than 11 million Floridians we serve. We look forward to presenting our proposal to the Commission for its review and consideration.

Sincerely,

Eric E. Silagy
President and CEO

cc: Florida Public Service Commission
Hon. Julie Imanuel Brown, Commissioner
Hon. Art Graham, Commissioner
Hon. Andrew Giles Fay, Commissioner
Hon. Michael LaRosa, Commissioner
Forrest Boone, Chief Advisor to Chairman Clark
Katherine Fleming, Chief Advisor to Commissioner Brown
Jim Varian, Chief Advisor to Commissioner Graham
Eddie Phillips, Chief Advisor to Commissioner Fay
Ana Ortega, Chief Advisor to Commissioner LaRosa
Braulio Baez, Executive Director
Keith Hetrick, General Counsel
Apryl Lynn, Deputy Executive Director, Administrative
Mark Futrell, Deputy Executive Director, Technical
Adam Teitzman, Commission Clerk
Judy Harlow, Director, Division of Economics
Andrew Maurey, Director, Division of Accounting & Finance
Thomas Ballinger, Director, Division of Engineering
Dale Mailhot, Director, Office of Auditing & Performance Analysis
Cynthia Muir, Director, Office of Consumer Assistance & Outreach
Cayce Hinton, Director, Office of Industry Development & Market Analysis
J. R. Kelly, Public Counsel

U.S. 30-YEAR TREASURY BOND YIELDS
OCTOBER 2016 & AUGUST 2021

`OCTOBER 2016		`AUGUST 2021	
DATE	YIELD	DATE	YIELD
3-Oct	2.34	2-Aug	1.86
4-Oct	2.40	3-Aug	1.85
5-Oct	2.44	4-Aug	1.83
6-Oct	2.46	5-Aug	1.86
7-Oct	2.46	6-Aug	1.94
11-Oct	2.50	9-Aug	1.96
12-Oct	2.51	10-Aug	1.99
13-Oct	2.48	11-Aug	1.99
14-Oct	2.55	12-Aug	2.03
		13-Aug	1.94
17-Oct	2.52		
18-Oct	2.51	16-Aug	1.92
19-Oct	2.51	17-Aug	1.92
20-Oct	2.50	18-Aug	1.91
21-Oct	2.48	19-Aug	1.88
		20-Aug	1.87
24-Oct	2.52		
25-Oct	2.50	23-Aug	1.87
26-Oct	2.53	24-Aug	1.91
27-Oct	2.60	25-Aug	1.96
28-Oct	2.62	26-Aug	1.94
		27-Aug	1.91
31-Oct	2.58		
		30-Aug	1.9
		31-Aug	1.92
SUM	50.01		42.16
AVERAGE	2.50		1.92

SOURCES: U.S. DEPARTMENT OF THE TREASURY RESOURCE CENTER
October 2016: https://www.treasury.gov/resource-center/data-chart-center/interest-rates/Pages/TextView.aspx?data=yieldYear&year=2016
August 2021: https://www.treasury.gov/resource-center/data-chart-center/interest-rates/Pages/TextView.aspx?data=yieldYear&year=2021

U.S. DEPARTMENT OF THE TREASURY

Resource Center

Daily Treasury Yield Curve Rates

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XSD The schema for the XML is available in XSD format by clicking on the XSD icon.

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Select type of Interest Rate Data
Daily Treasury Yield Curve Rates [Go]

Select Time Period
2016 [Go]

Date	1 Mo	2 Mo	3 Mo	6 Mo	1 Yr	2 Yr	3 Yr	5 Yr	7 Yr	10 Yr	20 Yr	30 Yr
01/04/16	0.17	N/A	0.22	0.49	0.61	1.02	1.31	1.73	2.06	2.24	2.64	2.98
01/05/16	0.20	N/A	0.20	0.49	0.68	1.04	1.32	1.73	2.06	2.25	2.67	3.01
01/06/16	0.21	N/A	0.21	0.47	0.67	0.99	1.26	1.65	1.98	2.18	2.59	2.94
01/07/16	0.20	N/A	0.20	0.46	0.66	0.96	1.22	1.61	1.94	2.16	2.56	2.92
01/08/16	0.20	N/A	0.20	0.45	0.64	0.94	1.20	1.57	1.91	2.13	2.55	2.91
01/11/16	0.19	N/A	0.21	0.48	0.63	0.94	1.20	1.58	1.94	2.17	2.59	2.96
01/12/16	0.22	N/A	0.21	0.47	0.62	0.93	1.18	1.55	1.88	2.12	2.51	2.89
01/13/16	0.22	N/A	0.22	0.46	0.60	0.91	1.15	1.51	1.85	2.08	2.47	2.85
01/14/16	0.22	N/A	0.25	0.43	0.55	0.90	1.14	1.52	1.87	2.10	2.51	2.90
01/15/16	0.19	N/A	0.24	0.37	0.49	0.85	1.08	1.46	1.79	2.03	2.44	2.81
01/19/16	0.21	N/A	0.26	0.37	0.48	0.88	1.11	1.49	1.82	2.06	2.45	2.82
01/20/16	0.26	N/A	0.26	0.35	0.43	0.85	1.06	1.44	1.76	2.01	2.41	2.77
01/21/16	0.27	N/A	0.28	0.38	0.44	0.84	1.06	1.44	1.77	2.02	2.42	2.79
01/22/16	0.26	N/A	0.31	0.41	0.47	0.88	1.11	1.49	1.81	2.07	2.46	2.83
01/25/16	0.25	N/A	0.31	0.42	0.47	0.88	1.10	1.47	1.79	2.03	2.42	2.80
01/26/16	0.29	N/A	0.31	0.45	0.47	0.85	1.07	1.45	1.76	2.01	2.41	2.79
01/27/16	0.28	N/A	0.32	0.43	0.47	0.84	1.07	1.43	1.76	2.02	2.42	2.80
01/28/16	0.26	N/A	0.35	0.45	0.47	0.83	1.05	1.40	1.75	2.00	2.41	2.79
01/29/16	0.22	N/A	0.33	0.43	0.47	0.76	0.97	1.33	1.67	1.94	2.36	2.75
02/01/16	0.19	N/A	0.35	0.47	0.47	0.81	1.01	1.38	1.72	1.97	2.38	2.77
02/02/16	0.26	N/A	0.34	0.47	0.54	0.75	0.93	1.28	1.61	1.87	2.27	2.67
02/03/16	0.27	N/A	0.33	0.46	0.54	0.72	0.91	1.27	1.61	1.88	2.30	2.70
02/04/16	0.24	N/A	0.29	0.43	0.52	0.70	0.90	1.25	1.60	1.87	2.29	2.70
02/05/16	0.23	N/A	0.30	0.45	0.55	0.74	0.91	1.25	1.58	1.86	2.27	2.68
02/08/16	0.21	N/A	0.32	0.42	0.51	0.66	0.83	1.16	1.48	1.75	2.17	2.56
02/09/16	0.27	N/A	0.30	0.43	0.52	0.69	0.85	1.15	1.47	1.74	2.16	2.55
02/10/16	0.27	N/A	0.31	0.42	0.52	0.71	0.85	1.15	1.46	1.71	2.13	2.53
02/11/16	0.27	N/A	0.28	0.39	0.47	0.64	0.81	1.11	1.39	1.63	2.06	2.50
02/12/16	0.26	N/A	0.30	0.39	0.51	0.71	0.89	1.20	1.50	1.74	2.15	2.60
02/16/16	0.23	N/A	0.30	0.42	0.51	0.74	0.91	1.23	1.53	1.78	2.19	2.64
02/17/16	0.28	N/A	0.30	0.43	0.53	0.74	0.93	1.26	1.57	1.81	2.24	2.68
02/18/16	0.28	N/A	0.30	0.45	0.53	0.71	0.88	1.21	1.51	1.75	2.17	2.62

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02/19/16	0.26	N/A	0.31	0.46	0.53	0.76	0.91	1.24	1.53	1.76	2.17	2.61
02/22/16	0.28	N/A	0.33	0.46	0.55	0.78	0.92	1.25	1.54	1.77	2.18	2.62
02/23/16	0.28	N/A	0.32	0.47	0.55	0.76	0.90	1.23	1.51	1.74	2.16	2.60
02/24/16	0.28	N/A	0.33	0.46	0.55	0.75	0.90	1.21	1.52	1.75	2.16	2.61
02/25/16	0.27	N/A	0.32	0.46	0.56	0.72	0.85	1.16	1.47	1.71	2.14	2.58
02/26/16	0.26	N/A	0.33	0.47	0.60	0.80	0.93	1.23	1.55	1.76	2.20	2.63
02/29/16	0.23	N/A	0.33	0.49	0.62	0.78	0.91	1.22	1.52	1.74	2.19	2.61
03/01/16	0.29	N/A	0.33	0.50	0.68	0.85	0.98	1.31	1.62	1.83	2.28	2.70
03/02/16	0.28	N/A	0.36	0.48	0.67	0.85	1.00	1.34	1.65	1.84	2.27	2.69
03/03/16	0.25	N/A	0.28	0.46	0.65	0.85	0.99	1.33	1.63	1.83	2.23	2.65
03/04/16	0.25	N/A	0.29	0.47	0.67	0.88	1.04	1.38	1.69	1.88	2.29	2.70
03/07/16	0.27	N/A	0.32	0.49	0.67	0.91	1.08	1.42	1.72	1.91	2.30	2.71
03/08/16	0.27	N/A	0.29	0.48	0.68	0.88	1.04	1.34	1.64	1.83	2.22	2.63
03/09/16	0.27	N/A	0.30	0.47	0.68	0.90	1.07	1.39	1.69	1.90	2.27	2.68
03/10/16	0.27	N/A	0.32	0.50	0.69	0.93	1.11	1.45	1.75	1.93	2.29	2.70
03/11/16	0.27	N/A	0.33	0.51	0.70	0.97	1.16	1.49	1.79	1.98	2.34	2.75
03/14/16	0.28	N/A	0.34	0.52	0.70	0.97	1.15	1.49	1.78	1.97	2.33	2.74
03/15/16	0.29	N/A	0.34	0.52	0.71	0.98	1.16	1.50	1.78	1.97	2.33	2.73
03/16/16	0.28	N/A	0.31	0.47	0.66	0.87	1.05	1.41	1.72	1.94	2.32	2.73
03/17/16	0.29	N/A	0.29	0.47	0.64	0.87	1.04	1.39	1.70	1.91	2.28	2.69
03/18/16	0.27	N/A	0.30	0.44	0.62	0.84	1.00	1.34	1.66	1.88	2.26	2.68
03/21/16	0.26	N/A	0.31	0.46	0.63	0.87	1.05	1.38	1.70	1.92	2.31	2.72
03/22/16	0.28	N/A	0.30	0.46	0.64	0.91	1.08	1.42	1.74	1.94	2.32	2.72
03/23/16	0.27	N/A	0.30	0.46	0.64	0.87	1.03	1.37	1.67	1.88	2.25	2.65
03/24/16	0.24	N/A	0.30	0.46	0.63	0.89	1.05	1.39	1.70	1.91	2.28	2.67
03/28/16	0.19	N/A	0.29	0.49	0.65	0.89	1.04	1.37	1.68	1.89	2.26	2.66
03/29/16	0.18	N/A	0.23	0.45	0.63	0.78	0.94	1.29	1.59	1.81	2.20	2.60
03/30/16	0.14	N/A	0.20	0.39	0.61	0.76	0.91	1.26	1.60	1.83	2.24	2.65
03/31/16	0.18	N/A	0.21	0.39	0.59	0.73	0.87	1.21	1.54	1.78	2.20	2.61
04/01/16	0.20	N/A	0.23	0.40	0.62	0.76	0.90	1.24	1.56	1.79	2.20	2.62
04/04/16	0.18	N/A	0.23	0.38	0.59	0.75	0.88	1.22	1.53	1.78	2.19	2.60
04/05/16	0.19	N/A	0.23	0.36	0.56	0.72	0.85	1.17	1.49	1.73	2.13	2.54
04/06/16	0.19	N/A	0.23	0.36	0.55	0.73	0.88	1.20	1.52	1.76	2.17	2.58
04/07/16	0.20	N/A	0.23	0.36	0.52	0.70	0.83	1.14	1.46	1.70	2.10	2.52
04/08/16	0.20	N/A	0.23	0.34	0.54	0.70	0.84	1.16	1.47	1.72	2.13	2.55
04/11/16	0.19	N/A	0.23	0.34	0.53	0.70	0.85	1.16	1.48	1.73	2.14	2.56
04/12/16	0.21	N/A	0.22	0.34	0.54	0.74	0.90	1.22	1.54	1.79	2.18	2.61
04/13/16	0.21	N/A	0.23	0.36	0.55	0.75	0.90	1.22	1.53	1.77	2.16	2.58
04/14/16	0.21	N/A	0.22	0.37	0.55	0.77	0.92	1.26	1.57	1.80	2.18	2.61
04/15/16	0.19	N/A	0.22	0.37	0.53	0.74	0.87	1.22	1.52	1.76	2.14	2.56
04/18/16	0.16	N/A	0.22	0.35	0.52	0.75	0.90	1.24	1.54	1.78	2.17	2.58
04/19/16	0.18	N/A	0.21	0.36	0.53	0.77	0.92	1.26	1.57	1.79	2.19	2.60
04/20/16	0.18	N/A	0.23	0.36	0.54	0.80	0.97	1.32	1.63	1.85	2.25	2.66
04/21/16	0.19	N/A	0.23	0.37	0.56	0.82	0.98	1.35	1.65	1.88	2.29	2.69
04/22/16	0.19	N/A	0.23	0.38	0.56	0.84	1.01	1.37	1.67	1.89	2.30	2.70
04/25/16	0.17	N/A	0.25	0.40	0.57	0.85	1.01	1.38	1.69	1.91	2.32	2.72
04/26/16	0.19	N/A	0.24	0.43	0.61	0.86	1.04	1.40	1.72	1.94	2.35	2.76
04/27/16	0.18	N/A	0.24	0.40	0.58	0.83	0.99	1.33	1.64	1.87	2.30	2.71
04/28/16	0.17	N/A	0.22	0.39	0.56	0.78	0.93	1.28	1.60	1.84	2.27	2.68

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04/29/16	0.16	N/A	0.22	0.40	0.56	0.77	0.92	1.28	1.60	1.83	2.26	2.66
05/02/16	0.11	N/A	0.22	0.41	0.55	0.80	0.96	1.32	1.64	1.88	2.31	2.71
05/03/16	0.18	N/A	0.21	0.40	0.53	0.75	0.92	1.25	1.57	1.81	2.24	2.66
05/04/16	0.18	N/A	0.19	0.39	0.52	0.75	0.89	1.23	1.55	1.79	2.22	2.64
05/05/16	0.20	N/A	0.20	0.39	0.51	0.72	0.87	1.20	1.52	1.76	2.17	2.60
05/06/16	0.20	N/A	0.19	0.39	0.51	0.74	0.90	1.23	1.55	1.79	2.20	2.62
05/09/16	0.21	N/A	0.24	0.38	0.51	0.72	0.86	1.20	1.51	1.77	2.18	2.61
05/10/16	0.25	N/A	0.24	0.36	0.52	0.72	0.88	1.20	1.52	1.77	2.18	2.61
05/11/16	0.25	N/A	0.26	0.37	0.53	0.74	0.87	1.20	1.51	1.73	2.15	2.58
05/12/16	0.25	N/A	0.27	0.37	0.54	0.76	0.92	1.24	1.54	1.75	2.18	2.60
05/13/16	0.25	N/A	0.29	0.38	0.55	0.76	0.91	1.22	1.51	1.71	2.14	2.55
05/16/16	0.21	N/A	0.28	0.38	0.57	0.79	0.94	1.26	1.55	1.75	2.18	2.59
05/17/16	0.25	N/A	0.28	0.40	0.58	0.82	0.97	1.29	1.57	1.76	2.18	2.59
05/18/16	0.25	N/A	0.30	0.43	0.63	0.90	1.08	1.41	1.69	1.87	2.27	2.67
05/19/16	0.25	N/A	0.31	0.43	0.64	0.89	1.06	1.38	1.67	1.85	2.24	2.64
05/20/16	0.26	N/A	0.33	0.46	0.67	0.89	1.05	1.38	1.65	1.85	2.24	2.63
05/23/16	0.26	N/A	0.35	0.48	0.69	0.91	1.05	1.38	1.65	1.84	2.23	2.63
05/24/16	0.28	N/A	0.35	0.48	0.69	0.92	1.08	1.41	1.68	1.86	2.25	2.65
05/25/16	0.24	N/A	0.33	0.47	0.67	0.92	1.08	1.40	1.69	1.87	2.27	2.67
05/26/16	0.17	N/A	0.31	0.46	0.65	0.87	1.03	1.35	1.65	1.83	2.24	2.64
05/27/16	0.23	N/A	0.32	0.47	0.68	0.90	1.06	1.39	1.67	1.85	2.25	2.65
05/31/16	0.27	N/A	0.34	0.49	0.68	0.87	1.03	1.37	1.66	1.84	2.23	2.64
06/01/16	0.27	N/A	0.30	0.49	0.70	0.91	1.07	1.39	1.67	1.85	2.22	2.63
06/02/16	0.19	N/A	0.29	0.48	0.68	0.89	1.03	1.36	1.63	1.81	2.17	2.58
06/03/16	0.19	N/A	0.30	0.43	0.60	0.78	0.92	1.23	1.50	1.71	2.09	2.52
06/06/16	0.19	N/A	0.28	0.43	0.60	0.80	0.94	1.25	1.53	1.73	2.12	2.55
06/07/16	0.20	N/A	0.28	0.43	0.59	0.78	0.94	1.23	1.51	1.72	2.10	2.54
06/08/16	0.20	N/A	0.24	0.43	0.60	0.78	0.93	1.23	1.51	1.71	2.08	2.51
06/09/16	0.21	N/A	0.26	0.43	0.59	0.77	0.91	1.22	1.49	1.68	2.05	2.48
06/10/16	0.18	N/A	0.26	0.42	0.57	0.73	0.87	1.17	1.44	1.64	2.02	2.44
06/13/16	0.23	N/A	0.27	0.40	0.55	0.73	0.84	1.14	1.42	1.62	2.01	2.43
06/14/16	0.24	N/A	0.27	0.41	0.55	0.74	0.85	1.15	1.42	1.62	2.00	2.43
06/15/16	0.23	N/A	0.26	0.37	0.52	0.69	0.81	1.10	1.38	1.60	1.99	2.43
06/16/16	0.23	N/A	0.27	0.36	0.53	0.70	0.81	1.10	1.37	1.57	1.96	2.39
06/17/16	0.22	N/A	0.27	0.37	0.51	0.70	0.83	1.13	1.41	1.62	1.99	2.43
06/20/16	0.23	N/A	0.28	0.41	0.56	0.74	0.87	1.17	1.45	1.67	2.03	2.47
06/21/16	0.25	N/A	0.27	0.41	0.57	0.76	0.89	1.22	1.49	1.71	2.07	2.50
06/22/16	0.25	N/A	0.27	0.40	0.56	0.75	0.88	1.20	1.49	1.69	2.06	2.50
06/23/16	0.27	N/A	0.31	0.43	0.58	0.78	0.92	1.25	1.54	1.74	2.12	2.55
06/24/16	0.24	N/A	0.27	0.38	0.48	0.64	0.76	1.08	1.35	1.57	1.96	2.42
06/27/16	0.22	N/A	0.27	0.35	0.45	0.61	0.70	1.00	1.26	1.46	1.83	2.28
06/28/16	0.25	N/A	0.26	0.35	0.45	0.61	0.71	1.00	1.26	1.46	1.83	2.27
06/29/16	0.18	N/A	0.26	0.35	0.46	0.62	0.74	1.03	1.30	1.50	1.86	2.30
06/30/16	0.20	N/A	0.26	0.36	0.45	0.58	0.71	1.01	1.29	1.49	1.86	2.30
07/01/16	0.24	N/A	0.28	0.37	0.45	0.59	0.71	1.00	1.27	1.46	1.81	2.24
07/05/16	0.27	N/A	0.28	0.35	0.44	0.56	0.66	0.94	1.19	1.37	1.72	2.14
07/06/16	0.26	N/A	0.27	0.36	0.46	0.58	0.69	0.95	1.20	1.38	1.72	2.14
07/07/16	0.27	N/A	0.29	0.37	0.47	0.58	0.69	0.97	1.21	1.40	1.72	2.14
07/08/16	0.26	N/A	0.28	0.36	0.48	0.61	0.71	0.95	1.19	1.37	1.69	2.11

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07/11/16	0.28	N/A	0.31	0.40	0.50	0.66	0.77	1.03	1.27	1.43	1.73	2.14
07/12/16	0.29	N/A	0.29	0.40	0.52	0.69	0.81	1.10	1.35	1.53	1.82	2.24
07/13/16	0.29	N/A	0.31	0.40	0.51	0.68	0.80	1.07	1.32	1.48	1.77	2.18
07/14/16	0.29	N/A	0.32	0.41	0.53	0.68	0.82	1.10	1.36	1.53	1.84	2.25
07/15/16	0.27	N/A	0.32	0.42	0.52	0.71	0.87	1.15	1.42	1.60	1.90	2.30
07/18/16	0.26	N/A	0.32	0.44	0.52	0.68	0.85	1.14	1.40	1.59	1.90	2.30
07/19/16	0.29	N/A	0.31	0.44	0.56	0.70	0.84	1.12	1.38	1.56	1.88	2.27
07/20/16	0.28	N/A	0.32	0.44	0.56	0.73	0.86	1.15	1.41	1.59	1.91	2.30
07/21/16	0.28	N/A	0.32	0.44	0.54	0.70	0.82	1.11	1.38	1.57	1.90	2.29
07/22/16	0.29	N/A	0.33	0.44	0.55	0.71	0.84	1.13	1.40	1.57	1.90	2.29
07/25/16	0.28	N/A	0.32	0.44	0.55	0.72	0.87	1.15	1.41	1.58	1.90	2.29
07/26/16	0.24	N/A	0.31	0.43	0.55	0.75	0.87	1.15	1.40	1.57	1.89	2.28
07/27/16	0.25	N/A	0.31	0.40	0.53	0.73	0.83	1.10	1.35	1.52	1.84	2.23
07/28/16	0.19	N/A	0.25	0.39	0.53	0.72	0.82	1.09	1.35	1.52	1.83	2.23
07/29/16	0.19	N/A	0.28	0.38	0.50	0.67	0.76	1.03	1.29	1.46	1.78	2.18
08/01/16	0.20	N/A	0.29	0.40	0.50	0.67	0.78	1.06	1.33	1.51	1.84	2.24
08/02/16	0.28	N/A	0.29	0.41	0.50	0.67	0.79	1.07	1.36	1.55	1.88	2.29
08/03/16	0.26	N/A	0.28	0.42	0.53	0.67	0.78	1.07	1.35	1.55	1.88	2.29
08/04/16	0.24	N/A	0.26	0.41	0.51	0.64	0.76	1.03	1.31	1.51	1.84	2.25
08/05/16	0.23	N/A	0.28	0.45	0.56	0.72	0.86	1.13	1.41	1.59	1.91	2.32
08/08/16	0.27	N/A	0.31	0.45	0.57	0.74	0.86	1.15	1.42	1.59	1.91	2.30
08/09/16	0.27	N/A	0.29	0.44	0.55	0.71	0.84	1.11	1.38	1.55	1.86	2.25
08/10/16	0.27	N/A	0.28	0.43	0.55	0.69	0.80	1.07	1.34	1.50	1.83	2.23
08/11/16	0.27	N/A	0.28	0.45	0.55	0.76	0.88	1.16	1.42	1.57	1.89	2.28
08/12/16	0.27	N/A	0.29	0.43	0.56	0.71	0.82	1.10	1.36	1.51	1.85	2.23
08/15/16	0.26	N/A	0.31	0.46	0.56	0.72	0.85	1.14	1.40	1.55	1.90	2.27
08/16/16	0.27	N/A	0.27	0.45	0.57	0.76	0.87	1.16	1.42	1.57	1.92	2.29
08/17/16	0.27	N/A	0.30	0.46	0.58	0.74	0.86	1.15	1.41	1.56	1.90	2.27
08/18/16	0.27	N/A	0.30	0.44	0.58	0.71	0.81	1.12	1.38	1.53	1.89	2.26
08/19/16	0.27	N/A	0.30	0.44	0.59	0.76	0.88	1.17	1.43	1.58	1.93	2.29
08/22/16	0.24	N/A	0.29	0.45	0.58	0.76	0.86	1.15	1.40	1.55	1.88	2.24
08/23/16	0.28	N/A	0.30	0.45	0.58	0.74	0.86	1.15	1.40	1.55	1.88	2.24
08/24/16	0.28	N/A	0.31	0.46	0.59	0.76	0.87	1.13	1.40	1.56	1.89	2.24
08/25/16	0.28	N/A	0.33	0.46	0.60	0.78	0.89	1.16	1.43	1.58	1.91	2.27
08/26/16	0.28	N/A	0.34	0.47	0.62	0.84	0.96	1.23	1.49	1.62	1.96	2.29
08/29/16	0.25	N/A	0.33	0.49	0.62	0.81	0.92	1.18	1.43	1.57	1.90	2.22
08/30/16	0.23	N/A	0.33	0.47	0.61	0.80	0.92	1.18	1.44	1.57	1.91	2.23
08/31/16	0.26	N/A	0.33	0.47	0.61	0.80	0.92	1.19	1.45	1.58	1.90	2.23
09/01/16	0.27	N/A	0.33	0.47	0.60	0.78	0.91	1.18	1.44	1.57	1.90	2.23
09/02/16	0.25	N/A	0.33	0.45	0.59	0.80	0.92	1.20	1.47	1.60	1.95	2.28
09/06/16	0.24	N/A	0.32	0.45	0.56	0.74	0.86	1.13	1.40	1.55	1.90	2.24
09/07/16	0.25	N/A	0.34	0.49	0.57	0.74	0.86	1.12	1.39	1.54	1.89	2.23
09/08/16	0.26	N/A	0.35	0.50	0.57	0.78	0.91	1.19	1.46	1.61	1.98	2.32
09/09/16	0.24	N/A	0.35	0.51	0.58	0.79	0.93	1.23	1.51	1.67	2.05	2.39
09/12/16	0.24	N/A	0.37	0.53	0.57	0.79	0.92	1.21	1.50	1.68	2.05	2.40
09/13/16	0.25	N/A	0.36	0.54	0.63	0.80	0.95	1.26	1.56	1.73	2.12	2.47
09/14/16	0.24	N/A	0.33	0.52	0.62	0.77	0.90	1.21	1.52	1.70	2.10	2.44
09/15/16	0.20	N/A	0.29	0.49	0.60	0.74	0.87	1.20	1.51	1.71	2.13	2.48
09/16/16	0.20	N/A	0.30	0.50	0.61	0.77	0.91	1.21	1.51	1.70	2.10	2.44

09/19/16	0.16	N/A	0.30	0.48	0.60	0.79	0.92	1.22	1.52	1.70	2.10	2.45
09/20/16	0.17	N/A	0.30	0.49	0.61	0.79	0.93	1.20	1.50	1.69	2.09	2.43
09/21/16	0.12	N/A	0.22	0.44	0.61	0.79	0.92	1.20	1.48	1.66	2.06	2.39
09/22/16	0.10	N/A	0.18	0.39	0.60	0.79	0.91	1.18	1.46	1.63	2.02	2.34
09/23/16	0.09	N/A	0.18	0.40	0.60	0.77	0.90	1.16	1.44	1.62	2.02	2.34
09/26/16	0.12	N/A	0.25	0.42	0.58	0.76	0.87	1.13	1.41	1.59	2.00	2.32
09/27/16	0.16	N/A	0.26	0.42	0.58	0.75	0.86	1.12	1.39	1.56	1.96	2.28
09/28/16	0.14	N/A	0.27	0.44	0.60	0.75	0.87	1.13	1.41	1.57	1.96	2.29
09/29/16	0.12	N/A	0.26	0.43	0.59	0.73	0.85	1.12	1.39	1.56	1.95	2.28
09/30/16	0.20	N/A	0.29	0.45	0.59	0.77	0.88	1.14	1.42	1.60	1.99	2.32
10/03/16	0.25	N/A	0.32	0.48	0.63	0.80	0.91	1.18	1.46	1.63	2.01	2.34
10/04/16	0.28	N/A	0.33	0.48	0.64	0.82	0.95	1.22	1.51	1.69	2.08	2.40
10/05/16	0.26	N/A	0.32	0.48	0.65	0.85	0.98	1.26	1.54	1.72	2.11	2.44
10/06/16	0.26	N/A	0.33	0.46	0.65	0.86	1.00	1.28	1.56	1.75	2.14	2.46
10/07/16	0.26	N/A	0.33	0.46	0.66	0.83	0.99	1.26	1.55	1.73	2.14	2.46
10/11/16	0.27	N/A	0.35	0.48	0.69	0.87	1.03	1.30	1.58	1.77	2.17	2.50
10/12/16	0.26	N/A	0.37	0.49	0.68	0.87	0.99	1.31	1.60	1.79	2.19	2.51
10/13/16	0.26	N/A	0.30	0.45	0.66	0.85	1.00	1.27	1.56	1.75	2.15	2.48
10/14/16	0.26	N/A	0.32	0.46	0.66	0.84	1.00	1.28	1.58	1.80	2.22	2.55
10/17/16	0.24	N/A	0.34	0.47	0.65	0.81	0.98	1.26	1.56	1.77	2.19	2.52
10/18/16	0.26	N/A	0.34	0.47	0.66	0.82	0.96	1.24	1.54	1.75	2.18	2.51
10/19/16	0.25	N/A	0.35	0.48	0.65	0.81	0.96	1.24	1.54	1.76	2.18	2.51
10/20/16	0.25	N/A	0.35	0.48	0.66	0.84	0.98	1.26	1.55	1.76	2.17	2.50
10/21/16	0.25	N/A	0.34	0.47	0.66	0.84	0.98	1.25	1.53	1.74	2.15	2.48
10/24/16	0.23	N/A	0.33	0.46	0.66	0.84	1.00	1.27	1.56	1.77	2.18	2.52
10/25/16	0.22	N/A	0.34	0.49	0.66	0.86	1.00	1.29	1.56	1.77	2.17	2.50
10/26/16	0.25	N/A	0.33	0.49	0.67	0.86	1.01	1.30	1.59	1.79	2.20	2.53
10/27/16	0.19	N/A	0.30	0.49	0.68	0.87	1.04	1.33	1.64	1.85	2.26	2.60
10/28/16	0.18	N/A	0.30	0.49	0.66	0.86	1.02	1.33	1.63	1.86	2.27	2.62
10/31/16	0.20	N/A	0.34	0.51	0.66	0.86	1.00	1.31	1.62	1.84	2.25	2.58
11/01/16	0.24	N/A	0.35	0.50	0.65	0.83	0.99	1.30	1.61	1.83	2.24	2.58
11/02/16	0.24	N/A	0.37	0.51	0.64	0.81	0.98	1.26	1.57	1.81	2.22	2.56
11/03/16	0.24	N/A	0.38	0.52	0.64	0.81	0.98	1.26	1.58	1.82	2.25	2.60
11/04/16	0.25	N/A	0.38	0.52	0.62	0.80	0.95	1.24	1.55	1.79	2.22	2.56
11/07/16	0.28	N/A	0.41	0.54	0.63	0.82	0.99	1.29	1.60	1.83	2.26	2.60
11/08/16	0.28	N/A	0.43	0.56	0.71	0.87	1.04	1.34	1.65	1.88	2.29	2.63
11/09/16	0.30	N/A	0.45	0.56	0.72	0.90	1.12	1.49	1.84	2.07	2.52	2.88
11/10/16	0.30	N/A	0.48	0.59	0.72	0.92	1.17	1.56	1.92	2.15	2.58	2.94
11/14/16	0.32	N/A	0.55	0.65	0.77	1.00	1.27	1.66	2.01	2.23	2.65	2.99
11/15/16	0.30	N/A	0.51	0.61	0.78	1.02	1.28	1.68	2.03	2.23	2.64	2.97
11/16/16	0.32	N/A	0.47	0.62	0.76	1.00	1.28	1.68	2.03	2.22	2.61	2.92
11/17/16	0.30	N/A	0.44	0.61	0.77	1.04	1.31	1.73	2.08	2.29	2.69	3.01
11/18/16	0.28	N/A	0.44	0.60	0.77	1.07	1.36	1.80	2.14	2.34	2.70	3.01
11/21/16	0.28	N/A	0.46	0.60	0.78	1.08	1.36	1.79	2.13	2.33	2.69	3.00
11/22/16	0.34	N/A	0.49	0.61	0.78	1.07	1.35	1.77	2.12	2.31	2.69	3.00
11/23/16	0.35	N/A	0.51	0.63	0.80	1.12	1.40	1.83	2.17	2.36	2.71	3.02
11/25/16	0.34	N/A	0.49	0.62	0.81	1.12	1.41	1.83	2.18	2.36	2.71	3.01
11/28/16	0.32	N/A	0.48	0.60	0.79	1.11	1.38	1.80	2.13	2.32	2.68	2.99
11/29/16	0.34	N/A	0.48	0.60	0.78	1.09	1.37	1.78	2.12	2.30	2.66	2.95

11/30/16	0.38	N/A	0.48	0.62	0.80	1.11	1.40	1.83	2.18	2.37	2.73	3.02
12/01/16	0.32	N/A	0.48	0.60	0.82	1.14	1.45	1.90	2.25	2.45	2.82	3.10
12/02/16	0.34	N/A	0.49	0.61	0.80	1.11	1.40	1.84	2.20	2.40	2.78	3.08
12/05/16	0.34	N/A	0.49	0.63	0.82	1.13	1.42	1.84	2.19	2.39	2.76	3.05
12/06/16	0.35	N/A	0.49	0.63	0.83	1.12	1.41	1.84	2.18	2.39	2.77	3.08
12/07/16	0.38	N/A	0.52	0.63	0.85	1.10	1.39	1.80	2.14	2.34	2.73	3.02
12/08/16	0.39	N/A	0.51	0.62	0.84	1.12	1.40	1.83	2.20	2.40	2.81	3.10
12/09/16	0.41	N/A	0.54	0.64	0.85	1.15	1.43	1.89	2.26	2.47	2.87	3.16
12/12/16	0.42	N/A	0.51	0.64	0.85	1.15	1.44	1.90	2.26	2.49	2.86	3.16
12/13/16	0.47	N/A	0.54	0.66	0.88	1.17	1.46	1.92	2.26	2.48	2.85	3.14
12/14/16	0.49	N/A	0.55	0.66	0.92	1.27	1.57	2.02	2.34	2.54	2.86	3.14
12/15/16	0.48	N/A	0.51	0.65	0.91	1.29	1.61	2.10	2.42	2.60	2.89	3.16
12/16/16	0.46	N/A	0.51	0.65	0.91	1.28	1.59	2.07	2.41	2.60	2.91	3.19
12/19/16	0.45	N/A	0.52	0.65	0.90	1.24	1.55	2.03	2.35	2.54	2.85	3.12
12/20/16	0.48	N/A	0.52	0.66	0.90	1.25	1.56	2.06	2.38	2.57	2.88	3.15
12/21/16	0.46	N/A	0.52	0.65	0.88	1.21	1.54	2.04	2.35	2.55	2.86	3.12
12/22/16	0.42	N/A	0.51	0.65	0.87	1.22	1.54	2.04	2.36	2.55	2.86	3.12
12/23/16	0.42	N/A	0.52	0.65	0.87	1.22	1.54	2.04	2.35	2.55	2.86	3.12
12/27/16	0.50	N/A	0.51	0.66	0.89	1.28	1.58	2.07	2.37	2.57	2.88	3.14
12/28/16	0.48	N/A	0.53	0.62	0.90	1.26	1.55	2.02	2.32	2.51	2.83	3.09
12/29/16	0.39	N/A	0.47	0.62	0.85	1.22	1.49	1.96	2.30	2.49	2.82	3.08
12/30/16	0.44	N/A	0.51	0.62	0.85	1.20	1.47	1.93	2.25	2.45	2.79	3.06

* The 2-month constant maturity series begins on October 16, 2018, with the first auction of the 8-week Treasury bill.

30-year Treasury constant maturity series was discontinued on February 18, 2002 and reintroduced on February 9, 2006. From February 18, 2002 to February 8, 2006, Treasury published alternatives to a 30-year rate. See Long-Term Average Rate for more information.

Treasury discontinued the 20-year constant maturity series at the end of calendar year 1986 and reinstated that series on October 1, 1993. As a result, there are no 20-year rates available for the time period January 1, 1987 through September 30, 1993.

Treasury Yield Curve Rates: These rates are commonly referred to as "Constant Maturity Treasury" rates, or CMTs. Yields are interpolated by the Treasury from the daily yield curve. This curve, which relates the yield on a security to its time to maturity is based on the closing market bid yields on actively traded Treasury securities in the over-the-counter market. These market yields are calculated from composites of indicative, bid-side market quotations (not actual transactions) obtained by the Federal Reserve Bank of New York at or near 3:30 PM each trading day. The CMT yield values are read from the yield curve at fixed maturities, currently 1, 2, 3 and 6 months and 1, 2, 3, 5, 7, 10, 20, and 30 years. This method provides a yield for a 10 year maturity, for example, even if no outstanding security has exactly 10 years remaining to maturity.

Treasury Yield Curve Methodology: The Treasury yield curve is estimated daily using a cubic spline model. Inputs to the model are primarily indicative bid-side yields for on-the-run Treasury securities. Treasury reserves the option to make changes to the yield curve as appropriate and in its sole discretion. See our Treasury Yield Curve Methodology page for details.

Negative Yields and Nominal Constant Maturity Treasury Series Rates (CMTs): At times, financial market conditions, in conjunction with extraordinary low levels of interest rates, may result in negative yields for some Treasury securities trading in the secondary market. Negative yields for Treasury securities most often reflect highly technical factors in Treasury markets related to the cash and repurchase agreement markets, and are at times unrelated to the time value of money.

At such times, Treasury will restrict the use of negative input yields for securities used in deriving interest rates for the Treasury nominal Constant Maturity Treasury series (CMTs). Any CMT input points with negative yields will be reset to zero percent prior to use as inputs in the CMT derivation. This decision is consistent with Treasury not accepting negative yields in Treasury nominal security auctions.

In addition, given that CMTs are used in many statutorily and regulatory determined loan and credit programs as well as for setting interest rates on non-marketable government securities, establishing a floor of zero more accurately reflects borrowing costs related to various programs.

For more information regarding these statistics contact the Office of Debt Management by email at debt.management@do.treas.gov.

For other Public Debt information contact (202) 504-3550

Docket No. 20210015-EI
U.S. Treasury Bond Yield Rates,
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U.S. DEPARTMENT OF THE TREASURY

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Date	1 Mo	2 Mo	3 Mo	6 Mo	1 Yr	2 Yr	3 Yr	5 Yr	7 Yr	10 Yr	20 Yr	30 Yr
01/04/21	0.09	0.09	0.09	0.09	0.10	0.11	0.16	0.36	0.64	0.93	1.46	1.66
01/05/21	0.08	0.09	0.09	0.09	0.10	0.13	0.17	0.38	0.66	0.96	1.49	1.70
01/06/21	0.09	0.09	0.09	0.09	0.11	0.14	0.20	0.43	0.74	1.04	1.60	1.81
01/07/21	0.09	0.09	0.09	0.09	0.11	0.14	0.22	0.46	0.78	1.08	1.64	1.85
01/08/21	0.08	0.08	0.08	0.09	0.10	0.14	0.24	0.49	0.81	1.13	1.67	1.87
01/11/21	0.09	0.08	0.08	0.10	0.10	0.14	0.22	0.50	0.84	1.15	1.68	1.88
01/12/21	0.09	0.08	0.09	0.09	0.11	0.14	0.23	0.50	0.83	1.15	1.68	1.88
01/13/21	0.09	0.08	0.09	0.10	0.12	0.14	0.22	0.48	0.80	1.10	1.63	1.82
01/14/21	0.09	0.09	0.09	0.09	0.10	0.16	0.23	0.49	0.82	1.15	1.69	1.88
01/15/21	0.08	0.09	0.09	0.10	0.10	0.13	0.20	0.46	0.78	1.11	1.66	1.85
01/19/21	0.07	0.09	0.09	0.11	0.10	0.14	0.21	0.45	0.78	1.10	1.65	1.84
01/20/21	0.08	0.08	0.08	0.10	0.10	0.13	0.19	0.45	0.78	1.10	1.65	1.84
01/21/21	0.07	0.09	0.09	0.09	0.10	0.13	0.19	0.45	0.79	1.12	1.68	1.87
01/22/21	0.07	0.08	0.08	0.10	0.10	0.13	0.19	0.44	0.77	1.10	1.66	1.85
01/25/21	0.07	0.08	0.09	0.09	0.10	0.13	0.17	0.42	0.73	1.05	1.61	1.80
01/26/21	0.05	0.07	0.07	0.09	0.09	0.11	0.18	0.42	0.74	1.05	1.61	1.80
01/27/21	0.05	0.06	0.08	0.09	0.09	0.12	0.18	0.41	0.72	1.04	1.60	1.79
01/28/21	0.05	0.06	0.07	0.08	0.08	0.12	0.18	0.42	0.75	1.07	1.63	1.81
01/29/21	0.07	0.07	0.06	0.07	0.10	0.11	0.19	0.45	0.79	1.11	1.68	1.87
02/01/21	0.06	0.07	0.07	0.08	0.08	0.11	0.17	0.42	0.76	1.09	1.66	1.84
02/02/21	0.04	0.05	0.07	0.08	0.08	0.11	0.18	0.45	0.79	1.12	1.69	1.87
02/03/21	0.03	0.04	0.04	0.06	0.08	0.11	0.19	0.46	0.81	1.15	1.73	1.92
02/04/21	0.03	0.04	0.04	0.06	0.07	0.11	0.18	0.46	0.81	1.15	1.75	1.93
02/05/21	0.02	0.03	0.03	0.05	0.06	0.09	0.19	0.47	0.83	1.19	1.79	1.97
02/08/21	0.04	0.03	0.05	0.05	0.07	0.11	0.20	0.48	0.83	1.19	1.78	1.96
02/09/21	0.04	0.04	0.04	0.06	0.07	0.11	0.19	0.48	0.83	1.18	1.78	1.95
02/10/21	0.05	0.04	0.05	0.06	0.07	0.11	0.19	0.46	0.80	1.15	1.75	1.92
02/11/21	0.05	0.05	0.05	0.06	0.07	0.11	0.19	0.46	0.81	1.16	1.77	1.94
02/12/21	0.03	0.04	0.04	0.05	0.06	0.11	0.20	0.50	0.85	1.20	1.83	2.01
02/16/21	0.03	0.04	0.04	0.06	0.08	0.13	0.23	0.57	0.94	1.30	1.92	2.08
02/17/21	0.03	0.04	0.04	0.06	0.07	0.11	0.21	0.57	0.94	1.29	1.92	2.06
02/18/21	0.03	0.03	0.03	0.04	0.06	0.11	0.21	0.56	0.94	1.29	1.91	2.08

02/19/21	0.03	0.03	0.04	0.06	0.07	0.11	0.22	0.59	0.98	1.34	1.98	2.14
02/22/21	0.03	0.02	0.03	0.04	0.06	0.11	0.22	0.61	1.00	1.37	2.02	2.19
02/23/21	0.03	0.02	0.04	0.05	0.08	0.11	0.22	0.59	1.00	1.37	2.03	2.21
02/24/21	0.03	0.03	0.03	0.05	0.08	0.12	0.24	0.62	1.02	1.38	2.07	2.24
02/25/21	0.04	0.03	0.04	0.06	0.09	0.17	0.34	0.81	1.23	1.54	2.25	2.33
02/26/21	0.04	0.04	0.04	0.05	0.08	0.14	0.30	0.75	1.15	1.44	2.08	2.17
03/01/21	0.03	0.03	0.05	0.07	0.08	0.13	0.27	0.71	1.12	1.45	2.11	2.23
03/02/21	0.04	0.04	0.04	0.06	0.08	0.13	0.26	0.67	1.08	1.42	2.09	2.21
03/03/21	0.04	0.04	0.05	0.07	0.08	0.14	0.29	0.73	1.14	1.47	2.12	2.25
03/04/21	0.03	0.05	0.04	0.07	0.08	0.14	0.32	0.77	1.21	1.54	2.18	2.30
03/05/21	0.04	0.04	0.04	0.07	0.08	0.14	0.32	0.79	1.23	1.56	2.18	2.28
03/08/21	0.04	0.04	0.05	0.06	0.09	0.17	0.34	0.86	1.28	1.59	2.20	2.31
03/09/21	0.04	0.04	0.05	0.07	0.10	0.17	0.35	0.83	1.23	1.55	2.16	2.26
03/10/21	0.03	0.03	0.04	0.06	0.08	0.16	0.32	0.80	1.20	1.53	2.15	2.24
03/11/21	0.04	0.04	0.04	0.05	0.08	0.14	0.31	0.78	1.20	1.54	2.18	2.29
03/12/21	0.03	0.03	0.04	0.06	0.09	0.14	0.34	0.85	1.30	1.64	2.31	2.40
03/15/21	0.02	0.02	0.04	0.06	0.08	0.14	0.33	0.84	1.28	1.62	2.27	2.37
03/16/21	0.01	0.02	0.02	0.06	0.07	0.15	0.33	0.83	1.28	1.62	2.30	2.38
03/17/21	0.01	0.02	0.02	0.05	0.07	0.13	0.29	0.80	1.27	1.63	2.32	2.42
03/18/21	0.01	0.01	0.01	0.03	0.08	0.16	0.33	0.86	1.35	1.71	2.36	2.45
03/19/21	0.01	0.01	0.01	0.03	0.07	0.16	0.33	0.90	1.38	1.74	2.36	2.45
03/22/21	0.02	0.02	0.03	0.05	0.06	0.15	0.32	0.87	1.34	1.69	2.29	2.38
03/23/21	0.02	0.02	0.01	0.04	0.08	0.15	0.31	0.83	1.29	1.63	2.24	2.34
03/24/21	0.02	0.02	0.02	0.04	0.07	0.14	0.31	0.83	1.27	1.62	2.21	2.31
03/25/21	0.02	0.03	0.02	0.04	0.07	0.14	0.30	0.82	1.29	1.63	2.24	2.34
03/26/21	0.02	0.02	0.02	0.04	0.06	0.14	0.31	0.85	1.32	1.67	2.27	2.37
03/29/21	0.02	0.03	0.03	0.04	0.06	0.14	0.32	0.89	1.37	1.73	2.32	2.43
03/30/21	0.01	0.01	0.02	0.04	0.06	0.16	0.33	0.90	1.39	1.73	2.29	2.38
03/31/21	0.01	0.01	0.03	0.05	0.07	0.16	0.35	0.92	1.40	1.74	2.31	2.41
04/01/21	0.02	0.02	0.02	0.04	0.06	0.17	0.35	0.90	1.37	1.69	2.24	2.34
04/02/21	0.02	0.02	0.02	0.04	0.07	0.19	0.39	0.97	1.42	1.72	2.27	2.35
04/05/21	0.03	0.02	0.03	0.04	0.06	0.17	0.37	0.94	1.40	1.73	2.28	2.36
04/06/21	0.02	0.02	0.02	0.04	0.06	0.16	0.35	0.88	1.34	1.67	2.24	2.32
04/07/21	0.01	0.02	0.02	0.04	0.06	0.16	0.34	0.87	1.34	1.68	2.26	2.35
04/08/21	0.02	0.02	0.01	0.04	0.05	0.14	0.33	0.85	1.30	1.64	2.22	2.32
04/09/21	0.02	0.01	0.02	0.03	0.06	0.16	0.35	0.87	1.33	1.67	2.23	2.34
04/12/21	0.02	0.02	0.02	0.04	0.06	0.18	0.38	0.89	1.35	1.69	2.24	2.34
04/13/21	0.03	0.02	0.03	0.05	0.06	0.16	0.35	0.85	1.29	1.64	2.21	2.32
04/14/21	0.02	0.02	0.02	0.04	0.06	0.16	0.35	0.87	1.31	1.64	2.22	2.32
04/15/21	0.02	0.01	0.02	0.04	0.06	0.16	0.32	0.81	1.24	1.56	2.13	2.23
04/16/21	0.02	0.02	0.02	0.04	0.06	0.16	0.34	0.84	1.26	1.59	2.15	2.26
04/19/21	0.01	0.02	0.02	0.04	0.08	0.16	0.34	0.85	1.28	1.61	2.18	2.29
04/20/21	0.01	0.02	0.03	0.04	0.07	0.15	0.31	0.81	1.25	1.58	2.16	2.27
04/21/21	0.00	0.02	0.03	0.04	0.07	0.15	0.32	0.81	1.24	1.57	2.16	2.26
04/22/21	0.02	0.02	0.03	0.04	0.06	0.16	0.32	0.81	1.24	1.57	2.13	2.24
04/23/21	0.01	0.02	0.03	0.03	0.07	0.16	0.34	0.83	1.26	1.58	2.14	2.25
04/26/21	0.02	0.02	0.03	0.04	0.06	0.18	0.35	0.85	1.27	1.58	2.13	2.24
04/27/21	0.01	0.02	0.01	0.04	0.06	0.17	0.36	0.88	1.32	1.63	2.18	2.29
04/28/21	0.01	0.01	0.01	0.04	0.05	0.17	0.35	0.86	1.31	1.63	2.19	2.29

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04/29/21	0.01	0.01	0.01	0.04	0.05	0.16	0.35	0.86	1.32	1.65	2.20	2.31
04/30/21	0.01	0.02	0.01	0.03	0.05	0.16	0.35	0.86	1.32	1.65	2.19	2.30
05/03/21	0.02	0.02	0.04	0.04	0.06	0.16	0.33	0.84	1.29	1.63	2.18	2.30
05/04/21	0.01	0.01	0.02	0.04	0.06	0.16	0.33	0.82	1.28	1.61	2.16	2.27
05/05/21	0.01	0.01	0.02	0.04	0.06	0.16	0.32	0.80	1.25	1.59	2.14	2.25
05/06/21	0.01	0.02	0.02	0.04	0.05	0.16	0.32	0.81	1.25	1.58	2.14	2.24
05/07/21	0.01	0.01	0.02	0.04	0.05	0.14	0.29	0.77	1.24	1.60	2.17	2.28
05/10/21	0.02	0.01	0.02	0.04	0.05	0.16	0.32	0.80	1.27	1.63	2.20	2.32
05/11/21	0.01	0.01	0.01	0.04	0.05	0.16	0.31	0.80	1.28	1.64	2.23	2.35
05/12/21	0.01	0.02	0.02	0.04	0.05	0.16	0.35	0.87	1.34	1.69	2.29	2.40
05/13/21	0.00	0.01	0.02	0.03	0.05	0.16	0.33	0.84	1.31	1.66	2.28	2.39
05/14/21	0.01	0.01	0.01	0.03	0.06	0.16	0.33	0.82	1.29	1.63	2.25	2.35
05/17/21	0.00	0.01	0.02	0.04	0.06	0.16	0.34	0.84	1.30	1.64	2.27	2.36
05/18/21	0.00	0.01	0.02	0.03	0.06	0.16	0.34	0.83	1.29	1.64	2.27	2.37
05/19/21	0.00	0.01	0.01	0.03	0.05	0.16	0.35	0.87	1.34	1.68	2.30	2.38
05/20/21	0.01	0.01	0.01	0.03	0.05	0.15	0.34	0.83	1.29	1.63	2.25	2.34
05/21/21	0.00	0.01	0.01	0.02	0.04	0.17	0.34	0.84	1.29	1.63	2.24	2.33
05/24/21	0.01	0.01	0.02	0.03	0.04	0.15	0.32	0.82	1.28	1.61	2.22	2.31
05/25/21	0.01	0.01	0.02	0.04	0.04	0.15	0.30	0.79	1.23	1.56	2.16	2.26
05/26/21	0.00	0.00	0.02	0.04	0.04	0.14	0.31	0.80	1.24	1.58	2.17	2.27
05/27/21	0.00	0.01	0.02	0.04	0.04	0.14	0.31	0.81	1.28	1.61	2.20	2.29
05/28/21	0.01	0.01	0.01	0.03	0.05	0.14	0.30	0.79	1.24	1.58	2.18	2.26
06/01/21	0.01	0.01	0.02	0.04	0.04	0.16	0.31	0.81	1.28	1.62	2.22	2.30
06/02/21	0.01	0.01	0.02	0.04	0.05	0.13	0.30	0.80	1.26	1.59	2.21	2.28
06/03/21	0.00	0.01	0.02	0.04	0.04	0.16	0.34	0.84	1.30	1.63	2.22	2.30
06/04/21	0.01	0.02	0.02	0.04	0.05	0.14	0.32	0.78	1.23	1.56	2.16	2.24
06/07/21	0.01	0.02	0.02	0.04	0.05	0.16	0.33	0.79	1.24	1.57	2.17	2.25
06/08/21	0.01	0.02	0.02	0.04	0.05	0.14	0.32	0.77	1.20	1.53	2.13	2.21
06/09/21	0.01	0.02	0.03	0.04	0.05	0.16	0.31	0.75	1.17	1.50	2.10	2.17
06/10/21	0.01	0.02	0.03	0.04	0.05	0.14	0.30	0.73	1.14	1.45	2.07	2.15
06/11/21	0.01	0.02	0.03	0.04	0.05	0.16	0.31	0.76	1.16	1.47	2.08	2.15
06/14/21	0.01	0.02	0.03	0.05	0.05	0.16	0.33	0.80	1.20	1.51	2.12	2.19
06/15/21	0.02	0.02	0.03	0.05	0.08	0.16	0.34	0.79	1.21	1.51	2.12	2.20
06/16/21	0.04	0.04	0.04	0.06	0.08	0.21	0.41	0.89	1.29	1.57	2.13	2.20
06/17/21	0.05	0.04	0.04	0.06	0.08	0.23	0.43	0.90	1.27	1.52	2.05	2.11
06/18/21	0.05	0.05	0.05	0.06	0.09	0.26	0.47	0.89	1.22	1.45	1.97	2.01
06/21/21	0.04	0.04	0.05	0.06	0.09	0.27	0.48	0.90	1.25	1.50	2.05	2.11
06/22/21	0.04	0.05	0.04	0.06	0.09	0.25	0.44	0.87	1.23	1.48	2.03	2.10
06/23/21	0.04	0.04	0.05	0.05	0.08	0.26	0.47	0.90	1.25	1.50	2.04	2.11
06/24/21	0.05	0.05	0.05	0.05	0.08	0.26	0.48	0.90	1.26	1.49	2.03	2.10
06/25/21	0.05	0.05	0.06	0.06	0.09	0.28	0.48	0.92	1.29	1.54	2.09	2.16
06/28/21	0.04	0.05	0.05	0.06	0.08	0.25	0.47	0.90	1.25	1.49	2.04	2.10
06/29/21	0.04	0.04	0.04	0.06	0.08	0.27	0.47	0.89	1.24	1.49	2.03	2.10
06/30/21	0.05	0.05	0.05	0.06	0.07	0.25	0.46	0.87	1.21	1.45	2.00	2.06
07/01/21	0.05	0.05	0.05	0.05	0.09	0.25	0.47	0.89	1.24	1.48	2.01	2.07
07/02/21	0.05	0.05	0.05	0.05	0.08	0.24	0.45	0.86	1.19	1.44	1.98	2.05
07/06/21	0.05	0.05	0.05	0.06	0.07	0.22	0.42	0.81	1.13	1.37	1.92	2.00
07/07/21	0.05	0.05	0.05	0.05	0.08	0.22	0.41	0.79	1.09	1.33	1.87	1.94
07/08/21	0.06	0.05	0.06	0.06	0.07	0.19	0.37	0.74	1.06	1.30	1.84	1.91

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07/09/21	0.06	0.05	0.06	0.05	0.08	0.23	0.41	0.79	1.12	1.37	1.91	1.99
07/12/21	0.05	0.05	0.05	0.06	0.08	0.23	0.43	0.81	1.13	1.38	1.93	2.00
07/13/21	0.05	0.05	0.05	0.06	0.08	0.26	0.47	0.85	1.16	1.42	1.96	2.04
07/14/21	0.06	0.05	0.06	0.05	0.08	0.23	0.44	0.80	1.11	1.37	1.91	1.98
07/15/21	0.05	0.05	0.05	0.05	0.07	0.23	0.43	0.78	1.07	1.31	1.85	1.92
07/16/21	0.05	0.05	0.05	0.05	0.08	0.25	0.43	0.79	1.08	1.31	1.86	1.93
07/19/21	0.05	0.05	0.05	0.06	0.07	0.21	0.38	0.70	0.97	1.19	1.74	1.81
07/20/21	0.05	0.05	0.05	0.06	0.08	0.20	0.37	0.69	0.98	1.23	1.79	1.88
07/21/21	0.04	0.04	0.05	0.05	0.07	0.22	0.39	0.74	1.05	1.30	1.87	1.94
07/22/21	0.04	0.04	0.05	0.05	0.07	0.20	0.37	0.71	1.02	1.27	1.82	1.90
07/23/21	0.05	0.05	0.05	0.05	0.07	0.22	0.38	0.72	1.04	1.30	1.85	1.92
07/26/21	0.05	0.05	0.05	0.06	0.08	0.22	0.38	0.73	1.04	1.29	1.85	1.93
07/27/21	0.04	0.05	0.05	0.05	0.07	0.20	0.37	0.71	1.01	1.25	1.81	1.89
07/28/21	0.04	0.05	0.05	0.05	0.07	0.20	0.38	0.72	1.01	1.26	1.83	1.90
07/29/21	0.05	0.05	0.06	0.05	0.08	0.20	0.37	0.73	1.04	1.28	1.84	1.91
07/30/21	0.05	0.05	0.06	0.05	0.07	0.19	0.35	0.69	1.00	1.24	1.81	1.89
08/02/21	0.05	0.05	0.05	0.06	0.07	0.17	0.33	0.66	0.96	1.20	1.77	1.86
08/03/21	0.05	0.05	0.05	0.06	0.07	0.17	0.33	0.65	0.95	1.19	1.76	1.85
08/04/21	0.05	0.05	0.05	0.05	0.07	0.17	0.34	0.67	0.96	1.19	1.74	1.83
08/05/21	0.05	0.05	0.05	0.06	0.08	0.21	0.38	0.72	1.01	1.23	1.77	1.86
08/06/21	0.04	0.05	0.06	0.06	0.09	0.21	0.42	0.77	1.07	1.31	1.85	1.94
08/09/21	0.04	0.05	0.06	0.06	0.08	0.23	0.43	0.79	1.09	1.33	1.87	1.96
08/10/21	0.05	0.05	0.05	0.05	0.08	0.24	0.47	0.82	1.12	1.36	1.90	1.99
08/11/21	0.05	0.05	0.05	0.06	0.08	0.23	0.45	0.81	1.11	1.35	1.90	1.99
08/12/21	0.05	0.06	0.06	0.06	0.09	0.23	0.46	0.83	1.13	1.36	1.92	2.03
08/13/21	0.04	0.05	0.06	0.05	0.08	0.23	0.44	0.79	1.08	1.29	1.85	1.94
08/16/21	0.04	0.05	0.06	0.05	0.08	0.21	0.42	0.75	1.04	1.26	1.82	1.92
08/17/21	0.03	0.05	0.07	0.06	0.07	0.23	0.43	0.77	1.05	1.26	1.82	1.92
08/18/21	0.03	0.05	0.07	0.05	0.07	0.23	0.43	0.79	1.06	1.27	1.84	1.91
08/19/21	0.04	0.05	0.06	0.05	0.06	0.22	0.44	0.78	1.04	1.24	1.80	1.88
08/20/21	0.04	0.05	0.05	0.05	0.06	0.23	0.44	0.80	1.06	1.26	1.79	1.87
08/23/21	0.04	0.05	0.05	0.06	0.07	0.23	0.43	0.78	1.05	1.25	1.79	1.87
08/24/21	0.03	0.05	0.05	0.05	0.06	0.24	0.44	0.80	1.08	1.29	1.83	1.91
08/25/21	0.04	0.05	0.06	0.06	0.07	0.23	0.47	0.84	1.13	1.35	1.88	1.96
08/26/21	0.04	0.06	0.05	0.06	0.07	0.25	0.46	0.84	1.13	1.34	1.87	1.94
08/27/21	0.04	0.06	0.05	0.05	0.07	0.22	0.41	0.79	1.09	1.31	1.84	1.91
08/30/21	0.04	0.07	0.05	0.05	0.08	0.20	0.40	0.77	1.07	1.29	1.82	1.90
08/31/21	0.03	0.05	0.04	0.06	0.07	0.20	0.40	0.77	1.08	1.30	1.85	1.92
09/01/21	0.04	0.06	0.05	0.06	0.07	0.20	0.42	0.78	1.08	1.31	1.84	1.92
09/02/21	0.05	0.07	0.05	0.06	0.07	0.20	0.42	0.78	1.07	1.29	1.83	1.90
09/03/21	0.04	0.07	0.05	0.05	0.08	0.21	0.42	0.78	1.09	1.33	1.87	1.94
09/07/21	0.04	0.07	0.05	0.06	0.08	0.22	0.45	0.82	1.14	1.38	1.91	1.99
09/08/21	0.05	0.06	0.05	0.06	0.08	0.22	0.43	0.81	1.11	1.35	1.88	1.95

* The 2-month constant maturity series begins on October 16, 2018, with the first auction of the 8-week Treasury bill.

30-year Treasury constant maturity series was discontinued on February 18, 2002 and reintroduced on February 9, 2006. From February 18, 2002 to February 8, 2006, Treasury published alternatives to a 30-year rate. See Long-Term Average Rate for more information.

Treasury discontinued the 20-year constant maturity series at the end of calendar year 1986 and reinstated that series on October 1, 1993. As a result, there are no 20-year rates available for the time period January 1, 1987 through September 30, 1993.

Treasury Yield Curve Rates: These rates are commonly referred to as "Constant Maturity Treasury" rates, or CMTs. Yields are interpolated by the Treasury from the daily yield curve. This curve, which relates the yield on a security to its time to maturity is based on the closing market bid yields on actively traded Treasury securities in the over-the-counter market. These market yields are calculated from composites of indicative, bid-side market quotations (not actual transactions) obtained by the Federal Reserve Bank of New York at or near 3:30 PM each trading day. The CMT yield values are read from the yield curve at fixed maturities, currently 1, 2, 3 and 6 months and 1, 2, 3, 5, 7, 10, 20, and 30 years. This method provides a yield for a 10 year maturity, for example, even if no outstanding security has exactly 10 years remaining to maturity.

Treasury Yield Curve Methodology: The Treasury yield curve is estimated daily using a cubic spline model. Inputs to the model are primarily indicative bid-side yields for on-the-run Treasury securities. Treasury reserves the option to make changes to the yield curve as appropriate and in its sole discretion. See our Treasury Yield Curve Methodology page for details.

Negative Yields and Nominal Constant Maturity Treasury Series Rates (CMTs): At times, financial market conditions, in conjunction with extraordinary low levels of interest rates, may result in negative yields for some Treasury securities trading in the secondary market. Negative yields for Treasury securities most often reflect highly technical factors in Treasury markets related to the cash and repurchase agreement markets, and are at times unrelated to the time value of money.

At such times, Treasury will restrict the use of negative input yields for securities used in deriving interest rates for the Treasury nominal Constant Maturity Treasury series (CMTs). Any CMT input points with negative yields will be reset to zero percent prior to use as inputs in the CMT derivation. This decision is consistent with Treasury not accepting negative yields in Treasury nominal security auctions.

In addition, given that CMTs are used in many statutorily and regulatory determined loan and credit programs as well as for setting interest rates on non-marketable government securities, establishing a floor of zero more accurately reflects borrowing costs related to various programs.

For more information regarding these statistics contact the Office of Debt Management by email at debt.management@do.treas.gov.

For other Public Debt information contact (202) 504-3550

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