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: June 21, 2021

DIRECT TESTIMONY AND EXHIBITS OF MICHAEL P. GORMAN ON BEHALF OF FEDERAL EXECUTIVE AGENCIES

Attached for filing is the Direct Testimony and Exhibits of Michael P. Gorman on behalf

of Federal Executive Agencies in the above referenced docket.

Respectfully Submitted,

Attorney for Federal Executive Agencies

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BEFORE THE

FLORIDA PUBLIC SERVICE COMMISSION

IN RE: PETITION FOR RATE INCREASE BY FLORIDA POWER & LIGHT COMPANY

DOCKET NO. 20210015-EI

Direct Testimony and Exhibits of

Michael P. Gorman

On behalf of

Federal Executive Agencies

June 21, 2021



Project 11121

BEFORE THE

FLORIDA PUBLIC SERVICE COMMISSION

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IN RE: PETITION FOR RATE INCREASE BY FLORIDA POWER & LIGHT COMPANY

DOCKET NO. 20210015-EI

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FLORIDA PUBLIC SERVICE COMMISSION

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IN RE: PETITION FOR RATE INCREASE BY FLORIDA POWER & LIGHT COMPANY

DOCKET NO. 20210015-EI

Direct Testimony of Michael P. Gorman

1	Q	PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.
2	А	Michael P. Gorman. My business address is 16690 Swingley Ridge Road, Suite 140,
3		Chesterfield, MO 63017.
4		
5	Q	WHAT IS YOUR OCCUPATION?
6	А	I am a consultant in the field of public utility regulation and a Managing Principal of
7		Brubaker & Associates, Inc. ("BAI"), energy, economic and regulatory consultants.
8		
9	Q	PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.
10	А	This information is included in Appendix A to my testimony.
11		
12	Q	ON WHOSE BEHALF ARE YOU APPEARING IN THIS PROCEEDING?
13	А	I am appearing in this proceeding on behalf of the Federal Executive Agencies
14		("FEA").
15		
16		
17		

1	Q	WHAT IS THE PURPOSE OF YOUR TESTIMONY?
2	А	My testimony will address Florida Power & Light Company's ("FPL" or "Company")
3		overall rate of return including return on equity, embedded debt cost, and ratemaking
4		capital structure.
5		
6	Q	DOES THE FACT THAT YOU DID NOT ADDRESS EVERY ISSUE RAISED IN
7		FPL'S TESTIMONY MEAN THAT YOU AGREE WITH FPL'S TESTIMONY ON
8		THOSE ISSUES?
9	А	No. It merely reflects that I chose not to address all those issues in my testimony. It
10		should not be read as an endorsement of, or agreement with, FPL's position on such
11		issues.
12		
13		I. SUMMARY
14	Q	PLEASE SUMMARIZE THE PURPOSE OF YOUR TESTIMONY.
15	А	In my testimony, I will make several adjustment to FPL's claimed revenue deficiency.
16		These adjustments are summarized as follows:
17 18		 I respond to FPL's proposal to recover a \$100 million payment to the Jacksonville Electric Authority ("JEA") to retire the Scherer Unit 4 early.
19 20		 I will comment on the recovery methodology of several abandoned plant cost capital recovery amounts the Company seeks in this proceeding.
21 22 23 24		 I will comment on the Company's proposal for a four-year rate plan including an adjustment to accelerate excess accumulated deferred income taxes in 2024 and 2025 in lieu of a rate change, and its proposal for a new solar rate capital cost recovery to be in effect in 2024 and 2025.
25 26 27 28 29 30		4. I will address an overall rate of return, return on equity, and ratemaking capital structure for FPL. I comment on FPL's proposal and propose an overall rate of return that provides FPL fair compensation, maintains its credit rating and financial integrity, and preserves its access to capital, but accomplishes these utility compensation objectives while preserving just and reasonable and lowest possible prices to customers.

1QPLEASESUMMARIZEYOURRECOMMENDATIONCONCERNINGFPL'S2PROPOSAL TO RECOVER A \$100 MILLION RETIREMENT PAYMENT TO JEA TO3SUPPORT ITS EFFORT TO RETIRE SCHERER UNIT 4 EARLIER THAN THE4EXPECTED OPERATING LIFE OF THIS FACILITY.

5 A FPL is proposing to recover a \$100 million payment to JEA as a coordination
6 condition for JEA to agree to retire Scherer Unit 4. FPL proposes to recover this
7 payment to JEA as a regulatory asset and amortize it over ten years.

8 I recommend the Commission reject FPL's proposal to recover this 9 \$100 million payment to JEA from its retail customers. Under the terms of retiring 10 Scherer Unit 4, FPL's retail customers in Florida will be burdened by the unrecovered 11 sunk costs of Scherer Unit 4 based on its decision to retire early. Even with these 12 sunk costs, FPL claims FPL's customers will be economically better off. Similarly, 13 FPL's contractual relationship with JEA would leave JEA customers saddled with 14 unrecovered costs associated with the retirement of Scherer Unit 4, but JEA's 15 economics indicate that its customers would be economically better off even with 16 these sunk investments. It is reasonable to treat FPL's retail customers and JEA on a 17 comparable basis.

18 FPL's agreement with JEA to retire Scherer Unit 4 also included a 20-year 19 new Power Purchase Agreement ("PPA") where JEA would purchase gas-fired 20 generating resources from FPL at stated capacity prices, fixed gas costs, and later 21 potentially converting to a solar resource backed PPA. The contractual relationship 22 between FPL and JEA will continue beyond the retirement of Scherer Unit 4, and the 23 \$100 million payment from FPL to JEA was part of this ongoing contractual 24 relationship. As such, I recommend the Commission reject permitting FPL to recover 25 the \$100 million payment to JEA from its retail customers' cost of service in this case, and instead direct FPL to recover its \$100 million payment to JEA as part of the
 contractual agreement between FPL and JEA to retire Scherer Unit 4, and enter a 20 year PPA.

4 Also noteworthy, the decision to retire Scherer Unit 4 will create economic 5 benefits both to FPL on a stand-alone basis, and to JEA on a stand-alone basis, 6 without regard to the \$100 million payment from FPL to JEA. As such, there is no 7 direct tie between FPL's infrastructure investments or operating costs needed to 8 provide service to its retail customers in this case, and its separate contractual 9 arrangements with JEA based on wholesale contract sales for Scherer Unit 4 and/or 10 the new 20-year PPA that would justify shifting this wholesale contractual payment to 11 JEA to its retail operations. For these reasons, I recommend the Commission reject 12 allowing FPL to recover this \$100 million payment to JEA from its retail customers.

13

14 Q PLEASE DESCRIBE YOUR PROPOSED MODIFIED RECOVERY METHODOLOGY 15 RELATED TO SEVERAL ABANDONED PLANT CAPITAL INVESTMENTS WHICH 16 FPL SEEKS RECOVERY OF IN THIS PROCEEDING.

17 A I modified recovery for certain coal-fired investments which will be retired early or are
18 already abandoned. The Company's proposal is to recover these in a regulatory
19 asset using a declining balance methodology. Because the assets are retired, the
20 Company will not be adding to these regulatory assets, but rather will simply amortize
21 the cost of these over time.

A more balanced and equitable method of recovering these costs from FPL's customers would be to use a levelized cost recovery instead of a declining balance cost recovery methodology. This will lower costs to customers initially, but will increase costs to customers toward the end of the amortization period. The actual

cost to customers over time would be more equitable, and mitigate the impact on
customers at the initial outset of beginning to recover the regulatory asset balance.
FPL should be economically indifferent to a declining balance cost recovery
methodology versus a levelized methodology, because it will continue to earn its
Commission-approved weighted average cost of capital on the unrecovered balance
as long as it is outstanding.

I also request the Commission to require FPL to consider the potential
benefits to customers by the use of a lower financing mechanism for these
non-recurring abandoned plant regulatory assets. For example, use of securitization
bonds, in lieu of the utility's weighted average cost of capital may provide the
Company full recovery of these abandoned plant costs, while reducing the charges to
customers to compensate the Company for these regulatory assets.

13

14 Q PLEASE SUMMARIZE YOUR RECOMMENDATIONS AND CONCLUSIONS ON 15 RETURN ON EQUITY.

16 A I recommend the Florida Public Service Commission ("Commission") award a return 17 on common equity in the range of 9.10% to 9.70%, with a midpoint of 9.40%. This 18 return on equity reflects FPL's current market cost of equity. I recommend the 19 Commission approve a return on equity that reflects FPL's investment risk, and 20 charges customers tariff prices that are no more than necessary to fairly compensate 21 FPL and maintain its financial integrity and credit standing.

I also respond to FPL witness Mr. James C. Coyne's return on equity recommendation. Mr. Coyne recommends an equity return in the range of 10.50% to 11.50%, and return on equity of 11.00%.¹ Mr. Coyne' recommended return on equity

¹Coyne Direct Testimony at 5-6.

1 for FPL substantially exceeds a fair return on equity and unjustifiably inflates rates to

customers above a just and reasonable level.

2 3

Q PLEASE SUMMARIZE YOUR PROPOSED ADJUSTMENTS TO THE COMPANY'S
 5 PROPOSED RATEMAKING CAPITAL STRUCTURE.

6 А The Company's proposed ratemaking capital structure includes a common equity 7 ratio of total investor capital of approximately 59.6%. This common equity ratio is 8 unreasonable because it represents a capital structure that is far more expensive than 9 necessary to support FPL's current bond rating and access to capital. As such, FPL's 10 proposed ratemaking capital structure does not reflect economic and efficient 11 management and produces an excessive rate of return and unnecessarily inflated 12 retail rates. A more reasonable and balanced ratemaking capital structure, and one 13 more reasonably aligned with capital structures approved for ratemaking purposes for 14 other Florida utilities, will support FPL's investment grade bond rating and access to 15 capital, but at significantly lower tariff rate prices to its retail customers, which 16 supports rates that are just and reasonable.

17 I recommend a ratemaking capital structure that consists of 53.5% common
18 equity of total investor capital, and when adjusted for other capital components,
19 including customer deposits, accumulated deferred income taxes and investor tax
20 credits, this produces a total ratemaking common equity ratio of 43.12% in 2022.

As shown on my Exhibit MPG-1, my recommended overall rate of return for FPL is 5.52% for 2022 and 5.58% for 2023, which reflects my recommended return on equity of 9.40% and my recommended ratemaking capital structure.

- 24
- 25

1QPLEASE SUMMARIZE YOUR PROPOSED ADJUSTMENTS TO FPL'S CLAIMED2REVENUE DEFICIENCY IN TEST YEARS 2022 AND 2023.

A My recommended adjustments to the Company's claimed revenue deficiencies in its
2022 and 2023 test years are presented in Table 1 below. As shown in this table, the
Company's claimed revenue deficiency under the RSM scenario for 2022 and 2023 is
overstated by \$1.051 billion and \$104.1 million, respectively.

TABL Revenue Requir <u>Consolidated</u> (\$ Millio	E 1 ement Issues <u>Company</u> ons)	
Description	2022	2023
Claimed Deficiency:	\$1,108.4	\$606.5
Issues:		
Return on Equity	\$685.0	\$50.9
Cost of Debt	\$0.0	\$17.8
Capital Structure	<u>\$327.9</u>	<u>\$24.0</u>
Rate of Return	\$1,012.9	\$92.7
Capital Recovery Schedules	\$24.0	\$1.9
Scherer JEA Payment	<u>\$14.5</u>	<u>\$9.5</u>
Total	\$1,051.4	\$104.1
Adjusted Deficiency	\$57.0	\$502.4

7

8

9 Q DO YOU HAVE ANY COMMENTS CONCERNING THE COMPANY'S 10 PROPOSAL FOR A FOUR-YEAR RATE PLAN?

A Yes. I recommend the Commission reject the Company's proposal for a four-year
 rate plan. In fact, the Company has not presented any quantification of its cost of
 service relative to the rate revenue expected to be collected in 2022 and 2023.

The Company has not provided a complete revenue requirement in relationship to
the projected rate revenue under current rates for 2024 and 2025. Hence, I reject
the Company's proposal for a four-year rate plan because its filing only supports
its claimed cost of service and rate revenue relationships under a two-year rate
plan – 2022 and 2023.

6

Q PLEASE SUMMARIZE YOUR RESPONSE TO THE COMPANY'S REQUEST TO ACCELERATE AMORTIZATION OF EXCESS ACCUMULATED DEFERRED INCOME TAXES ("EADIT") IN 2024 AND 2025.

10 А The Company's proposal to accelerate remaining balances of EADIT in 2024 and 11 2025 should be denied. FPL witness Scott Bores states that accelerating the 12 excess tax benefits will reduce unprotected excess deferred taxes in 2024 and 2025 of around \$81.3 million.² The revenue requirement net value would be 13 14 approximately \$109 million for tax gross-up of this operating income excess ADIT 15 credit. The Company simply has not demonstrated that it has \$218 million 16 (2 times \$109 million) of revenue requirement offset that justifies accelerating 17 these excess tax deferred credits in 2024 and 2025 in the amount it is requesting. 18 For these reasons, the Company's proposal should be rejected. The Company 19 has not presented a cost of service analysis that shows allowing for accelerated 20 write-down of these customer regulatory liabilities in 2024 and 2025. Allowing the 21 Company to accelerate amortization of these costs, without determining whether 22 or not a rate decrease to customers is appropriate, will prejudice customers' rights 23 to full value of these regulatory liabilities, and as such, customers would be 24 harmed under this proposal.

²Bores Direct Testimony at 41.

1QPLEASE SUMMARIZE YOUR PROPOSAL FOR THE COMMISSION TO2APPROVE A SOLAR RATE CAPITAL COST RECOVERY FOR FACILITIES3EXPECTED TO BE PLACED IN-SERVICE IN 2024 AND 2025.

4 The Commission should not approve FPL's proposal for a 2024 and 2025 Solar А 5 Base Rate Adjustment ("SoBRA") mechanism. FPL witness Liz Fuentes 6 proposes a separate mechanism to charge customers for revenue requirement for 7 2024 and 2025 SoBRAs following the test year. The revenue requirement for 8 these facilities will be based on estimated capital expenditures for each solar 9 project, including depreciation expense and accumulated depreciation, and 10 related operating expenses. She states the revenue requirement will reflect FPL's 11 approved midpoint return on equity and incremental capital structure that is 12 adjusted to reflect the inclusion of investment tax credit on a normalized basis. 13 She states that the estimated capital expenditures will eventually be trued up if 14 the actual capital costs are different than those forecasted.³

15 The Company's proposal for a SoBRA mechanism should be denied. It 16 reflects incremental cost of new Solar Resource capital investments in 2024 and 17 2025, but does not capture the reduction in capital costs for solar investments that 18 are in-service in 2022 and 2023, which will further depreciate into 2024 and 2025. 19 That is, the incremental capital investments for 2024 and 2025 do not accurately 20 track the change in total FPL Solar Resource "net" plant in-service for all of its 21 solar resources, including those in-service in 2022/2023.

Allowing for an incremental mechanism charge for new investments in 23 2024/2025 without tracking a decline in the net plant or rate base values of the 24 solar facilities that are in-service before 2024, will have the effect of overcharging

³Fuentes Direct Testimony at 25-26.

1	customers for FPL total Solar Resource "net" plant in-service investments. For
2	these reasons, FPL's proposed solar base rate adjustments for investments made
3	in 2024 and 2025 should be rejected.

4

5 6

II. SCHERER UNIT 4 EARLY RETIREMENT PAYMENT TO JACKSONVILLE ELECTRIC AUTHORITY ("JEA")

7QIS FPL REQUESTING TO SEEK RECOVERY OF A PAYMENT IT MADE TO JEA8AS PART OF ITS AGREEMENT TO RETIRE SCHERER UNIT 4?

9 A Yes. FPL witness Scott Bores states that FPL owns an 76% interest in Scherer
10 Unit 4 and the remaining 24% was owned by JEA.⁴ He explains that in order to retire
11 Scherer Unit 4, FPL needed an agreement that JEA would also agree to retire this
12 unit.

13 FPL witness Sam Forrest at page 20 of his testimony states that under its 14 agreement with JEA, FPL would not have been relieved of its obligation to operate 15 the Scherer Unit unless JEA also agreed to retire its percent ownership share of Unit 4. He explained that JEA had an interest in retiring the unit, but was concerned 16 17 about ongoing JEA revenue bond obligations related to its Scherer investments. If 18 retired early, JEA would still need to fully meet its debt service obligations for the 19 revenue bonds supporting its investment in Scherer Unit 4, and incur other asset 20 retirement costs.⁵

As part of its agreement to retire Scherer Unit 4 early, FPL agreed to a payment to JEA of \$100 million. FPL asserts that it could not have retired Scherer Unit 4 early without agreement from JEA, and retirement of this unit early produces significant economic benefits to its retail customers. FPL proposes to record the

⁴Bores Direct Testimony at 42.

⁵Forrest Direct Testimony at 21.

\$100 million payment to JEA as a regulatory asset and amortize it to its retail cost of
 service over a ten-year period.⁶

3

4 Q DID JEA MAKE STATEMENTS CONCERNING THE ECONOMICS OF EARLY

5 RETIREMENT OF SCHERER UNIT 4, IN RECEIPT OF A \$100 MILLION

6 PAYMENT FROM FPL?

- 7 A Yes. However, JEA's presentation to the public discusses the Scherer Unit 4 early
- 8 retirement, including a cooperation agreement, which requires FPL to make the
- 9 \$100 million payment to JEA, but also includes an agreement between FPL and JEA
- 10 to enter into a 20-year Power Purchase Agreement ("PPA") to replace JEA's capacity
- 11 from Scherer Unit 4. As outlined on my Exhibit MPG-2, a summary of JEA's
- 12 statements includes the following:

13 **DISCUSSION**:

14 JEA has held an ownership interest in Scherer since its opening in 1989. 15 JEA holds a 23.64 percent ownership position (approximately 198 MW), while FPL owns the remaining 76.36 percent. The Robert W. Scherer 16 Generating Facility is operated by Georgia Power. Owners of the other 17 18 three Scherer units are Georgia Power, Municipal Electric Authority of 19 Georgia, Oglethorpe Power, Gulf Power (now owned by NextEra, FPL's parent company) and the City of Dalton. While the Scherer units have 20 21 long been low-cost generating units, changes in the natural gas market 22 now make Scherer the highest cost dispatch unit in JEA's fleet. Closing 23 Scherer Unit 4 at this time provides benefits to JEA in several key areas, 24 described below:

25 Financial

26 Comparing current and projected market pricing for natural gas combined 27 cycle electric generation to current and projected Scherer Unit 4 operating 28 costs, results in saving approximately \$10/MWh or a cost reduction of approximately 33%. Assuming a plant closure and executing a 29 30 replacement capacity and energy, 20 year slice-of-system Power Purchase Agreement with FPL, as well as the ongoing future contract and 31 32 decommissioning costs for Scherer Unit 4, the proposed transaction 33 generates approximately \$191 million in NPV savings. In consideration of 34 jointly closing Scherer Unit 4, FPL has offered a cooperation agreement, 35 including some compensation for remaining Scherer future costs. The

⁶Bores Direct Testimony at 42 and Fuentes Direct Testimony at 22.

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natural gas price for the initial ten years of the PPA will be fixed, with the option to switch to solar for the last ten years.⁷

3 JEA's filing included a summary of the Scherer Unit 4 retirement economic study, 4 which demonstrated that from JEA's standpoint, retiring Scherer Unit 4 would produce 5 approximately \$91.1 million of savings to JEA. JEA's economic study reflects the 6 remaining JEA debt service costs, operation and maintenance ("O&M") expense, and 7 capital costs associated with Scherer Unit 4. Further, the JEA study also reflects the 8 benefits of the replacement PPA with FPL. FPL's proposed payment of \$100 million 9 to JEA increases this economic savings benefit of retiring Scherer Unit 4 from 10 \$91.1 million up to \$191.1 million, and leaves FPL with a 20-year PPA sales 11 agreement to supply JEA from its gas-fired generation resources.

12

Q IS IT APPROPRIATE TO ALLOW FPL TO RECOVER THE \$100 MILLION PAYMENT TO JEA IN AGREEMENT TO RETIRE SCHERER UNIT 4?

A No. Retiring Scherer Unit 4 was an economic decision to both FPL and to JEA. As
outlined by JEA, absent a \$100 million payment from FPL, retiring Scherer Unit 4
along with the projected cost of replacement capacity and energy from this unit under
a new PPA, would have resulted in over \$91 million of savings to JEA.

Also of significance is FPL's agreement with JEA to provide replacement power through a new 20-year PPA agreement with JEA, as another factor in the cooperation agreement to retire Scherer Unit 4. The proposed PPA agreement includes capacity purchases, a slice-of-the-system combined cycle unit agreement, agreement for a fixed gas cost component over the first ten years, and agreement for an option to JEA to switch to a solar resource after year 10. The cooperation agreement between JEA and FPL also includes transaction support which specifically

⁷JEA 2020.06.26 Special Board Meeting Agenda and Package at 3, Inter-Office Memorandum from Paul McElroy, Interim Managing Director/CEO to JEA Board of Directors, emphasis added.

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referenced the PPA agreement as a component of JEA's decision to retire Scherer Unit 4.

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4 Q SHOULD FPL'S RETAIL CUSTOMERS AND JEA BE TREATED IN AN 5 ECONOMICALLY SIMILAR MANNER CONCERNING THE COSTS ASSOCIATED 6 WITH THE EARLY RETIREMENT OF SCHERER UNIT 4?

7 А Yes, particularly since the retirement of this unit results in savings to both FPL 8 customers and JEA based on FPL's projections. Under FPL's proposal, the costs 9 associated with Scherer Unit 4 that would otherwise have been allocated to FPL retail 10 customers and recovered over the remaining life of this unit had it not been retired 11 early, would instead be paid for by FPL customers by the creation of a regulatory 12 asset. In a similar manner, JEA should be placed in a position where its customers 13 will be obligated to pay costs associated with retirement of Scherer Unit 4 in a manner 14 similar to those costs that would have been paid had Scherer Unit 4 not been retired. 15 From FPL's perspective, the investments it made to provide service to its retail 16 customers will be included in the regulatory asset and recovered. Similarly, FPL's 17 investment costs by its contractual relationships with JEA should be recovered 18 through payments JEA makes to FPL. This would include the \$100 million payment 19 FPL made to JEA as part of an agreement to both retire Scherer Unit 4 and JEA's 20 agreement to enter into a 20-year PPA agreement with FPL.

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1QSHOULD THE \$100 MILLION COOPERATION PAYMENT FROM FPL TO JEA BE2REFLECTED AS A COST OF SERVICE INVESTMENT FOR RETAIL CUSTOMERS3SERVED UNDER FPL'S TARIFFS?

4 No. FPL has a separate contractual relationship with JEA concerning providing А 5 capacity and energy to JEA which it needs to meet its own retail customer load 6 requirements. The new PPA agreement between FPL and JEA covers a 20-year 7 period and provides FPL margin in the form of both capacity payments and potentially 8 energy pricing that may also produce FPL margin. FPL will earn margin under the 9 proposed PPA agreement with JEA. For these reasons, FPL should recover its \$100 10 million cooperation agreement payment to JEA under the new terms and margin of its 11 new PPA agreement with JEA.

12 The \$100 million payment had no relationship to FPL's investment in Scherer 13 Unit 4 that was used to provide service to retail customers under FPL's own tariffs, 14 but rather deals exclusively with its contractual agreement with JEA.

15 The \$100 million payment to JEA therefore should be removed from FPL's 16 retail cost of service, and should be recovered by FPL under the new PPA pricing 17 terms and conditions with JEA. The PPA will have a margin component which FPL 18 should rely on to recover its costs of the separate contractual wholesale agreement 19 with JEA. For these reasons, I recommend the Commission reject allowing FPL to 20 recover the \$100 million cooperation agreement payment with JEA for agreement to 21 retire Scherer Unit 4 and include it as a regulatory asset and amortize it over a ten-22 year period. This lowers the Company's claimed revenue deficiency by 23 approximately \$14.5 million in 2022, as shown on Exhibit MPG-3.

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III. PROPOSAL TO CREATE A REGULATORY ASSET

2 Q PLEASE DESCRIBE FPL'S PROPOSAL TO CREATE A REGULATORY ASSET 3 RELATED TO ASSET RETIREMENTS.

- 4 А FPL's proposal for a regulatory asset for asset retirement costs is described in the 5 direct testimony of Keith Ferguson. FPL retired certain assets that are not yet fully 6 depreciated. As a result, Mr. Ferguson developed a series of capital recovery 7 schedules that seek to recover the remaining investment for those assets over a ten-8 year period. The base rate impact of the capital recovery schedules is identified on 9 the Company's Exhibit LF-4, sponsored by Liz Fuentes. As discussed at pages 10 18-20 of his testimony, Mr. Ferguson breaks out the 2022 and 2023 regulatory assets 11 for the retired assets and the significant capital assets retiring in periods beyond 2023. 12
- 13 For the 2022-2023 period, Mr. Ferguson describes the following assets to be
- 14 recorded as a regulatory asset:

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- 151. \$365 million investments related to Martin Units 1 and 2 that were retired16in 2018.
- 17 2. \$328 million investments in Lauderdale Units 4 and 5 also retired in 2018.
- \$462 million investments in Gulf Clean Energy Center Units 4-7 retired in October 2020.
- 204. \$231 million remaining investment at Manatee Units 1 & 2 expected to be
retired in January 2022.
- 225.\$112 million of investments in FPL's 500 kV Transmission System and23related Cost of Removal ("COR") beginning in January 2022, and another24\$92 million investment in COR beginning in January 2023.
- 25
 6. Finally, the Company is including \$831 million remaining investment at Scherer Unit 4, expected to be retired in January 2022.⁸

⁸Ferguson Direct at 18-19.

- 1 The Company also identifies additional asset retirements it proposes to 2 include in a regulatory asset including the following for periods past 2023: 3 1. \$67 million in 2024 and \$82 million in 2025 for remaining investment in COR related to FPL's 500 kV Transmission System; and 4 5 2. \$136 million retirement in 2024 of estimated net book value of Daniel Units 1 and 2, expected to be retired in 2024. 6 7 8 HOW DOES THE COMPANY PROPOSE TO RECOVER THESE UNRECOVERED Q 9 ASSET RETIREMENT COSTS? 10 А The Company is proposing to create a regulatory asset and include in its cost of 11 service a rate of return on the unamortized balance, and amortization expense on a 12 straight line basis that will recover this regulatory asset over a ten-year period.⁹ The 13 Company proposes to recover this abandoned plant regulatory asset in both base 14 rates and certain rider mechanisms. Mr. Ferguson's capital recovery schedules 15 show the Company proposes to recover \$1.3 billion in base rates and \$1.1 billion 16 through riders. A summary of the unrecovered assets is provided as Exhibit MPG-4. 17 The resulting increase to base rates as a result of the regulatory assets amortization 18 expense is approximately \$117 million in the 2022 Test Year and \$130 million in the 19 2023 Subsequent Year.¹⁰ The Company's August 2021 clause projection filing will
- 20 21
- 22 Q ARE YOU OPPOSING THE COMPANY'S REQUEST TO RECOVER THE 23 UNRECOVERED COST ASSOCIATED WITH THE RETIRED ASSETS?

address the \$1.1 billion regulatory assets recovered through riders.

A No. However, I am recommending that the Commission recognize the extraordinary proposal to significantly increase base rates as a result of the Company's capital

⁹Exhibit LF-4.

¹⁰Ferguson Direct at 21.

recovery schedules. I recommend the Commission modify FPL's proposed recovery
 mechanism in order to mitigate the test year and subsequent year cost of these
 abandoned assets, and more economically distribute these costs of these facilities
 over generations of FPL customers.

5 To be clear, however, I am not recommending a disallowance or adjustments 6 to recovery of abandoned plant costs, but rather simply a modification to the method 7 upon which these costs will be recovered in FPL's cost of service. The adjustment 8 mitigates the impact on cost of service in this case and is fair to the generations of 9 customers over the next ten years. Specifically, these abandoned costs will not 10 provide service to any generation of customers, and levelizing the costs to all 11 generations of customers places an equivalent burden in the rate structure of 12 customers over the next ten years.

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14 Q PLEASE DESCRIBE YOUR PROPOSED REGULATORY TREATMENT THAT WILL 15 CREATE A MORE ECONOMIC DISTRIBUTION OF THESE ABANDONED ASSET 16 COSTS ON FPL CUSTOMERS.

17 А I recommend a levelized cost recovery over the same ten year recovery period used 18 by the Company. This will have the effect of decreasing FPL's base rate revenue 19 requirement by approximately \$24.0 million in the 2022 Test Year and \$25.9 million in 20 the 2023 Subsequent Year, as summarized on my Exhibit MPG-5, page 1. Again, it 21 is important to note that this recovery method will still fully compensate FPL for its 22 unrecovered investments, or obsolete plant investments, but the recovery on a 23 levelized basis will reduce its costs in the test year and subsequent year, but increase 24 costs later on. A graphical depiction of the difference between FPL's declining 25 balance basis and a levelized cost basis is shown in Figure 1 below.

1 Q CAN YOU ILLUSTRATE YOUR PROPOSED RECOVERY STREAM UNDER A

2 LEVELIZED BASIS VERSUS A DECLINING BALANCE BASIS?



3 A Yes, this is illustrated in Figure 1 below.

5 As shown in the graph above, under both instances, FPL will fully recover its 6 unrecovered plant investment for all the retired assets that were or will be retired 7 between 2018 and 2022. The difference is that FPL will recover a levelized annual 8 amount for these facilities each year through 2031. After that time period, the regulatory assets created in 2022 will have been fully recovered. The cost recovery 9 10 under both scenarios increases in 2023 as a result of the 2023 transmissions assets 11 being turned into a regulatory asset and being recover over 10 years, or 2023 to 12 2032.

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1 The figure above only reflects the costs FPL proposes to recovery in base 2 rates. As noted above, approximately 50% of the of capital recovery costs will be 3 recovered through riders and addressed by FPL is filing later this year.

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Q IF THE COMMISSION ACCEPTS THIS ALTERNATIVE COST RECOVERY MECHANISM YOU PROPOSE, IS THERE POTENTIAL OF ADDITIONAL SAVINGS OTHER THAN THAT YOU HAVE ESTIMATED ON YOUR EXHIBIT MPG-5?

A Yes. In the event that FPL were permitted access to use securitization bonds to finance prudently incurred abandoned plant costs, and if these regulatory assets (including the portion included in the riders) would qualify for the use of securitization bonds, and allowed by statute, a levelized cost recovery of the abandoned coal costs could further reduce cost to customers, while still providing FPL full recovery of abandoned plant costs.

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15 Q PLEASE DESCRIBE HOW YOU DEVELOPED A LEVELIZED ANNUAL REVENUE 16 REQUIREMENT FOR RECOVERING THESE REGULATORY ASSETS.

17 А This is developed on my Exhibit MPG-5. On page 2 of this exhibit, I first recreate the 18 Company's proposal using the data provided by Mr. Ferguson on his capital recovery 19 schedules (FPL Exhibit KF-4) and Ms. Fuentes on her schedules and workpapers 20 supporting the Company's adjustment (FPL Exhibit LF-4). This is summarized on my 21 Exhibit MPG-5, page 2. I developed the annual cost recovery using the Company's 22 proposed annual amortization expense and a return on the unamortized balance at 23 the Company's weighted average cost of capital, after my proposed adjustments. On 24 page 3, I developed a levelized revenue requirement for each regulatory asset that 25 allows the Company to fully recover the costs of the retired assets using the same 10

year period as the Company (2022-2031 for the regulatory assets and 2023-2032 for
 the 2023 transmission assets).

This will have the effect of decreasing FPL's base rate revenue requirement by approximately \$24.0 million in the 2022 Test Year and \$25.9 million in the 2023 Subsequent Year, as shown on page 1 of my exhibit. As mentioned above, this adjustment includes all of unrecovered costs the Company proposes to recover in base rates.

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IV. RATE OF RETURN

10 Q PLEASE DESCRIBE THIS SECTION OF YOUR TESTIMONY.

11 А I will provide observable market evidence and a detailed analysis to demonstrate that 12 my recommended rate of return represents a fair return for investing in utility infrastructure plant, and equipment, and will support FPL's financial integrity and 13 access to capital. I will use market-based models to estimate the current market-14 15 required rate of return investors demand to assume the risk of an investment similar 16 to that of FPL's investment risk. Together, I use this information to demonstrate that 17 my recommended overall rate of return, ratemaking capital structure and return on 18 equity meet the Hope and Bluefield¹¹ standards of awarding FPL a rate of return that 19 represents fair compensation while maintaining financial integrity and investment 20 grade credit rating, but at just and reasonable rates to retail customers.

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¹¹Fed. Power Comm'n v. Hope Natural Gas Co., 320 U.S. 591 (1944) ("Hope") and Bluefield Water Works & Improvement Co. v. Pub. Serv. Comm'n of W. Va., 262 U.S. 679 (1923) ("Bluefield").

IV.A. Utility Industry Authorized Returns on Equity, Access to Capital, and Credit Strength

3 Q PLEASE DESCRIBE THE OBSERVABLE EVIDENCE ON TRENDS IN

4 AUTHORIZED RETURNS ON EQUITY FOR REGULATED UTILITIES.

- 5 A As illustrated in Figure 2 below, national average authorized returns on equity for both
- 6 electric and gas utilities have declined over the last several years and have been
- 7 reasonably stable well below 10.0% for many years.



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10 Q HAVE UTILITIES BEEN ABLE TO ACCESS EXTERNAL CAPITAL TO SUPPORT

- 11 CAPITAL EXPENDITURE PROGRAMS?
- 12 A Yes. In its April 8, 2021 Utility Capital Expenditures Update report, RRA Financial
- 13 *Focus*, a division of S&P Global Market Intelligence, made several relevant comments
- 14 about utility investments generally:

- Projected 2020 capital expenditures for the 47 energy utilities in the Regulatory Research Associates, a group within S&P Global Market Intelligence, universe currently stands at roughly \$141.3 billion, well above 2019's \$120.7 billion in capital investment.
- 2020 energy utility capital expenditures marked a record high and were
 more than 7.75% above the \$120.7 billion that the energy utility
 industry invested in 2019, despite that the coronavirus pandemic
 interrupted certain supply chains for a period of months in some
 instances.
- 2021 appears on track to be another record year for energy infrastructure investments. Assuming current projections hold, investment across the RRA covered energy utility industry may rise by 9% or more this year.
- * * *
 The nation's electric and gas utilities are investing in infrastructure to upgrade aging transmission and distribution systems, build new natural gas, solar and wind generation, and implement new technologies, including smart meter deployment, smart grid systems, cybersecurity measures and battery storage. We expect considerable levels of spending to serve as the basis for solid profit expansion in the sector for the foreseeable future.
- 22 * * *
- 23 From a natural gas perspective, the momentum in replacement of 24 mature gas distribution infrastructure continues and is likely to maintain 25 at material levels for many years, considering state and federal mandates to address safety. In addition, despite headwinds in many 26 27 regions of the country regarding the future of gas, it is expected to 28 remain a critical energy source for some time. In addition, natural gas 29 midstream pipelines and downstream distribution networks are likely to 30 be central to aims by many midstream and utility enterprises to extend 31 the life of their infrastructure through transportation of renewable 32 natural gas and hydrogen blends.¹²
- 33 As shown in Figure 3 below, capital expenditures for electric and natural gas
- 34 utilities have increased considerably over the period 2020 into 2021, and the
- 35 forecasted capital expenditures remain elevated through 2023, albeit falling below
- 36 current levels in 2023.

¹²S&P Global Market Intelligence, RRA Financial Focus: "Utility Capital Expenditures Update," April 8, 2021, at 1-2.



1 As outlined in Figure 3 above, and in the comments made by RRA S&P 2 Global Market Intelligence, capital investments for the utility industry continue to stay 3 at elevated levels, and fuel utilities' profit expansion into the foreseeable future. This 4 is clear evidence that the capital investments are enhancing shareholder value, and 5 are attracting both equity and debt capital to the utility industry in a manner that 6 allows for these accelerated capital investment levels. While capital markets 7 embrace these profit-driven capital investments, regulatory commissions also must be 8 careful to maintain reasonable prices, and tariff terms and conditions to protect 9 customers' need for reliable service at competitive prices.

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11QIS THERE EVIDENCE OF ROBUST VALUATIONS OF REGULATED UTILITY12EQUITY SECURITIES?

A Yes. Robust valuations are an indication that utilities can sell securities at high
 prices, which is a strong indication that they can access equity capital under

reasonable terms and conditions, and at relatively low cost. As shown on Exhibit
MPG-6, the historical valuation of electric and gas utilities followed by *The Value Line Investment Survey* ("*Value Line*"), based on their price-to-earnings ("P/E") ratios,
price-to-cash flow ("P/CF") ratios, and market price-to-book value ("M/B") ratios,
indicates that utility security valuations today are very strong and robust relative to the
last several years. These strong valuations of utility stocks indicate that utilities have
access to equity capital under reasonable terms at relatively low cost.

8

9 Q PLEASE DESCRIBE UTILITY STOCK PRICE PERFORMANCE OVER THE LAST 10 SEVERAL YEARS.

11 А As shown in Figure 4 below, S&P Global Market Intelligence ("MI") has recorded 12 utility stock price performance compared to the market. The industry's stock 13 performance data from 2005 through 2020 shows that the MI Electric Company and 14 MI Gas Utility Indexes have followed the market through downturns and recoveries. 15 However, utility investments have been less volatile during extreme market 16 downturns. This more stable price performance for utilities supports my conclusion 17 that market participants regard utility stock sectors as a moderate- to low-risk 18 investment option.

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2 While utility stocks have not exhibited the same volatility as the S&P 500, 3 stock prices have remained strong, relative to the market in general, and support the 4 utilities' access to equity capital markets under reasonable terms and prices.

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Q HOW SHOULD THE COMMISSION USE THIS MARKET INFORMATION IN ASSESSING A FAIR RETURN FOR FPL?

A Observable market evidence demonstrates that capital market costs are near historically low levels. While authorized returns on equity have fallen below the mid-0 9% range, utilities continue to have access to large amounts of external capital, even as they are funding large capital expenditure programs. Furthermore, utilities' investment-grade credit ratings are stable and have improved, due in part to supportive regulatory treatment. The Commission should carefully weigh all this important observable market evidence in assessing a fair return on equity for FPL.

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1 IV.B. Federal Reserve's Impact on Cost of Capital

2 Q DO YOU BELIEVE THAT THE FEDERAL RESERVE'S ACTIONS ARE FULLY 3 KNOWN BY MARKET PARTICIPANTS AND FULLY REFLECTED IN THE 4 VALUATION OF MARKET SECURITIES, BOTH DEBT AND EQUITY?

5 Yes, I do. The Federal Reserve's previous actions on Quantitative Easing and more Α 6 recent reentry into the Treasury, mortgage-backed security, and now, to a limited 7 extent, corporate bond markets were done in order to preserve stability and liquidity 8 in the market and to calm the marketplace. The effects of these measures, and the 9 outlooks by independent economists, continue to support the notion that capital 10 market costs will stay low for an extended period of time. Indeed, this can be seen 11 through observing independent economists' projections, as well as the observable 12 effects of the Federal Reserve's actions on short-term market costs and long-term 13 security costs.

An assessment of the market's reaction to the Federal Reserve's actions on
the Federal Funds Rate is shown below in Figure 5.

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BRUBAKER & ASSOCIATES, INC.



2 As shown in Figure 5 above, while the Federal Reserve has reduced short-3 term interest rates currently, as it did back in the period prior to 2015, the market's 4 valuation of long-term securities remains relatively stable, and at very low costs. The 5 Federal Reserve's interaction in short-term securities is specifically stated to manage 6 inflation and support employment in the economy. The Federal Reserve's interaction 7 in these marketplaces is not to manipulate utility valuation or security valuations, or 8 drive capital market costs in one direction or the other. Rather, it is strictly for the 9 purpose of supporting the U.S. economy.

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1 Q WHAT DO INDEPENDENT ECONOMISTS' OUTLOOKS FOR FUTURE INTEREST 2 RATES INDICATE?

A Independent economists expect the current low capital costs to prevail over at least the intermediate term. This is illustrated in projections for both short- and long-term changes in interest rates. Further, there is a clear trend in forecasted changes in interest rates over time, indicating that capital market participants are becoming more comfortable with today's low-cost capital market environment and expect it to prevail over at least the intermediate future.

9 For example, short-term projections suggest that the market expects capital 10 market costs to remain relatively low. Table 2 below shows capital cost projections 11 over the next two years, and demonstrates that projected Treasury bond yields are 12 not expected to increase significantly over the next two years.

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TABLE 2

Publicatio	n Date	4Q 2020	1Q 2021	2Q 2021	3Q 2021	4Q 2021	1Q 2022	2Q 2022	3Q 2022
Federal Fu	nds Rate	2020	2021	2021	2021	2021	2022	2022	2022
	.lan-21	0 1	0 1	0 1	0 1	0 1	0 1	0 1	
	Feb-21	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
	Mar-21	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
	Apr-21		0.1	0.1	0.1	0.1	0.1	0.1	0.1
	May-21		0.1	0.1	0.1	0.1	0.1	0.1	0.1
	Jun-21		0.1	0.1	0.1	0.1	0.1	0.1	0.1
<u>T-Bond, 30</u>	<u>yr.</u>								
	Jan-21	1.6	1.7	1.8	1.9	2.0	2.1	2.1	
	Feb-21	1.6	1.8	1.9	2.0	2.1	2.1	2.2	
	Mar-21	1.6	2.0	2.1	2.2	2.3	2.4	2.4	
	Apr-21		2.1	2.4	2.5	2.5	2.6	2.7	2.7
	May-21		2.1	2.4	2.5	2.6	2.7	2.7	2.8
	Jun-21		2.1	2.4	2.5	2.6	2.6	2.7	2.8
GDP Price	Index								
	Jan-21	1.6	1.8	1.8	1.8	1.8	1.9	1.9	
	Feb-21	2.0	1.8	1.7	1.9	1.9	1.9	2.0	
	Mar-21	2.1	2.2	1.8	1.9	1.9	1.9	2.0	
	Apr-21		2.2	2.1	2.1	2.0	1.9	2.1	2.2
	May-21		4.1	2.4	2.2	2.1	2.2	2.2	2.2
	Jun-21		4.3	3.3	2.5	2.1	2.2	2.2	2.3
0									
Blue Chi	a Note: 5 Financia	Eoroc	acte lar	00 yrany 20	21 throu	ah luna	2021		
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- 4 eventually the Federal Reserve's monetary actions will return to more normal levels.
- 5 Long-term interest rate projections are illustrated in Table 3 below.
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TABLE 3

30-Year Treasury Bond Yield Actual Vs. Projection				
<u>Description</u>	<u>Actual</u>	2-Year <u>Projected*</u>	5- to 10-Year <u>Projected</u>	
<u>2015</u>				
Q1	2.55%	3.80%		
Q2	2.89%	3.70%	4.8% - 5.0%	
Q3	2.84%	3.90%		
Q4	2.96%	3.80%	4.5% - 4.8%	
<u>2016</u>				
Q1	2.72%	3.67%		
Q2	2.64%	3.50%	4.3% - 4.6%	
Q3	2.28%	3.20%		
Q4	2.82%	3.20%	4.2% - 4.5%	
<u>2017</u>				
Q1	3.04%	3.70%		
Q2	2.91%	3.73%	4.3% - 4.5%	
Q3	2.82%	3.66%		
Q4	2.82%	3.60%	4.1% - 4.3%	
<u>2018</u>				
Q1	3.02%	3.63%		
Q2	3.09%	3.80%	4.2% - 4.4%	
Q3	3.07%	3.73%		
Q4	3.27%	3.67%	3.9% - 4.2%	
<u>2019</u>				
Q1	3.01%	3.50%		
Q2	2.78%	3.17%	3.6% - 3.8%	
Q3	2.30%	2.70%		
Q4	2.30%	2.50%	3.2% - 3.7%	
<u>2020</u>				
Q1	1.88%	2.57%		
Q2	1.38%	1.90%	3.0% - 3.8%	
Q3	1.36%	1.87%		
Q4	1.62%	1.97%	2.8% - 3.6%	
<u>2021</u>				
Q1	2.07%	2.23%		
Q2		2.77%	3.5% - 3.9%	
Source and Note Blue Chip Fina June 2021. *Average of all	: ncial Foreca 3 reports in	s <i>t</i> s, January 20 Quarter.	15 through	

As shown in Table 3 above, independent economists' projections of changes in long-term Treasury rates are very different today than they were over the last five to six years. Specifically, in 2015 economists were expecting that Treasury bond yields, which fell below 3%, would eventually return to the high 4-5% area. That outlook largely remained through 2016, but the outlook for future capital market costs started to decline in 2017. More recently, Treasury bond yields have dropped to historically low levels but are expected to stay low for the next five to ten years.

8 Again, the market is fully aware of the Federal Reserve's actions, and these 9 actions are not expected to have significant changes in capital market costs over the 10 next five to ten years. Further, the Federal Reserve's actions are expected to 11 maintain relatively stable capital market costs over the next two years.

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Q HAVE THE RECENT FEDERAL GOVERNMENT STIMULUS EFFORTS IMPACTED

14 CAPITAL MARKETS?

15 A The Federal Reserve's most recent projections indicate that its long-term inflation 16 outlook of around 2% is expected to hold, but is expecting relative increases in short-17 term inflation outlooks through 2021, likely to moderate in 2022.¹³

This outlook is generally shared by consensus economists in the most recent Blue Chip Financial Forecasts. In the most recent Blue Chip, economists are recognizing economic activity picking up at an accelerated pace due to the unwinding economic negative impact caused by the COVID pandemic and the success of vaccinations. More specifically, Blue Chip reports economists' outlooks concerning short-term and long-term inflation, and expected Treasury and Federal Reserve activities to include the following:

¹³Federal Open Market Committee, FOMC Projections materials accessible version, March 17, 2021.

Some Economic Fallout after the Pandemic Eases. The availability of COVID vaccines and their widespread use is not only helping to shield the population from the disease, but also commensurately reviving business and other activities of society, such as school attendance. We can rejoice in this, but it does not cure all of society's ills. Indeed, perhaps the most prominent of these at the present time is inflation. For many months, we have experienced inflation that was actually too low – or at least well below the Federal Reserve's "target" of 2%. The Fed applies this target specifically to the personal consumption expenditure price index and to its ex-food-and-energy core.

12Base Effects Raise Inflation Rates, but Current Months Strong13Too. Across 2019, the PCE price index and the core both rose just141.6% (December over December) and in 2020, the total index was up151.2%, with that core only 1.4%. Clearly, the monetary policymakers16were concerned about the apparent lack of price flexibility in the17economy generally.

* *

All this said, the forecast tabulation shows that the panel estimates that inflation rates will moderate during the second half of this year, reaching the Fed's desired 2% pace by the fourth quarter.

22 * *

Going forward, the Blue Chip panel looks for the Federal Reserve to hold the federal funds rate steady throughout the current near-term forecast period, to the end of 2022. They do believe the Fed will moderate the pace of its purchases of Treasury notes and bonds and mortgage-backed securities. So from the latest (May 26) \$7.9 trillion, the Fed's balance sheet total assets would rise to \$8.6 trillion at the end of this year and \$9.3 trillion at the end of 2022. They were \$4.17 trillion at the end of 2019.¹⁴

¹⁴Blue Chip Financial Forecasts, "Growth & Inflation Increase as Pandemic Impact Moderates," June 1, 2021.

1 IV.C. COVID-19 Pandemic

2 Q HAVE REGULATORY COMMISSIONS TAKEN SPECIFIC MEASURES TO HELP PROTECT UTILITIES' ABILITY TO FULLY RECOVER THEIR COST OF SERVICE 3 4 DURING THE ECONOMIC DISTRESS CAUSED BY THE COVID-19 PANDEMIC? 5 Yes. Regulatory commissions around the country have implemented measures that Α 6 prohibit utilities from disconnecting service for customers that are not paying their bill. 7 While this is an extraordinary measure, and exposes utility companies to increases in 8 uncollectible accounts expense, and waiver of certain utility fees, commissions have

9 also approved regulatory mechanisms that allow utilities to defer uncollectible10 accounts.

11 These regulatory mechanisms to protect customers' ability to receive essential 12 utility services were done in concert with the implementation of regulatory 13 mechanisms that preserved utilities' ability to recover their cost of service. 14 Accordingly, commissions have mitigated utilities' risks associated with the economic 15 turmoil caused by the COVID-19 pandemic considerably.

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17 IV.D. Market Sentiments and Utility Industry Outlook

18 Q PLEASE DESCRIBE THE CREDIT RATING OUTLOOK FOR REGULATED

- 19 UTILITIES.
- 20 A The global economy has faced the extraordinary challenges of the novel Coronavirus,
- 21 which led to nearly a complete shutdown of the global economy. This unprecedented
- 22 event has impacted all sectors and capital markets. With regard to regulated utilities,
- 23 S&P made the following statement:
- 24 Key Takeaways
- 25 Credit quality for the North American regulated utility industry
 26 weakened in 2020. At the beginning of the year about 18% of the

- industry had a negative outlook or ratings on CreditWatch with
 negative implications. By the end of the year that percentage had
 doubled, to about 36%.
- For the first time in a decade downgrades outpaced upgrades for the
 predominately investment-grade industry.
- The industry generally performed well throughout the pandemic and
 we expect it will continue to mostly manage through the remaining
 COVID-19-related risks.
- The main causes of weakening credit quality reflected environment,
 social, and governance (ESG) risks, regulatory issues, and companies'
 practice of strategically managing financial measures close to their
 downgrade threshold with little or no cushion.
- Despite our negative 2021 industry outlook, we expect a modest improvement to credit quality over the next 12 months. We believe Congress is more likely to raise the corporate tax rate, which would improve the industry's financial measures, offset in part by a continued focus on ESG risks.
- 18 * * *
- 19 COVID-19 Was Not The Culprit For Weaker Credit Quality
- 20In March 2020, we identified five COVID-19-related risks that could21lead to a weakening of the industry's credit quality.
- 22 * * *
- Encouragingly, the <u>industry has generally performed well throughout</u> the pandemic. Lower electric and gas deliveries to C&I customers were mostly offset by higher residential deliveries, the industry generally worked well with regulators to defer COVID-19-related costs for future recovery, market returns improved, and <u>the industry</u> <u>generally had consistent access to the capital markets</u>.¹⁵
- 29 Moody's opines that there may be delays in rate case decisions due to
- 30 COVID-19, but views regulated utilities as resilient to withstand the current economic
- 31 situation. Specifically, Moody's states:
- 32We are maintaining a stable outlook for the US regulated utilities33industry, reflecting our expectation for continued strong regulatory34support, robust residential demand and a recovering economy in 2021.35As a critical infrastructure sector with a regulated business model that

¹⁵S&P Global Ratings: "North American Regulated Utilities' Negative Outlook Could See Modest Improvement," January 20, 2021, at 1 and 3. (emphasis added).

- 1 provides good cost recovery, regulated utilities have remained 2 relatively resilient in the face of the uncertain economic environment 3 caused by the coronavirus pandemic.
- 4 » Following a decline in 2020 from last year's level, FFO-to-debt 5 will increase slightly on improving economic conditions. We project an aggregate industry funds from operations to debt ratio of 6 7 around 15% over the next 12 to 18 months, a slight improvement from 8 an expected decline to between 14% and 15% in 2020 from 15.8% in 9 2019. Our expectation considers Moody's global macro outlook 10 forecast of a 4.5% growth in US GDP in 2021, although this will be 11 closely tied to the containment of the coronavirus. We expect 12 continued strength in residential demand, improving commercial and 13 industrial load and disciplined O&M cost management to maintain financial stability. However, greater than usual use of debt financing 14 15 will constrain FFO-to-debt.
- 16 » Regulatory support to remain strong, although ROEs will be 17 under pressure. We expect continued supportive regulatory 18 frameworks to underpin the sector's ability to recover costs in a timely 19 manner and earn a fair return even as allowed returns on equity 20 (ROEs) remain under pressure amid low interest rates. We expect 21 most regulators to be supportive of the recovery of coronavirus-related 22 costs and investments, as well as costs associated with the increasing 23 frequency and severity of climate hazards.¹⁶
- 24

25 Q HOW IS THIS OBSERVABLE MARKET DATA USED IN FORMING YOUR

26 **RECOMMENDED RETURN ON EQUITY AND OVERALL RATE OF RETURN FOR**

- 27 FPL?
- A Generally, authorized returns on equity, credit standing, and access to capital have been quite robust for utilities over the last several years. The COVID-19 pandemic has created challenges for the U.S. economy as a whole, including utility companies. However, like the U.S. economy, utilities are expected to weather the economic downturn caused by the pandemic, and their financial strength will be restored as the economy recovers. In the meantime, it is critical that the Commission ensure that rates are increased no more than necessary to provide fair compensation and

¹⁶*Moody's Investors Service Sector Comment.* "2021 Outlook Stable On Strong Regulatory Support and Robust Residential Demand," October 29, 2020 (emphasis added).

1 maintain financial integrity, and be especially concerned about rate impacts on the 2 service area economies that are severely constrained due to current economic 3 conditions.

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5 IV.E. FPL Investment Risk

6 Q PLEASE DESCRIBE THE MARKET'S ASSESSMENT OF FPL'S INVESTMENT 7 RISK.

- 8 A The market's assessment of FPL's investment risk is described by credit rating
- 9 analysts' reports. FPL witness Mr. Coyne testified that FPL's current credit ratings
- 10 from S&P and Moody's are A, and A1, respectively. The Company has a stable
- 11 outlook from both rating agencies.¹⁷
- 12 Specifically, S&P states:

13 Outlook

14 S&P Global Ratings' stable outlook on FPL is consistent with its stable outlook on parent NEE and its expectation that FPL's stand-alone 15 financial measures will not materially weaken. The stable outlook on 16 17 NEE incorporates our view that NEE will remain focused on expanding 18 its regulated utility businesses and will continue to reduce risk at its 19 competitive businesses by strategically growing through contracted 20 assets. We expect NEE's regulated utility business will consistently reflect about 70% of consolidated EBITDA. We expect that NEE's 21 22 consolidated financial measures will marginally weaken, reflecting FFO 23 to debt at 21%-24%. We also expect that FPL's FFO to debt will 24 continue to reflect the middle of the range for its financial risk profile category at 29%-31%. 25 26

Business Risk: Excellent

FPL's business risk profile is further supported by its largely residential customer base, which accounts for about 55% of its operating revenue; its effective management of regulatory risk; and its above-average economic and customer growth, demonstrated by Florida outperforming the national GDP growth rate in the past six consecutive years and, consequently, strong energy demand. At the same time, Florida's economy continues to recover from the impacts of the ongoing COVID-19 pandemic, demonstrated by improvements in the unemployment rate and consumer confidence.

¹⁷ Coyne Direct Testimony at 41.

1 The FPSC regulates FPL. We view the regulatory environment in 2 Florida as constructive and supportive of credit quality. FPL benefits 3 from forecast test years, above-average authorized returns on equity 4 multiyear rate settlements, and various (ROEs), regulatory 5 mechanisms that enable the company to reduce its regulatory lag and 6 support earnings without burdening customers, resulting in earned 7 ROEs at the high-end of the authorized range. Further supporting our 8 assessment of the company's business risk profile is the company's ability to consistently recover storm-related costs, protecting it from 9 10 hurricanes that are common in its service territory and significantly 11 reducing a key risk for the company. As such, our assessment of FPL's 12 business risk is in the higher half of the range compared with peers.¹⁸

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15 **IV.F. FPL Proposed Capital Structure**

16 Q WHAT IS FPL'S PROPOSED CAPITAL STRUCTURE?

17 A FPL's proposed capital structure is sponsored by FPL witness Robert Barrett and is

18 shown in Table 4 below:

FPL Proposed Capital Structure						
Line	Description	<u>December</u> Regulatory <u>Weight</u> (1)	<u>31, 2022</u> Investors <u>Weight</u> (2)	<u>December</u> Regulatory <u>Weight</u> (3)	<u>31, 2023</u> Investors <u>Weight</u> (4)	
1	Long-Term Debt	31.37%	38.93%	31.43%	38.84%	
2	Short-Term Debt	1.18%	1.46%	1.26%	1.56%	
3	Common Equity	48.04%	59.61%	48.23%	59.60%	
4	Cost Free Capital	16.70%		16.22%		
5	Other Capital	<u>2.71%</u>		<u>2.85%</u>		
6	Total	100.00%	100.00%	100.00%	100.00%	

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¹⁸S&P Global Ratings, "RatingsDirect[®]: Florida Power & Light Co.," April 29, 2020, at pages 3-

1 FPL's proposed capital structure is based on projected capital balances as of

2 December 31, 2022.¹⁹

3

4 Q IS THE COMPANY'S PROPOSED RATEMAKING CAPITAL STRUCTURE

- 5 **REASONABLE?**
- 6 A No. The Company's proposed ratemaking capital structure is unreasonable for the
- 7 following reasons:
- 8 1. It contains far too much common equity to reflect a reasonable cost of 9 capital for setting rates. A more reasonable balance of debt and equity in 10 a ratemaking capital structure will reduce FPL's revenue requirement 11 costs by a lower rate of return, and related income tax expense, and will 12 also provide fair compensation to FPL, maintain its financial integrity and 13 credit rating, but while also maintaining competitive and just and 14 reasonable tariff rates to FPL's retail customers.
- 15
 2. FPL's recent acquisition of Gulf Power and Florida City Gas illustrates the unreasonableness and expensiveness of FPL's proposed ratemaking capital structure. Specifically, in Gulf Power's last rate case, the Commission approved a ratemaking capital structure common equity ratio of 52.5%, which was later increased to 53.5% to reflect the cash flow impacts associated with the federal tax law change in the Tax Cuts and Jobs Act ("TCJA").
- In a rate case after the TCJA, the Commission accepted a settlement in setting rates for Florida City Gas which included a ratemaking common equity of no more than 49.2%.²⁰ Ratemaking common equity ratios for these two affiliates when they were owned by Southern Company, represented far more reasonable ratemaking capital structures than FPL's proposal to set rates based on an investor capital equity ratio of 59.6%.
- Other Florida utilities are also setting rates with more reasonable rates of return. For example, Tampa Electric Company, using a 2022 test year, is proposing a ratemaking capital structure which includes approximately 54.6% common equity as a function of total investor capital.²¹
- Further, a comparison of regulated utility industry credit rating analysts' equity and debt ratios in support of a bond rating the same as that of FPL,

¹⁹ Schedule D-1a.

²⁰Docket No. 20170179-GU, Order No. PSC-2018-0190-FOF-GU, Attachment A, page 17, April 20, 2018.

²¹Docket 20210034-EI, Direct Testimony of Tampa Electric Company witness Kenneth D. McOnie at 17-18, and MFR Schedule D-1a.

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9 Q IS FPL'S PROPOSED RATEMAKING CAPITAL STRUCTURE WITH A 59.6%
10 COMMON EQUITY REASONABLY COMPARABLE TO THE PROXY GROUP
11 USED TO ESTIMATE A FAIR RATE OF RETURN ON COMMON EQUITY FOR
12 FPL?

capital structure cost that simply is unjust and unreasonable.

clearly demonstrates that FPL's proposed capital structure contains far

range of equity ratios, and the proxy group used to estimate a fair return

on equity for FPL in this case, also clearly indicates its common equity

component of its ratemaking capital structure is excessive and produces a

more common equity than necessary to support its current bond rating.

5. Also, a comparison of FPL's ratemaking capital structure to the industry

13 Α No. The proxy group, which met FPL witness Mr. Coyne's proxy group selection 14 criteria, includes a common equity ratio of long-term capital on average throughout 15 the proxy group of around 47%, and a median for the proxy group of around 46%. There is one company within the 14-company sample with a common equity ratio of 16 17 59%. This company has a common equity ratio of long-term capital and short-term 18 debt of around 49.7%, suggesting that it relies on an inordinately large amount of 19 short-term debt to support its capital investments. FPL's proposal for a long-term 20 common equity ratio of 59.6% exceeds every company within the proxy group, and is 21 substantially higher than the more balanced capital structure mix incorporated by all 22 the publicly traded companies.

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1 Q WHY DO YOU MAINTAIN THAT A RATEMAKING COMMON EQUITY OF 59.6%

2 COMMON EQUITY IS FAR MORE EXPENSIVE THAN NECESSARY TO SUPPORT

3 FPL'S CURRENT "A" BOND RATING?

4 A I state this in a comparison of distribution of adjusted debt ratios for regulated utility 5 companies across the country with various bond ratings. The distribution of this debt

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ratio for bond rating purposes based on credit ratings is shown below in Table 5.

TABLE 5

S&P Adjusted Debt Ratio
(Operating Subsidiaries of Value Line Electric, Gas and Water Utilities)

		% Distrib	ution of 9 Yea	r Averag
<u>Rating</u>	<u>Median</u>	<u><50</u>	<u>50 to 55</u>	<u>>55</u>
AA-	45.2%	100%	0%	0%
A+	56.7%	33%	0%	67%
А	48.7%	58%	25%	17%
A-	52.1%	29%	56%	16%
BBB+	50.4%	46%	39%	14%
BBB	54.2%	13%	38%	50%
FPL Proposed*	39.7%			
FPL, Gorman*	45.9%			
Sources:				
S&P Capital IQ, do	wnloaded Jur	ne 14, 2021.		
*Attachment MPG-	-18.			

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As shown in the table above, FPL's ratemaking capital structure of 59.6% common equity implies a total adjusted debt ratio of around 39.7%. As shown in the table above, for an "A" rated utility company, the median debt ratio is 48.7%, more than 10 percentage points above FPL's proposed common equity ratio. FPL's S&P adjusted debt ratio at this more leveraged capital structure would be 45.9%, still below the median for "A" rated utility companies. As also outlined in Table 5 above, the distribution of adjusted debt ratios for utility companies also clearly supports a finding that FPL's capital structure simply is far more expensive than necessary to support its bond rating. Over 50% of the industry have debt ratios of less than 58%, with over 42% having adjusted debt ratios in excess of 50%.

With this as a backdrop, even though it is a significant adjustment from FPL's
request, my proposed ratemaking capital structure reflects a relatively moderate debt
leverage for a regulated utility company and will support FPL's current "A" rated utility
bond rating, but do so at a much lower cost to FPL's customers.

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11 IV.G. Recommended Ratemaking Capital Structure

Q WHAT CAPITAL STRUCTURE DO YOU RECOMMEND BE USED TO SET FPL'S OVERALL RATE OF RETURN AND REVENUE REQUIREMENT IN THIS PROCEEDING?

15 A I recommend a forecasted test year 2022 and 2023 capital structure reflecting a 16 53.5% common equity ratio of total investor capital. This is the Commission-approved 17 capital structure for Gulf Power Company after taking in the effects of the TCJA that 18 went into effect January 1, 2018. This ratemaking capital structure is sufficient to 19 maintain FPL's current "A" bond rating, but will do so at considerably lower cost than 20 the capital structure proposed by FPL.

My recommended capital structure is shown below in Table 6.

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	TABLE 6								
	Proposed Capital Structure								
Line	<u>Description</u>	<u>December</u> Regulatory <u>Weight</u> (1)	<u>31, 2022</u> Investors <u>Weight</u> (2)	<u>December</u> Regulatory <u>Weight</u> (3)	<u>31, 2023</u> Investors <u>Weight</u> (4)				
1	Long-Term Debt	36.30%	45.04%	36.37%	44.94%				
2	Short-Term Debt	1.18%	1.46%	1.26%	1.56%				
3	Common Equity	43.12%	53.50%	43.30%	53.50%				
4	Cost Free Capital	16.70%		16.22%					
5	Other Capital	<u>2.71%</u>		<u>2.85%</u>					
6	Total	100.00%	100.00%	100.00%	100.00%				
	Source: Exhibit MPG-	1.							

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3 Q WHAT IS THE IMPACT ON FPL'S REVENUE REQUIREMENT IF ITS 4 RATEMAKING CAPITAL STRUCTURE IS ADJUSTED TO INCLUDE A 53.5% 5 COMMON EQUITY RATIO, RATHER THAN ITS 59.6% COMMON EQUITY RATIO 6 WITH NO OTHER ADJUSTMENTS TO FPL'S PROPOSAL?

7 A The impact on its revenue requirement in 2022 and 2023 is \$0.3 million and
\$0.3 million, respectively, as developed on my Exhibit MPG-7. These rates of return
9 reflect an adjustment to FPL's ratemaking capital structure by reducing common
10 equity and increasing long-term debt to produce a forecasted ratemaking capital
11 structure composed of 53.5% common equity as a function of total investor capital.

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1QWHY DO YOU ASSERT THAT YOUR PROPOSED RATEMAKING CAPITAL2STRUCTURE WILL SUPPORT FPL'S CURRENT STRONG "A" BOND3RATING?

A As noted above, FPL's proposed ratemaking capital structure contains a debt
ratio far lower than that for which other regulated utility companies with the same
bond rating are able to manage their capital structure at lower cost to customers,
and maintain their bond rating. Again, Gulf Power, Florida City Gas, and Tampa
Electric supported a "Stable" credit outlook from S&P at more reasonably
balanced and lower cost capital structures relative to that proposed by FPL.

More specifically, an assessment of FPL's actual ratemaking cost of service in this proceeding, along with my recommended capital structure and return on equity, as described in further detail below, demonstrate that FPL will set its revenue requirement and equity ratio at a level that will produce cash flow coverages, and debt balance sheet strength that is more than adequate to support its S&P "A" current investment grade bond rating, at S&P's financial and business ratings for FPL.

All of this supports my recommended overall rate of return as being just
and reasonable, and provides fair compensation to FPL in support of more
competitive rates that are just and reasonable in providing utility service.

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1 IV.H. Embedded Cost of Debt

2 Q WHAT EMBEDDED COST OF DEBT IS FPL PROPOSING IN THIS PROCEEDING?

- 3 A Mr. Barrett proposes an embedded cost of debt of 3.61% in Schedule D-4a for 2022.
- 4 The embedded cost of debt for 2023 is 3.77%.
- 5

Q DO YOU HAVE ANY COMMENTS CONCERNING THE COMPANY'S PROPOSED 7 EMBEDDED COST OF DEBT FOR FPL IN THIS PROCEEDING?

8 Yes. The Company's proposed embedded cost of debt for 2023 includes three А 9 projected debt issuances totaling \$3.6 billion at a projected interest rate of 4.86%. 10 The interest rate for these projected debt issuances is not reasonable nor supported 11 as a known and measureable costs. First, the 2023 projected interest rates are much 12 higher than actual known cost of issuing new debt . The Company's projected 2023 13 interest rate of 4.86% is approximately 150 basis points higher than the current 14 13-week average A rated utility yield of 3.35%, as shown on my Exhibit MPG-21. 15 Second, the projected 2023 interest rates is higher than FPL's projected 2022 interest rate projection for new bond issues of 3.39%, which already reflects an increase 16 17 relative to current interest rates..

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1 Q DO YOU PROPOSE ANY ADJUSTMENT TO FPL'S EMBEDDED COST OF DEBT 2 FOR 2023 IN THIS PROCEEDING?

3 Yes. I repriced the projected 2023 debt issuances to 3.49%, which is the Company's А 4 projected cost for new debt issuances in 2022. This coupon yield is slightly higher 5 than FPL actual debt issuance in December 2021 of 3.39% as shown on Schedule D-6 4a developed by Mr. Barrett. Importantly, in its Energy Annual Outlook for 2021, the 7 EIA, is projecting the Aa utility bond yield to be 3.07% for 2025.²² The current Aa 8 utility yield as of June 4, which is the end of my study period, is 3.09%. Therefore, 9 the EIA is projecting the utility yields to remain relatively flat after 2022 over the next 10 several years. Hence, an increase in bond yields beyond 2022 is not known and 11 measureable.

12 I revised the Company's Schedule D-4a to reflect the lower interest rate for
13 the three projected debt issuances, which in turn reduced FPL cost of debt from
14 3.77% to 3.68% as shown on my Exhibit MPG-8.

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V. RETURN ON EQUITY

17 Q PLEASE DESCRIBE WHAT IS MEANT BY A "UTILITY'S COST OF COMMON
 18 EQUITY."

A utility's cost of common equity is the expected return that investors require on an investment in the utility. Investors expect to earn their required return from receiving dividends and through stock price appreciation.

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²² EIA, Energy Annual Outlook for 2021, Table A20. February 3, 2021.

1 Q PLEASE DESCRIBE THE FRAMEWORK FOR DETERMINING A REGULATED 2 UTILITY'S COST OF COMMON EQUITY.

3 А In general, determining a fair cost of common equity for a regulated utility has been 4 framed by two hallmark decisions of the U.S. Supreme Court: Bluefield Water Works <u>& Improvement Co. v. Pub. Serv. Comm'n of W. Va., 262 U.S. 679 (1923) and Fed.</u> 5 6 Power Comm'n v. Hope Natural Gas Co., 320 U.S. 591 (1944). In these decisions, 7 the Supreme Court found that just compensation depends on many circumstances 8 and must be determined by fair and enlightened judgments based on relevant facts. 9 The Court found that a utility is entitled to such rates as were permitted to earn a 10 return on a property devoted to the convenience of the public that is generally 11 consistent with the same returns available in other investments of corresponding risk. 12 The Court continued that the utility has "no constitutional rights to profits" such as 13 those realized or anticipated in highly profitable enterprises or speculative ventures. 14 and defined the ratepayer/investor balance as follows: 15 The return should be reasonably sufficient to assure confidence in the 16 financial soundness of the utility and should be adequate, under efficient and economical management, to maintain and support its 17 credit and enable it to raise the money necessary for the proper 18 discharge of its public duties.23 19 20 As such, a fair rate of return is based on the expectation that the utility costs 21 reflect efficient and economical management, and the return will support its credit 22 standing and access to capital, but the return will not be in excess of this level. From 23 these standards, rates to customers will be just and reasonable, and compensation to 24 the utility will be fair and support financial integrity and credit standing, under

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economic management of the utility, and just and reasonable rates.

²³Bluefield, 262 U.S. 679, 693 (1923).

1 Q PLEASE DESCRIBE THE METHODS YOU HAVE USED TO ESTIMATE FPL'S 2 COST OF COMMON EQUITY.

A I have used several models based on financial theory to estimate FPL's cost of
common equity. These models are: (1) a constant growth Discounted Cash Flow
("DCF") model using consensus analysts' growth rate projections; (2) a constant
growth DCF using sustainable growth rate estimates; (3) a multi-stage growth DCF
model; (4) a Risk Premium model; and (5) a Capital Asset Pricing Model ("CAPM"). I
have applied these models to a group of publicly traded utilities with investment risk
similar to FPL.

10

11 V.A. Risk Proxy Group

12 Q PLEASE DESCRIBE HOW YOU IDENTIFIED A PROXY UTILITY GROUP THAT 13 COULD BE USED TO ESTIMATE FPL'S CURRENT MARKET COST OF EQUITY.

A I relied on the same proxy group developed by FPL witness Mr. Coyne, which consists of 14 electric utilities followed by *Value Line*.

16

17QPLEASE DESCRIBE WHY YOU BELIEVE YOUR PROXY GROUP IS18REASONABLY COMPARABLE IN INVESTMENT RISK TO FPL.

19 A My proxy group shown in Exhibit MPG-9, has an average credit rating from S&P of 20 BBB+, which is a two notches lower than FPL's credit rating from S&P of A. The 21 proxy group has an average credit rating from Moody's of Baa1, which is a four 22 notches higher than FPL's credit rating from Moody's of A1.

23 My proxy group has an average common equity ratio of 43.4% from S&P and 24 46.6% (excluding short-term debt) from *Value Line* for 2020, which is significantly

1	lower than the Company's proposed common equity ratio of 59.6% base on investors'
2	capital.

3 Therefore, my proxy group will produced a very generous return on equity for
4 a low-leveraged utility like FPL.

5

6 V.B. DCF Model

7 Q PLEASE DESCRIBE THE DCF MODEL.

8 A The DCF model posits that a stock price is valued by summing the present value of 9 expected future cash flows discounted at the investor's required rate of return or cost 10 of capital. This model is expressed mathematically as follows:

11
$$P_0 = \frac{D_1}{(1+K)^1} + \frac{D_2}{(1+K)^2} \dots \frac{D_{\infty}}{(1+K)^{\infty}}$$
 (Equation 1)
12

13
$$P_0$$
 = Current stock price

14 D = Dividends in periods 1 -
$$\infty$$

15 K = Investor's required return

16 This model can be rearranged in order to estimate the discount rate or 17 investor-required return, known as "K." If it is reasonable to assume that earnings 18 and dividends will grow at a constant rate, then Equation 1 can be rearranged as 19 follows: 20 $K = D_1/P_0 + G$ (Equation 2)

	(=
21 K = Investor's required ret	urn
22 D_1 = Dividend in first year	
23 P_0 = Current stock price	
24 G = Expected constant div	idend growth rate

- Equation 2 is referred to as the annual "constant growth" DCF model.
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- 1 Q PLEASE DESCRIBE THE INPUTS TO YOUR CONSTANT GROWTH DCF MODEL.
- A As shown in Equation 2 above, the DCF model requires a current stock price,
 expected dividend, and expected growth rate in dividends.
- 4

5 Q WHAT STOCK PRICE DID YOU USE IN YOUR CONSTANT GROWTH DCF 6 MODEL?

7 A I relied on the average of the weekly high and low stock prices of the utilities in the
8 proxy group over a 13-week period ending on June 4, 2021. An average stock price
9 is less susceptible to market price variations than a price at a single point in time.
10 Therefore, an average stock price is less susceptible to aberrant market price
11 movements, which may not reflect the stock's long-term value.

A 13-week average stock price reflects a period that is still short enough to contain data that reasonably reflects current market expectations, but the period is not so short as to be susceptible to market price variations that may not reflect the stock's long-term value. In my judgment, a 13-week average stock price is a reasonable balance between the need to reflect current market expectations and the need to capture sufficient data to smooth out aberrant market movements.

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19 Q WHAT DIVIDEND DID YOU USE IN YOUR CONSTANT GROWTH DCF MODEL?

20 A I used the most recently paid quarterly dividend as reported in *Value Line*.²⁴ This 21 dividend was annualized (multiplied by 4) and adjusted for next year's growth to 22 produce the D_1 factor for use in Equation 2 above. In other words, I calculate D_1 by 23 multiplying the annualized dividend (D_0) by (1+G).

²⁴*The Value Line Investment Survey*, March 12, April 23, and May 14, 2021.

1 Q WHAT DIVIDEND GROWTH RATES DID YOU USE IN YOUR CONSTANT 2 GROWTH DCF MODEL?

A There are several methods that can be used to estimate the expected growth in
dividends. However, regardless of the method, to determine the market-required
return on common equity, one must attempt to estimate investors' consensus about
what the dividend, or earnings growth rate, will be and not what an individual investor
or analyst may use to make individual investment decisions.

8 As predictors of future returns, securities analysts' growth estimates have 9 been shown to be more accurate than growth rates derived from historical data.²⁵ 10 That is, assuming the market generally makes rational investment decisions, analysts' 11 growth projections are more likely to influence investors' decisions, which are 12 captured in observable stock prices, than growth rates derived only from historical 13 data.

For my constant growth DCF analysis, I have relied on a consensus, or mean, of professional securities analysts' earnings growth estimates as a proxy for investor consensus dividend growth rate expectations. I used the average of analysts' growth rate estimates from three sources: Zacks, MI, and Yahoo! Finance. All such projections were available on June 4, 2021, and all were reported online.

Each consensus growth rate projection is based on a survey of securities analysts. There is no clear evidence whether a particular analyst is most influential on general market investors. Therefore, a single analyst's projection does not as reliably predict consensus investor outlooks as does a consensus of market analysts' projections. The consensus estimate is a simple arithmetic average, or mean, of surveyed analysts' earnings growth forecasts. A simple average of the growth

²⁵See, e.g., David Gordon, Myron Gordon & Lawrence Gould, "Choice Among Methods of Estimating Share Yield," *The Journal of Portfolio Management*, Spring 1989.

1		forecasts gives equal weight to all surveyed analysts' projections. Therefore, a
2		simple average, or arithmetic mean, of analyst forecasts is a good proxy for market
3		consensus expectations.
4		
5	Q	WHAT ARE THE GROWTH RATES YOU USED IN YOUR CONSTANT GROWTH
6		DCF MODEL?
7	А	The growth rates I used in my DCF analysis are shown in Exhibit MPG-10. The
8		average growth rate for my proxy group is 5.38%.
9		
10	Q	WHAT ARE THE RESULTS OF YOUR CONSTANT GROWTH DCF MODEL?
11	А	As shown in Exhibit MPG-11, the average and median constant growth DCF returns
12		for my proxy group for the 13-week analysis are 9.08% and 9.19%, respectively.
13		
14	Q	DO YOU HAVE ANY COMMENTS ON THE RESULTS OF YOUR CONSTANT
15		GROWTH DCF ANALYSIS?
16	А	Yes. The constant growth DCF analysis for my proxy group is based on an average
17		long-term sustainable growth rate of 5.38%. The three- to five-year growth rate is
18		higher than my estimate of a maximum long-term sustainable growth rate of 4.35%,
19		which I discuss later in this testimony.
20		
21	Q	HOW DID YOU ESTIMATE A MAXIMUM LONG-TERM SUSTAINABLE GROWTH
22		RATE?
23	А	Although there may be short-term peaks, the long-term sustainable growth rate for a
24		utility stock cannot exceed the growth rate of the economy in which it sells its goods

1 is, accordingly, best proxied by the projected long-term Gross Domestic Product 2 ("GDP") growth rate as that reflects the projected long-term growth rate of the 3 economy as a whole. Blue Chip Financial Forecasts projects that over the next 5 and 4 10 years, the U.S. nominal GDP will grow at an annual rate of approximately 4.35%. 5 These GDP growth projections reflect a real growth outlook of around 2.15% and an 6 inflation outlook of around 2.15% going forward. As such, the average nominal 7 growth rate over the next 10 years is around 4.35%, which I believe is a reasonable 8 proxy of long-term sustainable growth.²⁶

9 In my multi-stage growth DCF analysis, I discuss academic and investment 10 practitioner support for using the projected long-term GDP growth outlook as a 11 maximum sustainable growth rate projection. Using the long-term GDP growth rate, 12 however, as a conservative projection for the maximum sustainable growth rate is 13 logical, and is generally consistent with academic and economic practitioner accepted 14 practices.

15

16 V.C. Sustainable Growth DCF

17 Q PLEASE DESCRIBE HOW YOU ESTIMATED A SUSTAINABLE LONG-TERM 18 GROWTH RATE FOR YOUR SUSTAINABLE GROWTH DCF MODEL.

A sustainable growth rate is based on the percentage of the utility's earnings that is retained and reinvested in utility plant and equipment. These reinvested earnings increase the earnings base (rate base). Earnings grow when plant funded by reinvested earnings is put into service, and the utility is allowed to earn its authorized return on such additional rate base investment.

24

²⁶Blue Chip Financial Forecasts, June 1, 2020, at 14.

1 The internal growth methodology is tied to the percentage of earnings retained 2 in FPL and not paid out as dividends. The earnings retention ratio is 1 minus the 3 dividend payout ratio. As the payout ratio declines, the earnings retention ratio 4 increases. An increased earnings retention ratio will fuel stronger growth because 5 the business funds more investments with retained earnings.

6 The payout ratios of the proxy group are shown in my Exhibit MPG-12. These 7 dividend payout ratios and earnings retention ratios then can be used to develop a 8 sustainable long-term earnings retention growth rate. A sustainable long-term 9 earnings retention ratio will help gauge whether analysts' current three- to five-year 10 growth rate projections can be sustained over an indefinite period of time.

11 The data used to estimate the long-term sustainable growth rate is based on 12 FPL's current market-to-book ratio and on *Value Line*'s three- to five-year projections 13 of earnings, dividends, earned returns on book equity, and stock issuances.

As shown in Exhibit MPG-13, the average sustainable growth rate using this internal growth rate model is 4.66% for the proxy group.

16

17 Q WHAT IS THE DCF ESTIMATE USING THESE SUSTAINABLE LONG-TERM 18 GROWTH RATES?

A DCF estimate based on these sustainable growth rates is developed in Exhibit
 MPG-14. As shown there, the sustainable growth DCF analysis produces proxy
 group average and median DCF results for the 13-week period of 8.33% and 8.37%,
 respectively.

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1 V.D. Multi-Stage Growth DCF Model

2 Q HAVE YOU CONDUCTED ANY OTHER DCF STUDIES?

A Yes. My first constant growth DCF is based on consensus analysts' growth rate projections so it is a reasonable reflection of rational investment expectations over the next three to five years. The limitation on this constant growth DCF model is that it cannot reflect a rational expectation that a period of high or low short-term growth can be followed by a change in growth to a rate that better reflects long-term sustainable growth. Therefore, I performed a multi-stage growth DCF analysis to reflect this outlook of changing growth expectations.

10

11 Q WHY DO YOU BELIEVE GROWTH RATES CAN CHANGE OVER TIME?

A Analyst-projected growth rates over the next three to five years will change as utility earnings growth outlooks change. Utility companies go through cycles in making investments in their systems. When utility companies are making large investments, their rate base grows rapidly, which in turn accelerates earnings growth. Once a major construction cycle is completed or levels off, growth in the utility rate base slows and its earnings growth slows from an abnormally high three- to five-year rate to a lower sustainable growth rate.

As major construction cycles extend over longer periods of time, even with an accelerated construction program, the growth rate of the utility will slow simply because the pace of rate base growth will slow and because the utility has limited human and capital resources available to expand its construction program. Therefore, the three- to five-year growth rate projection should only be used as a long-term sustainable growth rate in concert with a reasonable, informed judgment as

- to whether it considers the current market environment, the industry, and whether the
 three- to five-year growth outlook is sustainable.
- 3

4 Q PLEASE DESCRIBE YOUR MULTI-STAGE GROWTH DCF MODEL.

5 A The multi-stage growth DCF model reflects the possibility of non-constant growth for 6 a company over time. The multi-stage growth DCF model reflects three growth 7 periods: (1) a short-term growth period consisting of the first five years; (2) a transition 8 period, consisting of the next five years (6 through 10); and (3) a long-term growth 9 period starting in year 11 through perpetuity.

For the short-term growth period, I relied on the consensus analysts' growth projections I used above in my constant growth DCF model. For the transition period, the growth rates were reduced or increased by an equal factor reflecting the difference between the analysts' growth rates and the long-term sustainable growth rate. For the long-term growth period, I assumed each company's growth would converge to the maximum sustainable long-term growth rate, which is the projected long-term GDP growth rate.

17

18 Q WHY IS THE GDP GROWTH PROJECTION A REASONABLE PROXY FOR THE 19 MAXIMUM SUSTAINABLE LONG-TERM GROWTH RATE?

A Utilities cannot indefinitely sustain a growth rate that exceeds the growth rate of the economy in which they sell services. Utilities' earnings/dividend growth are created by increased utility investment or rate base. Such investment, in turn, is driven by service area economic growth and demand for utility service. In other words, utilities invest in plant to meet sales demand growth. Sales growth, in turn, is tied to economic growth in their service areas.

1	The U.S. Department of Energy, Energy Information Administration ("EIA")
2	has observed utility sales growth tracks U.S. GDP growth, albeit at a lower level, as
3	shown in Exhibit MPG-15. Utility sales growth has lagged behind GDP growth for
4	more than a decade. As a result, nominal GDP growth is a very conservative proxy
5	for utility sales growth, rate base growth, and earnings growth. Therefore, the U.S.
6	GDP nominal growth rate is a reasonable proxy for the highest sustainable long-term
7	growth rate of a utility.

8

9

Q IS THERE RESEARCH THAT SUPPORTS YOUR POSITION THAT, OVER THE

10 LONG TERM, A COMPANY'S EARNINGS AND DIVIDENDS CANNOT GROW AT

11 A RATE GREATER THAN THE GROWTH OF THE U.S. GDP?

- 12 A Yes. This concept is supported in published analyst literature and academic work.
- 13 Specifically, in "Fundamentals of Financial Management," a textbook published by
- 14 Eugene Brigham and Joel F. Houston, the authors state:
- 15The constant growth model is most appropriate for mature companies16with a stable history of growth and stable future expectations.17Expected growth rates vary somewhat among companies, but18dividends for mature firms are often expected to grow in the future at19about the same rate as nominal gross domestic product (real GDP20plus inflation).27
- 21 The use of the economic growth rate is also supported by investment
- 22 practitioners as outlined as follows:
- 23 Estimating Growth Rates
- 24One of the advantages of a three-stage discounted cash flow model is25that it fits with life cycle theories in regards to company growth. In26these theories, companies are assumed to have a life cycle with27varying growth characteristics. Typically, the potential for extraordinary28growth in the near term eases over time and eventually growth slows29to a more stable level.

²⁷ *"Fundamentals of Financial Management,*" Eugene F. Brigham & Joel F. Houston, Eleventh Edition 2007, Thomson South-Western, a Division of Thomson Corporation at 298, emphasis added.

* * *

Another approach to estimating long-term growth rates is to focus on estimating the overall economic growth rate. Again, this is the approach used in the *Ibbotson Cost of Capital Yearbook*. To obtain the economic growth rate, a forecast is made of the growth rate's component parts. Expected growth can be broken into two main parts: expected inflation and expected real growth. By analyzing these components separately, it is easier to see the factors that drive growth.²⁸

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11 Q ARE THERE ACTUAL INVESTMENT RESULTS THAT SUPPORT THE THEORY
 12 THAT THE GROWTH ON STOCK INVESTMENTS WILL NOT EXCEED THE
 13 NOMINAL GROWTH OF THE U.S. GDP?

14 A Yes. This is evident by a comparison of the compound annual growth of the U.S.

GDP to the geometric growth of the U.S. stock market. Duff & Phelps measures the historical geometric growth of the U.S. stock market over the period 1926-2020 to be approximately 6.2%.²⁹ During this same time period, the U.S. nominal compound annual growth of the U.S. GDP was approximately 6.0%.³⁰

As such, over the past 90 years, the geometric average growth of the U.S. nominal GDP has been slightly higher than, but comparable to, the geometric average growth of the U.S. stock market capital appreciation. This historical relationship indicates that the U.S. GDP growth outlook is a reasonable estimate of the long-term sustainable growth of U.S. stock investments.

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 ²⁸Morningstar, Inc., Ibbotson SBBI 2013 Valuation Yearbook at 51 and 52.
 ²⁹Duff & Phelps, 2021 SBBI Yearbook at 6-17.
 ³⁰U.S. Bureau of Economic Analysis, January 28, 2021.

1QWHAT IS THE GEOMETRIC AVERAGE AND WHY IS IT APPROPRIATE TO USE2THIS MEASURE TO COMPARE GDP GROWTH TO CAPITAL APPRECIATION IN3THE STOCK MARKET?

A The terms geometric average growth rate and compound annual growth rate are used interchangeably. The geometric annual growth rate is the calculated growth rate, or return, that measures the magnitude of growth from start to finish. The geometric average is best, and most often, used as a measurement of performance or growth over a long period of time.³¹ Because I am comparing achieved growth in the stock market to achieved growth in U.S. GDP over a long period of time, the geometric average growth rate is most appropriate.

11

12 Q HOW DID YOU DETERMINE A LONG-TERM GROWTH RATE THAT REFLECTS 13 THE CURRENT CONSENSUS MARKET PARTICIPANT OUTLOOK?

14 А I relied on the economic consensus of long-term GDP growth projections. Blue Chip 15 Financial Forecasts publishes the consensus for GDP growth projections twice a 16 year. These consensus GDP growth outlooks are the best available measure of the 17 market's assessment of long-term GDP growth because the analysts' projections 18 reflect all current outlooks for GDP. They are therefore likely the most influential on 19 investors' expectations of future growth outlooks. The consensus projections 20 published GDP growth rate outlook is 4.35% over the next 10 years.³²

I propose to use the consensus for projected five- and ten-year average GDP
 growth rates of 4.35%, as published by *Blue Chip Financial Forecasts*, as an estimate
 of long-term sustainable growth. *Blue Chip Financial Forecasts* projections provide

³¹New Regulatory Finance, Roger Morin, PhD, at 133-134.

³²Blue Chip Financial Forecasts, June 1, 2020, at 14.

real GDP growth projections of approximately 2.15% and inflation of 2.15%³³ over the
 five-year and ten-year projection periods, resulting in nominal GDP growth projections
 of 4.35%. These GDP growth forecasts represent the most likely views of market
 participants because they are based on published economic consensus projections.

5

11

6 Q DO YOU CONSIDER OTHER SOURCES OF PROJECTED LONG-TERM GDP 7 GROWTH?

8 A Yes, and these alternative sources corroborate the consensus analysts' projections I
9 relied on. Various commonly relied upon analysts' projections are shown in Table 7
10 below.

TABLE 7						
GDP Forecasts						
Source	Term	Real <u>GDP</u>	<u>Inflation</u>	Nominal <u>GDP</u>		
Blue Chip Financial Forecasts EIA - Annual Energy Outlook Congressional Budget Office Moody's Analytics Social Security Administration The Economist Intelligence Unit	5-10 Yrs 28 Yrs 9 Yrs 28 Yrs 73 Yrs 25 Yrs	2.2% 2.0% 1.8% 2.1% 1.8%	2.2% 2.3% 2.1% 1.8% 2.0%	4.3% 4.4% 3.9% 3.9% 4.1% 3.9%		

12 The EIA in its *Annual Energy Outlook* projects real GDP out until 2050. In its 13 2020 Annual Report, the EIA projects real GDP through 2050 to be 1.8% and a 14 long-term GDP price inflation projection of 2.2%. The EIA data supports a long-term 15 nominal GDP growth outlook of 4.1%.³⁴

³³Id.

³⁴DOE/EIA Annual Energy Outlook 2020 With Projections to 2050, March 2020, Table Macroeconomic Indicators.

Also, the Congressional Budget Office ("CBO") makes long-term economic
 projections. The CBO is projecting real GDP growth to be 1.8% during the next
 nine years, with a GDP price inflation outlook of 2.0%. The CBO's nine-year outlook
 for nominal GDP based on this projection is 3.8%.³⁵

5 Moody's Analytics also makes long-term economic projections. In its recent 6 over 25-year outlook to 2048, Moody's Analytics is projecting real GDP growth of 7 2.2% with GDP inflation of 1.8%.³⁶ Based on these projections, Moody's Analytics is 8 projecting nominal GDP growth of 4.1% over the next 25 years.

9 The Social Security Administration ("SSA") makes long-term economic 10 projections out to 2095. The SSA's nominal GDP projection, under its "intermediate 11 cost" scenario of approximately 50 years, is 4.1%.³⁷

12 The Economist Intelligence Unit, a division of The Economist and a third-party 13 data provider to MI, makes a long-term economic projection out to 2050. The 14 Economist Intelligence Unit is projecting real GDP growth of 1.8% with an inflation 15 rate of 2.0% out to 2050. The real GDP growth projection is in line with the 16 consensus. The long-term nominal GDP projection based on these outlooks is 17 approximately 3.9%.³⁸

18 The real GDP and nominal GDP growth projections made by these 19 independent sources support my use of 4.35% as a reasonable estimate of market 20 participants' expectations for long-term GDP growth.

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³⁵CBO: An Update to the Economic Outlook: 2020 to 2030, July 2020.
 ³⁶<u>www.economy.com</u>, Moody's Analytics Forecast, May 11, 2020.
 ³⁷<u>www.ssa.gov</u>, "2020 OASDI Trustees Report," Table VI.G4, April 22, 2020.
 ³⁸S&P Global Market Intelligence, Economist Intelligence Unit, downloaded on January 28, 2021.

Q WHAT STOCK PRICE, DIVIDEND, AND GROWTH RATES DID YOU USE IN YOUR MULTI-STAGE GROWTH DCF ANALYSIS?

3 А I relied on the same 13-week average stock prices and the most recent quarterly 4 dividend payment data discussed above. For stage one growth, I used the 5 consensus analysts' growth rate projections discussed above in my constant growth 6 DCF model. The first stage covers the first five years, consistent with the time 7 horizon of the securities analysts' growth rate projections. The second stage, or 8 transition stage, begins in year 6 and extends through year 10. The second stage 9 growth transitions the growth rate from the first stage to the third stage using a 10 straight linear trend. For the third stage, or long-term sustainable growth stage, 11 starting in year 11, I used a 4.35% long-term sustainable growth rate based on the 12 consensus economists' long-term projected nominal GDP growth rate.

13

14

Q WHAT ARE THE RESULTS OF YOUR MULTI-STAGE GROWTH DCF MODEL?

A As shown in Exhibit MPG-16, the average and median DCF returns on equity for my
proxy group using the 13-week average stock price are 8.24% and 8.38%,
respectively.

18

19 Q PLEASE SUMMARIZE THE RESULTS FROM YOUR DCF ANALYSES.

The results from my DCF analyses are summarized in Table 8 below:

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TABLE 8	
Summary of DCF Results	
Description	Average
Constant Growth DCF Model (Analysts' Growth)	9.08%
Constant Growth DCF Model (Sustainable Growth)	8.33%
Multi-Stage Growth DCF Model	8.24%

I conclude that my DCF studies support a return on equity of 9.10%.

2 3

1

4 V.E. Risk Premium Model

5 Q PLEASE DESCRIBE YOUR BOND YIELD PLUS RISK PREMIUM MODEL.

6 A This model is based on the principle that investors require a higher return to assume 7 greater risk. Common equity investments have greater risk than bonds because 8 bonds have more security of payment in bankruptcy proceedings than common equity 9 and the coupon payments on bonds represent contractual obligations. In contrast, 10 companies are not required to pay dividends or guarantee returns on common equity 11 investments. Therefore, common equity securities are considered to be riskier than 12 bond securities.

This risk premium model is based on two estimates of an equity risk premium. First, I quantify the difference between regulatory commission-authorized returns on common equity and contemporary U.S. Treasury bonds. The difference between the authorized return on common equity and the Treasury bond yield is the risk premium. I estimated the risk premium on an annual basis for each year from 1986 through 2020. The authorized returns on equity were based on regulatory commissionauthorized returns for utility companies. Authorized returns are typically based on expert witnesses' estimates of the investor-required return at the time of the
 proceeding.

3 The second equity risk premium estimate is based on the difference between 4 regulatory commission-authorized returns on common equity and contemporary 5 "A" rated utility bond yields by Moody's. I selected the period 1986 through 2020 6 because public utility stocks consistently traded at a premium to book value during 7 that period. This is illustrated in Exhibit MPG-17, which shows the market-to-book 8 ratio since 1986 for the electric utility industry was consistently above a multiple of 9 1.0x. Over this period, an analyst can infer that authorized returns on equity were 10 sufficient to support market prices that at least exceeded book value. This is an 11 indication that commission authorized returns on common equity supported a utility's 12 ability to issue additional common stock without diluting existing shares. It further 13 demonstrates utilities were able to access equity markets without a detrimental 14 impact on current shareholders.

Based on this analysis, as shown in Exhibit MPG-18, the average indicated equity risk premium over U.S. Treasury bond yields has been 5.70%. Since the risk premium can vary depending upon market conditions and changing investor risk perceptions, I believe using an estimated range of risk premiums provides the best method to measure the current return on common equity for a risk premium methodology.

l incorporated five-year and ten-year rolling average risk premiums over the
 study period to gauge the variability over time of risk premiums. These rolling
 average risk premiums mitigate the impact of anomalous market conditions and
 skewed risk premiums over an entire business cycle. As shown on my Exhibit
 MPG-18, the five-year rolling average risk premium over Treasury bonds ranged from

4.25% to 7.10%, while the ten-year rolling average risk premium ranged from 4.38%
 to 6.91%.

As shown on my Exhibit MPG-19, the average indicated equity risk premium over contemporary "A" rated Moody's utility bond yields was 4.34%. The five-year and ten-year rolling average risk premiums ranged from 2.88% to 5.90% and 3.20% to 5.73%, respectively.

7

Q DO YOU BELIEVE THAT THE TIME PERIOD USED TO DERIVE THESE EQUITY 9 RISK PREMIUM ESTIMATES IS APPROPRIATE TO FORM ACCURATE 10 CONCLUSIONS ABOUT CONTEMPORARY MARKET CONDITIONS?

11 Yes. Contemporary market conditions can change during the period that rates А 12 determined in this proceeding will be in effect. A relatively long period of time where 13 stock valuations reflect premiums to book value indicates that the authorized returns 14 on equity and the corresponding equity risk premiums were supportive of investors' 15 return expectations and provided utilities access to the equity markets under 16 reasonable terms and conditions. Further, this time period is long enough to smooth 17 abnormal market movement that might distort equity risk premiums. While market 18 conditions and risk premiums do vary over time, this historical time period is a 19 reasonable period to estimate contemporary risk premiums.

Alternatively, some studies, such as Duff & Phelps, have recommended that the use of "actual achieved investment return data" in a risk premium study should be based on long historical time periods. The studies find that achieved returns over short time periods may not reflect investors' expected returns due to unexpected and abnormal stock price performance. Short-term, abnormal actual returns would be smoothed over time and the achieved actual investment returns over long time
1 periods would approximate investors' expected returns. Therefore, it is reasonable to 2 assume that averages of annual achieved returns over long time periods will 3 generally converge on the investors' expected returns.

4 My risk premium study is based on data that inherently relied on investor 5 expectations, not actual investment returns, and, thus, need not encompass a very 6 long historical time period.

7

8 WHAT DOES CURRENT OBSERVABLE MARKET DATA SUGGEST ABOUT Q 9 INVESTOR PERCEPTIONS OF UTILITY INVESTMENTS?

10 А The equity risk premium should reflect the relative market perception of risk today in 11 the utility industry. I have gauged investor perceptions in utility risk today in Exhibit MPG-20, where I show the yield spread between utility bonds and Treasury bonds 12 13 over the last 40 years. As shown in this exhibit, the average utility bond yield spreads 14 over Treasury bonds for "A" and "Baa" rated utility bonds for this historical period are 15 1.48% and 1.92%, respectively. The utility bond yield spreads over Treasury bonds 16 for "A" and "Baa" rated utilities for 2019 were 1.18% and 1.61%, respectively. In 2020, 17 the "A" and "Baa" utility spreads are 1.49% and 1.87%, respectively. More recently in 18 the first guarter of 2021, the "A" and "Baa" utility spreads are 1.08% and 1.36%, 19 respectively. Both the current average "A" rated and "Baa" rated utility bond yield 20 spreads over Treasury bond yields are lower or comparable to the respective 40-year 21 average spreads.

22 The current 13-week average "A" rated utility bond yield of 3.35% when 23 compared to the current Treasury bond yield of 2.32%, as shown in Exhibit MPG-21, 24 implies a yield spread of 1.03%. This current utility bond yield spread is significantly 25 lower than the 40-year average spread for "A" rated utility bonds of 1.48%. The

current spread for the "Baa" rated utility bond yield of 1.30% is also lower than the
 40-year average spread of 1.92%.

3

4 Q IS THERE OBSERVABLE MARKET EVIDENCE TO HELP GAUGE MARKET RISK 5 PREMIUMS?

A Yes. Market data illustrates how the market is pricing investment risk, and gauging
the current demands for returns based on securities of varying levels of investment
risk. This market evidence includes bond yield spreads for different bond return
ratings as implied by the yield spreads for Treasury, corporate and utility bonds.
These spreads provide an indication of the market's return requirement for securities
of different levels of investment risk and required risk premiums.

Table 9 below summarizes the utility and corporate bond spreads relative to
Treasury bond yields.

	TABLE	E 9			
Comparison of Yield Spreads Over Treasury Bond Yields					
	Uti	lity	Corporate		
Description	A	Baa	Aaa	Baa	
Average Historical Spread	1.50%	1.94%	0.84%	1.93%	
2019 Spread	1.18%	1.61%	0.81%	1.79%	
2020 Spread	1.49%	1.87%	0.96%	2.10%	
2021 Splead	1.00%	1.3070	0.00%	1.40%	
Source: Moody's Bond Yields *2021 data through 3/31/2027	I				

14

As shown above in Table 9, the average historical utility bond yield spread is greater than the current yield spread based on 2019-2021 data. This is an indication that the market is placing a higher value on utility securities currently, and indicating a

1 preference for lower-risk investment securities. This phenomenon is also evident in 2 spreads for general corporate securities. An Aaa-rated corporate bond 40-year 3 average spread is 0.84%, which is slightly higher than the 2019 spread of 0.81%. In 4 2020 and the first quarter of 2021, the Aaa and Baa corporate spreads are higher but 5 comparable to the 40-year average corporate spreads. For higher-risk bonds, utility 6 Baa and corporate bonds reflect reasonably consistent yield spreads, suggesting that 7 these higher-risk utility and corporate bond securities are not receiving the same 8 premium valuation as are the lower-risk A-rated and Aaa-rated utility and corporate 9 bond securities.

10 A relatively low yield for utility and corporate bonds is also reflected in 11 outlooks of real returns on these bond yields compared to the past. Over the period 1926-2020, long-term corporate bond yields have earned around 6.1%, compared to 12 inflation of around 2.9%.³⁹ This implies a historical real return on long-term corporate 13 14 bonds of around 2.9%. In 2019-2020, long-term corporate bonds rated Aaa averaged 15 around 3.0%. At that time, future inflation outlooks over the long term were expected 16 to be around 2.0% which implies a current real return outlook on long-term corporate 17 bonds of only 1.0%. Again, the lower current yield in comparison to historical yields 18 indicates that bond yields are being priced at a premium by market participants.

19 This information supports the finding that higher-risk securities are being 20 valued to produce higher-risk spreads relative to low-risk securities in the current 21 marketplace. As such, I believe this information supports that using an above-22 average risk premium in the current marketplace accurately estimates the market's 23 required return for an investment in a higher-risk security (common stock) compared

³⁹Duff & Phelps 2021 SBBI Yearbook at 6-17.

- to a lower-risk security (utility and Treasury bond yields). For these reasons, I believe
 an above-average risk premium is supported by observable market evidence.
- 3
- 4 Q WHAT IS YOUR RECOMMENDED RETURN FOR FPL BASED ON YOUR RISK 5 PREMIUM STUDY?

A I am recommending more weight be given to the high-end risk premium estimates
than the low-end. As outlined above, I believe the current market is reflecting high
premiums for investing in securities of greater levels of investment risk. Based on this
observation, I propose to be conservative in applying a risk premium analysis. For
these reasons, I will recommend my high-end equity risk premium in forming a return
on equity in this proceeding.

12 For Treasury bond yields, I propose a risk premium of 6.75%. This risk 13 premium gives more weight to the high-end estimate than it does to the study period 14 median. Indeed, it represents approximately the third decile in the range of the 15 midpoint of 5.64% up to the high-end of 7.10% based on the five-year rolling average. 16 I relied on the risk premium at approximately the 75th percentile of the range of risk 17 premiums to recognize clear, observable evidence that risk premiums are at 18 abnormally high levels right now, but to also recognize that the projected Treasury 19 bond yield is considerably higher than current observable bond yields, returning to 20 more of a normal level, including that relative to that of other investments. This risk 21 premium still represents an expectation that the current market risk premiums are at 22 elevated levels. This risk premium reflects observable evidence in the market that the 23 market risk premium is at relatively high levels currently, however, risk premiums may 24 be more moderated based on projected increases in Treasury bond yields.

1	Using a Treasury bond risk premium of 6.75% and a projected Treasury bond
2	yield of 2.80% produces an indicated equity risk premium of 9.55% (6.75% + 2.80%).
3	A risk premium based on utility bond yields was also based on a high-end estimate.
4	However, because current observable yields are employed in this risk premium study,
5	I am relying on the high-end estimate in the study of 5.90% on my Exhibit MPG-19
6	and the utility yield of 3.35% as developed on my Exhibit MPG-21. Hence, a risk
7	premium based on utility bond yields indicates a return on equity of 9.25% (5.90% +
8	3.35%).

Based on this methodology, my Treasury bond risk premium and my utility
bond risk premium indicate a return in the range of 9.25% to 9.55%, with a midpoint
of 9.40%.

12

13 V.F. Capital Asset Pricing Model ("CAPM")

14 Q PLEASE DESCRIBE THE CAPM.

15 A The CAPM method of analysis is based upon the theory that the market-required rate 16 of return for a security is equal to the risk-free rate, plus a risk premium associated 17 with the specific security. This relationship between risk and return can be expressed 18 mathematically as follows:

19	$R_i = R_f + B_i x (R_m - R_f)$ where:
20 21 22 23	R_i = Required return for stock i R_f = Risk-free rate R_m = Expected return for the market portfolio B_i = Beta - Measure of the risk for stock
24	The stock-specific risk term in the above equation is beta. Beta represents
25	the investment risk that cannot be diversified away when the security is held in a
26	diversified portfolio. When stocks are held in a diversified portfolio, stock-specific
27	risks can be eliminated by balancing the portfolio with securities that react in the

opposite direction to firm-specific risk factors (e.g., business cycle, competition,
 product mix, and production limitations).

3 Risks that cannot be eliminated when held in a diversified portfolio are 4 non-diversifiable risks. Non-diversifiable risks are related to the market and referred 5 Risks that can be eliminated by diversification are to as systematic risks. 6 non-systematic risks. In a broad sense, systematic risks are market risks and 7 non-systematic risks are business risks. The CAPM theory suggests the market will 8 not compensate investors for assuming risks that can be diversified away. Therefore, 9 the only risk investors will be compensated for are systematic, or non-diversifiable, 10 risks. The beta is a measure of the systematic, or non-diversifiable risks.

11

12 Q PLEASE DESCRIBE THE INPUTS TO YOUR CAPM.

- A The CAPM requires an estimate of the market risk-free rate, FPL's beta, and the
 market risk premium.
- 15

16 Q WHAT DID YOU USE AS AN ESTIMATE OF THE MARKET RISK-FREE RATE?

- A As previously noted, *Blue Chip Financial Forecasts*' projected 30-year Treasury bond
 yield is 2.80%.⁴⁰ The current 30-year Treasury bond yield is 2.32%, as shown in
 Exhibit MPG-21. I used *Blue Chip Financial Forecasts*' projected 30-year Treasury
 bond yield of 2.80% for my CAPM analysis.
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- 24

⁴⁰Blue Chip Financial Forecasts, June 1, 2021 at 2.

1 Q WHY DID YOU USE LONG-TERM TREASURY BOND YIELDS AS AN ESTIMATE 2 OF THE RISK-FREE RATE?

Treasury securities are backed by the full faith and credit of the United States 3 Α 4 government. Therefore, long-term Treasury bonds are considered to have negligible credit risk. Also, long-term Treasury bonds have an investment horizon similar to that 5 6 of common stock. As a result, investor-anticipated long-run inflation expectations are 7 reflected in both common stock required returns and long-term bond yields. 8 Therefore, the nominal risk-free rate (or expected inflation rate and real risk-free rate) 9 included in a long-term bond yield is a reasonable estimate of the nominal risk-free 10 rate included in common stock returns.

11 Treasury bond yields, however, do include risk premiums related to 12 unanticipated future inflation and interest rates. In this regard, a Treasury bond yield 13 is not a risk-free rate. Risk premiums related to unanticipated inflation and interest 14 rates reflect systematic market risks. Consequently, for companies with betas less 15 than 1.0, using the Treasury bond yield as a proxy for the risk-free rate in the CAPM 16 analysis can produce an overstated estimate of the CAPM return.

17

18

Q WHAT BETA DID YOU USE IN YOUR ANALYSIS?

A As shown on my Exhibit MPG-22, page 1, the average beta of my proxy group is 0.88. This means that my proxy group is less risky than the market as a whole. I also reviewed the long-term trend of *Value Line* betas reported for the proxy group companies. As shown on Exhibit MPG-22, page 2, the proxy group's betas have generally ranged between 0.60 and 0.80, or an average of approximately 0.72. Thus, the current beta estimates of around 0.88 are above the high-end of the historical range. As outlined below, I will consider both current published betas as well as normalized historical beta estimates in deriving a CAPM return estimate that reflects
 the current market cost of equity, and the likely cost of equity when rates determined
 in this proceeding are in effect.

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Q HOW DID YOU DERIVE YOUR MARKET RISK PREMIUM ESTIMATE?

A I derived two market risk premium estimates: a forward-looking estimate and one
based on a long-term historical average.

8 The forward-looking estimate was derived by estimating the expected return 9 on the market (as represented by the S&P 500) and subtracting the risk-free rate from 10 this estimate. I estimated the expected return on the S&P 500 by adding an expected 11 inflation rate to the long-term historical arithmetic average real return on the market. 12 The real return on the market represents the achieved return above the rate of 13 inflation.

Duff & Phelps' *2021 SBBI Yearbook* estimates the historical arithmetic average real market return over the period 1926 to 2021 to be 9.1%.⁴¹ A current consensus for projected inflation, as measured by the Consumer Price Index, is *2.2%.*⁴² Using these estimates, the expected market return is 11.50%.⁴³ The market risk premium then is the difference between the 11.50% expected market return and my 2.80% risk-free rate estimate, or 8.70%, which I referred to as a normalized market risk premium.

21 I also developed a current market risk premium based on the difference
22 between the expected return on the market of 11.50% as described above and the
23 current 30-year Treasury yield of 2.32% as shown on my Exhibit MPG-21, which
24 produced a current market risk premium of 9.18%.

⁴¹Duff & Phelps, 2021 SBBI Yearbook at 6-18. ⁴²Blue Chip Financial Forecasts, February 1, 2021 at 2. ⁴³{ $(1 + 0.090) * (1 + 0.022) - 1 } * 100.$

1	A historical estimate of the market risk premium was also calculated by using
2	data provided by Duff & Phelps in its 2021 SBBI Yearbook. Over the period 1926
3	through 2020, the Duff & Phelps study estimated that the arithmetic average of the
4	achieved total return on the S&P 500 was 12.2% ⁴⁴ and the total return on long-term
5	Treasury bonds was 6.1% . ⁴⁵ The indicated market risk premium is 6.1% (12.2% -
6	6.1% = 6.1%).
7	The long-term government bond yield of 6.1% occurred during a period of
8	inflation of approximately 2.9%, thus implying a real return on long-term government

9 10 bonds of 3.2%.

11 Q HOW DOES YOUR ESTIMATED MARKET RISK PREMIUM RANGE COMPARE TO 12 THAT ESTIMATED BY DUFF & PHELPS?

13 Duff & Phelps makes several estimates of a forward-looking market risk premium Α 14 based on actual achieved data from the historical period of 1926 through 2020 as well 15 as normalized data. Using this data, Duff & Phelps estimates a market risk premium 16 derived from the total return on the securities that comprise the S&P 500, less the 17 income return on Treasury bonds. The total return includes capital appreciation, 18 dividend or coupon reinvestment returns, and annual yields received from coupons 19 and/or dividend payments. The income return, in contrast, only reflects the income 20 return received from dividend payments or coupon yields.

21 Duff & Phelps' range is based on several methodologies. First, Duff & Phelps 22 estimates a market risk premium of 7.25% based on the difference between the total

 $^{44} Duff$ & Phelps 2020 Yearbook at 6-17. $^{45} {\rm Id}.$

- market return on common stocks (S&P 500) less the income return on 20-year
 Treasury bond investments over the 1926-2020 period.⁴⁶
- Second, Duff & Phelps used the Ibbotson & Chen supply-side model which
 produced a market risk premium estimate of 6.0%.⁴⁷

5 Duff & Phelps explains that the historical market risk premium based on the 6 S&P 500 was influenced by an abnormal expansion of P/E ratios relative to earnings 7 and dividend growth during the period, primarily over the last 30 years. Duff & Phelps 8 believes this abnormal P/E expansion is not sustainable. In order to control for the 9 volatility of extraordinary events and their impacts on P/E ratios, Duff & Phelps takes 10 into consideration the three-year average P/E ratio as the current P/E ratio.48 11 Therefore, Duff & Phelps adjusted this market risk premium estimate to normalize the 12 growth in the P/E ratio to be more in line with the growth in dividends and earnings.

13 Finally, Duff & Phelps develops its own recommended equity, or market risk 14 premium, by employing an analysis that takes into consideration a wide range of 15 economic information, multiple risk premium estimation methodologies, and the current state of the economy by observing measures such as the level of stock 16 17 indices and corporate spreads as indicators of perceived risk. Based on this 18 methodology, and utilizing a "normalized" risk-free rate of 2.5%, Duff & Phelps concludes the current expected, or forward-looking, market risk premium is 5.5%, 19 20 implying an expected return on the market of 8.0%.⁴⁹

21 Importantly, Duff & Phelps' market risk premiums are measured over a 20-22 year Treasury bond. Because I am relying on a projected 30-year Treasury bond

⁴⁶Duff & Phelps 2021 SBBI Yearbook at 10-21. ⁴⁷Id. at 10-29.

⁴⁸*Id.*

⁴⁹*Duff & Phelps*: "Technical Update: Duff & Phelps Recommended U.S. Equity Risk Premium Decreased from 6.0% to 5.5%," December 10, 2020.

- yield, the results of my CAPM analysis should be considered conservative estimates
 for the cost of equity.
- 3

4

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Q HOW DOES YOUR ESTIMATED MARKET RISK PREMIUM RANGE COMPARE TO THAT ESTIMATED BY DUFF & PHELPS?

A The Duff & Phelps analyses indicate a market risk premium falls somewhere in the
range of 5.5% to 7.25%. My market risk premium falls in the range of 6.1% to 9.2%.

8

9 Q WHAT ARE THE RESULTS OF YOUR CAPM ANALYSIS?

10 Α The evidence outlined above shows that current observable risk-free rates are around 11 2.32%, but projected risk-free rates increase to around 2.80%. Similarly, current 12 observable beta estimates are around 0.88 but forward-looking more normalized beta 13 estimates have consistently been about 0.72. I will use both of these CAPM factors 14 in deriving a reasonable estimate of the current market cost of equity, and that likely 15 to be reflective as rates determined in this case are in effect. Therefore, I will 16 estimate a CAPM return using a current beta of 0.88, and a normal beta of 0.72, with 17 a current and normalized market risk premium estimate.

18 As shown on my Exhibit MPG-23, using a current market risk-free rate of 19 2.32%, a projected market return of 11.50%, a market risk premium of 9.18%, and a 20 current beta of 0.88 indicates a CAPM return estimate of 10.35%. Using a market 21 return of 11.50%, with a projected risk-free rate of 2.8%, produces a market risk 22 premium of 8.7%. This market risk premium and risk-free rate with a normalized utility 23 beta of 0.72, indicates a CAPM return of about 9.10%. The midpoint of the current 24 and normalized CAPM return estimate is 9.73% (midpoint of 10.35% and 9.10%), 25 rounded up to 9.7%.

1 V.G. Return on Equity Summary

2 Q BASED ON THE RESULTS OF YOUR RETURN ON COMMON EQUITY 3 ANALYSES DESCRIBED ABOVE, WHAT RETURN ON COMMON EQUITY DO 4 YOU RECOMMEND FOR FPL?

5 A Based on my analyses, I recommend FPL's current market cost of equity be in the 6 range of 9.10% to 9.70%, with a midpoint of 9.40%.

TABLE 10			
Return on Common Equity Summary			
Description	<u>Results</u>		
DCF	9.10%		
Risk Premium	9.40%		
САРМ	9.70%		

7 A return on common equity of 9.40%, which is the midpoint of my 8 9 recommended range of 9.10% to 9.70%, is supported by both my DCF, my risk 10 premium and CAPM studies. The low-end of my range is based on my DCF return 11 and the high-end of my range is based on my risk premium study. The CAPM falls at 12 the high-end of my range. My return on equity estimates reflect observable market evidence, the impact of Federal Reserve policies on current and expected long-term 13 14 capital market costs, an assessment of the current risk premium built into current 15 market securities, and a general assessment of the current investment risk characteristics of the electric utility industry and the market's demand for utility 16 17 securities.

- 18
- 19

1 V.H. Financial Integrity

2 Q WILL YOUR RECOMMENDED OVERALL RATE OF RETURN SUPPORT AN 3 INVESTMENT GRADE BOND RATING FOR FPL?

- 4 A Yes. I have reached this conclusion by comparing the key credit rating financial
 5 ratios for FPL at my proposed return on equity, embedded debt cost, and proposed
 6 capital structure to S&P's benchmark financial ratios using S&P's credit metric
 7 ranges.
- 8

9 Q PLEASE DESCRIBE THE MOST RECENT S&P FINANCIAL RATIO CREDIT 10 METRIC METHODOLOGY.

A S&P publishes a matrix of financial ratios corresponding to its assessment of the
 business risk of utility companies and related bond ratings. On May 27, 2009, S&P
 expanded its matrix criteria by including additional business and financial risk
 categories.⁵⁰

Based on S&P's most recent credit matrix, the business risk profile categories
are "Excellent," "Strong," "Satisfactory," "Fair," "Weak," and "Vulnerable." Most
utilities have a business risk profile of "Excellent" or "Strong."

18 The financial risk profile categories are "Minimal," "Modest," "Intermediate," 19 "Significant," "Aggressive," and "Highly Leveraged." Most of the utilities have a 20 financial risk profile of "Aggressive." FPL has an "Excellent" business risk profile and 21 an "Intermediate" financial risk profile.

22

23

⁵⁰S&P updated its 2008 credit metric guidelines in 2009, and incorporated utility metric benchmarks with the general corporate rating metrics. *Standard & Poor's RatingsDirect*[®]: "Criteria Methodology: Business Risk/Financial Risk Matrix Expanded," May 27, 2009.

1QPLEASE DESCRIBE S&P'S USE OF THE FINANCIAL BENCHMARK RATIOS IN2ITS CREDIT RATING REVIEW.

A S&P evaluates a utility's credit rating based on an assessment of its financial and
business risks. A combination of financial and business risks equates to the overall
assessment of FPL's total credit risk exposure. On November 19, 2013, S&P
updated its methodology. In its update, S&P published a matrix of financial ratios that
defines the level of financial risk as a function of the level of business risk.

8 S&P publishes ranges for primary financial ratios that it uses as guidance in its
9 credit review for utility companies. The two core financial ratio benchmarks it relies
10 on in its credit rating process include: (1) Debt to Earnings Before Interest, Taxes,
11 Depreciation and Amortization ("EBITDA"); and (2) Funds From Operations ("FFO") to
12 Total Debt.⁵¹

13

14QHOWDIDYOUAPPLYS&P'SFINANCIALRATIOSTOTESTTHE15REASONABLENESS OF YOUR RATE OF RETURN RECOMMENDATIONS?

16 А I calculated each of S&P's financial ratios based on FPL's cost of service for its retail 17 utility operations in its Florida service territory. While S&P would normally look at total 18 consolidated FPL financial ratios in its credit review process, my investigation in this 19 proceeding is not the same as S&P's. I am attempting to judge the reasonableness 20 of my proposed cost of capital for rate-setting in FPL's Florida retail utility operations. 21 Hence, I am attempting to determine whether my proposed rate of return will in turn 22 result in cash flow metrics, balance sheet strength, and earnings that will support an 23 investment grade bond rating and FPL's financial integrity.

24

⁵¹Standard & Poor's RatingsDirect[®]: "Criteria: Corporate Methodology," November 19, 2013.

1 Q DID YOU INCLUDE ANY OFF BALANCE SHEET DEBT ("OBS") DEBT 2 EQUIVALENTS?

A Yes, I did. I obtained the off-balance sheet debt for both FPL and Gulf Power from S&P Capital IQ. The latest data available for FPL was as of December 2020 and the latest data available for Gulf Power was as of December 2019. I used S&P last year amortization to estimate the 2022 off-balance sheet debt. In addition, I applied the jurisdictional allocation factor to estimate the FPL OBS debt pertaining to the Company's cost of service.

9

10 Q PLEASE DESCRIBE THE RESULTS OF THIS CREDIT METRIC ANALYSIS AS IT 11 RELATES TO FPL'S REGULATED OPERATIONS.

12 A The S&P financial metric calculations for FPL at a 9.40% return are developed on 13 Exhibit MPG-24, page 1. The credit metrics produced below, with FPL's financial risk 14 profile from S&P of "Intermediate" and business risk profile of "Excellent," will be used 15 to assess the strength of the credit metrics based on FPL's retail operations in the 16 state of Florida.

17 The adjusted debt ratio for credit metric purposes at my proposed capital 18 structure is 45.9%, which is lower than the debt ratio for the A rated utilities of 19 approximately 48.7%.

Based on an equity return of 9.40% and my proposed common equity ratio of 53.5%, FPL will be provided an opportunity to produce a Debt to Earnings Before Interest, Taxes, Depreciation and Amortization ("EBITDA") ratio of 3.3x. This is within S&P's "Intermediate" guideline range of 2.5x to 3.5x,⁵² which supports FPL's credit rating.

⁵²Standard & Poor's RatingsDirect[®]: "Criteria: Corporate Methodology," November 19, 2013.

FPL's retail utility operations FFO to total debt coverage at a 9.40% equity
 return and 53.5% equity ratio is 23%, which is within S&P's "Intermediate" metric
 guideline range of 23% to 35%. Again, this FFO/total debt ratio will support a ratio
 consistent with FPL's "Excellent" business profile from S&P.

5

Q DOES THIS FINANCIAL INTEGRITY ASSESSMENT SUPPORT YOUR RECOMMENDED OVERALL RATE OF RETURN FOR FPL?

8 A Yes. As noted above, I believe my return on equity represents fair compensation in
9 today's very low capital market costs, and as outlined above, my overall rate of return
10 will provide FPL an opportunity to earn credit metrics that will support its bond rating.

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- 12

VI. RESPONSE TO FPL WITNESS MR. COYNE

13 Q WHAT RETURN ON COMMON EQUITY IS FPL PROPOSING FOR THIS 14 PROCEEDING?

15 A Mr. Coyne recommends a return on equity reflects return on equity estimates 16 produced by the DCF, CAPM, RP and Expected Earnings models in the range of 17 9.23% to 14.17%, with an average of 10.89%. Based on his analyses and his 18 consideration of 11 basis points for flotation costs, Mr. Coyne concludes that the 19 return on equity for FPL falls in the range of 10.5% to a 11.5%, with a point estimate 20 of 11.0% for 2020-2025.⁵³

21 FPL proposes to add 50 basis points to Mr. Coyne's estimated market return 22 on equity for FPL as an incentive return on equity. With this incentive, FPL proposes

⁵³Coyne Direct Testimony at 5-6.

- to set rates based on an 11.5% return on equity, which reflects Mr. Coyne's estimate
 of 11 basis points plus the 50 basis point return on equity incentive.⁵⁴
- 3

4 Q HOW DOES FPL'S REQUESTED OVERALL RATE OF RETURN AND RETURN 5 ON EQUITY COMPARE TO THAT PREVIOUSLY AWARDED FOR FPL AND GULF 6 POWER, AND TO THOSE RECENTLY APPROVED OR CURRENTLY 7 REQUESTED BY FLORIDA UTILITIES?

8 А FPL's request in this case completely disconnects from today's very low capital 9 market cost environment, and sets rates of return at substantially above market rates 10 of return, and much higher than those recently awarded to either FPL and/or other 11 Florida utilities, relative to contemporary utility bond yields available during those 12 proceedings. For example, in FPL's last rate decision, Docket No. 160021-EI, award 13 date of November 2016, it was awarded a return on equity of 10.55%. At that time, 14 "A" rated utility bond yields were around 4.16%. Currently, "A" rated utility bond yields 15 are about 3.35%, or roughly 81 basis points lower than the capital market that existed at the time of FPL's last rate case. This suggests that the return on equity 16 17 appropriate for FPL in this case should be less than that previously awarded, not 18 substantially higher as proposed by FPL in this proceeding.

19 Similarly, in Gulf Power's last rate case, Docket No. 160186-EI, the 20 Commission awarded it a 10.25% return on equity in March 2017, when 21 contemporary "A" utility bond yields were about 4.16%. Again, this is more than 22 80 basis points higher than contemporary utility bond yields. As such, this is more 23 observable evidence that FPL's authorized return on equity in this case should be 24 lower than its last case, not greater as proposed by FPL.

⁵⁴Reed Direct Testimony at 89-90.

Another utility recently acquired by FPL, Florida City Gas, was awarded a return on equity by the Commission of 10.19% in Docket No. 20170179-GU around March of 2018. At the time the Florida City Gas authorized return on equity was approved, contemporary "A" rated utility bond yields were around 4.00%. Again, this is approximately 65 basis points higher than "A" rated bond yields today.

6 For more recent cases, I would point to FPL witness John Reed's testimony at 7 page 90. There, he states in Docket No. 20210016-EI, Duke Florida was recently 8 awarded a return of equity of 9.85% with a capital structure of around 53% common 9 equity. Again, this shows FPL's requested return on equity and ratemaking capital 10 structure are not reasonably priced, and do not reflect a balanced capital structure or 11 fair return on equity.

Finally, Tampa Electric Company recently has filed for a rate case, seeking a return on equity of 10.75%,and a ratemaking capital structure with a common equity ratio of 54.6%. Here again, Tampa Electric's requested rate of return is far more reasonable and much closer to current capital market costs than that proposed by FPL in this proceeding. Tape 1

17

18 Q IS FPL'S AUTHORIZED RETURN ON EQUITY REASONABLY ALIGNED WITH
 19 INDUSTRY AUTHORIZED EQUITY RETURNS FOR ELECTRIC UTILITIES?

A No. FPL's authorized return on equity has generally consistently been significantly
 higher than that of the electric utility industry authorized returns on equity. This
 relationship is shown below in Figure 6.

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2 As shown above, because FPL's authorized return on equity has substantially 3 exceeded the industry norms, it is reasonable for the Commission to at a minimum 4 adjust its common equity ratio of capital down to a level that is no greater than 5 necessary to support its current investment grade bond rating. The combination of an 6 above-market rate of return and a common equity ratio more expensive than 7 necessary to support FPL's bond rating, has the effect of substantially increasing 8 FPL's revenue requirement and unjustifiably inflating its retail rates to its Florida 9 customers.

10

11 Q ARE MR. COYNE'S RETURN ON EQUITY ESTIMATES REASONABLE?

A No. Mr. Coyne's estimated return on equity is overstated and should be rejected. Mr.
 Coyne's analyses produce excessive results for various reasons, including the
 following:

15 1. His constant growth DCF results are based on unsustainably high growth rates;

- 16 2. His CAPM is based on inflated market risk premiums;
- His Bond Yield Plus Risk Premium studies are based on inflated utility equity risk premiums;

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- 4. Both Mr. Coyne's CAPM and RP studies are based on projected interest rates that are highly uncertain, and
 - 5. His Expected Earnings analysis is unreasonable because it measures the book accounting return, rather than the market required return.
- 5

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6 Q PLEASE COMPARE YOUR RECOMMENDED RETURN ON EQUITY WITH MR.

7 COYNE'S RETURN ON EQUITY ESTIMATES.

- A Mr. Coyne's return on equity estimates are summarized in Table 11 below. In the "Adjusted" Column 2, I show the results with prudent and sound adjustments to correct the flaws referenced above. With such adjustments to Mr. Coyne's proxy group's DCF, CAPM, and Risk Premium return estimates, Mr. Coyne's studies show that my 9.40% recommended return on equity for FPL is more reasonable and consistent with the current capital market environment.
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TABLE 11	TA	BL	E.	11
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Coyne's Adjusted Return on Equity Estimates

Description	Coyne <u>Mean¹</u>	Gorman Adjusted
	(1)	(2)
Constant Growth DCF		/
30-Day Average	9.33%	9.33%
90-Day Average	9.23%	9.23%
180-Day Average	9.30%	9.30%
<u>CAPM DCF-Derived Results</u> CAPM (<i>Value Line</i> Beta) CAPM (Bloomberg Beta)	14.17% 14.16%	9.70% 9.70%
<u>Risk Premium</u> Current 30-Yr Treasury (1.97%) Near-Term Projected 30-Yr Treasury (2.28%) Long-Term Projected 30-Yr Treasury (2.80%)	9.53% 9.66% 9.88%	8.72% 9.03% Reject
Expected Earnings	10.22%	Reject
Recommended ROE	11.00%	9.40%
Sources: ¹ Coyne Direct Testimony at 53, 60, 63, 64.		

1 2

As shown in Table 11 above, corrections and improvements to the accuracy of 3 Mr. Coyne's return on equity estimates support a return on equity for FPL of 9.40%. 4 While my adjustments are presented in Adjusted Column 2 of Table 11 above, 5 a description of the bases for my adjustments to Mr. Coyne's return on equity 6 estimates is presented below. 7 8 9 10

1 VI.A. Reliability of DCF Return Estimates

2 Q DOES MR. COYNE COMMENT ON THE RELIABILITY OF MARKET-BASED 3 MODELS TO MEASURE A FAIR RETURN ON EQUITY FOR FPL?

- 4 A Yes. Mr. Coyne opines that the traditional DCF analyses are not producing 5 reasonable results at this time due to the current capital market conditions. He goes 6 on to state that the DCF model, which relies on historical averages is likely to 7 understate the cost of equity for FPL.⁵⁵ He also opines that it is important now to 8 consider projected market data.⁵⁶
- 9

10QHAS MR. COYNE IDENTIFIED ANYTHING DIFFERENT IN THIS CASE TO11DISTINGUISH THE PROJECTIONS THAT HAVE BEEN OFFERED OVER THE12LAST FIVE TO TEN YEARS, BUT HAVE YET TO PAN OUT?

13 No. As explained in more detail later, economists have consistently been projecting А increases in interest rates relative to current observable interest rates over 14 15 approximately the last five years. However, those projections for increased interest 16 rates have turned out to be inaccurate. Instead, interest rates have remained 17 relatively stable and at low levels for approximately the last five to ten years. Also, I 18 show that projections for interest rates over the next five to ten years have been 19 moderated by independent consensus economists. This is clear evidence that 20 today's market is embracing the sustainability of relatively low capital market costs in 21 the current market relative to what independent economists have projected in prior 22 periods. A comparison of the components of the DCF return for utilities generally to 23 other income return investment options and growth investment options shows that the

⁵⁵Coyne Direct Testimony at 28-30.

⁵⁶Coyne Direct Testimony at 57.

1 2 results of DCF models are producing reliable and accurate estimates of the current market cost for utility companies.

3

Q PLEASE EXPLAIN WHY YOU BELIEVE THE DCF MODEL IS PRODUCING RELIABLE RESULTS FOR UTILITY COMPANIES WHEN THE DCF RETURN COMPONENT IS COMPARED TO ALTERNATIVE INVESTMENTS.

A In addition to the discussion above, the DCF model is producing an economically
logical estimate of the current market cost of equity and a return that is comparable
with observable returns in alternative investments of comparable risk. The DCF
model sums the observable dividend yield on utility stocks and then adds to that an
estimate of expected growth. These two components yield DCF returns that can be
compared to alternative investments to demonstrate their reasonableness.

13 The current dividend yield of utility stock (3.53%) is higher but comparable to 14 the yield on "A" rated utility bonds (3.02%) as shown my Exhibit MPG-6. Because 15 utility stock dividends can grow over time, and utility bond yield coupons are fixed, historically utility stock dividend yields are lower than observable utility bond yields. 16 17 The current yield spread of around -51 basis points is negligible, as described later in 18 my testimony. This relatively narrow spread between A-rated utility bonds and utility 19 stock dividend yields is an indication that the yield component, or income component, 20 on a utility stock is competitive with alternative income returns such as A-rated utility 21 bond yields. This is an indication that the yield component of a DCF return is 22 comparable with alternative investments.

23 Specifically, as shown on Exhibit MPG-6, the historical average yield spread 24 between utility bonds and utility stock dividends has been 0.87%, which is much 25 higher than the current yield spread of -0.51% for utilities. This indicates the DCF income return on utility stocks (dividend yield) is competitive with the income return
 available on utility bond investments.

The growth component of the DCF return relates to earnings and stock growth over time. The growth outlook for utility stocks is not depressed generally, but rather provides a robust outlook for dividends and stock price growth. The DCF return is not understated due to the DCF growth rate component.

7 Exhibit MPG-6 also shows the annual growth in earnings for utilities over the last 13 years has been approximately 3.02%. A forward growth rate of 5.38%, as 8 9 shown in Exhibit MPG-10, is higher than the realized historical growth. Also, utility 10 earnings growth is expected to be considerably higher than the growth of the U.S. 11 GDP, which generally is regarded as the maximum sustainable growth of the market 12 in general. Going forward, long-term sustainable growth for equity investments is 13 around 4.35%, as described above. Based on these factors, the growth rate 14 component of a regulated utility DCF return is quite robust and produces a highly 15 competitive DCF return estimate.

For these reasons, both dividend yield and growth components of a utility DCF
indicate an economically logical return estimate that is competitive with comparably
risky alternative investments.

19

20 VI.B. Coyne's Constant Growth DCF Models

21 Q PLEASE DESCRIBE MR. COYNE'S CONSTANT GROWTH DCF RETURN 22 ESTIMATES.

A Mr. Coyne's constant growth DCF returns are developed on his Exhibit JMC-4. Mr.
 Coyne's constant growth DCF models are based on consensus growth rates

published by *Yahoo! Finance* and *Zacks* and individual growth rate projections made
 by *Value Line*.

He relied on dividend yield calculations based on average stock prices over
three different time periods: 30-day, 90-day, and 180-day ending February 28, 2021
– all reflecting a half year of dividend growth adjustments.

- 6
- 7 Q ARE THE CONSTANT GROWTH DCF RESULTS PRODUCED BY MR. COYNE 8 REASONABLE?
- 9 A My major concerns with Mr. Coyne's DCF study, as discussed in regard to my own 10 DCF analysis, is that the current consensus analysts' growth rates are substantially 11 higher than the long-term sustainable growth rate of 4.35%. Specifically, Mr. Coyne's 12 constant growth DCF model is based on an average proxy group growth rate of 13 5.39% for his proxy group. This growth rate is excessive. Therefore, the DCF model 14 produces reasonable high-end return estimates.
- 15

16 VI.C. Coyne's CAPM Studies

17 Q PLEASE DESCRIBE MR. COYNE'S CAPM ANALYSIS.

- A As indicated above, the CAPM analysis is based upon the theory that the market required rate of return for a security is equal to the risk-free rate, plus a risk premium associated with the specific security. The risk premium associated with the specific security is expressed mathematically as:
- 22 Bi x (Rm Rf) where:
- 23 Bi = Beta Measure of the risk for stock
- 24 Rm = Expected return for the market portfolio
- 25 Rf = Risk-free rate
- 26

1 Q PLEASE DESCRIBE THE ISSUES YOU HAVE WITH MR. COYNE'S CAPM 2 STUDY.

A I have two primary issues with Mr. Coyne's CAPM study. First, I believe the market
risk premium he used in his CAPM studies is overstated because it does not reflect a
reasonable estimate of the expected return on the market. Second, Mr. Coyne relies
on a projected risk-free rate based on the 30-Year Treasury yield for 2022 to 2026.
Mr. Coyne's consistent reliance on projected interest rates is unreasonable and
should be rejected.

9

10 Q PLEASE DESCRIBE MR. COYNE'S MARKET RISK PREMIUM.

11 A Mr. Coyne derived his market risk premium by conducting a DCF analysis for the 12 market (S&P 500). Mr. Coyne market risk premium estimate is based on the total 13 return on the market from 1) S&P Earnings and Estimates report of 17.70%, 2) 14 Bloomberg of 15.46%, and 3) Value Line of 14.07%. The average of these market 15 returns is 15.75%, which is utilized in his CAPM study and a five-year projected risk-16 free rate of 2.80%, produces a market risk premium of 12.95%.⁵⁷

17

18 Q WHAT ISSUES DO YOU HAVE WITH MR. COYNE'S MARKET RISK PREMIUM 19 ESTIMATES?

A Mr. Coyne's DCF-derived market risk premium is based on a market returns of 17.70%, 15.46%, 14.07%,⁵⁸ which consist of a growth rate component of 16.06%, 13.87% and 12.41% and market-weighted expected dividend yield of 1.52%, 1.49%, and 1.57%, respectively. As discussed above with respect to my own DCF model, the DCF model requires a long-term sustainable growth rate. Mr. Coyne's

⁵⁷ Coyne Direct Testimony at 59.

⁵⁸Coyne Direct Testimony at 59 and Exhibit JMC-5.

sustainable market growth rates in the range of 12.41% to 16.06% are far too high to
be a rational outlook for sustainable long-term market growth. These growth rates
are more than three times the growth rate of the U.S. GDP long-term growth outlook
of 4.35% as discussed above.

As a result of these unreasonable long-term market growth rate estimates, Mr.
Coyne's market DCF returns used in his CAPM analyses are inflated and not reliable.
Consequently, Mr. Coyne's market risk premiums should be given minimal weight in
estimating FPL's CAPM-based return on equity.

9

10

Q DO HISTORICAL ACTUAL RETURNS ON THE MARKET SUPPORT MR. COYNE'S PROJECTED MARKET RETURNS?

A No. Historical data shows just how unreasonable Mr. Coyne's projected DCF return
 on the market is on a going-forward basis. Duff & Phelps estimates the actual capital
 appreciation for the S&P 500 over the period 1926 through 2020 to have been 6.2%
 to 8.0%.⁵⁹ This compares to Mr. Coyne's projected growth rate of the market in the
 range of 12.41% to 16.06%.

Further, historically the geometric growth of the market of 6.2%⁶⁰ has reflected
 geometric growth of GDP over this same time period of approximately 6.0%.⁶¹

This review of historical data establishes two facts very clearly. First, historical, actual achieved growth has been substantially less than projected by Mr. Coyne. Second, historical growth of the market has tracked historical growth of the U.S. GDP. Projected growth of the U.S. GDP is now closer to the 4.0% to 4.5% range. All this information strongly supports the conclusion that Mr. Coyne's projected growth rate on the market in the range of 12.41% to 16.06% is substantially

⁵⁹Duff & Phelps 2021 SBBI Yearbook at 6-17.

⁶⁰*Id*.

⁶¹ U.S. Bureau of Economic Analysis, January 28, 2021.

overstated. While I do not endorse the use of a historical growth rate to draw
 assessments of the market's forward-looking growth rate outlooks, this data can be
 used to show how unreasonable and inflated Mr. Coyne's market return estimate is.

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6

Q DO YOU HAVE ANY FURTHER COMMENTS IN REGARD TO MR. COYNE'S MARKET RETURN?

7 A Yes. The expected market return of 15.75% developed by Mr. Coyne is rather
abnormal. As show in Table 12 below, a market return of 15.75% is rarely sustained.
9 In fact, nearly 65% of the time, the market has achieved a return less than 15.75%
10 over any rolling five-year period dating back to 1926. Expected market returns of this
11 magnitude should be viewed with a large degree of skepticism because it is largely
12 inflated and unreasonable based on historical standards.

Observed Arithme	tic Total N	Iominal Re	turns on th	ne Market		
	Rolling P	eriod Arith	nmetic Tota	I Returns	- Nominal	Total
-	4-Year	5-Year	10-Year	20-Year	50-Year	95-Yea
Rolling periods observed	92	91	86	76	46	1
Rolling periods w/ returns less than 15.75%	60	59	65	64	46	1
Percent of periods less than 15.75%	65.2%	64.8%	75.6%	84.2%	100.0%	100.0%

13

14 Q WHY DO YOU BELIEVE MR. COYNE'S RELIANCE ON A PROJECTED LONG-

15 TERM RISK-FREE RATE IS UNREASONABLE?

16 A Mr. Coyne reliance on long-term projected bond yield of 2.80% does not reflect 17 market participants' outlooks for FPL's cost of capital during the period rates 18 determined in this proceeding will be in effect. This bond yield is based on 19 projections of Treasury bond yields five years out (2022-2026). Those projections are

1 highly uncertain, and in any event, do not reflect the cost of capital in the test period 2 or even the period over the next two to three years, the period in which rates 3 determined in this proceeding will largely be in effect. As such, the market risk 4 premium should be based on observable bond yields in the market today. 5 Alternatively, the market risk premium should at most reflect bond yield projections 6 through the rate-effective period in this case.

7

8

CAN MR. COYNE'S CAPM ANALYSIS BE REVISED TO REFLECT A MORE Q 9 **REASONABLE MARKET RISK PREMIUM AND RECENT RISK-FREE RATES?**

10 А Yes. Using Mr. Coyne's near-term Treasury yield of 2.28% as a risk-free rate, the average Value Line and Bloomberg beta estimates of 0.88,62, and my calculated high-11 12 end market risk premium of 9.18%, Mr. Coyne's CAPM would be no higher than 10.35%. Using the historical beta of 0.72 as discussed in regard to my CAPM study. 13 14 the projected long-term risk-free rate of 2.80% and my normalized market risk 15 premium of 8.70% will result in a CAPM return of 9.10%. The average of these two 16 CAPM estimates will produce a CAPM return no higher than 9.70%.

17

VI.D. Risk Premium Analysis 18

19 Q PLEASE DESCRIBE MR. COYNE'S RP RISK PREMIUM METHODOLOGY.

20 А As shown on his Exhibit JMC-6, Mr. Coyne constructs a risk premium return on equity 21 estimate based on the premise that equity risk premiums are inversely related to 22 interest rates. He estimates an average equity risk premium of approximately 6.0% 23 over the period January 1992 through February 26, 2021. He then applies a 24 regression formula to the current, near-term, and long-term projected 30-year

⁶²Exhibit JMC-5.2.

1	Treasury bond yields of 1.97%, 2.28%, and 2.80%, respectively, to produce equity
2	risk premiums of 7.56%, 7.38%, and 7.08%, respectively. Thus, he calculates return
3	on equity estimates of 9.53%, 9.66%, and 9.88%, respectively. ⁶³

4

5

Q IS MR. COYNE'S RISK PREMIUM METHODOLOGY REASONABLE?

A No. Mr. Coyne contends that there is a simplistic inverse relationship between equity
 risk premiums and interest rates without any regard to differences in investment risk.
 Academic studies are quite clear that interest rates are a relevant factor in assessing
 current market equity risk premiums, but the risk premium ties more specifically to the
 market's perception of investment risk of debt and equity securities, and not simply
 changes in interest rates.

More specifically, while academic studies have shown that, in the past, there has been an inverse relationship among these variables, researchers have found that the relationship changes over time and is influenced by changes in perception of the risk of bond investments relative to equity investments, and not simply changes to interest rates.⁶⁴

In the 1980s, equity risk premiums were inversely related to interest rates, but that was likely attributable to the interest rate volatility that existed at that time. As such, when interest rates were more volatile, perceptions of bond investment risk increased relative to the investment risk of equities. This changing investment risk perception caused changes in equity risk premiums.

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⁶³ Coyne Direct Testimony at 61-63.

⁶⁴Robert S. Harris & Felicia C. Marston, "The Market Risk Premium: "Expectational Estimates Using Analysts' Forecasts," *Journal of Applied Finance*, Volume 11, No. 1, 2001 at 10-13; Eugene F. Brigham, Dilip K. Shome, & Steve R. Vinson, "The Risk Premium Approach to Measuring a Utility's Cost of Equity," *Financial Management*, Spring 1985, at 42-43.

1 In today's marketplace, interest rate volatility is not as extreme as it was 2 during the 1980s.⁶⁵ Nevertheless, changes in the perceived risk of bond investments 3 relative to equity investments still drive changes in equity premiums and cannot be 4 measured simply by observing nominal interest rates. Changes in nominal interest 5 rates are heavily influenced by changes to inflation outlooks, which also change 6 equity return expectations. As such, the relevant factor needed to explain changes in 7 equity risk premiums is the relative changes between the risk of equity versus debt 8 investments, and not simply changes in interest rates.

9 Importantly, Mr. Coyne's analysis simply ignores investment risk differentials. 10 He bases his adjustment to the equity risk premium exclusively on changes in 11 nominal interest rates. This is a flawed methodology that does not produce accurate 12 or reliable risk premium estimates.

13

14 Q DO YOU BELIEVE THAT THE REGRESSION STUDY USED BY MR. COYNE IN 15 HIS RP DEMONSTRATES AN ACCURATE CAUSE AND EFFECT BETWEEN 16 INTEREST RATES AND EQUITY RISK PREMIUMS?

17 A No. Because the returns on equity he uses are authorized by commissions, those
18 returns on equity are not directly adjusted by market forces. While I also use
19 Commission-authorized returns as a proxy for market-required returns, of significance
20 is the simple regression analysis that tries to describe and gauge equity risk
21 premiums based on only changes in interest rates.

Equity risk premiums can move based on changes in market conditions that can impact both equity returns and bond returns in a like manner. This simple

⁶⁵"The Risk Premium Approach to Measuring a Utility's Cost of Equity," *Financial Management*, Spring 1985, at 44.

- regression analysis of equity risk premiums and interest rates ignores these relevant
 market factors in describing the current market-required equity risk premium.
- 3

4 Q DO YOU HAVE ANY OTHER COMMENTS CONCERNING MR. COYNE'S RISK

5

PREMIUM METHODOLOGY?

A Yes. Similar to his CAPM analysis, in his RP risk premium, Mr. Coyne's use of a
long-term projected bond yield of 2.80%⁶⁶ does not reflect market participants'
outlooks for FPL's cost of capital during the period rates determined in this
proceeding will be in effect. Therefore, Mr. Coyne's use of projected bond yields five
years out should be rejected..

11

12 Q CAN MR. COYNE'S RISK PREMIUM ANALYSIS BE REVISED TO REFLECT 13 CURRENT PROJECTIONS OF TREASURY YIELDS?

- A Yes. Mr. Coyne's simplistic and incomplete notion that equity risk premiums change
 only with changes to nominal interest rates should be rejected. Adding my equity risk
 premium over Treasury bonds of 6.75% to his Treasury yields of 1.97% and 2.28%,
 produces a RP no higher than 9.0%.
- 18

19 VI.E. Coyne's Expected Earnings Analysis

20 Q PLEASE DESCRIBE MR. COYNE'S EXPECTED EARNINGS ANALYSIS.

A Mr. Coyne's Expected Earnings analysis is based on the projected returns on book equity for the electric utility companies followed by *Value Line* and included in his proxy group as developed on his Exhibit JMC-7. Based on this analysis, Mr. Coyne

⁶⁶Exhibit JMC-6.

concludes that the average return on equity result for his proxy group is 9.53%, for
 the projected period 2023-2025.

3

4 Q WHAT IS PROBLEMATIC ABOUT MR. COYNE'S EXPECTED EARNINGS 5 ANALYSIS?

A Mr. Coyne's Expected Earnings analysis should be rejected because this approach
does not measure the market required return appropriate for the investment risk of
FPL. Rather, it measures the book accounting return. The market required return is
not the same as the accounting return, and the two can be – and in this instance are
– vastly different.

11 The significant discrepancy between the level and meaning of a market-12 required return and a book return on equity can have significant implications to both 13 investors and customers, when used to set a fair return on equity for ratemaking 14 purposes. Simply stated, a market return provides a pure measure of fair 15 compensation to investors, and allows for setting rates that provide no more than fair 16 compensation. Conversely, using the earned return on book equity can cause 17 compensation to be either too high or too low, and rates to be set either too low or too 18 high, depending on the specific circumstances when the book return is measured.

For example, if the proxy group's earned return on book equity is lower than the market return, then this could be an indication that the rates for the proxy group are too low and not providing fair compensation. As such, the measured return on book equity would be an indication rates need to be increased. However, if the earned return on book equity was used to estimate a fair return for ratemaking purposes, then this depressed earnings level could result in rates being set below a level that provides fair compensation to investors and may not support the utility's financial integrity. Conversely, if the earned return on book equity for the proxy
companies is above a fair market return on equity, then that could be an indication
that the rates for the proxy companies produce more earnings than necessary to fairly
compensate investors, and using this inflated return on equity would result in rates
that are not just and reasonable for customers.

6 The market-required return is a long-standing practice in setting rates for utility 7 companies. This is because the market sets the required rate of return for assuming 8 the risk of an investment. To the extent the utility's earnings are adequate to allow it 9 to attract investors, then it will be able to sell new equity shares to the market to 10 secure capital needed to fund additional rate base investments. If this long-standing 11 practice of setting authorized returns consistent with market returns is rejected, in 12 favor of Mr. Coyne's proposal to look at returns on book equity, then the balance 13 between estimating a return that is fair to both investors and customers will be turned 14 upside down, and the rate-setting practice could be substantially impaired and 15 rendered unreliable.

16 The earned return on book equity is simply not an accurate or legitimate basis 17 upon which to determine a fair and reasonable return on equity for both investors and 18 customers. A fair return on equity is a return that provides fair compensation to utility 19 investors, but also results in customer rate impacts that are no more than necessary 20 to produce that fair compensation – except to the extent greater earnings are 21 necessary to maintain financial integrity or credit standing. For these reasons, the 22 Expected Earnings analysis should simply be rejected.

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- 1 VI.F. Mr. Coyne's Consideration of Additional Risks
- 2 Q DID MR. COYNE INJECT CONSIDERATION OF ADDITIONAL BUSINESS RISKS 3 TO JUSTIFY HIS RETURN ON EQUITY?
- 4 А It appears so. Mr. Coyne believes that FPL is exposed to additional risks that should 5 be accounted for: (1) FPL's capital expenditure; (2) its nuclear generation fleet; (3) FPL's storm damages and resulting outages; (4) FPL's regulatory risk relative to 6 7 the proxy group; (5) the Company's risk associated with its proposed 4-year rate plan; 8 (6) the need to recover flotation costs; and (7) superior management performance.⁶⁷ 9 Mr. Coyne believes that these additional risks should be considered in determining 10 FPL's return on equity. However, he failed to recognize the fact that these additional 11 risks are already incorporated in FPL credit rating.
- 12

13 Q PLEASE EXPLAIN.

A The major business risks identified by Mr. Coyne are already considered in the assigning of a credit rating by the various credit rating agencies.

16 As shown on my Exhibit MPG-9, the average S&P credit rating for my proxy 17 group of BBB+ is comparable to FPL's credit rating of A from S&P. The relative risks 18 discussed on pages 66-86 of Mr. Coyne's testimony are already incorporated in the 19 credit ratings of the proxy group companies. Indeed, S&P and other credit rating 20 agencies go to great lengths and detail in assessing a utility's business risk and 21 financial risk in order to evaluate total investment risk. This total investment risk 22 assessment of FPL, in comparison to a proxy group, is fully absorbed into the 23 market's perception of FPL's risk. The use of my proxy group fully captures the

⁶⁷Coyne Direct Testimony at 66-86.

investment risk of FPL and is, in fact, conservative, given that the proxy group has a
 lower credit rating than FPL.

3

4 Q HOW DOES S&P ASSIGN CORPORATE CREDIT RATINGS FOR REGULATED

- 5 UTILITIES?
- 6 A In assigning corporate credit ratings, the credit rating agency considers both business

7 and financial risks. Business risks, among others, include a company's size,

8 competitive position, generation portfolio, and capital expenditure programs, as well

- 9 as consideration of the regulatory environment, current state of the industry, and the
- 10 economy as whole. Specifically, S&P states:

11 To determine the assessment for a corporate issuer's business risk 12 profile, the criteria combine our assessments of industry risk, country 13 risk, and competitive position. Cash flow/leverage analysis determines 14 a company's financial risk profile assessment. The analysis then 15 combines the corporate issuer's business risk profile assessment and 16 its financial risk profile assessment to determine its anchor. In general, 17 the analysis weighs the business risk profile more heavily for investment-grade anchors, while the financial risk profile carries more 18 19 weight for speculative-grade anchors.⁶⁸

- 20
- 21 VI.F.1. Flotation Costs

22 Q DID MR. COYNE INCLUDE A FLOTATION COST ADJUSTMENT IN HIS 23 RECOMMENDED RETURN FOR FPL?

A Yes. Mr. Coyne calculated an upward adjustment of 11 basis points to his return results to compensate for flotation costs. He developed his flotation cost adjustment by observing the cost incurred by the proxy group companies in issuing equity securities. The costs incurred on these issuances averaged around 2.64% of the

28 issuance amount.

⁶⁸*Standard & Poor's RatingsDirect*[®]: "Criteria/Corporates/General: Corporate Methodology," November 19, 2013.
Next, Mr. Coyne developed a constant growth DCF model for the proxy group
 with and without issuance costs to derive his flotation cost adjustment of 11 basis
 points.⁶⁹

- 4
- 5

Q IS MR. COYNE'S FLOTATION COST ADDER REASONABLE?

A No. Mr. Coyne's flotation cost adder is not reasonable or justified because it is not
based on the recovery of prudent and verifiable actual flotation costs incurred by FPL.
NextEra receives dividend payments from its various subsidiaries and can do
whatever it wants with that capital, like redistributing it to another subsidiary. Paid-in
capital at FPL can also be derived from debt capital issued by NextEra Mr. Coyne
has failed to show that the FPL's paid-in capital portion of its common equity balance
was derived from common equity issuances at its parent.

Because he does not show that his adjustment is based on FPL's actual and verifiable flotation expenses, there are no means of verifying whether Mr. Coyne's proposal is reasonable or appropriate. Stated differently, Mr. Coyne's flotation cost return on equity adder is not based on known and measurable FPL costs. Therefore, the Commission should reject a flotation cost return on equity adder for FPL.

18

19QPLEASE SUMMARIZE YOUR CONCLUSIONS IN REGARD TO FPL BUSINESS20AND REGULATORY RISK AS DESCRIBED BY MR. COYNE.

A I do not agree that the risk factors discussed in Mr. Coyne's testimony present investment risk that distinguishes FPL from that of the proxy group or the utility industry. As explained previously, flotation costs are a cost (which FPL has not supported), not a risk; FPL's capital expenditures obligations and development risk

⁶⁹Exhibit JMC-10.

are similar to the proxy group and the utility industry; and Florida's regulatory
 environment is one of the most favorable to utilities in the nation and mitigates FPL's
 cost recovery risk.

4 As mention above regulatory risk is a key credit rating consideration by credit 5 analysts in assigning utilities' business risk, which is fully reflected in the utility's bond 6 rating. Mr. Coyne's focus on a limited number of investment risk characteristics, while 7 ignoring many other significant risk factors such as financial risk, and actual financial 8 performance of Florida utilities generally, and FPL specifically, renders his analysis 9 incomplete and his findings inconclusive. Credit analysts would consider all these 10 risk factors, along with all other risk factors in assigning a bond rating. Hence, 11 including companies that have similar investment risk to FPL by reviewing a bond 12 rating of the proxy group companies is a more complete and reliable assessment of 13 total investment risk, including these specific line item risks identified by Mr. Coyne in 14 selecting comparable risk proxy group companies.

Another deficiency in Mr. Coyne's analysis is he is relying on his own assessment of risk, rather than assessments of utility risk made available to the investing public, and likely are risk assessments that are considered by investors in valuing the utilities' securities that are included in the proxy group. In other words, what is at issue here is the investment market's assessment of risk of the utilities' securities, not Mr. Coyne's personal investment outlook.

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1 VI.G. Capital Market Conditions

2 Q DID MR. COYNE ALSO OFFER AN ASSESSMENT OF CURRENT MARKET 3 CONDITIONS IN SUPPORT OF HIS RECOMMENDED RETURN ON EQUITY 4 RANGE?

- 5 A Yes. Mr. Coyne observes a few factors that he believes gauge the capital market 6 environment and investor sentiment, including the Federal Reserve's monetary policy 7 and the impact of the lower interest rate environment on dividend yield and P/E ratios, 8 the current and expected interest rate environment and volatility levels as measured 9 by the Chicago Board of Exchange ("CBOE"), Implied Volatility Index ("VIX'), as well 10 as .⁷⁰
- 11
- Q DO YOU BELIEVE THAT MR. COYNE'S USE OF THESE MARKET SENTIMENTS
 SUPPORTS HIS FINDINGS THAT FPL'S MARKET COST OF EQUITY IS
 CURRENTLY 11.00%?

15 A No. In many instances, Mr. Coyne's analysis simply ignores market sentiments 16 favorable toward utility companies and instead lumps utility investments in with 17 general corporate investments. A fair analysis of utility securities shows the market 18 generally regards utility securities as low-risk investment instruments and supports 19 the finding that utilities' cost of capital is low in today's marketplace.

20

21 Q WHAT IS THE MARKET SENTIMENT FOR UTILITY INVESTMENTS?

A Again, the current market sentiment toward utility investments, rather than just general corporate investments, is that the market is placing high value on utility securities, recognizing their low risk and stable characteristics. This is illustrated by

⁷⁰Coyne Direct Testimony at 15-40.

current utility bond yield spreads as discussed at length previously. The current
 strong utility bond valuation is an indication of the market's sentiment that utility
 bonds are lower risk and are generally regarded as a safe haven by the investment
 industry.

5 Further, other measures of utility stock valuations also support the conclusion 6 that there is a robust market for utility stocks. As shown on my Exhibit MPG-6, 7 financial valuation measures (*e.g.*, P/E ratio and market price to cash flow ratio) show 8 that utility stock valuation measures are robust.

9 For all these reasons, direct assessments of valuation measures and market 10 sentiment toward utility securities support the credit rating agencies' findings, as 11 quoted above, that the utility industry is largely regarded as a low-risk investment. All 12 of this supports my finding that utilities' market cost of equity is very low in today's 13 very low-cost capital market environment.

14

Q DID MR. COYNE ALSO OPINE THAT MARKET VOLATILITY HAS INCREASED, WHICH HAS CAUSED AN INCREASE IN COST OF EQUITY FOR FPL AND OTHER UTILITY COMPANIES?

A Yes. Mr. Coyne also talks about increased volatility as measured by the CBOE
 Implied Volatility Index ("VIX"). Mr. Coyne states that the VIX index, which generally
 tracks broader market equity security values, indicates volatility levels not seen since
 the Great Recession in 2008/2009 in the index.⁷¹

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⁷¹ Coyne Direct Testimony at 16.

1QIS THE VIX INDEX ADEQUATE TO SUPPORT THE NOTION THAT THE MARKET2PERCEPTION OF THE INVESTMENT RISK OF FPL OR UTILITIES GENERALLY3IS INCREASING?

A No. The VIX is a broader-based market index of stock price volatility, and not that of
subgroups within the market generally, and certainly not applicable to the utility
subsector. Utility securities are generally regarded as low-risk investments, and the
market generally flocks to low-risk sectors during periods of broader economic
distress. The VIX index may indicate greater risk in the overall market but that does
not indicate a similar change in investment risk for lower-risk regulated utility
companies.

Further, the VIX measures investors' expectations of market volatility over the next 30 days and can change significantly over a short period of time. As Mr. Coyne correctly observes recently it has declined. In fact, as of June 7, 2021 the VIX level closed at 16.42, which is very comparable to the levels observed prior to the COVID-19 pandemic. These drastic fluctuations of the VIX index emphasize the fact that the index should not be used to measure investors' perception of utility operating risk.

17

18 Q DO YOU HAVE ANY COMMENTS CONCERNING MR. COYNE'S CONTENTION
 19 THAT RELYING ON PROJECTED MARKET DATA IS CURRENTLY VERY
 20 IMPORTANT?

A Yes. Mr. Coyne develops his CAPM and risk premium studies mainly relying on nearterm and long-term projected interest rates. Mr. Coyne's primary reliance on forecasted Treasury bond yields is unreasonable because he is not considering the highly likely outcome that current observable interest rates will prevail during the period in which rates determined in this proceeding will be in effect. This is important because, while current observable interest rates are actual market data that provides
 a measure of the current cost of capital, the accuracy of forecasted interest rates is
 highly problematic.

4

5 Q WHY DO YOU BELIEVE THAT THE ACCURACY OF FORECASTED INTEREST 6 RATES IS HIGHLY PROBLEMATIC?

A Over the last several years, observable current interest rates have been a more
accurate predictor of future interest rates than economists' consensus projections.
9 Exhibit MPG-25 illustrates this point. Specifically, on Exhibit MPG-25, under Columns
10 1 and 2, I show the actual market yield for Treasury bonds at the time a projection is
made, and the corresponding projection for Treasury bond yields two years in the
future, respectively.

As shown in Columns 1 and 2 of Exhibit MPG-25, over the last several years, Treasury yields were projected to increase relative to the actual Treasury yields at the time of the projection. In Column 4, I show the actual Treasury yield two years after the forecast. In Column 5, I show the actual yield change at the time of the projections relative to the projected yield change.

As shown in Exhibit MPG-25, economists have consistently projected that interest rates will increase over the near term. However, as shown in Column 5, those yield projections turned out to be overstated in almost every case. Indeed, actual Treasury yields have decreased or remained flat over the last several years rather than increasing as the economists' projections indicated. As such, current observable interest rates are just as likely to accurately predict future interest rates as are economists' projections.

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1	Q	DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?
2	А	Yes, it does.
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1		Qualifications of Michael P. Gorman
2	Q	PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.
3	А	Michael P. Gorman. My business address is 16690 Swingley Ridge Road,
4		Suite 140, Chesterfield, MO 63017.
5		
6	Q	PLEASE STATE YOUR OCCUPATION.
7	А	I am a consultant in the field of public utility regulation and a Managing Principal with
8		the firm of Brubaker & Associates, Inc. ("BAI"), energy, economic and regulatory
9		consultants.
10		
11	Q	PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND WORK
12		EXPERIENCE.
13	А	In 1983 I received a Bachelor of Science Degree in Electrical Engineering from
14		Southern Illinois University, and in 1986, I received a Master's Degree in Business
15		Administration with a concentration in Finance from the University of Illinois at
16		Springfield. I have also completed several graduate level economics courses.
17		In August of 1983, I accepted an analyst position with the Illinois Commerce
18		Commission ("ICC"). In this position, I performed a variety of analyses for both
19		formal and informal investigations before the ICC, including: marginal cost of
20		energy, central dispatch, avoided cost of energy, annual system production costs,
21		and working capital. In October of 1986, I was promoted to the position of Senior
22		Analyst. In this position, I assumed the additional responsibilities of technical leader
23		on projects, and my areas of responsibility were expanded to include utility financial
24		modeling and financial analyses.

BRUBAKER & ASSOCIATES, INC.

In 1987, I was promoted to Director of the Financial Analysis Department. In
this position, I was responsible for all financial analyses conducted by the Staff.
Among other things, I conducted analyses and sponsored testimony before the ICC
on rate of return, financial integrity, financial modeling and related issues. I also
supervised the development of all Staff analyses and testimony on these same
issues. In addition, I supervised the Staff's review and recommendations to the
Commission concerning utility plans to issue debt and equity securities.

8 In August of 1989, I accepted a position with Merrill-Lynch as a financial 9 consultant. After receiving all required securities licenses, I worked with individual 10 investors and small businesses in evaluating and selecting investments suitable to 11 their requirements.

12 In September of 1990, I accepted a position with Drazen-Brubaker & Associates, Inc. ("DBA"). In April 1995, the firm of Brubaker & Associates, Inc. was 13 14 formed. It includes most of the former DBA principals and Staff. Since 1990, I have 15 performed various analyses and sponsored testimony on cost of capital, 16 cost/benefits of utility mergers and acquisitions, utility reorganizations, level of 17 operating expenses and rate base, cost of service studies, and analyses relating to 18 industrial jobs and economic development. I also participated in a study used to 19 revise the financial policy for the municipal utility in Kansas City, Kansas.

At BAI, I also have extensive experience working with large energy users to distribute and critically evaluate responses to requests for proposals ("RFPs") for electric, steam, and gas energy supply from competitive energy suppliers. These analyses include the evaluation of gas supply and delivery charges, cogeneration and/or combined cycle unit feasibility studies, and the evaluation of third-party asset/supply management agreements. I have participated in rate cases on rate design and class cost of service for electric, natural gas, water and wastewater
 utilities. I have also analyzed commodity pricing indices and forward pricing methods
 for third party supply agreements, and have also conducted regional electric market
 price forecasts.

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In addition to our main office in St. Louis, the firm also has branch offices in Phoenix, Arizona and Corpus Christi, Texas.

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Q HAVE YOU EVER TESTIFIED BEFORE A REGULATORY BODY?

9 А Yes. I have sponsored testimony on cost of capital, revenue requirements, cost of 10 service and other issues before the Federal Energy Regulatory Commission and 11 numerous state regulatory commissions including: Alaska, Arkansas, Arizona, 12 California, Colorado, Delaware, the District of Columbia, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Massachusetts, 13 14 Michigan, Minnesota, Mississippi, Missouri, Montana, Nevada, New Hampshire, New 15 Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, 16 Oregon, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, 17 Washington, West Virginia, Wisconsin, Wyoming, and before the provincial regulatory boards in Alberta, Nova Scotia, and Quebec, Canada. I have also 18 19 sponsored testimony before the Board of Public Utilities in Kansas City, Kansas; 20 presented rate setting position reports to the regulatory board of the municipal utility 21 in Austin, Texas, and Salt River Project, Arizona, on behalf of industrial customers; 22 and negotiated rate disputes for industrial customers of the Municipal Electric 23 Authority of Georgia in the LaGrange, Georgia district.

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1QPLEASEDESCRIBEANYPROFESSIONALREGISTRATIONSOR2ORGANIZATIONS TO WHICH YOU BELONG.

A I earned the designation of Chartered Financial Analyst ("CFA") from the CFA
Institute. The CFA charter was awarded after successfully completing three
examinations which covered the subject areas of financial accounting, economics,
fixed income and equity valuation and professional and ethical conduct. I am a
member of the CFA Institute's Financial Analyst Society.

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BEFORE THE

FLORIDA PUBLIC SERVICE COMMISSION

IN RE: PETITION FOR RATE INCREASE BY FLORIDA POWER & LIGHT COMPANY

DOCKET NO. 20210015-EI

STATE OF MISSOURI

SS

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COUNTY OF ST. LOUIS

Affidavit of Michael P. Gorman

Michael P. Gorman, being first duly sworn, on his oath states:

1. My name is Michael P. Gorman. I am a consultant with Brubaker & Associates, Inc., having its principal place of business at 16690 Swingley Ridge Road, Suite 140, Chesterfield, Missouri 63017. We have been retained by the Federal Executive Agencies in this proceeding on their behalf.

2. Attached hereto and made a part hereof for all purposes are my direct testimony and exhibits which were prepared in written form for introduction into evidence in the Florida Public Service Commission Docket No. 20210015-EI.

3. I hereby swear and affirm that the testimony and exhibits are true and correct and that they show the matters and things that they purport to show.

econ

Michael P. Gorman

Subscribed and sworn to before me this 21st day of June, 2021.

SALLY D. WILHELMS Notary Public - Notary Seal STATE OF MISSOURI St. Louis County My Commission Expires: Aug. 5, 2024 Commission # 20078050

O Wilhelms

Rate of Return (December 31, 2022)

<u>Line</u>	Description	Amount <u>(\$ 000)</u> (1)	<u>Weight</u> (2)	<u>Cost</u> (3)	Weighted <u>Cost</u> (4)
1	Long-Term Debt	\$ 20,147,178	36.30%	3.61%	1.31%
2	Short-Term Debt	\$ 654,984	1.18%	0.94%	0.01%
3	Common Equity	\$ 23,933,670	43.12%	9.40%	4.05%
4	Customer Deposits	\$ 455,339	0.82%	2.03%	0.02%
5	Deferred Income Tax	\$ 5,894,990	10.62%	0.00%	0.00%
6	FAS 109 DIT	\$ 3,372,609	6.08%	0.00%	0.00%
7	Investment Tax Credit	<u>\$ 1,049,226</u>	<u>1.89%</u>	6.67%	<u>0.13%</u>
8	Total	\$ 55,507,996	100.00%		5.52%

	Investors Capital				
9	Long-Term Debt	\$ 20,147,178	45.04%	3.61%	1.62%
10	Short-Term Debt	\$ 654,984	1.46%	0.94%	0.01%
11	Common Equity	<u>\$ 23,933,670</u>	<u>53.50%</u>	9.40%	<u>5.03%</u>
12	Total	\$ 44,735,833	100.00%		6.67%

Source: Schedule D-1a (with RSAM).

Rate of Return (December 31, 2023)

<u>Line</u>	Description		Amount <u>(\$ 000)</u> (1)	<u>Weight</u> (2)	<u>Cost</u> (3)	Weighted <u>Cost</u> (4)
1	Long-Term Debt	\$ 2	21,678,443	36.37%	3.68%	1.34%
2	Short-Term Debt	\$	751,215	1.26%	0.97%	0.01%
3	Common Equity	\$ 2	25,806,166	43.30%	9.40%	4.07%
4	Customer Deposits	\$	490,827	0.82%	2.04%	0.02%
5	Deferred Income Tax	\$	6,266,839	10.51%	0.00%	0.00%
6	FAS 109 DIT	\$	3,402,881	5.71%	0.00%	0.00%
7	Investment Tax Credit	\$	1,208,920	<u>2.03%</u>	6.70%	<u>0.14%</u>
8	Total	\$	59,605,291	100.00%		5.58%

	Investors Capital					
9	Long-Term Debt	\$ 2	1,678,443	44.94%	3.68%	1.65%
10	Short-Term Debt	\$	751,215	1.56%	0.97%	0.02%
11	Common Equity	<u>\$ 2</u>	5,806,166	<u>53.50%</u>	9.40%	<u>5.03%</u>
12	Total	\$4	8,235,824	100.00%		6.70%

Source: Schedule D-1a (with RSAM).

JEA SPECIAL BOARD MEETING AGENDA

June 26, 2020 • 8:00 a.m.



WebEx **No physical location will be provided for this meeting.**

1.	WE	COME								
	Α.	Call to Order – Board Chair								
	В.	Time of Reflection								
	C.	Adoption of the Agenda – Action								
	D.	Sunshine Law/Public Records Statement – Jody Brooks, Office of	of General Counsel							
п.	COMMENTS / PRESENTATIONS									
	Iten	n(s)	Speaker/Title							
	Α.	A. Comments from the Public Public								
	В.	Council Liaison's Comments Council Member Danny Becton								
	EOP									
	FUR	BOARD CONSIDERATION		1						
	Iten	n(s)	Speaker/Title	Discussion Action/Information						
	Α.	JEA/FPL Cooperation Agreement and Term Sheets – Plant Scherer	Joe Orfano, Treasurer	Action						
IV.	OTH	IER BUSINESS								
	Iten	n(s)								
	Α.	Announcement – Next Board Meeting July 28, 2020								
	В.	Adjournment								

Board Calendar

Board Meetings: 9:00 a.m. - Fourth Tuesday of Every Month (exception(s): November 17, 2020 and December 15, 2020

Committees: Finance & Audit Committee: August 17, 2020

Other Committee Meetings TBD

Florida's Government in the Sunshine Law Office of General Counsel

This meeting is subject to Florida's Government in the Sunshine Law, §286.011, Florida Statutes, and shall be open to the public at all times.



INTER-OFFICE MEMORANDUM

June 26, 2020

SUBJECT: JEA/FPL COOPERATION AGREEMENT AND TERM SHEETS – PLANT SCHERER

FROM:	Paul McElroy, Interim Managing Director/CEO
то:	JEA Board of Directors

BACKGROUND:

JEA Staff and Florida Power & Light Company ("FPL") have agreed to close the jointly owned Robert W. Scherer Unit 4 (Scherer) coal-fired electric generating station, located in Macon, Georgia. Closing the Scherer and replacing the capacity and energy with a Power Purchase Agreement utilizing natural gasfired combined cycle power provides financial, environmental and operational benefits to JEA and FPL. While this agreement calls for Scherer to discontinue operations, JEA will continue to own Scherer until the full plant is decommissioned.

DISCUSSION:

JEA has held an ownership interest in Scherer since its opening in 1989. JEA holds a 23.64 percent ownership position (approximately 198 MW), while FPL owns the remaining 76.36 percent. The Robert W. Scherer Generating Facility is operated by Georgia Power. Owners of the other three Scherer units are Georgia Power, Municipal Electric Authority of Georgia, Oglethorpe Power, Gulf Power (now owned by NextEra, FPL's parent company) and the City of Dalton. While the Scherer units have long been low-cost generating units, changes in the natural gas market now make Scherer the highest cost dispatch unit in JEA's fleet. Closing Scherer Unit 4 at this time provides benefits to JEA in several key areas, described below:

Financial

Comparing current and projected market pricing for natural gas combined cycle electric generation to current and projected Scherer Unit 4 operating costs, results in saving approximately \$10/MWh or a cost reduction of approximately 33%. Assuming a plant closure and executing a replacement capacity and energy, 20 year slice-of-system Power Purchase Agreement with FPL, as well as the ongoing future contract and decommissioning costs for Scherer Unit 4, the proposed transaction generates approximately \$191 million in NPV savings. In consideration of jointly closing Scherer Unit 4, FPL has offered a cooperation agreement, including some compensation for remaining Scherer future costs. The natural gas price for the initial ten years of the PPA will be fixed, with the option to switch to solar for the last ten years.

Environmental

The transaction will have environmental benefits, primarily a reduction of approximately 1.3 million tons/year of carbon dioxide emissions for the replacement power from combined cycle gas plants compared to the carbon dioxide emissions from Scherer. Currently the Robert W. Scherer Generating Facility is the largest Greenhouse Gas emitter in the country.

Additionally, JEA will avoid the cost of some future environmental upgrades associated with Scherer, currently estimated to be approximately \$8.2 million for Effluent Limitations Guidelines compliance. JEA will remain liable for some other environmental costs, particularly those associated with Ash Pond

Page 2

compliance, currently estimated as \$30.2 million between 2021 and 2029, and \$19.2 million between 2030 and 2066.

Operational

The Scherer capacity and energy will be replaced with a "slice of system" product (power purchase agreement). The benefits of this product include:

- There is no outage schedule on a system product, compared to biannual extended (30 day+) outage on Scherer Unit 4.
- While closing Scherer increases the portion of energy derived from combined cycle gas plants from 34 percent to 44 percent (projected 2029 values), it diversifies generation by establishing a firm supply from the south (currently all generation is either native or from Georgia).
- No restrictions/must-run conditions on taking energy (e.g., currently, if either Scherer co-owner elects to operate the unit, the other owner must take at least their share of the minimum load.)
- The natural gas supply to FPL's combined cycle fleet is primarily through the Sabal Trail pipeline. JEA does not currently receive natural gas through this pipeline, so the transaction allows for diversification of natural gas supply.
- The natural gas price for the initial ten years of the PPA will be fixed, with the option to switch to solar for the last ten years.
- JEA maintains transmission rights at FL/GA interconnection, allowing for more access to spot purchases from Georgia.

FINANCIAL IMPACT:

The proposed agreement would result in over \$191 million in NPV savings to JEA over the 20-year term of the Power Purchase Agreement. JEA will still own 23.64 percent of Scherer Unit 4, unchanged from its current ownership percentage. JEA will still be responsible for obligations under the co-owners agreement – these payments are included in the calculation of the NPV savings generated.

RECOMMENDATION:

That the Board of Directors authorize the Interim Managing Director/CEO to execute the Cooperation Agreement with FPL as outlined in the attached documents in their substantial form. This Cooperation Agreement calls for the closure of Scherer Unit 4 on January 1, 2022, with capacity and energy replaced by a Power Purchase Agreement with FPL.

Paul McElroy, Interim Managing Director/CEO

PEM/BJR/JEO

Attachments: Draft Cooperation Agreement with FPL Draft Term Sheets with FPL and NextEra Energy Marketing, LLC Resolution regarding the Cooperation Agreement with FPL concerning Scherer Unit 4

A RESOLUTION TO DELEGATE AUTHORITY TO EXECUTE THE COOPERATION AGREEMENT AND REPLACEMENT POWER PURCHASE AGREEMENT WITH FLORIDA POWER AND LIGHT COMPANY FOR THE PROPOSED RETIREMENT OF PLANT ROBERT W. SCHERER UNIT NO. 4 TO THE INTERIM MANAGING DIRECTOR/CEO IN ACCORDANCE WITH JEA CHARTER SECTION 21.10

WHEREAS, after consideration by JEA, staff has recommended JEA enter into a Cooperation Agreement with Florida Power and Light Company ("FPL") in substantially the same form as the attached draft agreement that is attached hereto as <u>Exhibit A</u>; and

WHEREAS, Cooperation Agreement calls for the closure of Plant Robert W. Scherer Unit No. 4 ("Scherer") on January 1, 2022, with the capacity and energy replaced by a Purchase Agreement ("PPA") that JEA will enter into with FPL; and

WHEREAS, the JEA Charter, Section 21.10, provides that the JEA Board may delegate the authority to an officer, agent or employee of JEA by resolution to execute agreements.

BE IT RESOLVED by the JEA Board of Directors that:

1. JEA shall enter into the Cooperation Agreement with FPL for the closure of the jointly owned Scherer coal-fired electric generating station, located in Macon, Georgia, and a PPA with FPL for the replacement of the capacity and energy from combined cycle gas plants.

2. The Board hereby delegates to the Interim Managing Director/CEO the authority to execute the Cooperation Agreement, the PPA, and all other transactional documents required for the closure of Scherer.

Dated this _____ day of June, 2020.

JEA

By: _____

John D. Baker, II, Chair

Attest:

Marty Lanahan, Secretary

Approved as to form:

Jody L. Brooks, Chief Legal Counsel

EXHIBIT "A" to JEA Resolution 2020-06

COOPERATION AGREEMENT

by and between

FLORIDA POWER & LIGHT COMPANY

and

JEA

Dated as of June [], 2020

COOPERATION AGREEMENT

This **COOPERATION AGREEMENT** is made as of June [__], 2020 (this "<u>Agreement</u>"), by and between Florida Power & Light Company, a corporation organized and existing under the laws of the State of Florida ("<u>FPL</u>"), and JEA, a body politic and an independent agency of the City of Jacksonville, Florida, organized and existing under the laws of the State of Florida ("<u>JEA</u>"). Each of FPL and JEA shall be referred to herein as a "<u>Party</u>" and together as the "<u>Parties</u>."

WITNESSETH:

WHEREAS, FPL and JEA are party to that certain Plant Robert Scherer Unit Number Four Amended and Restated Purchase and Ownership Participation Agreement among Georgia Power Company ("GPC"), FPL and JEA (f/k/a Jacksonville Electric Authority), dated as of December 31, 1990 (the "<u>Ownership Agreement</u>"); and

WHEREAS, pursuant to the Ownership Agreement, the Parties jointly own Plant Robert W. Scherer Unit No. 4 ("<u>Unit No. 4</u>") an [850 MW coal fired generating unit] with FPL owning a 76.36 a seventy-six and thirty-six one-hundredths percent (76.36%) undivided interest and JEA owning a twenty-four and sixty-four one-hundredths percent (23.64%) undivided interest; and

WHEREAS, FPL owns a thirty-eight and eighteen one-hundredths percent (38.18%) undivided interest in the "<u>Additional Unit Common Facilities</u>" (as defined in the Ownership Agreement), and JEA owns a twelve and thirty-two one-hundredths percent (12.32%) undivided interest in the Additional Unit Common Facilities; and

WHEREAS, FPL owns a nineteen and nine one-hundredths percent (19.09%) undivided interest in the "<u>Plant Scherer Common Facilities</u>" (as defined in the Ownership Agreement), and JEA owns a six and sixteen one-hundredths percent (6.16%) undivided interest in the Additional Unit Common Facilities; and

WHEREAS, each of FPL and JEA have its own "<u>Separate Coal Stockpile</u>" (as defined in the Ownership Agreement); and

WHEREAS, each of FPL and JEA own a portion of the Plant Scherer materials and spares inventory the "<u>M&S Inventory</u>"; and

WHEREAS, to finance its ownership of Unit No. 4, JEA issued and sold revenue bonds (the "<u>Bonds</u>") pursuant to that certain Restated and Amended Bulk Power Supply System Revenue Bond Resolution Adopted November 18, 2008 as amended through March 26, 2014 (the "<u>Bond Resolution</u>"), and

WHEREAS, the Parties now agree that it is in the best interest of their customers to explore the retirement Unit No. 4, to cease their use of the Additional Unit Common Facilities and Plant Scherer Common Facilities. ("<u>Proposed Retirement</u>").

NOW THEREFORE, in consideration of the mutual covenants and agreements set forth in this Agreement, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, and intending to be legally bound, the Parties hereto agree as follows:

Article I PROPOSED RETIREMENT

1.01 Proposed Transaction.

(a) The Parties shall cooperate, in good faith, in a joint effort to consummate the Proposed Retirement.

Article II NO REQUIREMENT TO TRANSACT

2.01 Unless and until a definitive agreement regarding the Proposed Retirement has been executed, neither Party will be under any legal obligation whatsoever with respect to the any Proposed Retirement by virtue of this Agreement except for the matters specifically agreed to in herein.

2.02 Each Party reserves the right, in its sole discretion, to reject any and all proposals made by the other with regard to the Proposed Retirement and to terminate discussions and negotiations with the other Party at any time.

Article III COVENANTS OF THE PARTIES

3.01 <u>Joint Pre-Retirement Obligations</u>. In order to facilitate the Proposed Retirement, each Party covenants that it shall:

(a) provide reasonable access to information with respect to its portion of the Undivided Interests, as requested by the other Party;

(b) participate in good faith negotiations of any documentation required to effectuate the Proposed Retirement;

(c) cooperate, as reasonably requested by the other Party, in any governmental proceedings associated with the Proposed Retirement

3.02 <u>Joint Post-Retirement Obligations</u>. Each Party covenants that following consummation of the Proposed Retirement it shall:

(a) continue to make any payments required of it pursuant to the Ownership Agreement; and

(b) [cooperate in the coordination of activities related to minimizing Post-Retirement costs related to the Parties' continued ownership].

Article IV TRANSACTION SUPPORT

4.01 <u>Consummation Payment</u>. Concurrent with the consummation of the Proposed Retirement and the satisfaction of the condition set forth in Section 5.02, FPL shall pay an aggregate amount equal to [**AMOUNT**] Dollars (**\$**[**AMOUNT**]) (such amount, the "<u>Consummation Payment</u>"), which shall be used by JEA in its discretion to pay for JEA's costs in completing the retirement of Unit No. 4, including, but not limited to the defeasance the outstanding Bonds.

4.02 <u>Replacement Power</u>. In order to provide JEA with energy and capacity to replace the energy and capacity it had been receiving from Unit No. 4, Concurrent with the delivery of the Consummation Payment, JEA and FPL shall execute a power purchase agreement materially on the terms set forth in Exhibit A hereto.

Article V REPRESENTATIONS AND WARRANTIES OF JEA

JEA hereby represents and warrants to FPL as follows as of the date hereof, the Shutdown Date and the Closing Date:

5.01 <u>Legal Existence; Power</u>. JEA is a body politic and an independent agency of the City of Jacksonville, Florida, organized and existing and in good standing under the laws of the State of Florida. JEA has all requisite right, power and authority and full legal capacity to execute and deliver this Agreement and to perform its obligations hereunder, including the consummation of the transactions contemplated hereby.

5.02 <u>Authority</u>. The execution and delivery by JEA of this Agreement, the performance by JEA of its obligations under this Agreement and the consummation by JEA of the transactions contemplated hereby have been duly and validly authorized by all necessary action of JEA, including by JEA's Board of Directors. This Agreement has been duly and validly executed and delivered by JEA and (assuming the due authorization, execution and delivery thereof by FPL) constitutes the legal, valid and binding obligation of JEA enforceable against JEA in accordance with its terms (except as such enforceability may be limited by bankruptcy, insolvency, fraudulent transfer, reorganization, moratorium or other similar Laws of general applicability related to or affecting creditors' rights, and to general equitable principles, including specific performance and injunctive and other forms of equitable relief).

5.03 <u>No Conflicts</u>. The execution and delivery by JEA of this Agreement, the performance by JEA of its obligations under this Agreement and the consummation by JEA of the transactions contemplated hereby do not and will not (with or without notice or lapse of time, or both): (a) conflict with or result in a violation or breach of any of the terms, conditions or provisions of the bylaws, or other organizational or governing documents, of JEA, (b) conflict with or result in a violation or breach of any term or provision of any Law or Order applicable to JEA, or (c) conflict with the Bond resolution or any covenant found therein.

5.04 <u>Compliance with Laws</u>. JEA is not in violation of or in default under any Law or Order applicable to JEA, the effect of which, in the aggregate, would prevent or materially impair or delay JEA from performing its obligations hereunder.

5.05 <u>Bankruptcy</u>. There are no bankruptcy, reorganization, or arrangement proceedings pending against, being contemplated by, or to the knowledge of JEA, threatened against JEA.

Article VI

REPRESENTATIONS AND WARRANTIES OF FPL

FPL hereby represents and warrants to JEA as follows as of the date hereof, the Shutdown Date and the Closing Date:

6.01 <u>Legal Existence; Power</u>. FPL is a corporation duly formed, validly existing and in good standing under the Laws of the State of Florida. FPL has all requisite right, power and authority and full legal capacity to execute and deliver this Agreement and to perform its obligations hereunder, including the consummation of the transactions contemplated hereby.

6.02 <u>Authority</u>. The execution and delivery by FPL of this Agreement, the performance by FPL of its obligations under this Agreement and the consummation by FPL of the transactions contemplated hereby have been duly and validly authorized by all necessary action of FPL. This Agreement has been duly and validly executed and delivered by FPL and (assuming the due authorization, execution and delivery thereof by JEA) constitutes the legal, valid and binding obligation of FPL enforceable against FPL in accordance with its terms (except as such enforceability may be limited by bankruptcy, insolvency, fraudulent transfer, reorganization, moratorium or other similar Laws of general applicability related to or affecting creditors' rights, and to general equitable principles, including specific performance and injunctive and other forms of equitable relief).

6.03 <u>No Conflicts</u>. The execution and delivery by FPL of this Agreement, the performance by FPL of its obligations under this Agreement and the consummation by FPL of the transactions contemplated hereby do not and will not (with or without notice or lapse of time, or both): (a) conflict with or result in a violation or breach of any of the terms, conditions or provisions of the bylaws, or other organizational or governing documents, of FPL and (b) conflict with or result in a violation or breach of any term or provision of any Law or Order applicable to FPL.

6.04 <u>Compliance with Laws</u>. FPL is not in violation of or in default under any Law or Order applicable to FPL, the effect of which, in the aggregate, would prevent or materially impair or delay FPL from performing its obligations hereunder.

6.05 <u>Bankruptcy</u>. There are no bankruptcy, reorganization, or arrangement proceedings pending against, being contemplated by, or to the knowledge of FPL, threatened against, FPL.

Article VII TERMINATION

7.01 <u>Termination</u>. This Agreement may be terminated, and the potential transactions contemplated hereby may be abandoned, by mutual written consent of FPL and JEA, or at any time by written notice from either Party to the other Party.

Article VIII MISCELLANEOUS

8.01 <u>Entire Agreement</u>. This Agreement (together with the Ancillary Agreements) supersedes all prior discussions and agreements between the Parties with respect to the subject matter hereof, and contains the sole and entire agreement between the Parties hereto with respect to the subject matter hereof.

Confidentiality. Each Party shall hold, and shall use all commercially 8.02 reasonable efforts to cause its Affiliates and Representatives to hold, in strict confidence, all documents and information concerning the other Party or any of its Affiliates furnished to it by the other Party or such other Party's Affiliates or Representatives in connection with this Agreement or the potential transactions contemplated hereby, provided, that nothing in this Section 8.02 shall limit the disclosure by any Party of any documents or information (a) to its Affiliates and Representatives to the extent reasonably necessary or advisable in connection with the consummation of the transactions contemplated hereby, (b) to the extent required by Law or Order, including but not limited to Florida Sunshine Laws, (c) to the extent reasonably necessary in an Action or Proceeding brought by a Party in pursuit of its rights or in the exercise of its remedies under this Agreement or the transactions contemplated hereby, (d) to the extent that such documents or information can be shown to have come within the public domain, other than in connection with any required submission seeking any Governmental or Regulatory Approval that is filed as confidential (including any redacted information), through no action or omission of the disclosing Party or its Affiliates or Representatives, and (e) later acquired by the receiving Party from another source if the receiving Party is not aware that such source is under an obligation to keep such documents and information confidential. Notwithstanding anything contained herein, this Section 8.02 shall remain in full force and effect following the execution of this Agreement and shall survive any termination of this Agreement in accordance with its terms. Notwithstanding the foregoing, FPL acknowledges that meetings of JEA's Board of Directors are duly noticed public meetings and that JEA will provide this Agreement and the Ancillary Agreements to its Board of Directors in connection with such public setting.

8.03 <u>Public Announcements</u>. Except as may be required by Florida Sunshine Laws, so long as this Agreement is in effect, neither Party shall, and shall use all reasonable best efforts to cause their respective Representatives not to, issue or make any reports, statements, comments whether in response to any inquiry or otherwise, or releases to the public or generally to the employees with respect to this Agreement or the transactions contemplated hereby without the consent of the other, such consent not to be unreasonably withheld, conditioned or delayed. FPL acknowledges that JEA is subject to Florida

Sunshine Laws, and as such, meetings of its Board of Directors are duly noticed public meetings, and such discussion are exempt from this clause.

8.04 <u>No Waiver</u>. Any term or condition of this Agreement may be waived at any time by the Party that is entitled to the benefit thereof, but no such waiver shall be effective unless set forth in a written instrument duly executed by or on behalf of the Party waiving such term or condition. No waiver by any Party of any term or condition of this Agreement, in any one or more instances, shall be deemed to be or construed as a waiver of the same or any other term or condition of this Agreement on any future occasion.

8.05 <u>Amendments</u>. Any provision of this Agreement may be modified, supplemented or waived only by an instrument in writing duly executed by FPL and JEA. Any such modification, supplement or waiver shall be for such period and subject to such conditions as shall be specified in the instrument effecting the same and shall be binding upon each of FPL and JEA, and any such waiver shall be effective only in the specific instance and for the purposes for which given.

8.06 <u>Addresses for Notices</u>. All notices and other communications required or permitted to be given or made under this Agreement shall be given or made in writing, by physical (including by certified mail, return receipt requested or courier) or facsimile or electronic mail delivery to the address specified below or such other address as shall be designated in a notice in writing. Notices will be effective upon receipt.

If to JEA:

JEA

21 West Church Street (T-16) Jacksonville, Florida 32202 Attn:

and with a copy to (which shall not constitute notice):

If to FPL:

Florida Power & Light Company 700 Universe Boulevard Juno Beach, FL 33408-0420 Attn: Vice President, Energy Marketing and Trading

with a copy to:

Florida Power & Light Company 700 Universe Boulevard Juno Beach, FL 33408-0420 Attn: General Counsel 8.07 <u>Captions</u>. The captions and section headings appearing in this Agreement are included solely for convenience of reference and shall not affect the interpretation of any provision of this Agreement.

8.08 <u>Severability</u>. Whenever possible, each provision of this Agreement shall be interpreted in such manner as to be effective and valid under applicable Law while giving effect to the original intent of the Parties hereto. Any provision or part of any provision of this Agreement that is deemed prohibited or unenforceable by a court of competent jurisdiction shall be ineffective only to the extent of such prohibition or unenforceability without invalidating the remaining provisions of this Agreement, and any such prohibition or unenforceability of any portion of a provision shall not invalidate or render unenforceable the remainder of such provision (in each case so long as the economic or legal substance of the transactions contemplated hereby is not affected in any manner materially adverse to any Party). Upon such determination that any provision or part of any provision is prohibited or unenforceable, the Parties shall negotiate in good faith to modify this Agreement so as to effect the original intent of the Parties as closely as possible in a mutually acceptable manner in order that the transactions contemplated hereby be consummated as originally contemplated to the greatest extent possible.

8.09 <u>Assignment</u>. This Agreement shall be binding upon and inure to the benefit of the Parties and their respective successors and permitted assigns. This Agreement or any of the rights, interests or obligations of the Parties under this Agreement are not assignable (by contract, operation of Law or otherwise) without the prior written consent of the other Party, which such Party may withhold in its discretion, and any attempted assignment, without such consent, shall be null and void.

8.10 <u>No Third-Party Beneficiary</u>. The terms and provisions of this Agreement are intended solely for the benefit of each Party hereto and their respective successors or permitted assigns, and nothing in this Agreement, express or implied, is intended to or shall confer upon any other Person any right, benefit or remedy of any nature whatsoever under or by reason of this Agreement.

8.11 <u>Counterparts</u>. This Agreement may be executed in any number of counterparts, including by facsimile or other electronic transmission, each of which shall be an original with the same effect as if the signatures thereto and hereto were upon the same instrument and all of which taken together shall constitute one and the same instrument and any of the Parties to this Agreement may execute this Agreement by signing any such counterpart.

8.12 <u>Governing Law</u>. This Agreement shall be governed by, and construed in accordance with, the Laws of the State of Florida applicable to a contract executed and performed in such State, without giving effect to any choice of law or conflict of law rules or principles thereof that would require the application of the rules of another jurisdiction.

8.13 <u>Consent to Jurisdiction</u>.

(a) For all purposes of this Agreement, and for all purposes of any Action or Proceeding arising out of or relating to the transactions contemplated hereby or for recognition or enforcement of any judgment, each Party hereto submits to the personal jurisdiction of the courts of the State of Florida sitting in Duval County and the United States District Court for the Middle District of the State of Florida, and hereby irrevocably and unconditionally agrees that any such Action or Proceeding may be heard and determined in such Florida court or, to the extent permitted by law, in such federal court. Each Party hereto agrees that a final judgment in any such Action or Proceeding may be enforced in any other jurisdiction by suit on the judgment or in any other manner provided by Law.

(b) Each Party hereto irrevocably and unconditionally waives, to the fullest extent it may legally and effectively do so:

(i) any objection which it may now or hereafter have to the laying of venue of any Action or Proceeding arising out of or relating to this Agreement or any related matter in any Florida state court located in Duval County or the United States District Court for the Middle District of the State of Florida; and

(ii) the defense of an inconvenient forum to the maintenance of such Action or Proceeding in any such court.

(c) Each Party hereto irrevocably consents to service of process by registered mail, return receipt requested, as provided in <u>Section 14.07</u>. Nothing in this Agreement will affect the right of any Party hereto to serve process in any other manner permitted by Law.

8.14 <u>Waiver of Jury Trial</u>. TO THE FULLEST EXTENT PERMITTED BY LAW, EACH PARTY HEREBY WAIVES ALL RIGHTS TO A TRIAL BY JURY IN ANY ACTION OR PROCEEDING TO ENFORCE OR INTERPRET THE PROVISIONS OF THIS AGREEMENT OR THAT OTHERWISE RELATES TO OR ARISES OUT OF THIS AGREEMENT OR ANY OF THE TRANSACTIONS CONTEMPLATED HEREBY OR THE ACTIONS OF THE PARTIES IN THE NEGOTIATION, ADMINISTRATION, PERFORMANCE OR ENFORCEMENT HEREOF OR THEREOF (WHETHER BASED ON CONTRACT, TORT OR OTHERWISE).

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IN WITNESS WHEREOF, this Agreement has been duly executed and delivered by the duly authorized officer of each Party hereto as of the date first above written.

JEA

By:

Name: Title:

FLORIDA POWER & LIGHT COMPANY

By:

Name:

Title:

Scherer Transaction - Financial Summary							
(NPV \$ in millions)							
20 Year Cost to Operate							
Debt Service	\$74.3						
0&M	\$146.5						
Capital	\$137.5						
Transmission	\$82.9						
Fuel Cost	\$567.5						
Ash Cost	\$37.1						
Decommissioning Cost	\$34.4						
Total Cost to Operate	\$1,080.1	\$1,080.1					
Cost of Replacement Power							
Power Purchase Agreement							
Capacity Charge	(\$228.3)						
Gas Charge	(\$406.4)						
Variable O&M	(\$24.1)						
Transmission	(\$124.2)						
Subtotal	(\$783.1)						
Ongoing/Deferred Ownership Costs							
Scherer Fixed	(\$59.7)						
Ash Cost	(\$36.3) (\$25.3)						
Decommissioning Cost	(\$35.7) (\$74.2)						
Debt Service	(\$74.3)						
Subtotal	(\$206.0)						
Total	(\$989.0)	(\$989.0)					
Net Transaction Value		¢01 1					
Conneration Agreement Consideration		\$100 0					
Total Transaction Value		<u>\$100.0</u> \$191.1					

=

Scherer Unit 4 Consummation Payment (\$000)

		13-Month Average							perating						
<u>Line</u>	Description	Re	egulatory <u>Asset</u> (1)	Acc <u>Am</u>	cumulated ortization (2)		Net <u>Asset</u> (3)	l <u>Ar</u>	ncome i <u>d Taxes</u> (4)	Am <u>E</u>	ortization <u>xpense</u> (5)	R <u>Rec</u>	evenue <u>luirement</u> (6)	<u>Ju</u>	FPSC risdiction (7)
1	2022 Pre-Tax F	Rate	of Return ¹						6.90%						
2	2022	\$	92,308	\$	(4,231)	\$	88,077	\$	6,077	\$	9,167	\$	15,244	\$	14,484
3	2023		100,000		(14,167)		85,833		5,923		10,000		15,923		15,129
4	2024		100,000		(24,167)		75,833		5,233		10,000		15,233		14,474
5	2025		100,000		(34,167)		65,833		4,543		10,000		14,543		13,818
6	2026		100,000		(44,167)		55,833		3,853		10,000		13,853		13,162
7	2027		100,000		(54,167)		45,833		3,163		10,000		13,163		12,507
8	2028		100,000		(64,167)		35,833		2,473		10,000		12,473		11,851
9	2029		100,000		(74,167)		25,833		1,783		10,000		11,783		11,195
10	2030		100,000		(84,167)		15,833		1,093		10,000		11,093		10,540
11	2031		100,000		(94,167)		5,833		403		10,000		10,403		9,884

Sources:

Exhibit LF-4 and workpaper Exh LF-4 Support 2022 & 2023 Proposed Company Adjustments.xlsx.

¹ Exhibit MPG-24, page 2.

Unrecovered Investment Summary

					Total		Total		
			Original	Book	Net Book	Removal	Unrecovered		
Line	Description	Utility	Cost	Reserve	Value	Cost	Costs		
		(1)	(2)	(3)	(4)	(5)	(6)		
		(-)	(-)	(-)	(-)	(-)	(-)		
	Base Rate Recovery								
	Production Plant								
1	Scherer Unit 4	FPL	\$ 718,994,863	\$ 387,289,494	\$ 331,705,369		\$ 331,705,369		
2	Martin Units 1 & 2	FPL	605,857,898	381,250,128	224,607,770		224,607,770		
3	Lauderdale Units 4 & 5	FPL	550,265,278	227,580,999	322,684,279		322,684,279		
4	Manatee Units 1 & 2	FPL	490,481,030	383,643,780	106,837,250		106,837,250		
5	Crist Coal Assets	Gulf	90,673,906	23,056,891	67,617,015		67,617,015		
6	Subtotal		\$2,456,272,974	\$1,402,821,292	\$1,053,451,682		\$1,053,451,682		
	Transmission Plant								
7	Scherer Unit 4	FPI	\$ 15462733	\$ 8 403 531	\$ 7,059,202		\$ 7,059,202		
8	Martin Units 1 & 2	FPI	φ 10,402,700 15 707 499	9 926 464	5 781 035		φ 7,000,202 5,781,035		
g	Lauderdale Units 4 & 5	FPI	12 053 014	7 378 465	4 674 550		4 674 550		
10	500 kV System (2022 Tranche)	FPI	18 173 267	17 364 041	809 226	111 465 350	112 274 576		
11	500 kV System (2022 Tranche)		93 836 140	72 036 580	21 799 561	70,000,000	91 799 560		
12	Subtotal	IFL	\$ 155,232,654	\$ 115,109,080	\$ 40,123,574	\$ 181,465,349	\$ 221,588,923		
13	Scherer Acquisition Adjustment	FPL	\$ 107,382,870	\$ 78,948,850	\$ 28,434,020		\$ 28,434,020		
14	Total Base Rate Recovery		\$2,718,888,498	\$1,596,879,222	\$1,122,009,276	\$ 181,465,349	\$1,303,474,626		
	Clause Recovery								
	Production Plant								
15	Scherer Unit /	FDI	\$ 500 232 312	\$ 126 005 052	\$ 463 326 360		\$ 463 326 360		
16	Martin Unite 1.8.2		φ J90,232,312 166 313 321	φ 120,903,932 21 700 735	φ 403,320,300 134,612,486		φ 403,320,300 134 612 486		
17	Laudardala Units 4.8.5		1 122 356	028 002	103,012,400		103,012,400		
10	Manataa Unita 1 8 2		202 825 516	78 104 727	124 640 780		124 640 780		
10	Criet Cool Acceste		508 552 557	204 005 124	394 547 122		304 547 129		
13		Guir	\$4,550,055,004	204,000,124	<u>534,547,452</u>		<u>534,347,432</u>		
20	i otal Clause Recovery		ə`ı,559,055,961	ə 441, <i>13</i> 5,440	ə1,117,320,521		\$1,117,320,521		
21	Total Abandoned Plant		\$4,277,944,459	\$2,038,614,662	\$2,239,329,798	\$ 181,465,349	\$2,420,795,147		

Source: Exhibit KF-4.

Capital Recovery Adjustment (\$000)

<u>Line</u>	Description	<u> </u>	<u>Amount</u> (1)
1	Base Rates Abandoned Plant Regulatory Asset ¹	\$ 1	1,303,475
	Estimated 2022 Revenue Requirement of Reg. Asset		
2	Company Proposed ²	\$	183,345
3	Levelized Recovery ³		159,339
4	Proposed Adjustment	\$	24,006
	Estimated 2023 Revenue Requirement of Reg. Asset		
5	Company Proposed ²	\$	197,317
6	Levelized Recovery ³		171,411
7	Proposed Adjustment	\$	25,907

Sources and Notes:

The impact of the Company's EADIT Adjustment is not included in the Capital Recovery revenue requirement estimates.

¹ Exhibit MPG-4.

² Exhibit MPG-5, page 2.

³ Exhibit MPG-5, page 3.

Capital Recovery Adjustment <u>Company Proposed Declining Balance Base Rates Recovery</u> (\$000)

(\$(100	U)	

		3-Month Avera	ge	Operating						
		Unrecovered	Regulatory	Accumulated	Net	Income	Amortization	Revenue	FPSC	
Line	Description	Costs	Asset	Amortization	Asset	And Taxes	Expense	Requirement	Jurisdiction	
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
1	2022 Pre-Tax Rate of Re	turn ¹				6.90%				
	2022 By Plant									
2 3 4	Scherer Unit 4 Martin Units 1 & 2 Lauderdale Units 4 & 5	\$ 367,199 230,389 327,359	\$ 323,417 230,389 327,359	\$ (15,535) (11,519) (16,368)	\$ 307,882 218,869 310,991	\$ 21,244 15,102 21,458	\$ 33,660 23,039 32,736	\$ 54,904 38,141 54,194	\$ 52,159 36,234 51,485	
5 6 7	Manatee Units 1 & 2 Crist Coal Assets 500 kV System	106,837 67,617 112,275	94,099 67,617 112,275	(4,520) (3,381) (5,614)	89,579 64,236 106,661	6,181 4,432 7,360	9,793 6,762 11,227	15,974 11,194 18,587	15,176 10,634 17,658	
8	Total	\$ 1,211,675	\$ 1,155,155	\$ (56,937)	\$ 1,098,218	\$ 75,777	\$ 117,217	\$ 192,994	\$ 183,345	
	2023 By Plant									
9 10 11 12 13 14 15	Scherer Unit 4 Martin Units 1 & 2 Lauderdale Units 4 & 5 Manatee Units 1 & 2 Crist Coal Assets 500 kV System Total	\$ 367,199 230,389 327,359 106,837 67,617 <u>204,074</u> \$ 1,303,475	\$ 367,199 230,389 327,359 106,837 67,617 204,074 \$ 1,303,475	\$ (52,020) (34,558) (49,104) (15,135) (10,143) (21,431) \$ (182,391)	\$ 315,179 195,830 278,255 91,702 57,474 182,643 \$ 1,121,084	\$ 21,747 13,512 19,200 6,327 3,966 12,602 \$ 77,355	\$ 36,720 23,039 32,736 10,684 6,762 20,407 \$ 130,347	\$ 58,467 36,551 51,935 17,011 10,727 <u>33,010</u> \$ 207,702	\$ 55,544 34,724 49,339 16,161 10,191 <u>31,359</u> \$ 197,317	
	2024-2031 All Assets									
16 17 18 19 20 21 22 23	2024 2025 2026 2027 2028 2029 2030 2031		\$ 1,303,475 1,303,475 1,303,475 1,303,475 1,303,475 1,303,475 1,303,475 1,303,475	\$ (312,738) (443,086) (573,433) (703,781) (834,128) (964,476) (1,094,823) (1,225,171)	\$ 990,736 860,389 730,041 599,694 469,346 338,999 208,651 78,304	\$ 68,361 59,367 50,373 41,379 32,385 23,391 14,397 5,403	 \$ 130,347 130,347 130,347 130,347 130,347 130,347 130,347 130,347 130,347 130,347 	\$ 198,708 189,714 180,720 171,726 162,732 153,738 144,744 135,750	\$ 188,773 180,229 171,684 163,140 154,596 146,051 137,507 128,963	

Sources:

Exhibit LF-4 and workpaper Exh LF-4 Support 2022 & 2023 Proposed Company Adjustments.xlsx. Exhibit KF-4.

¹ Exhibit MPG-24, page 2.

Capital Recovery Adjustment FEA Proposed Levelized Base Rates Recovery (\$000)

			Regulatory Asset					Operating								Difference	
			Begin	-	End			I	ncome	Am	ortization	F	Revenue		FPSC	Fror	n Company
Line	Description		Year		Year		Average	Ar	nd Taxes	E	xpense	Re	quirement	Ju	risdiction	Р	roposed
			(1)		(2)		(3)		(4)		(5)		(6)		(7)		(8)
1	2022 Pre-Tay Rate of Return ¹ 6 90%																
'	2022 FIG-Tax Na		Vetuini						0.9078								
	All Regulatory A	ssets	i														
2	2022	\$ ´	1,211,675	\$	1,124,582	\$	1,168,129	\$	80,601	\$	87,093	\$	167,694	\$	159,339	\$	(24,006)
3	2023		1,216,382		1,116,467		1,166,424		80,483		99,915		180,399		171,411		(25,907)
4	2024		1,116,467		1,009,411		1,062,939		73,343		107,056		180,399		171,411		(17,362)
5	2025		1,009,411		894,704		952,057		65,692		114,707		180,399		171,411		(8,818)
6	2026		894,704		771,800		833,252		57,494		122,904		180,399		171,411		(274)
7	2027		771,800		640,112		705,956		48,711		131,688		180,399		171,411		8,271
8	2028		640,112		499,014		569,563		39,300		141,099		180,399		171,411		16,815
9	2029		499,014		347,831		423,422		29,216		151,182		180,399		171,411		25,359
10	2030		347,831		185,844		266,838		18,412		161,987		180,399		171,411		33,903
11	2031		185,844		12,281		99,063		6,835		173,563		180,399		171,411		42,448
	Scherer Unit 4																
12	2022	\$	367,199	\$	340,805	\$	354,002	\$	24,426	\$	26,394	\$	50,820	\$	48,288		
13	2023		340,805		312,525		326,665		22,540		28,280		50,820		48,288		
14	2024		312,525		282,225		297,375		20,519		30,301		50,820		48,288		
15	2025		282,225		249,758		265,991		18,353		32,466		50,820		48,288		
16	2026		249,758		214,972		232,365		16,033		34,786		50,820		48,288		
17	2027		214,972		177,699		196,336		13,547		37,272		50,820		48,288		
18	2028		177,699		137,763		157,731		10,883		39,936		50,820		48,288		
19	2029		137.763		94.973		116.368		8.029		42,790		50.820		48,288		
20	2030		94.973		49,125		72.049		4.971		45.848		50.820		48.288		
21	2031		49,125		(0)		24,562		1,695		49,125		50,820		48,288		
	Martin Units 1 &	2															
22	2022	<u>-</u>	230 389	\$	213 829	\$	222 109	\$	15 326	\$	16 560	\$	31 885	\$	30 297		
23	2022	Ψ	213 829	Ψ	196.086	Ψ	204 957	Ψ	14 142	Ψ	17 743	Ψ	31 885	Ψ	30 297		
24	2024		196.086		177 074		186 580		12 874		19 011		31 885		30 297		
25	2025		177 074		156 704		166 889		11 515		20,370		31 885		30 297		
26	2026		156 704		134 878		145 791		10.060		21 826		31 885		30 297		
27	2020		134 878		111 493		123 186		8 500		23 386		31 885		30 297		
28	2027		111 493		86 436		98 964		6 829		25,000		31 885		30 297		
20	2020		86 436		59 588		73 012		5 038		26,848		31 885		30 297		
30	2023		59 588		30,822		45 205		3 1 1 9		28,040		31,885		30,297		
31	2031		30,822		(0)		15,411		1,063		30,822		31,885		30,297		
	l auderdale Unit	s 1 2	5														
32	2022	\$	<u>-</u> 327,359	\$	303,829	\$	315,594	\$	21,776	\$	23,530	\$	45,306	\$	43,049		
33	2023		303.829		278.617		291,223		20,094		25,211		45,306		43,049		
34	2024		278,617		251,604		265,111		18,293		27,013		45,306		43,049		
35	2025		251,604		222,660		237,132		16,362		28,944		45,306		43,049		
36	2026		222,660		191,648		207,154		14,294		31,012		45,306		43,049		
37	2027		191.648		158,420		175,034		12,077		33,229		45,306		43,049		
38	2028		158,420		122,816		140,618		9,703		35,603		45,306		43,049		
39	2029		122.816		84.669		103.743		7.158		38.148		45.306		43.049		
40	2030		84.669		43,795		64,232		4,432		40,874		45,306		43,049		
41	2031		43,795		(0)		21,897		1,511		43,795		45,306		43,049		
Capital Recovery Adjustment FEA Proposed Levelized Base Rates Recovery (\$000)

			R	egu	latory Ass	set		C	Operating							Difference
			Begin		End			-	Income	Am	ortization	F	levenue		FPSC	From Company
Line	Description		Year		Year	4	Average	A	nd Taxes	E	xpense	Ree	quirement	Ju	risdiction	Proposed
			(1)		(2)		(3)		(4)		(5)		(6)		(7)	(8)
	Manatee Units 1	82														
42	2022	\$	106 837	\$	99 158	\$	102 998	\$	7 107	\$	7 679	\$	14 786	\$	14 049	
43	2022	Ψ	99 158	Ψ	90,100	Ψ	95 044	Ψ	6 558	Ψ	8 228	Ψ	14,786	Ψ	14,049	
40	2020		90,100		82 114		86 522		5 970		8 816		14,786		14,049	
15	2024		82 11/		72 668		77 301		5 340		9.446		1/ 786		14,049	
46	2025		72 668		62 547		67 607		4 665		10 121		1/ 786		14,049	
40	2020		62 547		51 702		57 124		3 942		10,121		14,786		14,049	
18	2027		51 702		10 083		15 802		3 167		11 620		1/ 786		14,049	
40	2020		40.083		27 633		33 858		2 336		12 450		14,786		14 049	
50	2023		27 633		1/ 203		20,000		1 446		12,400		1/ 786		14,049	
51	2031		14,293		0		7,146		493		14,293		14,786		14,049	
	Criet Cool Accet	~														
F 2	Crist Coal Asset	<u>s</u>	67 617	¢	60 757	¢	CE 107	¢	4 400	¢	4 960	¢	0.250	¢	0 000	
52 52	2022	φ	62 757	Φ	62,757 57 540	φ	60 152	φ	4,490	Φ	4,000	Φ	9,000	Φ	0,092	
53	2023		57 540		51 070		54 750		3 779		5,200		9,300		0,092	
54	2024		51,049		45 001		10 000		2,110		5,500		9,300		0,092	
55	2025		51,970 45.001		20 596		40,900		3,300		5,976		9,000		0,092	
57	2020		30 586		39,000		42,700		2,902		6 863		9,300		0,092	
50	2027		29,000		32,122		20,154		2,495		7 254		9,300		0,092	
50	2020		32,122		17 490		29,040		2,004		7,304		9,300		0,092	
60	2029		17 / 80		0.046		13 267		015		7,000 8,443		9,300		0,092	
61	2030		9,046		9,040 (0)		4,523		312		9,046		9,358 9,358		8,892	
	500 kV Systom (2022	Trancho)													
62	2022	<u>2022</u> ¢	112 275	\$	104 205	\$	108 240	\$	7 469	\$	8 070	\$	15 539	\$	14 764	
63	2022	Ψ	104 205	Ψ	95 558	Ψ	99 881	Ψ	6 892	Ψ	8 647	Ψ	15 539	Ψ	14,764	
64	2024		95 558		86 293		90,001		6 274		9 265		15 539		14 764	
65	2024		86 293		76 366		81 330		5 612		9,200		15 539		14,764	
66	2026		76,366		65 730		71 048		4 902		10,636		15 539		14 764	
67	2027		65 730		54 333		60.032		4 142		11 396		15 539		14 764	
68	2028		54 333		42 122		48 228		3 328		12 211		15 539		14 764	
69	2029		42,122		29.039		35,581		2 455		13,084		15,539		14,764	
70	2030		29.039		15,020		22,030		1,520		14,019		15,539		14,764	
71	2031		15,020		(0)		7,510		518		15,020		15,539		14,764	
	500 kV System (2023	Tranche)													
72	2022	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	
73	2023		91,800		85,201		88,500		6,107		6,598		12,705		12,072	
74	2024		85,201		78,131		81,666		5,635		7,070		12,705		12,072	
75	2025		78,131		70,556		74,344		5,130		7,575		12,705		12,072	
76	2026		70,556		62,440		66,498		4,588		8,117		12,705		12,072	
77	2027		62,440		53,743		58,091		4,008		8,697		12,705		12,072	
78	2028		53,743		44,425		49,084		3,387		9,318		12,705		12,072	
79	2029		44,425		34,441		39,433		2,721		9,984		12,705		12,072	
80	2030		34,441		23,743		29,092		2,007		10,698		12,705		12,072	
81	2031		23,743		12,281		18,012		1,243		11,462		12,705		12,072	
82	2032		12,281		(0)		6,141		424		12,281		12,705		12,072	

Sources:

Exhibit LF-4 and workpaper Exh LF-4 Support 2022 & 2023 Proposed Company Adjustments.xlsx.

Exhibit KF-4.

¹ Exhibit MPG-24, page 2.

Electric Utilities (Valuation Metrics)

										Price	to Earning	js (P/E) Ra	tio ¹								
		18-Year	2																		
Line	<u>Company</u>	Average	<u>2020 ²</u>	<u>2019 °</u>	2018	2017	<u>2016</u>	2015	<u>2014</u>	<u>2013</u>	2012	<u>2011</u>	2010	2009	2008	2007	2006	2005	2004	2003	2002
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
1	ALLETE	17.87	18.30	24.70	17.23	23.05	18.63	15.06	17.23	18.59	15.88	14.66	15.98	16.08	13.95	14.78	16.55	17.91	25.21	N/A	N/A
2	Alliant Energy	16.40	21.20	21.20	16.60	20.60	22.30	18.07	16.60	15.28	14.50	14.45	12.47	13.86	13.43	15.08	16.82	12.59	14.00	12.69	19.93
3	Ameren Corp.	16.22	22.20	22.10	16.71	20.60	18.29	17.55	16.71	16.52	13.35	11.93	9.66	9.26	14.21	17.45	19.39	16.72	16.28	13.51	15.78
4	American Electric Power	14.65	19.60	21.40	15.88	19.33	15.16	15.77	15.88	14.49	13.77	11.92	13.42	10.03	13.06	16.27	12.91	13.70	12.42	10.66	12.68
5	Avangrid Inc	26.98	25.30	20.90	N/A	27 27	20.49	40.94	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	Avista Corp	17.96	21 20	15.30	17 28	23.37	18 80	17.60	17.28	14 64	19.30	14.08	12 74	11 42	14 97	30.88	15.39	19.45	24 43	13.84	19.27
7	Black Hills	17 94	17.00	21 70	19.03	19.48	22.29	16 14	19.03	18 24	17 13	31 13	18 10	9.93	N/A	15.02	15.00	17 27	17 13	15.95	12.52
8	CenterPoint Energy	15.06	15.00	19.50	16.06	17.01	21 01	18 10	16.00	18 75	1/ 85	14.58	13 78	11.81	11.27	15.02	10.77	19.06	17.10	6.05	5 59
å	CMS Energy Corp	17.57	23.30	24.30	17.30	21.32	20.04	18 20	17.30	16.32	15.07	13.62	12.46	13.56	10.87	26.84	22.18	12.60	12.30	N/A	N/A
10	Concol Edison	15.96	20.10	24.00	15.00	10.77	10.04	16.23	15.00	14.72	15.07	15.02	12.40	12.50	12.20	12 70	15.40	15.00	10.00	14.20	12 20
11	Dominion Resources	10.00	20.10	21.00	13.90	22.17	21 22	22.14	22.07	14.72	10.09	17.08	14.25	12.55	12.29	20.62	15.49	24 90	16.21	14.30	13.20
10	DOMINION Resources	10.34	16.20	10.00	22.97	10.50	21.33	22.14	22.97	19.20	14.90	12.51	14.33	12.74	14.04	20.03	13.90	24.09	16.04	13.24	12.00
12	DIE Energy	15.58	16.30	19.90	14.91	18.59	18.97	18.11	14.91	17.92	14.89	13.51	12.27	10.41	14.81	18.27	17.43	13.80	16.04	13.69	11.28
13	Duke Energy	17.39	22.40	17.80	17.91	19.93	21.25	18.22	17.91	17.45	17.46	13.76	12.69	13.32	17.28	16.13	N/A	IN/A	N/A	N/A	N/A
14	Edison Int I	15.00	34.90	14.30	13.05	17.23	17.92	14.77	13.05	12.70	9.71	11.81	10.32	9.72	12.36	16.03	12.99	11.74	37.59	6.97	7.78
15	El Paso Electric	18.26	33.70	23.20	16.38	21.78	18.66	18.33	16.38	15.88	14.47	12.60	10.72	10.79	11.89	15.26	16.92	26.72	22.03	18.26	22.99
16	Entergy Corp.	13.68	15.30	16.50	12.89	15.01	10.92	12.53	12.89	13.21	11.22	9.06	11.57	11.98	16.56	19.30	14.28	16.28	15.09	13.77	11.53
17	Eversource Energy	18.18	24.30	22.10	17.92	19.47	18.69	18.11	17.92	16.94	19.86	15.35	13.42	11.96	13.66	18.75	27.07	19.76	20.77	13.35	16.07
18	Evergy, Inc.	21.75	21.70	21.80	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19	Exelon Corp.	14.60	15.40	15.80	16.02	13.41	18.68	12.58	16.02	13.43	19.08	11.30	10.97	11.49	17.97	18.22	16.53	15.37	12.99	11.77	10.46
20	FirstEnergy Corp.	18.95	20.20	23.60	39.79	11.41	15.91	17.02	39.79	13.06	21.10	22.39	11.75	13.02	15.64	15.59	14.23	16.07	14.13	22.47	12.95
21	Fortis Inc.	19.64	20.60	19.20	24.29	16.81	21.60	18.00	24.29	19.97	20.12	18.79	18.22	16.36	17.48	21.14	17.68	N/A	N/A	N/A	N/A
22	Great Plains Energy	15.58	N/A	N/A	16.47	NMF	17.98	19.37	16.47	14.19	15.53	16.11	12.10	16.03	20.55	16.35	18.30	13.96	12.59	12.23	11.09
23	Hawaiian Elec.	18.29	21.50	22.30	15.88	20.69	13.56	20.40	15.88	16.21	15.81	17.09	18.59	19.79	23.16	21.57	20.33	18.27	19.18	13.76	13.47
24	IDACORP, Inc.	16.44	19.90	23.00	14.67	20.60	19.06	16.22	14.67	13.45	12.41	11.54	11.83	10.20	13.93	18.19	15.07	16.70	15.49	26.51	18.88
25	MGE Energy	19.10	26.40	28.40	17.19	29.36	24.90	20.28	17.19	17.01	17.23	15.82	14.98	15.14	14.22	15.01	15.88	22.40	17.98	17.55	15.96
26	NextEra Energy, Inc.	17.33	31.80	26.80	17.25	21.65	20.71	16.89	17.25	16.57	14.43	11.54	10.83	13.42	14.48	18.90	13.65	17.88	13.65	17.88	13.60
27	NorthWestern Corp	17.09	19.50	19.80	16.24	17.85	17.19	18.36	16.24	16.86	15.72	12.62	12.90	11.54	13.87	21.74	25.95	17.09	N/A	N/A	N/A
28	OGE Energy	15.35	16.20	19.00	18.27	18.32	17.68	17.69	18.27	17.69	15.16	14.37	13.31	10.83	12.41	13.75	13.68	14.95	14.13	11.84	14.12
29	Otter Tail Corp.	23.66	18.30	23.50	18.84	22.06	20.19	18.20	18.84	21.12	21.75	47.48	55.10	31.16	30.06	19.02	17.35	15.40	17.34	17.77	16.01
30	PG&E Corp.	16.68	N/A	N/A	15.00	18.28	21.13	26.40	15.00	23.67	20.70	15.46	15.80	13.01	12.08	16.85	14.84	15.37	13.81	9.50	N/A
31	Pinnacle West Capital	15.88	16.70	20.50	15.89	19.28	18.74	16.04	15.89	15.27	14.35	14.60	12.57	13.74	16.07	14.93	13.69	19.24	15.80	13.96	14.43
32	PNM Resources	18.24	20.80	21.80	18.68	20.43	19.83	16.85	18.68	16.13	14.97	14.53	14.05	18.09	N/A	35.65	15.57	17.38	15.02	14.73	15.08
33	Portland General	17.14	26.60	21.90	15.32	20.03	19.06	17.71	15.32	16.88	13.98	12.37	12.00	14.40	16.30	11.94	23.35	N/A	N/A	N/A	N/A
34	PPI Corp	14 19	13 90	13 10	14.08	17.65	12.83	13.92	14.08	12.84	10.88	10.52	11.93	25.69	17 64	17 26	14 10	15.12	12 51	10.59	11.06
35	Public Serv Enterprise	13.51	14 90	15.90	12.61	16 31	15 35	12.41	12.61	13.50	12 79	10.02	10.37	10.04	13.65	16 54	17.81	16.74	14.26	10.58	10.00
36	SCANA Corp	13.94	N/A	N/A	13.68	14.46	16.80	14.67	13.68	14.43	14.80	13.67	12.93	11.63	12.67	14.96	15.42	14 44	13.57	13.05	12 17
37	Sempra Energy	15.72	19.60	23.00	21.87	24.33	24.37	10.73	21.87	19.68	14.00	11 77	12.00	10.00	11.80	14.00	11.50	11 70	8.65	8.96	8 10
38	Southern Co	15.72	17.00	18.00	16.04	15.48	17.76	15.85	16.04	16.10	16.07	15.85	14.00	13.52	16.13	15.05	16.10	15.02	14.68	14.83	14.63
20	Voetron Corn	17.34	N/A	N/A	10.04	22.54	10.19	17.00	10.04	20.66	15.97	15.00	15 10	12.02	16 70	15.90	10.19	15.92	17.57	14.00	14.16
39	WEG Energy Group	17.22	1W/A	1N/A	13.90	23.34	10.05	01.02	13.90	20.00	15.02	14.05	14.01	12.09	10.79	10.33	10.92	10.11	17.57	14.00	14.10
40	Wester Energy Group	16.90	24.90	23.50	17.71	20.01	19.95	21.33	17.71	10.50	15./0	14.25	14.01	13.35	14.77	10.47	15.97	14.40	17.51	12.43	10.40
41	Westar Energy	15.50	IN/A	IN/A	15.30	23.40	21.59	18.45	15.30	14.04	13.43	14.78	12.90	14.95	10.90	14.10	12.18	14.79	17.44	10.78	14.02
42	Acei Energy Inc.	17.38	23.90	22.70	15.44	20.20	18.48	16.54	15.44	15.04	14.82	14.24	14.13	12.66	13.69	16.65	14.80	15.36	13.65	11.62	40.80
43	Average	16.80	21.16	20.84	17.39	19.81	18.97	18.00	17.39	16.38	15.69	15.30	14.28	13.56	15.18	17.74	16.47	16.52	16.57	13.70	14.31
44	Median	16.20	20.40	21.75	16.54	19.97	18.80	17.71	16.54	16.27	15.04	14.31	12.91	12.82	14.21	16.41	15.88	15.92	15.29	13.60	13.47

Sources:

¹ The Value Line Investment Survey Investment Analyzer Software, downloaded on June 25, 2019.

² The Value Line Investment Survey, March 12, April 23, and May 14, 2021.

³ The Value Line Investment Survey, January 24, February 14, and March 13, 2020.

Electric Utilities (Valuation Metrics)

										Market Pri	ce to Cash	Flow (MP/	CF) Ratio ¹								
		19-Year																			
Line	Company	Average	2020 2/a	2019 3/a	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>	<u>2012</u>	<u>2011</u>	<u>2010</u>	<u>2009</u>	<u>2008</u>	<u>2007</u>	2006	<u>2005</u>	<u>2004</u>	2003	2002
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
1	ALLETE	9.48	8.84	11.13	10.16	10.95	8.26	7.49	8.80	9.15	8.18	7.91	8.04	8.51	9.29	10.30	11.06	11.54	11.46	N/A	N/A
2	Alliant Energy	7.91	9.96	10.48	9.71	13.21	10.67	8.86	8.40	7.52	7.50	7.21	6.59	6.23	7.49	7.92	8.00	5.09	5.52	4.76	5.20
3	Ameren Corp.	7.13	9.06	9.20	7.95	8.38	7.44	6.87	6.95	6.61	5.48	5.02	4.23	4.25	6.35	7.69	8.57	8.57	8.24	6.74	7.96
4	American Electric Power	6.50	8.27	9.01	8.03	8.81	7.57	7.09	7.00	6.57	5.93	5.46	5.54	4.71	5.71	6.84	5.54	6.07	5.50	4.69	5.19
5	Avangrid, Inc.	9.77	9.15	9.20	10.24	10.14	8.56	11.30	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	Avista Corp.	6.83	8.25	7.50	10.14	9.35	7.63	6.76	7.30	6.21	6.88	6.40	5.80	4.06	5.12	7.58	5.30	6.58	7.58	5.36	5.90
7	Black Hills	7.84	9.12	10.42	8.83	9.20	9.33	8.06	8.81	8.03	6.04	7.85	6.16	4.25	11.26	7.62	6.92	7.57	6.69	6.89	5.92
8	CenterPoint Energy	5.17	5.65	6.76	8.45	6.97	5.96	5.75	6.25	6.56	5.15	5.39	4.70	4.05	4.29	5.17	3.94	4.70	4.26	2.08	2.16
9	CMS Energy Corp.	6.05	9.23	9.62	8.40	8.75	8.50	7.53	7.13	6.68	6.03	5.41	4.48	3.64	3.45	5.57	4.40	4.04	3.20	2.88	NMF
10	Consol. Edison	8.28	8.29	9.78	8.73	9.64	9.39	7.96	7.89	7.77	8.31	8.15	7.39	6.72	6.89	8.31	8.65	8.59	9.31	7.90	7.64
11	Dominion Resources	9.80	13.57	12.82	10.94	11.35	11.59	11.84	12.27	10.88	9.92	9.45	8.12	6.98	8.27	8.65	7.81	10.09	7.68	7.51	6.53
12	DTE Energy	6.41	7.04	9.32	8.54	9.05	8.64	8.52	6.42	6.65	5.91	5.18	4.69	3.59	4.90	5.73	5.21	5.54	6.00	5.62	5.20
13	Duke Energy	7.60	7.62	7.62	7 65	8 40	8.57	7.95	8.12	8 11	9.53	6.56	6.01	5.96	7 13	7 16	N/A	N/A	N/A	N/A	N/A
14	Edison Int'l	5.95	7 71	7 42	13.46	7.05	6 77	5.92	5.68	5.46	4 59	4 22	4 11	3.95	5.63	7.01	5.87	5.61	6.84	2.82	2.96
15	El Paso Electric	6.38	11.07	9.20	9.43	8.54	7 46	6.47	6.33	6 1 9	5 78	5.16	4.31	3.98	4 95	6 4 4	6 25	6.67	4 65	3.90	4.39
16	Entergy Corp	5.73	5 79	5.97	4 92	4 66	4 01	4 11	4 21	4 03	4 23	3.90	4 66	5.68	7.96	9.21	7 16	8 76	7 12	6.84	5.57
17	Eversource Energy	7 12	11 62	10.47	9.16	10.36	10.14	10.12	10.14	8.08	9.30	6.99	4 97	4 61	4 12	6.18	6.02	3 55	3.78	2.85	2 75
18	Everay Inc	8 46	8 40	8.52	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A								
19	Exelon Corp	6.00	4 42	5.26	5.05	4 45	4 80	4 70	5.09	4 61	5.54	5.86	5 10	5.98	9.65	9.89	8.62	7 97	6.29	5 71	4 97
20	EirstEnergy Corp	6.78	10.43	10.41	8 84	4 76	5.12	5 38	7 43	6.15	7 42	7 33	4 49	4 91	7 58	7 89	7.53	6.04	5 15	6.90	5 10
21	Fortis Inc	8.31	8.93	9.27	7 97	8 23	10.46	7 29	9 25	7 93	8.09	8.38	7 40	6.76	7.58	9.18	7.89	N/A	N/A	N/A	N/A
22	Great Plains Energy	6.89	N/A	N/A	N/A	14.62	8.63	6.66	6.45	5.73	6.09	5 74	4 4 9	5.06	7 71	7 13	7.68	6 70	6.52	5.92	5 14
23	Hawaiian Elec	8 12	9.71	9.51	8 34	9.21	7 44	9.25	7 64	8 15	8.05	7 73	7.81	6.95	9.10	7.10	8.47	8 29	8 44	6.12	6.20
24	IDACORP Inc	8.53	11 15	12 79	11 72	11.56	10.95	9.37	8.59	7 78	7.05	6.64	6.52	5.31	7 10	8 23	7 73	7.55	7 15	7 27	7.53
25	MGE Energy	11.46	13 77	15.04	15.04	17 33	15.66	12 53	11 42	11 20	10.77	9.48	9.05	8 40	8 4 2	9.23	9.30	11 73	11 04	10.20	8.09
26	NextEra Energy Inc.	10.19	53 14	12.26	10.04	11.60	9 24	7.93	7.98	7.60	7.58	5.98	5.33	6.09	7.34	9.02	6.51	6 71	671	5.97	5.77
27	NorthWestern Corp	7 79	9 35	9.44	8 19	8.82	8.65	8 99	9.01	7.60	6.85	5.89	5 79	5.05	5.57	8.45	9.39	7 31	8 13	N/A	N/A
28	OGE Epergy	7.04	8.61	10.42	0.15	10.52	0.00	0.00	10.65	0.03	7 35	7.48	6.61	5.37	6.43	7.58	7.50	7.04	6.73	5.62	5 30
20	Otter Tail Corp	9.47	10.24	12.60	11 58	11.09	9.38	9.04	9.45	9.58	8.43	9.04	8.07	8.01	11.65	9.53	8.66	8 18	9.01	8.13	8 33
30	PG&F Corp	5 55	N/A	N/A	- 5.65	7.09	7.26	7 24	5.65	6.84	5.86	5 32	5.42	4 71	4.61	5.84	5.28	5.07	5.13	4.05	14 69
31	Pinnacle West Capital	6 25	7 62	8 21	7 09	8 73	7.89	6.91	7.03	6.85	6.34	5.80	5.65	3.84	4 19	4 76	4 48	7 48	5.88	4.00	5 21
32	PNM Resources	6.82	7 32	7 99	7.57	7 40	7.64	6.95	7.00	6.47	5.80	4 94	4 58	4 53	7 10	10.67	7.50	7.40	6 84	5 55	5.72
33	Portland General	5.89	6.99	7.31	6.56	7.45	7.04	6.73	5 49	6.06	5.08	4.86	4.00	4.63	4.81	5 34	5 74	N/A	N/A	N/A	N/A
34	PPL Corp	7 47	7 20	8 11	7.02	10.11	8 37	8 73	7 32	6 59	5.87	5.98	7.46	8.82	9.17	8 90	7.58	7 57	6.49	5.41	5 30
35	Public Serv Enterprise	7.50	7.20	8.63	0.48	8.67	8.56	6.66	6.48	6.40	6.40	6.03	6.04	6.20	8.46	0.00	8 / 1	8.50	7 17	6 79	6.24
36	SCANA Corp	7.00	N/A	N/A	N/A	8.26	9.50	8 33	7.50	7 49	7.40	6.75	6.52	5.88	6 38	7 15	7.03	5.40	6.86	6.59	6.36
37	Sempra Energy	8.07	10.07	11.60	10 10	10.65	10.88	0.00	10.77	0.37	7.40	6.13	6.53	6.07	7.07	8.61	7.00	6.96	5.16	4.85	4.00
38	Southern Co	8 15	8 10	8 54	7.05	7 49	8.83	8.23	8.42	8 30	8 75	8.22	7 79	7.08	8 18	8.62	8.47	8 41	8 28	8.28	7.83
30	Vectren Corp	7.08	N/A	N/A	N/A	10.32	8 60	7.82	7.57	6.82	5 70	5.81	5.58	5.24	6.90	6.53	7 37	7.06	7.63	7 27	6.02
40	WEC Energy Group	8.86	12.86	12.66	10.82	11.04	10.95	12.90	10.27	9.52	9.70	8 4 2	8 15	6.87	7.57	7.84	7 27	6.40	6.27	4 91	4 27
40	Westar Energy	6.00	N/A	N/A	N/A	10.87	10.85	9.05	7 93	7 22	6.71	6.67	5.51	5 32	7.00	6.88	5.81	7.00	6.54	4.24	2 94
42	Xcel Energy Inc	6.76	9.30	9.18	7 90	8.50	8 10	7.62	7 31	7.00	6.85	6.47	6.28	5.42	5 71	6.51	5.54	5.62	5 31	4 27	5.46
72	Abor Energy Inc.	0.70	3.50	3.10	1.30	0.00	0.10	1.02	7.51	7.00	0.00	0.47	0.20	5.45	5.71	0.51	0.04	5.02	5.51	4.27	3.40
43	Average	7.47	10.14	9.56	8.64	9.36	8.65	8.05	7.85	7.39	6.98	6.53	6.00	5.59	6.95	7.72	7.12	7.13	6.77	5.70	5.85
44	Median	7.29	8.93	9.27	8.73	9.05	8.57	7.93	7.54	7.12	6.85	6.27	5.80	5.35	7.09	7.76	7.37	7.04	6.71	5.62	5.52

Sources:

¹ The Value Line Investment Survey Investment Analyzer Software, downloaded on June 25, 2019.

² The Value Line Investment Survey, March 12, April 23, and May 14, 2021.

³ The Value Line Investment Survey, January 24, February 14, and March 13, 2020.

Note:

^a Based on the average of the high and low price and the projected Cash Flow per share.

Electric Utilities (Valuation Metrics)

									N	Aarket Pric	e to Book '	Value (MP/	BV) Ratio ¹						
		16-Year																	
Line	Company	Average	2020 ^{2/b}	2019 ^{3/b}	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	
	· · · · · · · · · · · · · · · · · · ·	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	
1	ALLETE	1.60	1.51	1.87	1.79	1.78	1.53	1.37	1.42	1.51	1.34	1.35	1.28	1.15	1.55	1.89	2.09	2.22	
2	Alliant Energy	1.74	2.15	2.26	2.16	2.38	2.17	1.86	1.86	1.70	1.57	1.46	1.31	1.04	1.33	1.67	1.52	1.33	
3	Ameren Corp.	1.49	2.07	2.20	1.95	1.93	1.67	1.46	1.45	1.29	1.18	0.90	0.83	0.78	1.25	1.60	1.62	1.68	
4	American Electric Power	1.59	2.06	2.12	1.82	1.88	1.81	1.55	1.54	1.40	1.31	1.23	1.23	1.08	1.48	1.85	1.56	1.57	
5	Avangrid, Inc.	0.91	0.94	1.01	1.02	0.93	0.83	0.72	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
6	Avista Corp.	1.33	1.45	1.55	1.88	1.73	1.57	1.36	1.33	1.25	1.21	1.19	1.07	0.94	1.11	1.29	1.30	1.13	
7	Black Hills	1.52	1.66	1.87	1.61	2.06	1.94	1.59	1.79	1.62	1.21	1.14	1.07	0.83	1.22	1.57	1.47	1.63	
8	CenterPoint Energy	2.34	1.81	2.13	2.18	2.59	2.73	2.43	2.27	2.30	1.99	1.87	1.96	1.77	2.49	3.13	2.75	3.06	
9	CMS Energy Corp.	2.09	3.03	3.20	2.81	2.93	2.72	2.43	2.26	2.09	1.91	1.66	1.48	1.10	1.23	1.82	1.42	1.32	
10	Consol. Edison	1.41	1.43	1.57	1.49	1.63	1.58	1.42	1.34	1.38	1.47	1.38	1.22	1.08	1.17	1.47	1.47	1.52	
11	Dominion Resources	2.61	2.53	2.19	2.40	2.94	3.15	3.34	3.55	2.97	2.84	2.37	2.01	1.80	2.42	2.69	2.07	2.50	
12	DTE Energy	1.49	1.61	1.99	1.91	2.01	1.82	1.65	1.62	1.51	1.35	1.20	1.16	0.89	1.10	1.35	1.29	1.39	
13	Duke Energy	1.22	1.39	1.46	1.33	1.41	1.35	1.29	1.28	1.19	1.12	1.11	1.00	0.91	1.06	1.15	N/A	N/A	
14	Edison Int'l	1.67	1.65	1.71	1.97	2.17	1.92	1.76	1.68	1.57	1.53	1.24	1.07	1.04	1.56	2.05	1.80	1.93	
15	El Paso Electric	1.63	2.09	2.06	1.94	1.87	1.68	1.48	1.52	1.49	1.59	1.64	1.17	0.98	1.33	1.69	1.71	1.76	
16	Entergy Corp.	1.75	1.93	2.00	1.74	1.76	1.67	1.40	1.33	1.21	1.31	1.35	1.62	1.66	2.44	2.65	1.89	2.01	
17	Eversource Energy	1.48	1.95	1.99	1.68	1.73	1.64	1.53	1.47	1.38	1.28	1.50	1.31	1.12	1.31	1.60	1.22	1.05	
18	Evergy, Inc.	1.58	1.54	1.62	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
19	Exelon Corp.	2.17	1.20	1.42	1.31	1.20	1.20	1.14	1.28	1.17	1.46	1.95	2.07	2.57	4.39	4.79	3.89	3.60	
20	FirstEnergy Corp.	2.02	3.17	3.03	2.67	3.53	2.37	1.16	1.15	1.28	1.44	1.33	1.36	1.54	2.52	2.23	1.92	1.64	
21	Fortis Inc.	1.46	1.38	1.38	1.24	1.41	1.26	1.33	1.35	1.45	1.59	1.59	1.56	1.33	1.48	1.63	1.96	N/A	
22	Great Plains Energy	1.21	N/A	N/A	N/A	1.33	1.17	1.12	1.11	1.02	0.96	0.93	0.87	0.80	1.11	1.66	1.77	1.86	
23	Hawaiian Elec.	1.67	2.03	2.02	1.76	1.76	1.63	1.71	1.49	1.54	1.62	1.54	1.44	1.16	1.61	1.57	2.01	1.78	
24	IDACORP, Inc.	1.45	1.80	2.08	1.96	1.94	1.76	1.54	1.45	1.33	1.19	1.17	1.13	0.92	1.09	1.26	1.37	1.22	
25	MGE Energy	2.10	2.35	2.79	2.59	2.88	2.60	2.10	2.10	2.06	1.92	1.75	1.65	1.54	1.62	1.75	1.83	2.09	
26	NextEra Energy, Inc.	2.67	12.29	2.74	2.32	2.35	2.30	2.09	2.15	1.93	1.74	1.55	1.49	1.70	2.06	2.34	1.80	1.93	
27	NorthWestern Corp	1.47	1.53	1.67	1.48	1.64	1.68	1.60	1.54	1.56	1.42	1.35	1.22	1.07	1.15	1.48	1.65	1.42	
28	OGE Energy	1.85	1 91	2.03	1 75	1.82	1 73	1 79	2.22	2 24	1 94	1 90	1 70	1.37	1.52	1.98	1.91	1.80	
29	Otter Tail Corp.	1.85	2.09	2.66	2.49	2.33	1.90	1.78	1.90	1.96	1.58	1.35	1.19	1.18	1.71	1.93	1.76	1.74	
30	PG&F Corp	1.60	N/A	N/A	1 70	1 71	1.69	1.57	1.39	1.38	1 41	1 46	1.56	1 41	1.50	1 94	1.83	1 84	
31	Pinnacle West Capital	1.43	1.66	1.90	1 74	1 91	1 72	1.52	1 44	1 47	1.39	1 25	1 14	0.95	1.00	1.26	1.00	1.25	
32	PNM Resources	1.28	1 74	2 23	1.83	1.84	1.56	1.33	1 21	1.09	0.98	0.80	0.69	0.56	0.66	1 23	1 21	1.45	
33	Portland General	1.34	1.63	1 77	1.56	1.69	1.56	1 42	1.37	1.00	1 14	1.09	0.94	0.92	1.05	1.32	1.36	N/A	
34	PPI Corp	2.09	1.58	1.84	1.81	2 40	2 46	2 24	1.64	1.55	1.58	1 47	1.61	2 10	3 19	3.05	2 43	2.50	
35	Public Serv Enterprise	1.89	1.53	1 92	1.81	1.68	1.67	1.58	1.57	1 44	1.66	1 59	1.67	1 78	2.58	2 99	2.46	2.00	
36	SCANA Corp	1.51	N/A	N/A	N/A	1.65	1 74	1.00	1.07	1.44	1.40	1 36	1.33	1.70	1 45	1.62	1.64	1 72	
37	Sempra Energy	1.01	1 78	2 13	2.06	2.24	2.00	2.17	2 20	1.40	1.40	1.00	1.00	1.20	1.40	1.02	1.04	1.72	
38	Southern Co	2.05	2.14	2.15	1.80	2.24	2.00	1 00	2.20	2.04	2 15	1.20	1.00	1.32	2.12	2.24	2.23	2 35	
30	Vectren Corn	2.00	2.1 4 Ν/Δ	2.00 N/A	N/A	2.07	2.01	2 11	2.02	1.82	1.57	1.53	1.00	1.75	1.64	1 74	1 77	1.82	
40	WEC Eporal Group	1.03	2.67	2 60	2 11	2.10	2.23	4.00	2.00	2.04	2.05	1.00	1.41	1.04	1.04	1.74	1.71	1.02	
40	Wester Energy Gloup	1.97	2.07 N/A	2.00	2.11 N/A	2.10	2.09	1.02	2.34	2.21	2.00	1.01	1.00	1.40	1.57	1.77	1.71	1.02	
41	Yool Eporgy Inc	1.57	2.27	2.26	1.07	2.06	1.00	1.43	1.44	1.55	1.20	1.20	1.10	1 10	1.10	1.50	1.30	1.41	
42	Acei Ellergy Inc.	1.04	2.21	2.20	1.97	2.00	1.00	1.00	1.55	1.50	1.51	1.41	1.32	1.19	1.30	1.55	1.40	1.30	
43	Average	1.72	2.15	2.03	1.88	2.00	1.85	1.67	1.68	1.60	1.51	1.43	1.35	1.25	1.63	1.90	1.78	1.80	
44	Median	1.61	1.80	2.02	1.83	1.91	1.74	1.57	1.53	1.49	1.47	1.37	1.31	1.15	1.48	1.71	1.71	1.73	

Sources:

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Notes:

^b Based on the average of the high and low price and the projected Book Value per share.

Electric Utilities (Valuation Metrics)

									Dividen	d Yield'							
	0	15-Year	2020 2/a	2010 3/8	004.0	0017	0040	0045		0040	0040	0011	0040			0007	
Line	Company	Average (1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
			.,					.,				. ,	. ,		. ,		
1	ALLETE Alliant Energy	3.93%	3.72%	2.92%	2.99%	2.97%	3.56%	3.97%	3.92%	3.89%	4.49%	4.58%	5.03%	5.79%	4.37%	3.60%	3.16%
3	Ameren Corp.	4.38%	2.73%	2.67%	3.04%	3.12%	3.50%	3.96%	4.02%	4.61%	4.97%	5.28%	5.76%	5.98%	6.21%	4.88%	4.93%
4	American Electric Power	4.04%	3.34%	3.22%	3.60%	3.42%	3.54%	3.80%	3.83%	4.23%	4.58%	4.96%	4.90%	5.50%	4.20%	3.40%	4.06%
5	Avangrid, Inc.	3.77%	3.79%	3.51%	3.49%	3.79%	4.26%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	Avista Corp.	3.74%	3.81%	3.47%	2.93%	3.14%	3.39%	3.97%	3.99%	4.51%	4.55%	4.54%	4.76%	4.49%	3.39%	2.68%	2.52%
8	CenterPoint Energy	3.73%	3.21%	2.87%	3.31%	2.75%	2.87%	3.55%	2.84%	3.19%	4.39%	4.04%	4.79%	6.37%	4.21%	3.40%	3.79% 4 39%
9	CMS Energy Corp.	3.24%	2.83%	2.70%	3.03%	2.88%	2.99%	3.36%	3.59%	3.76%	4.16%	4.25%	3.98%	3.97%	2.69%	1.16%	N/A
10	Consol. Edison	4.41%	3.90%	3.52%	3.68%	3.40%	3.62%	4.12%	4.38%	4.25%	4.07%	4.46%	5.16%	5.99%	5.67%	4.84%	5.04%
11	Dominion Resources	4.08%	4.64%	4.85%	4.72%	3.88%	3.82%	3.66%	3.43%	3.78%	4.06%	4.13%	4.41%	5.20%	3.77%	3.32%	3.60%
12	DTE Energy	4.15%	3.98%	3.19%	3.34%	3.15%	3.34%	3.53%	3.54%	3.84%	4.19%	4.68%	4.75%	6.29%	5.24%	4.36%	4.86%
14	Edison Infl	4.73%	4.01%	3.82%	3.84%	2.87%	2.81%	2.83%	4.20%	2.85%	4.00%	3.37%	3.66%	3.95%	2.69%	2.21%	2.58%
15	El Paso Electric	2.69%	2.46%	2.48%	2.55%	2.49%	2.75%	3.13%	2.97%	2.99%	2.97%	2.11%	N/A	N/A	N/A	N/A	N/A
16	Entergy Corp.	4.05%	3.55%	3.57%	4.41%	4.49%	4.55%	4.59%	4.47%	5.07%	4.91%	4.85%	4.20%	3.97%	2.92%	2.39%	2.82%
17	Eversource Energy	3.28%	2.84%	2.86%	3.32%	3.14%	3.22%	3.34%	3.40%	3.48%	3.52%	3.23%	3.64%	4.16%	3.25%	2.60%	3.27%
18	Evergy, Inc.	3.31%	3.46%	3.15%	N/A 3.32%	N/A 2.51%	N/A 2.75%	N/A 2.99%	N/A 2.60%	N/A 4.60%	N/A 5 72%	N/A 4.06%	N/A 4 95%	N/A 4.26%	N/A 2.79%	N/A 2.48%	N/A 2 92%
20	FirstEnergy Corp.	4.32%	3.69%	3.58%	5.17%	4.62%	4.31%	4.23%	4.26%	4.26%	4.90%	5.23%	5.76%	5.09%	3.21%	3.12%	3.40%
21	Fortis Inc.	3.69%	3.90%	3.69%	4.07%	3.69%	3.80%	3.76%	3.88%	3.84%	3.64%	3.58%	3.80%	4.21%	3.76%	3.01%	2.79%
22	Great Plains Energy	4.52%	N/A	N/A	N/A	3.58%	3.64%	3.76%	3.62%	3.84%	4.08%	4.15%	4.49%	5.03%	6.96%	5.49%	5.60%
23	Hawaiian Elec.	4.52%	3.03%	3.10%	3.54%	3.65%	3.99%	4.05%	4.76%	4.72%	4.70%	5.04%	5.51%	6.89%	5.00%	5.18%	4.59%
24	MGE Energy	3.13%	2.96%	2.01%	2.01%	2.36%	2.23%	2.78%	2.78%	2.91%	3.26%	3.63%	3.98%	4.46%	4.24%	4.14%	4.25%
26	NextEra Energy, Inc.	2.93%	0.61%	2.42%	2.68%	2.79%	2.91%	3.01%	3.02%	3.30%	3.65%	3.96%	3.90%	N/A	N/A	N/A	N/A
27	NorthWestern Corp	4.07%	3.82%	3.43%	3.86%	3.52%	3.43%	3.61%	3.30%	3.66%	4.17%	4.51%	4.93%	5.75%	5.38%	4.09%	3.65%
28	OGE Energy	3.68%	4.55%	3.60%	3.98%	3.61%	3.87%	3.51%	2.63%	2.48%	2.94%	3.06%	3.68%	4.96%	4.52%	3.77%	3.99%
29	PG&F Corp.	4.10%	3.37% N/A	2.70% N/A	2.92% N/A	3.12% 2.42%	3.87%	4.33%	4.14%	4.11%	5.21% 4.25%	5.57% 4 24%	5.68% 4.08%	5.38% 4.26%	3.63%	3.46%	3.92%
31	Pinnacle West Capital	4.48%	3.90%	3.35%	3.55%	3.16%	3.46%	3.88%	4.09%	3.98%	5.32%	4.81%	5.43%	6.76%	6.17%	4.75%	4.67%
32	PNM Resources	3.24%	3.00%	2.55%	2.79%	2.53%	2.69%	2.90%	2.79%	2.99%	2.96%	3.19%	4.09%	4.76%	4.85%	3.36%	3.21%
33	Portland General	3.67%	3.34%	2.97%	3.27%	2.92%	3.06%	3.27%	3.34%	3.67%	4.11%	4.37%	5.20%	5.36%	4.28%	3.34%	2.54%
34	PPL Corp. Public San, Enterprise	4.54%	6.05%	5.15%	5.61%	4.24%	4.25%	4.55%	4.45%	4.81%	5.07%	5.10%	5.12%	4.51%	3.10%	2.69%	3.41%
36	SCANA Corp.	4.37%	4.05% N/A	N/A	3.49% N/A	4.03%	3.29%	3.90%	4.05%	4.35%	4.55%	4.24%	4.30%	4.30%	4.92%	4.29%	4.21%
37	Sempra Energy	2.97%	3.35%	2.97%	3.20%	2.92%	2.92%	2.71%	2.61%	3.03%	3.71%	3.65%	3.08%	3.23%	2.62%	2.08%	2.47%
38	Southern Co.	4.70%	4.49%	4.57%	5.27%	4.63%	4.42%	4.78%	4.69%	4.61%	4.29%	4.63%	5.13%	5.52%	4.58%	4.39%	4.52%
39	Vectren Corp.	4.38%	N/A	N/A	N/A	2.79%	3.31%	3.60%	3.62%	4.15%	4.82%	5.06%	5.53%	5.85%	4.79%	4.53%	4.52%
40	Westar Energy Group	3.04% 4.37%	2.85% N/A	2.85% N/A	3.38% N/A	3.31%	3.35%	3.49%	3.40%	3.49%	3.24%	3.35%	2.97%	3.16% 6.27%	2.41%	2.14%	2.18% 4.28%
42	Xcel Energy Inc.	3.84%	2.80%	2.85%	3.25%	3.10%	3.33%	3.69%	3.83%	3.86%	3.90%	4.20%	4.54%	5.14%	4.70%	4.05%	4.40%
43	Average	3.88%	3.53%	3.23%	3.56%	3.34%	3.49%	3.71%	3.66%	3.87%	4.18%	4.30%	4.63%	5.13%	4.24%	3.53%	3.72%
44	Median	3.85%	3.55%	3.10%	3.36%	3.15%	3.43%	3.71%	3.76%	3.85%	4.18%	4.42%	4.76%	5.17%	4.22%	3.43%	3.62%
45	20-Yr Treasury Yields ⁴	3.26%	1.35%	2 40%	3.02%	2.65%	2.23%	2.55%	3.07%	3.12%	2.54%	3.62%	4.03%	4.11%	4.36%	4.91%	4.99%
46	20-Yr TIPS ⁴	1.15%	-0.30%	0.60%	0.94%	0.75%	0.66%	0.78%	0.87%	0.75%	0.21%	1.19%	1.73%	2.21%	2.19%	2.36%	2.31%
47	Implied Inflation ^b	2.09%	1.66%	1.79%	2.06%	1.89%	1.56%	1.75%	2.19%	2.35%	2.33%	2.40%	2.26%	1.85%	2.13%	2.49%	2.62%
48	Real Dividend Yield	1.75%	1.84%	1.42%	1.47%	1.42%	1.90%	1.93%	1.44%	1.49%	1.81%	1.86%	2.32%	3.22%	2.07%	1.01%	1.07%
	A-Bated Utility																
49	Nominal "A" Rated Yield ⁵	4.75%	3.02%	3.77%	4.25%	4.00%	3.93%	4.12%	4.28%	4.48%	4.13%	5.04%	5.46%	6.04%	6.53%	6.07%	6.07%
50	Real "A" Rated Yield	2.60%	1.33%	1.94%	2.14%	2.07%	2.34%	2.33%	2.04%	2.08%	1.76%	2.58%	3.13%	4.11%	4.31%	3.49%	3.36%
	Baa-Rated Utility	-															
51	Nominal "Baa" Rated Yield	5.31%	3.66%	4.19%	4.67%	4.38%	4.67%	5.03%	4.80%	4.98%	4.83%	5.57%	5.96%	7.06%	7.25%	6.33%	6.32%
52	Real Baa Rated field	3.16%	1.97%	2.36%	2.55%	2.44%	3.07%	3.22%	2.55%	2.57%	2.44%	3.09%	3.62%	5.11%	5.01%	3.74%	3.60%
	Spreads (A-Rated Utility Bond - Stock)																
53	Nominal Spread ^d	0.87%	-0.51%	0.53%	0.69%	0.66%	0.44%	0.40%	0.61%	0.61%	-0.05%	0.74%	0.84%	0.91%	2.29%	2.54%	2.35%
54	Real Spread ^e	0.85%	-0.51%	0.52%	0.68%	0.65%	0.44%	0.40%	0.60%	0.59%	-0.05%	0.72%	0.82%	0.89%	2.24%	2.48%	2.29%
	Spreads (Baa-Rated Utility Bond - Stock)	_															
55	Nominal Spread	1.44%	0.13%	0.96%	1.11%	1.04%	1.19%	1.31%	1.14%	1.11%	0.65%	1.26%	1.34%	1.92%	3.00%	2.80%	2.60%
56	Real Spread ^e	1.41%	0.13%	0.94%	1.09%	1.02%	1.17%	1.29%	1.11%	1.09%	0.63%	1.23%	1.31%	1.89%	2.94%	2.73%	2.53%
	Spreads (Treasury Bond - Stock)																
57	Nominal ¹	-0.61%	-2.18%	-0.83%	-0.54%	-0.69%	-1.26%	-1.17%	-0.59%	-0.75%	-1.64%	-0.68%	-0.60%	-1.02%	0.12%	1.38%	1.27%
58	Real ⁹	-0.60%	-2.14%	-0.82%	-0.53%	-0.68%	-1.24%	-1.15%	-0.58%	-0.73%	-1.60%	-0.67%	-0.58%	-1.01%	0.12%	1.34%	1.24%



Sources:

¹ The Value Line Investment Survey Investment Analyzer Software, downloaded on June 25, 2019.
² The Value Line Investment Survey, March 12, April 23, and May 14, 2021.
³ The Value Line Investment Survey, January 24, February 14, and March 13, 2020.
⁴ SL Louis Federal Reserve: Economic Research, http://research.stducided.org.
⁶ www.moodys.com, Bord Yields and Key Indicatos, through December 31, 2020.
Notes:
⁸ Based on the average of the high and low price and the projected Dividends Declared per share, published in the Value Line Investment Survey.
⁸ Based on the average of the high and low price and the projected Dividends Declared per share, published in the Value Line Investment Survey.
⁹ Line 0.7 of ... Line 0.61 ... 0.

Based on the average of the high and tow price and the projected universe persisted persisted

Electric Utilities (Valuation Metrics)

									Dividend	per Share ¹							
		15-Year															
Line	Company	Average	2020 ²	2019 ³	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1	ALLETE	1.94	2.47	2.35	2.24	2.14	2.08	2.02	1.96	1.90	1.84	1.78	1.76	1.76	1.72	1.64	1.45
2	Alliant Energy	1.00	1.52	1.42	1.34	1.26	1.18	1.10	1.02	0.94	0.90	0.85	0.79	0.75	0.70	0.64	0.58
3	Ameren Corp.	1.87	2.00	1.92	1.85	1.78	1.72	1.66	1.61	1.60	1.60	1.56	1.54	1.54	2.54	2.54	2.54
4	American Electric Power	2.04	2.84	2.71	2.53	2.39	2.27	2.15	2.03	1.95	1.88	1.85	1.71	1.64	1.64	1.58	1.50
5	Avangrid, Inc.	1.74	1.76	1.76	1.74	1.73	1.73	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	Avista Corp.	1.15	1.62	1.55	1.49	1.43	1.37	1.32	1.27	1.22	1.16	1.10	1.00	0.81	0.69	0.60	0.57
7	Black Hills	1.62	2.17	2.05	1.93	1.81	1.68	1.62	1.56	1.52	1.48	1.46	1.44	1.42	1.40	1.37	1.32
8	CenterPoint Energy	0.88	0.90	0.86	1.12	1.35	1.03	0.99	0.95	0.83	0.81	0.79	0.78	0.76	0.73	0.68	0.60
9	CMS Energy Corp.	1.00	1.63	1.53	1.43	1.33	1.24	1.16	1.08	1.02	0.96	0.84	0.66	0.50	0.36	0.20	N/A
10	Consol. Edison	2.56	3.06	2.96	2.86	2.76	2.68	2.60	2.52	2.46	2.42	2.40	2.38	2.36	2.34	2.32	2.30
11	Dominion Resources	2.37	3.45	3.67	3.34	3.04	2.80	2.59	2.40	2.25	2.11	1.97	1.83	1.75	1.58	1.46	1.38
12	DTE Energy	2.76	4.12	3.85	3.59	3.36	3.06	2.84	2.69	2.59	2.42	2.32	2.18	2.12	2.12	2.12	2.08
13	Duke Energy	3.18	3.82	3.75	3.64	3.49	3.36	3.24	3.15	3.09	3.03	2.97	2.91	2.82	2.70	2.58	N/A
14	Edison Int'l	1.66	2.58	2.48	2.43	2.23	1.98	1.73	1.48	1.37	1.31	1.29	1.27	1.25	1.23	1.18	1.10
15	El Paso Electric	1.20	1.62	1.52	1.42	1.32	1.23	1.17	1.11	1.05	0.97	0.66	N/A	N/A	N/A	N/A	N/A
16	Entergy Corp.	3.23	3.74	3.66	3.58	3.50	3.42	3.34	3.32	3.32	3.32	3.32	3.24	3.00	3.00	2.58	2.16
17	Eversource Energy	1.44	2.27	2.14	2.02	1.90	1.78	1.67	1.57	1.47	1.32	1.10	1.03	0.95	0.83	0.78	0.73
18	Evergy, Inc.	1.99	2.05	1.93	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19	Exelon Corp.	1.65	1.53	1.45	1.38	1.31	1.26	1.24	1.24	1.46	2.10	2.10	2.10	2.10	2.05	1.82	1.64
20	FirstEnergy Corp.	1.81	1.56	1.53	1.82	1.44	1.44	1.44	1.44	1.65	2.20	2.20	2.20	2.20	2.20	2.05	1.85
21	Fortis Inc.	1.32	1.97	1.86	1.75	1.65	1.55	1.43	1.30	1.25	1.21	1.17	1.12	1.04	1.00	0.82	0.67
22	Great Plains Energy	1.11	N/A	N/A	N/A	1.10	1.06	1.00	0.94	0.88	0.86	0.84	0.83	0.83	1.66	1.66	1.66
23	Hawaiian Elec.	1.25	1.32	1.28	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24
24	IDACORP, Inc.	1.72	2.72	2.56	2.40	2.24	2.08	1.92	1.76	1.57	1.37	1.20	1.20	1.20	1.20	1.20	1.20
25	MGE Energy	1.12	1.45	1.38	1.32	1.26	1.21	1.16	1.11	1.07	1.04	1.01	0.99	0.97	0.96	0.94	0.93
26	NextEra Energy, Inc.	0.74	1.40	1.25	1.11	0.98	0.87	0.77	0.73	0.66	0.60	0.55	0.50	0.47	0.45	0.41	0.38
27	NorthWestern Corp	1.70	2.40	2.30	2.20	2.10	2.00	1.92	1.60	1.52	1.48	1.44	1.36	1.34	1.32	1.28	1.24
28	OGE Energy	0.99	1.58	1.51	1.40	1.27	1.16	1.05	0.95	0.85	0.80	0.76	0.73	0.71	0.70	0.68	0.67
29	Otter Tail Corp.	1.24	1.48	1.40	1.34	1.28	1.25	1.23	1.21	1.19	1.19	1.19	1.19	1.19	1.19	1.17	1.15
30	PG&E Corp.	1.70	N/A	N/A	N/A	1.55	1.93	1.82	1.82	1.82	1.82	1.82	1.82	1.68	1.56	1.44	1.32
31	Pinnacle West Capital	2.44	3.23	3.04	2.87	2.70	2.56	2.44	2.33	2.23	2.67	2.10	2.10	2.10	2.10	2.10	2.03
32	PNM Resources	0.81	1.25	1.18	1.09	0.99	0.88	0.80	0.76	0.68	0.58	0.50	0.50	0.50	0.61	0.91	0.86
33	Portland General	1.15	1.59	1.52	1.43	1.34	1.26	1.18	1.12	1.10	1.08	1.06	1.04	1.01	0.97	0.93	0.68
34	PPL Corp.	1.45	1.66	1.65	1.64	1.58	1.52	1.50	1.49	1.47	1.44	1.40	1.40	1.38	1.34	1.22	1.10
35	Public Serv. Enterprise	1.50	1.96	1.88	1.80	1.72	1.64	1.56	1.48	1.44	1.42	1.37	1.37	1.33	1.29	1.17	1.14
36	SCANA Corp.	2.00	N/A	N/A	N/A	2.45	2.30	2.18	2.10	2.03	1.98	1.94	1.90	1.88	1.84	1.76	1.68
37	Sempra Energy	2.48	4.18	3.87	3.58	3.29	3.02	2.80	2.64	2.52	2.40	1.92	1.56	1.56	1.37	1.24	1.20
38	Southern Co.	2.02	2.54	2.46	2.38	2.30	2.22	2.15	2.08	2.01	1.94	1.87	1.80	1.73	1.66	1.60	1.54
39	Vectren Corp.	1.42	N/A	N/A	N/A	1.71	1.62	1.54	1.46	1.43	1.41	1.39	1.37	1.35	1.31	1.27	1.23
40	WEC Energy Group	1.41	2.53	2.36	2.21	2.08	1.98	1.74	1.56	1.45	1.20	1.04	0.80	0.68	0.54	0.50	0.46
41	Westar Energy	1.30	N/A	N/A	N/A	1.60	1.52	1.44	1.40	1.36	1.32	1.28	1.24	1.20	1.16	1.08	0.98
42	Xcel Energy Inc.	1.20	1.72	1.62	1.52	1.44	1.36	1.28	1.20	1.11	1.07	1.03	1.00	0.97	0.94	0.91	0.88
43	Average	1.65	2.21	2.11	2.03	1.90	1.79	1.70	1.62	1.56	1.55	1.47	1.43	1.39	1.39	1.32	1.24
44	Industry Average Growth	4.21%	4.45%	4.22%	6.91%	5.79%	5.44%	5.20%	3.38%	0.98%	5.59%	2.36%	3.30%	-0.25%	4.98%	6.51%	

Sources:

² The Value Line Investment Survey, March 12, April 23, and May 14, 2021.

PG&E is excluded from 2017, 2018 and 2019 average calculations due to their Dividend Suspension.

¹ The Value Line Investment Survey Investment Analyzer Software, downloaded on June 25, 2019.

³ The Value Line Investment Survey, January 24, February 14, and March 13, 2020.

Notes:

Electric Utilities (Valuation Metrics)

									Earni	ings per Sl	nare ¹						
		15-Year															
l ine	Company	Average	2020 ²	2019 ³	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
<u></u>	<u>oompany</u>	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
		(1)	(-)	(3)	(-)	(5)	(0)	(1)	(0)	(3)	(10)	(11)	(12)	(13)	(14)	(13)	(10)
1	ALLETE	2.99	2.25	2 22	2.29	2 1 2	214	2.20	2.00	2.62	2.59	2.65	2 10	1 90	2 92	2.09	2 77
2		1.64	2.47	2 33	2 19	1 00	1.65	1.60	1 74	2.03	1.53	1 38	1 38	0.95	1.02	1 35	1.03
3	Ameren Corp	2.76	3.50	3 35	3.32	2 77	2.68	2 38	2.40	2 10	2.41	2.47	2 77	2 78	2.88	2.98	2.66
4	American Electric Power	2.70	4.42	4.09	3.00	2.07	4.22	2.50	2.40	2.10	2.41	2.47	2.00	2.70	2.00	2.00	2.00
5	Avangrid Inc	1 70	1.88	2.40	1 92	1.67	1 08	0.86	N/A	N/Δ	2.50 N/A	N/A	2.00 N/A	2.57 N/Δ	2.55 N/A	2.00 N/A	2.00 N/A
6	Aviata Corp	1.75	1.00	2.40	2.07	1.07	2.15	1.80	1.84	1.85	1 32	1 72	1.65	1.58	1 36	0.72	1 47
7	Rinek Hille	2.47	2 72	2.50	2.07	2.29	2.10	2.92	2.90	2.61	1.02	1.01	1.66	2.32	0.19	2.69	2.21
8	CenterPoint Energy	1.22	1 20	1 49	0.74	1.57	1.00	1.08	2.05	1.24	1.37	1.01	1.00	1.01	1 30	2.00	1 33
0	CMS Eporgy Corp	1.22	2.64	2 20	2.22	2.17	1.00	1.00	1.42	1.24	1.53	1.45	1.07	0.02	1.30	0.64	0.64
10	Consel Edison	2.72	2.04	2.35	2.52	2.17	2.04	1.05	2.62	2.02	1.55	2.57	2.47	0.55	2.26	2.49	2.05
11	Dominion Resources	3.73	3.94	3.95	4.00	4.10	3.94	4.05	3.02	3.93	3.00	3.57	3.47	3.14	3.30	3.40	2.90
10	DTE Enormy	4.20	7.02	2.13	5.25	5.55	4.02	3.20	5.05	3.03	2.75	2.70	2.03	2.04	3.04	2.13	2.40
12	Die Energy Dula Faaan	4.39	7.00	0.31	0.17	5.73	4.03	4.44	5.10	3.76	3.00	3.07	3.74	3.24	2.73	2.00	2.40
13	Edison Int'l	3.80	3.92	5.05	4.13	4.22	3.71	4.10	4.13	3.98	3.71	4.14	4.02	3.39	3.03	3.60	2.73
14	Eulson Inti El Basa Elastria	3.30	1.72	4.05	-1.20	4.51	3.94	4.15	4.33	3.76	4.55	3.23	3.35	3.24	3.00	3.32	3.20
10	El Paso Electric	2.07	2.00	2.70	2.07	2.42	2.39	2.03	2.21	2.20	2.20	2.40	2.07	1.50	1.73	1.03	1.27
10	Entergy Corp.	6.09	6.90	6.30	5.88	5.19	6.88	5.81	5.77	4.96	6.02	7.55	0.00	6.30	6.20	5.60	5.30
17	Eversource Energy	2.44	3.55	3.45	3.25	3.11	2.90	2.70	2.58	2.49	1.89	2.22	2.10	1.91	1.80	1.59	0.82
18	Evergy, Inc.	2.76	2.72	2.79	N/A	N/A	N/A	IN/A	IN/A	IN/A	IN/A	N/A	IN/A	IN/A	IN/A	N/A	IN/A
19	Exelon Corp.	2.98	2.60	3.00	2.07	2.78	1.80	2.54	2.10	2.31	1.92	3.75	3.87	4.29	4.10	4.03	3.50
20	FirstEnergy Corp.	2.58	1.85	1.85	1.33	2.73	2.10	2.00	0.85	2.97	2.13	1.88	3.25	3.32	4.38	4.22	3.82
21	Fortis Inc.	1.88	2.60	2.68	2.52	2.66	1.89	2.11	1.38	1.63	1.65	1.74	1.62	1.51	1.52	1.29	1.36
22	Great Plains Energy	1.33	N/A	N/A	N/A	-0.06	1.61	1.37	1.57	1.62	1.35	1.25	1.53	1.03	1.16	1.85	1.62
23	Hawaiian Elec.	1.53	1.81	1.90	1.85	1.64	2.29	1.50	1.64	1.62	1.67	1.44	1.21	0.91	1.07	1.11	1.33
24	IDACORP, Inc.	3.46	4.69	4.45	4.49	4.21	3.94	3.87	3.85	3.64	3.37	3.36	2.95	2.64	2.18	1.86	2.35
25	MGE Energy	1.98	2.60	2.51	2.43	2.20	2.18	2.06	2.32	2.16	1.86	1.76	1.67	1.47	1.59	1.51	1.37
26	NextEra Energy, Inc.	1.34	2.10	1.94	1.67	1.63	1.45	1.52	1.40	1.21	1.14	1.21	1.19	0.99	1.02	0.82	0.81
27	NorthWestern Corp	2.57	3.06	3.55	3.40	3.34	3.39	2.90	2.99	2.46	2.26	2.53	2.14	2.02	1.77	1.44	1.31
28	OGE Energy	1.72	2.08	2.24	2.12	1.92	1.69	1.69	1.98	1.94	1.79	1.73	1.50	1.33	1.25	1.32	1.23
29	Otter Tail Corp.	1.44	2.34	2.17	2.06	1.86	1.60	1.56	1.55	1.37	1.05	0.45	0.38	0.71	1.09	1.78	1.69
30	PG&E Corp.	1.49	N/A	N/A	-13.25	3.50	2.83	2.00	3.06	1.83	2.07	2.78	2.82	3.03	3.22	2.78	2.76
31	Pinnacle West Capital	3.57	4.87	4.50	4.54	4.43	3.95	3.92	3.58	3.66	3.50	2.99	3.08	2.26	2.12	2.96	3.17
32	PNM Resources	1.37	2.15	2.20	1.66	1.92	1.65	1.64	1.45	1.41	1.31	1.08	0.87	0.58	0.11	0.76	1.72
33	Portland General	1.91	1.72	2.40	2.37	2.29	2.16	2.04	2.18	1.77	1.87	1.95	1.66	1.31	1.39	2.33	1.14
34	PPL Corp.	2.34	2.04	2.40	2.58	2.11	2.79	2.37	2.38	2.38	2.61	2.61	2.29	1.19	2.45	2.63	2.29
35	Public Serv. Enterprise	2.90	3.61	3.70	2.76	2.82	2.83	3.30	2.99	2.45	2.44	3.11	3.07	3.08	2.90	2.59	1.85
36	SCANA Corp.	3.30	N/A	N/A	N/A	4.20	4.16	3.81	3.79	3.39	3.15	2.97	2.98	2.85	2.95	2.74	2.59
37	Sempra Energy	4.76	6.58	5.85	5.48	4.63	4.24	5.23	4.63	4.22	4.35	4.47	4.02	4.78	4.43	4.26	4.23
38	Southern Co.	2.68	3.25	3.10	3.00	3.21	2.83	2.84	2.77	2.70	2.67	2.55	2.36	2.32	2.25	2.28	2.10
39	Vectren Corp.	1.94	N/A	N/A	N/A	2.60	2.55	2.39	2.02	1.66	1.94	1.73	1.64	1.79	1.63	1.83	1.44
40	WEC Energy Group	2.44	3.79	3.58	3.34	3.14	2.96	2.34	2.59	2.51	2.35	2.18	1.92	1.60	1.52	1.42	1.32
41	Westar Energy	1.96	N/A	N/A	N/A	2.27	2.43	2.09	2.35	2.27	2.15	1.79	1.80	1.28	1.31	1.84	1.88
42	Xcel Energy Inc.	1.95	2.79	2.60	2.47	2.30	2.21	2.10	2.03	1.91	1.85	1.72	1.56	1.49	1.46	1.35	1.35
												. <i></i>					
43	Average	2.58	3.12	3.23	2.87	2.90	2.81	2.67	2.66	2.50	2.43	2.44	2.36	2.19	2.21	2.26	2.11
44	Industry Average Growth	2.92%	-3.62%	12.53%	-0.78%	3.24%	5.25%	0.08%	6.36%	3.26%	-0.70%	3.61%	7.71%	-1.07%	-2.17%	7.14%	

Sources: ¹ The Value Line Investment Survey Investment Analyzer Software, downloaded on June 25, 2019.

² The Value Line Investment Survey, March 12, April 23, and May 14, 2021.

 ³ The Value Line Investment Survey, March 12, April 23, and May 14, 2021.
 ³ The Value Line Investment Survey, January 24, February 14, and March 13, 2020.
 Notes:
 PG&E is excluded from 2017, 2018, and 2019 average calculations due to their Dividend Suspension.

Electric Utilities (Valuation Metrics)

		Ca	ash Flow /	Capital Spe	nding
	-				3 - 5 yr
Line	<u>Company</u>	<u>2019</u>	2020	<u>2021</u>	Projection
		(1)	(2)	(3)	(4)
1	ALLETE	0.63x	0.74x	0.80x	1.48x
2	Alliant Energy	0.73x	0.82x	0.97x	1.06x
3	Ameren Corp.	0.79x	0.51x	0.59x	0.84x
4	American Electric Power	0.75x	0.74x	0.69x	0.91x
5	Avangrid, Inc.	0.70x	0.56x	0.62x	0.62x
6	Avista Corp.	0.89x	0.85x	0.87x	1.13x
7	Black Hills	0.51x	0.72x	0.76x	1.20x
8	CenterPoint Energy	0.83x	0.88x	0.62x	0.89x
9	CMS Energy Corp.	0.79x	0.82x	0.77x	1.00x
10	Consol. Edison	0.79x	0.82x	0.89x	1.09x
11	Dominion Resources	0.81x	1.00x	0.89x	0.77x
12	DTE Energy	0.83x	0.67x	0.70x	1.43x
13	Duke Energy	0.78x	0.86x	0.93x	1.00x
14	Edison Int'l	0.69x	0.67x	0.74x	0.92x
15	El Paso Electric	0.96x	1.00x	0.83x	0.86x
16	Entergy Corp.	0.79x	0.81x	1.05x	1.20x
17	Eversource Energy	0.78x	0.95x	0.74x	1.06x
18	Evergy, Inc.	1.34x	1.06x	0.96x	1.16x
19	Exelon Corp.	1.18x	1.30x	1.32x	1.47x
20	FirstEnergy Corp.	0.74x	0.96x	0.91x	1.09x
21	Fortis Inc.	0.68x	0.60x	0.74x	0.91x
22	Hawaiian Elec.	1.12x	1.10x	1.42x	1.22x
23	IDACORP, Inc.	1.25x	1.25x	1.16x	1.00x
24	MGE Energy	0.97x	0.73x	0.87x	1.28x
25	NextEra Energy, Inc.	0.67x	0.58x	0.69x	0.67x
26	NorthWestern Corp	1.07x	0.98x	0.82x	1.10x
27	OGE Energy	1.26x	1.43x	1.13x	1.29x
28	Otter Tail Corp.	0.80x	0.45x	1.42x	2.09x
29	Pinnacle West Capital	0.98x	0.98x	0.85x	1.19x
30	PNM Resources	0.72x	0.59x	0.51x	1.00x
31	Portland General	0.99x	0.75x	0.97x	1.44x
32	PPL Corp.	0.92x	1.06x	1.12x	1.62x
33	Public Serv. Enterprise	1.07x	1.00x	1.05x	1.11x
34	Sempra Energy	0.66x	0.92x	0.78x	1.36x
35	Southern Co.	0.88x	1.01x	0.93x	1.42x
36	WEC Energy Group	0.91x	0.70x	0.75x	1.14x
37	Xcel Energy Inc.	0.69x	0.99x	0.86x	1.09x
38	Average	0.86x	0.86x	0.88x	1.14x
39	Median	0.80x	0.85x	0.86x	1.10x

Sources:

The Value Line Investment Survey Investment Analyzer Software,

downloaded on June 25, 2019.

The Value Line Investment Survey, January 24, February 14, and March 13, 2020. Notes:

Based on the projected Cash Flow per share and Capital Spending per share.

The Value Line Investment Survey, March 12, April 23, and May 14, 2021.

Electric Utilities (Valuation Metrics)

								Percen	t Dividend	s to Book	Value ¹						
		14-Year	2/-	2/-													
Line	Company	Average	2020 ^{2/a}	2019 3/a	<u>2018</u>	2017	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>	<u>2012</u>	<u>2011</u>	<u>2010</u>	2009	2008	2007	2006
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1		E 07%	E 619/	E 119/	E 2E0/	E 20%	E /E9/	E / E %	E E0%	E 960/	6 0 4 9/	6 100/	6 469/	6 670/	6 700/	6 900/	6 620/
2	ALLETE Alliant Enorgy	6 20%	5.01% 6.600/	5.44 %	6.00%	7 2 2 2 0/	5.45%	6 70%	0.09% 6 66%	5.00%	6 27%	6.269/	6.40%	5.09%	0.70% E /00/	5 229/	6.02 /0 E 0.49/
2	Amoron Corn	6.30%	0.00 /0 5 670/	0.09 /0 5 970/	0.90 /0 E 0.20/	7.32/0 6.019/	0.90 %	5 799/	0.00 /0 E 0.00/	0.30 /o 5 0.29/	0.37 /0 E 979/	4 769/	4 70%	3.96 %	7 7 40 /0	7 0 4 0/	7 07%
3	American Electric Rower	6.03%	0.07%	5.67%	0.92% 6.66%	6 429/	5.00%	5.76%	0.02% 5.01%	5.93%	5.01%	4.70%	4.79%	4.00%	6 220/	6 200/	6 220/
-	American Electric Fower	0.25%	0.00%	0.02 /0	0.50%	0.4370	0.42 /0	0.00%	5.9170	5.9170 N/A	5.99%	0.10%	0.04 /0	5.97 /0	0.2370	0.20 /0	0.32 /0
c c	Avangnu, Inc.	2.90%	3.30% 5.52%	5.30%	3.37%	5.04% 5.41%	5.00%	0.00% 5.20%	IN/A 5 220/	IN/A	N/A 5 5 1 9/	IN/A	IN/A	IN/A	N/A 2 770/	N/A	1N/A
7	Rvista Corp.	4.90%	5.03%	5.36%	5.32 /0	5.41/0	5.55%	5.36%	5.33%	5.05%	5.51%	5.42 /0	5.07 %	4.23/0	5.11/0	5.44 /0	5.20%
6		0.00%	0.32%	5.30%	0.01%	0.07%	5.55%	5.00%	0.00%	0.17%	0.01%	5.30% 7.07%	0.14%	5.10%	5.15%	5.34%	0.00%
0	CMC Energy	0.19%	0.33%	0.30%	0.94%	12.39%	12.02%	12.30%	0.90%	0.23%	0.05%	7.97%	TU.30%	11.20%	12.40%	2 1 1 0/	12.09%
9	Civis Energy Corp.	0.40%	0.07%	0.00%	0.02% E 400/	0.43%	0.14% 5.70%	6.10% 5.04%	0.10% 5.070/	7.00%	7.94%	7.05%	5.90%	4.30%	3.31%	2.11%	7.400/
10	Consol. Edison	0.09%	3.30%	5.52%	5.49%	5.55%	5.72%	3.04%	5.67%	0.00%	5.97%	0.10%	0.27%	0.47%	0.00%	7.12%	7.40%
10	DTE Energy	10.52%	6 420/	0.02%	6 200/	6.240/	12.04%	12.20% E 010/	12.10% 5.700/	F 70%	F 66%	9.01%	0.00%	9.30%	9.14%	6.95% 5.01%	6.000/
12	Die Energy	5.95%	0.43%	0.34%	0.30%	0.34%	6.09%	5.61%	5.72%	5.79%	5.00%	5.00%	5.49%	5.59%	5.76%	5.91%	0.20%
13	Duke Energy	5.29%	6.39%	6.07%	0.04%	5.85%	5.73%	5.61%	5.45%	5.28%	5.22%	5.81%	5.72%	5.66%	5.45%	5.12%	0.00%
14	Edison Inti	5.11%	6.90%	0.34%	7.50%	0.23%	5.39%	4.97%	4.41%	4.40%	4.54%	4.10%	3.90%	4.12%	4.19%	4.53%	4.00%
15	El Paso Electric	3.09%	5.13%	5.13%	4.94%	4.67%	4.62%	4.63%	4.53%	4.46%	4.72%	3.47%	0.00%	0.00%	0.00%	0.00%	0.00%
10	Enlergy Corp.	0.72%	0.00%	7.13%	7.65%	7.90%	7.36%	6.44%	5.95%	0.15%	0.42%	0.03%	0.02%	0.59%	1.13%	0.34%	5.34%
17	Eversource Energy	4.90%	5.54%	5.68%	5.57%	5.43%	5.27%	5.12%	4.99%	4.82%	4.49%	4.86%	4.75%	4.66%	4.26%	4.16%	4.00%
18	Evergy, Inc.	5.21%	5.32%	5.10%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19	Exelon Corp.	7.40%	4.62%	4.35%	4.34%	4.23%	4.51%	4.42%	4.72%	5.49%	8.38%	9.68%	10.25%	10.96%	12.21%	11.87%	11.02%
20	FirstEnergy Corp.	8.63%	11.70%	10.85%	13.82%	16.34%	10.21%	4.91%	4.88%	5.44%	7.03%	6.93%	7.85%	7.84%	8.10%	6.96%	6.54%
21	Fortis Inc.	5.35%	5.39%	5.10%	5.03%	5.19%	4.80%	5.00%	5.22%	5.58%	5.81%	5.70%	5.91%	5.60%	5.55%	4.90%	5.47%
22	Great Plains Energy	5.31%	N/A	N/A	N/A	4.78%	4.27%	4.21%	4.02%	3.91%	3.93%	3.84%	3.90%	4.03%	7.76%	9.13%	9.94%
23	Hawaiian Elec.	7.30%	6.17%	6.26%	6.24%	6.43%	6.51%	6.91%	7.10%	7.27%	7.62%	1.11%	7.91%	7.96%	8.08%	8.11%	9.22%
24	IDACORP, Inc.	4.54%	5.36%	5.24%	5.11%	5.02%	4.87%	4.70%	4.53%	4.26%	3.91%	3.62%	3.87%	4.11%	4.32%	4.48%	4.66%
25	MGE Energy	6.22%	5.22%	5.59%	5.60%	5.61%	5.79%	5.82%	5.84%	6.01%	6.22%	6.36%	6.56%	6.72%	6.87%	7.24%	7.77%
26	NextEra Energy, Inc.	6.38%	7.51%	6.61%	6.22%	6.55%	6.69%	6.29%	6.49%	6.36%	6.34%	6.12%	5.82%	5.99%	6.30%	6.22%	6.21%
27	NorthWestern Corp	5.85%	5.84%	5.72%	5.70%	5.76%	5.77%	5.78%	5.08%	5.71%	5.90%	6.08%	6.01%	6.13%	6.21%	6.06%	6.00%
28	OGE Energy	6.70%	8.71%	7.30%	6.96%	6.59%	6.70%	6.30%	5.84%	5.56%	5.70%	5.81%	6.24%	6.79%	6.89%	7.47%	7.61%
29	Otter Tail Corp.	7.23%	7.05%	7.19%	7.29%	7.27%	7.34%	7.70%	7.86%	8.07%	8.25%	7.52%	6.77%	6.33%	6.22%	6.67%	6.90%
30	PG&E Corp.	5.29%	N/A	N/A	0.00%	4.15%	5.44%	5.40%	5.50%	5.80%	6.00%	6.20%	6.38%	6.03%	6.01%	5.96%	5.88%
31	Pinnacle West Capital	6.17%	6.47%	6.37%	6.16%	6.03%	5.93%	5.91%	5.89%	5.84%	7.38%	6.00%	6.20%	6.42%	6.15%	5.98%	5.87%
32	PNM Resources	3.83%	5.23%	5.67%	5.12%	4.67%	4.18%	3.85%	3.37%	3.26%	2.89%	2.55%	2.84%	2.65%	3.20%	4.13%	3.89%
33	Portland General	4.74%	5.45%	5.26%	5.09%	4.94%	4.78%	4.64%	4.56%	4.70%	4.70%	4.78%	4.90%	4.93%	4.48%	4.42%	3.45%
34	PPL Corp.	8.95%	9.55%	9.48%	10.13%	10.18%	10.44%	10.19%	7.28%	7.43%	8.00%	7.48%	8.24%	9.47%	9.89%	8.20%	8.27%
35	Public Serv. Enterprise	6.88%	6.18%	6.34%	6.31%	6.27%	6.31%	6.03%	6.14%	6.28%	6.66%	6.75%	7.20%	7.66%	8.40%	8.15%	8.54%
36	SCANA Corp.	6.44%	N/A	N/A	N/A	6.67%	5.74%	5.72%	6.01%	6.14%	6.29%	6.48%	6.54%	6.80%	7.12%	6.94%	6.89%
37	Sempra Energy	5.30%	5.96%	6.32%	6.59%	6.53%	5.83%	5.89%	5.74%	5.60%	5.66%	4.68%	4.16%	4.27%	4.18%	3.89%	4.19%
38	Southern Co.	9.52%	9.59%	9.39%	9.95%	9.59%	8.89%	9.53%	9.48%	9.39%	9.22%	9.22%	9.38%	9.55%	9.74%	9.83%	10.07%
39	Vectren Corp.	7.71%	N/A	N/A	N/A	7.67%	7.60%	7.57%	7.51%	7.55%	7.57%	7.74%	7.78%	7.84%	7.85%	7.86%	7.97%
40	WEC Energy Group	6.09%	7.62%	7.36%	7.12%	6.94%	7.00%	6.35%	7.96%	7.71%	6.65%	6.05%	4.92%	4.42%	3.78%	3.77%	3.72%
41	Westar Energy	5.71%	N/A	N/A	N/A	5.82%	5.66%	5.57%	5.60%	5.70%	5.77%	5.81%	5.84%	5.83%	5.75%	5.64%	5.56%
42	Xcel Energy Inc.	6.13%	6.34%	6.44%	6.39%	6.38%	6.26%	6.13%	5.94%	5.78%	5.88%	5.91%	5.97%	6.09%	6.13%	6.19%	6.16%
43	Average	6.29%	6.65%	6.47%	6.51%	6.67%	6.44%	6.12%	6.07%	6.10%	6.28%	6.11%	6.08%	6.13%	6.36%	6.28%	6.10%
44	Median	6.06%	6.18%	6.32%	6.22%	6.23%	5.83%	5.81%	5.83%	5.82%	5.99%	6.09%	6.02%	6.01%	6.21%	6.21%	6.19%

Sources:

¹ The Value Line Investment Survey Investment Analyzer Software, downloaded on June 25, 2019.
 ² The Value Line Investment Survey, March 12, April 23, and May 14, 2021.

^a The Value Line Investment Survey, Match 12, April 23, and May 14, 2021.
 ^a The Value Line Investment Survey, January 24, February 14, and March 13, 2020.
 ^a Based on the projected 2019 Dividend Declared per share and Book Value per share, published in The Value Line Investment Survey, January 24, February 14, and March 13, 2020.

Electric Utilities (Valuation Metrics)

								Divi	dends to E	arnings Ra	itio ¹						
		14-Year	2/b	2/b													
Line	<u>Company</u>	Average (1)	(2)	(3)	<u>2018</u>	<u>2017</u> (5)	2016 (6)	2015 (7)	<u>2014</u> (8)	<u>2013</u>	2012 (10)	<u>2011</u> (11)	2010 (12)	<u>2009</u> (13)	2008 (14)	2007 (15)	2006 (16)
		(1)	(2)	(5)	(-)	(3)	(0)	(7)	(0)	(3)	(10)	(11)	(12)	(13)	(1-)	(13)	(10)
1	ALLETE	0.68	0.74	0.71	0.66	0.68	0.66	0.60	0.68	0.72	0.71	0.67	0.80	0.93	0.61	0.53	0.52
2	Alliant Energy	0.61	0.62	0.61	0.61	0.63	0.72	0.65	0.59	0.57	0.59	0.62	0.57	0.79	0.55	0.47	0.56
3	Ameren Corp.	0.68	0.57	0.57	0.56	0.64	0.64	0.70	0.67	0.76	0.66	0.63	0.56	0.55	0.88	0.85	0.95
4	American Electric Power	0.60	0.64	0.66	0.65	0.66	0.54	0.60	0.61	0.61	0.63	0.59	0.66	0.55	0.55	0.55	0.52
5	Avangrid, Inc.	0.90	0.94	0.73	0.91	1.03	0.87	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	Avista Corp.	0.66	0.85	0.53	0.72	0.73	0.64	0.70	0.69	0.66	0.88	0.64	0.61	0.51	0.51	0.83	0.39
7	Black Hills	1.14	0.58	0.59	0.56	0.54	0.64	0.57	0.54	0.58	0.75	1.45	0.87	0.61	7.78	0.51	0.60
8	CenterPoint Energy	0.75	0.70	0.58	1.51	0.86	1.03	0.92	0.67	0.67	0.60	0.62	0.73	0.75	0.56	0.58	0.45
9	CMS Energy Corp.	0.56	0.62	0.64	0.62	0.61	0.63	0.61	0.62	0.61	0.63	0.58	0.50	0.54	0.29	0.31	N/A
10	Consol. Edison	0.69	0.78	0.75	0.63	0.67	0.68	0.64	0.70	0.63	0.63	0.67	0.69	0.75	0.70	0.67	0.78
11	Dominion Resources	0.88	1.90	1.71	1.03	0.86	0.81	0.81	0.79	0.73	0.77	0.71	0.63	0.66	0.52	0.69	0.58
12	DTE Energy	0.65	0.58	0.61	0.58	0.59	0.63	0.64	0.53	0.69	0.62	0.63	0.58	0.65	0.78	0.80	0.85
13	Duke Energy	0.81	0.97	0.74	0.88	0.83	0.91	0.79	0.76	0.78	0.82	0.72	0.72	0.83	0.89	0.72	N/A
14	Edison Int'l	0.31	1.50	0.53	- 1.93	0.50	0.50	0.42	0.34	0.36	0.29	0.40	0.38	0.38	0.33	0.35	0.34
15	El Paso Electric	0.53	0.81	0.56	0.68	0.54	0.51	0.57	0.49	0.48	0.43	0.27	N/A	N/A	N/A	N/A	N/A
16	Entergy Corp.	0.53	0.54	0.58	0.61	0.67	0.50	0.57	0.58	0.67	0.55	0.44	0.49	0.48	0.48	0.46	0.40
17	Eversource Energy	0.59	0.64	0.62	0.62	0.61	0.60	0.61	0.61	0.59	0.70	0.50	0.49	0.50	0.44	0.49	0.88
18	Everay, Inc.	0.72	0.75	0.69	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19	Exelon Corp.	0.58	0.59	0.48	0.67	0.47	0.70	0.49	0.59	0.63	1.09	0.56	0.54	0.49	0.50	0.45	0.47
20	FirstEnergy Corp.	0.82	0.84	0.83	1.37	0.53	0.69	0.72	1.69	0.56	1.03	1.17	0.68	0.66	0.50	0.49	0.48
21	Fortis Inc.	0.70	0.76	0.69	0.69	0.62	0.82	0.68	0.94	0.77	0.73	0.67	0.69	0.69	0.66	0.64	0.49
22	Great Plains Energy	- 0.82	N/A	N/A	N/A	-18.33	0.66	0.73	0.60	0.54	0.63	0.67	0.54	0.81	1.43	0.90	1.02
23	Hawaiian Elec.	0.86	0.73	0.67	0.67	0.76	0.54	0.83	0.76	0.77	0.74	0.86	1.02	1.36	1.16	1.12	0.93
24	IDACORP, Inc.	0.50	0.58	0.58	0.53	0.53	0.53	0.50	0.46	0.43	0.41	0.36	0.41	0.45	0.55	0.65	0.51
25	MGE Energy	0.57	0.56	0.55	0.54	0.57	0.56	0.56	0.48	0.50	0.56	0.57	0.60	0.66	0.60	0.62	0.68
26	NextEra Energy, Inc.	0.54	0.67	0.64	0.66	0.60	0.60	0.51	0.52	0.55	0.53	0.45	0.42	0.47	0.44	0.50	0.47
27	NorthWestern Corp	0.68	0.78	0.65	0.65	0.63	0.59	0.66	0.54	0.62	0.65	0.57	0.64	0.66	0.75	0.89	0.95
28	OGE Energy	0.57	0.76	0.67	0.66	0.66	0.68	0.62	0.48	0.44	0.45	0.44	0.49	0.54	0.56	0.52	0.55
29	Otter Tail Corp.	1.12	0.63	0.65	0.65	0.69	0.78	0.79	0.78	0.87	1.13	2.64	3.13	1.68	1.09	0.66	0.68
30	PG&E Corp.	0.65	N/A	N/A	N/A	0.44	0.68	0.91	0.59	0.99	0.88	0.65	0.65	0.55	0.48	0.52	0.48
31	Pinnacle West Capital	0.70	0.66	0.68	0.63	0.61	0.65	0.62	0.65	0.61	0.76	0.70	0.68	0.93	0.99	0.71	0.64
32	PNM Resources	0.92	0.58	0.54	0.65	0.52	0.53	0.49	0.52	0.48	0.44	0.46	0.57	0.86	5.50	1.20	0.50
33	Portland General	0.62	0.92	0.63	0.60	0.59	0.58	0.58	0.51	0.62	0.57	0.54	0.62	0.77	0.70	0.40	0.59
34	PPL Corp.	0.64	0.81	0.69	0.64	0.75	0.54	0.63	0.63	0.62	0.55	0.54	0.61	1.16	0.55	0.46	0.48
35	Public Serv. Enterprise	0.52	0.54	0.51	0.65	0.61	0.58	0.47	0.49	0.59	0.58	0.44	0.45	0.43	0.44	0.45	0.62
36	SCANA Corp.	0.61	N/A	N/A	N/A	0.58	0.55	0.57	0.55	0.60	0.63	0.65	0.64	0.66	0.62	0.64	0.65
37	Sempra Energy	0.51	0.64	0.66	0.65	0.71	0.71	0.54	0.57	0.60	0.55	0.43	0.39	0.33	0.31	0.29	0.28
38	Southern Co.	0.75	0.78	0.79	0.79	0.72	0.79	0.76	0.75	0.75	0.73	0.73	0.76	0.75	0.74	0.70	0.73
39	Vectren Corp	0.75	N/A	N/A	N/A	0.66	0.64	0.64	0.72	0.86	0.72	0.80	0.84	0.75	0.80	0.69	0.85
40	WEC Energy Group	0.54	0.67	0.66	0.66	0.66	0.67	0.74	0.60	0.58	0.51	0.48	0.42	0.42	0.36	0.35	0.35
41	Westar Energy	0.68	N/A	N/A	N/A	0.70	0.63	0.69	0.60	0.60	0.61	0.72	0.69	0.94	0.89	0.59	0.52
42	Xcel Energy Inc	0.62	0.62	0.62	0.62	0.63	0.62	0.61	0.59	0.58	0.58	0.60	0.64	0.65	0.64	0.67	0.65
		0.02	0.02	0.02	0.02	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.0.	0.00	0.07	0.0.	0.00
43	Average	0.65	0.75	0.67	0.64	0.18	0.65	0.64	0.64	0.63	0.66	0.67	0.68	0.70	0.95	0.61	0.61
44	Median	0.62	0.67	0.64	0.65	0.63	0.64	0.63	0.60	0.61	0.63	0.62	0.62	0.66	0.60	0.59	0.56

Sources:

² The Value Line Investment Survey Investment Analyzer Software, downloaded on June 25, 2019.
 ² The Value Line Investment Survey, March 12, April 23, and May 14, 2021.
 ³ The Value Line Investment Survey, January 24, February 14, and March 13, 2020.

¹ The Value Line International Content of the Value Line Investment Survey, January 24, February 14, and March 13, 2020.

Electric Utilities (Valuation Metrics)

								Cash Flo	ow to Capit	al Spendin	g Ratio ¹						
		14-Year															
Line	Company	Average	2020 2/c	2019 2/c	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1		0.82	0.55	0.63	1 22	1.61	1 32	1 16	0.45	0.67	0.49	0.77	0.63	0.39	0.46	0.65	1 23
2	Alliant Energy	0.79	0.95	0.73	N/A	0.49	N/A	0.81	0.91	1 01	0.57	0.91	0.67	0.39	0.57	1 04	1.20
3	Ameren Corp	0.90	0.62	0.79	0.80	0.75	0.75	0.75	0.75	0.89	1 07	1.31	1.36	0.81	0.66	0.97	1 21
4	American Electric Power	0.88	0.81	0.75	0.68	0.67	0.85	0.85	0.87	0.91	1.07	1 19	1 24	1 02	0.00	0.77	0.75
5	Avangrid Inc	0.00	0.56	0.70	0.85	0.57	0.86	0.89	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	Avista Corp	0.90	0.88	0.89	0.00	0.77	0.84	0.05	0.80	0.86	0.80	0.90	0.99	1 15	0.97	0.73	1.36
7	Black Hills	0.65	0.61	0.51	0.87	1 17	0.71	0.64	0.00	0.00	0.00	0.00	0.41	0.61	0.35	0.76	0.55
8	CenterPoint Energy	1.05	0.73	0.83	0.07	1.17	1 12	0.04	1 20	1 18	1 37	1 12	0.88	0.99	1 16	0.70	1.08
ă	CMS Energy Corp	0.87	0.78	0.00	0.00	0.89	0.81	0.81	0.74	0.82	0.82	1.05	1 13	0.97	1 11	0.55	1.00
10	Consol Edison	0.82	0.70	0.79	0.82	0.05	0.65	0.76	0.88	0.86	1 01	0.98	0.90	0.75	0.70	0.81	0.74
11	Dominion Resources	0.78	0.00	0.75	1.04	0.70	0.65	0.64	0.63	0.00	0.73	0.50	0.87	0.75	0.70	0.74	0.85
12	DTE Energy	1.01	0.74	0.83	0.84	0.94	0.00	0.84	1.02	0.96	0.70	1.09	1 51	1 50	0.00	1.07	1.03
12	Duke Energy	0.90	0.74	0.03	0.04	0.34	0.33	0.04	1.02	1.00	0.33	0.89	0.78	0.77	0.30	1.07	0.07
14	Edison Int'l	0.30	0.05	0.70	0.34	0.07	0.02	0.30	0.83	0.80	0.07	0.63	0.70	0.70	0.71	0.88	0.37
15	El Paso Electric	0.70	0.83	0.05	0.86	1.04	0.85	0.67	0.00	0.00	0.70	1.03	0.00	0.68	0.30	0.00	1.26
16	Entergy Corp	0.07	0.03	0.30	0.00	0.76	1.08	1.05	1 19	1.03	0.00	1.05	1 24	1.02	0.70	1 14	1.20
17	Eversource Epergy	0.85	0.04	0.78	0.70	0.70	0.87	0.01	0.90	1.00	0.00	0.80	1.24	0.96	0.55	0.68	0.67
18	Everav Inc	1 10	1.03	1 34	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10	Evelop Corp	1.15	1.00	1.04	1.05	1.06	0.76	0.82	0.03	1.07	0.08	1 10	1.66	1.66	1.61	1.8/	1.86
20	Exclorit Corp.	1.23	0.83	0.74	0.76	1.00	0.70	0.02	0.53	0.01	0.30	1.15	1.00	1.00	0.95	1.64	1.00
20	Fortis Inc	0.68	0.65	0.68	0.70	0.76	0.34	0.55	0.54	0.31	0.00	0.66	0.68	0.63	0.55	0.57	0.63
21	Great Plains Energy	0.00	N/A	N/A	N/A	0.70	1 17	0.00	0.00	0.01	0.72	1.03	0.00	0.00	0.00	0.57	0.03
22	Hawaiian Elec	1.08	1 27	1 1 2	0.85	0.70	1.17	0.30	1.03	0.91	0.00	1.00	1.50	0.30	0.33	1 15	1 23
23		1.08	1.27	1.12	1 /2	1 33	1.37	1 15	1.03	1.34	1.24	0.86	0.78	0.79	0.87	0.64	0.80
24	MCE Enormy	1.03	0.92	0.07	0.66	1.00	1.10	1.10	1.21	0.06	1.24	1.56	1.57	1 1 2	0.02	0.04	0.03
20	NextEra Energy Inc.	0.62	0.62	0.97	0.00	0.53	0.63	0.71	0.77	0.90	0.30	0.58	0.69	0.60	0.67	0.59	0.00
20	Nextera Energy, Inc.	1.02	0.00	1.07	1.00	1.00	1 1 2	1.01	0.77	0.08	0.39	1.04	0.09	0.00	1.03	1.00	1 20
21		1.05	1.04	1.07	1.23	0.01	1.13	1.01	0.93	0.92	0.00	0.51	0.70	0.66	1.27	0.70	1.29
20	Ottor Tail Corp	0.89	0.49	0.80	1.30	1 10	0.94	0.74	0.70	0.09	0.03	1.16	1.09	0.01	0.00	0.79	1 4 4
29	BCSE Corp.	0.80	0.40 NI/A	0.80	0.69	0.92	0.84	0.74	0.70	0.67	0.85	1.10	0.95	0.50	0.37	1.03	1.44
21	Pinnacle West Capital	0.70	0.01	0.09	- 0.56	0.82	0.73	0.09	0.80	0.50	0.08	0.83	0.85	1.06	0.04	0.00	1.12
22	Philade West Capital	0.95	0.91	0.98	0.00	0.70	0.61	0.92	0.97	0.87	0.90	0.91	0.97	0.70	0.80	0.99	0.00
22	Pinivi Resources	0.71	0.72	0.72	1.00	1.07	0.57	0.57	0.03	0.80	1.00	1.25	0.82	0.70	0.44	0.43	0.89
24	Politario General	0.64	0.76	0.99	0.02	1.07	0.00	0.60	0.47	0.59	1.20	1.25	0.01	0.44	1.25	0.72	0.70
34	Pre Corp.	0.90	0.90	1.92	0.93	0.62	1.00	0.72	1.04	0.09	0.91	1.07	1.11	1.07	1.20	1.13	1.10
20	SCANA Corp	0.96	1.13 N/A	1.07 N/A	0.70	0.04	0.01	0.80	0.00	0.93	0.90	1.30	0.96	0.76	0.76	0.02	1.94
27	SCANA COIP.	0.80	0.77	N/A	0.00	0.80	0.00	0.83	0.90	0.83	0.77	0.88	0.80	1.02	0.70	0.92	0.02
31	Sempra Energy	0.60	0.77	0.66	0.00	0.67	0.56	0.01	0.74	0.64	0.73	0.72	0.90	0.79	0.07	0.90	1.00
20	Southern Corp	0.88	0.99	0.00	0.85	0.90	0.77	0.66	0.80	1.05	0.93	1.34	0.93	0.78	0.87	0.91	1.00
39	Vectien Corp.	1.00	N/A	N/A	IN/A	0.62	0.07	0.95	0.96	1.05	1.13	1.20	1.31	0.83	0.62	0.96	1.00
40	Wester Factory	0.98	0.97	0.91	0.90	0.92	1.20	0.97	1.37	1.42	1.30	1.02	0.97	0.89	0.61	0.56	0.69
41	Westar Energy	0.72	N/A	N/A	N/A	0.91	0.63	0.00	0.70	0.72	0.67	0.71	0.00	0.66	0.36	0.46	1.00
42	Acei Energy Inc.	0.75	0.00	0.69	0.77	0.84	0.79	0.63	0.08	0.60	0.76	0.83	0.76	0.89	0.75	0.71	0.90
43	Average	0.89	0.83	0.86	0.85	0.89	0.88	0.86	0.87	0.88	0.88	0.96	0.98	0.86	0.80	0.88	1.05
44	Median	0.85	0.81	0.80	0.83	0.84	0.84	0.83	0.82	0.86	0.87	0.96	0.90	0.80	0.80	0.82	1.00

Sources:

Sources:
 ¹ The Value Line Investment Survey Investment Analyzer Software, downloaded on June 25, 2019.
 ² The Value Line Investment Survey, March 12, April 23, and May 14, 2021.
 ³ The Value Line Investment Survey, January 24, February 14, and March 13, 2020.
 Notes:
 ^c Based on the projected Cash Flow per share and Capital Spending per share

Natural Gas Utilities (Valuation Metrics)

								Price	e to Earnin	igs (P/E) Ra	atio ¹						
Line	Company	15-Year Average	2020 ²	2019 ²	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
	<u>oompany</u>	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1	Atmos Energy	17.24	22.30	23.20	21.75	22.04	20.80	17.50	16.09	15.87	15.93	14.36	13.21	12.54	13.59	15.87	13.52
2	Chesapeake Utilities	18.58	22.40	27.10	22.94	27.84	21.77	19.15	17.70	15.62	14.81	14.16	12.21	14.20	14.15	16.72	17.85
3	New Jersey Resources	17.27	17.70	24.30	15.64	22.38	21.25	16.61	11.73	15.98	16.83	16.76	14.98	14.93	12.27	21.61	16.13
4	NiSource Inc.	19.96	18.70	22.30	19.34	NMF	23.18	37.34	22.74	18.89	17.87	19.36	15.33	14.34	12.07	18.82	19.16
5	Northwest Nat. Gas	21.28	25.50	32.20	26.63	NMF	26.92	23.69	20.69	19.38	21.08	19.02	16.97	15.17	18.08	16.74	15.85
6	ONE Gas Inc.	22.08	22.40	25.30	23.06	23.47	22.74	19.79	17.83	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
7	South Jersey Inds.	18.91	15.60	28.80	22.64	27.92	21.71	17.95	18.03	18.90	16.94	18.48	16.81	14.96	15.90	17.18	11.86
8	Southwest Gas	17.69	17.40	20.20	20.61	22.21	21.64	19.35	17.86	15.76	15.00	15.69	13.97	12.20	20.27	17.26	15.94
9	Spire Inc.	16.66	NMF	22.80	16.74	19.82	19.61	16.49	19.80	21.25	14.46	13.05	13.74	13.39	14.31	14.19	13.60
10	UGI Corp.	15.94	13.80	23.40	17.77	20.84	19.33	17.71	15.81	15.44	16.38	15.03	10.86	10.30	13.30	15.14	13.97
11	WGL Holdings Inc.	16.71	N/A	N/A	N/A	25.40	20.05	16.99	15.15	18.25	15.27	16.97	15.11	12.58	13.66	15.60	15.46
12	Average	18.22	19.53	24.96	20.71	23.55	21.73	20.23	17.58	17.53	16.46	16.29	14.32	13.46	14.76	16.91	15.33
13	Median	17.84	18.70	23.85	21.18	22.38	21.64	17.95	17.83	17.11	16.15	16.22	14.48	13.80	13.91	16.73	15.66
								Market Pri	ce to Cash	Flow (MP/	CF) Ratio						

		15-Year															
Line	Company	Average	2020 ^{2/a}	2019 2/a	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
14	Atmos Energy	8.88	12.39	13.50	12.02	11.99	11.36	9.30	8.79	7.72	7.02	6.87	6.15	5.76	6.48	7.44	6.36
15	Chesapeake Utilities	9.82	11.90	13.25	12.24	13.78	12.06	10.16	9.25	8.12	7.46	7.35	6.36	9.48	7.88	8.58	9.40
16	New Jersey Resources	11.91	9.97	15.30	11.44	14.45	13.94	11.71	8.95	11.29	12.29	12.71	11.32	11.34	9.15	13.76	11.01
17	NiSource Inc.	7.96	8.08	9.89	8.91	12.11	8.56	10.38	10.56	8.71	7.81	6.81	5.09	4.06	4.87	6.69	6.87
18	Northwest Nat. Gas	13.11	11.28	14.59	11.75	59.72	11.57	9.46	8.84	8.61	9.48	9.08	8.94	8.26	8.75	8.54	7.83
19	ONE Gas Inc.	10.80	11.01	12.41	11.85	11.89	11.10	9.19	8.16	N/A							
20	South Jersey Inds.	10.93	9.74	14.21	10.72	12.33	10.88	10.70	10.57	11.57	10.95	11.98	10.78	9.57	10.38	11.23	8.32
21	Southwest Gas	6.39	6.60	9.03	9.32	9.10	7.41	6.56	6.35	5.94	5.55	5.60	4.91	3.84	4.89	5.42	5.28
22	Spire Inc.	9.90	13.20	11.21	9.60	10.39	10.32	8.47	12.03	13.76	8.80	8.08	8.12	8.58	8.95	8.46	8.46
23	UGI Corp.	7.82	6.74	11.87	9.01	10.09	9.02	8.47	7.49	6.55	6.30	7.51	6.02	5.74	7.11	7.92	7.48
24	WGL Holdings Inc.	9.17	N/A	N/A	N/A	12.92	11.36	9.59	8.46	9.83	9.03	9.52	8.34	7.17	7.68	8.39	7.81
25	Average	9.61	10.09	12.53	10.69	16.25	10.69	9.45	9.04	9.21	8.47	8.55	7.60	7.38	7.62	8.64	7.88
26	Median	9.31	10.49	12.83	11.08	12.11	11.10	9.46	8.84	8.66	8.31	7.80	7.24	7.71	7.78	8.42	7.82

							Ν	Aarket Pric	e to Book	Value (MP/	BV) Ratio	1					
		15-Year															
Line	Company	Average	2020 ^{2/b}	2019 ^{2/b}	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>	2013	<u>2012</u>	<u>2011</u>	<u>2010</u>	2009	2008	2007	2006
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
27	Atmos Energy	1.58	1.84	2.12	2.03	2.16	2.11	1.72	1.55	1.39	1.28	1.30	1.18	1.05	1.20	1.40	1.34
28	Chesapeake Utilities	1.98	2.46	2.51	2.50	2.51	2.28	2.19	2.12	1.83	1.66	1.61	1.40	1.37	1.64	1.84	1.85
29	New Jersey Resources	2.24	1.71	2.63	2.63	2.70	2.52	2.28	2.13	2.05	2.33	2.31	2.09	2.16	1.92	2.17	2.01
30	NiSource Inc.	1.50	1.82	2.03	1.92	1.96	1.84	1.95	1.94	1.58	1.37	1.15	0.92	0.69	0.94	1.16	1.19
31	Northwest Nat. Gas	1.91	1.95	2.54	2.35	2.41	1.92	1.63	1.59	1.56	1.72	1.70	1.78	1.73	1.96	2.05	1.69
32	ONE Gas Inc.	1.69	1.88	2.16	1.93	1.89	1.67	1.26	1.07	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
33	South Jersey Inds.	2.07	1.58	1.89	2.11	2.29	1.79	1.77	2.07	2.27	2.21	2.59	2.38	1.95	2.08	2.21	1.93
34	Southwest Gas	1.55	1.34	1.83	1.79	2.13	1.96	1.68	1.68	1.61	1.51	1.43	1.24	0.97	1.20	1.46	1.46
35	Spire Inc.	1.57	1.57	1.77	1.63	1.65	1.64	1.44	1.33	1.34	1.51	1.46	1.39	1.68	1.71	1.66	1.71
36	UGI Corp.	2.03	1.70	2.68	2.30	2.62	2.41	2.29	1.97	1.69	1.45	1.75	1.55	1.66	2.01	2.16	2.21
37	WGL Holdings Inc.	1.81	N/A	N/A	N/A	2.69	2.45	2.15	1.69	1.71	1.66	1.63	1.50	1.45	1.59	1.64	1.59
38	Average	1.81	1.79	2.22	2.12	2.27	2.05	1.85	1.74	1.70	1.67	1.69	1.54	1.47	1.62	1.78	1.70
39	Median	1.78	1.77	2.14	2.07	2.29	1.96	1.77	1.69	1.65	1.58	1.62	1.45	1.56	1.67	1.75	1.70

Sources:

² The Value Line Investment Survey Investment Analyzer Software, downloaded on June 25, 2019.
 ² The Value Line Investment Survey, Feb 26, 2021.

^a The Value Life investment Gov(y), so 2, ..., Notes:
 ^a Based on the average of the high and low price for year and the projected Cash Flow per share, published in The Value Line Investment Survey.
 ^b Based on the average of the high and low price for the year and the projected Book Value per share, published in The Value Line Investment Survey.

Natural Gas Utilities (Valuation Metrics)

									Dividen	d Yield ¹							
	_	15-Year	01-	01-													
Line	Company	Average	2020 2/3	2019 2/4	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1	Atmos Energy	3.52%	2.31%	2.05%	2.23%	2.27%	2.39%	2.88%	3.11%	3.53%	4.13%	4.19%	4.70%	5.34%	4.78%	4.16%	4.66%
2	Chesapeake Utilities	2.84%	1.87%	1.76%	1.76%	1.69%	1.91%	2.18%	2.44%	2.87%	3.25%	3.36%	3.91%	4.09%	4.10%	3.62%	3.76%
3	New Jersey Resources	3.23%	3.86%	2.60%	2.61%	2.69%	2.86%	3.14%	3.50%	3.71%	3.38%	3.33%	3.69%	3.46%	3.35%	3.02%	3.19%
4	NiSource Inc.	4.02%	3.35%	2.89%	3.10%	2.79%	2.76%	3.53%	2.69%	3.30%	3.84%	4.53%	5.66%	7.64%	5.69%	4.29%	4.21%
5	Northwest Nat. Gas	3.53%	3.19%	2.89%	3.05%	3.02%	3.28%	4.01%	4.14%	4.22%	3.83%	3.85%	3.63%	3.73%	3.27%	3.12%	3.73%
6	ONE Gas Inc.	2.45%	2.69%	2.32%	2.46%	2.37%	2.32%	2.71%	2.28%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
7	South Jersey Inds.	3.39%	4.61%	3.80%	3.62%	3.20%	3.64%	3.95%	3.40%	3.14%	3.22%	2.81%	3.00%	3.43%	3.08%	2.81%	3.15%
8	Southwest Gas	2.89%	3.55%	2.62%	2.74%	2.46%	2.62%	2.87%	2.72%	2.69%	2.75%	2.78%	3.15%	4.01%	3.19%	2.56%	2.60%
9	Spire Inc.	3.79%	3.59%	2.97%	3.10%	3.09%	3.08%	3.53%	3.78%	3.96%	4.11%	4.31%	4.70%	3.91%	3.94%	4.43%	4.34%
10	UGI Corp.	2.87%	3.93%	2.35%	2.09%	2.01%	2.35%	2.50%	2.61%	3.01%	3.68%	3.30%	3.48%	3.23%	2.85%	2.69%	2.96%
11	WGL Holdings Inc.	3.91%	N/A	N/A	N/A	2.56%	2.94%	3.41%	4.24%	3.94%	3.89%	4.06%	4.37%	4.62%	4.22%	4.19%	4.48%
12	Average	3.36%	3.30%	2.63%	2.68%	2.56%	2.74%	3.16%	3.17%	3.44%	3.61%	3.65%	4.03%	4.35%	3.85%	3.49%	3.71%
13	Median	3.31%	3.45%	2.61%	2.68%	2.56%	2.76%	3.14%	3.11%	3.42%	3.75%	3.60%	3.80%	3.96%	3.65%	3.37%	3.75%
14	20-Yr Treasury Yields ³	3 26%	1.35%	2 40%	3.02%	2 65%	2 23%	2 55%	3.07%	3 12%	2 54%	3.62%	4 03%	4 11%	4 36%	4 91%	4 99%
15	20-Vr TIPS ³	1 15%	-0.30%	0.60%	0.02%	0.75%	0.66%	0.78%	0.87%	0.75%	0.21%	1 19%	1 73%	2 21%	2 10%	2.36%	2 31%
40	In a line of the first of the f	0.000/	4.000/	4.700/	0.0470	4.000/	4.500/0	4.750/	0.07 %	0.75%	0.2170	0.400/	0.000/	2.2170	2.1370	2.30%	2.0170
16	Implied Inflation	2.09%	1.66%	1.79%	2.06%	1.89%	1.56%	1.75%	2.19%	2.35%	2.33%	2.40%	2.26%	1.85%	2.13%	2.49%	2.62%
17	Real Dividend Yield ^c	1.24%	1.61%	0.82%	0.60%	0.65%	1.17%	1.38%	0.96%	1.06%	1.25%	1.22%	1.73%	2.45%	1.68%	0.97%	1.06%
	Utility																
18	Nominal "A" Rated Yield ⁴	4.75%	3.02%	3.77%	4.25%	4.00%	3.93%	4.12%	4.28%	4.48%	4.13%	5.04%	5.46%	6.04%	6.53%	6.07%	6.07%
19	Real "A" Rated Yield	2.60%	1.33%	1.94%	2.14%	2.07%	2.34%	2.33%	2.04%	2.08%	1.76%	2.58%	3.13%	4.11%	4.31%	3.49%	3.36%
	Spreads (Utility Bond - Stock)																
20	Nominal ^d	1 30%	-0 28%	1 14%	1 57%	1 44%	1 10%	0.96%	1 11%	1 04%	0 52%	1 39%	1 43%	1 69%	2.68%	2 59%	2 36%
20	DI [®]	1.00%	-0.20%	1.14%	1.57 %	1.4470	1.1370	0.50%	1.1170	1.0476	0.52 /6	1.00%	1.40%	1.00 %	2.00%	2.55%	2.00%
21	Real	1.36%	-0.28%	1.12%	1.54%	1.41%	1.17%	0.94%	1.08%	1.01%	0.51%	1.36%	1.40%	1.66%	2.62%	2.52%	2.30%
	Spreads (Treasury Bond - Stock)																
22	Nominal	-0.09%	-1.94%	-0.22%	0.34%	0.09%	-0.52%	-0.61%	-0.10%	-0.32%	-1.06%	-0.03%	0.00%	-0.24%	0.51%	1.42%	1.28%
23	Real ⁹	-0.09%	-1.91%	-0.22%	0.34%	0.09%	-0.51%	-0.60%	-0.10%	-0.31%	-1.04%	-0.03%	0.00%	-0.23%	0.50%	1.39%	1.25%
																	/0



www.moodys.com, Bond Yields and Key Indicators, through December 31, 2020.

 Notes:
 a Based on the average of the high and low price for the year and the projected Dividends Declared per share published in the Value Line Investment Survey.

^b Line 16 = (1 + Line 14) / (1 + Line 15) - 1.^c Line 17 = (1 + Line 12) / (1 + Line 16) - 1.

Sources: ¹ The Value Line Investment Survey Investment Analyzer Software, downloaded on June 25, 2019.

² The Value Line Investment Survey Investment Analyzer Software, downloadec
²
³ The Value Line Investment Survey, Feb 26, 2021.
³ St. Louis Federal Reserve: Economic Research, http://research.stlouisfed.org.

^d The spread being measured here is the nominal A-rated utility bond yield over the average nominal utility dividend yield; (Line 18 - Line 12).

 ⁶ The spread being measured here is the real A-rated utility bond yield over the average real utility dividend yield; Line 19 - Line 17)
 ⁷ The spread being measured here is the nominal 20-Year Treasury yield over the average nominal utility dividend yield; Line 14 - Line 12).
 ⁹ The spread being measured here is the real 20-Year TIPS yield over the average real utility dividend yield; Line 15 - Line 17)

Natural Gas Utilities (Valuation Metrics)

								D	ividend pe	er Share ¹							
<u>Line</u>	Company	15-Year <u>Average</u>	<u>2020 ²</u>	<u>2019 ²</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>	<u>2012</u>	<u>2011</u>	<u>2010</u>	<u>2009</u>	<u>2008</u>	<u>2007</u>	<u>2006</u>
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1	Atmos Energy	1.57	2.30	2.10	1.94	1.80	1.68	1.56	1.48	1.40	1.38	1.36	1.34	1.32	1.30	1.28	1.26
2	Chesapeake Utilities	1.08	1.69	1.55	1.39	1.26	1.19	1.12	1.07	1.01	0.96	0.91	0.87	0.83	0.81	0.78	0.77
3	New Jersey Resources	0.83	1.27	1.19	1.11	1.04	0.98	0.93	0.86	0.81	0.77	0.72	0.68	0.62	0.56	0.51	0.48
4	NiSource Inc.	0.87	0.84	0.80	0.78	0.70	0.64	0.83	1.02	0.98	0.94	0.92	0.92	0.92	0.92	0.92	0.92
5	Northwest Nat. Gas	1.74	1.91	1.90	1.89	1.88	1.87	1.86	1.85	1.83	1.79	1.75	1.68	1.60	1.52	1.44	1.39
6	ONE Gas Inc.	1.59	2.16	2.00	1.84	1.68	1.40	1.20	0.84	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
7	South Jersey Inds.	0.86	1.19	1.16	1.13	1.10	1.06	1.02	0.96	0.90	0.83	0.75	0.68	0.61	0.56	0.51	0.46
8	Southwest Gas	1.43	2.26	2.18	2.08	1.98	1.80	1.62	1.46	1.32	1.18	1.06	1.00	0.95	0.90	0.86	0.82
9	Spire Inc.	1.81	2.49	2.37	2.25	2.10	1.96	1.84	1.76	1.70	1.66	1.61	1.57	1.53	1.49	1.45	1.40
10	UGI Corp.	0.78	1.32	1.15	1.02	0.96	0.93	0.89	0.79	0.74	0.71	0.68	0.60	0.52	0.50	0.48	0.46
11	WGL Holdings Inc.	1.62	N/A	N/A	N/A	2.02	1.93	1.83	1.72	1.66	1.59	1.55	1.50	1.47	1.41	1.37	1.35
12	Average	1.27	1.74	1.64	1.54	1.50	1.40	1.34	1.25	1.24	1.18	1.13	1.08	1.04	1.00	0.96	0.93
13	Industry Average Growth	4.60%	6.28%	6.27%	2.76%	6.99%	5.03%	6.50%	1.58%	4.67%	4.35%	4.34%	4.47%	4.20%	3.83%	3.13%	

Sources:

¹ The Value Line Investment Survey Investment Analyzer Software, downloaded on June 25, 2019.

² The Value Line Investment Survey, Feb 26, 2021.

Natural Gas Utilities (Valuation Metrics)

									Earnings p	er Share ¹							
	-	15-Year															
Line	Company	Average	2020 ²	2019 ²	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1	Atmos Energy	2.87	4.72	4.35	4.00	3.60	3.38	3.09	2.96	2.50	2.10	2.26	2.16	1.97	2.00	1.94	2.00
2	Chesapeake Utilities	2.32	4.05	3.40	3.45	2.68	2.86	2.68	2.47	2.26	1.99	1.91	1.82	1.43	1.39	1.29	1.15
3	New Jersey Resources	1.56	2.07	1.96	2.72	1.73	1.61	1.78	2.08	1.37	1.36	1.29	1.23	1.20	1.35	0.78	0.93
4	NiSource Inc.	1.14	1.32	1.25	1.30	0.39	1.00	0.63	1.67	1.57	1.37	1.05	1.06	0.84	1.34	1.14	1.14
5	Northwest Nat. Gas	2.07	2.25	2.10	2.33	-1.94	2.12	1.96	2.16	2.24	2.22	2.39	2.73	2.83	2.57	2.76	2.35
6	ONE Gas Inc.	2.92	3.68	3.51	3.25	3.02	2.65	2.24	2.07	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
7	South Jersey Inds.	1.34	1.60	1.10	1.38	1.23	1.34	1.44	1.57	1.52	1.52	1.45	1.35	1.19	1.14	1.05	1.23
8	Southwest Gas	2.81	4.00	3.75	3.68	3.62	3.18	2.92	3.01	3.11	2.86	2.43	2.27	1.94	1.39	1.95	1.98
9	Spire Inc.	2.79	1.44	3.52	4.33	3.43	3.24	3.16	2.35	2.02	2.79	2.86	2.43	2.92	2.64	2.31	2.37
10	UGI Corp.	1.79	2.67	2.28	2.74	2.29	2.05	2.01	1.92	1.59	1.17	1.37	1.59	1.57	1.33	1.18	1.10
11	WGL Holdings Inc.	2.56	N/A	N/A	N/A	3.11	3.27	3.16	2.68	2.31	2.68	2.25	2.27	2.53	2.44	2.09	1.94
12	Average	2.15	2.78	2.72	2.92	2.11	2.43	2.28	2.27	2.05	2.01	1.93	1.89	1.84	1.76	1.65	1.62
13	Industry Average Growth	4.46%	2.13%	-6.72%	38.59%	-13.26%	6.50%	0.54%	10.67%	2.13%	4.13%	1.87%	2.61%	4.79%	6.67%	1.82%	

Sources:

¹ The Value Line Investment Survey Investment Analyzer Software, downloaded on June 25, 2019.

² The Value Line Investment Survey, Feb 26, 2021.

Natural Gas Utilities (Valuation Metrics)

		Ca	ash Flow /	Capital Spe	nding
<u>Line</u>	<u>Company</u>	<u>2019</u> (1)	<u>2020</u> (2)	<u>2021</u> (3)	3 - 5 yr <u>Projection</u> (4)
1	Atmos Energy	0.53x	0.53x	0.53x	0.68x
2	Chesapeake Utilities	0.66x	0.64x	0.71x	0.88x
3	New Jersey Resources	1.41x	0.65x	0.72x	0.98x
4	NiSource Inc.	0.66x	0.65x	0.69x	0.94x
5	Northwest Nat. Gas	0.77x	0.75x	0.61x	0.73x
6	ONE Gas Inc.	0.78x	0.88x	0.86x	1.02x
7	South Jersey Inds.	0.48x	0.47x	0.49x	0.50x
8	Southwest Gas	0.62x	0.53x	0.61x	0.53x
9	Spire Inc.	0.65x	0.65x	0.70x	0.90x
10	UGI Corp.	1.33x	1.54x	1.66x	1.75x
11	Average	0.79x	0.73x	0.76x	0.89x
12	Median	0.66x	0.65x	0.69x	0.89x

Sources:

The Value Line Investment Survey Investment Analyzer Software, downloaded on June 25, 2019.

The Value Line Investment Survey, Feb 26, 2021.

Notes:

Based on the projected Cash Flow per share and Capital Spending per share.

Natural Gas Utilities (Valuation Metrics)

								Percen	t Dividend	s to Book	Value ¹						
		15-Year	21-	2/-													
Line	<u>Company</u>	Average	<u>2020 ^{2/a}</u>	2019 ^{2/a}	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>	<u>2012</u>	<u>2011</u>	<u>2010</u>	2009	2008	<u>2007</u>	<u>2006</u>
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1	Atmos Energy	5.16%	4.26%	4.36%	4.53%	4.90%	5.04%	4.96%	4.81%	4.92%	5.28%	5.44%	5.55%	5.61%	5.75%	5.82%	6.25%
2	Chesapeake Utilities	5.30%	4.60%	4.42%	4.39%	4.23%	4.35%	4.78%	5.18%	5.25%	5.39%	5.42%	5.49%	5.60%	6.71%	6.66%	6.95%
3	New Jersey Resources	7.14%	6.59%	6.85%	6.87%	7.26%	7.21%	7.16%	7.45%	7.60%	7.86%	7.69%	7.72%	7.48%	6.42%	6.54%	6.40%
4	NiSource Inc.	5.47%	6.11%	5.86%	5.96%	5.46%	5.08%	6.89%	5.22%	5.22%	5.25%	5.19%	5.22%	5.25%	5.34%	4.97%	5.02%
5	Northwest Nat. Gas	6.61%	6.23%	7.36%	7.16%	7.27%	6.30%	6.53%	6.58%	6.59%	6.57%	6.55%	6.44%	6.43%	6.41%	6.39%	6.32%
6	ONE Gas Inc.	4.14%	5.06%	5.01%	4.73%	4.48%	3.88%	3.41%	2.44%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
7	South Jersey Inds.	6.93%	7.28%	7.18%	7.63%	7.34%	6.53%	6.98%	7.04%	7.12%	7.09%	7.26%	7.13%	6.69%	6.40%	6.22%	6.09%
8	Southwest Gas	4.39%	4.77%	4.80%	4.90%	5.25%	5.14%	4.82%	4.57%	4.33%	4.16%	3.98%	3.90%	3.89%	3.83%	3.74%	3.80%
9	Spire Inc.	5.91%	5.63%	5.25%	5.06%	5.09%	5.06%	5.07%	5.04%	5.31%	6.22%	6.30%	6.53%	6.56%	6.74%	7.33%	7.43%
10	UGI Corp.	5.64%	6.70%	6.29%	4.82%	5.28%	5.65%	5.72%	5.14%	5.07%	5.35%	5.77%	5.41%	5.35%	5.72%	5.82%	6.54%
11	WGL Holdings Inc.	6.86%	N/A	N/A	N/A	6.88%	7.21%	7.33%	7.14%	6.73%	6.45%	6.60%	6.57%	6.72%	6.71%	6.88%	7.13%
12	Average	5.85%	5.72%	5.74%	5.60%	5.77%	5.59%	5.78%	5.51%	5.82%	5.96%	6.02%	6.00%	5.96%	6.00%	6.04%	6.19%
13	Median	5.73%	5.87%	5.56%	4.98%	5.28%	5.14%	5.72%	5.18%	5.28%	5.80%	6.03%	5.99%	6.02%	6.41%	6.30%	6.36%

								Divid	lends to E	arnings Ra	tio ¹						
		15-Year															
Line	Company	Average	2020 ^{2/b}	2019 ^{2/b}	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>	2013	2012	<u>2011</u>	<u>2010</u>	2009	2008	2007	2006
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
14	Atmos Energy	0.57	0.49	0.48	0.49	0.50	0.50	0.50	0.50	0.56	0.66	0.60	0.62	0.67	0.65	0.66	0.63
15	Chesapeake Utilities	0.49	0.42	0.46	0.40	0.47	0.42	0.42	0.43	0.45	0.48	0.48	0.48	0.58	0.58	0.61	0.67
16	New Jersey Resources	0.54	0.61	0.61	0.41	0.60	0.61	0.52	0.41	0.59	0.57	0.56	0.55	0.52	0.41	0.65	0.51
17	NiSource Inc.	0.85	0.64	0.64	0.60	1.79	0.64	1.32	0.61	0.62	0.69	0.88	0.87	1.10	0.69	0.81	0.81
18	Northwest Nat. Gas	0.63	0.85	0.90	0.81	- 0.97	0.88	0.95	0.86	0.82	0.81	0.73	0.62	0.57	0.59	0.52	0.59
19	ONE Gas Inc.	0.54	0.59	0.57	0.57	0.56	0.53	0.54	0.41	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
20	South Jersey Inds.	0.64	0.74	1.05	0.82	0.89	0.79	0.71	0.61	0.59	0.54	0.52	0.50	0.51	0.49	0.48	0.37
21	Southwest Gas	0.50	0.57	0.58	0.57	0.55	0.57	0.55	0.49	0.42	0.41	0.44	0.44	0.49	0.65	0.44	0.41
22	Spire Inc.	0.69	1.73	0.67	0.52	0.61	0.60	0.58	0.75	0.84	0.59	0.56	0.65	0.52	0.56	0.63	0.59
23	UGI Corp.	0.44	0.49	0.50	0.37	0.42	0.45	0.44	0.41	0.46	0.60	0.50	0.38	0.33	0.38	0.41	0.41
24	WGL Holdings Inc.	0.64	N/A	N/A	N/A	0.65	0.59	0.58	0.64	0.72	0.59	0.69	0.66	0.58	0.58	0.65	0.69
25	Average	0.60	0.71	0.65	0.55	0.55	0.60	0.65	0.56	0.61	0.59	0.59	0.58	0.59	0.56	0.59	0.57
26	Median	0.57	0.60	0.59	0.54	0.56	0.59	0.55	0.50	0.59	0.59	0.56	0.58	0.54	0.58	0.62	0.59

								Cash Flo	w to Capit	al Spendin	g Ratio ¹						
<u>Line</u>	<u>Company</u>	15-Year <u>Average</u> (1)	<u>2020 ^{2/c}</u> (2)	<u>2019 ^{2/c}</u> (3)	<u>2018</u> (4)	<u>2017</u> (5)	<u>2016</u> (6)	<u>2015</u> (7)	<u>2014</u> (8)	<u>2013</u> (9)	<u>2012</u> (10)	<u>2011</u> (11)	<u>2010</u> (12)	<u>2009</u> (13)	<u>2008</u> (14)	<u>2007</u> (15)	<u>2006</u> (16)
27	Atmos Energy	0.67	0.52	0.53	0.55	0.62	0.59	0.60	0.65	0.55	0.59	0.68	0.77	0.78	0.81	0.94	0.82
28	Chesapeake Utilities	0.72	0.67	0.62	0.39	0.50	0.50	0.53	0.71	0.65	0.79	1.12	1.10	1.14	0.83	0.82	0.45
29	New Jersey Resources	1.30	0.71	0.51	0.85	0.70	0.59	0.67	1.79	1.46	1.48	1.51	1.55	1.75	2.11	1.67	2.14
30	NiSource Inc.	0.77	0.66	0.61	0.58	0.41	0.59	0.53	0.56	0.57	0.65	0.75	1.11	1.06	0.94	1.11	1.37
31	Northwest Nat. Gas	0.95	0.66	0.69	0.71	0.14	1.01	1.12	1.15	0.98	1.01	1.33	0.55	1.02	1.35	1.21	1.34
32	ONE Gas Inc.	0.86	0.83	0.89	0.84	0.87	0.92	0.86	0.79	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
33	South Jersey Inds.	0.84	0.54	0.40	0.73	0.81	0.76	0.50	0.53	0.51	0.58	0.70	0.75	1.01	1.67	1.70	1.40
34	Southwest Gas	0.86	0.69	0.53	0.56	0.68	0.83	0.84	0.99	1.05	0.90	0.82	1.37	1.28	0.85	0.78	0.72
35	Spire Inc.	1.09	0.42	0.44	0.77	0.72	0.96	0.92	0.98	0.78	0.95	1.53	1.61	1.93	1.64	1.42	1.28
36	UGI Corp.	1.48	1.59	1.22	1.64	1.29	1.35	1.48	1.53	1.32	1.52	1.28	1.36	1.52	1.72	1.62	1.69
37	WGL Holdings Inc.	1.02	N/A	N/A	N/A	0.61	0.56	0.60	0.63	0.71	0.93	1.02	1.60	1.60	1.60	1.17	1.18
38	Average	0.97	0.73	0.64	0.76	0.67	0.79	0.79	0.94	0.86	0.94	1.07	1.18	1.31	1.35	1.24	1.24
39	Median	0.93	0.66	0.57	0.72	0.68	0.76	0.67	0.79	0.74	0.92	1.07	1.23	1.21	1.48	1.19	1.31

Sources:

¹ The Value Line Investment Survey Investment Analyzer Software, downloaded on June 25, 2019. ² The Value Line Investment Survey, Feb 26, 2021.

^a Based on the projected Dividends Declared per share and Book Value per share, published in The Value Line Investment Survey.
 ^b Based on the projected Dividends Declared per share and Earnings per share, published in The Value Line Investment Survey.
 ^c Based on the projected Cash Flow per share and Capital Spending per share, published in The Value Line Investment Survey.

2022 Revenue Impact (Consolidated with RSAM) (\$ 000)

1. Proposed Rate of Return¹

<u>Line</u>	Description	<u>Amount</u> (1)	<u>Weight</u> (2)	<u>Cost</u> (3)	<u>WACC</u> (4)	WACC (5)
1	Long-Term Debt	\$ 17,415,346	31.37%	3.61%	1.13%	1.13%
2	Short-Term Debt	\$ 654,984	1.18%	0.94%	0.01%	0.01%
3	Common Equity	\$ 26,665,503	48.04%	11.50%	5.52%	7.41%
4	Customer Deposits	\$ 455,339	0.82%	2.03%	0.02%	0.02%
5	Deferred Income Tax	\$ 5,894,990	10.62%	0.00%	0.00%	0.00%
6	FAS 109 DIT	\$ 3,372,609	6.08%	0.00%	0.00%	0.00%
7	Investment Tax Credit	\$ 1,049,226	<u>1.89</u> %	8.27%	<u>0.16%</u>	<u>0.16%</u>
8	Total	\$ 55,507,996	100.00%		6.84%	8.73%
9	Tax Conversion Factor ²					1.3415

2. Capital Structure Adjustment³

<u>Line</u>	Description	<u>Amount</u> (1)	<u>Weight</u> (2)	<u>Cost</u> (3)	<u>WACC</u> (4)	Pre-Tax <u>WACC</u> (5)
10	Long-Term Debt	\$ 20,147,178	36.30%	3.61%	1.31%	1.31%
11	Short-Term Debt	\$ 654,984	1.18%	0.94%	0.01%	0.01%
12	Common Equity	\$ 23,933,670	43.12%	11.50%	4.96%	6.65%
13	Customer Deposits	\$ 455,339	0.82%	2.03%	0.02%	0.02%
14	Deferred Income Tax	\$ 5,894,990	10.62%	0.00%	0.00%	0.00%
15	FAS 109 DIT	\$ 3,372,609	6.08%	0.00%	0.00%	0.00%
16	Investment Tax Credit	\$ 1,049,226	<u>1.89</u> %	7.79%	<u>0.15%</u>	<u>0.15%</u>
17	Total	\$ 55,507,996	100.00%		6.44%	8.14%

3. ROE Adjustment³

						Pre-Tax
Line	Description	Amount	Weight	Cost	WACC	WACC
		(1)	(2)	(3)	(4)	(5)
18	Long-Term Debt	\$ 20.147.178	36.30%	3.61%	1.31%	1.31%
19	Short-Term Debt	\$ 654,984	1 18%	0.94%	0.01%	0.01%
20	Common Equity	\$ 23,933,670	43.12%	9.40%	4.05%	5.43%
21	Customer Deposits	\$ 455,339	0.82%	2.03%	0.02%	0.02%
22	Deferred Income Tax	\$ 5,894,990	10.62%	0.00%	0.00%	0.00%
23	FAS 109 DIT	\$ 3,372,609	6.08%	0.00%	0.00%	0.00%
24	Investment Tax Credit	\$ 1,049,226	1.89%	6.67%	0.13%	0.13%
25	Total	\$ 55,507,996	100.00%		5.52%	6.90%
26	Rate Base ²					\$ 55,507,996
						• , ,
Rate of I	Return Impacts					
27	Capital Structure					0.59%
28	Return on Equity (ROE)					1.23%
Revenue	Requirement Impacts					
29	Capital Structure					\$ 327.892
30	ROE					\$ 685.033
31	Total Impact					\$ 1,012,926

Sources:

¹MFR 2022 FPL Consolidated, Schedule D-1a. ²MFR 2022 FPL Consolidated, Schedule A-1.

³Exhibit MPG-1.

2023 Revenue Impact (Consolidated with RSAM) (\$ 000)

1. Proposed Rate of Return¹

<u>Line</u>	Description	<u>Amount</u> (1)	<u>Weight</u> (2)	<u>Cost</u> (3)	<u>WACC</u> (4)	Pre-Tax <u>WACC</u> (5)
1	Long-Term Debt	\$ 18,736,084	31.43%	3.77%	1.19%	1.19%
2	Short-Term Debt	\$ 751,215	1.26%	0.97%	0.01%	0.01%
3	Common Equity	\$ 28,748,525	48.23%	11.50%	5.55%	7.44%
4	Customer Deposits	\$ 490,827	0.82%	2.04%	0.02%	0.02%
5	Deferred Income Tax	\$ 6,266,839	10.51%	0.00%	0.00%	0.00%
6	FAS 109 DIT	\$ 3,402,881	5.71%	0.00%	0.00%	0.00%
7	Investment Tax Credit	\$ 1,208,920	2.03%	8.33%	0.17%	0.17%
8	Total	\$ 59,605,291	100.00%		6.92%	8.82%
9	Tax Conversion Factor ²					1.3416

2. Capital Structure Adjustment³

<u>Line</u>	Description	<u>Amount</u> (1)	<u>Weight</u> (2)	<u>Cost</u> (3)	<u>WACC</u> (4)	Pre-Tax <u>WACC</u> (5)
10	Long-Term Debt	\$21,678,443	36.37%	3.77%	1.37%	1.37%
11	Short-Term Debt	\$ 751,215	1.26%	0.97%	0.01%	0.01%
12	Common Equity	\$25,806,166	43.30%	11.50%	4.98%	6.68%
13	Customer Deposits	\$ 490,827	0.82%	2.04%	0.02%	0.02%
14	Deferred Income Tax	\$ 6,266,839	10.51%	0.00%	0.00%	0.00%
15	FAS 109 DIT	\$ 3,402,881	5.71%	0.00%	0.00%	0.00%
16	Investment Tax Credit	\$ 1,208,920	2.03%	7.86%	0.16%	0.16%
17	Total	\$ 59,605,291	100.00%		6.54%	8.24%

3. ROE Adjustment³

<u>Line</u>	Description	<u>Amount</u> (1)	<u>Weight</u> (2)	<u>Cost</u> (3)	<u>WACC</u> (4)	WACC (5)
18	Long-Term Debt	\$21,678,443	36.37%	3.77%	1.37%	1.37%
19	Short-Term Debt	\$ 751,215	1.26%	0.97%	0.01%	0.01%
20	Common Equity	\$25,806,166	43.30%	9.40%	4.07%	5.46%
21	Customer Deposits	\$ 490,827	0.82%	2.04%	0.02%	0.02%
22	Deferred Income Tax	\$ 6,266,839	10.51%	0.00%	0.00%	0.00%
23	FAS 109 DIT	\$ 3,402,881	5.71%	0.00%	0.00%	0.00%
24	Investment Tax Credit	\$ 1,208,920	2.03%	6.74%	0.14%	0.14%
25	Total	\$ 59,605,291	100.00%		5.61%	7.00%

4. Cost of Debt Adjustment³

<u>Line</u>	Description	<u>Amount</u> (1)	<u>Weight</u> (2)	<u>Cost</u> (3)	<u>WACC</u> (4)	Pre-Tax <u>WACC</u> (5)
26	Long-Term Debt	\$21,678,443	36.37%	3.68%	1.34%	1.34%
27	Short-Term Debt	\$ 751,215	1.26%	0.97%	0.01%	0.01%
28	Common Equity	\$ 25,806,166	43.30%	9.40%	4.07%	5.46%
29	Customer Deposits	\$ 490,827	0.82%	2.04%	0.02%	0.02%
30	Deferred Income Tax	\$ 6,266,839	10.51%	0.00%	0.00%	0.00%
31	FAS 109 DIT	\$ 3,402,881	5.71%	0.00%	0.00%	0.00%
32	Investment Tax Credit	\$ 1,208,920	<u>2.03</u> %	6.74%	0.14%	0.14%
33	Total	\$ 59,605,291	100.00%		5.58%	6.97%

34	Rate Base ²	\$ 59,605,291
Rate of	Return Impacts	
35	Capital Structure	0.59%
36	Return on Equity (ROE)	1.24%
37	Cost of Debt	0.03%
Revenu	e Requirement Impacts	
38	Capital Structure	\$ 348,719
39	Return on Equity (ROE)	\$ 740,613
40	Cost of Debt	<u>\$ 17,776</u>
41	Total Impact	\$ 1,107,107

Sources:

¹MFR 2023 FPL Consolidated, Schedule D-1a. ²MFR 2023 FPL Consolidated, Schedule A-1. ³Exhibit MPG-1.

2023 Embedded Cost of Debt Adjustment (\$000)

Line No.	Description/Coupon Rate	Issue Date	Maturity Date	Principal Amount Sold (Face Value)	13-Month Average Principal Amt. Outstanding	Discount (Premium) on Principal Amount Sold ⁽¹⁾	Issuing Expense on Principal Amount Sold ⁽¹⁾	Life (Years)	Annual Amortization (6+7)/(8) ⁽²⁾	Interest Expense (Coupon Rate) (1) x (5) ⁽²⁾	Total Annual Cost (9)+(10) ⁽²⁾	Unamortized Discount (Premium) Associated with (6)	Unamort. Issuing Expense & Loss on Reacquired Debt Associated with (7)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	First Mortgage Bonds:												
2	5.85%	Dec 2002	Feb 2033	200.000	170.695	2.212	910	30.17	106	9.986	10.092	720	296
3	5.625%	Apr 2003	Apr 2034	500,000	418,172	6,480	2,200	31.00	286	23,522	23,809	2,298	781
4	5.95%	Oct 2003	Oct 2033	300,000	272,444	5,802	1,527	30.00	250	16,210	16,461	2,031	534
5	5.65%	Jan 2004	Feb 2035	240,000	204,431	2,762	1,265	31.08	133	11,550	11,683	1,056	482
6	4.95%	Jun 2005	Jun 2035	300,000	300,000	4,893	1,635	30.00	222	14,850	15,072	1,984	663
7	5.4%	Sep 2005	Oct 2035	300,000	229,586	4,026	1,603	30.08	191	12,398	12,588	1,671	664
8	6.2%	Apr 2006	Apr 2036	300,000	219,161	2,700	1,734	30.00	152	13,588	13,740	1,182	763
9	5.65%	Jan 2006	Feb 2037	400,000	394,991	6,348	1,993	31.08	275	22,317	22,592	2,844	891
10	5.85%	Apr 2007	May 2037	300,000	230,521	600	4,056	30.08	160	13,485	13,645	282	1,931
10	5.95%	Jan 2008 Mar 2000	Feb 2038	500,000	500,000	3,204	7,821	30.08	3/8	35,700	30,078	1,019	3,692
12	5.90%	Doc 2010	Api 2039 Ech 2041	400,000	400,000	303	5 221	30.08	230	29,600	21,030	195	3,002
14	5.23%	Eeb 2010	Feb 2041	500,000	500,000	670	6 907	30.00	210	21,000	21,210	379	3,105
15	4 125%	Dec 2011	Feb 2042	600,000	600,000	1 482	8 250	30.17	324	24,750	25,074	928	5 089
16	5.125%	Jun 2011	Jun 2041	250,000	250,000	225	3,488	30.00	120	12,813	12,933	137	2,019
17	3.8%	Dec 2012	Dec 2042	400,000	400,000	1,984	5,700	30.00	245	15,200	15,445	1,307	3,455
18	4.05%	May 2012	Jun 2042	600,000	600,000	840	8,150	30.08	295	24,300	24,595	537	5,044
19	2.75%	Jun 2013	Jun 2023	500,000	230,769	1,905	5,650	10.00	317	5,729	6,046	19	55
20	3.25%	May 2014	Jun 2024	500,000	500,000	645	5,650	10.08	654	16,250	16,904	60	540
21	4.05%	Sep 2014	Oct 2044	500,000	500,000	1,650	6,775	30.08	282	20,250	20,532	1,184	4,818
22	3.13%	Nov 2015	Nov 2025	600,000	600,000	978	6,600	10.00	780	18,750	19,530	236	1,616
23	3.70%	Nov 2017	Nov 2047	700,000	700,000	5,537	9,272	30.00	503	25,900	26,403	4,566	7,693
24	4.13%	May 2018	Jun 2048	500,000	500,000	445	6,733	30.08	243	20,625	20,868	375	5,701
25	3.95%	Feb 2018	Mar 2047	1,000,000	1,000,000	5,400	13,637	29.08	672	39,500	40,172	4,488	11,407
20	3.99%	Feb 2019	Mar 2049	600,000	600,000	318	8,322	30.08	293	23,940	24,233	2/5	7,237
21	3.15%	Sep 2019	Sep 2049	1 000,000	1 000,000	5,096	10,447	30.00	528 202	25,200	20,720	4,504	9,339
20 29	3.39%	Eeb 2021	Eeb 2051	1,000,000	1,000,000		8,750	30.00	292	33,900	34,192		8,299
30	3.49%	Dec 2021	Dec 2052	500,000	500,000		4 375	30.00	146	17 450	17 596		4 296
31	3.49%	Apr 2022	Apr 2052	1.000.000	1.000.000		8,750	30.00	292	34,900	35,192		8,396
32	3.49%	Jul 2023	Jul 2053	1.500.000	692.308		13,125	30.00	202	24,139	24.341		6.007
33	3.49%	Mar 2023	Mar 2053	800,000	615,385		7,000	30.00	185	22,181	22,366		5,309
34	FMB-Variable	Mar 2020	Apr 2025	1,100,000	1,100,000	1,122	11,015	5.08	2,441	30,375	32,816	394	3,878
35	3.49%	Dec 2023	Dec 2053	1,000,000	76,923		8,750	30.00	13	1,551	2,173		672
36													
37	Senior Notes:												
38	4.55%	Sep 2014	Aug 2044	200,000	200,000	1,837	177	29.92	80	9,100	9,180	1,542	155
39	5.00%	Jun 2013	Jun 2043	90,000	90,000	755	151	30.00	38	4,500	4,538	628	128
40	5.10% 3.10%	Sep 2010	Oct 2040	125,000	125,000	849	1025	30.08	44	6,375	6,419 10 196	687	64
41	3.10%	iviay 2017	way 2027	300,000	300,000	427	1,935	10.00	286	9,900	10,186	202	920

2023 Embedded Cost of Debt Adjustment (\$000)

Line No.	Description/Coupon Rate	Issue Date	Maturity Date	Principal Amount Sold (Face Value)	13-Month Average Principal Amt. Outstanding	Discount (Premium) on Principal Amount Sold ⁽¹⁾	Issuing Expense on Principal Amount Sold ⁽¹⁾	Life (Years)	Annual Amortization (6+7)/(8) ⁽²⁾	Interest Expense (Coupon Rate) (1) x (5) ⁽²⁾	Total Annual Cost (9)+(10) ⁽²⁾	Unamortized Discount (Premium) Associated with (6)	Unamort. Issuing Expense & Loss on Reacquired Debt Associated with (7)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	lerm Loans:				15 005								
2	Var Term Loan	Jan 2021	Jan 2023	200,000	15,385			2.00		256	256		
3	Var Term Loan	Sep 2021	Sep 2023	350,000	242,308			2.00		4,163	4,163		
4	Var Term Loan	Jan 2022	Jan 2026	100,000	100,000			4.00		936	936		
5	Var Term Loan	May 2022	Aug 2025	200,000	200,000			3.25		1,873	1,873		
6	var Term Loan	Jan 2023	Jan 2026	400,000	369,231			3.00		4,604	4,604		
/ 9	Electing Note:												
0	Floating Note.	1.1.2020	101 2022	1 250 000	672 077		1 275	2 00	021	E 107	6 100		201
10	Tioating Rate Note	Jui 2020	Jui 2023	1,230,000	075,077		4,575	5.00	521	5,107	0,109		201
10	ICI Debt												
12	ICL Debt 3.95%	Jan 2017	Dec 2021	27,790				5				40	
13													
14	Qualified Replacement Property Notes:												
15	Qualified Replacement Property Note	Jun 2018	Jun 2068	94,121	94,121		1,278	50.00	26	95	121		1,161
16	Qualified Replacement Property Note	Mar 2019	Mar 2069	42,720	42,720		594	50.00	14	43	57		634
17	Qualified Replacement Property Note	Aug 2020	Aug 2070	145,106	145,106		1,451	50.00	33	147	180		1,579
18	Qualified Replacement Property Note	Mar 2020	Mar 2070	174,657	174,657		1,985	50.00	40		40		1,856
19	Qualified Replacement Property Note	Nov 2018	Nov 2068	99,330	99,330		1,265	50.00	26	100	126		1,162
20													
21	Unsecured Pollution Control and Industrial I	Development Bond	ds:										
22	Var Dade County	Aug 1991	Feb 2023	15,000	2,308		323	31.50	1	4	6		0
23	Var Jacksonville	May 1992	May 2027	28,300	28,300		377	35.00	11	109	120		41
24	Var Manatee	Mar 1994	Sep 2024	16,510	16,510		132	30.50	4	64	68		5
25	Var Jacksonville	Mar 1994	Sep 2024	45,960	45,960		397	30.50	13	178	191		15
26	Var Putnam	Mar 1994	Sep 2024	4,480	4,480		82	30.50	3	17	20		3
27	Var Jacksonville	Jun 1995	May 2029	51,940	51,940		342	33.92	10	201	211		59
28	Var St. Lucie	Sep 2000	Sep 2028	242,210	242,210		568	28.00	20	936	956		104
29	Var St. Lucie	May 2003	Way 2024	78,785	/8,/85		451	21.00	21	304	325		18
30	Tax Exampt Los County	Jun 2015	Jun 2045	85,000	85,000		121	30.00	24	328	303		53Z 790
22	Tax Exempt-Lee County	Nov 2017	Nov 2047	60,000	60,000		937	30.00	24	232	200		709
32	Tax Exempt-Broward	Dec 2018	Dec 2048	55,000	55,000	3/	506	30.00	18	232	230	20	/31
34	Tax Exempt-Bloward	Jun 2019	Jun 2040	55,000	55,000	54	510	30.00	20	212	231	25	525
35	Tax Exempt-Monroe County	Jun 2010	Jun 2049	21 000	21 000	57	681	39.00	30	81	111	48	731
36	Tax Exempt-Escambia County	Mar 2009	Apr 2039	65,000	65,000	01	425	30.08	21	1 170	1 191	40	1 227
37	Tax Exempt-Monroe County	Apr 2008	Sep 2037	42,000	42,000		1.630	29.42	97	840	937		1,378
38	Tax Exempt-Escambia County	Apr 2008	Jun 2023	32,550	15.023		727	15.17	70	353	422		16
39	Tax Exempt-Jackson County	Apr 2014	Apr 2044	29,075	29.075		765	30.00	34	112	146		702
40	Tax Exempt-Monroe County	Oct 2019	Oct 2049	45,000	45,000		611	30.00	20	174	194		536
41	Tax Exempt-Mississippi State	Dec 2019	Dec 2049	55,000	55,000		548	30.00	18	212	231		485
42	Tax Exempt-Escambia County	Mar 2009	Apr 2039	65,400	65,400		1,559	30.08	78	253	331		333
	· · · · · ·												

2023 Embedded Cost of Debt Adjustment (\$000)

Line No	Description/Coupon Rate	Issue Date	Maturity Date	Principal Amount Sold (Face Value)	13-Month Average Principal Amt. Outstanding	Discount (Premium) on Principal Amount Sold ⁽¹⁾	Issuing Expense on Principal Amount Sold ⁽¹⁾	Life (Years)	Annual Amortization (6+7)/(8) ⁽²⁾	Interest Expense (Coupon Rate) (1) x (5) ⁽²⁾	Total Annual Cost (9)+(10) ⁽²⁾	Unamortized Discount (Premium) Associated with (6)	Unamort. Issuing Expense & Loss on Reacquired Debt Associated with (7)
_	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1 2 3 4	Unsecured Pollution Control and Industrial Dev Tax Exempt-Jackson County Tax Exempt-Bay County	elopment Bond Nov 2012 Jun 2020	ds: Nov 2042 Jun 2050	13,000 50,000	13,000 50,000		542 412	30.00 30.00	23 14	50 193	73 207		440 371
5	Gain/Loss on Reacquired Debt												70,735
6 7 9 10 11 12 13 14	Total Less Unamortized Premium, Discount, Issue and Loss Col (12) + (13) Net Embedded Cost of Long Term Debt Col (11)/Ne	et		25,304,934	21,762,310 (257,428) 21,504,882 3.68%	72,702	239,995	1,995	14,095	776,208	790,912	39,036	218,393
15 16	⁽¹⁾ For issuances that are from Gulf, discount/(p ⁽²⁾ Bonds issued or retired within the reported p	remium) and is eriod will not h	ssuing expenses a ave a full year of a	are the unamortiz amortization or in	ed balances as o erest costs.	f the acquisition date	e of Gulf Power by N	extEra Energy, Ja	anuary 1, 2019.				

⁽²⁾ Bonds issued or retired within the reported period will not have a full year of amortization or interest costs.

NOTE - ALL DEBT IN THIS MFR ISSUED BEFORE JANUARY 1, 2022 IS CONSIDERED TO BE ASSUMED BY THE CONSOLIDATED COMPANY

Source:

MFR 2023 Consolidated, Schedule D-4a.

The highlighted numbers reflect the adjustment applied by Mr. Gorman.

Proxy Group

		Credit	Ratings ¹	Common I	Equity Ratios
<u>Line</u>	<u>Company</u>	<u>S&P</u>	Moody's	<u>MI¹</u>	Value Line ²
		(1)	(2)	(3)	(4)
1	ALLETE, Inc.	BBB	Baa1	49.7%	59.0%
2	Alliant Energy Corporation	A-	Baa2	43.5%	45.7%
3	Ameren Corporation	BBB+	Baa1	43.3%	44.3%
4	American Electric Power Company, Inc.	A-	Baa2	37.0%	41.5%
5	Duke Energy Corporation	BBB+	Baa2	40.6%	44.4%
6	Edison International	BBB	Baa3	35.0%	39.5%
7	Entergy Corporation	BBB+	Baa2	30.8%	33.7%
8	Evergy, Inc.	A-	Baa2	45.5%	48.7%
9	Hawaiian Electric Industries, Inc.	BBB-	N/A	48.9%	52.7%
10	IDACORP, Inc.	BBB	Baa1	56.1%	56.1%
11	OGE Energy Corp.	BBB+	Baa1	50.0%	51.0%
12	Pinnacle West Capital Corporation	A-	A3	44.5%	47.2%
13	Portland General Electric Company	BBB+	A3	43.6%	46.4%
14	Xcel Energy Inc.	A-	Baa1	39.5%	42.6%
15	Average	BBB+	Baa1	43.4%	46.6%
16	Florida Power & Light Company	А	A1		59.6 ³

Sources:

¹ S&P Global Market Intelligence, Downloaded on June 4, 2021.

² The Value Line Investment Survey, March 12, April 23, and May 14, 2021.

³ Barrett Direct at 45.

Consensus Analysts' Growth Rates

		Zao	cks	N	11	Yahoo!	Finance	Average of
		Estimated	Number of	Estimated	Number of	Estimated	Number of	Growth
<u>Line</u>	<u>Company</u>	Growth % ¹	Estimates	Growth % ²	Estimates	Growth % ³	Estimates	Rates
		(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	ALLETE, Inc.	6.00%	N/A	5.67%	3	7.00%	N/A	6.22%
2	Alliant Energy Corporation	5.50%	N/A	5.89%	4	5.50%	N/A	5.63%
3	Ameren Corporation	7.30%	N/A	6.88%	6	7.70%	N/A	7.29%
4	American Electric Power Company, Inc.	5.90%	N/A	6.23%	5	6.20%	N/A	6.11%
5	Duke Energy Corporation	5.20%	N/A	5.62%	6	5.00%	N/A	5.27%
6	Edison International	4.10%	N/A	4.16%	4	3.40%	N/A	3.89%
7	Entergy Corporation	5.10%	N/A	5.80%	2	5.80%	N/A	5.57%
8	Evergy, Inc.	5.80%	N/A	6.47%	3	5.80%	N/A	6.02%
9	Hawaiian Electric Industries, Inc.	7.10%	N/A	7.10%	1	1.30%	N/A	5.17%
10	IDACORP, Inc.	3.90%	N/A	3.23%	4	3.20%	N/A	3.44%
11	OGE Energy Corp.	4.40%	N/A	2.91%	2	3.80%	N/A	3.70%
12	Pinnacle West Capital Corporation	4.00%	N/A	3.49%	4	3.50%	N/A	3.66%
13	Portland General Electric Company	8.60%	N/A	5.87%	6	7.10%	N/A	7.19%
14	Xcel Energy Inc.	6.10%	N/A	6.14%	5	6.20%	N/A	6.15%
15	Average	5.64%	N/A	5.39%	4	5.11%	N/A	5.38%

Sources:

¹ Zacks, http://www.zacks.com/, downloaded on June 4, 2021.

² S&P Global Market Intelligence, https://platform.mi.spglobal.com, downloaded on June 4, 2021.

³ Yahoo! Finance, https://finance.yahoo.com/, downloaded on June 4, 2021.

Constant Growth DCF Model (Consensus Analysts' Growth Rates)

<u>Line</u>	<u>Company</u>	13-Week AVG <u>Stock Price¹</u> (1)	Analysts' <u>Growth²</u> (2)	Annualized <u>Dividend³</u> (3)	Adjusted <u>Yield</u> (4)	Constant <u>Growth DCF</u> (5)
1	ALLETE, Inc.	\$69.24	6.22%	\$2.52	3.87%	10.09%
2	Alliant Energy Corporation	\$55.13	5.63%	\$1.61	3.09%	8.72%
3	Ameren Corporation	\$82.40	7.29%	\$2.20	2.86%	10.16%
4	American Electric Power Company, Inc.	\$85.72	6.11%	\$2.96	3.66%	9.78%
5	Duke Energy Corporation	\$98.52	5.27%	\$3.86	4.12%	9.40%
6	Edison International	\$58.70	3.89%	\$2.65	4.69%	8.58%
7	Entergy Corporation	\$102.89	5.57%	\$3.80	3.90%	9.47%
8	Evergy, Inc.	\$61.32	6.02%	\$2.14	3.70%	9.72%
9	Hawaiian Electric Industries, Inc.	\$42.98	5.17%	\$1.36	3.33%	8.49%
10	IDACORP, Inc.	\$99.97	3.44%	\$2.84	2.94%	6.38%
11	OGE Energy Corp.	\$33.12	3.70%	\$1.61	5.04%	8.75%
12	Pinnacle West Capital Corporation	\$83.05	3.66%	\$3.32	4.14%	7.81%
13	Portland General Electric Company	\$48.61	7.19%	\$1.63	3.59%	10.78%
14	Xcel Energy Inc.	\$68.39	6.15%	\$1.83	2.84%	8.99%
15	Average	\$70.72	5.38%	\$2.45	3.70%	9.08%
16	Median					9.19%

Sources:

¹ S&P Global Market Intelligence, Downloaded on June 4, 2021.

² Exhibit MPG-10.

³ The Value Line Investment Survey, March 12, April 23, and May 14, 2021.

Payout Ratios

		Dividend	s Per Share	Earnings	Per Share	Payou	t Ratio
Line	<u>Company</u>	2020	Projected	2020	Projected	2020	Projected
		(1)	(2)	(3)	(4)	(5)	(6)
1	ALLETE, Inc.	\$2.47	\$2.90	\$3.35	\$4.75	73.73%	61.05%
2	Alliant Energy Corporation	\$1.52	\$2.05	\$2.47	\$3.25	61.54%	63.08%
3	Ameren Corporation	\$2.00	\$2.90	\$3.50	\$4.75	57.14%	61.05%
4	American Electric Power Company, Inc.	\$2.84	\$3.75	\$4.42	\$6.00	64.25%	62.50%
5	Duke Energy Corporation	\$3.82	\$4.25	\$3.92	\$6.50	97.45%	65.38%
6	Edison International	\$2.58	\$3.10	\$1.72	\$5.25	150.00%	59.05%
7	Entergy Corporation	\$3.74	\$4.80	\$6.90	\$7.50	54.20%	64.00%
8	Evergy, Inc.	\$2.05	\$2.65	\$2.72	\$4.25	75.37%	62.35%
9	Hawaiian Electric Industries, Inc.	\$1.32	\$1.52	\$1.81	\$2.25	72.93%	67.56%
10	IDACORP, Inc.	\$2.72	\$3.70	\$4.69	\$5.75	58.00%	64.35%
11	OGE Energy Corp.	\$1.58	\$1.95	\$2.08	\$2.75	75.96%	70.91%
12	Pinnacle West Capital Corporation	\$3.23	\$4.25	\$4.87	\$6.50	66.32%	65.38%
13	Portland General Electric Company	\$1.59	\$2.10	\$1.72	\$3.50	92.44%	60.00%
14	Xcel Energy Inc.	\$1.72	\$2.30	\$2.79	\$3.75	61.65%	61.33%
15	Average	\$2.37	\$3.02	\$3.35	\$4.77	75.78%	63.43%

Source:

The Value Line Investment Survey, March 12, April 23, and May 14, 2021.

Sustainable Growth Rate

		3 to 5 Year Projections Si									Sustainable	
		Dividends	Earnings	Book Value	Book Value		Adjustment	Adjusted	Payout	Retention	Internal	Growth
Line	<u>Company</u>	Per Share	Per Share	Per Share	Growth	ROE	Factor	ROE	Ratio	Rate	Growth Rate	Rate
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1	ALLETE, Inc.	\$2.90	\$4.75	\$50.75	2.88%	9.36%	1.01	9.49%	61.05%	38.95%	3.70%	3.89%
2	Alliant Energy Corporation	\$2.05	\$3.25	\$30.00	5.68%	10.83%	1.03	11.13%	63.08%	36.92%	4.11%	6.33%
3	Ameren Corporation	\$2.90	\$4.75	\$47.25	6.01%	10.05%	1.03	10.35%	61.05%	38.95%	4.03%	6.73%
4	American Electric Power Company, Inc.	\$3.75	\$6.00	\$55.25	5.95%	10.86%	1.03	11.17%	62.50%	37.50%	4.19%	6.40%
5	Duke Energy Corporation	\$4.25	\$6.50	\$68.50	2.75%	9.49%	1.01	9.62%	65.38%	34.62%	3.33%	3.35%
6	Edison International	\$3.10	\$5.25	\$46.50	4.63%	11.29%	1.02	11.55%	59.05%	40.95%	4.73%	4.91%
7	Entergy Corporation	\$4.80	\$7.50	\$68.50	4.66%	10.95%	1.02	11.20%	64.00%	36.00%	4.03%	4.88%
8	Evergy, Inc.	\$2.65	\$4.25	\$45.25	3.28%	9.39%	1.02	9.54%	62.35%	37.65%	3.59%	3.76%
9	Hawaiian Electric Industries, Inc.	\$1.52	\$2.25	\$25.00	3.15%	9.00%	1.02	9.14%	67.56%	32.44%	2.97%	3.66%
10	IDACORP, Inc.	\$3.70	\$5.75	\$58.75	2.98%	9.79%	1.01	9.93%	64.35%	35.65%	3.54%	3.54%
11	OGE Energy Corp.	\$1.95	\$2.75	\$21.50	3.45%	12.79%	1.02	13.01%	70.91%	29.09%	3.78%	3.78%
12	Pinnacle West Capital Corporation	\$4.25	\$6.50	\$58.00	3.03%	11.21%	1.01	11.37%	65.38%	34.62%	3.94%	4.54%
13	Portland General Electric Company	\$2.10	\$3.50	\$34.50	3.41%	10.14%	1.02	10.31%	60.00%	40.00%	4.13%	4.19%
14	Xcel Energy Inc.	\$2.30	\$3.75	\$34.25	4.78%	10.95%	1.02	11.20%	61.33%	38.67%	4.33%	5.20%
15	Average	\$3.02	\$4.77	\$46.00	4.04%	10.44%	1.02	10.64%	63.43%	36.57%	3.89%	4.66%

Sources and Notes:

Cols. (1), (2) and (3): The Value Line Investment Survey, March 12, April 23, and May 14, 2021. Col. (4): [Col. (3) / Page 2 Col. (2)] ^ (1/number of years projected) - 1. Col. (5): Col. (2 / Col. (3). Col. (6): [2 * (1 + Col. (4))] / (2 + Col. (4)). Col. (7): Col. (6) * Col. (5). Col. (1) / Col. (2). Col. (9): 1 - Col. (8). Col. (10): Col. (9) * Col. (7). Col. (11): Col. (10) + Page 2 Col. (9).

Sustainable Growth Rate

		13-Week	<u>2020</u>	Market	Commo	n Shares				
		Average	Book Value	to Book _ <u>Ratio</u> (3)	Outstandin	g (in Millions) ²			<u>V Factor⁴</u> (8)	<u>S * V</u> (9)
<u>Line</u>	Company	<u>Stock Price¹</u> (1)	Per Share ² (2)		<u>2020</u> (4)	<u>3-5 Years</u> (5)	<u>Growth</u> (6)	<u>S Factor³</u> (7)		
1		\$69.24	\$44.04	1 57	52 10	53.00	0.34%	0 54%	36 39%	0 20%
2	Alliant Energy Corporation	\$55.13	\$22.76	2.42	249.87	270.00	1.56%	3.78%	58.72%	2.22%
3	Ameren Corporation	\$82.40	\$35.29	2.33	253.30	280.00	2.02%	4.73%	57.17%	2.70%
4	American Electric Power Company, Inc.	\$85.72	\$41.38	2.07	496.60	550.00	2.06%	4.27%	51.73%	2.21%
5	Duke Energy Corporation	\$98.52	\$59.82	1.65	769.00	770.00	0.03%	0.04%	39.28%	0.02%
6	Edison International	\$58.70	\$37.08	1.58	378.91	385.00	0.32%	0.51%	36.84%	0.19%
7	Entergy Corporation	\$102.89	\$54.56	1.89	200.24	210.00	0.96%	1.80%	46.97%	0.85%
8	Evergy, Inc.	\$61.32	\$38.50	1.59	226.84	230.00	0.28%	0.44%	37.21%	0.16%
9	Hawaiian Electric Industries, Inc.	\$42.98	\$21.41	2.01	109.18	113.00	0.69%	1.39%	50.18%	0.70%
10	IDACORP, Inc.	\$99.97	\$50.73	1.97	50.46	50.45	- 0.00%	- 0.01%	49.25%	- 0.00%
11	OGE Energy Corp.	\$33.12	\$18.15	1.82	200.10	200.00	- 0.01%	- 0.02%	45.19%	- 0.01%
12	Pinnacle West Capital Corporation	\$83.05	\$49.96	1.66	112.76	118.00	0.91%	1.52%	39.85%	0.60%
13	Portland General Electric Company	\$48.61	\$29.18	1.67	89.54	90.00	0.10%	0.17%	39.97%	0.07%
14	Xcel Energy Inc.	\$68.39	\$27.12	2.52	537.44	553.00	0.57%	1.44%	60.35%	0.87%
15	Average	\$70.72	\$37.86	1.91	266.17	276.60	0.82%	1.72%	46.36%	0.90%

Sources and Notes:

¹ S&P Global Market Intelligence, Downloaded on June 4, 2021.

² The Value Line Investment Survey, March 12, April 23, and May 14, 2021.

³ Expected Growth in the Number of Shares, Column (3) * Column (6).

⁴ Expected Profit of Stock Investment, [1 - 1 / Column (3)].

Constant Growth DCF Model (Sustainable Growth Rate)

<u>Line</u>	<u>Company</u>	13-Week AVG <u>Stock Price¹</u> (1)	Sustainable <u>Growth²</u> (2)	Annualized <u>Dividend³</u> (3)	Adjusted <u>Yield</u> (4)	Constant <u>Growth DCF</u> (5)
1	ALLETE, Inc.	\$69.24	3.89%	\$2.52	3.78%	7.67%
2	Alliant Energy Corporation	\$55.13	6.33%	\$1.61	3.11%	9.44%
3	Ameren Corporation	\$82.40	6.73%	\$2.20	2.85%	9.58%
4	American Electric Power Company, Inc.	\$85.72	6.40%	\$2.96	3.67%	10.08%
5	Duke Energy Corporation	\$98.52	3.35%	\$3.86	4.05%	7.39%
6	Edison International	\$58.70	4.91%	\$2.65	4.74%	9.65%
7	Entergy Corporation	\$102.89	4.88%	\$3.80	3.87%	8.75%
8	Evergy, Inc.	\$61.32	3.76%	\$2.14	3.62%	7.38%
9	Hawaiian Electric Industries, Inc.	\$42.98	3.66%	\$1.36	3.28%	6.94%
10	IDACORP, Inc.	\$99.97	3.54%	\$2.84	2.94%	6.48%
11	OGE Energy Corp.	\$33.12	3.78%	\$1.61	5.05%	8.83%
12	Pinnacle West Capital Corporation	\$83.05	4.54%	\$3.32	4.18%	8.72%
13	Portland General Electric Company	\$48.61	4.19%	\$1.63	3.49%	7.69%
14	Xcel Energy Inc.	\$68.39	5.20%	\$1.83	2.81%	8.02%
15 16	Average Median	\$70.72	4.66%	\$2.45	3.67%	8.33% 8.37%

Sources:

¹ S&P Global Market Intelligence, Downloaded on June 4, 2021.

² Exhibit MPG-10.

³ The Value Line Investment Survey, March 12, April 23, and May 14, 2021.

Electricity Sales Are Linked to U.S. Economic Growth



Note:

1988 represents the base year. Graph depicts increases or decreases from the base year.

Sources:

U.S. Energy Information Administration Federal Reserve Bank of St. Louis

Multi-Stage Growth DCF Model

		13-Week AVG	Annualized	First Stage		Sec	ond Stage Gro	wth		Third Stage	Multi-Stage
<u>Line</u>	<u>Company</u>	<u>Stock Price¹</u> (1)	Dividend ² (2)	Growth ³ (3)	<u>Year 6</u> (4)	<u>Year 7</u> (5)	<u>Year 8</u> (6)	<u>Year 9</u> (7)	<u>Year 10</u> (8)	<u>Growth⁴</u> (9)	Growth DCF (10)
1	ALLETE, Inc.	\$69.24	\$2.52	6.22%	5.91%	5.60%	5.28%	4.97%	4.66%	4.35%	8.62%
2	Alliant Energy Corporation	\$55.13	\$1.61	5.63%	5.42%	5.20%	4.99%	4.77%	4.56%	4.35%	7.65%
3	Ameren Corporation	\$82.40	\$2.20	7.29%	6.80%	6.31%	5.82%	5.33%	4.84%	4.35%	7.71%
4	American Electric Power Company, Inc.	\$85.72	\$2.96	6.11%	5.82%	5.52%	5.23%	4.93%	4.64%	4.35%	8.37%
5	Duke Energy Corporation	\$98.52	\$3.86	5.27%	5.12%	4.96%	4.81%	4.65%	4.50%	4.35%	8.68%
6	Edison International	\$58.70	\$2.65	3.89%	3.96%	4.04%	4.12%	4.19%	4.27%	4.35%	8.92%
7	Entergy Corporation	\$102.89	\$3.80	5.57%	5.36%	5.16%	4.96%	4.75%	4.55%	4.35%	8.51%
8	Evergy, Inc.	\$61.32	\$2.14	6.02%	5.74%	5.46%	5.18%	4.90%	4.63%	4.35%	8.39%
9	Hawaiian Electric Industries, Inc.	\$42.98	\$1.36	5.17%	5.03%	4.89%	4.76%	4.62%	4.48%	4.35%	7.82%
10	IDACORP, Inc.	\$99.97	\$2.84	3.44%	3.60%	3.75%	3.90%	4.05%	4.20%	4.35%	7.12%
11	OGE Energy Corp.	\$33.12	\$1.61	3.70%	3.81%	3.92%	4.03%	4.13%	4.24%	4.35%	9.22%
12	Pinnacle West Capital Corporation	\$83.05	\$3.32	3.66%	3.78%	3.89%	4.01%	4.12%	4.23%	4.35%	8.34%
13	Portland General Electric Company	\$48.61	\$1.63	7.19%	6.72%	6.24%	5.77%	5.29%	4.82%	4.35%	8.53%
14	Xcel Energy Inc.	\$68.39	\$1.83	6.15%	5.85%	5.55%	5.25%	4.95%	4.65%	4.35%	7.48%
15 16	Average Median	\$70.72	\$2.45	5.38%	5.21%	5.04%	4.86%	4.69%	4.52%	4.35%	8.24% 8.38%

Sources:

¹ S&P Global Market Intelligence, Downloaded on June 4, 2021.

² The Value Line Investment Survey, March 12, April 23, and May 14, 2021.

³ Exhibit MPG-10.

⁴ Blue Chip Financial Forecasts, June 1, 2021, at 2.

Common Stock Market/Book Ratio



Source:

1980 - 2000: Mergent Public Utility Manual.

2001 - 2015: AUS Utility Reports, multiple dates.

2016 - 2019: Value Line Investment Survey, multiple dates.

* Value Line Investment Survey Reports, February 26, March 12, April 23, and May 24, 2021.

Equity Risk Premium - Treasury Bond

<u>Line</u>	<u>Year</u>	Authorized Electric <u>Returns¹</u> (1)	30 yr. Treasury <u>Bond Yield²</u> (2)	Indicated Risk <u>Premium</u> (3)	Rolling 5 - Year <u>Average</u> (4)	Rolling 10 - Year <u>Average</u> (5)
1	1986	13.93%	7.80%	6.13%		
2	1987	12.99%	8.58%	4.41%		
3	1988	12.79%	8.96%	3.83%		
4	1989	12.97%	8.45%	4.52%		
5	1990	12.70%	8.61%	4.09%	4.60%	
6	1991	12.55%	8.14%	4.41%	4.25%	
7	1992	12.09%	7.67%	4.42%	4.26%	
8	1993	11.41%	6.60%	4.81%	4.45%	
9	1994	11.34%	7.37%	3.97%	4.34%	
10	1995	11.55%	6.88%	4.67%	4.46%	4.53%
11	1996	11.39%	6.70%	4.69%	4.51%	4.38%
12	1997	11.40%	6.61%	4.79%	4.59%	4.42%
13	1998	11.66%	5.58%	6.08%	4.84%	4.65%
14	1999	10.77%	5.87%	4.90%	5.03%	4.68%
15	2000	11.43%	5.94%	5.49%	5.19%	4.82%
16	2001	11.09%	5.49%	5.60%	5.37%	4.94%
17	2002	11.16%	5.43%	5.73%	5.56%	5.07%
18	2003	10.97%	4.96%	6.01%	5.55%	5.19%
19	2004	10.75%	5.05%	5.70%	5.71%	5.37%
20	2005	10.54%	4.65%	5.89%	5.79%	5.49%
21	2006	10.34%	4.87%	5.47%	5.76%	5.57%
22	2007	10.31%	4.83%	5.48%	5.71%	5.64%
23	2008	10.37%	4.28%	6.09%	5.73%	5.64%
24	2009	10.52%	4.07%	6.45%	5.88%	5.79%
25	2010	10.29%	4.25%	6.04%	5.90%	5.85%
26	2011	10.19%	3.91%	6.28%	6.07%	5.91%
27	2012	10.01%	2.92%	7.09%	6.39%	6.05%
28	2013	9.81%	3.45%	6.36%	6.44%	6.09%
29	2014	9.75%	3.34%	6.41%	6.44%	6.16%
30	2015	9.60%	2.84%	6.76%	6.58%	6.24%
31	2016	9.60%	2.60%	7.00%	6.72%	6.40%
32	2017	9.68%	2.90%	6.79%	6.66%	6.53%
33	2018	9.55%	3.11%	6.44%	6.68%	6.56%
34	2019	9.64%	2.58%	7.06%	6.81%	6.62%
35	2020	9.39%	1.56%	7.83%	7.02%	6.80%
36	2021 ³	9.45%	2.07%	7.38%	7.10%	6.91%
37 38 39	Average Minimum Maximum	10.94%	5.25%	5.70%	5.64% 4.25% 7.10%	5.64% 4.38% 6.91%

Sources:

¹ Regulatory Research Associates, Inc., Regulatory Focus, Major Rate Case Decisions, Jan. 1997 p. 5, and Jan. 2011 p. 3. S&P Global Market Intelligence, RRA Regulatory Focus, Major Rate Case Decisions, January - March 2021, April 28, 2021, p. 1.

2006 - 2021 Authorized Returns exclude limited issue rider cases.

² St. Louis Federal Reserve: Economic Research, http://research.stlouisfed.org/.

The yields from 2002 to 2005 represent the 20-Year Treasury yields obtained from the Federal Reserve Bank.

³ Data represents January - March, 2021.

Equity Risk Premium - Utility Bond

<u>Line</u>	<u>Year</u>	Authorized Electric <u>Returns¹</u> (1)	Average "A" Rated Utility <u>Bond Yield²</u> (2)	Indicated Risk <u>Premium</u> (3)	Rolling 5 - Year <u>Average</u> (4)	Rolling 10 - Year <u>Average</u> (5)
1	1986	13.93%	9.58%	4.35%		
2	1987	12.99%	10.10%	2.89%		
3	1988	12.79%	10.49%	2.30%		
4	1989	12.97%	9.77%	3.20%		
5	1990	12.70%	9.86%	2.84%	3.12%	
6	1991	12.55%	9.36%	3.19%	2.88%	
7	1992	12.09%	8.69%	3.40%	2.99%	
8	1993	11.41%	7.59%	3.82%	3.29%	
9	1994	11.34%	8.31%	3.03%	3.26%	
10	1995	11.55%	7.89%	3.66%	3.42%	3.27%
11	1996	11.39%	7.75%	3.64%	3.51%	3.20%
12	1997	11.40%	7.60%	3.80%	3.59%	3.29%
13	1998	11.66%	7.04%	4.62%	3.75%	3.52%
14	1999	10.77%	7.62%	3.15%	3.77%	3.52%
15	2000	11.43%	8.24%	3.19%	3.68%	3.55%
16	2001	11.09%	7.76%	3.33%	3.62%	3.56%
17	2002	11.16%	7.37%	3.79%	3.61%	3.60%
18	2003	10.97%	6.58%	4.39%	3.57%	3.66%
19	2004	10.75%	6.16%	4.59%	3.86%	3.82%
20	2005	10.54%	5.65%	4.89%	4.20%	3.94%
21	2006	10.34%	6.07%	4.27%	4.39%	4.00%
22	2007	10.31%	6.07%	4.24%	4.48%	4.04%
23	2008	10.37%	6.53%	3.84%	4.37%	3.97%
24	2009	10.52%	6.04%	4.48%	4.34%	4.10%
25	2010	10.29%	5.47%	4.82%	4.33%	4.26%
26	2011	10.19%	5.04%	5.15%	4.51%	4.45%
27	2012	10.01%	4.13%	5.88%	4.83%	4.66%
28	2013	9.81%	4.48%	5.33%	5.13%	4.75%
29	2014	9.75%	4.28%	5.47%	5.33%	4.84%
30	2015	9.60%	4.12%	5.48%	5.46%	4.90%
31	2016	9.60%	3.93%	5.67%	5.57%	5.04%
32	2017	9.68%	4.00%	5.68%	5.53%	5.18%
33	2018	9.55%	4.25%	5.30%	5.52%	5.33%
34	2019	9.64%	3.77%	5.87%	5.60%	5.47%
35	2020	9.39%	3.05%	6.34%	5.77%	5.62%
36	2021 ³	9.45%	3.14%	6.31%	5.90%	5.73%
37 38	Average Minimum	10.94%	6.60%	4.34%	4.29% 2.88%	4.27% 3.20%
39	Maximum				5.90%	5.73%

Sources:

¹ Regulatory Research Associates, Inc., Regulatory Focus, Major Rate Case Decisions, Jan. 1997 p. 5, and Jan. 2011 p. 3. S&P Global Market Intelligence, RRA Regulatory Focus, Major Rate Case Decisions, January - March 2021, April 28, 2021, p. 1.

 ² St. Louis Federal Reserve: Economic Research, http://research.stlouisfed.org/.

The yields from 2002 to 2005 represent the 20-Year Treasury yields obtained from the Federal Reserve Bank.

³ Data represents January - March, 2021.

Bond Yield Spreads

				Publi	c Utility Bond	i	Corporate Bond				Utility to Corporate	
		T-Bond			A-T-Bond	Baa-T-Bond			Aaa-T-Bond	Baa-T-Bond	Baa	A-Aaa
Line	Year	Yield ¹	A ²	Baa ²	Spread	Spread	Aaa ³	Baa ³	Spread	Spread	Spread	Spread
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1	1980	11.30%	13.34%	13.95%	2.04%	2.65%	11.94%	13.67%	0.64%	2.37%	0.28%	1.40%
2	1981	13.44%	15.95%	16.60%	2.51%	3.16%	14.17%	16.04%	0.73%	2.60%	0.56%	1.78%
3	1982	12.76%	15.86%	16.45%	3.10%	3.69%	13.79%	16.11%	1.03%	3.35%	0.34%	2.07%
4	1983	11.18%	13.66%	14.20%	2.48%	3.02%	12.04%	13.55%	0.86%	2.38%	0.65%	1.62%
5	1984	12.39%	14.03%	14.53%	1.64%	2.14%	12.71%	14.19%	0.32%	1.80%	0.34%	1.32%
6	1985	10.79%	12.47%	12.96%	1.68%	2.17%	11.37%	12.72%	0.58%	1.93%	0.24%	1.10%
7	1986	7.80%	9.58%	10.00%	1.78%	2.20%	9.02%	10.39%	1.22%	2.59%	-0.39%	0.56%
8	1987	8.58%	10.10%	10.53%	1.52%	1.95%	9.38%	10.58%	0.80%	2.00%	-0.05%	0.72%
9	1988	8.96%	10.49%	11.00%	1.53%	2.04%	9.71%	10.83%	0.75%	1.87%	0.17%	0.78%
10	1989	8.45%	9.77%	9.97%	1.32%	1.52%	9.26%	10.18%	0.81%	1.73%	-0.21%	0.51%
11	1990	8.61%	9.86%	10.06%	1.25%	1.45%	9.32%	10.36%	0.71%	1.75%	-0.30%	0.54%
12	1991	8.14%	9.36%	9.55%	1.22%	1.41%	8.77%	9.80%	0.63%	1.67%	-0.25%	0.59%
13	1992	7.67%	8.69%	8.86%	1.02%	1.19%	8.14%	8.98%	0.47%	1.31%	-0.12%	0.55%
14	1993	6.60%	7.59%	7.91%	0.99%	1.31%	7.22%	7.93%	0.62%	1.33%	-0.02%	0.37%
15	1994	7.37%	8.31%	8.63%	0.94%	1.26%	7.96%	8.62%	0.59%	1.25%	0.01%	0.35%
16	1995	6.88%	7.89%	8.29%	1.01%	1.41%	7.59%	8.20%	0.71%	1.32%	0.09%	0.30%
17	1996	6.70%	7.75%	8.17%	1.05%	1.47%	7.37%	8.05%	0.67%	1.35%	0.12%	0.38%
18	1997	6.61%	7.60%	7.95%	0.99%	1.34%	7.26%	7.86%	0.66%	1.26%	0.09%	0.34%
19	1998	5.58%	7.04%	7.26%	1.46%	1.68%	6.53%	7.22%	0.95%	1.64%	0.04%	0.51%
20	1999	5.87%	7.62%	7.88%	1.75%	2.01%	7.04%	7.87%	1.18%	2.01%	0.01%	0.58%
21	2000	5.94%	8.24%	8.36%	2.30%	2.42%	7.62%	8.36%	1.68%	2.42%	-0.01%	0.62%
22	2001	5.49%	7.76%	8.03%	2.27%	2.54%	7.08%	7.95%	1.59%	2.45%	0.08%	0.68%
23	2002	5.43%	7.37%	8.02%	1.94%	2.59%	6.49%	7.80%	1.06%	2.37%	0.22%	0.88%
24	2003	4.96%	6.58%	6.84%	1.62%	1.89%	5.67%	6.77%	0.71%	1.81%	0.08%	0.91%
25	2004	5.05%	6.16%	6.40%	1.11%	1.35%	5.63%	6.39%	0.58%	1.35%	0.00%	0.53%
26	2005	4.65%	5.65%	5.93%	1.00%	1.28%	5.24%	6.06%	0.59%	1.42%	-0.14%	0.41%
27	2006	4.87%	6.07%	6.32%	1.20%	1.44%	5.59%	6.48%	0.71%	1.61%	-0.16%	0.48%
28	2007	4.83%	6.07%	6.33%	1.24%	1.50%	5.56%	6.48%	0.72%	1.65%	-0.15%	0.52%
29	2008	4.28%	6.53%	7.25%	2.25%	2.97%	5.63%	7.45%	1.35%	3.17%	-0.20%	0.90%
30	2009	4.07%	6.04%	7.06%	1.97%	2.99%	5.31%	7.30%	1.24%	3.23%	-0.24%	0.73%
31	2010	4.25%	5.47%	5.96%	1.22%	1.71%	4.95%	6.04%	0.70%	1.79%	-0.08%	0.52%
32	2011	3.91%	5.04%	5.57%	1.13%	1.66%	4.64%	5.67%	0.73%	1.76%	-0.10%	0.40%
33	2012	2 92%	4 13%	4 83%	1 21%	1.90%	3 67%	4 94%	0.75%	2 02%	-0.11%	0.46%
34	2013	3 45%	1 18%	1 98%	1.03%	1 53%	1 24%	5 10%	0.79%	1.65%	-0.12%	0.24%
25	2013	2 24%	4.20%	4.90%	0.04%	1.00%	4 16%	1 96%	0.73%	1.53%	0.06%	0.24%
30	2014	3.34 /6	4.20%	4.00 %	0.94 /0	0.40%	4.10%	4.00 %	0.02 %	1.32 /0	-0.00 %	0.12%
30	2015	2.84%	4.12%	5.03%	1.27%	2.19%	3.89%	5.00%	1.05%	2.10%	0.03%	0.23%
37	2016	2.60%	3.93%	4.67%	1.33%	2.08%	3.66%	4.71%	1.07%	2.12%	-0.04%	0.27%
38	2017	2.90%	4.00%	4.38%	1.10%	1.48%	3.74%	4.44%	0.85%	1.55%	-0.06%	0.26%
39	2018	3.11%	4.25%	4.67%	1.14%	1.56%	3.93%	4.80%	0.82%	1.69%	-0.13%	0.32%
40	2019	2.58%	3.77%	4.19%	1.18%	1.61%	3.39%	4.38%	0.81%	1.79%	-0.18%	0.38%
41	2020	1.56%	3.05%	3.44%	1.49%	1.87%	2.53%	3.66%	0.96%	2.10%	-0.22%	0.53%
42	2021 4	2.07%	3.14%	3.42%	1.08%	1.36%	2.73%	3.47%	0.66%	1.40%	-0.04%	0.42%
43	Average	6.21%	7.69%	8.12%	1.48%	1.92%	7.05%	8.13%	0.84%	1.92%	0.00%	0.65%

Yield Spreads Treasury Vs. Corporate & Treasury Vs. Utility



Sources:

¹ St. Louis Federal Reserve: Economic Research, http://research.stlouisfed.org/.
 ² The utility yields for the period 1980-2000 were obtained from Mergent Public Utility Manual, Mergent Weekly News Reports, 2003. The utility yields for the period 2001-2009 were obtained from the Mergent Bond Record. The utility yields for the period 2010-2021 were obtained from thtp://credittrends.moodys.com/.
 ³ The corporate yields for the period 1980-2009 were obtained from the St. Louis Federal Reserve: Economic Research, http://research.stlouisfed.org/.

The corporate yields from 2010-2021 were obtained from http://credittrends.moodys.com/. ⁴ Data represents January - March, 2021.

Treasury and Utility Bond Yields

Date	Treasury <u>Bond Yield¹</u>	"A" Rated Utility <u>Bond Yield²</u>	"Baa" Rated Utility Bond Yield ²
	(1)	(2)	(3)
06/04/21	2.24%	3.24%	3.50%
05/28/21	2.26%	3.28%	3.53%
05/21/21	2.33%	3.35%	3.60%
05/14/21	2.35%	3.38%	3.63%
05/07/21	2.28%	3.29%	3.53%
04/30/21	2.30%	3.31%	3.56%
04/23/21	2.25%	3.25%	3.53%
04/16/21	2.26%	3.26%	3.52%
04/09/21	2.34%	3.33%	3.60%
04/01/21	2.34%	3.38%	3.65%
03/26/21	2.37%	3.47%	3.73%
03/19/21	2.45%	3.56%	3.82%
03/12/21	2.40%	3.51%	3.81%
Average	2.32%	3.35%	3.62%
Spread To Treasury		1.03%	1.30%
	Date 06/04/21 05/28/21 05/21/21 05/14/21 05/07/21 04/30/21 04/23/21 04/16/21 04/09/21 04/09/21 04/01/21 03/26/21 03/19/21 03/12/21 Average Spread To Treasury	DateTreasury Bond Yield1 (1)06/04/212.24% 05/28/212.26% 05/21/2105/28/212.33% 05/14/212.35% 05/07/2105/07/212.28% 04/30/212.30% 04/23/2104/30/212.25% 04/16/212.26% 04/09/2104/09/212.34% 03/26/212.37% 03/19/2103/19/212.45% 03/12/212.45% 03/19/21Average Spread To Treasury2.32% Carbon	Date Treasury Bond Yield ¹ (1) "A" Rated Utility Bond Yield ² (2) 06/04/21 2.24% 3.24% 05/28/21 2.26% 3.28% 05/21/21 2.33% 3.35% 05/14/21 2.35% 3.38% 05/07/21 2.28% 3.29% 04/30/21 2.30% 3.31% 04/23/21 2.25% 3.25% 04/16/21 2.34% 3.33% 04/09/21 2.34% 3.38% 03/26/21 2.37% 3.47% 03/19/21 2.45% 3.56% 03/12/21 2.40% 3.51% Average 2.32% 3.35%

Sources:

¹ St. Louis Federal Reserve: Economic Research, http://research.stlouisfed.org.

² http://credittrends.moodys.com/.
Exhibit MPG-21 Page 2 of 3

Florida Power & Light Company



Yield Spread Between Utility Bonds and 30-Year Treasury Bonds

Sources:

Mergent Bond Record.

www.moodys.com, Bond Yields and Key Indicators.

St. Louis Federal Reserve: Economic Research, http://research.stlouisfed.org/

Trends in Bond Yields



Sources:

Mergent Bond Record.

www.moodys.com, Bond Yields and Key Indicators.

St. Louis Federal Reserve: Economic Research, http://research.stlouisfed.org/

Value Line Beta

<u>Line</u>	Company	<u>Beta</u>
1	ALLETE, Inc.	0.90
2	Alliant Energy Corporation	0.85
3	Ameren Corporation	0.80
4	American Electric Power Company, Inc.	0.75
5	Duke Energy Corporation	0.85
6	Edison International	0.95
7	Entergy Corporation	0.95
8	Evergy, Inc.	0.95
9	Hawaiian Electric Industries, Inc.	0.80
10	IDACORP, Inc.	0.80
11	OGE Energy Corp.	1.05
12	Pinnacle West Capital Corporation	0.90
13	Portland General Electric Company	0.90
14	Xcel Energy Inc.	0.80
15	Average	0.88

Source:

The Value Line Investment Survey, March 12, April 23, and May 14, 2021.

Historical Betas

Line	Company	Average	1Q21	4Q20	3Q20	2Q20	1Q20	4Q19	3Q19	2Q19	1Q19	4Q18	3Q18	2Q18	1Q18	4Q17	3Q17	2Q17	1Q17	4Q16	3Q16	2Q16	1Q16	4Q15	3Q15	2Q15	1Q15	4Q14	3Q14
		(1)	(1)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)
1	ALLETE, Inc.	0.76	0.90	0.85	0.85	0.85	0.60	0.65	0.65	0.65	0.65	0.65	0.70	0.75	0.75	0.80	0.75	0.80	0.80	0.75	0.75	0.75	0.80	0.80	0.80	0.80	0.80	0.80	0.80
2	Alliant Energy Corporation	0.73	0.85	0.85	0.85	0.80	0.55	0.60	0.60	0.60	0.65	0.60	0.65	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.75	0.75	0.80	0.80	0.80	0.80	0.80	0.80	0.80
3	Ameren Corporation	0.69	0.80	0.85	0.80	0.80	0.50	0.55	0.55	0.60	0.60	0.55	0.60	0.65	0.65	0.70	0.65	0.65	0.70	0.65	0.70	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
4	American Electric Power Company, Inc.	0.65	0.75	0.75	0.75	0.75	0.50	0.55	0.55	0.55	0.55	0.55	0.60	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
5	Duke Energy Corporation	0.60	0.85	N/A	0.85	0.85	0.45	0.50	0.50	0.50	0.50	0.55	0.55	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.65	0.50	0.60	0.60	0.60	0.60	0.60
6	Edison International	0.68	0.95	0.90	0.90	0.55	0.55	0.60	0.60	0.60	0.55	0.60	0.60	0.60	0.65	0.65	0.60	0.60	0.65	0.65	0.70	0.70	0.70	0.70	0.75	0.75	0.75	0.75	0.75
7	Entergy Corporation	0.69	0.95	0.95	0.95	0.95	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.70	0.70	0.70	0.65	0.70	0.70	0.70	0.70
8	Evergy, Inc.	1.00	0.95	1.00	1.00	1.05	NMF	N/A																					
9	Hawaiian Electric Industries, Inc.	0.70	0.80	0.80	0.80	0.55	0.55	0.55	0.55	0.60	0.60	0.60	0.65	0.65	0.70	0.70	0.70	0.70	0.70	0.70	0.75	0.75	0.80	0.80	0.80	0.80	0.80	0.80	0.75
10	IDACORP, Inc.	0.71	0.80	0.80	0.80	0.50	0.55	0.55	0.60	0.60	0.55	0.60	0.65	0.70	0.70	0.70	0.70	0.75	0.75	0.75	0.75	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
11	OGE Energy Corp.	0.91	1.05	1.10	1.05	1.05	0.70	0.75	0.80	0.80	0.85	0.85	0.90	0.95	0.95	0.95	0.95	0.95	0.95	0.90	0.90	0.95	0.95	0.95	0.90	0.90	0.90	0.90	0.85
12	Pinnacle West Capital Corporation	0.68	0.90	0.85	0.85	0.45	0.50	0.55	0.55	0.55	0.55	0.60	0.65	0.65	0.70	0.70	0.65	0.70	0.70	0.70	0.70	0.75	0.75	0.75	0.70	0.70	0.70	0.70	0.70
13	Portland General Electric Company	0.71	0.85	0.85	0.85	0.55	0.55	0.60	0.60	0.60	0.60	0.60	0.65	0.65	0.70	0.70	0.70	0.70	0.70	0.70	0.75	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.75
14	Xcel Energy Inc.	0.61	0.80	0.80	0.75	0.45	0.50	0.50	0.50	0.50	0.50	0.55	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.70	0.65
15	Average	0.72	0.87	0.87	0.86	0.73	0.55	0.58	0.59	0.60	0.60	0.61	0.65	0.68	0.69	0.70	0.68	0.70	0.70	0.69	0.72	0.74	0.76	0.75	0.75	0.75	0.75	0.75	0.74

Source: Value Line Software Analyzer

CAPM Return

<u>Line</u>	<u>Description</u>	Current Market Risk <u>Premium</u> (1)	Normalized Market Risk <u>Premium</u> (2)		
1	Risk-Free Rate ^{1,2}	2.32%	2.80%		
2	Risk Premium ³	9.18%	8.70%		
3	Beta ^{4,5}	0.88	0.72		
4	САРМ	10.35%	9.10%		

Sources:

- ¹ Exhibit MPG-21, Page 1 of 3.
- ² Blue Chip Financial Forecasts, June 1, 2021, at 2.
- ³ *Duff & Phelps, 2020 SBBI Yearbook* at 6-17 and 6-18.
- ⁴ Exhibit MPG-22, Page 1.
- ⁵ Exhibit MPG-22, Page 2.

Standard & Poor's Credit Metrics

	2022 Retail					
Lina Decemination	Cost of Service	Description	S&P Ben	chmark (Medial	Volatility)	Deferrer
Line Description	Amount	Description	Intermediate	Significant (2)	Aggressive	<u>Reterence</u>
	(1)		(2)	(3)	(4)	(3)
1 Rate Base (\$ 000)	\$ 55,507,996	se (\$ 000)				Schedule A-1 (with RSAM).
2 Weighted Common Return	4.05%	d Common Return				Page 2, Line 3, Col. 4.
3 Pre-Tax Rate of Return	6.90%	Rate of Return				Page 2, Line 8, Col. 5.
4 Income to Common	\$ 2,249,765	o Common 🖇				Line 1 x Line 2.
5 EBIT	\$ 3,829,820	9				Line 1 x Line 3.
6 Depreciation & Amortization	\$ 2,239,569	tion & Amortization				Schedule C-1 (with RSAM).
7 Imputed Amortization	\$ 27,027	Amortization §				S&P Capital IQ, downloaded on June 8, 2021.
8 Capitalized Interest	\$ 60,751	ed Interest				S&P Capital IQ, downloaded on June 8, 2021.
9 Deferred Income Taxes & ITC	\$-	Income Taxes & ITC				N/A
10 Funds from Operations (FFO)	\$ 4,577,112	om Operations (FFO)				Sum of Line 4 and Lines 6 through 9.
11 Imputed Interest Expense	\$ 112,148	Interest Expense				S&P Capital IQ, downloaded on June 8, 2021.
12 EBITDA	\$ 6,208,563	9				Sum of Lines 5 through 7 and Line 11.
13 Adjusted Debt	\$ 20,322,575	Debt				Page 3, Line 4, Col. 3.
14 Total Adjusted Debt Ratio	45.9%	usted Debt Ratio		48.7%		Page 3, Line 4, Col 4 and Industry median 'A'.
15 Debt to EBITDA	3.3x	BITDA	2.5x - 3.5x	3.5x - 4.5x	4.5x - 5.5x	Line 13 / Line 12.
16 FFO to Total Debt	23%	otal Debt	23% - 35%	13% - 23%	9% - 13%	Line 10 / Line 13.
17 Indicative Credit Rating		e Credit Rating	A+/A	А-	BBB	S&P Methodology, November 19, 2013.
 Total Adjusted Debt Ratio Debt to EBITDA FFO to Total Debt Indicative Credit Rating 	45.9% 3.3x 23%	usted Debt Ratio EBITDA otal Debt e Credit Rating	2.5x - 3.5x 23% - 35% A+/A	48.7% 3.5x - 4.5x 13% - 23% A -	4.5x - 5.5x 9% - 13% BBB	Page 3, Line 4, Col 4 and Industry m Line 13 / Line 12. Line 10 / Line 13. S&P Methodology, November 19, 20

Sources:

Standard & Poor's: "Criteria: Corporate Methodology," November 19, 2013.

Note:

Based on the January 2021 S&P report, FPL has an "A" credit rating with "Stable" outlook, an "Excellent" business profile, an "Intermediate" financial profile, and falls under the 'Medial Volatility' matrix.

S&P Business/Financial Risk Profile Matrix									
Business Risk Financial Risk Profile									
Profile	3 (intermediate)	4 (significant)	5 (aggressive)						
1 (excellent)	a+/a	a-	bbb						
2 (strong)	a-/bbb+	bbb	bb+						
3 (satisfactory)	bbb/bbb-	bbb-/bb+	bb						

Standard & Poor's Credit Metrics (Pre-Tax Rate of Return)

<u>Line</u>	Description	A (1	mount <u>\$ 000)</u> (1)	<u>Weight</u> (2)	<u>Cost</u> (3)	Weighted <u>Cost</u> (4)	Pre-Tax Weighted <u>Cost</u> (5)
1	Long-Term Debt	\$ 20),147,178	36.30%	3.61%	1.31%	1.31%
2	Short-Term Debt	\$	654,984	1.18%	0.94%	0.01%	0.01%
3	Common Equity	\$ 23	8,933,670	43.12%	9.40%	4.05%	5.44%
4	Customer Deposits	\$	455,339	0.82%	2.03%	0.02%	0.02%
5	Deferred Income Tax	\$ 5	5,894,990	10.62%	0.00%	0.00%	0.00%
6	FAS 109 DIT	\$ 3	3,372,609	6.08%	0.00%	0.00%	0.00%
7	Investment Tax Credit	<u>\$</u> 1	,049,226	<u>1.89%</u>	6.67%	<u>0.13%</u>	<u>0.13%</u>
8	Total	\$ 55	5,507,996	100.00%		5.52%	6.90%

9 Tax Conversion Factor*

1.3415

Sources: Exhibit MPG-1. *Schedule A-1 (with RSAM).

Standard & Poor's Credit Metrics (FPL Debt Ratio)

		FPL Prop	osed	Gorman Proposed			
		Amount	_	Amount			
Line	Description	<u>(\$ 000)</u>	Weight	<u>(\$ 000)</u>	Weight		
		(1)	(2)	(3)	(4)		
1	Long-Term Debt	\$17,415,346	39.35%	\$20,147,178	45.52%		
2	Short-Term Debt	\$ 654,984	1.48%	\$ 654,984	1.48%		
3	Off-Balance Sheet Debt*	<u>\$ 175,397</u>	<u>0.40%</u>	<u>\$ 175,397</u>	<u>0.40%</u>		
4	Total Debt	\$17,590,743	39.75%	\$20,322,575	45.92%		
5	Common Equity	<u>\$26,665,503</u>	<u>60.25%</u>	<u>\$23,933,670</u>	<u>54.08%</u>		
6	Total	\$44,256,246	100.00%	\$44,256,246	100.00%		

Sources:

Schedule D-1a (with RSAM) and Exhibit MPG-1. *S&P Capital IQ, downloaded June 8, 2021. The OBS Debt Includes both FPL and Gulf Power.

Standard & Poor's Credit Metrics <u>2022 Off-Balance Sheet Debt</u> (\$ Mill)

<u>Line</u>	Description	<u>FPL</u>	<u>Gulf</u>	<u>Total</u>	<u>Allocator</u>	<u>Retail</u>
1	Off-Balance Sheet Debt	21.00	160.71	181.71	0.9653	175.40
2	Imputed Amortization	2.00	26.00	28.00	0.9653	27.03
3	Imputed Interest Expense	103.15	13.03	116.18	0.9653	112.15

Source: *S&P Capital IQ, downloaded June 8, 2021.

Standard & Poor's Credit Metrics (Capitalized Interest)

<u>Line</u>	Description	Amount <u>(\$ 000)</u> (1)	<u>Weight</u> (2)	<u>Cost</u> (3)	Weighted <u>Cost</u> (4)
1 2 3	Long-Term Debt Short-Term Debt Total	\$20,147,178 <u>\$654,984</u> \$20,802,162	96.85% <u>3.15%</u> 100.00%	3.61% 0.94%	3.49% <u>0.03%</u> 3.52%
4 5	Retail CWIP* Capitalized Interest	\$ 1,725,318 <u>\$ 60,751</u>			

Source: Exhibit MPG-1. *Schedule B-1 (with RSAM).

S&P Adjusted Debt Ratio

Operating Subsidiaries of Value Line Electric, Gas and Water Utilities (Industry Medians)

		% Distribution of 9 Year Average								
<u>Rating</u>	<u>Median</u>	<u><50</u>	<u>50 to 55</u>	<u>>55</u>						
AA-	45.2%	100%	0%	0%						
A+	56.7%	33%	0%	67%						
А	48.7%	58%	25%	17%						
A-	52.1%	29%	56%	16%						
BBB+	50.4%	46%	39%	14%						
BBB	54.2%	13%	38%	50%						

Source: S&P Capital IQ, downloaded June 14, 2021.

Accuracy of Interest Rate Forecasts (Long-Term Treasury Bond Yields - Projected Vs. Actual)

		Pu	ublication Dat	a	Actual Yield Projected Yield			
		Prior Quarter	Projected	Projected	in Projected	Higher (Lower)		
Line	Date	Actual Yield (1)	Yield (2)	Quarter (3)	Quarter (4)	Than Actual Yield* (5)		
		(.)	(_/	(0)	(-)	(0)		
1	Dec-00	5.8%	5.8%	1Q, 02	5.6%	0.2%		
2	Mar-01	5.7%	5.6%	20,02	5.8%	-0.2%		
4	Sep-01	5.7%	5.9%	4Q, 02	5.1%	0.8%		
5	Dec-01	5.5%	5.7%	1Q, 03	5.0%	0.7%		
6	Mar-02	5.3%	5.9%	2Q, 03	4.7%	1.2%		
7	Jun-02	5.6%	6.2%	3Q, 03	5.2%	1.0%		
8	Sep-02	5.8%	5.9%	4Q, 03	5.2%	0.7%		
9 10	Dec-02 Mar-03	5.2%	5.7%	10, 04	4.9%	0.8%		
11	Jun-03	5.0%	5.4%	3Q. 04	5.1%	0.3%		
12	Sep-03	4.7%	5.8%	4Q, 04	4.9%	0.9%		
13	Dec-03	5.2%	5.9%	1Q, 05	4.8%	1.1%		
14	Mar-04	5.2%	5.9%	2Q, 05	4.6%	1.4%		
15	Jun-04	4.9%	6.2%	3Q, 05	4.5%	1.7%		
10	Dec-04	5.4%	5.8%	40,05	4.0%	1.2%		
18	Mar-05	4.9%	5.6%	2Q, 06	5.1%	0.5%		
19	Jun-05	4.8%	5.5%	3Q, 06	5.0%	0.5%		
20	Sep-05	4.6%	5.2%	4Q, 06	4.7%	0.5%		
21	Dec-05	4.5%	5.3%	1Q, 07	4.8%	0.5%		
22	Mar-06	4.8%	5.1%	20,07	5.0%	0.1%		
23	Sep-06	5.1%	5.2%	40.07	4.6%	0.4%		
25	Dec-06	5.0%	5.0%	1Q, 08	4.4%	0.6%		
26	Mar-07	4.7%	5.1%	2Q, 08	4.6%	0.5%		
27	Jun-07	4.8%	5.1%	3Q, 08	4.5%	0.7%		
28	Sep-07	5.0%	5.2%	4Q, 08	3.7%	1.5%		
29	Dec-07 Mar-08	4.9%	4.8%	20.09	3.5%	1.4%		
31	Jun-08	4.4%	4.9%	30.09	4.3%	0.6%		
32	Sep-08	4.6%	5.1%	4Q, 09	4.3%	0.8%		
33	Dec-08	4.5%	4.6%	1Q, 10	4.6%	0.0%		
34	Mar-09	3.7%	4.1%	2Q, 10	4.4%	-0.3%		
35	Jun-09	3.5%	4.6%	3Q, 10	3.9%	0.8%		
30	Sep-09	4.0%	5.0%	40,10	4.2%	0.8%		
38	Mar-10	4.3%	5.2%	20, 11	4.3%	0.4%		
39	Jun-10	4.6%	5.2%	3Q, 11	3.7%	1.5%		
40	Sep-10	4.4%	4.7%	4Q, 11	3.0%	1.7%		
41	Dec-10	3.9%	4.6%	1Q, 12	3.1%	1.5%		
42	Mar-11	4.2%	5.1%	20, 12	2.9%	2.2%		
43	Sep-11	4.0%	5.2%	40 12	2.0%	2.5%		
45	Dec-11	3.7%	3.8%	1Q, 13	3.1%	0.7%		
46	Mar-12	3.0%	3.8%	2Q, 13	3.2%	0.7%		
47	Jun-12	3.1%	3.7%	3Q, 13	3.7%	0.0%		
48	Sep-12	2.9%	3.4%	4Q, 13	3.8%	-0.4%		
49	Dec-12 Mor 12	2.8%	3.4%	10, 14	3.7%	-0.3%		
51	Jun-13	3.1%	3.7%	30.14	3.3%	0.4%		
52	Sep-13	3.2%	4.2%	4Q, 14	3.0%	1.2%		
53	Dec-13	3.7%	4.2%	1Q, 15	2.6%	1.7%		
54	Mar-14	3.8%	4.4%	2Q 15	2.9%	1.5%		
55	Jun-14	3.7%	4.3%	3Q 15	2.8%	1.5%		
50	Sep-14 Doc 14	3.4%	4.3%	40 15	3.0%	1.3%		
58	Mar-15	3.0%	3.7%	20 16	2.6%	1.1%		
59	Jun-15	2.6%	3.7%	3Q 16	2.3%	1.4%		
60	Sep-15	2.9%	3.8%	4Q 16	2.8%	1.0%		
61	Dec-15	2.8%	3.7%	1Q 17	3.0%	0.7%		
62	Mar-16	3.0%	3.5%	2Q 17	2.9%	0.6%		
64	Sep-16	2.1%	3.4%	40.17	2.0%	0.0%		
65	Dec-16	2.3%	3.4%	1Q 18	3.0%	0.4%		
66	Mar-17	2.8%	3.7%	2Q 18	3.1%	0.6%		
67	Jun-17	3.0%	3.7%	3Q 18	3.1%	0.6%		
68	Sep-17	2.9%	3.6%	4Q 18	3.3%	0.3%		
69 70	Dec-17 Mor 19	2.8%	3.6%	10 19	3.0%	0.6%		
70	Jun-18	2.0%	3.8%	30 19	2.0%	0.9%		
72	Sep-18	3.1%	3.7%	4Q 19	2.3%	1.4%		
73	Dec-18	3.1%	3.7%	1Q 20	1.9%	1.8%		
74	Mar-19	3.3%	3.4%	2Q 20	1.4%	2.0%		
75	Jun-19	3.0%	3.1%	3Q 20	1.4%	1.7%		
70	Oct-19	2.0%	2.0%	40/20	1.0%	1.0%		
78	Nov-19	2.3%	2.5%	10 21				
79	Dec-19	2.3%	2.5%	1Q 21				
80	Jan-20	2.3%	2.6%	2Q 21				
81	Feb-20	2.3%	2.6%	2Q 21				
82	Mar-20	2.3%	2.5%	2Q 21				
83	Apr-20 May 20	1.9%	2.0%	30 21				
85	Jun-20	1.9%	1.9%	30 21				
86	Jul-20	1.4%	1.9%	4Q 21				
87	Aug-20	1.4%	1.9%	4Q 21				
88	Sep-20	1.4%	1.8%	4Q 21				
89	Oct-20	1.4%	1.9%	1Q 22				
90	NOV-20 Dec-20	1.4%	2.0%	10 22				
92	Jan-21	1.6%	2.0%	20 22				
93	Feb-21	1.6%	2.2%	2Q 22				
94	Mar-21	1.6%	2.4%	2Q 22				

Source: Blue Chip Financial Forecasts, Various Dates. * Col. 2 - Col. 4.