BEFORE THE MINNESOTA OFFICE OF ADMINISTRATIVE HEARINGS
600 North Robert Street
St. Paul, Minnesota 55101

FOR THE MINNESOTA PUBLIC UTILITIES COMMISSION
121 7th Place East
Suite 350
St. Paul, Minnesota 55101-2147

MPUC Docket No. E-002/GR-15-826
OAH Docket No. 19-2500-33074

In the Matter of the Application of Northern States Power Company, d/b/a Xcel Energy, for Authority to Increase Rates for Electric Service in the State of Minnesota

DIRECT TESTIMONY AND SCHEDULES OF MINNESOTA OFFICE OF THE ATTORNEY GENERAL – RESIDENTIAL UTILITIES AND ANTITRUST DIVISION

WITNESS:

BRIAN PHILIP LEBENS

June 14, 2016

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I. BACKGROUND AND QUALIFICATIONS

Q. Please state your name and business address.

A. My name is Brian Lebens. My business address is Bremer Tower, Suite 1400, 445 Minnesota Street, Saint Paul, Minnesota 55101.

Q. By whom are you employed?

A. I am a Financial Analyst with the Office of the Minnesota Attorney General – Residential Utilities and Antitrust Division ("OAG").

Q. What is your educational and professional background?

A. I hold an MBA from the Carlson School of Management at the University of Minnesota as well as a Bachelor of Science in Business in Finance, also from the Carlson School. Additionally, I have eight years of experience in finance with 3M Company and Lockheed Martin. My responsibilities included financial modeling, cost accounting, audit, discounted cash flow analysis, and project management including cost and schedule analysis. In my previous positions, I provided strategic financial counsel to senior leadership in the areas for which I was responsible. I have also provided testimony on behalf of the OAG in MERC's most recent natural gas rate case in Docket No. G-011/GR-15-736

II. TESTIMONY OVERVIEW

Q. What topics do you examine in your testimony?

A. I examine the required return on equity ("ROE") of Northern States Power Minnesota ("NSPM").

Q. How is your testimony organized?

A. In Section, III, I provide an overview of the return on equity and define a fair rate of return. In Sections IV and V, I use Discounted Cash Flow ("DCF") methods to analyze the return on equity. I use both Constant-Growth DCF and Multi-Stage DCF models. Following this discussion, in Section VI, I discuss flotation costs. In Section VII, I then perform another analysis using the Capital Asset Pricing Model ("CAPM"). I briefly discuss the Risk Premium model in Section VIII, and conclude in Section IX by summarizing my analysis and recommendations.

Q. Have you prepared Schedules for use in determining the fair rate of return on common equity for NSPM?

A. Yes, I have prepared five schedules, BPL – 1 through BPL – 5.

Q. What do you recommend as the allowed return on equity for the Company?

A. Based on the analysis that follows, I recommend a return on equity of 7.38 percent.

III. RETURN ON EQUITY OVERVIEW

Q. What is a fair rate of return?

A. A fair return is the rate that will give the utility a reasonable return on its total investment. *See* Minnesota Statutes section 216B.16, subdivision 6. If utilities operated in a competitive market, their return would be determined by the free interaction of supply and demand. But utilities in Minnesota do not operate in a competitive market. Instead, they are regulated utilities and the optimizing forces of the market are replaced by oversight from regulatory agencies like the Minnesota Public Utilities Commission ("Commission"). As a result, the Commission must ensure that the utility provides

service at a reasonable rate to consumers, but also that its rate of return is sufficient to attract the capital necessary to continue to provide service to consumers in the long term.

Q. Is there any legal guidance on how to determine a fair return for a regulated utility?

A. There are several United States Supreme Court cases in which the Court set standards for the rate of return for regulated utilities: *Bluefield Waterworks & Improvement Company v. Public Service Commission of West Virginia*, 262 U.S. 679 (1923) ("*Bluefield*") and *Federal Power Commission v. Hope Natural Gas Company*, 320 U.S. 591 (1994) ("*Hope*"). Equity analysts generally rely on these cases as a guideline for the required return on utility investments. On advice of counsel, I understand that the standard set forth in these cases is that a public utility may be allowed to earn a return on its investments comparable to the return of other enterprises having similar risks in order to allow the utility the opportunity to attract capital and to maintain a sound credit rating.

According to the Supreme Court, "The return should be reasonably sufficient to assure confidence in the financial soundness of the utility and should be adequate, under efficient and economical management, to maintain and support its credit and enable it to raise the money necessary for the proper discharge of its public duties." *Bluefield*, 262 U.S. at 693. According to these cases, a utility's rate of return must allow the company to maintain its financial integrity, and be comparable to other investments of similar risk in order to ensure that that the company is able to attract sufficient capital to provide adequate and reliable service to its customers.

Q. What return is required for NSPM to continue attracting investors?

A. The cost of equity capital for NSPM is the rate of return that will induce investment in its regulated operations. Investors have many investment opportunities available to them in

the financial markets. By choosing one investment, investors are giving up the "opportunity" to make other investments. For that reason, in order to attract investors, NSPM must pay a return on equity similar to the equity return on other investments of comparable risk. The primary way that NSPM attracts investors is by paying dividends on its common stock. The dividends that investors expect to receive in the future from a particular company must be sufficient for them to forego the "opportunity" to use their funds to purchase stock from a different company.

Q. How do potential investors form their future dividend expectations?

A. Investors form expectations about future dividends in a number of ways. In general, such expectations are based on the past and current record of the company as well as how the company will perform going forward. They also consider current and future economic conditions.

Q. How have you estimated the return that is required for NSPM?

A. I have performed Constant-Growth DCF, Multi-Stage DCF and CAPM analyses to estimate the required return for NSPM. I will address each of them in turn.

IV. CONSTANT-GROWTH DISCOUNTED CASH FLOW ANALYSIS

Q. Describe the Discounted Cash Flow model.

A. As discussed above, investors are primarily induced to invest in utility stocks by anticipated future dividends. Dividend growth expectations, therefore, are essential for estimating the return on equity necessary for NSPM. The DCF theory states that a company's required ROE, or what investors expect to receive in the future, is equal to the

Company's expected dividend yield plus its expected growth rate in dividends. The Constant-Growth DCF model is typically represented by the equation:

$$K = D_1/P_0 + g$$

where K is the estimate of the cost of equity (ROE),

D_1 is the next period's dividend rate,

P_0 is the current stock price,

g is the expected constant growth rate in dividends, and

D_1/P_0 is the next period's dividend yield.

This formula is known as the "Discounted Cash Flow" model. It is a market-oriented approach requiring the determination of the appropriate dividend yield and growth rate. The model is based on the premise that cash dividends are the only income from a share of stock held in perpetuity. As a result, the value of that stock is the present value of its stream of future cash dividends. Expected future dividends are estimated by applying a constant growth rate to the current observable dividend.

Q. Can NSPM specific data be plugged into the DCF equation?

A. No. It is not possible to perform a DCF analysis directly on NSPM because it is not a publicly traded company and therefore does not issue its own dividends directly to individual shareholders. NSPM is a division of Xcel Energy, Inc. ("XEI"), which is publically traded under the XEL ticker symbol. Analysts publish Earning Per Share ("EPS") and dividend growth expectations for XEL, but not for NSPM.[1]

[1] The Value Line Investment Survey includes dividend growth expectations, while many other analysts offer EPS growth expectations.

Q. Can a DCF analysis be used to estimate the required return for a company that is not publically traded?

A. Yes. There are a few alternatives regarding a DCF analysis when a stock is not publicly traded. For example, it is possible to conduct a DCF analysis on the parent company XEL. For XEL, as of June 4, 2016, a DCF analysis would result in an ROE of 8.58%.[2] But a DCF analysis on a single company may be more sensitive to the randomness of stock prices and the analyst's specific prediction of growth. Instead, it is generally better to perform a DCF analysis on a comparison or proxy group of companies whose risk profile compares with that of NSPM.

A. SELECTING THE PROXY GROUP FOR NSPM

Q. What criteria did you use to select the DCF proxy group?

A. I began by reviewing Mr. Coyne's proxy group and screening analysis. As Mr. Coyne described in his initial testimony, he began with "the 46 companies that Value Line classifies as 'Electric Utilities.'"[3] Mr. Coyne then applied nine screening criteria to the 46 companies ensure that the companies in the proxy group:

1. Consistently pay quarterly cash dividends;
2. Maintain an investment grade long-term issuer rating from both S&P and Moody's;
3. Are covered by more than one equity analyst;

[2] 0.0858 = 0.0327 * (1 + 0.25 * 0.0527) + 0.0527
Current yield = 3.27%
Consensus five year EPS Growth = 5.27
0.25 = adjustment because Xcel increased its dividend in the most recent quarter
Source: finance.yahoo.com

[3] Coyne Direct, at 19.

4. Have positive earnings growth rates published by at least two of Value Line Investment Survey, Thomson First Call, and Zacks Investment Research.

5. Own generation assets included in rate base;

6. Provide more than 50 percent of MWh sales to customers from owned generation;

7. Derive more than 60 percent of the company's revenue and net operating income from regulated sources;

8. Derive more than 80 percent of the company's regulated revenue and net operating income from regulated *electric* operations; and

9. Are not involved in a merger or other transformative transaction.

Q. Do you agree with Mr. Coyne's screening criteria?

A. Generally, yes. I note that in previous cases the OAG has recommended screening the proxy group for regulated revenues and regulated assets, in an effort to ensure that the companies in the proxy group are reasonably close to complete regulation, as is NSPM for the purposes of this analysis. While Mr. Coyne does not recommend using an overall asset screen, he does recommend using screens to ensure that 60% of a company's revenue is derived from regulated operations and that 50% of electric sales were generated using company owned generation. Given the facts of this case, I believe it may be reasonable to proceed on the basis of these screens for this case.

In other proceedings the OAG has also questioned the utility of screening companies based on their regulated net income, as Xcel proposes, as net income can fluctuate significantly depending on unregulated businesses that can be highly variable.

To determine whether these screens had a material impact on the proxy group, I reviewed the Company's screening analysis to determine whether any companies were excluded solely on the basis of regulated net income or regulated electric net income screens.[4] I confirmed that each company that failed a net income screen also failed at least one other screen, indicating that this screen had no material effect on the proxy group in this proceeding.

Q. Do you recommend any changes to Mr. Coyne's original proxy group?

A. Yes. After Mr. Coyne's initial analysis, two companies in his proxy group announced new M&A activity indicating they should now be excluded. On May 31, 2016 Great Plains Energy, Inc. announced plans to acquire Westar Energy, Inc. As a result these two companies no longer qualify for proxy group inclusion.[5]

Q. What is the resulting proxy group?

A. The resulting proxy group listed below is the same as Mr. Coyne's proxy group, excluding Great Plains Energy, Inc. and Westar Energy, Inc.

ALLETE, Inc.	Empire District Electric Company
Alliant Energy Corporation	IDACORP, Inc.
Ameren Corporation	OGE Energy Corporation
American Electric Power Company, Inc.	Pinnacle West Capital Corporation
Duke Energy Corporation	PNM Resources, Inc.
El Paso Electric Company	

[4] JMC-1, Appendix A.

[5] Nathan Borney, USA Today, *Great Plains Energy Acquires Kansas Utility*, (May 31, 2016, 11:46 AM, EDT) www.usatoday.com/story/money/2016/05/31/great-plains-energy-westar-energy/85181346/.

Q. After constructing your proxy group, what is the next step in the DCF analysis?

A. The next step is to estimate a growth rate "g."

B. GROWTH RATE FOR NSPM

Q. How did you develop the growth rates that you used in your DCF analysis?

A. It is possible to project future growth rates by extrapolating from historical trends, but past performance does not necessarily predict future results. Therefore, my estimated growth rates are based on *projected* growth rates. I used the projected growth rates provided by Yahoo Finance.[6] I rely on Yahoo Finance information for two main reasons. First, Yahoo Finance information is publically available, without a paid subscription for basic access or for premium access. Second, incorporating consensus estimates from multiple sources will likely result in double-counting some analyst estimates.

Q. How could using multiple sources lead to double counting?

A. Sources such as Thomson First Call and Zacks, (and Yahoo Finance) provide consensus estimates. Consensus estimates are the average estimates provided by many analysts covering each company. Thomson, Zacks and Yahoo Finance likely gather as many analyst estimates as possible in order to provide the broadest possible consensus estimate. According to Xcel Energy's Investor Relations website, 17 analysts cover the company.[7] The Zacks consensus estimates are based on 8 analysts, but require a premium subscription to view the individual analyst names and estimates. The one year Yahoo Finance consensus earnings estimates,[8] which sources data from Thomson Financial

[6] Yahoo! Finance, http://finance.yahoo.com (last visited June 13, 2016).
[7] Xcel Energy Corporate Profile, http://investors.xcelenergy.com (last visited June 13, 2016).
[8] Yahoo Finance and Zacks specify the number of analysts included in their quarterly, current year and next year consensus estimates, but they do not specifically provide the number of analysts included in their five year consensus estimates.

Network,[9] are based on 16 analysts, but again the individual analyst information is not publically provided.

Q. What relevance does this have?

A. Some of the analysts may be counted more than once because Yahoo, Zacks, and Thomson collect data from the same analysts. If an analyst is included in Yahoo's consensus, and is also included in Zacks' consensus, then relying on both Yahoo and Zacks would count the opinion of that analyst twice.

Analysts covering Xcel Energy, Inc.	
Company	**Name**
Argus Research	Gary Hovis
Barclays Capital	Daniel F. Ford
BMO Capital	Michael Worms
Deutsche Bank	Jonathan Arnold
Evercore ISI	Greg Gordon
J.P. Morgan	Chris Turnure
Jefferies	Anthony Crowdell
KeyBanc	Paul Ridzon
Macquarie Research	Angie Storozynski

Analysts covering Xcel Energy, Inc.	
Company	**Name**
Morgan Stanley	Stephen Byrd
Morningstar	Travis Miller
RBC	Shelby Tucker
S&P Capital IQ	Christopher Muir
SunTrust Robinson Humphrey	Ali Agha
UBS	Julien Dumoulin-Smith
Wells Fargo	Neil Kalton
Wolfe Research	Steve Fleishman

[9] Thomson Financial Network is presumably the same as Thomson First Call.

Q. Please explain the concept of sustainable growth rates.

A. Sustained long-run growth in dividends can occur only from the utility's retained earnings. In other words, companies generally should not pay out dividends that are higher than their long-run profit. But published forecasts of growth rates are based on shorter term five-year forecasts which may not accurately reflect the growth rate over the longer run.

Q. How, then, do you estimate the sustainable growth rates?

A. I perform both constant-growth and multi-stage DCF analyses by (1) using the projected five-year average EPS growth rates for the sustainable growth rates in the constant-growth DCF and (2) incorporating more precise GDP growth and inflation estimates for the multi-stage DCF analysis.

Q. How did you estimate the growth rate for the proxy group?

A. My projected growth rates are the projected growth rates for EPS collected by Yahoo Finance. The average proxy group EPS growth for the next five years is 5.12 percent. I use plus or minus one standard deviation as the minimum and maximum growth rates for the purposes of this DCF analysis. The minimum and maximum growth rates are 3.51 percent and 6.73 percent, respectively. These growth rates are presented in Schedule BPL-1.

Following the growth rate, the next step is to collect data for the dividend yield.

C. DIVIDEND YIELD

Q. Please explain the dividend yield.

A. The general formula for estimating the expected dividend yield is D_1/P_0, where D_1 is the dividend in the next period and P_0 is the price today.

Q. How do you estimate the expected dividends (D_1)?

A. First, I start with the current annualized dividend. Since most companies pay dividends four times each year, I multiply the most recent quarterly dividend by four to reach the annual dividend. I then assume that dividend increases are distributed throughout the four fiscal quarters of the year. So, to account for this distribution, I then increase the annualized dividend by half of the forward-looking EPS growth rate.

Q. How do you estimate the current price (P_0)?

A. I calculate P_0 using the closing prices over a one month period. Since share prices and thus dividend yields can be volatile in the short run, it is best to look at a time period that is not too short since daily capital market aberrations can have a significant P_0 value impact. In addition, the time period must be short enough to avoid the influence of outdated historical information that is no longer applicable to the current price. I estimate P_0 by taking the average of the closing prices from May 2, 2016 through May 27, 2016 and I also provide the maximum and minimum prices and the corresponding dividend yields to illustrate the range of investor expectations during the period. This information is presented in Schedule BPL-2.

Q. What dividend yields result from these calculations?

A. The average expected dividend yield for the proxy group is 3.40 percent, which will be used in the Constant-Growth DCF analysis. Applying the low and high prices during the period results in average minimum and maximum dividend yields ranging from a low of 3.33 percent to a high of 3.50 percent. This information is presented in schedule BPL-2.

D. RESULTS OF THE CONSTANT-GROWTH DCF ANALYSIS

Q. What were the results of your Constant-Growth DCF analysis?

A. My Constant-Growth DCF results are summarized in the chart below:

Constant-Growth DCF Results

	Low	Mean	High
Growth Rate	3.51%	5.12%	6.73%
+ Dividend Yield	3.33%	3.40%	3.50%
= Return on Equity	**6.83%**	**8.52%**	**10.23%**

E. CRITICISM OF MR. COYNE'S CONSTANT-GROWTH DCF ANALYSIS

Q. What are the results of Mr. Coyne's constant growth DCF analysis?

A. The results of Mr. Coyne's analysis are presented in the table below:

Coyne's Constant Growth DCF Results

	Mean Low	***Mean***	***Mean High***
30-Day Average	8.36%	9.19%	9.91%
90-Day Average	8.33%	9.16%	9.89%
180-Day Average	8.18%	9.00%	9.73%

Q. Do you agree with Mr. Coyne's methodology?

A. I agree with his use of 30-day period prices to calculate dividend yields. I do not, however, agree with the use of prices over 90-day and 180-day periods.

Q. Please explain.

A. Assuming that markets are efficient, which means that current stock prices fully reflect all publicly available information, it may not be appropriate to use the 90- and 180-day average. Using prices older than 30 days will likely result in dividend yields based on

outdated market expectation information. As a result, DCF analysis should be performed on the most recently available 30-day period. This is consistent with the Commission's Order in Xcel's previous rate case, which used a DCF analysis that covered the 30-day period from June 7 to July 7, 2014.[10]

Q. What is your recommendation regarding Mr. Coyne's DCF?

A. Mr. Coyne's DCF calculations based on 90-day and 180-day average prices should not be considered. I also recommend that flotation costs be excluded from the final ROE awarded in this case, as discussed in Section VI.

V. MULTI-STAGE DCF ANALYSIS

Q. Please describe the general idea of a Multi-Stage DCF analysis.

A. While the Constant-Growth DCF assumes stable growth rates, the Multi-Stage DCF analysis uses multiple[11] growth rates to reflect expected future changes. For example, the market expects a gradual inflation increase, and U.S. GDP growth is expected to gradually slow in the future. The Multi-Stage DCF incorporates changes such as these into the Return on Equity analysis.

A. DESCRIPTION OF THE MULTI-STAGE DCF METHOD

Q. How is the Multi-Stage DCF different from the Constant-Growth DCF?

A. The Constant-Growth DCF assumes that all of the factors in the analysis are static, or constant. Analysts try to choose the assumptions that will be most representative of all future results. Often, analysts use the current five year growth expectations, but analysts

[10] *In the Matter of the Application of Northern States Power Company d/b/a Xcel Energy for Authority to Increase Rates for Electric Service in the State of Minnesota*, Docket No. E-002/GR-13-868, Findings of Fact, Conclusions of Law, and Order 54 (May 8, 2015).

[11] This is essentially where the term "Multi-Stage" originates.

could also choose other representative assumptions such as the average of all future growth expectations, etc. Nevertheless, the same inputs are used in perpetuity for the Constant-Growth DCF, while different inputs can be used for each year of the Multi-Stage DCF.[12] Both the Constant-Growth DCF and the Multi-Stage DCF provide valuable information that should be carefully considered. In this case, I believe that my Multi-Stage DCF model, described below, provides a better representation of investor expectations.

Q. Please explain your approach to your Multi-Stage DCF analysis.

A. For the first five years of my multi-stage DCF analysis I use the same growth rates that I used for my constant-growth DCF analysis described above. For years eleven through two hundred,[13] I used growth rates based on the real United States GDP forecast provided by the Organization for Economic Cooperation and Development ("OECD"). OECD provides global GDP forecasts "based on an assessment of the economic climate in individual countries and the world economy, using a combination of model-based analyses and expert judgement."[14] I use OECD's annual country level real GDP growth forecasts for the United States extending to the year 2060,[15] when the OECD estimates cease. For the years beyond 2060, I use two different approaches for the real GDP growth rates. I provide ROEs based on two slightly different approaches to estimating the real GDP growth rates in an attempt to balance the problems inherent in using a single point estimate throughout a long time-period with the benefits associated with

[12] Mr. Coyne used 200 years in his DCF analysis, so I did as well to maintain consistency and to avoid the small discrepancies that could result by using perpetuities.
[13] *Id.*
[14] GDP Long-Term Forecast, Organisation for Economic Co-Operation and Development, https://data.oecd.org/gdp/gdp-long-term-forecast.htm#indicator-chart (last visited June 13, 2016).
[15] *Id.* To clarify, while the data is produced by the OECD, the data is a U.S.-specific GDP estimate.

incorporating future changes in U.S. GDP growth. These approaches are detailed in BPL-3.

In the first approach, I use OECD's 2060 growth estimate of 1.3 percent throughout the remaining years. For the second approach, I extrapolated the growth rate trend beyond 2060 using OECD's growth rates from 2028 through 2060, producing the following formula: $y = 0.0236e^{-0.018x}$. The formula has an R-squared equal to 0.9923, showing that the projections fit the data well.[16] Unadjusted, the formula creates a 0.27 percent gap from OECD's 2060 growth estimate of 1.30 percent to the 2061 formula result of 1.03 percent = $y = 0.0236e^{-0.018*46}$, so I adjust by adding 0.25 percent to ensure a smooth transition beyond the 2060 growth rate. In other words, this adjustment eliminates a gap, or jump, from the 2060 growth rate to the 2061 growth rate. For years six through ten, I calculate a gradual transition from the year five growth rates to the year eleven growth rate of 3.97 percent.[17] The 2026 OECD growth rate of 2.38 percent is within the 2.3 percent to 2.4 percent range of the longest term growth rate estimates provided in the May 1, 2016 Blue Chip Financial Forecasts for 2017.[18] The ROE impact of this extrapolation is approximately five basis points.

Long-term inflation forecasts have increased slightly from the company's long-term inflation forecast based on data from September 2015 to May 2016. Inflation expectations have increased from 1.72 percent to 1.77 percent based on the spread between the 30-year Treasury Bond yield and the 30-year TIPS yield. Inflation

[16] R-squared is a statistical measurement of how close the data are to the extrapolated regression line. Its values can range from 0.00 to 1.00, with 0.00 indicating a poor fit, and 1.00 indicating a perfect fit.
[17] Mr. Coyne's comparable year 11 growth rates are 4.06 percent, 4.36 percent, and 4.65 percent for his Forecasted GDP growth scenario. Mr. Coyne and I use different data sources and my data is more current. In addition, my data source provides a longer-term forecast, as discussed above.
[18] Blue Chip Financial Forecasts Vol. 35, No. 5, page 4 (May 1, 2016).

expectations vary over different time periods, so I have incorporated inflation forecasts based on 10- and 20-year Treasuries in addition to 30-year Treasuries.[19] If there were liquid Treasuries with maturities greater than 30 years, I would have incorporated their implied inflation numbers into my analysis as well, but there are none.

B. RESULTS OF THE MULTI-STAGE DCF ANALYSIS

Q. What were the results of your Multi-Stage DCF analysis?

A. My Multi-Stage DCF results are summarized in the chart below:

Multi-Stage DCF Results

ROEs	Low	Mean	High
OECD Growth	7.34%	7.43%	7.55%
OECD Growth with extrapolation beyond 2060	7.29%	7.38%	7.50%

Q. Do you have any conclusions regarding your Multi-Stage DCF analysis?

A. Yes. The results of my two alternate methods are relatively close, which indicates that the methods provide a cross-check on each other.

C. CRITICISM OF MR. COYNE'S MULTI-STAGE DCF ANALYSIS

Q. Please explain the areas in which your Multi-Stage DCF Analysis may be an improvement over Mr. Coyne's Multi-Stage DCF Analysis.

A. My Multi-Stage DCF is similar to Mr. Coyne's with two key exceptions. My analysis uses more precise values for (1) GDP growth and (2) inflation expectations.

Regarding GDP growth, Mr. Coyne uses both historical GDP growth and a forward looking GDP forecast. It is not reasonable to use 1929 to 2014 GDP growth as a proxy for 2026 to 2215 GDP growth, as Mr. Coyne does. Mr. Coyne's forward looking

[19] Inflation expectations are 1.59 percent based on 10-year maturities, and 1.57 percent based on 20-year maturities.

GDP forecast is used during the entire third phase of his analysis, covering 190 years, and uses the average Blue Chip Financial Forecast of GDP growth for the years 2022 through 2026.[20] Said another way, Mr. Coyne's GDP growth numbers were developed for and apply to the years 2022 through 2026, but he uses them as though they apply equally to each and every year from 2026 through 2215. Note that 2026 is the only year in common between the time period for which the estimate was developed and the time period where Mr. Coyne applies the estimate. My analysis, instead, uses GDP growth estimates developed specifically for each year from 2026 through 2060 and incorporates the simple assumptions described above for the years after 2060.[21]

Regarding inflation, Mr. Coyne uses two sources for inflation: (1) a single estimate based on 30-year treasuries, and (2) a single consensus CPI estimate for the years 2022 through 2026, provided by Blue Chip Financial Forecast.[22] Mr. Coyne uses these inflation numbers throughout the 190 year duration of his third phase. I also use the 30-year treasury assumptions in my analysis, but only for the years to which they are most relevant, or when other information is not available (year 25 and beyond). For years 15 through 24, I use inflation based on 20-year treasuries and for years 11 through 14, I use inflation based on 10-year treasuries.

The GDP and inflation methodology used in my analysis provides a more accurate ROE estimate because it incorporates more precise information than in Mr. Coyne's analysis.

[20] This average is 2.3 percent; Coyne Direct, at 28; JMC-1, Schedule 5.
[21] I use overall GDP growth rates as Mr. Coyne does. Overall GDP growth rates incorporate all products and services throughout the United States, but growth rates for electricity expenditures in Minnesota will differ from overall GDP growth rates.
[22] The Blue Chip Financial Forecast also provides a GDP Price Index, which may be more applicable than CPI to an analysis that starts with real GDP growth.

VI. FLOTATION COSTS

Q. What are flotation costs?

A. Flotation costs are the cost of issuing new shares of common stock. They may include (1) an underwriting spread that the investment banks receive by paying the Company one price for shares, and selling the shares to investors at a higher prices; and (2) out-of-pocket expenses including attorney fees, printing costs, and the expense for presentations to investments firms. To the extent that Xcel ever incurred flotation costs, they would actually be incurred by the parent company, XEI, rather than NSPM, which does not issue shares publically.

Q. Has Xcel requested a flotation cost adjustment in this case?

A. Yes. Xcel witness Mr. Coyne recommends a 19 basis point flotation cost adjustment to the return on equity. In other words, after conducting his DCF analysis to calculate the ROE, Mr. Coyne increases the results by 19 basis points.[23]

Q. What is the financial impact of Xcel's requested 19 basis point flotation cost adjustment?

A. Xcel witness Ms. Heuer testified that Xcel's test year rate base is $7,836,115,000.[24] When applied to Xcel's requested rate base and proposed capital structure, a 19 basis point adjustment increases Xcel's revenue requirement by approximately $7.8 million.[25]

[23] Coyne Direct, at 26.
[24] Heuer Direct, at 29.
[25] $7,836,115,000 * 0.0019 * 0.525 = $7,816,525.

Q. Do you believe that the Commission should increase Xcel's revenue requirement by $7.8 million for a flotation cost adjustment?

A. No, I do not. First, I disagree with Mr. Coyne that flotation costs are justified in this case. Second, to the extent that flotation costs are considered I disagree with the manner in which Mr. Coyne has calculated his proposed adjustment. I will address each of these issues in turn.

A. THE COMMISSION SHOULD DENY THE REQUEST FOR A FLOTATION COST ADJUSTMENT.

Q. Why does Mr. Coyne state that a flotation cost adjustment is necessary?

A. Mr. Coyne states, "To the extent that a company is denied the opportunity to recover prudently incurred flotation costs, actual returns will fall short of expected (or required) returns, thereby diminishing the utility's allowed return."[26]

Q. Do you agree that Xcel should receive a flotation cost adjustment?

A. No, I do not, and for several reasons. First, Xcel and Mr. Coyne have provided no serious attempt to justify their request for a flotation cost adjustment. Mr. Coyne's only justification for the adjustment is a single, conclusory statement, effectively stating that Xcel must receive a flotation cost adjustment because the Company's return would be lower without one. While I agree that Xcel's shareholders would certainly prefer to receive an upward adjustment to the Company's return on equity, neither Mr. Coyne nor any other witness has attempted to demonstrate why one would be justified in this case.

In fact, the evidence in this record demonstrates the opposite: that a flotation cost adjustment would be unreasonable in this case.

[26] Coyne Direct, at 26.

Q. What evidence demonstrates that a flotation cost adjustment would be unreasonable?

A. Xcel claims that flotation cost adjustment is necessary because its actual returns will be insufficient if the Company cannot recover "prudently incurred flotation costs."[27] The problem with this argument is that Xcel will not incur any flotation costs, prudent or otherwise during the test year or plan years in this case.

In its initial filing, Xcel provided information on the Company's common equity issuances. Since the merger which resulted in XEI, the Company has issued shares in 2002, 2008, 2010, 2013, and 2014. 2014 was the test year for Xcel's previous rate case, Docket 13-868. Xcel did not issue shares in 2015, and has not issued any shares in 2016. More importantly, intervenors have conducted discovery in which Xcel has confirmed that the Company has not announced, and does not plan, any stock issuances in 2016, 2017, or 2018.[28]

As a result, Xcel will *not* incur any flotation costs during the test or plan years of this rate case. Granting Xcel a flotation cost adjustment when it will not incur any flotation costs would not be reasonable.

Q. Has Xcel received flotation cost adjustments in previous cases?

A. Yes. In its 2013 rate case, Xcel received a flotation cost adjustment of approximately 11 basis points.[29]

[27] Coyne Direct, at 26.
[28] Schedule BPL-4 (OAG Information Request 532; XLI Information Request 25).
[29] Xcel has also received flotation cost adjustments in earlier proceedings.

Q. If Xcel has received a flotation cost adjustment in prior cases, why should a flotation cost adjustment be denied in this case?

A. First, I believe that the Commission's decision in this case must be based on the record in this case, not on the record of other, earlier proceedings. Accordingly, I believe that the record in this case does not support a flotation cost adjustment.

Second, the Commission's decision in a more recent case indicates that the Commission has established new precedent on flotation costs. While, as I mentioned, the facts in each rate case are unique, the Commission's reasoning in CenterPoint Energy's most recent rate case led the Commission to deny a flotation cost adjustment.[30] The factual scenario in CenterPoint's case was very similar to this one. In the CenterPoint case, the Commission decided against a flotation cost adjustment, in part, because of CenterPoint's lack of planned issuances.[31] Just as in the CenterPoint proceeding, Xcel has no plans to issue stock in the near future. The primary difference from the CenterPoint proceeding is that XEI has issued shares in the last few years, while CenterPoint had not. These issuances were, however, relatively small. While the Company issued 21.85 million shares in 2010, it issued far fewer shares in 2013 and 2014, and the Company also testified that these issuances were the result of a special SEC-registered "At the Market" program rather than standard issuances.[32] As a result, it appears that XEI has not had a standard issuance of common equity since 2010, the same amount of time as CenterPoint. Following the new precedent in the CenterPoint case should lead the Commission to reach the same conclusion in this case.

[30] *In the Matter of the Application of CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Minnesota Gas for Authority to Increase Natural Gas Rates in Minnesota*, Docket No. G-008/GR-15-424, Findings of Fact, Conclusions, and Order 43–44 (June 3, 2016).
[31] *Id.*
[32] Van Abel Direct, at 38.

The Commission has recognized these concerns before, in addition to its decision in the CenterPoint proceeding. In Xcel's 2005 electric rate case, the Commission questioned whether a flotation cost adjustment should be granted because the "absence of affirmative, record evidence that Xcel plans to issue stock during the test year clearly cuts in favor of denying" the adjustment.[33] In that case, the Commission did not deny the adjustment because no party had requested it, but in this proceeding the issue has been raised clearly. The concerns the Commission expressed in this proceeding also apply to this proceeding.

Other regulatory bodies regularly apply the same principle. In particular, the Federal Energy Regulatory Commission ("FERC") permits "flotation cost adjustments only when the utility demonstrates that a new stock issuance is imminent."[34] The FERC has applied this principle in several proceedings to reject flotation cost adjustments where utilities have failed to demonstrate that they will be making issuances during the test year or in the near future.[35] While the Commission is not required to follow FERC's guidance on this issue, FERC's policy comports with the Commission's recent decision in the CenterPoint rate case, and the concerns the Commission has expressed in previous Xcel rate cases. The balance of the Commission's reasoning should lead the Commission to reach the same conclusion in this case as the FERC, and the CenterPoint proceeding, and reject Xcel's request for a flotation cost adjustment.

[33] *Order Opening Investigation, In the Matter of the Application of Northern States Power Company d/b/a Xcel Energy for Authority to Increase Rates for Electric Service in Minnesota*, Docket No. E-002/GR-05-1428, Findings of Fact, Conclusions of Law, and Order 26 (Sept. 1, 2006) (noting that "flotation adjustments are generally granted only when stock issuances are anticipated").
[34] Bangor Hydro-Electric Co et al., Docket No. ER04-157-004, Opinion No. 489, at 31 (2006).
[35] Williston Basin Interstate Pipeline Co., 104 FERC ¶ 61,036 at P. 51 (2003); Allegheny 65 FERC ¶ 63,026, at 65, 179.

Q. Would it be reasonable for NSPM to receive a flotation cost adjustment absent an issuance?

A. No. Flotation costs are only incurred when a utility actually issues shares. NSPM has provided no evidence that XEI will issue shares during this rate case, and, in fact, the Company admitted through information requests that there is no issuance planned in the test year or the plans years.[36]

Moreover, even to the extent that XEI did issue shares, NSPM should bear only part of the expense of such an issuance as XEI owns several other utility subsidiaries. Neither XEI, nor NSPM have provided discussion as to how those issuance costs should be borne in the event of an issuance.

Q. Would denial of a flotation cost adjustment have any detrimental effect on Xcel's ability to access capital markets?

A. No. NSPM can access short term financing through its parent company and appears to have ready access to long-term financing through its own credit facilities. All public equity issuances are handled at the parent company level, rather than at the operating company level. The Company has not produced any evidence to demonstrate that its access to capital markets would change as a result of the flotation cost adjustment.

Q. Do you have any other concerns regarding Xcel's flotation cost adjustment in previous cases?

A. Yes, I do. Xcel provided information that XEI incurred $2.6 million in flotation costs in 2013 and $1.9 million in flotation costs in 2014. In its 2013 rate case, Xcel received a flotation cost adjustment of approximately 11 basis points, and an equity ratio of 52.50%.

[36] Schedule BPL-4.

When applied to the Company's approved rate base of $6,493,649,000, that indicates that Xcel recovered approximately $3.75 million[37] per year from ratepayers as a result of its flotation cost adjustment.[38] This recovery exceeds the level of flotation costs that Xcel actually incurred for its two most recent issuances, and is another reason that the Commission should critically review the Company's request in this case.

Q. What is your flotation cost recommendation?

A. I recommend that the Commission deny the company's request for a flotation cost adjustment.

B. CALCULATION OF THE FLOTATION COST ADJUSTMENT

Q. You stated that you also disagree with Mr. Coyne's calculation of the flotation cost adjustment. Can you explain why?

A. Yes. Xcel witness Mr. Van Abel calculated Xcel's requested flotation cost adjustment by averaging the flotation costs the Company has incurred since 1949.[39] The world was a very different place in 1949, and there is no plausible reason that flotation costs from issuances in the 1940s, 1950s, or 1960s would bear any resemblance to issuances in the modern era. For that matter, reviewing Mr. Van Abel's Schedule demonstrates that flotation cost percentages were generally higher in the mid-20th century than in more recent decades.

Over the entire period from 1949 to 2014, the flotation cost percentages averaged at 4.617%. The flotation cost percentages from 1949 to 1976 averaged 6.434%, while

[37] $6,493,649,000 * 0.0011 * 0.525 = $3,750,256.
[38] *In the Matter of the Application of Northern States Power Company d/b/a Xcel Energy for Authority to Increase Rates for Electric Service in the State of Minnesota*, Docket No. E-002/GR-13-868, Findings of Fact, Conclusions, and Order 57 (May 8, 2015).
[39] Van Abel Direct, Schedule 13; Coyne Direct, Schedule 4.

they have averaged only 3.759% from 1993 to the present day.[40] In what is perhaps an even better comparison, flotation costs since Xcel's merger, and when the Company issued the vast majority of its outstanding shares, have averaged 3.615%. Additionally, the 2010 issuance of 22 million shares "was structured as a forward equity sale."[41] This is the only issuance structured as a forward equity sale,[42] and this unique structure resulted in a flotation cost of 6.918%. Eliminating this unique, high cost issuance results in an average flotation cost percentage of 2.789% since Xcel's merger. Furthermore, Xcel's two most recent issuances averaged 1.138%. All of this information indicates that the Company has overstated its flotation cost percentage by performing the calculation going back more than 70 years to the 1940s.

As stated above, the Company has not demonstrated that it would be reasonable to permit a flotation cost adjustment in this proceeding. To the extent that a flotation cost adjustment is considered, however, I recommend that it be based either on data from issuances beginning in 1993, or from issuances that took place after the Company's merger, excluding the issuance structured as a forward equity sale.

Q. Do you have any additional concerns with Xcel's calculation of flotation costs?

A. Yes. In response to a Department information request, Xcel admitted that it excluded non-public issuances from its calculation of flotation costs.[43] As the Department correctly noted, non-public issuances were included in calculating flotation costs in Xcel's previous rate case, Docket No. 13-868. While I do not agree that flotation costs should be permitted in this case, to the extent that they are there does not appear to be any

[40] There were no issuances between 1976 and 1993.
[41] Coyne Direct, Schedule 4, footnote 1.
[42] There have been a total of 21 issuances going back to 1949 according to Mr. Van Abel and Mr. Coyne.
[43] Schedule BPL – 5 (Department IR 201).

justification for excluding non-public issuances for the purposes of calculation when they have been included in the past. In its response to the Department, Xcel admits that the non-public issuances should have been included, and that doing so would reduce the flotation cost calculation from 19 basis points to 12 basis points.

Q. Does including non-public issuances resolve all of your concerns with the calculation?

A. No, I continue to have concerns with the time period used for the calculation, as described above.

Q. Can you summarize your recommendation regarding flotation costs?

A. Yes. Xcel has not demonstrated that it requires a flotation cost adjustment in order to earn a fair return for its shareholders. In fact, all evidence in this proceeding indicates that Xcel will continue to have strong access to capital markets regardless of a flotation cost adjustment. Awarding the Company with millions of dollars in additional revenue requirements based on these facts would not result in just and reasonable rates, and I recommend that Xcel's request for a flotation cost adjustment be denied.

VII. CAPITAL ASSET PRICING MODEL (CAPM) ANALYSIS

Q. Please explain the purpose of your CAPM analysis.

A. My CAPM analysis is intended as a check on the reasonableness of the DCF analyses I performed.

Q. What is the CAPM?

A. The basic premise of the CAPM is that any risk which is company specific can be eliminated through diversification by holding a portfolio of securities. Therefore, the

only risk that matters is the systematic risk of the stock. Systematic risk refers to the risk associated with movements in the macro-economy. This systematic risk is measured by beta, which is a statistical measure that attempts to quantify the non-diversifiable risk of the return on a particular security against the returns inherent in general stock market fluctuation. The formula is expressed as follows:

$$k = r_f + \text{beta}\ (r_m - r_f)$$

where k is the required rate of return for the stock in question;

r_f is the rate of return on a risk-free asset;

r_m is the average market return; and

$(r_m - r_f)$ is the market risk premium.

To perform a CAPM analysis, it is necessary to determine the return on a risk-free asset, r_f, along with the appropriate beta and the appropriate market rate of return, r_m.

Q. What is a risk-free asset?

A. The most widely accepted risk-free investment is the 13-week U.S. Treasury bill. While longer-term Treasury bonds have equivalent default risk to T-Bills, those longer-term government bonds carry additional risk that the T-Bills do not. When investors commit their money for longer periods of time, as they do with when purchasing a Treasury bond, they must be compensated for future investment opportunities forgone as well as the potential for future changes in inflation. Investors are compensated for this increased risk by receiving a higher yield on T-Bonds.

However, there are two problems with using T-Bill yields as the risk free rate. First, they have been heavily influenced by Federal Reserve policy. For example, since the Fed has acted aggressively over the past several years to keep short-term interest rates

low in order to fend off recession, the yield is near zero. Second, the 13-week T-Bills do not match the planning horizon of many equity investors. Equity investors generally have an investment horizon beyond 90 days.

For the purposes of the risk-free asset rate of return for my CAPM analysis, I have used the average yields on 10-year, 20-year, and 30-year Treasuries over the period from May 2, 2016 to May 27, 2016.[44] This monthly time period is used again to dampen the impact of daily aberrations. The yields are shown in the table below:

	10-Yr	**20-Yr**	**30-Yr**
Treasury Yield	1.80%	2.22%	2.63%

Since the yields on longer term bonds incorporate higher inflation risk premiums, using them in a CAPM analysis may result in an upward bias of the ROE.

Q. How is the market rate of return, r_m determined?

A. One can choose from a number of market indices to estimate a market rate of return for use in the CAPM formula. Common choices included the S&P 500 Index, the Value Line Composite or the New York Stock Exchange Index. I chose the S&P 500 Index because it is representative of the market as a whole and not a proprietary projection and therefore readily accessible to the public. On May 31, 2016, the projected EPS growth rate for the S&P 500 was 7.54 percent[45] and the dividend yield was 2.1 percent.[46] Using the same assumptions explained earlier, I increase this dividend yield by one half the growth rate of 7.54 percent (0.021 * (1 + 0.5 * 0.0754). This calculation results in a dividend yield of 2.18 percent. Using the yield plus growth methodology, the market rate

[44] Interest Rate Statistics, U.S. Department of the Treasury, http://www.treasury.gov/resource-center/data-chart-center/interest-rates/Pages/default.aspx (last visited June 13, 2016).
[45] Yahoo! Finance, http://finance.yahoo.com (last visited June 13, 2016).
[46] S&P 500 Dividend Yield, http://www.multpl.com/s-p-500-dividend-yield/ (last visited June 13, 2016).

of return based on the S&P 500 is 2.18 percent + 7.54 percent = 9.72 percent. I use the market rate of return r_m equal to 9.72 percent in my CAPM calculation.

Q. What are your CAPM results?

A. Using r_m = 9.72 percent, risk-free rates of 1.80 percent for the 10-year, 2.22 percent for the 20-year, and 2.63 percent for the 30-year, and a beta of 0.388, the CAPM results fall between 4.88 percent and 5.38 percent with an average of 5.13 percent, matching the results for the 20-year Treasury.

Q. Did you calculate any other CAPM results?

A. Yes, I calculated an Empirical CAPM (ECAPM) using the following formula:

$$k = r_f + 0.25(r_m - r_f) + 0.75\beta\,(r_m - r_f)$$ [47]

ECAPM provides another ROE estimate that is customized for use with low Beta stocks, such as utilities. The table below shows the ROE results of both the CAPM and ECAPM using 10, 20, and 30 year treasuries for the risk free rate.

ROEs	CAPM	ECAPM
10-yr Treasury	4.88%	6.09%
20-yr Treasury	5.13%	6.28%
30-yr Treasury	5.38%	6.46%
Average	5.13%	6.28%

Q. Can you explain the CAPM and ECAPM results?

A. Yes. According to these CAPM and ECAPM analyses, an investor would require a return of between 4.88 and 6.46 percent to invest in NSPM. The CAPM and ECAPM results are lower than DCF results primarily as a result of the historically low Betas for

[47] Roger A. Morin, *New Regulatory Finance* 190, equation 6-6 (2006).

the stocks included in the proxy group. As a result, I use the CAPM and ECAPM analyses only as a check on the reasonableness of the DCF results.

VIII. RISK PREMIUM ANALYSIS

Q. DO YOU PERFORM A RISK PREMIUM ANALYSIS?

A. No.

Q. Why not?

A. Because "the Commission has historically relied on [it] less heavily [than the DCF and CAPM models], considering the [Risk Premium] model prone to producing volatile and unreliable outcomes."[48] I agree with the Commission's prior decisions and so did not conduct a Risk Premium analysis.

IX. CONCLUSION

Q. Can you summarize your results?

A. My results are summarized as follows:

Constant-Growth DCF Results

	Low	Mean	High
Growth Rate	3.51%	5.12%	6.73%
+ Dividend Yield	3.33%	3.40%	3.50%
= Return on Equity	**6.83%**	**8.52%**	**10.23%**

[48] *In the Matter of the Application of Northern States Power Company for Authority to Increase Rates for Electric Service in the State of Minnesota*, Docket No. E-002/GR-13-868, Findings of Fact, Conclusions, and Order 53 (May 8, 2015).

Multi-Stage DCF Results

ROEs	Low	Mean	High
OECD Growth	7.34%	7.43%	7.55%
OECD Growth with extrapolation beyond 2060	7.29%	7.38%	7.50%

ROEs	CAPM	ECAPM
10-yr Treasury	4.88%	6.09%
20-yr Treasury	5.13%	6.28%
30-yr Treasury	5.38%	6.46%
Average	5.13%	6.28%

Q. What is your recommendation?

A. I recommend an ROE of 7.38%, which is the midpoint of my Multi-Stage DCF with extrapolation of the OECD's growth rates beyond 2060.

Q. Why choose the Multi-Stage DCF?

A. The Multi-Stage DCF incorporates anticipated inflation and GDP changes into the ROE analysis, while the Constant-Growth DCF assumes static inflation and GDP growth rates over a long time period. I believe that this makes the Multi-Stage DCF a more precise model.

Q. Why is the midpoint the most reasonable ROE from the range of results of a DCF analysis?

A. As the Commission recently stated "[p]roxy-group averages have much higher probative value than proxy-group ranges; the purpose of a proxy group is to provide a

representative average or composite to stand in for the company being studied."[49] The Commission made this statement in reference to utility capital structures, but the reasoning applies equally to ROE analysis. I agree with the Commission's judgment that the midpoint is the most appropriate in this case.

Q. Does this conclude your Direct Testimony?

A. Yes.

[49] *In the Matter of the Application of CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Minnesota Gas for Authority to Increase Natural Gas Rates in Minnesota*, Docket No. G-008/GR-15-424, Findings of Fact, Conclusions, and Order 35 (June 3, 2016).

Company	Ticker	Growth Est. Next Five Years (per annum)
ALLETE, Inc.	ALE	3.00%
Alliant Energy Corporation	LNT	6.60%
Ameren Corporation	AEE	5.20%
American Electric Power Company, Inc.	AEP	4.10%
Duke Energy Corporation	DUK	4.62%
El Paso Electric Company	EE	7.00%
Empire District Electric Company	EDE	5.00%
IDACORP, Inc.	IDA	4.00%
OGE Energy Corporation	OGE	4.30%
Pinnacle West Capital Corporation	PNW	3.73%
PNM Resources, Inc.	PNM	8.76%
Average		**5.12%**
Standard Deviation		1.61%
-1 std		3.51%
+1 std		6.73%

Company	Ticker	Next Five Years growth	Min Price	Average Price	Max Price	Current Annualized Dividend	Dividend Forecast	Min Yield: D1/P0	Ave Yield: D1/P0	Max Yield: D1/P0	Min Gordon Growth Results	Ave Gordon Growth Results	Max Gordon Growth Results
ALLETE, Inc.	ALE	3.00%	$54.53	$56.34	$57.61	$ 2.08	$ 2.11	3.66%	3.75%	3.87%	6.66%	6.75%	6.87%
Alliant Energy Corporation	LNT	6.60%	$35.35	$36.28	$37.05	$ 1.18	$ 1.21	3.28%	3.35%	3.44%	9.88%	9.95%	10.04%
Ameren Corporation	AEE	5.20%	$46.69	$47.88	$48.88	$ 1.70	$ 1.74	3.57%	3.64%	3.74%	8.77%	8.84%	8.94%
American Electric Power Company, Inc.	AEP	4.10%	$62.95	$64.43	$65.93	$ 2.24	$ 2.29	3.47%	3.55%	3.63%	7.57%	7.65%	7.73%
Duke Energy Corporation	DUK	4.62%	$76.15	$78.35	$80.24	$ 3.30	$ 3.38	4.21%	4.31%	4.43%	8.83%	8.93%	9.05%
El Paso Electric Company	EE	7.00%	$42.63	$44.63	$46.19	$ 1.18	$ 1.22	2.64%	2.74%	2.86%	9.64%	9.74%	9.86%
Empire District Electric Company	EDE	5.00%	$33.12	$33.33	$33.63	$ 1.04	$ 1.07	3.17%	3.20%	3.22%	8.17%	8.20%	8.22%
IDACORP, Inc.	IDA	4.00%	$70.17	$72.58	$73.95	$ 2.04	$ 2.08	2.81%	2.87%	2.97%	6.81%	6.87%	6.97%
OGE Energy Corporation	OGE	4.30%	$29.34	$30.32	$30.99	$ 1.10	$ 1.12	3.63%	3.71%	3.83%	7.93%	8.01%	8.13%
Pinnacle West Capital Corporation	PNW	3.73%	$70.75	$72.91	$74.57	$ 2.50	$ 2.55	3.42%	3.49%	3.60%	7.15%	7.22%	7.33%
PNM Resources, Inc.	PNM	8.76%	$31.46	$32.43	$33.27	$ 0.88	$ 0.92	2.76%	2.83%	2.92%	11.52%	11.59%	11.68%
Average		5.12%						3.33%	3.40%	3.50%	8.45%	8.52%	8.62%
Standard Deviation		1.61%							0.45%			1.41%	
-1 std		3.51%							2.95%			7.11%	
+1 std		6.73%							3.85%			9.93%	

AVERAGE YIELD -- MULTI-STAGE DCF -- FORECASTED OECD GDP GROWTH WITH EXTRAPOLATION BEYOND 2060

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]
					Second Stage Growth						
Company	Ticker	Stock Price	Annualized Dividend	First Stage Growth	Year 6	Year 7	Year 8	Year 9	Year 10	Third Stage Growth	ROE
ALLETE, In	ALE	$56.34	$2.08	3.00%	3.16%	3.32%	3.49%	3.65%	3.81%	3.97%	7.27%
Alliant Ener	LNT	$36.28	$1.18	6.60%	6.16%	5.72%	5.29%	4.85%	4.41%	3.97%	7.70%
Ameren Cor	AEE	$47.88	$1.70	5.20%	5.00%	4.79%	4.59%	4.38%	4.18%	3.97%	7.71%
American El	AEP	$64.43	$2.24	4.10%	4.08%	4.06%	4.04%	4.02%	3.99%	3.97%	7.31%
Duke Energ	DUK	$78.35	$3.30	4.62%	4.51%	4.40%	4.30%	4.19%	4.08%	3.97%	8.37%
El Paso Ele	EE	$44.63	$1.18	7.00%	6.50%	5.99%	5.49%	4.98%	4.48%	3.97%	6.95%
Empire Dist	EDE	$33.33	$1.04	5.00%	4.83%	4.66%	4.49%	4.32%	4.14%	3.97%	7.10%
Great Plains	GXP	$31.01	$1.05	7.10%	6.58%	6.06%	5.54%	5.02%	4.49%	3.97%	8.05%
IDACORP,	IDA	$72.58	$2.04	4.00%	4.00%	3.99%	3.99%	3.98%	3.98%	3.97%	6.46%
OGE Energy	OGE	$30.32	$1.10	4.30%	4.25%	4.19%	4.14%	4.08%	4.03%	3.97%	7.55%
Pinnacle We	PNW	$72.91	$2.50	3.73%	3.77%	3.81%	3.85%	3.89%	3.93%	3.97%	7.15%
PNM Resou	PNM	$32.43	$0.88	8.76%	7.96%	7.16%	6.37%	5.57%	4.77%	3.97%	7.51%
Westar Ene	WR	$52.04	$1.52	4.93%	4.77%	4.61%	4.45%	4.29%	4.13%	3.97%	6.83%

Nominal Growth
OECD Real GDP Growth rate
Inflation

Mean	7.38%
Standard Deviation	0.49%
+ 1 Standard Deviation	7.88%
-1 Standard Deviation	6.89%

Notes:
[1] Source: Yahoo Finance
[2] Source: Yahoo Finance
[3] Source: Yahoo Finance
[4] Equals [3] + ([9] − [3]) / 6
[5] Equals [4] + ([9] − [3]) / 6
[6] Equals [5] + ([9] − [3]) / 6
[7] Equals [6] + ([9] − [3]) / 6
[8] Equals [7] + ([9] − [3]) / 6
[9] Source: OECD long term real GDP forecast, plus inflation based on the May 2016 average of Treasury Bond yields less the May 2016 averageof TIPS yields as of May 31, 2016
[10] Equals internal rate of return of cash flows for Year 0 through Year 200

	First Stage					Second Stage								
Stock Price	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14
5/31/2016	11/30/2016	11/30/2017	11/30/2018	11/30/2019	11/30/2020	11/30/2021	11/30/2022	11/30/2023	11/30/2024	11/30/2025	11/30/2026	11/30/2027	11/30/2028	11/30/2029
-$56.34	$2.14	$2.21	$2.27	$2 34	$2.41	$2.49	$2.57	$2.66	$2.76	$2.86	$2.98	$3.09	$3.22	$3.34
-$36.28	$1.25	$1.34	$1.42	$1 52	$1.62	$1.72	$1.82	$1.91	$2.01	$2.09	$2.18	$2.26	$2.35	$2.45
-$47.88	$1.79	$1.88	$1.98	$2 08	$2.19	$2.30	$2.41	$2.52	$2.63	$2.74	$2.85	$2.96	$3.08	$3.20
-$64.43	$2.33	$2.43	$2.53	$2.63	$2.74	$2.85	$2.97	$3.09	$3.21	$3.34	$3.47	$3.61	$3.75	$3.90
-$78.35	$3.45	$3.61	$3.78	$3 95	$4.14	$4.32	$4.51	$4.71	$4.90	$5.10	$5.31	$5.52	$5.74	$5.96
-$44.63	$1.26	$1.35	$1.45	$1 55	$1.66	$1.76	$1.87	$1.97	$2.07	$2.16	$2.25	$2.34	$2.43	$2.52
-$33.33	$1.09	$1.15	$1.20	$1 26	$1.33	$1.39	$1.46	$1.52	$1.59	$1.65	$1.72	$1.79	$1.86	$1.93
-$31.01	$1.13	$1.21	$1.29	$1 38	$1.48	$1.58	$1.68	$1.77	$1.86	$1.94	$2.02	$2.10	$2.18	$2.27
-$72.58	$2.12	$2.21	$2.29	$2 39	$2.48	$2.58	$2.68	$2.79	$2.90	$3.02	$3.14	$3.26	$3.39	$3.52
-$30.32	$1.15	$1.20	$1.25	$1 30	$1.36	$1.42	$1.47	$1.54	$1.60	$1.66	$1.73	$1.80	$1.87	$1.94
-$72.91	$2.59	$2.69	$2.79	$2 89	$3.00	$3.12	$3.23	$3.36	$3.49	$3.63	$3.77	$3.92	$4.08	$4.23
-$32.43	$0.96	$1.04	$1.13	$1 23	$1.34	$1.45	$1.55	$1.65	$1.74	$1.82	$1.90	$1.97	$2.05	$2.13
-$52.04	$1.59	$1.67	$1.76	$1 84	$1.93	$2.03	$2.12	$2.21	$2.31	$2.40	$2.50	$2.60	$2.70	$2.81
											3.97%	3.96%	3.95%	3.92%
											2.38%	2.37%	2.35%	2.33%
											1.59%	1.59%	1.59%	1.59%

Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21	Year 22	Year 23	Year 24	Year 25	Year 26	Year 27	Year 28	Year 29
11/30/2030	11/30/2031	11/30/2032	11/30/2033	11/30/2034	11/30/2035	11/30/2036	11/30/2037	11/30/2038	11/30/2039	11/30/2040	11/30/2041	11/30/2042	11/30/2043	11/30/2044
$3.47	$3.60	$3.74	$3 88	$4.02	$4.16	$4.31	$4.46	$4.62	$4.78	$4.95	$5.13	$5.30	$5.49	$5.68
$2.54	$2.64	$2.74	$2 84	$2.94	$3.05	$3.16	$3.27	$3.38	$3.50	$3.62	$3.75	$3.88	$4.02	$4.16
$3.32	$3.45	$3.58	$3.71	$3.85	$3.99	$4.13	$4.28	$4.42	$4.58	$4.74	$4.91	$5.08	$5.26	$5.44
$4.05	$4.20	$4.36	$4 52	$4.69	$4.86	$5.03	$5.21	$5.39	$5.57	$5.77	$5.98	$6.19	$6.40	$6.62
$6.19	$6.43	$6.67	$6 91	$7.17	$7.43	$7.69	$7.96	$8.24	$8.52	$8.83	$9.14	$9.46	$9.79	$10.13
$2.62	$2.72	$2.82	$2 93	$3.03	$3.14	$3.26	$3.37	$3.49	$3.61	$3.74	$3.87	$4.01	$4.15	$4.29
$2.00	$2.08	$2.16	$2 24	$2.32	$2.40	$2.49	$2.58	$2.67	$2.76	$2.86	$2.96	$3.06	$3.17	$3.28
$2.35	$2.44	$2.53	$2.63	$2.72	$2.82	$2.92	$3.03	$3.13	$3.24	$3.36	$3.48	$3.60	$3.72	$3.85
$3.66	$3.80	$3.94	$4 09	$4.24	$4.39	$4.55	$4.71	$4.87	$5.04	$5.22	$5.40	$5.59	$5.79	$5.99
$2.02	$2.09	$2.17	$2 25	$2.33	$2.42	$2.51	$2.59	$2.68	$2.78	$2.88	$2.98	$3.08	$3.19	$3.30
$4.40	$4.57	$4.74	$4 91	$5.09	$5.28	$5.46	$5.66	$5.85	$6.06	$6.27	$6.49	$6.72	$6.96	$7.20
$2.21	$2.29	$2.38	$2.47	$2.56	$2.65	$2.75	$2.84	$2.94	$3.04	$3.15	$3.26	$3.38	$3.50	$3.62
$2.92	$3.03	$3.14	$3 26	$3.38	$3.50	$3.62	$3.75	$3.88	$4.01	$4.16	$4.30	$4.46	$4.61	$4.77
3.85%	3.80%	3.76%	3.71%	3.66%	3.62%	3.57%	3.52%	3.48%	3.43%	3.59%	3.55%	3.51%	3.48%	3.45%
2.28%	2.23%	2.18%	2.14%	2.09%	2.04%	1.99%	1.95%	1.90%	1.86%	1.82%	1.78%	1.74%	1.71%	1.68%
1.57%	1.57%	1.57%	1.57%	1.57%	1.57%	1.57%	1.57%	1.57%	1.57%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 30	Year 31	Year 32	Year 33	Year 34	Year 35	Year 36	Year 37	Year 38	Year 39	Year 40	Year 41	Year 42	Year 43	Year 44
11/30/2045	11/30/2046	11/30/2047	11/30/2048	11/30/2049	11/30/2050	11/30/2051	11/30/2052	11/30/2053	11/30/2054	11/30/2055	11/30/2056	11/30/2057	11/30/2058	11/30/2059
$5.87	$6.07	$6.28	$6.49	$6.70	$6.92	$7.15	$7.39	$7.62	$7.87	$8.12	$8.38	$8.64	$8.91	$9.19
$4.30	$4.44	$4.59	$4.75	$4.91	$5.07	$5.23	$5.40	$5.58	$5.76	$5.94	$6.13	$6.32	$6.52	$6.72
$5.62	$5.82	$6.01	$6 21	$6.42	$6.63	$6.85	$7.07	$7.30	$7.54	$7.78	$8.02	$8.28	$8.53	$8.80
$6.85	$7.08	$7.32	$7 57	$7.82	$8.08	$8.34	$8.61	$8.89	$9.18	$9.47	$9.77	$10.08	$10.39	$10.71
$10.47	$10.83	$11.20	$11 57	$11.96	$12.35	$12.76	$13.17	$13.60	$14.04	$14.48	$14.94	$15.41	$15.89	$16.38
$4.44	$4.59	$4.74	$4 90	$5.06	$5.23	$5.40	$5.58	$5.76	$5.94	$6.13	$6.33	$6.53	$6.73	$6.94
$3.39	$3.51	$3.63	$3.75	$3.87	$4.00	$4.13	$4.27	$4.40	$4.55	$4.69	$4.84	$4.99	$5.15	$5.31
$3.98	$4.12	$4.26	$4.40	$4.55	$4.70	$4.85	$5.01	$5.17	$5.34	$5.51	$5.68	$5.86	$6.04	$6.23
$6.19	$6.40	$6.62	$6 84	$7.07	$7.30	$7.54	$7.79	$8.04	$8.30	$8.56	$8.83	$9.11	$9.40	$9.69
$3.41	$3.53	$3.65	$3.77	$3.89	$4.02	$4.16	$4.29	$4.43	$4.57	$4.72	$4.87	$5.02	$5.18	$5.34
$7.44	$7.70	$7.95	$8 22	$8.49	$8.78	$9.06	$9.36	$9.66	$9.97	$10.29	$10.62	$10.95	$11.29	$11.64
$3.74	$3.87	$4.00	$4.13	$4.27	$4.41	$4.56	$4.70	$4.86	$5.01	$5.17	$5.34	$5.50	$5.68	$5.85
$4.93	$5.10	$5.27	$5.45	$5.63	$5.82	$6.01	$6.20	$6.40	$6.61	$6.82	$7.04	$7.26	$7.48	$7.72
3.42%	3.40%	3.37%	3.35%	3.33%	3.30%	3.28%	3.26%	3.24%	3.22%	3.19%	3.17%	3.14%	3.12%	3.09%
1.66%	1.63%	1.61%	1.58%	1.56%	1.54%	1.52%	1.49%	1.47%	1.45%	1.43%	1.40%	1.38%	1.35%	1.32%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 45	Year 46	Year 47	Year 48	Year 49	Year 50	Year 51	Year 52	Year 53	Year 54	Year 55	Year 56	Year 57	Year 58	Year 59
11/30/2060	11/30/2061	11/30/2062	11/30/2063	11/30/2064	11/30/2065	11/30/2066	11/30/2067	11/30/2068	11/30/2069	11/30/2070	11/30/2071	11/30/2072	11/30/2073	11/30/2074
$9.47	$9.76	$10.05	$10 35	$10.66	$10.98	$11.31	$11.64	$11.98	$12.33	$12.68	$13.05	$13.42	$13.81	$14.20
$6.93	$7.14	$7.36	$7 58	$7.80	$8.04	$8.27	$8.52	$8.77	$9.02	$9.28	$9.55	$9.82	$10.10	$10.39
$9.07	$9.34	$9.63	$9 92	$10.21	$10.52	$10.83	$11.15	$11.47	$11.81	$12.15	$12.50	$12.86	$13.22	$13.60
$11.04	$11.38	$11.72	$12 08	$12.44	$12.81	$13.19	$13.57	$13.97	$14.38	$14.79	$15.22	$15.65	$16.10	$16.56
$16.89	$17.40	$17.93	$18.47	$19.02	$19.59	$20.17	$20.76	$21.37	$21.99	$22.62	$23.27	$23.94	$24.62	$25.32
$7.15	$7.37	$7.59	$7 82	$8.05	$8.29	$8.54	$8.79	$9.05	$9.31	$9.58	$9.86	$10.14	$10.43	$10.72
$5.47	$5.64	$5.81	$5 98	$6.16	$6.34	$6.53	$6.72	$6.92	$7.12	$7.33	$7.54	$7.75	$7.97	$8.20
$6.42	$6.62	$6.82	$7 02	$7.23	$7.45	$7.67	$7.89	$8.12	$8.36	$8.60	$8.85	$9.10	$9.36	$9.63
$9.98	$10.29	$10.60	$10 92	$11.24	$11.58	$11.92	$12.27	$12.63	$13.00	$13.38	$13.76	$14.15	$14.56	$14.97
$5.50	$5.67	$5.84	$6 02	$6.20	$6.38	$6.57	$6.76	$6.96	$7.16	$7.37	$7.58	$7.80	$8.02	$8.25
$12.00	$12.36	$12.74	$13.12	$13.51	$13.92	$14.33	$14.75	$15.18	$15.62	$16.07	$16.54	$17.01	$17.50	$17.99
$6.03	$6.21	$6.40	$6 59	$6.79	$6.99	$7.20	$7.41	$7.63	$7.85	$8.08	$8.31	$8.55	$8.79	$9.04
$7.95	$8.19	$8.44	$8.70	$8.96	$9.22	$9.50	$9.78	$10 06	$10.35	$10.65	$10.96	$11.27	$11.60	$11.92
3.07%	3.05%	3.03%	3.01%	2.99%	2.98%	2.96%	2.94%	2.93%	2.91%	2.89%	2.88%	2.86%	2.85%	2.83%
1.30%	1.28%	1.26%	1.24%	1.23%	1.21%	1.19%	1.18%	1.16%	1.14%	1.13%	1.11%	1.10%	1.08%	1.07%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 60	Year 61	Year 62	Year 63	Year 64	Year 65	Year 66	Year 67	Year 68	Year 69	Year 70	Year 71	Year 72	Year 73	Year 74
11/30/2075	11/30/2076	11/30/2077	11/30/2078	11/30/2079	11/30/2080	11/30/2081	11/30/2082	11/30/2083	11/30/2084	11/30/2085	11/30/2086	11/30/2087	11/30/2088	11/30/2089
$14.60	$15.01	$15.42	$15 85	$16.29	$16.74	$17.20	$17.66	$18.14	$18.63	$19.13	$19.64	$20.17	$20.70	$21.25
$10.68	$10.98	$11.29	$11.60	$11.92	$12.25	$12.58	$12.93	$13.28	$13.63	$14.00	$14.37	$14.76	$15.15	$15.55
$13.98	$14.37	$14.77	$15.18	$15.60	$16.03	$16.47	$16.92	$17.38	$17.84	$18.32	$18.81	$19.31	$19.83	$20.35
$17.02	$17.50	$17.99	$18.49	$19.00	$19.52	$20.05	$20.60	$21.16	$21.73	$22.31	$22.91	$23.52	$24.14	$24.78
$26.03	$26.76	$27.51	$28 27	$29.05	$29.85	$30.67	$31.50	$32.36	$33.23	$34.12	$35.04	$35.97	$36.92	$37.90
$11.02	$11.33	$11.65	$11 97	$12.30	$12.64	$12.99	$13.34	$13.70	$14.07	$14.45	$14.84	$15.23	$15.63	$16.05
$8.43	$8.67	$8.91	$9.16	$9.41	$9.67	$9.93	$10.20	$10.48	$10.76	$11.05	$11.35	$11.65	$11.96	$12.27
$9.90	$10.17	$10.46	$10.75	$11.05	$11.35	$11.66	$11.98	$12.30	$12.63	$12.97	$13.32	$13.67	$14.04	$14.41
$15.39	$15.82	$16.26	$16.72	$17.18	$17.65	$18.13	$18.63	$19.13	$19.65	$20.17	$20.71	$21.26	$21.83	$22.40
$8.48	$8.72	$8.96	$9 21	$9.46	$9.72	$9.99	$10.26	$10 54	$10.83	$11.12	$11.41	$11.72	$12.03	$12.34
$18.50	$19.02	$19.55	$20 09	$20.64	$21.21	$21.79	$22.38	$22.99	$23.61	$24.25	$24.89	$25.56	$26.23	$26.93
$9.30	$9.56	$9.82	$10.10	$10.38	$10.66	$10.95	$11.25	$11.56	$11.87	$12.19	$12.51	$12.84	$13.18	$13.53
$12.26	$12.60	$12.96	$13 32	$13.68	$14.06	$14.44	$14.84	$15.24	$15.65	$16.07	$16.50	$16.94	$17.39	$17.85
2.82%	2.80%	2.79%	2.78%	2.76%	2.75%	2.74%	2.72%	2.71%	2.70%	2.69%	2.67%	2.66%	2.65%	2.64%
1.05%	1.04%	1.02%	1.01%	1.00%	0.98%	0.97%	0.96%	0.94%	0.93%	0.92%	0.91%	0.90%	0.88%	0.87%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 75	Year 76	Year 77	Year 78	Year 79	Year 80	Year 81	Year 82	Year 83	Year 84	Year 85	Year 86	Year 87	Year 88	Year 89
11/30/2090	11/30/2091	11/30/2092	11/30/2093	11/30/2094	11/30/2095	11/30/2096	11/30/2097	11/30/2098	11/30/2099	11/30/2100	11/30/2101	11/30/2102	11/30/2103	11/30/2104
$21.81	$22.38	$22.96	$23 56	$24.17	$24.79	$25.42	$26.07	$26.74	$27.42	$28.11	$28.82	$29.54	$30.28	$31.03
$15.96	$16.37	$16.80	$17 24	$17.68	$18.14	$18.60	$19.08	$19.56	$20.06	$20.57	$21.09	$21.61	$22.16	$22.71
$20.88	$21.43	$21.99	$22 56	$23.14	$23.74	$24.35	$24.97	$25.61	$26.26	$26.92	$27.60	$28.29	$29.00	$29.72
$25.43	$26.10	$26.78	$27.47	$28.18	$28.91	$29.65	$30.41	$31.18	$31.97	$32.78	$33.60	$34.45	$35.31	$36.19
$38.89	$39.91	$40.95	$42 01	$43.10	$44.21	$45.34	$46.50	$47.69	$48.90	$50.13	$51.39	$52.68	$54.00	$55.35
$16.47	$16.90	$17.34	$17.79	$18.25	$18.72	$19.20	$19.69	$20.19	$20.70	$21.23	$21.76	$22.31	$22.87	$23.44
$12.59	$12.92	$13.26	$13.61	$13.96	$14.32	$14.68	$15.06	$15.44	$15.83	$16.23	$16.64	$17.06	$17.49	$17.92
$14.79	$15.17	$15.57	$15 97	$16.39	$16.81	$17.24	$17.68	$18.13	$18.59	$19.06	$19.54	$20.03	$20.53	$21.04
$22.99	$23.60	$24.21	$24 84	$25.48	$26.14	$26.81	$27.49	$28.19	$28.91	$29.64	$30.38	$31.15	$31.93	$32.72
$12.67	$13.00	$13.34	$13.69	$14.04	$14.40	$14.77	$15.15	$15.53	$15.93	$16.33	$16.74	$17.16	$17.59	$18.03
$27.63	$28.36	$29.10	$29 85	$30.62	$31.41	$32.22	$33.04	$33.88	$34.74	$35.62	$36.52	$37.43	$38.37	$39.33
$13.89	$14.25	$14.62	$15 00	$15.39	$15.79	$16.19	$16.61	$17.03	$17.46	$17.90	$18.35	$18.81	$19.28	$19.76
$18.32	$18.80	$19.29	$19.79	$20.30	$20.82	$21.35	$21.90	$22.46	$23.03	$23.61	$24.20	$24.81	$25.43	$26.07
2.63%	2.62%	2.61%	2.60%	2.59%	2.58%	2.57%	2.56%	2.55%	2.54%	2.53%	2.52%	2.51%	2.50%	2.49%
0.86%	0.85%	0.84%	0.83%	0.82%	0.81%	0.80%	0.79%	0.78%	0.77%	0.76%	0.75%	0.74%	0.73%	0.73%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 90	Year 91	Year 92	Year 93	Year 94	Year 95	Year 96	Year 97	Year 98	Year 99	Year 100	Year 101	Year 102	Year 103	Year 104
11/30/2105	11/30/2106	11/30/2107	11/30/2108	11/30/2109	11/30/2110	11/30/2111	11/30/2112	11/30/2113	11/30/2114	11/30/2115	11/30/2116	11/30/2117	11/30/2118	11/30/2119
$31.80	$32.59	$33.39	$34 21	$35.05	$35.91	$36.78	$37.68	$38.59	$39.52	$40.47	$41.44	$42.43	$43.45	$44.48
$23.27	$23.85	$24.44	$25 04	$25.65	$26.28	$26.92	$27.57	$28.24	$28.92	$29.61	$30.33	$31.05	$31.79	$32.55
$30.46	$31.21	$31.98	$32.77	$33.57	$34.39	$35.23	$36.08	$36.96	$37.85	$38.76	$39.69	$40.64	$41.61	$42.60
$37.09	$38.01	$38.94	$39 90	$40.88	$41.88	$42.90	$43.94	$45.00	$46.09	$47.20	$48.33	$49.49	$50.67	$51.87
$56.72	$58.12	$59.56	$61 02	$62.52	$64.04	$65.60	$67.20	$68.82	$70.48	$72.18	$73.91	$75.68	$77.49	$79.33
$24.02	$24.61	$25.22	$25 84	$26.47	$27.12	$27.78	$28.45	$29.14	$29.85	$30.56	$31.30	$32.05	$32.81	$33.59
$18.37	$18.82	$19.29	$19.76	$20.25	$20.74	$21.25	$21.76	$22.29	$22.83	$23.38	$23.94	$24.51	$25.09	$25.69
$21.56	$22.10	$22.64	$23 20	$23.77	$24.35	$24.94	$25.55	$26.17	$26.80	$27.44	$28.10	$28.77	$29.46	$30.16
$33.53	$34.36	$35.21	$36 08	$36.96	$37.86	$38.79	$39.73	$40.69	$41.67	$42.67	$43.70	$44.74	$45.81	$46.90
$18.48	$18.93	$19.40	$19 88	$20.37	$20.86	$21.37	$21.89	$22.42	$22.96	$23.51	$24.08	$24.65	$25.24	$25.84
$40.30	$41.30	$42.32	$43 36	$44.42	$45.51	$46.61	$47.75	$48.90	$50.08	$51.29	$52.52	$53.77	$55.06	$56.37
$20.25	$20.76	$21.27	$21.79	$22.33	$22.87	$23.43	$24.00	$24.58	$25.17	$25.78	$26.39	$27.03	$27.67	$28.33
$26.71	$27.37	$28.05	$28.74	$29.44	$30.16	$30.90	$31.65	$32.41	$33.19	$33.99	$34.81	$35.64	$36.49	$37.36
2.48%	2.47%	2.47%	2.46%	2.45%	2.44%	2.44%	2.43%	2.42%	2.41%	2.41%	2.40%	2.39%	2.39%	2.38%
0.72%	0.71%	0.70%	0.69%	0.68%	0.68%	0.67%	0.66%	0.65%	0.65%	0.64%	0.63%	0.63%	0.62%	0.61%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 105	Year 106	Year 107	Year 108	Year 109	Year 110	Year 111	Year 112	Year 113	Year 114	Year 115	Year 116	Year 117	Year 118	Year 119
11/30/2120	11/30/2121	11/30/2122	11/30/2123	11/30/2124	11/30/2125	11/30/2126	11/30/2127	11/30/2128	11/30/2129	11/30/2130	11/30/2131	11/30/2132	11/30/2133	11/30/2134
$45.54	$46.61	$47.71	$48 84	$49.98	$51.15	$52.35	$53.57	$54.81	$56.09	$57.38	$58.71	$60.06	$61.44	$62.85
$33.32	$34.11	$34.91	$35.74	$36.57	$37.43	$38.31	$39.20	$40.11	$41.04	$41.99	$42.96	$43.95	$44.96	$45.99
$43.61	$44.64	$45.70	$46.77	$47.87	$48.99	$50.13	$51.30	$52.50	$53.71	$54.96	$56.23	$57.52	$58.84	$60.19
$53.10	$54.36	$55.64	$56 95	$58.29	$59.65	$61.05	$62.47	$63.92	$65.41	$66.92	$68.46	$70.04	$71.65	$73.29
$81.21	$83.13	$85.10	$87.10	$89.14	$91.23	$93.36	$95.54	$97.76	$100.03	$102.34	$104.71	$107.12	$109.58	$112.09
$34.39	$35.20	$36.03	$36 88	$37.75	$38.63	$39.53	$40.46	$41.40	$42.36	$43.34	$44.34	$45.36	$46.40	$47.47
$26.30	$26.92	$27.56	$28 21	$28.87	$29.55	$30.24	$30.94	$31.66	$32.39	$33.14	$33.91	$34.69	$35.49	$36.30
$30.88	$31.61	$32.35	$33.11	$33.89	$34.68	$35.49	$36.32	$37.17	$38.03	$38.91	$39.81	$40.72	$41.66	$42.62
$48.01	$49.15	$50.31	$51.49	$52.70	$53.94	$55.20	$56.48	$57.80	$59.14	$60.51	$61.90	$63.33	$64.79	$66.27
$26.46	$27.08	$27.72	$28 37	$29.04	$29.72	$30.41	$31.12	$31.85	$32.58	$33.34	$34.11	$34.89	$35.70	$36.51
$57.70	$59.07	$60.46	$61 89	$63.34	$64.82	$66.34	$67.88	$69.46	$71.07	$72.72	$74.40	$76.11	$77.86	$79.65
$29.00	$29.69	$30.39	$31.10	$31.83	$32.58	$33.34	$34.12	$34.91	$35.72	$36.55	$37.39	$38.25	$39.13	$40.03
$38.25	$39.15	$40.08	$41 02	$41.98	$42.97	$43.97	$44.99	$46.04	$47.11	$48.20	$49.31	$50.45	$51.61	$52.79
2.37%	2.37%	2.36%	2.35%	2.35%	2.34%	2.34%	2.33%	2.32%	2.32%	2.31%	2.31%	2.30%	2.30%	2.29%
0.61%	0.60%	0.59%	0.59%	0.58%	0.58%	0.57%	0.56%	0.56%	0.55%	0.55%	0.54%	0.54%	0.53%	0.53%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 120	Year 121	Year 122	Year 123	Year 124	Year 125	Year 126	Year 127	Year 128	Year 129	Year 130	Year 131	Year 132	Year 133	Year 134
11/30/2135	11/30/2136	11/30/2137	11/30/2138	11/30/2139	11/30/2140	11/30/2141	11/30/2142	11/30/2143	11/30/2144	11/30/2145	11/30/2146	11/30/2147	11/30/2148	11/30/2149
$64.29	$65.76	$67.25	$68.78	$70.34	$71.94	$73.56	$75.22	$76.92	$78.65	$80.41	$82.21	$84.05	$85.93	$87.84
$47.04	$48.12	$49.21	$50 33	$51.47	$52.64	$53.83	$55.04	$56.28	$57.55	$58.84	$60.16	$61.50	$62.88	$64.28
$61.57	$62.98	$64.41	$65 88	$67.37	$68.90	$70.45	$72.04	$73.67	$75.32	$77.01	$78.74	$80.50	$82.29	$84.12
$74.97	$76.68	$78.43	$80 21	$82.04	$83.89	$85.79	$87.73	$89.70	$91.72	$93.77	$95.87	$98.02	$100.20	$102.44
$114.66	$117.28	$119.95	$122.68	$125.46	$128.30	$131.20	$134.16	$137.18	$140.27	$143.41	$146.62	$149.90	$153.25	$156.66
$48.55	$49.66	$50.79	$51 95	$53.13	$54.33	$55.56	$56.81	$58.09	$59.40	$60.73	$62.09	$63.48	$64.89	$66.34
$37.13	$37.98	$38.84	$39.73	$40.63	$41.55	$42.49	$43.45	$44.43	$45.42	$46.44	$47.48	$48.55	$49.63	$50.73
$43.59	$44.59	$45.60	$46.64	$47.70	$48.78	$49.88	$51.01	$52.15	$53.33	$54.52	$55.74	$56.99	$58.26	$59.56
$67.79	$69.34	$70.92	$72 53	$74.17	$75.85	$77.57	$79.32	$81.10	$82.93	$84.79	$86.69	$88.62	$90.60	$92.62
$37.35	$38.20	$39.07	$39 96	$40.87	$41.80	$42.74	$43.70	$44.69	$45.69	$46.72	$47.76	$48.83	$49.92	$51.03
$81.47	$83.33	$85.23	$87.17	$89.14	$91.16	$93.22	$95.33	$97.47	$99.67	$101.90	$104.18	$106.51	$108.89	$111.31
$40.94	$41.88	$42.83	$43 81	$44.80	$45.82	$46.85	$47.91	$48.99	$50.09	$51.21	$52.36	$53.53	$54.73	$55.94
$54.00	$55.23	$56.49	$57.77	$59.09	$60.42	$61.79	$63.18	$64.61	$66.06	$67.54	$69.05	$70.60	$72.17	$73.78
2.29%	2.28%	2.28%	2.27%	2.27%	2.26%	2.26%	2.26%	2.25%	2.25%	2.24%	2.24%	2.24%	2.23%	2.23%
0.52%	0.52%	0.51%	0.51%	0.50%	0.50%	0.49%	0.49%	0.49%	0.48%	0.48%	0.47%	0.47%	0.47%	0.46%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 135	Year 136	Year 137	Year 138	Year 139	Year 140	Year 141	Year 142	Year 143	Year 144	Year 145	Year 146	Year 147	Year 148	Year 149
11/30/2150	11/30/2151	11/30/2152	11/30/2153	11/30/2154	11/30/2155	11/30/2156	11/30/2157	11/30/2158	11/30/2159	11/30/2160	11/30/2161	11/30/2162	11/30/2163	11/30/2164
$89.79	$91.79	$93.82	$95 90	$98.02	$100.18	$102.39	$104.64	$106.94	$109.28	$111.67	$114.11	$116.61	$119.15	$121.74
$65.71	$67.16	$68.65	$70.17	$71.72	$73.30	$74.92	$76.57	$78.25	$79.96	$81.72	$83.50	$85.33	$87.19	$89.09
$86.00	$87.91	$89.85	$91 84	$93.87	$95.94	$98.06	$100.21	$102.41	$104.66	$106.95	$109.29	$111.68	$114.11	$116.60
$104.72	$107.04	$109.41	$111.83	$114.31	$116.83	$119.40	$122.03	$124.71	$127.44	$130.23	$133.08	$135.99	$138.95	$141.98
$160.15	$163.70	$167.33	$171.03	$174.81	$178.67	$182.60	$186.62	$190.72	$194.90	$199.17	$203.52	$207.97	$212.50	$217.13
$67.81	$69.32	$70.86	$72.42	$74.02	$75.66	$77.32	$79.02	$80.76	$82.53	$84.34	$86.18	$88.06	$89.98	$91.94
$51.86	$53.01	$54.19	$55 39	$56.61	$57.86	$59.14	$60.44	$61.76	$63.12	$64.50	$65.91	$67.35	$68.82	$70.32
$60.88	$62.24	$63.62	$65 02	$66.46	$67.93	$69.42	$70.95	$72.51	$74.10	$75.72	$77.38	$79.07	$80.79	$82.55
$94.68	$96.78	$98.93	$101.12	$103.35	$105.63	$107.96	$110.33	$112.76	$115.23	$117.75	$120.33	$122.95	$125.64	$128.37
$52.17	$53.33	$54.51	$55.72	$56.95	$58.20	$59.48	$60.79	$62.13	$63.49	$64.88	$66.30	$67.75	$69.22	$70.73
$113.79	$116.32	$118.90	$121.53	$124.21	$126.95	$129.75	$132.60	$135.51	$138.49	$141.52	$144.61	$147.77	$150.99	$154.28
$57.19	$58.46	$59.75	$61 08	$62.43	$63.80	$65.21	$66.64	$68.11	$69.60	$71.12	$72.68	$74.27	$75.89	$77.54
$75.42	$77.10	$78.80	$80 55	$82.33	$84.14	$86.00	$87.89	$89.82	$91.79	$93.80	$95.85	$97.94	$100.08	$102.26
2.22%	2.22%	2.22%	2.21%	2.21%	2.21%	2.20%	2.20%	2.20%	2.19%	2.19%	2.19%	2.18%	2.18%	2.18%
0.46%	0.45%	0.45%	0.45%	0.44%	0.44%	0.44%	0.43%	0.43%	0.43%	0.42%	0.42%	0.42%	0.41%	0.41%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 150	Year 151	Year 152	Year 153	Year 154	Year 155	Year 156	Year 157	Year 158	Year 159	Year 160	Year 161	Year 162	Year 163	Year 164
11/30/2165	11/30/2166	11/30/2167	11/30/2168	11/30/2169	11/30/2170	11/30/2171	11/30/2172	11/30/2173	11/30/2174	11/30/2175	11/30/2176	11/30/2177	11/30/2178	11/30/2179
$124.39	$127.09	$129.85	$132.66	$135.53	$138.46	$141.45	$144.50	$147.61	$150.79	$154.03	$157.33	$160.71	$164.15	$167.66
$91.02	$93.00	$95.02	$97 08	$99.18	$101.32	$103.51	$105.74	$108.01	$110.34	$112.71	$115.13	$117.60	$120.12	$122.68
$119.13	$121.72	$124.36	$127.05	$129.80	$132.61	$135.47	$138.39	$141.37	$144.41	$147.52	$150.68	$153.91	$157.21	$160.57
$145.06	$148.21	$151.43	$154.71	$158.06	$161.47	$164.96	$168.52	$172.14	$175.85	$179.63	$183.48	$187.42	$191.43	$195.52
$221.85	$226.67	$231.59	$236.60	$241.72	$246.95	$252.28	$257.72	$263.27	$268.93	$274.71	$280.61	$286.62	$292.76	$299.02
$93.94	$95.98	$98.07	$100.19	$102.36	$104.57	$106.83	$109.13	$111.48	$113.88	$116.33	$118.82	$121.37	$123.97	$126.62
$71.85	$73.41	$75.00	$76.62	$78.28	$79.97	$81.70	$83.46	$85.26	$87.09	$88.96	$90.87	$92.82	$94.81	$96.84
$84.34	$86.18	$88.04	$89 95	$91.90	$93.88	$95.91	$97.98	$100.09	$102.24	$104.44	$106.68	$108.97	$111.30	$113.68
$131.16	$134.01	$136.92	$139.88	$142.91	$146.00	$149.15	$152.37	$155.65	$159.00	$162.41	$165.90	$169.46	$173.09	$176.79
$72.27	$73.84	$75.44	$77 08	$78.74	$80.45	$82.18	$83.95	$85.76	$87.61	$89.49	$91.41	$93.37	$95.37	$97.41
$157.64	$161.06	$164.55	$168.12	$171.76	$175.47	$179.26	$183.12	$187.06	$191.09	$195.19	$199.38	$203.66	$208.02	$212.47
$79.22	$80.95	$82.70	$84.49	$86.32	$88.19	$90.09	$92.03	$94.01	$96.04	$98.10	$100.21	$102.35	$104.55	$106.78
$104.48	$106.75	$109.07	$111.43	$113.84	$116.30	$118.81	$121.37	$123.99	$126.65	$129.37	$132.15	$134.99	$137.88	$140.83
2.17%	2.17%	2.17%	2.17%	2.16%	2.16%	2.16%	2.16%	2.15%	2.15%	2.15%	2.15%	2.14%	2.14%	2.14%
0.41%	0.41%	0.40%	0.40%	0.40%	0.39%	0.39%	0.39%	0.39%	0.38%	0.38%	0.38%	0.38%	0.38%	0.37%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 165	Year 166	Year 167	Year 168	Year 169	Year 170	Year 171	Year 172	Year 173	Year 174	Year 175	Year 176	Year 177	Year 178	Year 179
11/30/2180	11/30/2181	11/30/2182	11/30/2183	11/30/2184	11/30/2185	11/30/2186	11/30/2187	11/30/2188	11/30/2189	11/30/2190	11/30/2191	11/30/2192	11/30/2193	11/30/2194
$171.25	$174.90	$178.63	$182.44	$186.32	$190.29	$194.33	$198.45	$202.66	$206.96	$211.34	$215.81	$220.37	$225.03	$229.78
$125.31	$127.98	$130.71	$133.50	$136.34	$139.24	$142.20	$145.22	$148.30	$151.44	$154.65	$157.92	$161.26	$164.66	$168.14
$164.00	$167.51	$171.08	$174.72	$178.44	$182.24	$186.11	$190.06	$194.09	$198.21	$202.40	$206.68	$211.05	$215.51	$220.06
$199.70	$203.97	$208.32	$212.76	$217.29	$221.91	$226.62	$231.43	$236.34	$241.35	$246.46	$251.68	$257.00	$262.42	$267.96
$305.41	$311.94	$318.59	$325.38	$332.30	$339.37	$346.58	$353.94	$361.45	$369.11	$376.92	$384.90	$393.03	$401.33	$409.80
$129.33	$132.09	$134.91	$137.78	$140.71	$143.71	$146.76	$149.88	$153.06	$156.30	$159.61	$162.98	$166.43	$169.94	$173.53
$98.91	$101.02	$103.17	$105.37	$107.62	$109.91	$112.24	$114.62	$117.05	$119.53	$122.07	$124.65	$127.28	$129.97	$132.71
$116.11	$118.59	$121.12	$123.70	$126.34	$129.02	$131.76	$134.56	$137.42	$140.33	$143.30	$146.33	$149.42	$152.58	$155.80
$180.57	$184.42	$188.36	$192.37	$196.46	$200.64	$204.91	$209.26	$213.70	$218.22	$222.84	$227.56	$232.37	$237.28	$242.28
$99.49	$101.62	$103.78	$105.99	$108.25	$110.55	$112.90	$115.30	$117.74	$120.24	$122.79	$125.38	$128.03	$130.74	$133.50
$217.01	$221.64	$226.37	$231.20	$236.12	$241.14	$246.26	$251.49	$256.83	$262.27	$267.82	$273.49	$279.27	$285.17	$291.18
$109.07	$111.39	$113.77	$116.19	$118.67	$121.19	$123.77	$126.39	$129.08	$131.81	$134.60	$137.45	$140.35	$143.32	$146.34
$143.84	$146.91	$150.04	$153.24	$156.50	$159.83	$163.22	$166.69	$170.22	$173.83	$177.51	$181.27	$185.10	$189.01	$193.00
2.14%	2.14%	2.13%	2.13%	2.13%	2.13%	2.12%	2.12%	2.12%	2.12%	2.12%	2.12%	2.11%	2.11%	2.11%
0.37%	0.37%	0.37%	0.36%	0.36%	0.36%	0.36%	0.36%	0.35%	0.35%	0.35%	0.35%	0.35%	0.35%	0.34%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 180	Year 181	Year 182	Year 183	Year 184	Year 185	Year 186	Year 187	Year 188	Year 189	Year 190	Year 191	Year 192	Year 193	Year 194
11/30/2195	11/30/2196	11/30/2197	11/30/2198	11/30/2199	11/30/2200	11/30/2201	11/30/2202	11/30/2203	11/30/2204	11/30/2205	11/30/2206	11/30/2207	11/30/2208	11/30/2209
$234.62	$239.56	$244.61	$249.75	$255.00	$260.36	$265.83	$271.40	$277.09	$282.90	$288.82	$294.86	$301.03	$307.31	$313.73
$171.68	$175.30	$178.99	$182.75	$186.60	$190.52	$194.52	$198.60	$202.76	$207.01	$211.34	$215.76	$220.27	$224.87	$229.57
$224.70	$229.43	$234.26	$239.19	$244.22	$249.35	$254.59	$259.93	$265.37	$270.93	$276.60	$282.39	$288.30	$294.32	$300.46
$273.61	$279.38	$285.26	$291.26	$297.38	$303.63	$310.00	$316.51	$323.14	$329.91	$336.82	$343.86	$351.05	$358.39	$365.87
$418.44	$427.26	$436.26	$445.43	$454.80	$464.35	$474.10	$484.04	$494.19	$504.54	$515.11	$525.88	$536.88	$548.09	$559.54
$177.19	$180.92	$184.73	$188.62	$192.58	$196.63	$200.76	$204.97	$209.27	$213.65	$218.12	$222.68	$227.34	$232.09	$236.94
$135.51	$138.37	$141.28	$144.25	$147.29	$150.38	$153.54	$156.76	$160.04	$163.40	$166.82	$170.31	$173.87	$177.50	$181.20
$159.08	$162.44	$165.86	$169.35	$172.91	$176.54	$180.24	$184.02	$187.88	$191.82	$195.83	$199.93	$204.11	$208.37	$212.73
$247.39	$252.60	$257.92	$263.35	$268.88	$274.53	$280.30	$286.18	$292.17	$298.30	$304.54	$310.91	$317.41	$324.04	$330.81
$136.31	$139.18	$142.11	$145.10	$148.15	$151.27	$154.44	$157.68	$160.99	$164.36	$167.80	$171.31	$174.89	$178.55	$182.27
$297.32	$303.59	$309.98	$316.50	$323.15	$329.94	$336.87	$343.94	$351.14	$358.50	$366.01	$373.66	$381.47	$389.44	$397.58
$149.43	$152.58	$155.79	$159.07	$162.41	$165.82	$169.30	$172.86	$176.48	$180.18	$183.95	$187.80	$191.72	$195.73	$199.81
$197.07	$201.22	$205.46	$209.78	$214.19	$218.69	$223.28	$227.96	$232.74	$237.62	$242.59	$247.66	$252.84	$258.13	$263.52
2.11%	2.11%	2.11%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.09%	2.09%	2.09%	2.09%	2.09%	2.09%
0.34%	0.34%	0.34%	0.34%	0.34%	0.33%	0.33%	0.33%	0.33%	0.33%	0.33%	0.33%	0.32%	0.32%	0.32%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 195	Year 196	Year 197	Year 198	Year 199	Year 200
11/30/2210	11/30/2211	11/30/2212	11/30/2213	11/30/2214	11/30/2215
$320.28	$326.96	$333.77	$340.72	$347.82	$355.05
$234.36	$239.25	$244.23	$249.32	$254.51	$259.81
$306.73	$313.13	$319.66	$326.32	$333.11	$340.04
$373.50	$381.29	$389.24	$397.35	$405.62	$414.06
$571.21	$583.13	$595.28	$607.68	$620.33	$633.24
$241.88	$246.92	$252.07	$257.32	$262.68	$268.14
$184.99	$188.84	$192.78	$196.80	$200.89	$205.07
$217.16	$221.69	$226.31	$231.03	$235.84	$240.74
$337.71	$344.75	$351.94	$359.27	$366.75	$374.38
$186.08	$189.96	$193.92	$197.96	$202.08	$206.28
$405.87	$414.34	$422.97	$431.78	$440.77	$449.94
$203.98	$208.24	$212.58	$217.01	$221.52	$226.13
$269.01	$274.62	$280.35	$286.19	$292.15	$298.22
2.09%	2.09%	2.08%	2.08%	2.08%	2.08%
0.32%	0.32%	0.32%	0.32%	0.32%	0.31%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

HIGH YIELD -- MULTI-STAGE DCF -- FORECASTED OECD GDP GROWTH WITH EXTRAPOLATION BEYOND 2060

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]
					Second Stage Growth						
Company	Ticker	Stock Price	Annualized Dividend	First Stage Growth	Year 6	Year 7	Year 8	Year 9	Year 10	Third Stage Growth	ROE
ALLETE, In	ALE	$54.53	$2.08	3.00%	3.16%	3.32%	3.49%	3.65%	3.81%	3.97%	7.41%
Alliant Ener	LNT	$35.35	$1.18	6.60%	6.16%	5.72%	5.29%	4.85%	4.41%	3.97%	7.82%
Ameren Cor	AEE	$46.69	$1.70	5.20%	5.00%	4.79%	4.59%	4.38%	4.18%	3.97%	7.83%
American El	AEP	$62.95	$2.24	4.10%	4.08%	4.06%	4.04%	4.02%	3.99%	3.97%	7.41%
Duke Energ	DUK	$76.15	$3.30	4.62%	4.51%	4.40%	4.30%	4.19%	4.08%	3.97%	8.52%
El Paso Ele	EE	$42.63	$1.18	7.00%	6.50%	5.99%	5.49%	4.98%	4.48%	3.97%	7.13%
Empire Dist	EDE	$33.12	$1.04	5.00%	4.83%	4.66%	4.49%	4.32%	4.14%	3.97%	7.13%
Great Plains	GXP	$30.30	$1.05	7.10%	6.58%	6.06%	5.54%	5.02%	4.49%	3.97%	8.17%
IDACORP,	IDA	$70.17	$2.04	4.00%	4.00%	3.99%	3.99%	3.98%	3.98%	3.97%	6.58%
OGE Energy	OGE	$29.34	$1.10	4.30%	4.25%	4.19%	4.14%	4.08%	4.03%	3.97%	7.70%
Pinnacle We	PNW	$70.75	$2.50	3.73%	3.77%	3.81%	3.85%	3.89%	3.93%	3.97%	7.28%
PNM Resou	PNM	$31.46	$0.88	8.76%	7.96%	7.16%	6.37%	5.57%	4.77%	3.97%	7.64%
Westar Ene	WR	$51.26	$1.52	4.93%	4.77%	4.61%	4.45%	4.29%	4.13%	3.97%	6.88%

Nominal Growth
OECD Real GDP Growth rate
Inflation

Mean	7.50%
Standard Deviation	0.50%
+ 1 Standard Deviation	8.00%
-1 Standard Deviation	7.00%

Notes:
[1] Source: Yahoo Finance
[2] Source: Yahoo Finance
[3] Source: Yahoo Finance
[4] Equals [3] + ([9] − [3]) / 6
[5] Equals [4] + ([9] − [3]) / 6
[6] Equals [5] + ([9] − [3]) / 6
[7] Equals [6] + ([9] − [3]) / 6
[8] Equals [7] + ([9] − [3]) / 6
[9] Source: OECD long term real GDP forecast, plus inflation based on the May 2016 average of Treasury Bond yields less the May 2016 averageof TIPS yields as of May 31, 2016
[10] Equals internal rate of return of cash flows for Year 0 through Year 200

	First Stage					Second Stage								
Stock Price	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14
5/31/2016	11/30/2016	11/30/2017	11/30/2018	11/30/2019	11/30/2020	11/30/2021	11/30/2022	11/30/2023	11/30/2024	11/30/2025	11/30/2026	11/30/2027	11/30/2028	11/30/2029
-$54.53	$2.14	$2.21	$2.27	$2 34	$2.41	$2.49	$2.57	$2.66	$2.76	$2.86	$2.98	$3.09	$3.22	$3.34
-$35.35	$1.25	$1.34	$1.42	$1 52	$1.62	$1.72	$1.82	$1.91	$2.01	$2.09	$2.18	$2.26	$2.35	$2.45
-$46.69	$1.79	$1.88	$1.98	$2 08	$2.19	$2.30	$2.41	$2.52	$2.63	$2.74	$2.85	$2.96	$3.08	$3.20
-$62.95	$2.33	$2.43	$2.53	$2.63	$2.74	$2.85	$2.97	$3.09	$3.21	$3.34	$3.47	$3.61	$3.75	$3.90
-$76.15	$3.45	$3.61	$3.78	$3 95	$4.14	$4.32	$4.51	$4.71	$4.90	$5.10	$5.31	$5.52	$5.74	$5.96
-$42.63	$1.26	$1.35	$1.45	$1 55	$1.66	$1.76	$1.87	$1.97	$2.07	$2.16	$2.25	$2.34	$2.43	$2.52
-$33.12	$1.09	$1.15	$1.20	$1 26	$1.33	$1.39	$1.46	$1.52	$1.59	$1.65	$1.72	$1.79	$1.86	$1.93
-$30.30	$1.13	$1.21	$1.29	$1 38	$1.48	$1.58	$1.68	$1.77	$1.86	$1.94	$2.02	$2.10	$2.18	$2.27
-$70.17	$2.12	$2.21	$2.29	$2 39	$2.48	$2.58	$2.68	$2.79	$2.90	$3.02	$3.14	$3.26	$3.39	$3.52
-$29.34	$1.15	$1.20	$1.25	$1 30	$1.36	$1.42	$1.47	$1.54	$1.60	$1.66	$1.73	$1.80	$1.87	$1.94
-$70.75	$2.59	$2.69	$2.79	$2 89	$3.00	$3.12	$3.23	$3.36	$3.49	$3.63	$3.77	$3.92	$4.08	$4.23
-$31.46	$0.96	$1.04	$1.13	$1 23	$1.34	$1.45	$1.55	$1.65	$1.74	$1.82	$1.90	$1.97	$2.05	$2.13
-$51.26	$1.59	$1.67	$1.76	$1 84	$1.93	$2.03	$2.12	$2.21	$2.31	$2.40	$2.50	$2.60	$2.70	$2.81
											3.97%	3.96%	3.95%	3.92%
											2.38%	2.37%	2.35%	2.33%
											1.59%	1.59%	1.59%	1.59%

Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21	Year 22	Year 23	Year 24	Year 25	Year 26	Year 27	Year 28	Year 29
11/30/2030	11/30/2031	11/30/2032	11/30/2033	11/30/2034	11/30/2035	11/30/2036	11/30/2037	11/30/2038	11/30/2039	11/30/2040	11/30/2041	11/30/2042	11/30/2043	11/30/2044
$3.47	$3.60	$3.74	$3 88	$4.02	$4.16	$4.31	$4.46	$4.62	$4.78	$4.95	$5.13	$5.30	$5.49	$5.68
$2.54	$2.64	$2.74	$2 84	$2.94	$3.05	$3.16	$3.27	$3.38	$3.50	$3.62	$3.75	$3.88	$4.02	$4.16
$3.32	$3.45	$3.58	$3.71	$3.85	$3.99	$4.13	$4.28	$4.42	$4.58	$4.74	$4.91	$5.08	$5.26	$5.44
$4.05	$4.20	$4.36	$4 52	$4.69	$4.86	$5.03	$5.21	$5.39	$5.57	$5.77	$5.98	$6.19	$6.40	$6.62
$6.19	$6.43	$6.67	$6 91	$7.17	$7.43	$7.69	$7.96	$8.24	$8.52	$8.83	$9.14	$9.46	$9.79	$10.13
$2.62	$2.72	$2.82	$2 93	$3.03	$3.14	$3.26	$3.37	$3.49	$3.61	$3.74	$3.87	$4.01	$4.15	$4.29
$2.00	$2.08	$2.16	$2 24	$2.32	$2.40	$2.49	$2.58	$2.67	$2.76	$2.86	$2.96	$3.06	$3.17	$3.28
$2.35	$2.44	$2.53	$2.63	$2.72	$2.82	$2.92	$3.03	$3.13	$3.24	$3.36	$3.48	$3.60	$3.72	$3.85
$3.66	$3.80	$3.94	$4 09	$4.24	$4.39	$4.55	$4.71	$4.87	$5.04	$5.22	$5.40	$5.59	$5.79	$5.99
$2.02	$2.09	$2.17	$2 25	$2.33	$2.42	$2.51	$2.59	$2.68	$2.78	$2.88	$2.98	$3.08	$3.19	$3.30
$4.40	$4.57	$4.74	$4 91	$5.09	$5.28	$5.46	$5.66	$5.85	$6.06	$6.27	$6.49	$6.72	$6.96	$7.20
$2.21	$2.29	$2.38	$2.47	$2.56	$2.65	$2.75	$2.84	$2.94	$3.04	$3.15	$3.26	$3.38	$3.50	$3.62
$2.92	$3.03	$3.14	$3 26	$3.38	$3.50	$3.62	$3.75	$3.88	$4.01	$4.16	$4.30	$4.46	$4.61	$4.77
3.85%	3.80%	3.76%	3.71%	3.66%	3.62%	3.57%	3.52%	3.48%	3.43%	3.59%	3.55%	3.51%	3.48%	3.45%
2.28%	2.23%	2.18%	2.14%	2.09%	2.04%	1.99%	1.95%	1.90%	1.86%	1.82%	1.78%	1.74%	1.71%	1.68%
1.57%	1.57%	1.57%	1.57%	1.57%	1.57%	1.57%	1.57%	1.57%	1.57%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 30	Year 31	Year 32	Year 33	Year 34	Year 35	Year 36	Year 37	Year 38	Year 39	Year 40	Year 41	Year 42	Year 43	Year 44
11/30/2045	11/30/2046	11/30/2047	11/30/2048	11/30/2049	11/30/2050	11/30/2051	11/30/2052	11/30/2053	11/30/2054	11/30/2055	11/30/2056	11/30/2057	11/30/2058	11/30/2059
$5.87	$6.07	$6.28	$6.49	$6.70	$6.92	$7.15	$7.39	$7.62	$7.87	$8.12	$8.38	$8.64	$8.91	$9.19
$4.30	$4.44	$4.59	$4.75	$4.91	$5.07	$5.23	$5.40	$5.58	$5.76	$5.94	$6.13	$6.32	$6.52	$6.72
$5.62	$5.82	$6.01	$6 21	$6.42	$6.63	$6.85	$7.07	$7.30	$7.54	$7.78	$8.02	$8.28	$8.53	$8.80
$6.85	$7.08	$7.32	$7 57	$7.82	$8.08	$8.34	$8.61	$8.89	$9.18	$9.47	$9.77	$10.08	$10.39	$10.71
$10.47	$10.83	$11.20	$11 57	$11.96	$12.35	$12.76	$13.17	$13.60	$14.04	$14.48	$14.94	$15.41	$15.89	$16.38
$4.44	$4.59	$4.74	$4 90	$5.06	$5.23	$5.40	$5.58	$5.76	$5.94	$6.13	$6.33	$6.53	$6.73	$6.94
$3.39	$3.51	$3.63	$3.75	$3.87	$4.00	$4.13	$4.27	$4.40	$4.55	$4.69	$4.84	$4.99	$5.15	$5.31
$3.98	$4.12	$4.26	$4.40	$4.55	$4.70	$4.85	$5.01	$5.17	$5.34	$5.51	$5.68	$5.86	$6.04	$6.23
$6.19	$6.40	$6.62	$6 84	$7.07	$7.30	$7.54	$7.79	$8.04	$8.30	$8.56	$8.83	$9.11	$9.40	$9.69
$3.41	$3.53	$3.65	$3.77	$3.89	$4.02	$4.16	$4.29	$4.43	$4.57	$4.72	$4.87	$5.02	$5.18	$5.34
$7.44	$7.70	$7.95	$8 22	$8.49	$8.78	$9.06	$9.36	$9.66	$9.97	$10.29	$10.62	$10.95	$11.29	$11.64
$3.74	$3.87	$4.00	$4.13	$4.27	$4.41	$4.56	$4.70	$4.86	$5.01	$5.17	$5.34	$5.50	$5.68	$5.85
$4.93	$5.10	$5.27	$5.45	$5.63	$5.82	$6.01	$6.20	$6.40	$6.61	$6.82	$7.04	$7.26	$7.48	$7.72
3.42%	3.40%	3.37%	3.35%	3.33%	3.30%	3.28%	3.26%	3.24%	3.22%	3.19%	3.17%	3.14%	3.12%	3.09%
1.66%	1.63%	1.61%	1.58%	1.56%	1.54%	1.52%	1.49%	1.47%	1.45%	1.43%	1.40%	1.38%	1.35%	1.32%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 45	Year 46	Year 47	Year 48	Year 49	Year 50	Year 51	Year 52	Year 53	Year 54	Year 55	Year 56	Year 57	Year 58	Year 59
11/30/2060	11/30/2061	11/30/2062	11/30/2063	11/30/2064	11/30/2065	11/30/2066	11/30/2067	11/30/2068	11/30/2069	11/30/2070	11/30/2071	11/30/2072	11/30/2073	11/30/2074
$9.47	$9.76	$10.05	$10 35	$10.66	$10.98	$11.31	$11.64	$11.98	$12.33	$12.68	$13.05	$13.42	$13.81	$14.20
$6.93	$7.14	$7.36	$7 58	$7.80	$8.04	$8.27	$8.52	$8.77	$9.02	$9.28	$9.55	$9.82	$10.10	$10.39
$9.07	$9.34	$9.63	$9 92	$10.21	$10.52	$10.83	$11.15	$11.47	$11.81	$12.15	$12.50	$12.86	$13.22	$13.60
$11.04	$11.38	$11.72	$12 08	$12.44	$12.81	$13.19	$13.57	$13.97	$14.38	$14.79	$15.22	$15.65	$16.10	$16.56
$16.89	$17.40	$17.93	$18.47	$19.02	$19.59	$20.17	$20.76	$21.37	$21.99	$22.62	$23.27	$23.94	$24.62	$25.32
$7.15	$7.37	$7.59	$7 82	$8.05	$8.29	$8.54	$8.79	$9.05	$9.31	$9.58	$9.86	$10.14	$10.43	$10.72
$5.47	$5.64	$5.81	$5 98	$6.16	$6.34	$6.53	$6.72	$6.92	$7.12	$7.33	$7.54	$7.75	$7.97	$8.20
$6.42	$6.62	$6.82	$7 02	$7.23	$7.45	$7.67	$7.89	$8.12	$8.36	$8.60	$8.85	$9.10	$9.36	$9.63
$9.98	$10.29	$10.60	$10 92	$11.24	$11.58	$11.92	$12.27	$12.63	$13.00	$13.38	$13.76	$14.15	$14.56	$14.97
$5.50	$5.67	$5.84	$6 02	$6.20	$6.38	$6.57	$6.76	$6.96	$7.16	$7.37	$7.58	$7.80	$8.02	$8.25
$12.00	$12.36	$12.74	$13.12	$13.51	$13.92	$14.33	$14.75	$15.18	$15.62	$16.07	$16.54	$17.01	$17.50	$17.99
$6.03	$6.21	$6.40	$6 59	$6.79	$6.99	$7.20	$7.41	$7.63	$7.85	$8.08	$8.31	$8.55	$8.79	$9.04
$7.95	$8.19	$8.44	$8.70	$8.96	$9.22	$9.50	$9.78	$10 06	$10.35	$10.65	$10.96	$11.27	$11.60	$11.92
3.07%	3.05%	3.03%	3.01%	2.99%	2.98%	2.96%	2.94%	2.93%	2.91%	2.89%	2.88%	2.86%	2.85%	2.83%
1.30%	1.28%	1.26%	1.24%	1.23%	1.21%	1.19%	1.18%	1.16%	1.14%	1.13%	1.11%	1.10%	1.08%	1.07%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 60	Year 61	Year 62	Year 63	Year 64	Year 65	Year 66	Year 67	Year 68	Year 69	Year 70	Year 71	Year 72	Year 73	Year 74
11/30/2075	11/30/2076	11/30/2077	11/30/2078	11/30/2079	11/30/2080	11/30/2081	11/30/2082	11/30/2083	11/30/2084	11/30/2085	11/30/2086	11/30/2087	11/30/2088	11/30/2089
$14.60	$15.01	$15.42	$15 85	$16.29	$16.74	$17.20	$17.66	$18.14	$18.63	$19.13	$19.64	$20.17	$20.70	$21.25
$10.68	$10.98	$11.29	$11.60	$11.92	$12.25	$12.58	$12.93	$13.28	$13.63	$14.00	$14.37	$14.76	$15.15	$15.55
$13.98	$14.37	$14.77	$15.18	$15.60	$16.03	$16.47	$16.92	$17.38	$17.84	$18.32	$18.81	$19.31	$19.83	$20.35
$17.02	$17.50	$17.99	$18.49	$19.00	$19.52	$20.05	$20.60	$21.16	$21.73	$22.31	$22.91	$23.52	$24.14	$24.78
$26.03	$26.76	$27.51	$28 27	$29.05	$29.85	$30.67	$31.50	$32.36	$33.23	$34.12	$35.04	$35.97	$36.92	$37.90
$11.02	$11.33	$11.65	$11 97	$12.30	$12.64	$12.99	$13.34	$13.70	$14.07	$14.45	$14.84	$15.23	$15.63	$16.05
$8.43	$8.67	$8.91	$9.16	$9.41	$9.67	$9.93	$10.20	$10.48	$10.76	$11.05	$11.35	$11.65	$11.96	$12.27
$9.90	$10.17	$10.46	$10.75	$11.05	$11.35	$11.66	$11.98	$12.30	$12.63	$12.97	$13.32	$13.67	$14.04	$14.41
$15.39	$15.82	$16.26	$16.72	$17.18	$17.65	$18.13	$18.63	$19.13	$19.65	$20.17	$20.71	$21.26	$21.83	$22.40
$8.48	$8.72	$8.96	$9 21	$9.46	$9.72	$9.99	$10.26	$10 54	$10.83	$11.12	$11.41	$11.72	$12.03	$12.34
$18.50	$19.02	$19.55	$20 09	$20.64	$21.21	$21.79	$22.38	$22.99	$23.61	$24.25	$24.89	$25.56	$26.23	$26.93
$9.30	$9.56	$9.82	$10.10	$10.38	$10.66	$10.95	$11.25	$11.56	$11.87	$12.19	$12.51	$12.84	$13.18	$13.53
$12.26	$12.60	$12.96	$13 32	$13.68	$14.06	$14.44	$14.84	$15.24	$15.65	$16.07	$16.50	$16.94	$17.39	$17.85
2.82%	2.80%	2.79%	2.78%	2.76%	2.75%	2.74%	2.72%	2.71%	2.70%	2.69%	2.67%	2.66%	2.65%	2.64%
1.05%	1.04%	1.02%	1.01%	1.00%	0.98%	0.97%	0.96%	0.94%	0.93%	0.92%	0.91%	0.90%	0.88%	0.87%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 75	Year 76	Year 77	Year 78	Year 79	Year 80	Year 81	Year 82	Year 83	Year 84	Year 85	Year 86	Year 87	Year 88	Year 89
11/30/2090	11/30/2091	11/30/2092	11/30/2093	11/30/2094	11/30/2095	11/30/2096	11/30/2097	11/30/2098	11/30/2099	11/30/2100	11/30/2101	11/30/2102	11/30/2103	11/30/2104
$21.81	$22.38	$22.96	$23 56	$24.17	$24.79	$25.42	$26.07	$26.74	$27.42	$28.11	$28.82	$29.54	$30.28	$31.03
$15.96	$16.37	$16.80	$17 24	$17.68	$18.14	$18.60	$19.08	$19.56	$20.06	$20.57	$21.09	$21.61	$22.16	$22.71
$20.88	$21.43	$21.99	$22 56	$23.14	$23.74	$24.35	$24.97	$25.61	$26.26	$26.92	$27.60	$28.29	$29.00	$29.72
$25.43	$26.10	$26.78	$27.47	$28.18	$28.91	$29.65	$30.41	$31.18	$31.97	$32.78	$33.60	$34.45	$35.31	$36.19
$38.89	$39.91	$40.95	$42 01	$43.10	$44.21	$45.34	$46.50	$47.69	$48.90	$50.13	$51.39	$52.68	$54.00	$55.35
$16.47	$16.90	$17.34	$17.79	$18.25	$18.72	$19.20	$19.69	$20.19	$20.70	$21.23	$21.76	$22.31	$22.87	$23.44
$12.59	$12.92	$13.26	$13.61	$13.96	$14.32	$14.68	$15.06	$15.44	$15.83	$16.23	$16.64	$17.06	$17.49	$17.92
$14.79	$15.17	$15.57	$15 97	$16.39	$16.81	$17.24	$17.68	$18.13	$18.59	$19.06	$19.54	$20.03	$20.53	$21.04
$22.99	$23.60	$24.21	$24 84	$25.48	$26.14	$26.81	$27.49	$28.19	$28.91	$29.64	$30.38	$31.15	$31.93	$32.72
$12.67	$13.00	$13.34	$13.69	$14.04	$14.40	$14.77	$15.15	$15.53	$15.93	$16.33	$16.74	$17.16	$17.59	$18.03
$27.63	$28.36	$29.10	$29 85	$30.62	$31.41	$32.22	$33.04	$33.88	$34.74	$35.62	$36.52	$37.43	$38.37	$39.33
$13.89	$14.25	$14.62	$15 00	$15.39	$15.79	$16.19	$16.61	$17.03	$17.46	$17.90	$18.35	$18.81	$19.28	$19.76
$18.32	$18.80	$19.29	$19.79	$20.30	$20.82	$21.35	$21.90	$22.46	$23.03	$23.61	$24.20	$24.81	$25.43	$26.07
2.63%	2.62%	2.61%	2.60%	2.59%	2.58%	2.57%	2.56%	2.55%	2.54%	2.53%	2.52%	2.51%	2.50%	2.49%
0.86%	0.85%	0.84%	0.83%	0.82%	0.81%	0.80%	0.79%	0.78%	0.77%	0.76%	0.75%	0.74%	0.73%	0.73%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 90	Year 91	Year 92	Year 93	Year 94	Year 95	Year 96	Year 97	Year 98	Year 99	Year 100	Year 101	Year 102	Year 103	Year 104
11/30/2105	11/30/2106	11/30/2107	11/30/2108	11/30/2109	11/30/2110	11/30/2111	11/30/2112	11/30/2113	11/30/2114	11/30/2115	11/30/2116	11/30/2117	11/30/2118	11/30/2119
$31.80	$32.59	$33.39	$34 21	$35.05	$35.91	$36.78	$37.68	$38.59	$39.52	$40.47	$41.44	$42.43	$43.45	$44.48
$23.27	$23.85	$24.44	$25 04	$25.65	$26.28	$26.92	$27.57	$28.24	$28.92	$29.61	$30.33	$31.05	$31.79	$32.55
$30.46	$31.21	$31.98	$32.77	$33.57	$34.39	$35.23	$36.08	$36.96	$37.85	$38.76	$39.69	$40.64	$41.61	$42.60
$37.09	$38.01	$38.94	$39 90	$40.88	$41.88	$42.90	$43.94	$45.00	$46.09	$47.20	$48.33	$49.49	$50.67	$51.87
$56.72	$58.12	$59.56	$61 02	$62.52	$64.04	$65.60	$67.20	$68.82	$70.48	$72.18	$73.91	$75.68	$77.49	$79.33
$24.02	$24.61	$25.22	$25 84	$26.47	$27.12	$27.78	$28.45	$29.14	$29.85	$30.56	$31.30	$32.05	$32.81	$33.59
$18.37	$18.82	$19.29	$19.76	$20.25	$20.74	$21.25	$21.76	$22.29	$22.83	$23.38	$23.94	$24.51	$25.09	$25.69
$21.56	$22.10	$22.64	$23 20	$23.77	$24.35	$24.94	$25.55	$26.17	$26.80	$27.44	$28.10	$28.77	$29.46	$30.16
$33.53	$34.36	$35.21	$36 08	$36.96	$37.86	$38.79	$39.73	$40.69	$41.67	$42.67	$43.70	$44.74	$45.81	$46.90
$18.48	$18.93	$19.40	$19 88	$20.37	$20.86	$21.37	$21.89	$22.42	$22.96	$23.51	$24.08	$24.65	$25.24	$25.84
$40.30	$41.30	$42.32	$43 36	$44.42	$45.51	$46.61	$47.75	$48.90	$50.08	$51.29	$52.52	$53.77	$55.06	$56.37
$20.25	$20.76	$21.27	$21.79	$22.33	$22.87	$23.43	$24.00	$24.58	$25.17	$25.78	$26.39	$27.03	$27.67	$28.33
$26.71	$27.37	$28.05	$28.74	$29.44	$30.16	$30.90	$31.65	$32.41	$33.19	$33.99	$34.81	$35.64	$36.49	$37.36
2.48%	2.47%	2.47%	2.46%	2.45%	2.44%	2.44%	2.43%	2.42%	2.41%	2.41%	2.40%	2.39%	2.39%	2.38%
0.72%	0.71%	0.70%	0.69%	0.68%	0.68%	0.67%	0.66%	0.65%	0.65%	0.64%	0.63%	0.63%	0.62%	0.61%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 105	Year 106	Year 107	Year 108	Year 109	Year 110	Year 111	Year 112	Year 113	Year 114	Year 115	Year 116	Year 117	Year 118	Year 119
11/30/2120	11/30/2121	11/30/2122	11/30/2123	11/30/2124	11/30/2125	11/30/2126	11/30/2127	11/30/2128	11/30/2129	11/30/2130	11/30/2131	11/30/2132	11/30/2133	11/30/2134
$45.54	$46.61	$47.71	$48 84	$49.98	$51.15	$52.35	$53.57	$54.81	$56.09	$57.38	$58.71	$60.06	$61.44	$62.85
$33.32	$34.11	$34.91	$35.74	$36.57	$37.43	$38.31	$39.20	$40.11	$41.04	$41.99	$42.96	$43.95	$44.96	$45.99
$43.61	$44.64	$45.70	$46.77	$47.87	$48.99	$50.13	$51.30	$52.50	$53.71	$54.96	$56.23	$57.52	$58.84	$60.19
$53.10	$54.36	$55.64	$56 95	$58.29	$59.65	$61.05	$62.47	$63.92	$65.41	$66.92	$68.46	$70.04	$71.65	$73.29
$81.21	$83.13	$85.10	$87.10	$89.14	$91.23	$93.36	$95.54	$97.76	$100.03	$102.34	$104.71	$107.12	$109.58	$112.09
$34.39	$35.20	$36.03	$36 88	$37.75	$38.63	$39.53	$40.46	$41.40	$42.36	$43.34	$44.34	$45.36	$46.40	$47.47
$26.30	$26.92	$27.56	$28 21	$28.87	$29.55	$30.24	$30.94	$31.66	$32.39	$33.14	$33.91	$34.69	$35.49	$36.30
$30.88	$31.61	$32.35	$33.11	$33.89	$34.68	$35.49	$36.32	$37.17	$38.03	$38.91	$39.81	$40.72	$41.66	$42.62
$48.01	$49.15	$50.31	$51.49	$52.70	$53.94	$55.20	$56.48	$57.80	$59.14	$60.51	$61.90	$63.33	$64.79	$66.27
$26.46	$27.08	$27.72	$28 37	$29.04	$29.72	$30.41	$31.12	$31.85	$32.58	$33.34	$34.11	$34.89	$35.70	$36.51
$57.70	$59.07	$60.46	$61 89	$63.34	$64.82	$66.34	$67.88	$69.46	$71.07	$72.72	$74.40	$76.11	$77.86	$79.65
$29.00	$29.69	$30.39	$31.10	$31.83	$32.58	$33.34	$34.12	$34.91	$35.72	$36.55	$37.39	$38.25	$39.13	$40.03
$38.25	$39.15	$40.08	$41 02	$41.98	$42.97	$43.97	$44.99	$46.04	$47.11	$48.20	$49.31	$50.45	$51.61	$52.79
2.37%	2.37%	2.36%	2.35%	2.35%	2.34%	2.34%	2.33%	2.32%	2.32%	2.31%	2.31%	2.30%	2.30%	2.29%
0.61%	0.60%	0.59%	0.59%	0.58%	0.58%	0.57%	0.56%	0.56%	0.55%	0.55%	0.54%	0.54%	0.53%	0.53%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 120	Year 121	Year 122	Year 123	Year 124	Year 125	Year 126	Year 127	Year 128	Year 129	Year 130	Year 131	Year 132	Year 133	Year 134
11/30/2135	11/30/2136	11/30/2137	11/30/2138	11/30/2139	11/30/2140	11/30/2141	11/30/2142	11/30/2143	11/30/2144	11/30/2145	11/30/2146	11/30/2147	11/30/2148	11/30/2149
$64.29	$65.76	$67.25	$68.78	$70.34	$71.94	$73.56	$75.22	$76.92	$78.65	$80.41	$82.21	$84.05	$85.93	$87.84
$47.04	$48.12	$49.21	$50 33	$51.47	$52.64	$53.83	$55.04	$56.28	$57.55	$58.84	$60.16	$61.50	$62.88	$64.28
$61.57	$62.98	$64.41	$65 88	$67.37	$68.90	$70.45	$72.04	$73.67	$75.32	$77.01	$78.74	$80.50	$82.29	$84.12
$74.97	$76.68	$78.43	$80 21	$82.04	$83.89	$85.79	$87.73	$89.70	$91.72	$93.77	$95.87	$98.02	$100.20	$102.44
$114.66	$117.28	$119.95	$122.68	$125.46	$128.30	$131.20	$134.16	$137.18	$140.27	$143.41	$146.62	$149.90	$153.25	$156.66
$48.55	$49.66	$50.79	$51 95	$53.13	$54.33	$55.56	$56.81	$58.09	$59.40	$60.73	$62.09	$63.48	$64.89	$66.34
$37.13	$37.98	$38.84	$39.73	$40.63	$41.55	$42.49	$43.45	$44.43	$45.42	$46.44	$47.48	$48.55	$49.63	$50.73
$43.59	$44.59	$45.60	$46.64	$47.70	$48.78	$49.88	$51.01	$52.15	$53.33	$54.52	$55.74	$56.99	$58.26	$59.56
$67.79	$69.34	$70.92	$72 53	$74.17	$75.85	$77.57	$79.32	$81.10	$82.93	$84.79	$86.69	$88.62	$90.60	$92.62
$37.35	$38.20	$39.07	$39 96	$40.87	$41.80	$42.74	$43.70	$44.69	$45.69	$46.72	$47.76	$48.83	$49.92	$51.03
$81.47	$83.33	$85.23	$87.17	$89.14	$91.16	$93.22	$95.33	$97.47	$99.67	$101.90	$104.18	$106.51	$108.89	$111.31
$40.94	$41.88	$42.83	$43 81	$44.80	$45.82	$46.85	$47.91	$48.99	$50.09	$51.21	$52.36	$53.53	$54.73	$55.94
$54.00	$55.23	$56.49	$57.77	$59.09	$60.42	$61.79	$63.18	$64.61	$66.06	$67.54	$69.05	$70.60	$72.17	$73.78
2.29%	2.28%	2.28%	2.27%	2.27%	2.26%	2.26%	2.26%	2.25%	2.25%	2.24%	2.24%	2.24%	2.23%	2.23%
0.52%	0.52%	0.51%	0.51%	0.50%	0.50%	0.49%	0.49%	0.49%	0.48%	0.48%	0.47%	0.47%	0.47%	0.46%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 135	Year 136	Year 137	Year 138	Year 139	Year 140	Year 141	Year 142	Year 143	Year 144	Year 145	Year 146	Year 147	Year 148	Year 149
11/30/2150	11/30/2151	11/30/2152	11/30/2153	11/30/2154	11/30/2155	11/30/2156	11/30/2157	11/30/2158	11/30/2159	11/30/2160	11/30/2161	11/30/2162	11/30/2163	11/30/2164
$89.79	$91.79	$93.82	$95 90	$98.02	$100.18	$102.39	$104.64	$106.94	$109.28	$111.67	$114.11	$116.61	$119.15	$121.74
$65.71	$67.16	$68.65	$70.17	$71.72	$73.30	$74.92	$76.57	$78.25	$79.96	$81.72	$83.50	$85.33	$87.19	$89.09
$86.00	$87.91	$89.85	$91 84	$93.87	$95.94	$98.06	$100.21	$102.41	$104.66	$106.95	$109.29	$111.68	$114.11	$116.60
$104.72	$107.04	$109.41	$111.83	$114.31	$116.83	$119.40	$122.03	$124.71	$127.44	$130.23	$133.08	$135.99	$138.95	$141.98
$160.15	$163.70	$167.33	$171.03	$174.81	$178.67	$182.60	$186.62	$190.72	$194.90	$199.17	$203.52	$207.97	$212.50	$217.13
$67.81	$69.32	$70.86	$72.42	$74.02	$75.66	$77.32	$79.02	$80.76	$82.53	$84.34	$86.18	$88.06	$89.98	$91.94
$51.86	$53.01	$54.19	$55 39	$56.61	$57.86	$59.14	$60.44	$61.76	$63.12	$64.50	$65.91	$67.35	$68.82	$70.32
$60.88	$62.24	$63.62	$65 02	$66.46	$67.93	$69.42	$70.95	$72.51	$74.10	$75.72	$77.38	$79.07	$80.79	$82.55
$94.68	$96.78	$98.93	$101.12	$103.35	$105.63	$107.96	$110.33	$112.76	$115.23	$117.75	$120.33	$122.95	$125.64	$128.37
$52.17	$53.33	$54.51	$55.72	$56.95	$58.20	$59.48	$60.79	$62.13	$63.49	$64.88	$66.30	$67.75	$69.22	$70.73
$113.79	$116.32	$118.90	$121.53	$124.21	$126.95	$129.75	$132.60	$135.51	$138.49	$141.52	$144.61	$147.77	$150.99	$154.28
$57.19	$58.46	$59.75	$61 08	$62.43	$63.80	$65.21	$66.64	$68.11	$69.60	$71.12	$72.68	$74.27	$75.89	$77.54
$75.42	$77.10	$78.80	$80 55	$82.33	$84.14	$86.00	$87.89	$89.82	$91.79	$93.80	$95.85	$97.94	$100.08	$102.26
2.22%	2.22%	2.22%	2.21%	2.21%	2.21%	2.20%	2.20%	2.20%	2.19%	2.19%	2.19%	2.18%	2.18%	2.18%
0.46%	0.45%	0.45%	0.45%	0.44%	0.44%	0.44%	0.43%	0.43%	0.43%	0.42%	0.42%	0.42%	0.41%	0.41%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 150	Year 151	Year 152	Year 153	Year 154	Year 155	Year 156	Year 157	Year 158	Year 159	Year 160	Year 161	Year 162	Year 163	Year 164
11/30/2165	11/30/2166	11/30/2167	11/30/2168	11/30/2169	11/30/2170	11/30/2171	11/30/2172	11/30/2173	11/30/2174	11/30/2175	11/30/2176	11/30/2177	11/30/2178	11/30/2179
$124.39	$127.09	$129.85	$132.66	$135.53	$138.46	$141.45	$144.50	$147.61	$150.79	$154.03	$157.33	$160.71	$164.15	$167.66
$91.02	$93.00	$95.02	$97 08	$99.18	$101.32	$103.51	$105.74	$108.01	$110.34	$112.71	$115.13	$117.60	$120.12	$122.68
$119.13	$121.72	$124.36	$127.05	$129.80	$132.61	$135.47	$138.39	$141.37	$144.41	$147.52	$150.68	$153.91	$157.21	$160.57
$145.06	$148.21	$151.43	$154.71	$158.06	$161.47	$164.96	$168.52	$172.14	$175.85	$179.63	$183.48	$187.42	$191.43	$195.52
$221.85	$226.67	$231.59	$236.60	$241.72	$246.95	$252.28	$257.72	$263.27	$268.93	$274.71	$280.61	$286.62	$292.76	$299.02
$93.94	$95.98	$98.07	$100.19	$102.36	$104.57	$106.83	$109.13	$111.48	$113.88	$116.33	$118.82	$121.37	$123.97	$126.62
$71.85	$73.41	$75.00	$76.62	$78.28	$79.97	$81.70	$83.46	$85.26	$87.09	$88.96	$90.87	$92.82	$94.81	$96.84
$84.34	$86.18	$88.04	$89 95	$91.90	$93.88	$95.91	$97.98	$100.09	$102.24	$104.44	$106.68	$108.97	$111.30	$113.68
$131.16	$134.01	$136.92	$139.88	$142.91	$146.00	$149.15	$152.37	$155.65	$159.00	$162.41	$165.90	$169.46	$173.09	$176.79
$72.27	$73.84	$75.44	$77 08	$78.74	$80.45	$82.18	$83.95	$85.76	$87.61	$89.49	$91.41	$93.37	$95.37	$97.41
$157.64	$161.06	$164.55	$168.12	$171.76	$175.47	$179.26	$183.12	$187.06	$191.09	$195.19	$199.38	$203.66	$208.02	$212.47
$79.22	$80.95	$82.70	$84.49	$86.32	$88.19	$90.09	$92.03	$94.01	$96.04	$98.10	$100.21	$102.35	$104.55	$106.78
$104.48	$106.75	$109.07	$111.43	$113.84	$116.30	$118.81	$121.37	$123.99	$126.65	$129.37	$132.15	$134.99	$137.88	$140.83
2.17%	2.17%	2.17%	2.17%	2.16%	2.16%	2.16%	2.16%	2.15%	2.15%	2.15%	2.15%	2.14%	2.14%	2.14%
0.41%	0.41%	0.40%	0.40%	0.40%	0.39%	0.39%	0.39%	0.39%	0.38%	0.38%	0.38%	0.38%	0.38%	0.37%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 165	Year 166	Year 167	Year 168	Year 169	Year 170	Year 171	Year 172	Year 173	Year 174	Year 175	Year 176	Year 177	Year 178	Year 179
11/30/2180	11/30/2181	11/30/2182	11/30/2183	11/30/2184	11/30/2185	11/30/2186	11/30/2187	11/30/2188	11/30/2189	11/30/2190	11/30/2191	11/30/2192	11/30/2193	11/30/2194
$171.25	$174.90	$178.63	$182.44	$186.32	$190.29	$194.33	$198.45	$202.66	$206.96	$211.34	$215.81	$220.37	$225.03	$229.78
$125.31	$127.98	$130.71	$133.50	$136.34	$139.24	$142.20	$145.22	$148.30	$151.44	$154.65	$157.92	$161.26	$164.66	$168.14
$164.00	$167.51	$171.08	$174.72	$178.44	$182.24	$186.11	$190.06	$194.09	$198.21	$202.40	$206.68	$211.05	$215.51	$220.06
$199.70	$203.97	$208.32	$212.76	$217.29	$221.91	$226.62	$231.43	$236.34	$241.35	$246.46	$251.68	$257.00	$262.42	$267.96
$305.41	$311.94	$318.59	$325.38	$332.30	$339.37	$346.58	$353.94	$361.45	$369.11	$376.92	$384.90	$393.03	$401.33	$409.80
$129.33	$132.09	$134.91	$137.78	$140.71	$143.71	$146.76	$149.88	$153.06	$156.30	$159.61	$162.98	$166.43	$169.94	$173.53
$98.91	$101.02	$103.17	$105.37	$107.62	$109.91	$112.24	$114.62	$117.05	$119.53	$122.07	$124.65	$127.28	$129.97	$132.71
$116.11	$118.59	$121.12	$123.70	$126.34	$129.02	$131.76	$134.56	$137.42	$140.33	$143.30	$146.33	$149.42	$152.58	$155.80
$180.57	$184.42	$188.36	$192.37	$196.46	$200.64	$204.91	$209.26	$213.70	$218.22	$222.84	$227.56	$232.37	$237.28	$242.28
$99.49	$101.62	$103.78	$105.99	$108.25	$110.55	$112.90	$115.30	$117.74	$120.24	$122.79	$125.38	$128.03	$130.74	$133.50
$217.01	$221.64	$226.37	$231.20	$236.12	$241.14	$246.26	$251.49	$256.83	$262.27	$267.82	$273.49	$279.27	$285.17	$291.18
$109.07	$111.39	$113.77	$116.19	$118.67	$121.19	$123.77	$126.39	$129.08	$131.81	$134.60	$137.45	$140.35	$143.32	$146.34
$143.84	$146.91	$150.04	$153.24	$156.50	$159.83	$163.22	$166.69	$170.22	$173.83	$177.51	$181.27	$185.10	$189.01	$193.00
2.14%	2.14%	2.13%	2.13%	2.13%	2.13%	2.12%	2.12%	2.12%	2.12%	2.12%	2.12%	2.11%	2.11%	2.11%
0.37%	0.37%	0.37%	0.36%	0.36%	0.36%	0.36%	0.36%	0.35%	0.35%	0.35%	0.35%	0.35%	0.35%	0.34%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 180	Year 181	Year 182	Year 183	Year 184	Year 185	Year 186	Year 187	Year 188	Year 189	Year 190	Year 191	Year 192	Year 193	Year 194
11/30/2195	11/30/2196	11/30/2197	11/30/2198	11/30/2199	11/30/2200	11/30/2201	11/30/2202	11/30/2203	11/30/2204	11/30/2205	11/30/2206	11/30/2207	11/30/2208	11/30/2209
$234.62	$239.56	$244.61	$249.75	$255.00	$260.36	$265.83	$271.40	$277.09	$282.90	$288.82	$294.86	$301.03	$307.31	$313.73
$171.68	$175.30	$178.99	$182.75	$186.60	$190.52	$194.52	$198.60	$202.76	$207.01	$211.34	$215.76	$220.27	$224.87	$229.57
$224.70	$229.43	$234.26	$239.19	$244.22	$249.35	$254.59	$259.93	$265.37	$270.93	$276.60	$282.39	$288.30	$294.32	$300.46
$273.61	$279.38	$285.26	$291.26	$297.38	$303.63	$310.00	$316.51	$323.14	$329.91	$336.82	$343.86	$351.05	$358.39	$365.87
$418.44	$427.26	$436.26	$445.43	$454.80	$464.35	$474.10	$484.04	$494.19	$504.54	$515.11	$525.88	$536.88	$548.09	$559.54
$177.19	$180.92	$184.73	$188.62	$192.58	$196.63	$200.76	$204.97	$209.27	$213.65	$218.12	$222.68	$227.34	$232.09	$236.94
$135.51	$138.37	$141.28	$144.25	$147.29	$150.38	$153.54	$156.76	$160.04	$163.40	$166.82	$170.31	$173.87	$177.50	$181.20
$159.08	$162.44	$165.86	$169.35	$172.91	$176.54	$180.24	$184.02	$187.88	$191.82	$195.83	$199.93	$204.11	$208.37	$212.73
$247.39	$252.60	$257.92	$263.35	$268.88	$274.53	$280.30	$286.18	$292.17	$298.30	$304.54	$310.91	$317.41	$324.04	$330.81
$136.31	$139.18	$142.11	$145.10	$148.15	$151.27	$154.44	$157.68	$160.99	$164.36	$167.80	$171.31	$174.89	$178.55	$182.27
$297.32	$303.59	$309.98	$316.50	$323.15	$329.94	$336.87	$343.94	$351.14	$358.50	$366.01	$373.66	$381.47	$389.44	$397.58
$149.43	$152.58	$155.79	$159.07	$162.41	$165.82	$169.30	$172.86	$176.48	$180.18	$183.95	$187.80	$191.72	$195.73	$199.81
$197.07	$201.22	$205.46	$209.78	$214.19	$218.69	$223.28	$227.96	$232.74	$237.62	$242.59	$247.66	$252.84	$258.13	$263.52
2.11%	2.11%	2.11%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.09%	2.09%	2.09%	2.09%	2.09%	2.09%
0.34%	0.34%	0.34%	0.34%	0.34%	0.33%	0.33%	0.33%	0.33%	0.33%	0.33%	0.33%	0.32%	0.32%	0.32%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 195	Year 196	Year 197	Year 198	Year 199	Year 200
11/30/2210	11/30/2211	11/30/2212	11/30/2213	11/30/2214	11/30/2215
$320.28	$326.96	$333.77	$340.72	$347.82	$355.05
$234.36	$239.25	$244.23	$249.32	$254.51	$259.81
$306.73	$313.13	$319.66	$326.32	$333.11	$340.04
$373.50	$381.29	$389.24	$397.35	$405.62	$414.06
$571.21	$583.13	$595.28	$607.68	$620.33	$633.24
$241.88	$246.92	$252.07	$257.32	$262.68	$268.14
$184.99	$188.84	$192.78	$196.80	$200.89	$205.07
$217.16	$221.69	$226.31	$231.03	$235.84	$240.74
$337.71	$344.75	$351.94	$359.27	$366.75	$374.38
$186.08	$189.96	$193.92	$197.96	$202.08	$206.28
$405.87	$414.34	$422.97	$431.78	$440.77	$449.94
$203.98	$208.24	$212.58	$217.01	$221.52	$226.13
$269.01	$274.62	$280.35	$286.19	$292.15	$298.22
2.09%	2.09%	2.08%	2.08%	2.08%	2.08%
0.32%	0.32%	0.32%	0.32%	0.32%	0.31%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

LOW YIELD -- MULTI-STAGE DCF -- FORECASTED OECD GDP GROWTH WITH EXTRAPOLATION BEYOND 2060

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]
					Second Stage Growth						
Company	Ticker	Stock Price	Annualized Dividend	First Stage Growth	Year 6	Year 7	Year 8	Year 9	Year 10	Third Stage Growth	ROE
ALLETE, In	ALE	$57.61	$2.08	3.00%	3.16%	3.32%	3.49%	3.65%	3.81%	3.97%	7.17%
Alliant Ener	LNT	$37.05	$1.18	6.60%	6.16%	5.72%	5.29%	4.85%	4.41%	3.97%	7.60%
Ameren Cor	AEE	$48.88	$1.70	5.20%	5.00%	4.79%	4.59%	4.38%	4.18%	3.97%	7.62%
American El	AEP	$65.93	$2.24	4.10%	4.08%	4.06%	4.04%	4.02%	3.99%	3.97%	7.21%
Duke Energ	DUK	$80.24	$3.30	4.62%	4.51%	4.40%	4.30%	4.19%	4.08%	3.97%	8.25%
El Paso Ele	EE	$46.19	$1.18	7.00%	6.50%	5.99%	5.49%	4.98%	4.48%	3.97%	6.82%
Empire Dist	EDE	$33.63	$1.04	5.00%	4.83%	4.66%	4.49%	4.32%	4.14%	3.97%	7.07%
Great Plains	GXP	$31.54	$1.05	7.10%	6.58%	6.06%	5.54%	5.02%	4.49%	3.97%	7.97%
IDACORP,	IDA	$73.95	$2.04	4.00%	4.00%	3.99%	3.99%	3.98%	3.98%	3.97%	6.40%
OGE Energy	OGE	$30.99	$1.10	4.30%	4.25%	4.19%	4.14%	4.08%	4.03%	3.97%	7.46%
Pinnacle We	PNW	$74.57	$2.50	3.73%	3.77%	3.81%	3.85%	3.89%	3.93%	3.97%	7.06%
PNM Resou	PNM	$33.27	$0.88	8.76%	7.96%	7.16%	6.37%	5.57%	4.77%	3.97%	7.40%
Westar Ene	WR	$52.92	$1.52	4.93%	4.77%	4.61%	4.45%	4.29%	4.13%	3.97%	6.76%

Nominal Growth
OECD Real GDP Growth rate
Inflation

Mean	7.29%
Standard Deviation	0.48%
+ 1 Standard Deviation	7.78%
-1 Standard Deviation	6.81%

Notes:
[1] Source: Yahoo Finance
[2] Source: Yahoo Finance
[3] Source: Yahoo Finance
[4] Equals [3] + ([9] − [3]) / 6
[5] Equals [4] + ([9] − [3]) / 6
[6] Equals [5] + ([9] − [3]) / 6
[7] Equals [6] + ([9] − [3]) / 6
[8] Equals [7] + ([9] − [3]) / 6
[9] Source: OECD long term real GDP forecast, plus inflation based on the May 2016 average of Treasury Bond yields less the May 2016 averageof TIPS yields as of May 31, 2016
[10] Equals internal rate of return of cash flows for Year 0 through Year 200

	First Stage					Second Stage								
Stock Price	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14
5/31/2016	11/30/2016	11/30/2017	11/30/2018	11/30/2019	11/30/2020	11/30/2021	11/30/2022	11/30/2023	11/30/2024	11/30/2025	11/30/2026	11/30/2027	11/30/2028	11/30/2029
-$57.61	$2.14	$2.21	$2.27	$2 34	$2.41	$2.49	$2.57	$2.66	$2.76	$2.86	$2.98	$3.09	$3.22	$3.34
-$37.05	$1.25	$1.34	$1.42	$1 52	$1.62	$1.72	$1.82	$1.91	$2.01	$2.09	$2.18	$2.26	$2.35	$2.45
-$48.88	$1.79	$1.88	$1.98	$2 08	$2.19	$2.30	$2.41	$2.52	$2.63	$2.74	$2.85	$2.96	$3.08	$3.20
-$65.93	$2.33	$2.43	$2.53	$2.63	$2.74	$2.85	$2.97	$3.09	$3.21	$3.34	$3.47	$3.61	$3.75	$3.90
-$80.24	$3.45	$3.61	$3.78	$3 95	$4.14	$4.32	$4.51	$4.71	$4.90	$5.10	$5.31	$5.52	$5.74	$5.96
-$46.19	$1.26	$1.35	$1.45	$1 55	$1.66	$1.76	$1.87	$1.97	$2.07	$2.16	$2.25	$2.34	$2.43	$2.52
-$33.63	$1.09	$1.15	$1.20	$1 26	$1.33	$1.39	$1.46	$1.52	$1.59	$1.65	$1.72	$1.79	$1.86	$1.93
-$31.54	$1.13	$1.21	$1.29	$1 38	$1.48	$1.58	$1.68	$1.77	$1.86	$1.94	$2.02	$2.10	$2.18	$2.27
-$73.95	$2.12	$2.21	$2.29	$2 39	$2.48	$2.58	$2.68	$2.79	$2.90	$3.02	$3.14	$3.26	$3.39	$3.52
-$30.99	$1.15	$1.20	$1.25	$1 30	$1.36	$1.42	$1.47	$1.54	$1.60	$1.66	$1.73	$1.80	$1.87	$1.94
-$74.57	$2.59	$2.69	$2.79	$2 89	$3.00	$3.12	$3.23	$3.36	$3.49	$3.63	$3.77	$3.92	$4.08	$4.23
-$33.27	$0.96	$1.04	$1.13	$1 23	$1.34	$1.45	$1.55	$1.65	$1.74	$1.82	$1.90	$1.97	$2.05	$2.13
-$52.92	$1.59	$1.67	$1.76	$1 84	$1.93	$2.03	$2.12	$2.21	$2.31	$2.40	$2.50	$2.60	$2.70	$2.81
											3.97%	3.96%	3.95%	3.92%
											2.38%	2.37%	2.35%	2.33%
											1.59%	1.59%	1.59%	1.59%

Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21	Year 22	Year 23	Year 24	Year 25	Year 26	Year 27	Year 28	Year 29
11/30/2030	11/30/2031	11/30/2032	11/30/2033	11/30/2034	11/30/2035	11/30/2036	11/30/2037	11/30/2038	11/30/2039	11/30/2040	11/30/2041	11/30/2042	11/30/2043	11/30/2044
$3.47	$3.60	$3.74	$3 88	$4.02	$4.16	$4.31	$4.46	$4.62	$4.78	$4.95	$5.13	$5.30	$5.49	$5.68
$2.54	$2.64	$2.74	$2 84	$2.94	$3.05	$3.16	$3.27	$3.38	$3.50	$3.62	$3.75	$3.88	$4.02	$4.16
$3.32	$3.45	$3.58	$3.71	$3.85	$3.99	$4.13	$4.28	$4.42	$4.58	$4.74	$4.91	$5.08	$5.26	$5.44
$4.05	$4.20	$4.36	$4 52	$4.69	$4.86	$5.03	$5.21	$5.39	$5.57	$5.77	$5.98	$6.19	$6.40	$6.62
$6.19	$6.43	$6.67	$6 91	$7.17	$7.43	$7.69	$7.96	$8.24	$8.52	$8.83	$9.14	$9.46	$9.79	$10.13
$2.62	$2.72	$2.82	$2 93	$3.03	$3.14	$3.26	$3.37	$3.49	$3.61	$3.74	$3.87	$4.01	$4.15	$4.29
$2.00	$2.08	$2.16	$2 24	$2.32	$2.40	$2.49	$2.58	$2.67	$2.76	$2.86	$2.96	$3.06	$3.17	$3.28
$2.35	$2.44	$2.53	$2.63	$2.72	$2.82	$2.92	$3.03	$3.13	$3.24	$3.36	$3.48	$3.60	$3.72	$3.85
$3.66	$3.80	$3.94	$4 09	$4.24	$4.39	$4.55	$4.71	$4.87	$5.04	$5.22	$5.40	$5.59	$5.79	$5.99
$2.02	$2.09	$2.17	$2 25	$2.33	$2.42	$2.51	$2.59	$2.68	$2.78	$2.88	$2.98	$3.08	$3.19	$3.30
$4.40	$4.57	$4.74	$4 91	$5.09	$5.28	$5.46	$5.66	$5.85	$6.06	$6.27	$6.49	$6.72	$6.96	$7.20
$2.21	$2.29	$2.38	$2.47	$2.56	$2.65	$2.75	$2.84	$2.94	$3.04	$3.15	$3.26	$3.38	$3.50	$3.62
$2.92	$3.03	$3.14	$3 26	$3.38	$3.50	$3.62	$3.75	$3.88	$4.01	$4.16	$4.30	$4.46	$4.61	$4.77
3.85%	3.80%	3.76%	3.71%	3.66%	3.62%	3.57%	3.52%	3.48%	3.43%	3.59%	3.55%	3.51%	3.48%	3.45%
2.28%	2.23%	2.18%	2.14%	2.09%	2.04%	1.99%	1.95%	1.90%	1.86%	1.82%	1.78%	1.74%	1.71%	1.68%
1.57%	1.57%	1.57%	1.57%	1.57%	1.57%	1.57%	1.57%	1.57%	1.57%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 30	Year 31	Year 32	Year 33	Year 34	Year 35	Year 36	Year 37	Year 38	Year 39	Year 40	Year 41	Year 42	Year 43	Year 44
11/30/2045	11/30/2046	11/30/2047	11/30/2048	11/30/2049	11/30/2050	11/30/2051	11/30/2052	11/30/2053	11/30/2054	11/30/2055	11/30/2056	11/30/2057	11/30/2058	11/30/2059
$5.87	$6.07	$6.28	$6.49	$6.70	$6.92	$7.15	$7.39	$7.62	$7.87	$8.12	$8.38	$8.64	$8.91	$9.19
$4.30	$4.44	$4.59	$4.75	$4.91	$5.07	$5.23	$5.40	$5.58	$5.76	$5.94	$6.13	$6.32	$6.52	$6.72
$5.62	$5.82	$6.01	$6 21	$6.42	$6.63	$6.85	$7.07	$7.30	$7.54	$7.78	$8.02	$8.28	$8.53	$8.80
$6.85	$7.08	$7.32	$7 57	$7.82	$8.08	$8.34	$8.61	$8.89	$9.18	$9.47	$9.77	$10.08	$10.39	$10.71
$10.47	$10.83	$11.20	$11 57	$11.96	$12.35	$12.76	$13.17	$13.60	$14.04	$14.48	$14.94	$15.41	$15.89	$16.38
$4.44	$4.59	$4.74	$4 90	$5.06	$5.23	$5.40	$5.58	$5.76	$5.94	$6.13	$6.33	$6.53	$6.73	$6.94
$3.39	$3.51	$3.63	$3.75	$3.87	$4.00	$4.13	$4.27	$4.40	$4.55	$4.69	$4.84	$4.99	$5.15	$5.31
$3.98	$4.12	$4.26	$4.40	$4.55	$4.70	$4.85	$5.01	$5.17	$5.34	$5.51	$5.68	$5.86	$6.04	$6.23
$6.19	$6.40	$6.62	$6 84	$7.07	$7.30	$7.54	$7.79	$8.04	$8.30	$8.56	$8.83	$9.11	$9.40	$9.69
$3.41	$3.53	$3.65	$3.77	$3.89	$4.02	$4.16	$4.29	$4.43	$4.57	$4.72	$4.87	$5.02	$5.18	$5.34
$7.44	$7.70	$7.95	$8 22	$8.49	$8.78	$9.06	$9.36	$9.66	$9.97	$10.29	$10.62	$10.95	$11.29	$11.64
$3.74	$3.87	$4.00	$4.13	$4.27	$4.41	$4.56	$4.70	$4.86	$5.01	$5.17	$5.34	$5.50	$5.68	$5.85
$4.93	$5.10	$5.27	$5.45	$5.63	$5.82	$6.01	$6.20	$6.40	$6.61	$6.82	$7.04	$7.26	$7.48	$7.72
3.42%	3.40%	3.37%	3.35%	3.33%	3.30%	3.28%	3.26%	3.24%	3.22%	3.19%	3.17%	3.14%	3.12%	3.09%
1.66%	1.63%	1.61%	1.58%	1.56%	1.54%	1.52%	1.49%	1.47%	1.45%	1.43%	1.40%	1.38%	1.35%	1.32%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 45	Year 46	Year 47	Year 48	Year 49	Year 50	Year 51	Year 52	Year 53	Year 54	Year 55	Year 56	Year 57	Year 58	Year 59
11/30/2060	11/30/2061	11/30/2062	11/30/2063	11/30/2064	11/30/2065	11/30/2066	11/30/2067	11/30/2068	11/30/2069	11/30/2070	11/30/2071	11/30/2072	11/30/2073	11/30/2074
$9.47	$9.76	$10.05	$10 35	$10.66	$10.98	$11.31	$11.64	$11.98	$12.33	$12.68	$13.05	$13.42	$13.81	$14.20
$6.93	$7.14	$7.36	$7 58	$7.80	$8.04	$8.27	$8.52	$8.77	$9.02	$9.28	$9.55	$9.82	$10.10	$10.39
$9.07	$9.34	$9.63	$9 92	$10.21	$10.52	$10.83	$11.15	$11.47	$11.81	$12.15	$12.50	$12.86	$13.22	$13.60
$11.04	$11.38	$11.72	$12 08	$12.44	$12.81	$13.19	$13.57	$13.97	$14.38	$14.79	$15.22	$15.65	$16.10	$16.56
$16.89	$17.40	$17.93	$18.47	$19.02	$19.59	$20.17	$20.76	$21.37	$21.99	$22.62	$23.27	$23.94	$24.62	$25.32
$7.15	$7.37	$7.59	$7 82	$8.05	$8.29	$8.54	$8.79	$9.05	$9.31	$9.58	$9.86	$10.14	$10.43	$10.72
$5.47	$5.64	$5.81	$5 98	$6.16	$6.34	$6.53	$6.72	$6.92	$7.12	$7.33	$7.54	$7.75	$7.97	$8.20
$6.42	$6.62	$6.82	$7 02	$7.23	$7.45	$7.67	$7.89	$8.12	$8.36	$8.60	$8.85	$9.10	$9.36	$9.63
$9.98	$10.29	$10.60	$10 92	$11.24	$11.58	$11.92	$12.27	$12.63	$13.00	$13.38	$13.76	$14.15	$14.56	$14.97
$5.50	$5.67	$5.84	$6 02	$6.20	$6.38	$6.57	$6.76	$6.96	$7.16	$7.37	$7.58	$7.80	$8.02	$8.25
$12.00	$12.36	$12.74	$13.12	$13.51	$13.92	$14.33	$14.75	$15.18	$15.62	$16.07	$16.54	$17.01	$17.50	$17.99
$6.03	$6.21	$6.40	$6 59	$6.79	$6.99	$7.20	$7.41	$7.63	$7.85	$8.08	$8.31	$8.55	$8.79	$9.04
$7.95	$8.19	$8.44	$8.70	$8.96	$9.22	$9.50	$9.78	$10 06	$10.35	$10.65	$10.96	$11.27	$11.60	$11.92
3.07%	3.05%	3.03%	3.01%	2.99%	2.98%	2.96%	2.94%	2.93%	2.91%	2.89%	2.88%	2.86%	2.85%	2.83%
1.30%	1.28%	1.26%	1.24%	1.23%	1.21%	1.19%	1.18%	1.16%	1.14%	1.13%	1.11%	1.10%	1.08%	1.07%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 60	Year 61	Year 62	Year 63	Year 64	Year 65	Year 66	Year 67	Year 68	Year 69	Year 70	Year 71	Year 72	Year 73	Year 74
11/30/2075	11/30/2076	11/30/2077	11/30/2078	11/30/2079	11/30/2080	11/30/2081	11/30/2082	11/30/2083	11/30/2084	11/30/2085	11/30/2086	11/30/2087	11/30/2088	11/30/2089
$14.60	$15.01	$15.42	$15 85	$16.29	$16.74	$17.20	$17.66	$18.14	$18.63	$19.13	$19.64	$20.17	$20.70	$21.25
$10.68	$10.98	$11.29	$11.60	$11.92	$12.25	$12.58	$12.93	$13.28	$13.63	$14.00	$14.37	$14.76	$15.15	$15.55
$13.98	$14.37	$14.77	$15.18	$15.60	$16.03	$16.47	$16.92	$17.38	$17.84	$18.32	$18.81	$19.31	$19.83	$20.35
$17.02	$17.50	$17.99	$18.49	$19.00	$19.52	$20.05	$20.60	$21.16	$21.73	$22.31	$22.91	$23.52	$24.14	$24.78
$26.03	$26.76	$27.51	$28 27	$29.05	$29.85	$30.67	$31.50	$32.36	$33.23	$34.12	$35.04	$35.97	$36.92	$37.90
$11.02	$11.33	$11.65	$11 97	$12.30	$12.64	$12.99	$13.34	$13.70	$14.07	$14.45	$14.84	$15.23	$15.63	$16.05
$8.43	$8.67	$8.91	$9.16	$9.41	$9.67	$9.93	$10.20	$10.48	$10.76	$11.05	$11.35	$11.65	$11.96	$12.27
$9.90	$10.17	$10.46	$10.75	$11.05	$11.35	$11.66	$11.98	$12.30	$12.63	$12.97	$13.32	$13.67	$14.04	$14.41
$15.39	$15.82	$16.26	$16.72	$17.18	$17.65	$18.13	$18.63	$19.13	$19.65	$20.17	$20.71	$21.26	$21.83	$22.40
$8.48	$8.72	$8.96	$9 21	$9.46	$9.72	$9.99	$10.26	$10 54	$10.83	$11.12	$11.41	$11.72	$12.03	$12.34
$18.50	$19.02	$19.55	$20 09	$20.64	$21.21	$21.79	$22.38	$22.99	$23.61	$24.25	$24.89	$25.56	$26.23	$26.93
$9.30	$9.56	$9.82	$10.10	$10.38	$10.66	$10.95	$11.25	$11.56	$11.87	$12.19	$12.51	$12.84	$13.18	$13.53
$12.26	$12.60	$12.96	$13 32	$13.68	$14.06	$14.44	$14.84	$15.24	$15.65	$16.07	$16.50	$16.94	$17.39	$17.85
2.82%	2.80%	2.79%	2.78%	2.76%	2.75%	2.74%	2.72%	2.71%	2.70%	2.69%	2.67%	2.66%	2.65%	2.64%
1.05%	1.04%	1.02%	1.01%	1.00%	0.98%	0.97%	0.96%	0.94%	0.93%	0.92%	0.91%	0.90%	0.88%	0.87%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 75	Year 76	Year 77	Year 78	Year 79	Year 80	Year 81	Year 82	Year 83	Year 84	Year 85	Year 86	Year 87	Year 88	Year 89
11/30/2090	11/30/2091	11/30/2092	11/30/2093	11/30/2094	11/30/2095	11/30/2096	11/30/2097	11/30/2098	11/30/2099	11/30/2100	11/30/2101	11/30/2102	11/30/2103	11/30/2104
$21.81	$22.38	$22.96	$23 56	$24.17	$24.79	$25.42	$26.07	$26.74	$27.42	$28.11	$28.82	$29.54	$30.28	$31.03
$15.96	$16.37	$16.80	$17 24	$17.68	$18.14	$18.60	$19.08	$19.56	$20.06	$20.57	$21.09	$21.61	$22.16	$22.71
$20.88	$21.43	$21.99	$22 56	$23.14	$23.74	$24.35	$24.97	$25.61	$26.26	$26.92	$27.60	$28.29	$29.00	$29.72
$25.43	$26.10	$26.78	$27.47	$28.18	$28.91	$29.65	$30.41	$31.18	$31.97	$32.78	$33.60	$34.45	$35.31	$36.19
$38.89	$39.91	$40.95	$42 01	$43.10	$44.21	$45.34	$46.50	$47.69	$48.90	$50.13	$51.39	$52.68	$54.00	$55.35
$16.47	$16.90	$17.34	$17.79	$18.25	$18.72	$19.20	$19.69	$20.19	$20.70	$21.23	$21.76	$22.31	$22.87	$23.44
$12.59	$12.92	$13.26	$13.61	$13.96	$14.32	$14.68	$15.06	$15.44	$15.83	$16.23	$16.64	$17.06	$17.49	$17.92
$14.79	$15.17	$15.57	$15 97	$16.39	$16.81	$17.24	$17.68	$18.13	$18.59	$19.06	$19.54	$20.03	$20.53	$21.04
$22.99	$23.60	$24.21	$24 84	$25.48	$26.14	$26.81	$27.49	$28.19	$28.91	$29.64	$30.38	$31.15	$31.93	$32.72
$12.67	$13.00	$13.34	$13.69	$14.04	$14.40	$14.77	$15.15	$15.53	$15.93	$16.33	$16.74	$17.16	$17.59	$18.03
$27.63	$28.36	$29.10	$29 85	$30.62	$31.41	$32.22	$33.04	$33.88	$34.74	$35.62	$36.52	$37.43	$38.37	$39.33
$13.89	$14.25	$14.62	$15 00	$15.39	$15.79	$16.19	$16.61	$17.03	$17.46	$17.90	$18.35	$18.81	$19.28	$19.76
$18.32	$18.80	$19.29	$19.79	$20.30	$20.82	$21.35	$21.90	$22.46	$23.03	$23.61	$24.20	$24.81	$25.43	$26.07
2.63%	2.62%	2.61%	2.60%	2.59%	2.58%	2.57%	2.56%	2.55%	2.54%	2.53%	2.52%	2.51%	2.50%	2.49%
0.86%	0.85%	0.84%	0.83%	0.82%	0.81%	0.80%	0.79%	0.78%	0.77%	0.76%	0.75%	0.74%	0.73%	0.73%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 90	Year 91	Year 92	Year 93	Year 94	Year 95	Year 96	Year 97	Year 98	Year 99	Year 100	Year 101	Year 102	Year 103	Year 104
11/30/2105	11/30/2106	11/30/2107	11/30/2108	11/30/2109	11/30/2110	11/30/2111	11/30/2112	11/30/2113	11/30/2114	11/30/2115	11/30/2116	11/30/2117	11/30/2118	11/30/2119
$31.80	$32.59	$33.39	$34 21	$35.05	$35.91	$36.78	$37.68	$38.59	$39.52	$40.47	$41.44	$42.43	$43.45	$44.48
$23.27	$23.85	$24.44	$25 04	$25.65	$26.28	$26.92	$27.57	$28.24	$28.92	$29.61	$30.33	$31.05	$31.79	$32.55
$30.46	$31.21	$31.98	$32.77	$33.57	$34.39	$35.23	$36.08	$36.96	$37.85	$38.76	$39.69	$40.64	$41.61	$42.60
$37.09	$38.01	$38.94	$39 90	$40.88	$41.88	$42.90	$43.94	$45.00	$46.09	$47.20	$48.33	$49.49	$50.67	$51.87
$56.72	$58.12	$59.56	$61 02	$62.52	$64.04	$65.60	$67.20	$68.82	$70.48	$72.18	$73.91	$75.68	$77.49	$79.33
$24.02	$24.61	$25.22	$25 84	$26.47	$27.12	$27.78	$28.45	$29.14	$29.85	$30.56	$31.30	$32.05	$32.81	$33.59
$18.37	$18.82	$19.29	$19.76	$20.25	$20.74	$21.25	$21.76	$22.29	$22.83	$23.38	$23.94	$24.51	$25.09	$25.69
$21.56	$22.10	$22.64	$23 20	$23.77	$24.35	$24.94	$25.55	$26.17	$26.80	$27.44	$28.10	$28.77	$29.46	$30.16
$33.53	$34.36	$35.21	$36 08	$36.96	$37.86	$38.79	$39.73	$40.69	$41.67	$42.67	$43.70	$44.74	$45.81	$46.90
$18.48	$18.93	$19.40	$19 88	$20.37	$20.86	$21.37	$21.89	$22.42	$22.96	$23.51	$24.08	$24.65	$25.24	$25.84
$40.30	$41.30	$42.32	$43 36	$44.42	$45.51	$46.61	$47.75	$48.90	$50.08	$51.29	$52.52	$53.77	$55.06	$56.37
$20.25	$20.76	$21.27	$21.79	$22.33	$22.87	$23.43	$24.00	$24.58	$25.17	$25.78	$26.39	$27.03	$27.67	$28.33
$26.71	$27.37	$28.05	$28.74	$29.44	$30.16	$30.90	$31.65	$32.41	$33.19	$33.99	$34.81	$35.64	$36.49	$37.36
2.48%	2.47%	2.47%	2.46%	2.45%	2.44%	2.44%	2.43%	2.42%	2.41%	2.41%	2.40%	2.39%	2.39%	2.38%
0.72%	0.71%	0.70%	0.69%	0.68%	0.68%	0.67%	0.66%	0.65%	0.65%	0.64%	0.63%	0.63%	0.62%	0.61%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 105	Year 106	Year 107	Year 108	Year 109	Year 110	Year 111	Year 112	Year 113	Year 114	Year 115	Year 116	Year 117	Year 118	Year 119
11/30/2120	11/30/2121	11/30/2122	11/30/2123	11/30/2124	11/30/2125	11/30/2126	11/30/2127	11/30/2128	11/30/2129	11/30/2130	11/30/2131	11/30/2132	11/30/2133	11/30/2134
$45.54	$46.61	$47.71	$48 84	$49.98	$51.15	$52.35	$53.57	$54.81	$56.09	$57.38	$58.71	$60.06	$61.44	$62.85
$33.32	$34.11	$34.91	$35.74	$36.57	$37.43	$38.31	$39.20	$40.11	$41.04	$41.99	$42.96	$43.95	$44.96	$45.99
$43.61	$44.64	$45.70	$46.77	$47.87	$48.99	$50.13	$51.30	$52.50	$53.71	$54.96	$56.23	$57.52	$58.84	$60.19
$53.10	$54.36	$55.64	$56 95	$58.29	$59.65	$61.05	$62.47	$63.92	$65.41	$66.92	$68.46	$70.04	$71.65	$73.29
$81.21	$83.13	$85.10	$87.10	$89.14	$91.23	$93.36	$95.54	$97.76	$100.03	$102.34	$104.71	$107.12	$109.58	$112.09
$34.39	$35.20	$36.03	$36 88	$37.75	$38.63	$39.53	$40.46	$41.40	$42.36	$43.34	$44.34	$45.36	$46.40	$47.47
$26.30	$26.92	$27.56	$28 21	$28.87	$29.55	$30.24	$30.94	$31.66	$32.39	$33.14	$33.91	$34.69	$35.49	$36.30
$30.88	$31.61	$32.35	$33.11	$33.89	$34.68	$35.49	$36.32	$37.17	$38.03	$38.91	$39.81	$40.72	$41.66	$42.62
$48.01	$49.15	$50.31	$51.49	$52.70	$53.94	$55.20	$56.48	$57.80	$59.14	$60.51	$61.90	$63.33	$64.79	$66.27
$26.46	$27.08	$27.72	$28 37	$29.04	$29.72	$30.41	$31.12	$31.85	$32.58	$33.34	$34.11	$34.89	$35.70	$36.51
$57.70	$59.07	$60.46	$61 89	$63.34	$64.82	$66.34	$67.88	$69.46	$71.07	$72.72	$74.40	$76.11	$77.86	$79.65
$29.00	$29.69	$30.39	$31.10	$31.83	$32.58	$33.34	$34.12	$34.91	$35.72	$36.55	$37.39	$38.25	$39.13	$40.03
$38.25	$39.15	$40.08	$41 02	$41.98	$42.97	$43.97	$44.99	$46.04	$47.11	$48.20	$49.31	$50.45	$51.61	$52.79
2.37%	2.37%	2.36%	2.35%	2.35%	2.34%	2.34%	2.33%	2.32%	2.32%	2.31%	2.31%	2.30%	2.30%	2.29%
0.61%	0.60%	0.59%	0.59%	0.58%	0.58%	0.57%	0.56%	0.56%	0.55%	0.55%	0.54%	0.54%	0.53%	0.53%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 120	Year 121	Year 122	Year 123	Year 124	Year 125	Year 126	Year 127	Year 128	Year 129	Year 130	Year 131	Year 132	Year 133	Year 134
11/30/2135	11/30/2136	11/30/2137	11/30/2138	11/30/2139	11/30/2140	11/30/2141	11/30/2142	11/30/2143	11/30/2144	11/30/2145	11/30/2146	11/30/2147	11/30/2148	11/30/2149
$64.29	$65.76	$67.25	$68.78	$70.34	$71.94	$73.56	$75.22	$76.92	$78.65	$80.41	$82.21	$84.05	$85.93	$87.84
$47.04	$48.12	$49.21	$50 33	$51.47	$52.64	$53.83	$55.04	$56.28	$57.55	$58.84	$60.16	$61.50	$62.88	$64.28
$61.57	$62.98	$64.41	$65 88	$67.37	$68.90	$70.45	$72.04	$73.67	$75.32	$77.01	$78.74	$80.50	$82.29	$84.12
$74.97	$76.68	$78.43	$80 21	$82.04	$83.89	$85.79	$87.73	$89.70	$91.72	$93.77	$95.87	$98.02	$100.20	$102.44
$114.66	$117.28	$119.95	$122.68	$125.46	$128.30	$131.20	$134.16	$137.18	$140.27	$143.41	$146.62	$149.90	$153.25	$156.66
$48.55	$49.66	$50.79	$51 95	$53.13	$54.33	$55.56	$56.81	$58.09	$59.40	$60.73	$62.09	$63.48	$64.89	$66.34
$37.13	$37.98	$38.84	$39.73	$40.63	$41.55	$42.49	$43.45	$44.43	$45.42	$46.44	$47.48	$48.55	$49.63	$50.73
$43.59	$44.59	$45.60	$46.64	$47.70	$48.78	$49.88	$51.01	$52.15	$53.33	$54.52	$55.74	$56.99	$58.26	$59.56
$67.79	$69.34	$70.92	$72 53	$74.17	$75.85	$77.57	$79.32	$81.10	$82.93	$84.79	$86.69	$88.62	$90.60	$92.62
$37.35	$38.20	$39.07	$39 96	$40.87	$41.80	$42.74	$43.70	$44.69	$45.69	$46.72	$47.76	$48.83	$49.92	$51.03
$81.47	$83.33	$85.23	$87.17	$89.14	$91.16	$93.22	$95.33	$97.47	$99.67	$101.90	$104.18	$106.51	$108.89	$111.31
$40.94	$41.88	$42.83	$43 81	$44.80	$45.82	$46.85	$47.91	$48.99	$50.09	$51.21	$52.36	$53.53	$54.73	$55.94
$54.00	$55.23	$56.49	$57.77	$59.09	$60.42	$61.79	$63.18	$64.61	$66.06	$67.54	$69.05	$70.60	$72.17	$73.78
2.29%	2.28%	2.28%	2.27%	2.27%	2.26%	2.26%	2.26%	2.25%	2.25%	2.24%	2.24%	2.24%	2.23%	2.23%
0.52%	0.52%	0.51%	0.51%	0.50%	0.50%	0.49%	0.49%	0.49%	0.48%	0.48%	0.47%	0.47%	0.47%	0.46%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 135	Year 136	Year 137	Year 138	Year 139	Year 140	Year 141	Year 142	Year 143	Year 144	Year 145	Year 146	Year 147	Year 148	Year 149
11/30/2150	11/30/2151	11/30/2152	11/30/2153	11/30/2154	11/30/2155	11/30/2156	11/30/2157	11/30/2158	11/30/2159	11/30/2160	11/30/2161	11/30/2162	11/30/2163	11/30/2164
$89.79	$91.79	$93.82	$95 90	$98.02	$100.18	$102.39	$104.64	$106.94	$109.28	$111.67	$114.11	$116.61	$119.15	$121.74
$65.71	$67.16	$68.65	$70.17	$71.72	$73.30	$74.92	$76.57	$78.25	$79.96	$81.72	$83.50	$85.33	$87.19	$89.09
$86.00	$87.91	$89.85	$91 84	$93.87	$95.94	$98.06	$100.21	$102.41	$104.66	$106.95	$109.29	$111.68	$114.11	$116.60
$104.72	$107.04	$109.41	$111.83	$114.31	$116.83	$119.40	$122.03	$124.71	$127.44	$130.23	$133.08	$135.99	$138.95	$141.98
$160.15	$163.70	$167.33	$171.03	$174.81	$178.67	$182.60	$186.62	$190.72	$194.90	$199.17	$203.52	$207.97	$212.50	$217.13
$67.81	$69.32	$70.86	$72.42	$74.02	$75.66	$77.32	$79.02	$80.76	$82.53	$84.34	$86.18	$88.06	$89.98	$91.94
$51.86	$53.01	$54.19	$55 39	$56.61	$57.86	$59.14	$60.44	$61.76	$63.12	$64.50	$65.91	$67.35	$68.82	$70.32
$60.88	$62.24	$63.62	$65 02	$66.46	$67.93	$69.42	$70.95	$72.51	$74.10	$75.72	$77.38	$79.07	$80.79	$82.55
$94.68	$96.78	$98.93	$101.12	$103.35	$105.63	$107.96	$110.33	$112.76	$115.23	$117.75	$120.33	$122.95	$125.64	$128.37
$52.17	$53.33	$54.51	$55.72	$56.95	$58.20	$59.48	$60.79	$62.13	$63.49	$64.88	$66.30	$67.75	$69.22	$70.73
$113.79	$116.32	$118.90	$121.53	$124.21	$126.95	$129.75	$132.60	$135.51	$138.49	$141.52	$144.61	$147.77	$150.99	$154.28
$57.19	$58.46	$59.75	$61 08	$62.43	$63.80	$65.21	$66.64	$68.11	$69.60	$71.12	$72.68	$74.27	$75.89	$77.54
$75.42	$77.10	$78.80	$80 55	$82.33	$84.14	$86.00	$87.89	$89.82	$91.79	$93.80	$95.85	$97.94	$100.08	$102.26
2.22%	2.22%	2.22%	2.21%	2.21%	2.21%	2.20%	2.20%	2.20%	2.19%	2.19%	2.19%	2.18%	2.18%	2.18%
0.46%	0.45%	0.45%	0.45%	0.44%	0.44%	0.44%	0.43%	0.43%	0.43%	0.42%	0.42%	0.42%	0.41%	0.41%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 150	Year 151	Year 152	Year 153	Year 154	Year 155	Year 156	Year 157	Year 158	Year 159	Year 160	Year 161	Year 162	Year 163	Year 164
11/30/2165	11/30/2166	11/30/2167	11/30/2168	11/30/2169	11/30/2170	11/30/2171	11/30/2172	11/30/2173	11/30/2174	11/30/2175	11/30/2176	11/30/2177	11/30/2178	11/30/2179
$124.39	$127.09	$129.85	$132.66	$135.53	$138.46	$141.45	$144.50	$147.61	$150.79	$154.03	$157.33	$160.71	$164.15	$167.66
$91.02	$93.00	$95.02	$97 08	$99.18	$101.32	$103.51	$105.74	$108.01	$110.34	$112.71	$115.13	$117.60	$120.12	$122.68
$119.13	$121.72	$124.36	$127.05	$129.80	$132.61	$135.47	$138.39	$141.37	$144.41	$147.52	$150.68	$153.91	$157.21	$160.57
$145.06	$148.21	$151.43	$154.71	$158.06	$161.47	$164.96	$168.52	$172.14	$175.85	$179.63	$183.48	$187.42	$191.43	$195.52
$221.85	$226.67	$231.59	$236.60	$241.72	$246.95	$252.28	$257.72	$263.27	$268.93	$274.71	$280.61	$286.62	$292.76	$299.02
$93.94	$95.98	$98.07	$100.19	$102.36	$104.57	$106.83	$109.13	$111.48	$113.88	$116.33	$118.82	$121.37	$123.97	$126.62
$71.85	$73.41	$75.00	$76.62	$78.28	$79.97	$81.70	$83.46	$85.26	$87.09	$88.96	$90.87	$92.82	$94.81	$96.84
$84.34	$86.18	$88.04	$89 95	$91.90	$93.88	$95.91	$97.98	$100.09	$102.24	$104.44	$106.68	$108.97	$111.30	$113.68
$131.16	$134.01	$136.92	$139.88	$142.91	$146.00	$149.15	$152.37	$155.65	$159.00	$162.41	$165.90	$169.46	$173.09	$176.79
$72.27	$73.84	$75.44	$77 08	$78.74	$80.45	$82.18	$83.95	$85.76	$87.61	$89.49	$91.41	$93.37	$95.37	$97.41
$157.64	$161.06	$164.55	$168.12	$171.76	$175.47	$179.26	$183.12	$187.06	$191.09	$195.19	$199.38	$203.66	$208.02	$212.47
$79.22	$80.95	$82.70	$84.49	$86.32	$88.19	$90.09	$92.03	$94.01	$96.04	$98.10	$100.21	$102.35	$104.55	$106.78
$104.48	$106.75	$109.07	$111.43	$113.84	$116.30	$118.81	$121.37	$123.99	$126.65	$129.37	$132.15	$134.99	$137.88	$140.83
2.17%	2.17%	2.17%	2.17%	2.16%	2.16%	2.16%	2.16%	2.15%	2.15%	2.15%	2.15%	2.14%	2.14%	2.14%
0.41%	0.41%	0.40%	0.40%	0.40%	0.39%	0.39%	0.39%	0.39%	0.38%	0.38%	0.38%	0.38%	0.38%	0.37%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 165	Year 166	Year 167	Year 168	Year 169	Year 170	Year 171	Year 172	Year 173	Year 174	Year 175	Year 176	Year 177	Year 178	Year 179
11/30/2180	11/30/2181	11/30/2182	11/30/2183	11/30/2184	11/30/2185	11/30/2186	11/30/2187	11/30/2188	11/30/2189	11/30/2190	11/30/2191	11/30/2192	11/30/2193	11/30/2194
$171.25	$174.90	$178.63	$182.44	$186.32	$190.29	$194.33	$198.45	$202.66	$206.96	$211.34	$215.81	$220.37	$225.03	$229.78
$125.31	$127.98	$130.71	$133.50	$136.34	$139.24	$142.20	$145.22	$148.30	$151.44	$154.65	$157.92	$161.26	$164.66	$168.14
$164.00	$167.51	$171.08	$174.72	$178.44	$182.24	$186.11	$190.06	$194.09	$198.21	$202.40	$206.68	$211.05	$215.51	$220.06
$199.70	$203.97	$208.32	$212.76	$217.29	$221.91	$226.62	$231.43	$236.34	$241.35	$246.46	$251.68	$257.00	$262.42	$267.96
$305.41	$311.94	$318.59	$325.38	$332.30	$339.37	$346.58	$353.94	$361.45	$369.11	$376.92	$384.90	$393.03	$401.33	$409.80
$129.33	$132.09	$134.91	$137.78	$140.71	$143.71	$146.76	$149.88	$153.06	$156.30	$159.61	$162.98	$166.43	$169.94	$173.53
$98.91	$101.02	$103.17	$105.37	$107.62	$109.91	$112.24	$114.62	$117.05	$119.53	$122.07	$124.65	$127.28	$129.97	$132.71
$116.11	$118.59	$121.12	$123.70	$126.34	$129.02	$131.76	$134.56	$137.42	$140.33	$143.30	$146.33	$149.42	$152.58	$155.80
$180.57	$184.42	$188.36	$192.37	$196.46	$200.64	$204.91	$209.26	$213.70	$218.22	$222.84	$227.56	$232.37	$237.28	$242.28
$99.49	$101.62	$103.78	$105.99	$108.25	$110.55	$112.90	$115.30	$117.74	$120.24	$122.79	$125.38	$128.03	$130.74	$133.50
$217.01	$221.64	$226.37	$231.20	$236.12	$241.14	$246.26	$251.49	$256.83	$262.27	$267.82	$273.49	$279.27	$285.17	$291.18
$109.07	$111.39	$113.77	$116.19	$118.67	$121.19	$123.77	$126.39	$129.08	$131.81	$134.60	$137.45	$140.35	$143.32	$146.34
$143.84	$146.91	$150.04	$153.24	$156.50	$159.83	$163.22	$166.69	$170.22	$173.83	$177.51	$181.27	$185.10	$189.01	$193.00
2.14%	2.14%	2.13%	2.13%	2.13%	2.13%	2.12%	2.12%	2.12%	2.12%	2.12%	2.12%	2.11%	2.11%	2.11%
0.37%	0.37%	0.37%	0.36%	0.36%	0.36%	0.36%	0.36%	0.35%	0.35%	0.35%	0.35%	0.35%	0.35%	0.34%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 180	Year 181	Year 182	Year 183	Year 184	Year 185	Year 186	Year 187	Year 188	Year 189	Year 190	Year 191	Year 192	Year 193	Year 194
11/30/2195	11/30/2196	11/30/2197	11/30/2198	11/30/2199	11/30/2200	11/30/2201	11/30/2202	11/30/2203	11/30/2204	11/30/2205	11/30/2206	11/30/2207	11/30/2208	11/30/2209
$234.62	$239.56	$244.61	$249.75	$255.00	$260.36	$265.83	$271.40	$277.09	$282.90	$288.82	$294.86	$301.03	$307.31	$313.73
$171.68	$175.30	$178.99	$182.75	$186.60	$190.52	$194.52	$198.60	$202.76	$207.01	$211.34	$215.76	$220.27	$224.87	$229.57
$224.70	$229.43	$234.26	$239.19	$244.22	$249.35	$254.59	$259.93	$265.37	$270.93	$276.60	$282.39	$288.30	$294.32	$300.46
$273.61	$279.38	$285.26	$291.26	$297.38	$303.63	$310.00	$316.51	$323.14	$329.91	$336.82	$343.86	$351.05	$358.39	$365.87
$418.44	$427.26	$436.26	$445.43	$454.80	$464.35	$474.10	$484.04	$494.19	$504.54	$515.11	$525.88	$536.88	$548.09	$559.54
$177.19	$180.92	$184.73	$188.62	$192.58	$196.63	$200.76	$204.97	$209.27	$213.65	$218.12	$222.68	$227.34	$232.09	$236.94
$135.51	$138.37	$141.28	$144.25	$147.29	$150.38	$153.54	$156.76	$160.04	$163.40	$166.82	$170.31	$173.87	$177.50	$181.20
$159.08	$162.44	$165.86	$169.35	$172.91	$176.54	$180.24	$184.02	$187.88	$191.82	$195.83	$199.93	$204.11	$208.37	$212.73
$247.39	$252.60	$257.92	$263.35	$268.88	$274.53	$280.30	$286.18	$292.17	$298.30	$304.54	$310.91	$317.41	$324.04	$330.81
$136.31	$139.18	$142.11	$145.10	$148.15	$151.27	$154.44	$157.68	$160.99	$164.36	$167.80	$171.31	$174.89	$178.55	$182.27
$297.32	$303.59	$309.98	$316.50	$323.15	$329.94	$336.87	$343.94	$351.14	$358.50	$366.01	$373.66	$381.47	$389.44	$397.58
$149.43	$152.58	$155.79	$159.07	$162.41	$165.82	$169.30	$172.86	$176.48	$180.18	$183.95	$187.80	$191.72	$195.73	$199.81
$197.07	$201.22	$205.46	$209.78	$214.19	$218.69	$223.28	$227.96	$232.74	$237.62	$242.59	$247.66	$252.84	$258.13	$263.52
2.11%	2.11%	2.11%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.09%	2.09%	2.09%	2.09%	2.09%	2.09%
0.34%	0.34%	0.34%	0.34%	0.34%	0.33%	0.33%	0.33%	0.33%	0.33%	0.33%	0.33%	0.32%	0.32%	0.32%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 195	Year 196	Year 197	Year 198	Year 199	Year 200
11/30/2210	11/30/2211	11/30/2212	11/30/2213	11/30/2214	11/30/2215
$320.28	$326.96	$333.77	$340.72	$347.82	$355.05
$234.36	$239.25	$244.23	$249.32	$254.51	$259.81
$306.73	$313.13	$319.66	$326.32	$333.11	$340.04
$373.50	$381.29	$389.24	$397.35	$405.62	$414.06
$571.21	$583.13	$595.28	$607.68	$620.33	$633.24
$241.88	$246.92	$252.07	$257.32	$262.68	$268.14
$184.99	$188.84	$192.78	$196.80	$200.89	$205.07
$217.16	$221.69	$226.31	$231.03	$235.84	$240.74
$337.71	$344.75	$351.94	$359.27	$366.75	$374.38
$186.08	$189.96	$193.92	$197.96	$202.08	$206.28
$405.87	$414.34	$422.97	$431.78	$440.77	$449.94
$203.98	$208.24	$212.58	$217.01	$221.52	$226.13
$269.01	$274.62	$280.35	$286.19	$292.15	$298.22
2.09%	2.09%	2.08%	2.08%	2.08%	2.08%
0.32%	0.32%	0.32%	0.32%	0.32%	0.31%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

With Extrapolation above ↑
Without Extrapolation below ↓

AVERAGE YIELD -- MULTI-STAGE DCF -- FORECASTED OECD GDP GROWTH

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]
					Second Stage Growth						
Company	Ticker	Stock Price	Annualized Dividend	First Stage Growth	Year 6	Year 7	Year 8	Year 9	Year 10	Third Stage Growth	ROE
ALLETE, In	ALE	$56.34	$2.08	3.00%	3.16%	3.32%	3.49%	3.65%	3.81%	3.97%	7.32%
Alliant Ener	LNT	$36.28	$1.18	6.60%	6.16%	5.72%	5.29%	4.85%	4.41%	3.97%	7.74%
Ameren Cor	AEE	$47.88	$1.70	5.20%	5.00%	4.79%	4.59%	4.38%	4.18%	3.97%	7.75%
American El	AEP	$64.43	$2.24	4.10%	4.08%	4.06%	4.04%	4.02%	3.99%	3.97%	7.36%
Duke Energ	DUK	$78.35	$3.30	4.62%	4.51%	4.40%	4.30%	4.19%	4.08%	3.97%	8.40%
El Paso Ele	EE	$44.63	$1.18	7.00%	6.50%	5.99%	5.49%	4.98%	4.48%	3.97%	7.01%
Empire Dist	EDE	$33.33	$1.04	5.00%	4.83%	4.66%	4.49%	4.32%	4.14%	3.97%	7.16%
Great Plains	GXP	$31.01	$1.05	7.10%	6.58%	6.06%	5.54%	5.02%	4.49%	3.97%	8.09%
IDACORP,	IDA	$72.58	$2.04	4.00%	4.00%	3.99%	3.99%	3.98%	3.98%	3.97%	6.54%
OGE Energy	OGE	$30.32	$1.10	4.30%	4.25%	4.19%	4.14%	4.08%	4.03%	3.97%	7.60%
Pinnacle We	PNW	$72.91	$2.50	3.73%	3.77%	3.81%	3.85%	3.89%	3.93%	3.97%	7.21%
PNM Resou	PNM	$32.43	$0.88	8.76%	7.96%	7.16%	6.37%	5.57%	4.77%	3.97%	7.56%
Westar Ene	WR	$52.04	$1.52	4.93%	4.77%	4.61%	4.45%	4.29%	4.13%	3.97%	6.89%
Nominal Growth											
OECD Real GDP Growth rate											
Inflation											
Mean											7.43%
Standard Deviation											0.48%
+ 1 Standard Deviation											7.91%
-1 Standard Deviation											6.95%

Notes:
[1] Source: Yahoo Finance
[2] Source: Yahoo Finance
[3] Source: Yahoo Finance
[4] Equals [3] + ([9] – [3]) / 6
[5] Equals [4] + ([9] – [3]) / 6
[6] Equals [5] + ([9] – [3]) / 6
[7] Equals [6] + ([9] – [3]) / 6

	First Stage					Second Stage								
Stock Price	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14
5/31/2016	11/30/2016	11/30/2017	11/30/2018	11/30/2019	11/30/2020	11/30/2021	11/30/2022	11/30/2023	11/30/2024	11/30/2025	11/30/2026	11/30/2027	11/30/2028	11/30/2029
-$56.34	$2.14	$2.21	$2.27	$2 34	$2.41	$2.49	$2.57	$2.66	$2.76	$2.86	$2.98	$3.09	$3.22	$3.34
-$36.28	$1.25	$1.34	$1.42	$1 52	$1.62	$1.72	$1.82	$1.91	$2.01	$2.09	$2.18	$2.26	$2.35	$2.45
-$47.88	$1.79	$1.88	$1.98	$2 08	$2.19	$2.30	$2.41	$2.52	$2.63	$2.74	$2.85	$2.96	$3.08	$3.20
-$64.43	$2.33	$2.43	$2.53	$2.63	$2.74	$2.85	$2.97	$3.09	$3.21	$3.34	$3.47	$3.61	$3.75	$3.90
-$78.35	$3.45	$3.61	$3.78	$3 95	$4.14	$4.32	$4.51	$4.71	$4.90	$5.10	$5.31	$5.52	$5.74	$5.96
-$44.63	$1.26	$1.35	$1.45	$1 55	$1.66	$1.76	$1.87	$1.97	$2.07	$2.16	$2.25	$2.34	$2.43	$2.52
-$33.33	$1.09	$1.15	$1.20	$1 26	$1.33	$1.39	$1.46	$1.52	$1.59	$1.65	$1.72	$1.79	$1.86	$1.93
-$31.01	$1.13	$1.21	$1.29	$1 38	$1.48	$1.58	$1.68	$1.77	$1.86	$1.94	$2.02	$2.10	$2.18	$2.27
-$72.58	$2.12	$2.21	$2.29	$2 39	$2.48	$2.58	$2.68	$2.79	$2.90	$3.02	$3.14	$3.26	$3.39	$3.52
-$30.32	$1.15	$1.20	$1.25	$1 30	$1.36	$1.42	$1.47	$1.54	$1.60	$1.66	$1.73	$1.80	$1.87	$1.94
-$72.91	$2.59	$2.69	$2.79	$2 89	$3.00	$3.12	$3.23	$3.36	$3.49	$3.63	$3.77	$3.92	$4.08	$4.23
-$32.43	$0.96	$1.04	$1.13	$1 23	$1.34	$1.45	$1.55	$1.65	$1.74	$1.82	$1.90	$1.97	$2.05	$2.13
-$52.04	$1.59	$1.67	$1.76	$1 84	$1.93	$2.03	$2.12	$2.21	$2.31	$2.40	$2.50	$2.60	$2.70	$2.81
											3.97%	3.96%	3.95%	3.92%
											2.38%	2.37%	2.35%	2.33%
											1.59%	1.59%	1.59%	1.59%

Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21	Year 22	Year 23	Year 24	Year 25	Year 26	Year 27	Year 28	Year 29
11/30/2030	11/30/2031	11/30/2032	11/30/2033	11/30/2034	11/30/2035	11/30/2036	11/30/2037	11/30/2038	11/30/2039	11/30/2040	11/30/2041	11/30/2042	11/30/2043	11/30/2044
$3.47	$3.60	$3.74	$3 88	$4.02	$4.16	$4.31	$4.46	$4.62	$4.78	$4.95	$5.13	$5.30	$5.49	$5.68
$2.54	$2.64	$2.74	$2 84	$2.94	$3.05	$3.16	$3.27	$3.38	$3.50	$3.62	$3.75	$3.88	$4.02	$4.16
$3.32	$3.45	$3.58	$3.71	$3.85	$3.99	$4.13	$4.28	$4.42	$4.58	$4.74	$4.91	$5.08	$5.26	$5.44
$4.05	$4.20	$4.36	$4 52	$4.69	$4.86	$5.03	$5.21	$5.39	$5.57	$5.77	$5.98	$6.19	$6.40	$6.62
$6.19	$6.43	$6.67	$6 91	$7.17	$7.43	$7.69	$7.96	$8.24	$8.52	$8.83	$9.14	$9.46	$9.79	$10.13
$2.62	$2.72	$2.82	$2 93	$3.03	$3.14	$3.26	$3.37	$3.49	$3.61	$3.74	$3.87	$4.01	$4.15	$4.29
$2.00	$2.08	$2.16	$2 24	$2.32	$2.40	$2.49	$2.58	$2.67	$2.76	$2.86	$2.96	$3.06	$3.17	$3.28
$2.35	$2.44	$2.53	$2.63	$2.72	$2.82	$2.92	$3.03	$3.13	$3.24	$3.36	$3.48	$3.60	$3.72	$3.85
$3.66	$3.80	$3.94	$4 09	$4.24	$4.39	$4.55	$4.71	$4.87	$5.04	$5.22	$5.40	$5.59	$5.79	$5.99
$2.02	$2.09	$2.17	$2 25	$2.33	$2.42	$2.51	$2.59	$2.68	$2.78	$2.88	$2.98	$3.08	$3.19	$3.30
$4.40	$4.57	$4.74	$4 91	$5.09	$5.28	$5.46	$5.66	$5.85	$6.06	$6.27	$6.49	$6.72	$6.96	$7.20
$2.21	$2.29	$2.38	$2.47	$2.56	$2.65	$2.75	$2.84	$2.94	$3.04	$3.15	$3.26	$3.38	$3.50	$3.62
$2.92	$3.03	$3.14	$3 26	$3.38	$3.50	$3.62	$3.75	$3.88	$4.01	$4.16	$4.30	$4.46	$4.61	$4.77
3.85%	3.80%	3.76%	3.71%	3.66%	3.62%	3.57%	3.52%	3.48%	3.43%	3.59%	3.55%	3.51%	3.48%	3.45%
2.28%	2.23%	2.18%	2.14%	2.09%	2.04%	1.99%	1.95%	1.90%	1.86%	1.82%	1.78%	1.74%	1.71%	1.68%
1.57%	1.57%	1.57%	1.57%	1.57%	1.57%	1.57%	1.57%	1.57%	1.57%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 30	Year 31	Year 32	Year 33	Year 34	Year 35	Year 36	Year 37	Year 38	Year 39	Year 40	Year 41	Year 42	Year 43	Year 44
11/30/2045	11/30/2046	11/30/2047	11/30/2048	11/30/2049	11/30/2050	11/30/2051	11/30/2052	11/30/2053	11/30/2054	11/30/2055	11/30/2056	11/30/2057	11/30/2058	11/30/2059
$5.87	$6.07	$6.28	$6.49	$6.70	$6.92	$7.15	$7.39	$7.62	$7.87	$8.12	$8.38	$8.64	$8.91	$9.19
$4.30	$4.44	$4.59	$4.75	$4.91	$5.07	$5.23	$5.40	$5.58	$5.76	$5.94	$6.13	$6.32	$6.52	$6.72
$5.62	$5.82	$6.01	$6 21	$6.42	$6.63	$6.85	$7.07	$7.30	$7.54	$7.78	$8.02	$8.28	$8.53	$8.80
$6.85	$7.08	$7.32	$7 57	$7.82	$8.08	$8.34	$8.61	$8.89	$9.18	$9.47	$9.77	$10.08	$10.39	$10.71
$10.47	$10.83	$11.20	$11 57	$11.96	$12.35	$12.76	$13.17	$13.60	$14.04	$14.48	$14.94	$15.41	$15.89	$16.38
$4.44	$4.59	$4.74	$4 90	$5.06	$5.23	$5.40	$5.58	$5.76	$5.94	$6.13	$6.33	$6.53	$6.73	$6.94
$3.39	$3.51	$3.63	$3.75	$3.87	$4.00	$4.13	$4.27	$4.40	$4.55	$4.69	$4.84	$4.99	$5.15	$5.31
$3.98	$4.12	$4.26	$4.40	$4.55	$4.70	$4.85	$5.01	$5.17	$5.34	$5.51	$5.68	$5.86	$6.04	$6.23
$6.19	$6.40	$6.62	$6 84	$7.07	$7.30	$7.54	$7.79	$8.04	$8.30	$8.56	$8.83	$9.11	$9.40	$9.69
$3.41	$3.53	$3.65	$3.77	$3.89	$4.02	$4.16	$4.29	$4.43	$4.57	$4.72	$4.87	$5.02	$5.18	$5.34
$7.44	$7.70	$7.95	$8 22	$8.49	$8.78	$9.06	$9.36	$9.66	$9.97	$10.29	$10.62	$10.95	$11.29	$11.64
$3.74	$3.87	$4.00	$4.13	$4.27	$4.41	$4.56	$4.70	$4.86	$5.01	$5.17	$5.34	$5.50	$5.68	$5.85
$4.93	$5.10	$5.27	$5.45	$5.63	$5.82	$6.01	$6.20	$6.40	$6.61	$6.82	$7.04	$7.26	$7.48	$7.72
3.42%	3.40%	3.37%	3.35%	3.33%	3.30%	3.28%	3.26%	3.24%	3.22%	3.19%	3.17%	3.14%	3.12%	3.09%
1.66%	1.63%	1.61%	1.58%	1.56%	1.54%	1.52%	1.49%	1.47%	1.45%	1.43%	1.40%	1.38%	1.35%	1.32%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 45	Year 46	Year 47	Year 48	Year 49	Year 50	Year 51	Year 52	Year 53	Year 54	Year 55	Year 56	Year 57	Year 58	Year 59
11/30/2060	11/30/2061	11/30/2062	11/30/2063	11/30/2064	11/30/2065	11/30/2066	11/30/2067	11/30/2068	11/30/2069	11/30/2070	11/30/2071	11/30/2072	11/30/2073	11/30/2074
$9.47	$9.76	$10.06	$10 37	$10.68	$11.01	$11.35	$11.70	$12.06	$12.43	$12.81	$13.20	$13.60	$14.02	$14.45
$6.93	$7.14	$7.36	$7 59	$7.82	$8.06	$8.30	$8.56	$8.82	$9.09	$9.37	$9.66	$9.95	$10.26	$10.57
$9.07	$9.35	$9.63	$9 93	$10.23	$10.55	$10.87	$11.20	$11 55	$11.90	$12.26	$12.64	$13.03	$13.43	$13.84
$11.04	$11.38	$11.73	$12 09	$12.46	$12.84	$13.24	$13.64	$14.06	$14.49	$14.93	$15.39	$15.86	$16.35	$16.85
$16.89	$17.40	$17.94	$18.49	$19.05	$19.64	$20.24	$20.86	$21.50	$22.16	$22.84	$23.54	$24.26	$25.01	$25.77
$7.15	$7.37	$7.60	$7 83	$8.07	$8.32	$8.57	$8.83	$9.10	$9.38	$9.67	$9.97	$10.27	$10.59	$10.91
$5.47	$5.64	$5.81	$5 99	$6.17	$6.36	$6.55	$6.76	$6.96	$7.18	$7.40	$7.62	$7.86	$8.10	$8.35
$6.42	$6.62	$6.82	$7 03	$7.24	$7.47	$7.70	$7.93	$8.17	$8.43	$8.68	$8.95	$9.22	$9.51	$9.80
$9.98	$10.29	$10.60	$10 93	$11.27	$11.61	$11.97	$12.33	$12.71	$13.10	$13.50	$13.92	$14.34	$14.78	$15.24
$5.50	$5.67	$5.84	$6 02	$6.21	$6.40	$6.59	$6.80	$7.00	$7.22	$7.44	$7.67	$7.90	$8.15	$8.40
$12.00	$12.37	$12.75	$13.14	$13.54	$13.95	$14.38	$14.82	$15.28	$15.75	$16.23	$16.73	$17.24	$17.77	$18.31
$6.03	$6.21	$6.41	$6.60	$6.80	$7.01	$7.23	$7.45	$7.68	$7.91	$8.16	$8.41	$8.66	$8.93	$9.20
$7.95	$8.20	$8.45	$8.71	$8.97	$9.25	$9.53	$9.82	$10.13	$10.44	$10.76	$11.09	$11.43	$11.78	$12.14
3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%
1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 60	Year 61	Year 62	Year 63	Year 64	Year 65	Year 66	Year 67	Year 68	Year 69	Year 70	Year 71	Year 72	Year 73	Year 74
11/30/2075	11/30/2076	11/30/2077	11/30/2078	11/30/2079	11/30/2080	11/30/2081	11/30/2082	11/30/2083	11/30/2084	11/30/2085	11/30/2086	11/30/2087	11/30/2088	11/30/2089
$14.89	$15.35	$15.82	$16 31	$16.81	$17.32	$17.85	$18.40	$18.97	$19.55	$20.15	$20.76	$21.40	$22.06	$22.73
$10.90	$11.23	$11.58	$11 93	$12.30	$12.68	$13.06	$13.46	$13.88	$14.30	$14.74	$15.19	$15.66	$16.14	$16.64
$14.26	$14.70	$15.15	$15.62	$16.10	$16.59	$17.10	$17.62	$18.16	$18.72	$19.29	$19.89	$20.50	$21.12	$21.77
$17.37	$17.90	$18.45	$19 02	$19.60	$20.20	$20.82	$21.46	$22.12	$22.80	$23.49	$24.22	$24.96	$25.72	$26.51
$26.56	$27.38	$28.22	$29 08	$29.98	$30.89	$31.84	$32.82	$33.83	$34.86	$35.93	$37.03	$38.17	$39.34	$40.55
$11.25	$11.59	$11.95	$12 32	$12.69	$13.08	$13.48	$13.90	$14.32	$14.76	$15.22	$15.68	$16.16	$16.66	$17.17
$8.60	$8.87	$9.14	$9.42	$9.71	$10.01	$10.31	$10.63	$10 95	$11.29	$11.64	$11.99	$12.36	$12.74	$13.13
$10.10	$10.41	$10.73	$11 06	$11.40	$11.75	$12.11	$12.48	$12.86	$13.25	$13.66	$14.08	$14.51	$14.96	$15.41
$15.71	$16.19	$16.68	$17.19	$17.72	$18.27	$18.83	$19.40	$20.00	$20.61	$21.24	$21.89	$22.57	$23.26	$23.97
$8.65	$8.92	$9.19	$9.47	$9.76	$10.06	$10.37	$10.69	$11 02	$11.36	$11.70	$12.06	$12.43	$12.82	$13.21
$18.87	$19.45	$20.05	$20.67	$21.30	$21.95	$22.63	$23.32	$24.03	$24.77	$25.53	$26.31	$27.12	$27.95	$28.81
$9.49	$9.78	$10.08	$10 39	$10.70	$11.03	$11.37	$11.72	$12.08	$12.45	$12.83	$13.22	$13.63	$14.05	$14.48
$12.51	$12.89	$13.29	$13.70	$14.12	$14.55	$15.00	$15.46	$15.93	$16.42	$16.92	$17.44	$17.98	$18.53	$19.10
3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%
1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 75	Year 76	Year 77	Year 78	Year 79	Year 80	Year 81	Year 82	Year 83	Year 84	Year 85	Year 86	Year 87	Year 88	Year 89
11/30/2090	11/30/2091	11/30/2092	11/30/2093	11/30/2094	11/30/2095	11/30/2096	11/30/2097	11/30/2098	11/30/2099	11/30/2100	11/30/2101	11/30/2102	11/30/2103	11/30/2104
$23.43	$24.15	$24.89	$25.65	$26.44	$27.25	$28.09	$28.95	$29.84	$30.75	$31.69	$32.67	$33.67	$34.70	$35.76
$17.15	$17.67	$18.21	$18.77	$19.35	$19.94	$20.55	$21.18	$21.83	$22.50	$23.19	$23.90	$24.64	$25.39	$26.17
$22.44	$23.13	$23.84	$24 57	$25.32	$26.10	$26.90	$27.72	$28.57	$29.45	$30.35	$31.28	$32.24	$33.23	$34.25
$27.33	$28.16	$29.03	$29 92	$30.83	$31.78	$32.75	$33.76	$34.79	$35.86	$36.96	$38.09	$39.26	$40.47	$41.71
$41.79	$43.07	$44.39	$45.75	$47.16	$48.60	$50.09	$51.63	$53.21	$54.84	$56.53	$58.26	$60.05	$61.89	$63.79
$17.70	$18.24	$18.80	$19 37	$19.97	$20.58	$21.21	$21.86	$22.53	$23.22	$23.94	$24.67	$25.43	$26.21	$27.01
$13.53	$13.95	$14.38	$14 82	$15.27	$15.74	$16.22	$16.72	$17.23	$17.76	$18.31	$18.87	$19.45	$20.04	$20.66
$15.89	$16.37	$16.88	$17 39	$17.93	$18.48	$19.04	$19.63	$20.23	$20.85	$21.49	$22.15	$22.83	$23.53	$24.25
$24.71	$25.46	$26.25	$27 05	$27.88	$28.73	$29.62	$30.52	$31.46	$32.42	$33.42	$34.44	$35.50	$36.59	$37.71
$13.61	$14.03	$14.46	$14 90	$15.36	$15.83	$16.32	$16.82	$17.33	$17.87	$18.41	$18.98	$19.56	$20.16	$20.78
$29.69	$30.60	$31.54	$32 51	$33.51	$34.53	$35.59	$36.68	$37.81	$38.97	$40.16	$41.40	$42.67	$43.97	$45.32
$14.92	$15.38	$15.85	$16 34	$16.84	$17.36	$17.89	$18.44	$19.00	$19.59	$20.19	$20.80	$21.44	$22.10	$22.78
$19.68	$20.28	$20.91	$21 55	$22.21	$22.89	$23.59	$24.31	$25.06	$25.83	$26.62	$27.44	$28.28	$29.15	$30.04
3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%
1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 90	Year 91	Year 92	Year 93	Year 94	Year 95	Year 96	Year 97	Year 98	Year 99	Year 100	Year 101	Year 102	Year 103	Year 104
11/30/2105	11/30/2106	11/30/2107	11/30/2108	11/30/2109	11/30/2110	11/30/2111	11/30/2112	11/30/2113	11/30/2114	11/30/2115	11/30/2116	11/30/2117	11/30/2118	11/30/2119
$36.86	$37.99	$39.16	$40 36	$41.59	$42.87	$44.19	$45.54	$46.94	$48.38	$49.86	$51.39	$52.96	$54.59	$56.26
$26.97	$27.80	$28.65	$29 53	$30.44	$31.37	$32.33	$33.32	$34.35	$35.40	$36.48	$37.60	$38.76	$39.94	$41.17
$35.30	$36.38	$37.50	$38.65	$39.84	$41.06	$42.32	$43.61	$44.95	$46.33	$47.75	$49.22	$50.72	$52.28	$53.88
$42.99	$44.30	$45.66	$47 06	$48.51	$49.99	$51.53	$53.11	$54.74	$56.42	$58.15	$59.93	$61.77	$63.66	$65.61
$65.74	$67.76	$69.84	$71 98	$74.18	$76.46	$78.80	$81.22	$83.71	$86.28	$88.92	$91.65	$94.46	$97.36	$100.34
$27.84	$28.69	$29.57	$30.48	$31.41	$32.38	$33.37	$34.39	$35.45	$36.53	$37.65	$38.81	$40.00	$41.23	$42.49
$21.29	$21.94	$22.62	$23 31	$24.02	$24.76	$25.52	$26.30	$27.11	$27.94	$28.80	$29.68	$30.59	$31.53	$32.50
$24.99	$25.76	$26.55	$27 36	$28.20	$29.07	$29.96	$30.88	$31.83	$32.80	$33.81	$34.84	$35.91	$37.01	$38.15
$38.87	$40.06	$41.29	$42 55	$43.86	$45.20	$46.59	$48.02	$49.49	$51.01	$52.57	$54.19	$55.85	$57.56	$59.33
$21.42	$22.07	$22.75	$23.45	$24.17	$24.91	$25.67	$26.46	$27.27	$28.11	$28.97	$29.86	$30.77	$31.72	$32.69
$46.71	$48.14	$49.62	$51.14	$52.71	$54.33	$55.99	$57.71	$59.48	$61.30	$63.18	$65.12	$67.12	$69.18	$71.30
$23.48	$24.20	$24.94	$25.70	$26.49	$27.30	$28.14	$29.00	$29.89	$30.81	$31.76	$32.73	$33.73	$34.77	$35.83
$30.96	$31.91	$32.89	$33 90	$34.94	$36.01	$37.11	$38.25	$39.42	$40.63	$41.88	$43.16	$44.49	$45.85	$47.26
3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%
1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 105	Year 106	Year 107	Year 108	Year 109	Year 110	Year 111	Year 112	Year 113	Year 114	Year 115	Year 116	Year 117	Year 118	Year 119
11/30/2120	11/30/2121	11/30/2122	11/30/2123	11/30/2124	11/30/2125	11/30/2126	11/30/2127	11/30/2128	11/30/2129	11/30/2130	11/30/2131	11/30/2132	11/30/2133	11/30/2134
$57.99	$59.77	$61.60	$63.49	$65.44	$67.44	$69.51	$71.64	$73.84	$76.10	$78.44	$80.84	$83.32	$85.88	$88.51
$42.43	$43.73	$45.07	$46.46	$47.88	$49.35	$50.86	$52.42	$54.03	$55.69	$57.40	$59.16	$60.97	$62.84	$64.77
$55.54	$57.24	$58.99	$60 80	$62.67	$64.59	$66.57	$68.61	$70.72	$72.88	$75.12	$77.42	$79.80	$82.25	$84.77
$67.62	$69.70	$71.84	$74 04	$76.31	$78.65	$81.06	$83.55	$86.11	$88.75	$91.47	$94.28	$97.17	$100.15	$103.22
$103.42	$106.59	$109.86	$113.23	$116.70	$120.28	$123.97	$127.77	$131.69	$135.73	$139.89	$144.18	$148.60	$153.16	$157.86
$43.79	$45.14	$46.52	$47 95	$49.42	$50.93	$52.50	$54.11	$55.76	$57.47	$59.24	$61.05	$62.93	$64.86	$66.84
$33.49	$34.52	$35.58	$36.67	$37.79	$38.95	$40.15	$41.38	$42.65	$43.96	$45.30	$46.69	$48.12	$49.60	$51.12
$39.32	$40.52	$41.77	$43 05	$44.37	$45.73	$47.13	$48.58	$50.07	$51.60	$53.18	$54.82	$56.50	$58.23	$60.01
$61.14	$63.02	$64.95	$66 94	$69.00	$71.11	$73.29	$75.54	$77.86	$80.25	$82.71	$85.24	$87.86	$90.55	$93.33
$33.69	$34.72	$35.79	$36 89	$38.02	$39.18	$40.38	$41.62	$42.90	$44.21	$45.57	$46.97	$48.41	$49.89	$51.42
$73.49	$75.74	$78.06	$80.46	$82.92	$85.47	$88.09	$90.79	$93.57	$96.44	$99.40	$102.45	$105.59	$108.83	$112.16
$36.93	$38.06	$39.23	$40.44	$41.68	$42.95	$44.27	$45.63	$47.03	$48.47	$49.96	$51.49	$53.07	$54.69	$56.37
$48.71	$50.20	$51.74	$53 33	$54.96	$56.65	$58.38	$60.17	$62.02	$63.92	$65.88	$67.90	$69.98	$72.13	$74.34
3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%
1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 120	Year 121	Year 122	Year 123	Year 124	Year 125	Year 126	Year 127	Year 128	Year 129	Year 130	Year 131	Year 132	Year 133	Year 134
11/30/2135	11/30/2136	11/30/2137	11/30/2138	11/30/2139	11/30/2140	11/30/2141	11/30/2142	11/30/2143	11/30/2144	11/30/2145	11/30/2146	11/30/2147	11/30/2148	11/30/2149
$91.22	$94.02	$96.91	$99 88	$102.94	$106.10	$109.35	$112.70	$116.16	$119.72	$123.39	$127.18	$131.08	$135.10	$139.24
$66.75	$68.80	$70.91	$73 08	$75.33	$77.64	$80.02	$82.47	$85.00	$87.61	$90.29	$93.06	$95.91	$98.86	$101.89
$87.37	$90.05	$92.81	$95.65	$98.59	$101.61	$104.73	$107.94	$111.25	$114.66	$118.18	$121.80	$125.53	$129.38	$133.35
$106.38	$109.65	$113.01	$116.48	$120.05	$123.73	$127.52	$131.43	$135.46	$139.62	$143.90	$148.31	$152.86	$157.55	$162.38
$162.70	$167.69	$172.83	$178.13	$183.59	$189.22	$195.03	$201.01	$207.17	$213.52	$220.07	$226.82	$233.78	$240.95	$248.33
$68.89	$71.01	$73.18	$75.43	$77.74	$80.13	$82.58	$85.12	$87.73	$90.42	$93.19	$96.05	$98.99	$102.03	$105.16
$52.69	$54.31	$55.97	$57.69	$59.46	$61.28	$63.16	$65.10	$67.09	$69.15	$71.27	$73.46	$75.71	$78.03	$80.42
$61.85	$63.75	$65.71	$67.72	$69.80	$71.94	$74.14	$76.42	$78.76	$81.18	$83.67	$86.23	$88.88	$91.60	$94.41
$96.19	$99.14	$102.18	$105.31	$108.54	$111.87	$115.30	$118.84	$122.48	$126.24	$130.11	$134.10	$138.21	$142.45	$146.82
$53.00	$54.63	$56.30	$58 03	$59.81	$61.64	$63.53	$65.48	$67.49	$69.56	$71.69	$73.89	$76.15	$78.49	$80.90
$115.60	$119.15	$122.80	$126.57	$130.45	$134.45	$138.57	$142.82	$147.20	$151.72	$156.37	$161.17	$166.11	$171.20	$176.45
$58.10	$59.88	$61.72	$63.61	$65.56	$67.57	$69.64	$71.78	$73.98	$76.25	$78.59	$81.00	$83.48	$86.04	$88.68
$76.62	$78.97	$81.39	$83 89	$86.46	$89.11	$91.85	$94.66	$97.57	$100.56	$103.64	$106.82	$110.10	$113.47	$116.95
3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%
1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 135	Year 136	Year 137	Year 138	Year 139	Year 140	Year 141	Year 142	Year 143	Year 144	Year 145	Year 146	Year 147	Year 148	Year 149
11/30/2150	11/30/2151	11/30/2152	11/30/2153	11/30/2154	11/30/2155	11/30/2156	11/30/2157	11/30/2158	11/30/2159	11/30/2160	11/30/2161	11/30/2162	11/30/2163	11/30/2164
$143.51	$147.91	$152.45	$157.12	$161.94	$166.91	$172.03	$177.30	$182.74	$188.34	$194.12	$200.07	$206.21	$212.53	$219.05
$105.01	$108.23	$111.55	$114.97	$118.50	$122.13	$125.88	$129.74	$133.72	$137.82	$142.04	$146.40	$150.89	$155.52	$160.29
$137.44	$141.66	$146.00	$150.48	$155.09	$159.85	$164.75	$169.80	$175.01	$180.38	$185.91	$191.61	$197.49	$203.54	$209.78
$167.36	$172.49	$177.78	$183.23	$188.85	$194.64	$200.61	$206.77	$213.11	$219.64	$226.38	$233.32	$240.47	$247.85	$255.45
$255.95	$263.80	$271.89	$280.23	$288.82	$297.68	$306.81	$316.21	$325.91	$335.91	$346.21	$356.82	$367.77	$379.05	$390.67
$108.38	$111.71	$115.13	$118.66	$122.30	$126.05	$129.92	$133.90	$138.01	$142.24	$146.60	$151.10	$155.73	$160.51	$165.43
$82.89	$85.43	$88.05	$90.75	$93.53	$96.40	$99.36	$102.41	$105.55	$108.78	$112.12	$115.56	$119.10	$122.75	$126.52
$97.31	$100.29	$103.37	$106.54	$109.80	$113.17	$116.64	$120.22	$123.91	$127.71	$131.62	$135.66	$139.82	$144.11	$148.52
$151.32	$155.96	$160.75	$165.68	$170.76	$175.99	$181.39	$186.95	$192.69	$198.59	$204.68	$210.96	$217.43	$224.10	$230.97
$83.38	$85.93	$88.57	$91 29	$94.09	$96.97	$99.94	$103.01	$106.17	$109.42	$112.78	$116.24	$119.80	$123.48	$127.26
$181.86	$187.44	$193.19	$199.11	$205.22	$211.51	$218.00	$224.68	$231.58	$238.68	$246.00	$253.54	$261.32	$269.33	$277.59
$91.40	$94.20	$97.09	$100.07	$103.14	$106.30	$109.56	$112.92	$116.39	$119.95	$123.63	$127.42	$131.33	$135.36	$139.51
$120.54	$124.24	$128.05	$131.97	$136.02	$140.19	$144.49	$148.92	$153.49	$158.20	$163.05	$168.05	$173.20	$178.51	$183.99
3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%
1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 150	Year 151	Year 152	Year 153	Year 154	Year 155	Year 156	Year 157	Year 158	Year 159	Year 160	Year 161	Year 162	Year 163	Year 164
11/30/2165	11/30/2166	11/30/2167	11/30/2168	11/30/2169	11/30/2170	11/30/2171	11/30/2172	11/30/2173	11/30/2174	11/30/2175	11/30/2176	11/30/2177	11/30/2178	11/30/2179
$225.76	$232.69	$239.82	$247.18	$254.76	$262.57	$270.62	$278.92	$287.48	$296.29	$305.38	$314.74	$324.40	$334.34	$344.60
$165.20	$170.27	$175.49	$180.87	$186.42	$192.13	$198.03	$204.10	$210.36	$216.81	$223.46	$230.31	$237.37	$244.65	$252.15
$216.22	$222.85	$229.68	$236.73	$243.99	$251.47	$259.18	$267.13	$275.32	$283.76	$292.46	$301.43	$310.68	$320.20	$330.02
$263.28	$271.36	$279.68	$288.26	$297.10	$306.21	$315.60	$325.28	$335.25	$345.53	$356.13	$367.05	$378.30	$389.91	$401.86
$402.65	$415.00	$427.72	$440.84	$454.36	$468.29	$482.65	$497.46	$512.71	$528.43	$544.64	$561.34	$578.56	$596.30	$614.58
$170.50	$175.73	$181.12	$186.67	$192.40	$198.30	$204.38	$210.65	$217.11	$223.77	$230.63	$237.70	$244.99	$252.50	$260.25
$130.40	$134.40	$138.52	$142.77	$147.14	$151.66	$156.31	$161.10	$166.04	$171.13	$176.38	$181.79	$187.36	$193.11	$199.03
$153.08	$157.77	$162.61	$167.60	$172.74	$178.04	$183.50	$189.12	$194.92	$200.90	$207.06	$213.41	$219.96	$226.70	$233.65
$238.05	$245.35	$252.88	$260.63	$268.63	$276.86	$285.35	$294.11	$303.12	$312.42	$322.00	$331.88	$342.05	$352.54	$363.35
$131.17	$135.19	$139.33	$143.61	$148.01	$152.55	$157.23	$162.05	$167.02	$172.14	$177.42	$182.86	$188.47	$194.25	$200.21
$286.10	$294.87	$303.92	$313.24	$322.84	$332.74	$342.95	$353.46	$364.30	$375.48	$386.99	$398.86	$411.09	$423.70	$436.69
$143.79	$148.20	$152.74	$157.43	$162.25	$167.23	$172.36	$177.64	$183.09	$188.71	$194.49	$200.46	$206.61	$212.94	$219.47
$189.63	$195.44	$201.44	$207.61	$213.98	$220.54	$227.31	$234.28	$241.46	$248.87	$256.50	$264.36	$272.47	$280.83	$289.44
3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%
1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 165	Year 166	Year 167	Year 168	Year 169	Year 170	Year 171	Year 172	Year 173	Year 174	Year 175	Year 176	Year 177	Year 178	Year 179
11/30/2180	11/30/2181	11/30/2182	11/30/2183	11/30/2184	11/30/2185	11/30/2186	11/30/2187	11/30/2188	11/30/2189	11/30/2190	11/30/2191	11/30/2192	11/30/2193	11/30/2194
$355.16	$366.06	$377.28	$388.85	$400.78	$413.07	$425.73	$438.79	$452.25	$466.11	$480.41	$495.14	$510.32	$525.97	$542.10
$259.89	$267.86	$276.07	$284.54	$293.26	$302.26	$311.53	$321.08	$330.93	$341.07	$351.53	$362.31	$373.42	$384.88	$396.68
$340.14	$350.58	$361.33	$372.41	$383.83	$395.60	$407.73	$420.23	$433.12	$446.40	$460.09	$474.20	$488.74	$503.73	$519.18
$414.19	$426.89	$439.98	$453.47	$467.38	$481.71	$496.48	$511.71	$527.40	$543.58	$560.25	$577.43	$595.13	$613.38	$632.19
$633.43	$652.86	$672.88	$693.51	$714.78	$736.70	$759.29	$782.58	$806.58	$831.31	$856.80	$883.08	$910.16	$938.07	$966.84
$268.23	$276.45	$284.93	$293.67	$302.67	$311.96	$321.52	$331.38	$341.54	$352.02	$362.81	$373.94	$385.41	$397.23	$409.41
$205.14	$211.43	$217.91	$224.59	$231.48	$238.58	$245.90	$253.44	$261.21	$269.22	$277.47	$285.98	$294.75	$303.79	$313.11
$240.82	$248.20	$255.82	$263.66	$271.75	$280.08	$288.67	$297.52	$306.64	$316.05	$325.74	$335.73	$346.03	$356.64	$367.57
$374.50	$385.98	$397.82	$410.02	$422.59	$435.55	$448.91	$462.67	$476.86	$491.49	$506.56	$522.09	$538.10	$554.61	$571.61
$206.35	$212.67	$219.20	$225.92	$232.85	$239.99	$247.35	$254.93	$262.75	$270.81	$279.11	$287.67	$296.49	$305.58	$314.96
$450.08	$463.88	$478.11	$492.77	$507.88	$523.46	$539.51	$556.06	$573.11	$590.68	$608.80	$627.47	$646.71	$666.54	$686.98
$226.20	$233.14	$240.29	$247.66	$255.25	$263.08	$271.15	$279.46	$288.03	$296.87	$305.97	$315.35	$325.02	$334.99	$345.26
$298.32	$307.46	$316.89	$326.61	$336.63	$346.95	$357.59	$368.56	$379.86	$391.51	$403.51	$415.89	$428.64	$441.79	$455.33
3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%
1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 180	Year 181	Year 182	Year 183	Year 184	Year 185	Year 186	Year 187	Year 188	Year 189	Year 190	Year 191	Year 192	Year 193	Year 194
11/30/2195	11/30/2196	11/30/2197	11/30/2198	11/30/2199	11/30/2200	11/30/2201	11/30/2202	11/30/2203	11/30/2204	11/30/2205	11/30/2206	11/30/2207	11/30/2208	11/30/2209
$558.73	$575.86	$593.52	$611.72	$630.48	$649.82	$669.75	$690.28	$711.45	$733.27	$755.76	$778.93	$802.82	$827.44	$852.82
$408.84	$421.38	$434.30	$447.62	$461.35	$475.50	$490.08	$505.11	$520.60	$536.56	$553.02	$569.98	$587.46	$605.47	$624.04
$535.10	$551.51	$568.42	$585.86	$603.82	$622.34	$641.42	$661.09	$681.37	$702.26	$723.80	$745.99	$768.87	$792.45	$816.75
$651.58	$671.56	$692.16	$713.38	$735.26	$757.81	$781.05	$805.00	$829.69	$855.13	$881.35	$908.38	$936.24	$964.95	$994.54
$996.49	$1,027.05	$1,058.54	$1,091.01	$1,124.46	$1,158.95	$1,194.49	$1,231.12	$1,268.87	$1,307.78	$1,347.89	$1,389.22	$1,431.83	$1,475.74	$1,520.99
$421.96	$434.90	$448.24	$461.99	$476.15	$490.76	$505.81	$521.32	$537.30	$553.78	$570.76	$588.27	$606.31	$624.90	$644.06
$322.71	$332.61	$342.81	$353.32	$364.15	$375.32	$386.83	$398.69	$410.92	$423.52	$436.51	$449.90	$463.69	$477.91	$492.57
$378.85	$390.46	$402.44	$414.78	$427.50	$440.61	$454.12	$468.05	$482.40	$497.19	$512.44	$528.16	$544.35	$561.05	$578.25
$589.14	$607.21	$625.83	$645.02	$664.80	$685.19	$706.20	$727.86	$750.18	$773.19	$796.90	$821.33	$846.52	$872.48	$899.24
$324.61	$334.57	$344.83	$355.40	$366.30	$377.54	$389.11	$401.05	$413.34	$426.02	$439.09	$452.55	$466.43	$480.73	$495.47
$708.05	$729.76	$752.14	$775.21	$798.98	$823.48	$848.74	$874.76	$901.59	$929.24	$957.74	$987.11	$1,017.38	$1,048.58	$1,080.73
$355.85	$366.76	$378.01	$389.60	$401.55	$413.87	$426.56	$439.64	$453.12	$467.02	$481.34	$496.10	$511.31	$526.99	$543.15
$469.30	$483.69	$498.52	$513.81	$529.57	$545.81	$562.55	$579.80	$597.58	$615.90	$634.79	$654.26	$674.32	$695.00	$716.31
3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%
1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 195	Year 196	Year 197	Year 198	Year 199	Year 200
11/30/2210	11/30/2211	11/30/2212	11/30/2213	11/30/2214	11/30/2215
$878.97	$905.92	$933.71	$962.34	$991.85	$1,022.27
$643.18	$662.90	$683.23	$704.18	$725.78	$748.03
$841.80	$867.61	$894.22	$921.64	$949.91	$979.04
$1,025.04	$1,056.48	$1,088.87	$1,122.27	$1,156.68	$1,192.15
$1,567.63	$1,615.71	$1,665.26	$1,716.32	$1,768.96	$1,823.21
$663.81	$684.17	$705.15	$726.78	$749.06	$772.04
$507.68	$523.24	$539.29	$555.83	$572.87	$590.44
$595.98	$614.26	$633.10	$652.51	$672.52	$693.15
$926.81	$955.24	$984.53	$1,014.72	$1,045.84	$1,077.91
$510.67	$526.33	$542.47	$559.11	$576.25	$593.92
$1,113.87	$1,148.03	$1,183.24	$1,219.53	$1,256.92	$1,295.47
$559.81	$576.98	$594.67	$612.91	$631.71	$651.08
$738.28	$760.92	$784.26	$808.31	$833.09	$858.64
3.07%	3.07%	3.07%	3.07%	3.07%	3.07%
1.30%	1.30%	1.30%	1.30%	1.30%	1.30%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

[8] Equals [7] + ([9] − [3]) / 6

[9] Source: OECD long term real GDP forecast, plus inflation based on the May 2016 average of Treasury Bond yields less the May 2016 averageof TIPS yields as of May 31, 2016

[10] Equals internal rate of return of cash flows for Year 0 through Year 200

HIGH YIELD -- MULTI-STAGE DCF -- FORECASTED OECD GDP GROWTH

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]
					Second Stage Growth						
Company	Ticker	Stock Price	Annualized Dividend	First Stage Growth	Year 6	Year 7	Year 8	Year 9	Year 10	Third Stage Growth	ROE
ALLETE, In	ALE	$54.53	$2.08	3.00%	3.16%	3.32%	3.49%	3.65%	3.81%	3.97%	7.46%
Alliant Ener	LNT	$35.35	$1.18	6.60%	6.16%	5.72%	5.29%	4.85%	4.41%	3.97%	7.86%
Ameren Cor	AEE	$46.69	$1.70	5.20%	5.00%	4.79%	4.59%	4.38%	4.18%	3.97%	7.87%
American El	AEP	$62.95	$2.24	4.10%	4.08%	4.06%	4.04%	4.02%	3.99%	3.97%	7.46%
Duke Energ	DUK	$76.15	$3.30	4.62%	4.51%	4.40%	4.30%	4.19%	4.08%	3.97%	8.55%
El Paso Ele	EE	$42.63	$1.18	7.00%	6.50%	5.99%	5.49%	4.98%	4.48%	3.97%	7.19%
Empire Dist	EDE	$33.12	$1.04	5.00%	4.83%	4.66%	4.49%	4.32%	4.14%	3.97%	7.18%
Great Plains	GXP	$30.30	$1.05	7.10%	6.58%	6.06%	5.54%	5.02%	4.49%	3.97%	8.20%
IDACORP,	IDA	$70.17	$2.04	4.00%	4.00%	3.99%	3.99%	3.98%	3.98%	3.97%	6.66%
OGE Energy	OGE	$29.34	$1.10	4.30%	4.25%	4.19%	4.14%	4.08%	4.03%	3.97%	7.74%
Pinnacle We	PNW	$70.75	$2.50	3.73%	3.77%	3.81%	3.85%	3.89%	3.93%	3.97%	7.33%
PNM Resou	PNM	$31.46	$0.88	8.76%	7.96%	7.16%	6.37%	5.57%	4.77%	3.97%	7.68%
Westar Ene	WR	$51.26	$1.52	4.93%	4.77%	4.61%	4.45%	4.29%	4.13%	3.97%	6.95%

Nominal Growth
OECD Real GDP Growth rate
Inflation

Mean	7.55%
Standard Deviation	0.49%
+ 1 Standard Deviation	8.04%
-1 Standard Deviation	7.05%

Notes:
[1] Source: Yahoo Finance
[2] Source: Yahoo Finance
[3] Source: Yahoo Finance
[4] Equals [3] + ([9] − [3]) / 6
[5] Equals [4] + ([9] − [3]) / 6
[6] Equals [5] + ([9] − [3]) / 6
[7] Equals [6] + ([9] − [3]) / 6
[8] Equals [7] + ([9] − [3]) / 6
[9] Source: OECD long term real GDP forecast, plus inflation based on the May 2016 average of Treasury Bond yields less the May 2016 averageof TIPS yields as of May 31, 2016
[10] Equals internal rate of return of cash flows for Year 0 through Year 200

	First Stage					Second Stage								
Stock Price	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14
5/31/2016	11/30/2016	11/30/2017	11/30/2018	11/30/2019	11/30/2020	11/30/2021	11/30/2022	11/30/2023	11/30/2024	11/30/2025	11/30/2026	11/30/2027	11/30/2028	11/30/2029
-$54.53	$2.14	$2.21	$2.27	$2 34	$2.41	$2.49	$2.57	$2.66	$2.76	$2.86	$2.98	$3.09	$3.22	$3.34
-$35.35	$1.25	$1.34	$1.42	$1 52	$1.62	$1.72	$1.82	$1.91	$2.01	$2.09	$2.18	$2.26	$2.35	$2.45
-$46.69	$1.79	$1.88	$1.98	$2 08	$2.19	$2.30	$2.41	$2.52	$2.63	$2.74	$2.85	$2.96	$3.08	$3.20
-$62.95	$2.33	$2.43	$2.53	$2.63	$2.74	$2.85	$2.97	$3.09	$3.21	$3.34	$3.47	$3.61	$3.75	$3.90
-$76.15	$3.45	$3.61	$3.78	$3 95	$4.14	$4.32	$4.51	$4.71	$4.90	$5.10	$5.31	$5.52	$5.74	$5.96
-$42.63	$1.26	$1.35	$1.45	$1 55	$1.66	$1.76	$1.87	$1.97	$2.07	$2.16	$2.25	$2.34	$2.43	$2.52
-$33.12	$1.09	$1.15	$1.20	$1 26	$1.33	$1.39	$1.46	$1.52	$1.59	$1.65	$1.72	$1.79	$1.86	$1.93
-$30.30	$1.13	$1.21	$1.29	$1 38	$1.48	$1.58	$1.68	$1.77	$1.86	$1.94	$2.02	$2.10	$2.18	$2.27
-$70.17	$2.12	$2.21	$2.29	$2 39	$2.48	$2.58	$2.68	$2.79	$2.90	$3.02	$3.14	$3.26	$3.39	$3.52
-$29.34	$1.15	$1.20	$1.25	$1 30	$1.36	$1.42	$1.47	$1.54	$1.60	$1.66	$1.73	$1.80	$1.87	$1.94
-$70.75	$2.59	$2.69	$2.79	$2 89	$3.00	$3.12	$3.23	$3.36	$3.49	$3.63	$3.77	$3.92	$4.08	$4.23
-$31.46	$0.96	$1.04	$1.13	$1 23	$1.34	$1.45	$1.55	$1.65	$1.74	$1.82	$1.90	$1.97	$2.05	$2.13
-$51.26	$1.59	$1.67	$1.76	$1 84	$1.93	$2.03	$2.12	$2.21	$2.31	$2.40	$2.50	$2.60	$2.70	$2.81
											3.97%	3.96%	3.95%	3.92%
											2.38%	2.37%	2.35%	2.33%
											1.59%	1.59%	1.59%	1.59%

Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21	Year 22	Year 23	Year 24	Year 25	Year 26	Year 27	Year 28	Year 29
11/30/2030	11/30/2031	11/30/2032	11/30/2033	11/30/2034	11/30/2035	11/30/2036	11/30/2037	11/30/2038	11/30/2039	11/30/2040	11/30/2041	11/30/2042	11/30/2043	11/30/2044
$3.47	$3.60	$3.74	$3 88	$4.02	$4.16	$4.31	$4.46	$4.62	$4.78	$4.95	$5.13	$5.30	$5.49	$5.68
$2.54	$2.64	$2.74	$2 84	$2.94	$3.05	$3.16	$3.27	$3.38	$3.50	$3.62	$3.75	$3.88	$4.02	$4.16
$3.32	$3.45	$3.58	$3.71	$3.85	$3.99	$4.13	$4.28	$4.42	$4.58	$4.74	$4.91	$5.08	$5.26	$5.44
$4.05	$4.20	$4.36	$4 52	$4.69	$4.86	$5.03	$5.21	$5.39	$5.57	$5.77	$5.98	$6.19	$6.40	$6.62
$6.19	$6.43	$6.67	$6 91	$7.17	$7.43	$7.69	$7.96	$8.24	$8.52	$8.83	$9.14	$9.46	$9.79	$10.13
$2.62	$2.72	$2.82	$2 93	$3.03	$3.14	$3.26	$3.37	$3.49	$3.61	$3.74	$3.87	$4.01	$4.15	$4.29
$2.00	$2.08	$2.16	$2 24	$2.32	$2.40	$2.49	$2.58	$2.67	$2.76	$2.86	$2.96	$3.06	$3.17	$3.28
$2.35	$2.44	$2.53	$2.63	$2.72	$2.82	$2.92	$3.03	$3.13	$3.24	$3.36	$3.48	$3.60	$3.72	$3.85
$3.66	$3.80	$3.94	$4 09	$4.24	$4.39	$4.55	$4.71	$4.87	$5.04	$5.22	$5.40	$5.59	$5.79	$5.99
$2.02	$2.09	$2.17	$2 25	$2.33	$2.42	$2.51	$2.59	$2.68	$2.78	$2.88	$2.98	$3.08	$3.19	$3.30
$4.40	$4.57	$4.74	$4 91	$5.09	$5.28	$5.46	$5.66	$5.85	$6.06	$6.27	$6.49	$6.72	$6.96	$7.20
$2.21	$2.29	$2.38	$2.47	$2.56	$2.65	$2.75	$2.84	$2.94	$3.04	$3.15	$3.26	$3.38	$3.50	$3.62
$2.92	$3.03	$3.14	$3 26	$3.38	$3.50	$3.62	$3.75	$3.88	$4.01	$4.16	$4.30	$4.46	$4.61	$4.77
3.85%	3.80%	3.76%	3.71%	3.66%	3.62%	3.57%	3.52%	3.48%	3.43%	3.59%	3.55%	3.51%	3.48%	3.45%
2.28%	2.23%	2.18%	2.14%	2.09%	2.04%	1.99%	1.95%	1.90%	1.86%	1.82%	1.78%	1.74%	1.71%	1.68%
1.57%	1.57%	1.57%	1.57%	1.57%	1.57%	1.57%	1.57%	1.57%	1.57%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 30	Year 31	Year 32	Year 33	Year 34	Year 35	Year 36	Year 37	Year 38	Year 39	Year 40	Year 41	Year 42	Year 43	Year 44
11/30/2045	11/30/2046	11/30/2047	11/30/2048	11/30/2049	11/30/2050	11/30/2051	11/30/2052	11/30/2053	11/30/2054	11/30/2055	11/30/2056	11/30/2057	11/30/2058	11/30/2059
$5.87	$6.07	$6.28	$6.49	$6.70	$6.92	$7.15	$7.39	$7.62	$7.87	$8.12	$8.38	$8.64	$8.91	$9.19
$4.30	$4.44	$4.59	$4.75	$4.91	$5.07	$5.23	$5.40	$5.58	$5.76	$5.94	$6.13	$6.32	$6.52	$6.72
$5.62	$5.82	$6.01	$6 21	$6.42	$6.63	$6.85	$7.07	$7.30	$7.54	$7.78	$8.02	$8.28	$8.53	$8.80
$6.85	$7.08	$7.32	$7 57	$7.82	$8.08	$8.34	$8.61	$8.89	$9.18	$9.47	$9.77	$10.08	$10.39	$10.71
$10.47	$10.83	$11.20	$11 57	$11.96	$12.35	$12.76	$13.17	$13.60	$14.04	$14.48	$14.94	$15.41	$15.89	$16.38
$4.44	$4.59	$4.74	$4 90	$5.06	$5.23	$5.40	$5.58	$5.76	$5.94	$6.13	$6.33	$6.53	$6.73	$6.94
$3.39	$3.51	$3.63	$3.75	$3.87	$4.00	$4.13	$4.27	$4.40	$4.55	$4.69	$4.84	$4.99	$5.15	$5.31
$3.98	$4.12	$4.26	$4.40	$4.55	$4.70	$4.85	$5.01	$5.17	$5.34	$5.51	$5.68	$5.86	$6.04	$6.23
$6.19	$6.40	$6.62	$6 84	$7.07	$7.30	$7.54	$7.79	$8.04	$8.30	$8.56	$8.83	$9.11	$9.40	$9.69
$3.41	$3.53	$3.65	$3.77	$3.89	$4.02	$4.16	$4.29	$4.43	$4.57	$4.72	$4.87	$5.02	$5.18	$5.34
$7.44	$7.70	$7.95	$8 22	$8.49	$8.78	$9.06	$9.36	$9.66	$9.97	$10.29	$10.62	$10.95	$11.29	$11.64
$3.74	$3.87	$4.00	$4.13	$4.27	$4.41	$4.56	$4.70	$4.86	$5.01	$5.17	$5.34	$5.50	$5.68	$5.85
$4.93	$5.10	$5.27	$5.45	$5.63	$5.82	$6.01	$6.20	$6.40	$6.61	$6.82	$7.04	$7.26	$7.48	$7.72
3.42%	3.40%	3.37%	3.35%	3.33%	3.30%	3.28%	3.26%	3.24%	3.22%	3.19%	3.17%	3.14%	3.12%	3.09%
1.66%	1.63%	1.61%	1.58%	1.56%	1.54%	1.52%	1.49%	1.47%	1.45%	1.43%	1.40%	1.38%	1.35%	1.32%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 45	Year 46	Year 47	Year 48	Year 49	Year 50	Year 51	Year 52	Year 53	Year 54	Year 55	Year 56	Year 57	Year 58	Year 59
11/30/2060	11/30/2061	11/30/2062	11/30/2063	11/30/2064	11/30/2065	11/30/2066	11/30/2067	11/30/2068	11/30/2069	11/30/2070	11/30/2071	11/30/2072	11/30/2073	11/30/2074
$9.47	$9.76	$10.06	$10 37	$10.68	$11.01	$11.35	$11.70	$12.06	$12.43	$12.81	$13.20	$13.60	$14.02	$14.45
$6.93	$7.14	$7.36	$7 59	$7.82	$8.06	$8.30	$8.56	$8.82	$9.09	$9.37	$9.66	$9.95	$10.26	$10.57
$9.07	$9.35	$9.63	$9 93	$10.23	$10.55	$10.87	$11.20	$11 55	$11.90	$12.26	$12.64	$13.03	$13.43	$13.84
$11.04	$11.38	$11.73	$12 09	$12.46	$12.84	$13.24	$13.64	$14.06	$14.49	$14.93	$15.39	$15.86	$16.35	$16.85
$16.89	$17.40	$17.94	$18.49	$19.05	$19.64	$20.24	$20.86	$21.50	$22.16	$22.84	$23.54	$24.26	$25.01	$25.77
$7.15	$7.37	$7.60	$7 83	$8.07	$8.32	$8.57	$8.83	$9.10	$9.38	$9.67	$9.97	$10.27	$10.59	$10.91
$5.47	$5.64	$5.81	$5 99	$6.17	$6.36	$6.55	$6.76	$6.96	$7.18	$7.40	$7.62	$7.86	$8.10	$8.35
$6.42	$6.62	$6.82	$7 03	$7.24	$7.47	$7.70	$7.93	$8.17	$8.43	$8.68	$8.95	$9.22	$9.51	$9.80
$9.98	$10.29	$10.60	$10 93	$11.27	$11.61	$11.97	$12.33	$12.71	$13.10	$13.50	$13.92	$14.34	$14.78	$15.24
$5.50	$5.67	$5.84	$6 02	$6.21	$6.40	$6.59	$6.80	$7.00	$7.22	$7.44	$7.67	$7.90	$8.15	$8.40
$12.00	$12.37	$12.75	$13.14	$13.54	$13.95	$14.38	$14.82	$15.28	$15.75	$16.23	$16.73	$17.24	$17.77	$18.31
$6.03	$6.21	$6.41	$6.60	$6.80	$7.01	$7.23	$7.45	$7.68	$7.91	$8.16	$8.41	$8.66	$8.93	$9.20
$7.95	$8.20	$8.45	$8.71	$8.97	$9.25	$9.53	$9.82	$10.13	$10.44	$10.76	$11.09	$11.43	$11.78	$12.14
3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%
1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 60	Year 61	Year 62	Year 63	Year 64	Year 65	Year 66	Year 67	Year 68	Year 69	Year 70	Year 71	Year 72	Year 73	Year 74
11/30/2075	11/30/2076	11/30/2077	11/30/2078	11/30/2079	11/30/2080	11/30/2081	11/30/2082	11/30/2083	11/30/2084	11/30/2085	11/30/2086	11/30/2087	11/30/2088	11/30/2089
$14.89	$15.35	$15.82	$16 31	$16.81	$17.32	$17.85	$18.40	$18.97	$19.55	$20.15	$20.76	$21.40	$22.06	$22.73
$10.90	$11.23	$11.58	$11 93	$12.30	$12.68	$13.06	$13.46	$13.88	$14.30	$14.74	$15.19	$15.66	$16.14	$16.64
$14.26	$14.70	$15.15	$15.62	$16.10	$16.59	$17.10	$17.62	$18.16	$18.72	$19.29	$19.89	$20.50	$21.12	$21.77
$17.37	$17.90	$18.45	$19 02	$19.60	$20.20	$20.82	$21.46	$22.12	$22.80	$23.49	$24.22	$24.96	$25.72	$26.51
$26.56	$27.38	$28.22	$29 08	$29.98	$30.89	$31.84	$32.82	$33.83	$34.86	$35.93	$37.03	$38.17	$39.34	$40.55
$11.25	$11.59	$11.95	$12 32	$12.69	$13.08	$13.48	$13.90	$14.32	$14.76	$15.22	$15.68	$16.16	$16.66	$17.17
$8.60	$8.87	$9.14	$9.42	$9.71	$10.01	$10.31	$10.63	$10 95	$11.29	$11.64	$11.99	$12.36	$12.74	$13.13
$10.10	$10.41	$10.73	$11 06	$11.40	$11.75	$12.11	$12.48	$12.86	$13.25	$13.66	$14.08	$14.51	$14.96	$15.41
$15.71	$16.19	$16.68	$17.19	$17.72	$18.27	$18.83	$19.40	$20.00	$20.61	$21.24	$21.89	$22.57	$23.26	$23.97
$8.65	$8.92	$9.19	$9.47	$9.76	$10.06	$10.37	$10.69	$11 02	$11.36	$11.70	$12.06	$12.43	$12.82	$13.21
$18.87	$19.45	$20.05	$20.67	$21.30	$21.95	$22.63	$23.32	$24.03	$24.77	$25.53	$26.31	$27.12	$27.95	$28.81
$9.49	$9.78	$10.08	$10 39	$10.70	$11.03	$11.37	$11.72	$12.08	$12.45	$12.83	$13.22	$13.63	$14.05	$14.48
$12.51	$12.89	$13.29	$13.70	$14.12	$14.55	$15.00	$15.46	$15.93	$16.42	$16.92	$17.44	$17.98	$18.53	$19.10
3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%
1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 75	Year 76	Year 77	Year 78	Year 79	Year 80	Year 81	Year 82	Year 83	Year 84	Year 85	Year 86	Year 87	Year 88	Year 89
11/30/2090	11/30/2091	11/30/2092	11/30/2093	11/30/2094	11/30/2095	11/30/2096	11/30/2097	11/30/2098	11/30/2099	11/30/2100	11/30/2101	11/30/2102	11/30/2103	11/30/2104
$23.43	$24.15	$24.89	$25.65	$26.44	$27.25	$28.09	$28.95	$29.84	$30.75	$31.69	$32.67	$33.67	$34.70	$35.76
$17.15	$17.67	$18.21	$18.77	$19.35	$19.94	$20.55	$21.18	$21.83	$22.50	$23.19	$23.90	$24.64	$25.39	$26.17
$22.44	$23.13	$23.84	$24 57	$25.32	$26.10	$26.90	$27.72	$28.57	$29.45	$30.35	$31.28	$32.24	$33.23	$34.25
$27.33	$28.16	$29.03	$29 92	$30.83	$31.78	$32.75	$33.76	$34.79	$35.86	$36.96	$38.09	$39.26	$40.47	$41.71
$41.79	$43.07	$44.39	$45.75	$47.16	$48.60	$50.09	$51.63	$53.21	$54.84	$56.53	$58.26	$60.05	$61.89	$63.79
$17.70	$18.24	$18.80	$19 37	$19.97	$20.58	$21.21	$21.86	$22.53	$23.22	$23.94	$24.67	$25.43	$26.21	$27.01
$13.53	$13.95	$14.38	$14 82	$15.27	$15.74	$16.22	$16.72	$17.23	$17.76	$18.31	$18.87	$19.45	$20.04	$20.66
$15.89	$16.37	$16.88	$17 39	$17.93	$18.48	$19.04	$19.63	$20.23	$20.85	$21.49	$22.15	$22.83	$23.53	$24.25
$24.71	$25.46	$26.25	$27 05	$27.88	$28.73	$29.62	$30.52	$31.46	$32.42	$33.42	$34.44	$35.50	$36.59	$37.71
$13.61	$14.03	$14.46	$14 90	$15.36	$15.83	$16.32	$16.82	$17.33	$17.87	$18.41	$18.98	$19.56	$20.16	$20.78
$29.69	$30.60	$31.54	$32 51	$33.51	$34.53	$35.59	$36.68	$37.81	$38.97	$40.16	$41.40	$42.67	$43.97	$45.32
$14.92	$15.38	$15.85	$16 34	$16.84	$17.36	$17.89	$18.44	$19.00	$19.59	$20.19	$20.80	$21.44	$22.10	$22.78
$19.68	$20.28	$20.91	$21 55	$22.21	$22.89	$23.59	$24.31	$25.06	$25.83	$26.62	$27.44	$28.28	$29.15	$30.04
3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%
1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 90	Year 91	Year 92	Year 93	Year 94	Year 95	Year 96	Year 97	Year 98	Year 99	Year 100	Year 101	Year 102	Year 103	Year 104
11/30/2105	11/30/2106	11/30/2107	11/30/2108	11/30/2109	11/30/2110	11/30/2111	11/30/2112	11/30/2113	11/30/2114	11/30/2115	11/30/2116	11/30/2117	11/30/2118	11/30/2119
$36.86	$37.99	$39.16	$40 36	$41.59	$42.87	$44.19	$45.54	$46.94	$48.38	$49.86	$51.39	$52.96	$54.59	$56.26
$26.97	$27.80	$28.65	$29 53	$30.44	$31.37	$32.33	$33.32	$34.35	$35.40	$36.48	$37.60	$38.76	$39.94	$41.17
$35.30	$36.38	$37.50	$38.65	$39.84	$41.06	$42.32	$43.61	$44.95	$46.33	$47.75	$49.22	$50.72	$52.28	$53.88
$42.99	$44.30	$45.66	$47 06	$48.51	$49.99	$51.53	$53.11	$54.74	$56.42	$58.15	$59.93	$61.77	$63.66	$65.61
$65.74	$67.76	$69.84	$71 98	$74.18	$76.46	$78.80	$81.22	$83.71	$86.28	$88.92	$91.65	$94.46	$97.36	$100.34
$27.84	$28.69	$29.57	$30.48	$31.41	$32.38	$33.37	$34.39	$35.45	$36.53	$37.65	$38.81	$40.00	$41.23	$42.49
$21.29	$21.94	$22.62	$23 31	$24.02	$24.76	$25.52	$26.30	$27.11	$27.94	$28.80	$29.68	$30.59	$31.53	$32.50
$24.99	$25.76	$26.55	$27 36	$28.20	$29.07	$29.96	$30.88	$31.83	$32.80	$33.81	$34.84	$35.91	$37.01	$38.15
$38.87	$40.06	$41.29	$42 55	$43.86	$45.20	$46.59	$48.02	$49.49	$51.01	$52.57	$54.19	$55.85	$57.56	$59.33
$21.42	$22.07	$22.75	$23.45	$24.17	$24.91	$25.67	$26.46	$27.27	$28.11	$28.97	$29.86	$30.77	$31.72	$32.69
$46.71	$48.14	$49.62	$51.14	$52.71	$54.33	$55.99	$57.71	$59.48	$61.30	$63.18	$65.12	$67.12	$69.18	$71.30
$23.48	$24.20	$24.94	$25.70	$26.49	$27.30	$28.14	$29.00	$29.89	$30.81	$31.76	$32.73	$33.73	$34.77	$35.83
$30.96	$31.91	$32.89	$33 90	$34.94	$36.01	$37.11	$38.25	$39.42	$40.63	$41.88	$43.16	$44.49	$45.85	$47.26
3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%
1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 105	Year 106	Year 107	Year 108	Year 109	Year 110	Year 111	Year 112	Year 113	Year 114	Year 115	Year 116	Year 117	Year 118	Year 119
11/30/2120	11/30/2121	11/30/2122	11/30/2123	11/30/2124	11/30/2125	11/30/2126	11/30/2127	11/30/2128	11/30/2129	11/30/2130	11/30/2131	11/30/2132	11/30/2133	11/30/2134
$57.99	$59.77	$61.60	$63.49	$65.44	$67.44	$69.51	$71.64	$73.84	$76.10	$78.44	$80.84	$83.32	$85.88	$88.51
$42.43	$43.73	$45.07	$46.46	$47.88	$49.35	$50.86	$52.42	$54.03	$55.69	$57.40	$59.16	$60.97	$62.84	$64.77
$55.54	$57.24	$58.99	$60 80	$62.67	$64.59	$66.57	$68.61	$70.72	$72.88	$75.12	$77.42	$79.80	$82.25	$84.77
$67.62	$69.70	$71.84	$74 04	$76.31	$78.65	$81.06	$83.55	$86.11	$88.75	$91.47	$94.28	$97.17	$100.15	$103.22
$103.42	$106.59	$109.86	$113.23	$116.70	$120.28	$123.97	$127.77	$131.69	$135.73	$139.89	$144.18	$148.60	$153.16	$157.86
$43.79	$45.14	$46.52	$47 95	$49.42	$50.93	$52.50	$54.11	$55.76	$57.47	$59.24	$61.05	$62.93	$64.86	$66.84
$33.49	$34.52	$35.58	$36.67	$37.79	$38.95	$40.15	$41.38	$42.65	$43.96	$45.30	$46.69	$48.12	$49.60	$51.12
$39.32	$40.52	$41.77	$43 05	$44.37	$45.73	$47.13	$48.58	$50.07	$51.60	$53.18	$54.82	$56.50	$58.23	$60.01
$61.14	$63.02	$64.95	$66 94	$69.00	$71.11	$73.29	$75.54	$77.86	$80.25	$82.71	$85.24	$87.86	$90.55	$93.33
$33.69	$34.72	$35.79	$36 89	$38.02	$39.18	$40.38	$41.62	$42.90	$44.21	$45.57	$46.97	$48.41	$49.89	$51.42
$73.49	$75.74	$78.06	$80.46	$82.92	$85.47	$88.09	$90.79	$93.57	$96.44	$99.40	$102.45	$105.59	$108.83	$112.16
$36.93	$38.06	$39.23	$40.44	$41.68	$42.95	$44.27	$45.63	$47.03	$48.47	$49.96	$51.49	$53.07	$54.69	$56.37
$48.71	$50.20	$51.74	$53 33	$54.96	$56.65	$58.38	$60.17	$62.02	$63.92	$65.88	$67.90	$69.98	$72.13	$74.34
3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%
1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 120	Year 121	Year 122	Year 123	Year 124	Year 125	Year 126	Year 127	Year 128	Year 129	Year 130	Year 131	Year 132	Year 133	Year 134
11/30/2135	11/30/2136	11/30/2137	11/30/2138	11/30/2139	11/30/2140	11/30/2141	11/30/2142	11/30/2143	11/30/2144	11/30/2145	11/30/2146	11/30/2147	11/30/2148	11/30/2149
$91.22	$94.02	$96.91	$99 88	$102.94	$106.10	$109.35	$112.70	$116.16	$119.72	$123.39	$127.18	$131.08	$135.10	$139.24
$66.75	$68.80	$70.91	$73 08	$75.33	$77.64	$80.02	$82.47	$85.00	$87.61	$90.29	$93.06	$95.91	$98.86	$101.89
$87.37	$90.05	$92.81	$95.65	$98.59	$101.61	$104.73	$107.94	$111.25	$114.66	$118.18	$121.80	$125.53	$129.38	$133.35
$106.38	$109.65	$113.01	$116.48	$120.05	$123.73	$127.52	$131.43	$135.46	$139.62	$143.90	$148.31	$152.86	$157.55	$162.38
$162.70	$167.69	$172.83	$178.13	$183.59	$189.22	$195.03	$201.01	$207.17	$213.52	$220.07	$226.82	$233.78	$240.95	$248.33
$68.89	$71.01	$73.18	$75.43	$77.74	$80.13	$82.58	$85.12	$87.73	$90.42	$93.19	$96.05	$98.99	$102.03	$105.16
$52.69	$54.31	$55.97	$57.69	$59.46	$61.28	$63.16	$65.10	$67.09	$69.15	$71.27	$73.46	$75.71	$78.03	$80.42
$61.85	$63.75	$65.71	$67.72	$69.80	$71.94	$74.14	$76.42	$78.76	$81.18	$83.67	$86.23	$88.88	$91.60	$94.41
$96.19	$99.14	$102.18	$105.31	$108.54	$111.87	$115.30	$118.84	$122.48	$126.24	$130.11	$134.10	$138.21	$142.45	$146.82
$53.00	$54.63	$56.30	$58 03	$59.81	$61.64	$63.53	$65.48	$67.49	$69.56	$71.69	$73.89	$76.15	$78.49	$80.90
$115.60	$119.15	$122.80	$126.57	$130.45	$134.45	$138.57	$142.82	$147.20	$151.72	$156.37	$161.17	$166.11	$171.20	$176.45
$58.10	$59.88	$61.72	$63.61	$65.56	$67.57	$69.64	$71.78	$73.98	$76.25	$78.59	$81.00	$83.48	$86.04	$88.68
$76.62	$78.97	$81.39	$83 89	$86.46	$89.11	$91.85	$94.66	$97.57	$100.56	$103.64	$106.82	$110.10	$113.47	$116.95
3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%
1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 135	Year 136	Year 137	Year 138	Year 139	Year 140	Year 141	Year 142	Year 143	Year 144	Year 145	Year 146	Year 147	Year 148	Year 149
11/30/2150	11/30/2151	11/30/2152	11/30/2153	11/30/2154	11/30/2155	11/30/2156	11/30/2157	11/30/2158	11/30/2159	11/30/2160	11/30/2161	11/30/2162	11/30/2163	11/30/2164
$143.51	$147.91	$152.45	$157.12	$161.94	$166.91	$172.03	$177.30	$182.74	$188.34	$194.12	$200.07	$206.21	$212.53	$219.05
$105.01	$108.23	$111.55	$114.97	$118.50	$122.13	$125.88	$129.74	$133.72	$137.82	$142.04	$146.40	$150.89	$155.52	$160.29
$137.44	$141.66	$146.00	$150.48	$155.09	$159.85	$164.75	$169.80	$175.01	$180.38	$185.91	$191.61	$197.49	$203.54	$209.78
$167.36	$172.49	$177.78	$183.23	$188.85	$194.64	$200.61	$206.77	$213.11	$219.64	$226.38	$233.32	$240.47	$247.85	$255.45
$255.95	$263.80	$271.89	$280.23	$288.82	$297.68	$306.81	$316.21	$325.91	$335.91	$346.21	$356.82	$367.77	$379.05	$390.67
$108.38	$111.71	$115.13	$118.66	$122.30	$126.05	$129.92	$133.90	$138.01	$142.24	$146.60	$151.10	$155.73	$160.51	$165.43
$82.89	$85.43	$88.05	$90.75	$93.53	$96.40	$99.36	$102.41	$105.55	$108.78	$112.12	$115.56	$119.10	$122.75	$126.52
$97.31	$100.29	$103.37	$106.54	$109.80	$113.17	$116.64	$120.22	$123.91	$127.71	$131.62	$135.66	$139.82	$144.11	$148.52
$151.32	$155.96	$160.75	$165.68	$170.76	$175.99	$181.39	$186.95	$192.69	$198.59	$204.68	$210.96	$217.43	$224.10	$230.97
$83.38	$85.93	$88.57	$91 29	$94.09	$96.97	$99.94	$103.01	$106.17	$109.42	$112.78	$116.24	$119.80	$123.48	$127.26
$181.86	$187.44	$193.19	$199.11	$205.22	$211.51	$218.00	$224.68	$231.58	$238.68	$246.00	$253.54	$261.32	$269.33	$277.59
$91.40	$94.20	$97.09	$100.07	$103.14	$106.30	$109.56	$112.92	$116.39	$119.95	$123.63	$127.42	$131.33	$135.36	$139.51
$120.54	$124.24	$128.05	$131.97	$136.02	$140.19	$144.49	$148.92	$153.49	$158.20	$163.05	$168.05	$173.20	$178.51	$183.99
3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%
1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 150	Year 151	Year 152	Year 153	Year 154	Year 155	Year 156	Year 157	Year 158	Year 159	Year 160	Year 161	Year 162	Year 163	Year 164
11/30/2165	11/30/2166	11/30/2167	11/30/2168	11/30/2169	11/30/2170	11/30/2171	11/30/2172	11/30/2173	11/30/2174	11/30/2175	11/30/2176	11/30/2177	11/30/2178	11/30/2179
$225.76	$232.69	$239.82	$247.18	$254.76	$262.57	$270.62	$278.92	$287.48	$296.29	$305.38	$314.74	$324.40	$334.34	$344.60
$165.20	$170.27	$175.49	$180.87	$186.42	$192.13	$198.03	$204.10	$210.36	$216.81	$223.46	$230.31	$237.37	$244.65	$252.15
$216.22	$222.85	$229.68	$236.73	$243.99	$251.47	$259.18	$267.13	$275.32	$283.76	$292.46	$301.43	$310.68	$320.20	$330.02
$263.28	$271.36	$279.68	$288.26	$297.10	$306.21	$315.60	$325.28	$335.25	$345.53	$356.13	$367.05	$378.30	$389.91	$401.86
$402.65	$415.00	$427.72	$440.84	$454.36	$468.29	$482.65	$497.46	$512.71	$528.43	$544.64	$561.34	$578.56	$596.30	$614.58
$170.50	$175.73	$181.12	$186.67	$192.40	$198.30	$204.38	$210.65	$217.11	$223.77	$230.63	$237.70	$244.99	$252.50	$260.25
$130.40	$134.40	$138.52	$142.77	$147.14	$151.66	$156.31	$161.10	$166.04	$171.13	$176.38	$181.79	$187.36	$193.11	$199.03
$153.08	$157.77	$162.61	$167.60	$172.74	$178.04	$183.50	$189.12	$194.92	$200.90	$207.06	$213.41	$219.96	$226.70	$233.65
$238.05	$245.35	$252.88	$260.63	$268.63	$276.86	$285.35	$294.11	$303.12	$312.42	$322.00	$331.88	$342.05	$352.54	$363.35
$131.17	$135.19	$139.33	$143.61	$148.01	$152.55	$157.23	$162.05	$167.02	$172.14	$177.42	$182.86	$188.47	$194.25	$200.21
$286.10	$294.87	$303.92	$313.24	$322.84	$332.74	$342.95	$353.46	$364.30	$375.48	$386.99	$398.86	$411.09	$423.70	$436.69
$143.79	$148.20	$152.74	$157.43	$162.25	$167.23	$172.36	$177.64	$183.09	$188.71	$194.49	$200.46	$206.61	$212.94	$219.47
$189.63	$195.44	$201.44	$207.61	$213.98	$220.54	$227.31	$234.28	$241.46	$248.87	$256.50	$264.36	$272.47	$280.83	$289.44
3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%
1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 165	Year 166	Year 167	Year 168	Year 169	Year 170	Year 171	Year 172	Year 173	Year 174	Year 175	Year 176	Year 177	Year 178	Year 179
11/30/2180	11/30/2181	11/30/2182	11/30/2183	11/30/2184	11/30/2185	11/30/2186	11/30/2187	11/30/2188	11/30/2189	11/30/2190	11/30/2191	11/30/2192	11/30/2193	11/30/2194
$355.16	$366.06	$377.28	$388.85	$400.78	$413.07	$425.73	$438.79	$452.25	$466.11	$480.41	$495.14	$510.32	$525.97	$542.10
$259.89	$267.86	$276.07	$284.54	$293.26	$302.26	$311.53	$321.08	$330.93	$341.07	$351.53	$362.31	$373.42	$384.88	$396.68
$340.14	$350.58	$361.33	$372.41	$383.83	$395.60	$407.73	$420.23	$433.12	$446.40	$460.09	$474.20	$488.74	$503.73	$519.18
$414.19	$426.89	$439.98	$453.47	$467.38	$481.71	$496.48	$511.71	$527.40	$543.58	$560.25	$577.43	$595.13	$613.38	$632.19
$633.43	$652.86	$672.88	$693.51	$714.78	$736.70	$759.29	$782.58	$806.58	$831.31	$856.80	$883.08	$910.16	$938.07	$966.84
$268.23	$276.45	$284.93	$293.67	$302.67	$311.96	$321.52	$331.38	$341.54	$352.02	$362.81	$373.94	$385.41	$397.23	$409.41
$205.14	$211.43	$217.91	$224.59	$231.48	$238.58	$245.90	$253.44	$261.21	$269.22	$277.47	$285.98	$294.75	$303.79	$313.11
$240.82	$248.20	$255.82	$263.66	$271.75	$280.08	$288.67	$297.52	$306.64	$316.05	$325.74	$335.73	$346.03	$356.64	$367.57
$374.50	$385.98	$397.82	$410.02	$422.59	$435.55	$448.91	$462.67	$476.86	$491.49	$506.56	$522.09	$538.10	$554.61	$571.61
$206.35	$212.67	$219.20	$225.92	$232.85	$239.99	$247.35	$254.93	$262.75	$270.81	$279.11	$287.67	$296.49	$305.58	$314.96
$450.08	$463.88	$478.11	$492.77	$507.88	$523.46	$539.51	$556.06	$573.11	$590.68	$608.80	$627.47	$646.71	$666.54	$686.98
$226.20	$233.14	$240.29	$247.66	$255.25	$263.08	$271.15	$279.46	$288.03	$296.87	$305.97	$315.35	$325.02	$334.99	$345.26
$298.32	$307.46	$316.89	$326.61	$336.63	$346.95	$357.59	$368.56	$379.86	$391.51	$403.51	$415.89	$428.64	$441.79	$455.33
3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%
1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 180	Year 181	Year 182	Year 183	Year 184	Year 185	Year 186	Year 187	Year 188	Year 189	Year 190	Year 191	Year 192	Year 193	Year 194
11/30/2195	11/30/2196	11/30/2197	11/30/2198	11/30/2199	11/30/2200	11/30/2201	11/30/2202	11/30/2203	11/30/2204	11/30/2205	11/30/2206	11/30/2207	11/30/2208	11/30/2209
$558.73	$575.86	$593.52	$611.72	$630.48	$649.82	$669.75	$690.28	$711.45	$733.27	$755.76	$778.93	$802.82	$827.44	$852.82
$408.84	$421.38	$434.30	$447.62	$461.35	$475.50	$490.08	$505.11	$520.60	$536.56	$553.02	$569.98	$587.46	$605.47	$624.04
$535.10	$551.51	$568.42	$585.86	$603.82	$622.34	$641.42	$661.09	$681.37	$702.26	$723.80	$745.99	$768.87	$792.45	$816.75
$651.58	$671.56	$692.16	$713.38	$735.26	$757.81	$781.05	$805.00	$829.69	$855.13	$881.35	$908.38	$936.24	$964.95	$994.54
$996.49	$1,027.05	$1,058.54	$1,091.01	$1,124.46	$1,158.95	$1,194.49	$1,231.12	$1,268.87	$1,307.78	$1,347.89	$1,389.22	$1,431.83	$1,475.74	$1,520.99
$421.96	$434.90	$448.24	$461.99	$476.15	$490.76	$505.81	$521.32	$537.30	$553.78	$570.76	$588.27	$606.31	$624.90	$644.06
$322.71	$332.61	$342.81	$353.32	$364.15	$375.32	$386.83	$398.69	$410.92	$423.52	$436.51	$449.90	$463.69	$477.91	$492.57
$378.85	$390.46	$402.44	$414.78	$427.50	$440.61	$454.12	$468.05	$482.40	$497.19	$512.44	$528.16	$544.35	$561.05	$578.25
$589.14	$607.21	$625.83	$645.02	$664.80	$685.19	$706.20	$727.86	$750.18	$773.19	$796.90	$821.33	$846.52	$872.48	$899.24
$324.61	$334.57	$344.83	$355.40	$366.30	$377.54	$389.11	$401.05	$413.34	$426.02	$439.09	$452.55	$466.43	$480.73	$495.47
$708.05	$729.76	$752.14	$775.21	$798.98	$823.48	$848.74	$874.76	$901.59	$929.24	$957.74	$987.11	$1,017.38	$1,048.58	$1,080.73
$355.85	$366.76	$378.01	$389.60	$401.55	$413.87	$426.56	$439.64	$453.12	$467.02	$481.34	$496.10	$511.31	$526.99	$543.15
$469.30	$483.69	$498.52	$513.81	$529.57	$545.81	$562.55	$579.80	$597.58	$615.90	$634.79	$654.26	$674.32	$695.00	$716.31
3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%
1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 195	Year 196	Year 197	Year 198	Year 199	Year 200
11/30/2210	11/30/2211	11/30/2212	11/30/2213	11/30/2214	11/30/2215
$878.97	$905.92	$933.71	$962.34	$991.85	$1,022.27
$643.18	$662.90	$683.23	$704.18	$725.78	$748.03
$841.80	$867.61	$894.22	$921.64	$949.91	$979.04
$1,025.04	$1,056.48	$1,088.87	$1,122.27	$1,156.68	$1,192.15
$1,567.63	$1,615.71	$1,665.26	$1,716.32	$1,768.96	$1,823.21
$663.81	$684.17	$705.15	$726.78	$749.06	$772.04
$507.68	$523.24	$539.29	$555.83	$572.87	$590.44
$595.98	$614.26	$633.10	$652.51	$672.52	$693.15
$926.81	$955.24	$984.53	$1,014.72	$1,045.84	$1,077.91
$510.67	$526.33	$542.47	$559.11	$576.25	$593.92
$1,113.87	$1,148.03	$1,183.24	$1,219.53	$1,256.92	$1,295.47
$559.81	$576.98	$594.67	$612.91	$631.71	$651.08
$738.28	$760.92	$784.26	$808.31	$833.09	$858.64
3.07%	3.07%	3.07%	3.07%	3.07%	3.07%
1.30%	1.30%	1.30%	1.30%	1.30%	1.30%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

LOW YIELD -- MULTI-STAGE DCF -- FORECASTED OECD GDP GROWTH

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]
					Second Stage Growth						
Company	Ticker	Stock Price	Annualized Dividend	First Stage Growth	Year 6	Year 7	Year 8	Year 9	Year 10	Third Stage Growth	ROE
ALLETE, In	ALE	$57.61	$2.08	3.00%	3.16%	3.32%	3.49%	3.65%	3.81%	3.97%	7.23%
Alliant Ener	LNT	$37.05	$1.18	6.60%	6.16%	5.72%	5.29%	4.85%	4.41%	3.97%	7.65%
Ameren Cor	AEE	$48.88	$1.70	5.20%	5.00%	4.79%	4.59%	4.38%	4.18%	3.97%	7.66%
American El	AEP	$65.93	$2.24	4.10%	4.08%	4.06%	4.04%	4.02%	3.99%	3.97%	7.27%
Duke Energ	DUK	$80.24	$3.30	4.62%	4.51%	4.40%	4.30%	4.19%	4.08%	3.97%	8.28%
El Paso Ele	EE	$46.19	$1.18	7.00%	6.50%	5.99%	5.49%	4.98%	4.48%	3.97%	6.89%
Empire Dist	EDE	$33.63	$1.04	5.00%	4.83%	4.66%	4.49%	4.32%	4.14%	3.97%	7.12%
Great Plains	GXP	$31.54	$1.05	7.10%	6.58%	6.06%	5.54%	5.02%	4.49%	3.97%	8.01%
IDACORP,	IDA	$73.95	$2.04	4.00%	4.00%	3.99%	3.99%	3.98%	3.98%	3.97%	6.48%
OGE Energy	OGE	$30.99	$1.10	4.30%	4.25%	4.19%	4.14%	4.08%	4.03%	3.97%	7.50%
Pinnacle We	PNW	$74.57	$2.50	3.73%	3.77%	3.81%	3.85%	3.89%	3.93%	3.97%	7.12%
PNM Resou	PNM	$33.27	$0.88	8.76%	7.96%	7.16%	6.37%	5.57%	4.77%	3.97%	7.45%
Westar Ene	WR	$52.92	$1.52	4.93%	4.77%	4.61%	4.45%	4.29%	4.13%	3.97%	6.83%

Nominal Growth
OECD Real GDP Growth rate
Inflation

Mean	7.34%
Standard Deviation	0.47%
+ 1 Standard Deviation	7.82%
-1 Standard Deviation	6.87%

Notes:
[1] Source: Yahoo Finance
[2] Source: Yahoo Finance
[3] Source: Yahoo Finance
[4] Equals [3] + ([9] − [3]) / 6
[5] Equals [4] + ([9] − [3]) / 6
[6] Equals [5] + ([9] − [3]) / 6
[7] Equals [6] + ([9] − [3]) / 6
[8] Equals [7] + ([9] − [3]) / 6
[9] Source: OECD long term real GDP forecast, plus inflation based on the May 2016 average of Treasury Bond yields less the May 2016 averageof TIPS yields as of May 31, 2016
[10] Equals internal rate of return of cash flows for Year 0 through Year 200

	First Stage					Second Stage								
Stock Price	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14
5/31/2016	11/30/2016	11/30/2017	11/30/2018	11/30/2019	11/30/2020	11/30/2021	11/30/2022	11/30/2023	11/30/2024	11/30/2025	11/30/2026	11/30/2027	11/30/2028	11/30/2029
-$57.61	$2.14	$2.21	$2.27	$2 34	$2.41	$2.49	$2.57	$2.66	$2.76	$2.86	$2.98	$3.09	$3.22	$3.34
-$37.05	$1.25	$1.34	$1.42	$1 52	$1.62	$1.72	$1.82	$1.91	$2.01	$2.09	$2.18	$2.26	$2.35	$2.45
-$48.88	$1.79	$1.88	$1.98	$2 08	$2.19	$2.30	$2.41	$2.52	$2.63	$2.74	$2.85	$2.96	$3.08	$3.20
-$65.93	$2.33	$2.43	$2.53	$2.63	$2.74	$2.85	$2.97	$3.09	$3.21	$3.34	$3.47	$3.61	$3.75	$3.90
-$80.24	$3.45	$3.61	$3.78	$3 95	$4.14	$4.32	$4.51	$4.71	$4.90	$5.10	$5.31	$5.52	$5.74	$5.96
-$46.19	$1.26	$1.35	$1.45	$1 55	$1.66	$1.76	$1.87	$1.97	$2.07	$2.16	$2.25	$2.34	$2.43	$2.52
-$33.63	$1.09	$1.15	$1.20	$1 26	$1.33	$1.39	$1.46	$1.52	$1.59	$1.65	$1.72	$1.79	$1.86	$1.93
-$31.54	$1.13	$1.21	$1.29	$1 38	$1.48	$1.58	$1.68	$1.77	$1.86	$1.94	$2.02	$2.10	$2.18	$2.27
-$73.95	$2.12	$2.21	$2.29	$2 39	$2.48	$2.58	$2.68	$2.79	$2.90	$3.02	$3.14	$3.26	$3.39	$3.52
-$30.99	$1.15	$1.20	$1.25	$1 30	$1.36	$1.42	$1.47	$1.54	$1.60	$1.66	$1.73	$1.80	$1.87	$1.94
-$74.57	$2.59	$2.69	$2.79	$2 89	$3.00	$3.12	$3.23	$3.36	$3.49	$3.63	$3.77	$3.92	$4.08	$4.23
-$33.27	$0.96	$1.04	$1.13	$1 23	$1.34	$1.45	$1.55	$1.65	$1.74	$1.82	$1.90	$1.97	$2.05	$2.13
-$52.92	$1.59	$1.67	$1.76	$1 84	$1.93	$2.03	$2.12	$2.21	$2.31	$2.40	$2.50	$2.60	$2.70	$2.81
											3.97%	3.96%	3.95%	3.92%
											2.38%	2.37%	2.35%	2.33%
											1.59%	1.59%	1.59%	1.59%

Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21	Year 22	Year 23	Year 24	Year 25	Year 26	Year 27	Year 28	Year 29
11/30/2030	11/30/2031	11/30/2032	11/30/2033	11/30/2034	11/30/2035	11/30/2036	11/30/2037	11/30/2038	11/30/2039	11/30/2040	11/30/2041	11/30/2042	11/30/2043	11/30/2044
$3.47	$3.60	$3.74	$3 88	$4.02	$4.16	$4.31	$4.46	$4.62	$4.78	$4.95	$5.13	$5.30	$5.49	$5.68
$2.54	$2.64	$2.74	$2 84	$2.94	$3.05	$3.16	$3.27	$3.38	$3.50	$3.62	$3.75	$3.88	$4.02	$4.16
$3.32	$3.45	$3.58	$3.71	$3.85	$3.99	$4.13	$4.28	$4.42	$4.58	$4.74	$4.91	$5.08	$5.26	$5.44
$4.05	$4.20	$4.36	$4 52	$4.69	$4.86	$5.03	$5.21	$5.39	$5.57	$5.77	$5.98	$6.19	$6.40	$6.62
$6.19	$6.43	$6.67	$6 91	$7.17	$7.43	$7.69	$7.96	$8.24	$8.52	$8.83	$9.14	$9.46	$9.79	$10.13
$2.62	$2.72	$2.82	$2 93	$3.03	$3.14	$3.26	$3.37	$3.49	$3.61	$3.74	$3.87	$4.01	$4.15	$4.29
$2.00	$2.08	$2.16	$2 24	$2.32	$2.40	$2.49	$2.58	$2.67	$2.76	$2.86	$2.96	$3.06	$3.17	$3.28
$2.35	$2.44	$2.53	$2.63	$2.72	$2.82	$2.92	$3.03	$3.13	$3.24	$3.36	$3.48	$3.60	$3.72	$3.85
$3.66	$3.80	$3.94	$4 09	$4.24	$4.39	$4.55	$4.71	$4.87	$5.04	$5.22	$5.40	$5.59	$5.79	$5.99
$2.02	$2.09	$2.17	$2 25	$2.33	$2.42	$2.51	$2.59	$2.68	$2.78	$2.88	$2.98	$3.08	$3.19	$3.30
$4.40	$4.57	$4.74	$4 91	$5.09	$5.28	$5.46	$5.66	$5.85	$6.06	$6.27	$6.49	$6.72	$6.96	$7.20
$2.21	$2.29	$2.38	$2.47	$2.56	$2.65	$2.75	$2.84	$2.94	$3.04	$3.15	$3.26	$3.38	$3.50	$3.62
$2.92	$3.03	$3.14	$3 26	$3.38	$3.50	$3.62	$3.75	$3.88	$4.01	$4.16	$4.30	$4.46	$4.61	$4.77
3.85%	3.80%	3.76%	3.71%	3.66%	3.62%	3.57%	3.52%	3.48%	3.43%	3.59%	3.55%	3.51%	3.48%	3.45%
2.28%	2.23%	2.18%	2.14%	2.09%	2.04%	1.99%	1.95%	1.90%	1.86%	1.82%	1.78%	1.74%	1.71%	1.68%
1.57%	1.57%	1.57%	1.57%	1.57%	1.57%	1.57%	1.57%	1.57%	1.57%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 30	Year 31	Year 32	Year 33	Year 34	Year 35	Year 36	Year 37	Year 38	Year 39	Year 40	Year 41	Year 42	Year 43	Year 44
11/30/2045	11/30/2046	11/30/2047	11/30/2048	11/30/2049	11/30/2050	11/30/2051	11/30/2052	11/30/2053	11/30/2054	11/30/2055	11/30/2056	11/30/2057	11/30/2058	11/30/2059
$5.87	$6.07	$6.28	$6.49	$6.70	$6.92	$7.15	$7.39	$7.62	$7.87	$8.12	$8.38	$8.64	$8.91	$9.19
$4.30	$4.44	$4.59	$4.75	$4.91	$5.07	$5.23	$5.40	$5.58	$5.76	$5.94	$6.13	$6.32	$6.52	$6.72
$5.62	$5.82	$6.01	$6 21	$6.42	$6.63	$6.85	$7.07	$7.30	$7.54	$7.78	$8.02	$8.28	$8.53	$8.80
$6.85	$7.08	$7.32	$7 57	$7.82	$8.08	$8.34	$8.61	$8.89	$9.18	$9.47	$9.77	$10.08	$10.39	$10.71
$10.47	$10.83	$11.20	$11 57	$11.96	$12.35	$12.76	$13.17	$13.60	$14.04	$14.48	$14.94	$15.41	$15.89	$16.38
$4.44	$4.59	$4.74	$4 90	$5.06	$5.23	$5.40	$5.58	$5.76	$5.94	$6.13	$6.33	$6.53	$6.73	$6.94
$3.39	$3.51	$3.63	$3.75	$3.87	$4.00	$4.13	$4.27	$4.40	$4.55	$4.69	$4.84	$4.99	$5.15	$5.31
$3.98	$4.12	$4.26	$4.40	$4.55	$4.70	$4.85	$5.01	$5.17	$5.34	$5.51	$5.68	$5.86	$6.04	$6.23
$6.19	$6.40	$6.62	$6 84	$7.07	$7.30	$7.54	$7.79	$8.04	$8.30	$8.56	$8.83	$9.11	$9.40	$9.69
$3.41	$3.53	$3.65	$3.77	$3.89	$4.02	$4.16	$4.29	$4.43	$4.57	$4.72	$4.87	$5.02	$5.18	$5.34
$7.44	$7.70	$7.95	$8 22	$8.49	$8.78	$9.06	$9.36	$9.66	$9.97	$10.29	$10.62	$10.95	$11.29	$11.64
$3.74	$3.87	$4.00	$4.13	$4.27	$4.41	$4.56	$4.70	$4.86	$5.01	$5.17	$5.34	$5.50	$5.68	$5.85
$4.93	$5.10	$5.27	$5.45	$5.63	$5.82	$6.01	$6.20	$6.40	$6.61	$6.82	$7.04	$7.26	$7.48	$7.72
3.42%	3.40%	3.37%	3.35%	3.33%	3.30%	3.28%	3.26%	3.24%	3.22%	3.19%	3.17%	3.14%	3.12%	3.09%
1.66%	1.63%	1.61%	1.58%	1.56%	1.54%	1.52%	1.49%	1.47%	1.45%	1.43%	1.40%	1.38%	1.35%	1.32%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 45	Year 46	Year 47	Year 48	Year 49	Year 50	Year 51	Year 52	Year 53	Year 54	Year 55	Year 56	Year 57	Year 58	Year 59
11/30/2060	11/30/2061	11/30/2062	11/30/2063	11/30/2064	11/30/2065	11/30/2066	11/30/2067	11/30/2068	11/30/2069	11/30/2070	11/30/2071	11/30/2072	11/30/2073	11/30/2074
$9.47	$9.76	$10.06	$10 37	$10.68	$11.01	$11.35	$11.70	$12.06	$12.43	$12.81	$13.20	$13.60	$14.02	$14.45
$6.93	$7.14	$7.36	$7 59	$7.82	$8.06	$8.30	$8.56	$8.82	$9.09	$9.37	$9.66	$9.95	$10.26	$10.57
$9.07	$9.35	$9.63	$9 93	$10.23	$10.55	$10.87	$11.20	$11 55	$11.90	$12.26	$12.64	$13.03	$13.43	$13.84
$11.04	$11.38	$11.73	$12 09	$12.46	$12.84	$13.24	$13.64	$14.06	$14.49	$14.93	$15.39	$15.86	$16.35	$16.85
$16.89	$17.40	$17.94	$18.49	$19.05	$19.64	$20.24	$20.86	$21.50	$22.16	$22.84	$23.54	$24.26	$25.01	$25.77
$7.15	$7.37	$7.60	$7 83	$8.07	$8.32	$8.57	$8.83	$9.10	$9.38	$9.67	$9.97	$10.27	$10.59	$10.91
$5.47	$5.64	$5.81	$5 99	$6.17	$6.36	$6.55	$6.76	$6.96	$7.18	$7.40	$7.62	$7.86	$8.10	$8.35
$6.42	$6.62	$6.82	$7 03	$7.24	$7.47	$7.70	$7.93	$8.17	$8.43	$8.68	$8.95	$9.22	$9.51	$9.80
$9.98	$10.29	$10.60	$10 93	$11.27	$11.61	$11.97	$12.33	$12.71	$13.10	$13.50	$13.92	$14.34	$14.78	$15.24
$5.50	$5.67	$5.84	$6 02	$6.21	$6.40	$6.59	$6.80	$7.00	$7.22	$7.44	$7.67	$7.90	$8.15	$8.40
$12.00	$12.37	$12.75	$13.14	$13.54	$13.95	$14.38	$14.82	$15.28	$15.75	$16.23	$16.73	$17.24	$17.77	$18.31
$6.03	$6.21	$6.41	$6.60	$6.80	$7.01	$7.23	$7.45	$7.68	$7.91	$8.16	$8.41	$8.66	$8.93	$9.20
$7.95	$8.20	$8.45	$8.71	$8.97	$9.25	$9.53	$9.82	$10.13	$10.44	$10.76	$11.09	$11.43	$11.78	$12.14
3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%
1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 60	Year 61	Year 62	Year 63	Year 64	Year 65	Year 66	Year 67	Year 68	Year 69	Year 70	Year 71	Year 72	Year 73	Year 74
11/30/2075	11/30/2076	11/30/2077	11/30/2078	11/30/2079	11/30/2080	11/30/2081	11/30/2082	11/30/2083	11/30/2084	11/30/2085	11/30/2086	11/30/2087	11/30/2088	11/30/2089
$14.89	$15.35	$15.82	$16 31	$16.81	$17.32	$17.85	$18.40	$18.97	$19.55	$20.15	$20.76	$21.40	$22.06	$22.73
$10.90	$11.23	$11.58	$11 93	$12.30	$12.68	$13.06	$13.46	$13.88	$14.30	$14.74	$15.19	$15.66	$16.14	$16.64
$14.26	$14.70	$15.15	$15.62	$16.10	$16.59	$17.10	$17.62	$18.16	$18.72	$19.29	$19.89	$20.50	$21.12	$21.77
$17.37	$17.90	$18.45	$19 02	$19.60	$20.20	$20.82	$21.46	$22.12	$22.80	$23.49	$24.22	$24.96	$25.72	$26.51
$26.56	$27.38	$28.22	$29 08	$29.98	$30.89	$31.84	$32.82	$33.83	$34.86	$35.93	$37.03	$38.17	$39.34	$40.55
$11.25	$11.59	$11.95	$12 32	$12.69	$13.08	$13.48	$13.90	$14.32	$14.76	$15.22	$15.68	$16.16	$16.66	$17.17
$8.60	$8.87	$9.14	$9.42	$9.71	$10.01	$10.31	$10.63	$10 95	$11.29	$11.64	$11.99	$12.36	$12.74	$13.13
$10.10	$10.41	$10.73	$11 06	$11.40	$11.75	$12.11	$12.48	$12.86	$13.25	$13.66	$14.08	$14.51	$14.96	$15.41
$15.71	$16.19	$16.68	$17.19	$17.72	$18.27	$18.83	$19.40	$20.00	$20.61	$21.24	$21.89	$22.57	$23.26	$23.97
$8.65	$8.92	$9.19	$9.47	$9.76	$10.06	$10.37	$10.69	$11 02	$11.36	$11.70	$12.06	$12.43	$12.82	$13.21
$18.87	$19.45	$20.05	$20.67	$21.30	$21.95	$22.63	$23.32	$24.03	$24.77	$25.53	$26.31	$27.12	$27.95	$28.81
$9.49	$9.78	$10.08	$10 39	$10.70	$11.03	$11.37	$11.72	$12.08	$12.45	$12.83	$13.22	$13.63	$14.05	$14.48
$12.51	$12.89	$13.29	$13.70	$14.12	$14.55	$15.00	$15.46	$15.93	$16.42	$16.92	$17.44	$17.98	$18.53	$19.10
3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%
1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 75	Year 76	Year 77	Year 78	Year 79	Year 80	Year 81	Year 82	Year 83	Year 84	Year 85	Year 86	Year 87	Year 88	Year 89
11/30/2090	11/30/2091	11/30/2092	11/30/2093	11/30/2094	11/30/2095	11/30/2096	11/30/2097	11/30/2098	11/30/2099	11/30/2100	11/30/2101	11/30/2102	11/30/2103	11/30/2104
$23.43	$24.15	$24.89	$25.65	$26.44	$27.25	$28.09	$28.95	$29.84	$30.75	$31.69	$32.67	$33.67	$34.70	$35.76
$17.15	$17.67	$18.21	$18.77	$19.35	$19.94	$20.55	$21.18	$21.83	$22.50	$23.19	$23.90	$24.64	$25.39	$26.17
$22.44	$23.13	$23.84	$24 57	$25.32	$26.10	$26.90	$27.72	$28.57	$29.45	$30.35	$31.28	$32.24	$33.23	$34.25
$27.33	$28.16	$29.03	$29 92	$30.83	$31.78	$32.75	$33.76	$34.79	$35.86	$36.96	$38.09	$39.26	$40.47	$41.71
$41.79	$43.07	$44.39	$45.75	$47.16	$48.60	$50.09	$51.63	$53.21	$54.84	$56.53	$58.26	$60.05	$61.89	$63.79
$17.70	$18.24	$18.80	$19 37	$19.97	$20.58	$21.21	$21.86	$22.53	$23.22	$23.94	$24.67	$25.43	$26.21	$27.01
$13.53	$13.95	$14.38	$14 82	$15.27	$15.74	$16.22	$16.72	$17.23	$17.76	$18.31	$18.87	$19.45	$20.04	$20.66
$15.89	$16.37	$16.88	$17 39	$17.93	$18.48	$19.04	$19.63	$20.23	$20.85	$21.49	$22.15	$22.83	$23.53	$24.25
$24.71	$25.46	$26.25	$27 05	$27.88	$28.73	$29.62	$30.52	$31.46	$32.42	$33.42	$34.44	$35.50	$36.59	$37.71
$13.61	$14.03	$14.46	$14 90	$15.36	$15.83	$16.32	$16.82	$17.33	$17.87	$18.41	$18.98	$19.56	$20.16	$20.78
$29.69	$30.60	$31.54	$32 51	$33.51	$34.53	$35.59	$36.68	$37.81	$38.97	$40.16	$41.40	$42.67	$43.97	$45.32
$14.92	$15.38	$15.85	$16 34	$16.84	$17.36	$17.89	$18.44	$19.00	$19.59	$20.19	$20.80	$21.44	$22.10	$22.78
$19.68	$20.28	$20.91	$21 55	$22.21	$22.89	$23.59	$24.31	$25.06	$25.83	$26.62	$27.44	$28.28	$29.15	$30.04
3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%
1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 90	Year 91	Year 92	Year 93	Year 94	Year 95	Year 96	Year 97	Year 98	Year 99	Year 100	Year 101	Year 102	Year 103	Year 104
11/30/2105	11/30/2106	11/30/2107	11/30/2108	11/30/2109	11/30/2110	11/30/2111	11/30/2112	11/30/2113	11/30/2114	11/30/2115	11/30/2116	11/30/2117	11/30/2118	11/30/2119
$36.86	$37.99	$39.16	$40 36	$41.59	$42.87	$44.19	$45.54	$46.94	$48.38	$49.86	$51.39	$52.96	$54.59	$56.26
$26.97	$27.80	$28.65	$29 53	$30.44	$31.37	$32.33	$33.32	$34.35	$35.40	$36.48	$37.60	$38.76	$39.94	$41.17
$35.30	$36.38	$37.50	$38.65	$39.84	$41.06	$42.32	$43.61	$44.95	$46.33	$47.75	$49.22	$50.72	$52.28	$53.88
$42.99	$44.30	$45.66	$47 06	$48.51	$49.99	$51.53	$53.11	$54.74	$56.42	$58.15	$59.93	$61.77	$63.66	$65.61
$65.74	$67.76	$69.84	$71 98	$74.18	$76.46	$78.80	$81.22	$83.71	$86.28	$88.92	$91.65	$94.46	$97.36	$100.34
$27.84	$28.69	$29.57	$30.48	$31.41	$32.38	$33.37	$34.39	$35.45	$36.53	$37.65	$38.81	$40.00	$41.23	$42.49
$21.29	$21.94	$22.62	$23 31	$24.02	$24.76	$25.52	$26.30	$27.11	$27.94	$28.80	$29.68	$30.59	$31.53	$32.50
$24.99	$25.76	$26.55	$27 36	$28.20	$29.07	$29.96	$30.88	$31.83	$32.80	$33.81	$34.84	$35.91	$37.01	$38.15
$38.87	$40.06	$41.29	$42 55	$43.86	$45.20	$46.59	$48.02	$49.49	$51.01	$52.57	$54.19	$55.85	$57.56	$59.33
$21.42	$22.07	$22.75	$23.45	$24.17	$24.91	$25.67	$26.46	$27.27	$28.11	$28.97	$29.86	$30.77	$31.72	$32.69
$46.71	$48.14	$49.62	$51.14	$52.71	$54.33	$55.99	$57.71	$59.48	$61.30	$63.18	$65.12	$67.12	$69.18	$71.30
$23.48	$24.20	$24.94	$25.70	$26.49	$27.30	$28.14	$29.00	$29.89	$30.81	$31.76	$32.73	$33.73	$34.77	$35.83
$30.96	$31.91	$32.89	$33 90	$34.94	$36.01	$37.11	$38.25	$39.42	$40.63	$41.88	$43.16	$44.49	$45.85	$47.26
3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%
1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 105	Year 106	Year 107	Year 108	Year 109	Year 110	Year 111	Year 112	Year 113	Year 114	Year 115	Year 116	Year 117	Year 118	Year 119
11/30/2120	11/30/2121	11/30/2122	11/30/2123	11/30/2124	11/30/2125	11/30/2126	11/30/2127	11/30/2128	11/30/2129	11/30/2130	11/30/2131	11/30/2132	11/30/2133	11/30/2134
$57.99	$59.77	$61.60	$63.49	$65.44	$67.44	$69.51	$71.64	$73.84	$76.10	$78.44	$80.84	$83.32	$85.88	$88.51
$42.43	$43.73	$45.07	$46.46	$47.88	$49.35	$50.86	$52.42	$54.03	$55.69	$57.40	$59.16	$60.97	$62.84	$64.77
$55.54	$57.24	$58.99	$60 80	$62.67	$64.59	$66.57	$68.61	$70.72	$72.88	$75.12	$77.42	$79.80	$82.25	$84.77
$67.62	$69.70	$71.84	$74 04	$76.31	$78.65	$81.06	$83.55	$86.11	$88.75	$91.47	$94.28	$97.17	$100.15	$103.22
$103.42	$106.59	$109.86	$113.23	$116.70	$120.28	$123.97	$127.77	$131.69	$135.73	$139.89	$144.18	$148.60	$153.16	$157.86
$43.79	$45.14	$46.52	$47 95	$49.42	$50.93	$52.50	$54.11	$55.76	$57.47	$59.24	$61.05	$62.93	$64.86	$66.84
$33.49	$34.52	$35.58	$36.67	$37.79	$38.95	$40.15	$41.38	$42.65	$43.96	$45.30	$46.69	$48.12	$49.60	$51.12
$39.32	$40.52	$41.77	$43 05	$44.37	$45.73	$47.13	$48.58	$50.07	$51.60	$53.18	$54.82	$56.50	$58.23	$60.01
$61.14	$63.02	$64.95	$66 94	$69.00	$71.11	$73.29	$75.54	$77.86	$80.25	$82.71	$85.24	$87.86	$90.55	$93.33
$33.69	$34.72	$35.79	$36 89	$38.02	$39.18	$40.38	$41.62	$42.90	$44.21	$45.57	$46.97	$48.41	$49.89	$51.42
$73.49	$75.74	$78.06	$80.46	$82.92	$85.47	$88.09	$90.79	$93.57	$96.44	$99.40	$102.45	$105.59	$108.83	$112.16
$36.93	$38.06	$39.23	$40.44	$41.68	$42.95	$44.27	$45.63	$47.03	$48.47	$49.96	$51.49	$53.07	$54.69	$56.37
$48.71	$50.20	$51.74	$53 33	$54.96	$56.65	$58.38	$60.17	$62.02	$63.92	$65.88	$67.90	$69.98	$72.13	$74.34
3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%
1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 120	Year 121	Year 122	Year 123	Year 124	Year 125	Year 126	Year 127	Year 128	Year 129	Year 130	Year 131	Year 132	Year 133	Year 134
11/30/2135	11/30/2136	11/30/2137	11/30/2138	11/30/2139	11/30/2140	11/30/2141	11/30/2142	11/30/2143	11/30/2144	11/30/2145	11/30/2146	11/30/2147	11/30/2148	11/30/2149
$91.22	$94.02	$96.91	$99 88	$102.94	$106.10	$109.35	$112.70	$116.16	$119.72	$123.39	$127.18	$131.08	$135.10	$139.24
$66.75	$68.80	$70.91	$73 08	$75.33	$77.64	$80.02	$82.47	$85.00	$87.61	$90.29	$93.06	$95.91	$98.86	$101.89
$87.37	$90.05	$92.81	$95.65	$98.59	$101.61	$104.73	$107.94	$111.25	$114.66	$118.18	$121.80	$125.53	$129.38	$133.35
$106.38	$109.65	$113.01	$116.48	$120.05	$123.73	$127.52	$131.43	$135.46	$139.62	$143.90	$148.31	$152.86	$157.55	$162.38
$162.70	$167.69	$172.83	$178.13	$183.59	$189.22	$195.03	$201.01	$207.17	$213.52	$220.07	$226.82	$233.78	$240.95	$248.33
$68.89	$71.01	$73.18	$75.43	$77.74	$80.13	$82.58	$85.12	$87.73	$90.42	$93.19	$96.05	$98.99	$102.03	$105.16
$52.69	$54.31	$55.97	$57.69	$59.46	$61.28	$63.16	$65.10	$67.09	$69.15	$71.27	$73.46	$75.71	$78.03	$80.42
$61.85	$63.75	$65.71	$67.72	$69.80	$71.94	$74.14	$76.42	$78.76	$81.18	$83.67	$86.23	$88.88	$91.60	$94.41
$96.19	$99.14	$102.18	$105.31	$108.54	$111.87	$115.30	$118.84	$122.48	$126.24	$130.11	$134.10	$138.21	$142.45	$146.82
$53.00	$54.63	$56.30	$58 03	$59.81	$61.64	$63.53	$65.48	$67.49	$69.56	$71.69	$73.89	$76.15	$78.49	$80.90
$115.60	$119.15	$122.80	$126.57	$130.45	$134.45	$138.57	$142.82	$147.20	$151.72	$156.37	$161.17	$166.11	$171.20	$176.45
$58.10	$59.88	$61.72	$63.61	$65.56	$67.57	$69.64	$71.78	$73.98	$76.25	$78.59	$81.00	$83.48	$86.04	$88.68
$76.62	$78.97	$81.39	$83 89	$86.46	$89.11	$91.85	$94.66	$97.57	$100.56	$103.64	$106.82	$110.10	$113.47	$116.95
3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%
1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 135	Year 136	Year 137	Year 138	Year 139	Year 140	Year 141	Year 142	Year 143	Year 144	Year 145	Year 146	Year 147	Year 148	Year 149
11/30/2150	11/30/2151	11/30/2152	11/30/2153	11/30/2154	11/30/2155	11/30/2156	11/30/2157	11/30/2158	11/30/2159	11/30/2160	11/30/2161	11/30/2162	11/30/2163	11/30/2164
$143.51	$147.91	$152.45	$157.12	$161.94	$166.91	$172.03	$177.30	$182.74	$188.34	$194.12	$200.07	$206.21	$212.53	$219.05
$105.01	$108.23	$111.55	$114.97	$118.50	$122.13	$125.88	$129.74	$133.72	$137.82	$142.04	$146.40	$150.89	$155.52	$160.29
$137.44	$141.66	$146.00	$150.48	$155.09	$159.85	$164.75	$169.80	$175.01	$180.38	$185.91	$191.61	$197.49	$203.54	$209.78
$167.36	$172.49	$177.78	$183.23	$188.85	$194.64	$200.61	$206.77	$213.11	$219.64	$226.38	$233.32	$240.47	$247.85	$255.45
$255.95	$263.80	$271.89	$280.23	$288.82	$297.68	$306.81	$316.21	$325.91	$335.91	$346.21	$356.82	$367.77	$379.05	$390.67
$108.38	$111.71	$115.13	$118.66	$122.30	$126.05	$129.92	$133.90	$138.01	$142.24	$146.60	$151.10	$155.73	$160.51	$165.43
$82.89	$85.43	$88.05	$90.75	$93.53	$96.40	$99.36	$102.41	$105.55	$108.78	$112.12	$115.56	$119.10	$122.75	$126.52
$97.31	$100.29	$103.37	$106.54	$109.80	$113.17	$116.64	$120.22	$123.91	$127.71	$131.62	$135.66	$139.82	$144.11	$148.52
$151.32	$155.96	$160.75	$165.68	$170.76	$175.99	$181.39	$186.95	$192.69	$198.59	$204.68	$210.96	$217.43	$224.10	$230.97
$83.38	$85.93	$88.57	$91 29	$94.09	$96.97	$99.94	$103.01	$106.17	$109.42	$112.78	$116.24	$119.80	$123.48	$127.26
$181.86	$187.44	$193.19	$199.11	$205.22	$211.51	$218.00	$224.68	$231.58	$238.68	$246.00	$253.54	$261.32	$269.33	$277.59
$91.40	$94.20	$97.09	$100.07	$103.14	$106.30	$109.56	$112.92	$116.39	$119.95	$123.63	$127.42	$131.33	$135.36	$139.51
$120.54	$124.24	$128.05	$131.97	$136.02	$140.19	$144.49	$148.92	$153.49	$158.20	$163.05	$168.05	$173.20	$178.51	$183.99
3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%
1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 150	Year 151	Year 152	Year 153	Year 154	Year 155	Year 156	Year 157	Year 158	Year 159	Year 160	Year 161	Year 162	Year 163	Year 164
11/30/2165	11/30/2166	11/30/2167	11/30/2168	11/30/2169	11/30/2170	11/30/2171	11/30/2172	11/30/2173	11/30/2174	11/30/2175	11/30/2176	11/30/2177	11/30/2178	11/30/2179
$225.76	$232.69	$239.82	$247.18	$254.76	$262.57	$270.62	$278.92	$287.48	$296.29	$305.38	$314.74	$324.40	$334.34	$344.60
$165.20	$170.27	$175.49	$180.87	$186.42	$192.13	$198.03	$204.10	$210.36	$216.81	$223.46	$230.31	$237.37	$244.65	$252.15
$216.22	$222.85	$229.68	$236.73	$243.99	$251.47	$259.18	$267.13	$275.32	$283.76	$292.46	$301.43	$310.68	$320.20	$330.02
$263.28	$271.36	$279.68	$288.26	$297.10	$306.21	$315.60	$325.28	$335.25	$345.53	$356.13	$367.05	$378.30	$389.91	$401.86
$402.65	$415.00	$427.72	$440.84	$454.36	$468.29	$482.65	$497.46	$512.71	$528.43	$544.64	$561.34	$578.56	$596.30	$614.58
$170.50	$175.73	$181.12	$186.67	$192.40	$198.30	$204.38	$210.65	$217.11	$223.77	$230.63	$237.70	$244.99	$252.50	$260.25
$130.40	$134.40	$138.52	$142.77	$147.14	$151.66	$156.31	$161.10	$166.04	$171.13	$176.38	$181.79	$187.36	$193.11	$199.03
$153.08	$157.77	$162.61	$167.60	$172.74	$178.04	$183.50	$189.12	$194.92	$200.90	$207.06	$213.41	$219.96	$226.70	$233.65
$238.05	$245.35	$252.88	$260.63	$268.63	$276.86	$285.35	$294.11	$303.12	$312.42	$322.00	$331.88	$342.05	$352.54	$363.35
$131.17	$135.19	$139.33	$143.61	$148.01	$152.55	$157.23	$162.05	$167.02	$172.14	$177.42	$182.86	$188.47	$194.25	$200.21
$286.10	$294.87	$303.92	$313.24	$322.84	$332.74	$342.95	$353.46	$364.30	$375.48	$386.99	$398.86	$411.09	$423.70	$436.69
$143.79	$148.20	$152.74	$157.43	$162.25	$167.23	$172.36	$177.64	$183.09	$188.71	$194.49	$200.46	$206.61	$212.94	$219.47
$189.63	$195.44	$201.44	$207.61	$213.98	$220.54	$227.31	$234.28	$241.46	$248.87	$256.50	$264.36	$272.47	$280.83	$289.44
3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%
1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 165	Year 166	Year 167	Year 168	Year 169	Year 170	Year 171	Year 172	Year 173	Year 174	Year 175	Year 176	Year 177	Year 178	Year 179
11/30/2180	11/30/2181	11/30/2182	11/30/2183	11/30/2184	11/30/2185	11/30/2186	11/30/2187	11/30/2188	11/30/2189	11/30/2190	11/30/2191	11/30/2192	11/30/2193	11/30/2194
$355.16	$366.06	$377.28	$388.85	$400.78	$413.07	$425.73	$438.79	$452.25	$466.11	$480.41	$495.14	$510.32	$525.97	$542.10
$259.89	$267.86	$276.07	$284.54	$293.26	$302.26	$311.53	$321.08	$330.93	$341.07	$351.53	$362.31	$373.42	$384.88	$396.68
$340.14	$350.58	$361.33	$372.41	$383.83	$395.60	$407.73	$420.23	$433.12	$446.40	$460.09	$474.20	$488.74	$503.73	$519.18
$414.19	$426.89	$439.98	$453.47	$467.38	$481.71	$496.48	$511.71	$527.40	$543.58	$560.25	$577.43	$595.13	$613.38	$632.19
$633.43	$652.86	$672.88	$693.51	$714.78	$736.70	$759.29	$782.58	$806.58	$831.31	$856.80	$883.08	$910.16	$938.07	$966.84
$268.23	$276.45	$284.93	$293.67	$302.67	$311.96	$321.52	$331.38	$341.54	$352.02	$362.81	$373.94	$385.41	$397.23	$409.41
$205.14	$211.43	$217.91	$224.59	$231.48	$238.58	$245.90	$253.44	$261.21	$269.22	$277.47	$285.98	$294.75	$303.79	$313.11
$240.82	$248.20	$255.82	$263.66	$271.75	$280.08	$288.67	$297.52	$306.64	$316.05	$325.74	$335.73	$346.03	$356.64	$367.57
$374.50	$385.98	$397.82	$410.02	$422.59	$435.55	$448.91	$462.67	$476.86	$491.49	$506.56	$522.09	$538.10	$554.61	$571.61
$206.35	$212.67	$219.20	$225.92	$232.85	$239.99	$247.35	$254.93	$262.75	$270.81	$279.11	$287.67	$296.49	$305.58	$314.96
$450.08	$463.88	$478.11	$492.77	$507.88	$523.46	$539.51	$556.06	$573.11	$590.68	$608.80	$627.47	$646.71	$666.54	$686.98
$226.20	$233.14	$240.29	$247.66	$255.25	$263.08	$271.15	$279.46	$288.03	$296.87	$305.97	$315.35	$325.02	$334.99	$345.26
$298.32	$307.46	$316.89	$326.61	$336.63	$346.95	$357.59	$368.56	$379.86	$391.51	$403.51	$415.89	$428.64	$441.79	$455.33
3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%
1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 180	Year 181	Year 182	Year 183	Year 184	Year 185	Year 186	Year 187	Year 188	Year 189	Year 190	Year 191	Year 192	Year 193	Year 194
11/30/2195	11/30/2196	11/30/2197	11/30/2198	11/30/2199	11/30/2200	11/30/2201	11/30/2202	11/30/2203	11/30/2204	11/30/2205	11/30/2206	11/30/2207	11/30/2208	11/30/2209
$558.73	$575.86	$593.52	$611.72	$630.48	$649.82	$669.75	$690.28	$711.45	$733.27	$755.76	$778.93	$802.82	$827.44	$852.82
$408.84	$421.38	$434.30	$447.62	$461.35	$475.50	$490.08	$505.11	$520.60	$536.56	$553.02	$569.98	$587.46	$605.47	$624.04
$535.10	$551.51	$568.42	$585.86	$603.82	$622.34	$641.42	$661.09	$681.37	$702.26	$723.80	$745.99	$768.87	$792.45	$816.75
$651.58	$671.56	$692.16	$713.38	$735.26	$757.81	$781.05	$805.00	$829.69	$855.13	$881.35	$908.38	$936.24	$964.95	$994.54
$996.49	$1,027.05	$1,058.54	$1,091.01	$1,124.46	$1,158.95	$1,194.49	$1,231.12	$1,268.87	$1,307.78	$1,347.89	$1,389.22	$1,431.83	$1,475.74	$1,520.99
$421.96	$434.90	$448.24	$461.99	$476.15	$490.76	$505.81	$521.32	$537.30	$553.78	$570.76	$588.27	$606.31	$624.90	$644.06
$322.71	$332.61	$342.81	$353.32	$364.15	$375.32	$386.83	$398.69	$410.92	$423.52	$436.51	$449.90	$463.69	$477.91	$492.57
$378.85	$390.46	$402.44	$414.78	$427.50	$440.61	$454.12	$468.05	$482.40	$497.19	$512.44	$528.16	$544.35	$561.05	$578.25
$589.14	$607.21	$625.83	$645.02	$664.80	$685.19	$706.20	$727.86	$750.18	$773.19	$796.90	$821.33	$846.52	$872.48	$899.24
$324.61	$334.57	$344.83	$355.40	$366.30	$377.54	$389.11	$401.05	$413.34	$426.02	$439.09	$452.55	$466.43	$480.73	$495.47
$708.05	$729.76	$752.14	$775.21	$798.98	$823.48	$848.74	$874.76	$901.59	$929.24	$957.74	$987.11	$1,017.38	$1,048.58	$1,080.73
$355.85	$366.76	$378.01	$389.60	$401.55	$413.87	$426.56	$439.64	$453.12	$467.02	$481.34	$496.10	$511.31	$526.99	$543.15
$469.30	$483.69	$498.52	$513.81	$529.57	$545.81	$562.55	$579.80	$597.58	$615.90	$634.79	$654.26	$674.32	$695.00	$716.31
3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%
1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

Year 195	Year 196	Year 197	Year 198	Year 199	Year 200
11/30/2210	11/30/2211	11/30/2212	11/30/2213	11/30/2214	11/30/2215
$878.97	$905.92	$933.71	$962.34	$991.85	$1,022.27
$643.18	$662.90	$683.23	$704.18	$725.78	$748.03
$841.80	$867.61	$894.22	$921.64	$949.91	$979.04
$1,025.04	$1,056.48	$1,088.87	$1,122.27	$1,156.68	$1,192.15
$1,567.63	$1,615.71	$1,665.26	$1,716.32	$1,768.96	$1,823.21
$663.81	$684.17	$705.15	$726.78	$749.06	$772.04
$507.68	$523.24	$539.29	$555.83	$572.87	$590.44
$595.98	$614.26	$633.10	$652.51	$672.52	$693.15
$926.81	$955.24	$984.53	$1,014.72	$1,045.84	$1,077.91
$510.67	$526.33	$542.47	$559.11	$576.25	$593.92
$1,113.87	$1,148.03	$1,183.24	$1,219.53	$1,256.92	$1,295.47
$559.81	$576.98	$594.67	$612.91	$631.71	$651.08
$738.28	$760.92	$784.26	$808.31	$833.09	$858.64
3.07%	3.07%	3.07%	3.07%	3.07%	3.07%
1.30%	1.30%	1.30%	1.30%	1.30%	1.30%
1.77%	1.77%	1.77%	1.77%	1.77%	1.77%

☐ **Non Public Document – Contains Trade Secret Data**
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☒ **Public Document**

Xcel Energy
Docket No.: E002/GR-15-826
Response To: Office of Attorney General Information Request No. 532
Requestor: Ryan Barlow
Date Received: May 16, 2016

Question:

For all responses show amounts for Total Company and the Minnesota jurisdictional retail unless indicated otherwise. Total Company is meant to include costs incurred for both regulated and non-regulated operations.

Has Xcel Energy Inc. announced any stock issuance in the test year or any plan years?

Response:

Xcel Energy has not announced any stock issuance for the 2016 Test Year or 2017 and 2018 Plan Years.

Witness: Brian Van Abel
Preparer: Mary Schell
Title: Director
Department: Corporate Financial Policy
Telephone: 612-215-5362
Date: May 24, 2016

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☐ **Public Document – Trade Secret Data Excised**
☒ **Public Document**

Xcel Energy
Docket No.: E002/GR-15-826
Response To: Xcel Large Industrials Information Request No. 25
Requestor: Andrew Moratzka, Sarah Johnson Phillips, Emma J. Fazio
Date Received: January 5, 2016

Question:

Reference: Van Abel Direct Testimony:

Does Xcel plan on issuing any equity during the periods 2016-2019? If yes, please provide the expected amounts and dates of issuance, along with any projected costs, similar to the calculations as shown in Schedule 13.

Response:

No, Xcel Energy Inc. does not currently plan on issuing any equity during the periods 2016-2019.

Witness: Brian Van Abel
Preparer: Kaydra Kirtz
Title: Forecast/Financial Consultant
Department: Financial Policy
Telephone: 612-215-4637
Date: January 14, 2016

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☒ **Public Document**

Xcel Energy
Docket No.: E002/GR-15-826
Response To: MN Department of Commerce Information Request No. 201
Requestor: Nancy Campbell, Dale Lusti, Angela Byrne
Date Received: May 27, 2016

Question:

Subject: Flotation Costs

References: Van Abel Direct, Schedule 13; Coyne Direct, Schedule 4

Please explain why Xcel excluded non-public issuances from the calculation of the flotation cost percentage (4.617 percent) in the above-referenced Schedules in light of the fact Xcel included non-public issuances in its calculation in Docket No. E002/GR-13-868 (see Exhibit __ RBH-1, Schedule 3 (Hevert Direct)).

Response:

The non-public issuances should have been included in the calculation of the flotation costs for NSP-MN shown on Schedule 4 to Company witness Mr. James Coyne's Direct Testimony, Exhibit___(JMC-1). If those costs for non-public issuances are included, the recommended flotation cost adjustment in Mr. Coyne's testimony would be reduced from 19 basis points to 12 basis points.

Witness: James M. Coyne
Preparer: James M. Coyne
Title: Senior Vice President
Department: Concentric Energy Advisors, Inc.
Telephone: 508-263-6255
Date: June 9, 2016

STATE OF MINNESOTA

OFFICE OF THE ATTORNEY GENERAL

LORI SWANSON
ATTORNEY GENERAL

SUITE 1400
445 MINNESOTA STREET
ST. PAUL, MN 55101-2131
TELEPHONE: (651) 296-7575

June 14, 2016

Mr. Daniel Wolf, Executive Secretary
Minnesota Public Utilities Commission
121 Seventh Place East, Suite 350
St. Paul, MN 55101-2147

Re: ***In the Matter of the Application of Northern States Power Company, d/b/a Xcel Energy for Authority to Increase Rates for Electric Service in Minnesota***
MPUC Docket No. E-002/GR-15-826

Dear Mr. Wolf:

Enclosed and e-filed in the above-referenced matter please find Direct Testimony of the Office of the Attorney General–Residential Utilities and Antitrust Division's witness Brian Lebens.

By copy of this letter all parties have been served. An Affidavit of Service is also enclosed.

Sincerely,

s/ Ryan Barlow

RYAN P. BARLOW
Assistant Attorney General

(651) 757-1473 (Voice)
(651) 296-9663 (Fax)

Enclosure

AFFIDAVIT OF SERVICE

Re: ***In the Matter of the Application of Northern States Power Company, d/b/a Xcel Energy for Authority to Increase Rates for Electric Service in Minnesota***
MPUC Docket No. E-002/GR-15-826

STATE OF MINNESOTA)
) ss.
COUNTY OF RAMSEY)

I hereby state that on June 14, 2016, I filed with eDockets ***Direct Testimony of the Office of the Attorney General–Residential Utilities and Antitrust Division's witness Brian Lebens*** and served the same upon all parties listed on the attached service list by email, and/or United States Mail with postage prepaid, and deposited the same in a U.S. Post Office mail receptacle in the City of St. Paul, Minnesota.

s/ Judy Sigal
Judy Sigal

Subscribed and sworn to before me
this 14th day of June, 2016.

s/ Patricia Jotblad
Notary Public

My Commission expires: January 31, 2020.

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