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August 11, 2022

Via Electronic Filing

Public Utility Commission of Oregon
Attn: Filing Center
201 High St. SE, Suite 100
Salem OR 97301

Re: In the Matter of PACIFICORP, dba PACIFIC POWER
**Docket Nos. UE 399, UM 1694, UM 2134, UM 2142, UM 2167, UM 2185,
UM 2186, and UM 2201**

Dear Filing Center:

Please find enclosed the Rebuttal Testimony and Exhibits of Michael P. Gorman (AWEC-CUB/200 – 212) on behalf of the Alliance of Western Energy Consumers and Oregon Citizens' Utility Board in the above-referenced dockets.

Thank you for your assistance. If you have any questions, please do not hesitate to call.

Sincerely,

/s/ Jesse O. Gorsuch
Jesse O. Gorsuch

Enclosure

**BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON**

UE 399, UM 1964, UM 2134, UM 2142, UM 2167, UM 2185, UM 2186, UM 2201

In the Matters of

PACIFICORP dba PACIFIC POWER,

Request for a General Rate Revision
(UE 399),

Application for Approval of Deferred
Accounting for a Balancing Account Related
to the Transportation Electrification Program
(UM 1964),

Application to Defer Costs Relating to Cedar
Springs II (UM 2134),

Application for Approval of Deferred
Accounting for Cholla Unit 4-Related
Property Tax Expense (UM 2142),

Application for Approval of Deferred
Accounting for Revenues Associated with
Renewable Energy Credits from Pryor
Mountain, (UM 2167),

Application for Approval of Deferred
Accounting and Accounting Order Related to
Non-Contributory Defined Benefit Pension
Plans (UM 2185),

Application for Approval of Deferred
Accounting for Costs Relating to a Renewable
Resource Pursuant to ORS 469A.120
(UM 2186), and

Alliance of Western Energy Consumers,
Application for an Accounting Order
Requiring PacifiCorp to Defer Fly Ash
Revenues (UM 2201).

**REBUTTAL TESTIMONY OF
MICHAEL P. GORMAN
ON BEHALF OF THE
ALLIANCE OF WESTERN ENERGY
CONSUMERS AND
OREGON CITIZENS' UTILITY
BOARD**

August 11, 2022

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EXHIBIT LIST

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|---|
| AWEC-CUB/201 – Constant Growth DCF Model (Consensus Analysts’ Growth Rates) (Updated) |
| AWEC-CUB/202 – Payout Ratios (Updated) |
| AWEC-CUB/203 – Sustainable Growth Rate (Updated) |
| AWEC-CUB/204 – Constant Growth DCF Model (Sustainable Growth Rate) (Updated) |
| AWEC-CUB/205 – Multi-Stage Growth DCF Model (Updated) |
| AWEC-CUB/206 – Equity Risk Premium – Treasury Bond (Updated) |
| AWEC-CUB/207 – Equity Risk Premium – Utility Bond (Updated) |
| AWEC-CUB/208 – Bond Yield Spreads (Updated) |
| AWEC-CUB/209 – Treasury and Utility Bond Yields (Updated) |
| AWEC-CUB/210 – Value Line Beta (Updated) |
| AWEC-CUB/211– CAPM Return (Updated) |
| AWEC-CUB/212 – Accuracy of Interest Rate Forecasts (Updated) |

1 **I. INTRODUCTION AND SUMMARY**

2 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

3 A. Michael P. Gorman. My business address is 16690 Swingley Ridge Road, Suite 140,
4 Chesterfield, MO 63017.

5 **Q. ARE YOU THE SAME MICHAEL P. GORMAN WHO PREVIOUSLY FILED**
6 **TESTIMONY IN THIS PROCEEDING?**

7 A. Yes.

8 **Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS PROCEEDING?**

9 A. I am testifying on behalf of the Alliance of Western Energy Consumers (“AWEC”) and
10 the Oregon Citizens’ Utility Board (“CUB”). AWEC members include large energy
11 consumers that purchase services from PacifiCorp, dba Pacific Power (“PacifiCorp” or
12 “Company”). CUB represents the interests of PacifiCorp’s residential customers.

13 **Q. ARE YOU SPONSORING ANY EXHIBITS IN CONNECTION WITH YOUR**
14 **TESTIMONY?**

15 A. Yes. I am sponsoring Exhibit AWEC-CUB/201 through Exhibit AWEC-CUB/212.

16 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?**

17 A. I will respond to PacifiCorp witness Ann Bulkley’s Reply Testimony, and provide an
18 updated cost of equity for PacifiCorp using the same methodology I offered in my
19 Opening Testimony, but reflecting data available through the end of July 2022. This
20 updated analysis supports a return on equity (“ROE”) in the range of 8.90% to 9.80%,
21 with a midpoint estimate of 9.35%. This update produces an ROE slightly higher than
22 my recommended midpoint of 9.25% in my Opening Testimony.

23 **Q. DID PACIFICORP WITNESS MS. BULKLEY OFFER REBUTTAL TO YOUR**
24 **RATE OF RETURN FINDINGS IN THIS PROCEEDING?**

25 A. Yes. Ms. Bulkley’s arguments include the following:

- 1 1. She believes that my sustainable growth Discounted Cash Flow (“DCF”)
2 analysis is not appropriate. She argues that earnings growth is not based on
3 retaining earnings reinvested in plant to grow rate base. In support of this
4 contradiction to my testimony, she cites an article published in the *Journal of*
5 *Finance*, which found that contrary to traditional thinking, within U.S.
6 “Market Portfolios” composed of companies with high growth rates correlated
7 with higher dividend payout ratios. She opines that this finding contradicts
8 the internal growth rate methodology, and further opines that this article
9 proves her position that the sustainable growth DCF model is not
10 appropriate.^{1/} I disagree for many reasons, as explained in this testimony.
- 11 2. She maintains that my criticisms of her single-stage DCF analysis relying on
12 short-term (three- to five-year) growth rates that are too high to be reasonable
13 estimates of long-term sustainable growth are unfounded. She opines that the
14 short-term growth rates used in her model are comparable to the short-term
15 growth rates used in my constant growth DCF analysis.^{2/} Analysts’ three- to
16 five-year growth rates used in both her analysis and my analysis are too high
17 to be reasonable estimates of long-term sustainable growth. Hence, her
18 persistence to give significant weight to a constant growth DCF model using
19 analysts’ short-term growth rates that are far too high to be rational,
20 sustainable growth rates has the effect of overstating a reasonable DCF return
21 on the market, and inflates her ROE recommendation.
- 22 3. She maintains that my multi-stage DCF analysis is below any authorized
23 return for a utility in the past 40 years.^{3/} In arriving at my DCF return results,
24 I found it appropriate to use a DCF return that is higher than my multi-stage
25 growth DCF model found to be appropriate in this case. However, I
26 considered all the results of my DCF studies, along with my risk premium
27 studies, in reaching this conclusion. Ms. Bulkley’s singling out the results of
28 the multi-stage DCF analysis, without considering this other market
29 information, renders her criticism suspect, especially in light of her own
30 testimony, where she looks at a full analysis before reaching an opinion on a
31 fair ROE.^{4/}
- 32 4. She maintains that my Bond Yield Plus Risk Premium analysis suffers from
33 numerous issues including:
- 34 a. Not accounting for the simple inverse relationship between equity risk
35 premiums and interest rates. In my analysis I relied on all factors which
36 describe differences in investment risk for equity versus debt securities,
37 not only interest rate relationships.

^{1/} PAC/1400, Bulkley/94.

^{2/} *Id.*, Bulkley/90.

^{3/} *Id.*, Bulkley/91.

^{4/} *Id.*, Bulkley/98 and Bulkley/99.

- 1 b. She claims that without explanation or justification, my risk premium in
2 this case was not the same as it has been in prior cases. My risk premium
3 analysis was based on observable risk premium levels in the current
4 marketplace, which were different than risk premiums observed in market
5 data in prior cases. My analysis is the same as prior cases, but the results
6 are based on the current market. Ms. Bulkley provided no response to this
7 assessment of changes in risk premiums.
- 8 c. Relied on outdated Treasury and utility bond yields. In this testimony, I
9 update my analysis to reflect bond yields that extend through the end of
10 July 2022, and this update of my analysis continues to support the
11 reasonableness of my ROE findings for PacifiCorp. She maintains that
12 correcting the deficiencies in my Bond Yield Plus Risk Premium analysis
13 would produce results between 10.45% and 10.69%.^{5/} I strongly disagree.
- 14 5. She proposes two updates to my Capital Asset Pricing Model (“CAPM”)
15 analysis. Those include using risk-free rates for more current data relative to
16 the April 2022 data, and reflecting current betas of the proxy group, but her
17 numbers are flawed and unreliable.
- 18 6. She states that the midpoint of my ROE analysis would support an ROE of
19 10.06%, which is higher than what the Company is requesting of 9.8%.^{6/} I
20 disagree.
- 21 7. And finally, she disagrees with the updates I made to her DCF analysis by
22 employing a multi-stage DCF study to her study results, CAPM and Bond
23 Yield Plus Risk Premium models, corrected for the deficiencies in her
24 analysis. Her arguments are without merit.

25 **Q. IN RESPONSE TO MS. BULKLEY’S CLAIM THAT THE DATA USED IN**
26 **YOUR ANALYSIS IS STALE, DID YOU UPDATE YOUR ROE**
27 **METHODOLOGIES IN REBUTTAL TESTIMONY?**

28 A. Yes. Using the same methodologies I did in my Opening Testimony, but updating for
29 data through the end of July 2022, my ROE methodologies support an ROE in the range
30 of 8.90% to 9.80%, with a midpoint of 9.35%. The updated analysis suggests a slightly
31 higher ROE than the 9.25% I recommended in my Opening Testimony.

^{5/} *Id.*

^{6/} *Id.*, Bulkley/92.

1 **II. DCF MODELS**

2 **Q. IN FORMING YOUR RECOMMENDED ROE FOR PACIFICORP, DID YOU**
3 **RELY ON A SINGLE GROWTH RATE DCF METHODOLOGY OR DID YOU**
4 **CONSIDER RESULTS OF ALL THREE MODELS?**

5 A. I considered the results of all three DCF analyses I performed, as well as other observable
6 market evidence, to form my opinion on the best estimate of the current DCF estimate of
7 the market-required return. I relied on three versions of the DCF model. First, I
8 developed a constant growth DCF analysis using analysts' three- to five-year growth rate
9 projections. Second, I developed a constant growth DCF analysis using a sustainable
10 growth rate methodology. Finally, I developed a multi-stage growth rate methodology
11 reflecting three different stages of growth.

12 After performing all three of these DCF studies, I relied on my judgement and
13 observation of other observable market evidence to recommend a DCF return which
14 reasonably aligns with current market costs. In my Opening Testimony (AWEC-
15 CUB/100) at Gorman/43 and Gorman/44, I concluded that my DCF analysis supported a
16 fair return for PacifiCorp of 8.8%. In my updated ROE study, these methodologies
17 support an ROE of 8.90%.

18 My recommended ROE was higher than my estimate from the constant growth
19 DCF analysis using sustainable growth rate projections and my multi-stage growth DCF
20 analysis. I did recommend an ROE toward the results of my constant growth DCF
21 analysis using analysts' growth rate estimates, which I concluded in my testimony were
22 based on unsustainably high short-term growth rates.^{7/} Ms. Bulkley's response to my
23 DCF studies simply fails to recognize my reliance on multi-DCF methodologies to

^{7/} *Id.*, Gorman/33 through Gorman/35.

1 estimate a range of possible results for measuring a fair market cost of equity, and
2 selecting DCF return estimates which reflect economically logical data, sustainable
3 growth and DCF parameters that reflect rational outlooks for expected investment returns
4 and logical economic results.

5 **Q. DO YOU AGREE WITH MS. BULKLEY THAT VERSIONS OF THE DCF**
6 **MODEL CAN PRODUCE RESULTS WHICH MAY NOT BE APPROPRIATE**
7 **FOR REASONABLY ESTIMATING THE CURRENT MARKET COST OF**
8 **EQUITY FOR PACIFICORP?**

9 A. Yes. While I disagree that Ms. Bulkley's reliance on a single article and disregarding the
10 sustainable growth DCF methodology is reasonable, I do agree that that methodology,
11 along with the multi-stage growth DCF methodology, can at times produce market return
12 estimates which are not reasonable for setting rates. That is precisely why I relied on
13 multiple studies to support my recommendation on a fair and reasonable DCF return on
14 the market.

15 **Q. PLEASE RESPOND TO MS. BULKLEY'S ARGUMENT THAT A CONSTANT**
16 **GROWTH DCF ANALYSIS BASED ON A SUSTAINABLE GROWTH RATE**
17 **METHODOLOGY IS NOT REASONABLE.**

18 A. Ms. Bulkley's argues that long-term sustainable earnings growth cannot be based on
19 growth in rate base and internal funding. In my testimony, I described how utilities'
20 earnings growth is tied to rate base growth, and rate base growth is funded by internal
21 cash flows, and issuing new debt or new equity securities. Internally generated cash is
22 the largest source of capital used to fund rate base growth, and is comprised of retained
23 earnings, and non-cash expenses such as depreciation expense and deferred income taxes.
24 Retaining earnings for existing shareholders to reinvest in plant and grow rate base grows
25 revenue requirement and operating income, which results in higher earnings per share for
26 existing shareholders. Further, to the extent new shares are sold to fund rate base growth

1 and those shares are sold above book value, that also has the effect of creating an
2 accretion growth to the book value for existing shareholders, and thus growing short-term
3 earnings growth outlooks.

4 Ms. Bulkley appears to disagree with this assessment of utilities' long-term
5 growth outlook. However, her views are in conflict with independent market
6 participants, and her citing of a specific report dealing with market portfolios does not
7 refute the accuracy of this internal growth rate methodology.

8 For example, a report issued by Standard & Poor's ("S&P") *Global Market*
9 *Intelligence* entitled, "The Big Picture: 2022 Electric, Natural Gas and Water Utilities
10 Outlook" (October 2021), outlined the U.S. utility industry's proposed capital program
11 and noted it is on the upswing and will drive infrastructure needs and Environmental,
12 Social, and Governance ("ESG") considerations. The effects of these capital
13 expenditures were noted:

14 Forecast renewable energy spending is expected to comprise
15 approximately 11% of cumulative planned capex between 2021 and 2023,
16 or about 4% to 7% annual earnings growth.

17 S&P further stated that:

18 Energy utility growth strategies are focused on regulated infrastructure
19 investment and the expansion of renewable portfolios.

20 I would also note that an industry assessment by Moody's, in concluding a
21 "Stable" outlook for regulatory support for a robust investment cycle, notes that the
22 strength of the utility including cash flow coverages of debt, is supported by investments
23 that grow rate base.^{8/}

^{8/} *Moody's Investors Service*: "Regulated Electric and Gas Utilities – US: FAQ on the growing use of securitization bonds by investor-owned regulated utilities," November 4, 2021 at page 1.

1 Finally, I would note several regulated utility companies’ investor presentations
2 support outlooks for future growth rates, tied to levels of rate base investment. For
3 example, in a presentation to the investment community, Avista in May 2022² outlined its
4 focus to include expected growth in rate base of around 5%, which is mentioned along
5 with its long-term earnings growth rates outlook of 4% to 6%.

6 Ms. Bulkley’s concern that a utility’s long-term earnings/dividend sustainable
7 growth is not being based on investments that grow rate base, and the funding source of
8 that investment, is in conflict with the vast majority of independent market participants,
9 and utility companies themselves.

10 **Q. MS. BULKLEY ALSO CITES AN ARTICLE TITLED, “SURPRISE: HIGHER**
11 **DIVIDENDS = HIGHER EARNINGS GROWTH,” PUBLISHED IN THE**
12 **FINANCIAL ANALYSTS JOURNAL. SHE CONCLUDES THIS ARTICLE**
13 **DEMONSTRATES THE CONSTANT GROWTH DCF MODEL IS NOT**
14 **APPROPRIATE. PLEASE RESPOND.**

15 **A.** Ms. Bulkley confuses the article’s description of market portfolio methodologies that
16 identify annual “Market Portfolios” in concluding that high growth and high dividend
17 portfolio payouts do not align with earnings retention rates. In measuring market
18 portfolios, the authors identified companies with high payouts and high growth rates for
19 each year of the study period to reach their conclusions.

20 Importantly, this article does not investigate or address individual companies’
21 ability to generate sustainable long-term rates of earnings and/or dividend growth. The
22 article does raise questions related to annual growth of companies with high dividend
23 payout ratios and low retention rates having strong stock price performance. The article
24 also does not investigate whether individual companies can generate long-term

² Avista presentation to investment community: “Our Customers | Our People Perform | Invent,”
May 2022.

1 sustainable growth without earnings retention and reinvestment in new plant and
2 equipment that will grow revenues, operating income and profit. These are the principles
3 underlying the sustainable growth methodology, which is based on individual companies'
4 growth and not annual selections of portfolios of stocks to measure annual returns. Ms.
5 Bulkley's evaluation of the sustainable growth methodology is simply off base, and this
6 article does not support her assertion that the sustainable growth DCF model is not
7 appropriate.

8 **Q. PLEASE RESPOND TO MS. BULKLEY'S CONCLUSION THAT YOUR MULTI-**
9 **STAGE GROWTH DCF RESULTS ARE LOWER THAN THAT AUTHORIZED**
10 **FOR AN ELECTRIC UTILITY?**

11 A. I do not dispute that the results of my multi-stage growth DCF analysis in this proceeding
12 resulted in market return estimates which were too low to be regarded as reasonable
13 estimates of forward-looking cost of capital for PacifiCorp. This is precisely the reason I
14 recommended a DCF return that is the higher than the multi-stage growth DCF analysis
15 suggests the market cost of equity is in this proceeding. As noted above, all DCF
16 methodologies, and all market cost of capital methodologies, must be reviewed with
17 critical assessments in comparison to market data to make an accurate judgment on what
18 is the current market cost of equity. Any single model can produce numbers that are
19 unreasonably high or unreasonably low at any given point in time. The methodologies do
20 vary over time, and sometimes can produce low numbers, high numbers, or reasonable
21 numbers. But completing multiple analyses provides adequate information to make an
22 informed judgement on what is the current market cost of equity. This is precisely how I
23 used the models, and that is precisely what I intended to accomplish when I
24 recommended a fair return for PacifiCorp in this proceeding.

1 **III. RISK PREMIUM**

2 **Q. CONCERNING YOUR RISK PREMIUM ANALYSIS, MS. BULKLEY STATES**
3 **THAT YOU USED A DIFFERENT RISK PREMIUM METHOD IN THIS CASE**
4 **THAN YOU DID IN PRIOR CASES.^{10/} DID YOU EXPLAIN HOW YOU**
5 **DEVELOPED YOUR RISK PREMIUM ANALYSIS IN THIS PROCEEDING?**

6 A. Yes. As discussed in my Opening Testimony (AWEC-CUB/100) at Gorman/47 through
7 Gorman/50, I outlined observable market evidence to help assess whether or not risk
8 premiums in the current marketplace are higher or lower than risk premiums that have
9 been required in the marketplace for making investments in prior periods. The market
10 data in this case shows that observable risk premiums have receded to historical normal
11 levels, which is a change over the last several years. Specifically, in my testimony at
12 Gorman/48, Table 11, I show that the utility bond yield spread relative to Treasury bond
13 yields was near historical norms in 2020, but very low in 2019 and 2021. More recently,
14 the utility bond yields spreads are slightly above average. Higher or lower spreads are an
15 indication of whether or not the market is demanding a higher/lower risk premium for
16 securities with different investment risks.

17 I also examined a risk premium of observable utility stock yields relative to A-
18 rated utility bond yields and Treasury bond yields. In 2021, utility stock yield relative to
19 utility bond yield was actually negative.^{11/} More recently, utility adjusted yields of
20 around 3.42% represented a negative spread from A-rated utility bond yields of around
21 3.83%.^{12/} The spread in utility stock yields relative to utility bond yields has returned to
22 more of a normal risk premium available in the market for utility stocks versus bond
23 investments. Because utility bond investments offer a yield but no growth, the yields

^{10/} PGE/400, Bulkley/101.

^{11/} AWEC-CUB/103, Gorman/4.

^{12/} AWEC-CUB/116 and AWEC-CUB/106, Gorman/1.

1 historically have been slightly higher than that available for utility stocks, which offer
2 both yield and growth of principal. Again, this confirms a more normal risk premium in
3 this case.

4 **Q. IS YOUR OBSERVATION OF OBSERVABLE RISK PREMIUMS IN THE**
5 **MARKETPLACE IN THIS CASE DIFFERENT THAN THE METHODOLOGY**
6 **USED IN PRIOR CASES IN FORMING YOUR RISK PREMIUM ANALYSES?**

7 A. No. Indeed, it is the same analysis used in prior cases. My conclusions were different in
8 this case because the observable market risk premiums are different. As such, my risk
9 premium reflects risk premiums demanded by the marketplace currently, rather than the
10 risk premiums that have been demanded by the marketplace during different periods in
11 time.

12 **Q. DO YOU AGREE WITH MS. BULKLEY THAT MEASURING A RISK**
13 **PREMIUM IN A CURRENT MARKETPLACE SHOULD BE DONE BASED ON**
14 **CHANGES IN ONLY NOMINAL INTEREST RATES?**

15 A. No. I do not believe that academic articles support measuring a risk premium across time
16 periods is based on only changes in interest rates. Changes in interest rates is one factor
17 but other factors are also important such as changing levels of outlooks for future
18 inflation, and changing outlooks for the investment risk differentials between equity and
19 debt investments. All of these market factors result in variations in risk premiums over
20 time. Ms. Bulkley's proposal to gauge a risk premium by only changes in nominal
21 interest rates is incomplete and not reliable.

22 **Q. DO YOU BELIEVE IT IS APPROPRIATE TO REJECT YOUR CRITICISMS OF**
23 **MS. BULKLEY'S CAPM RESULTS?**

24 A. No. Ms. Bulkley's development of models and choice of inputs had the effect of
25 inflating her ROE estimates, her supporting analyses simply are not done reasonably and
26 correctly, and her conclusions are not reasonable.

1 **Q. DO YOU HAVE ANY COMMENTS CONCERNING MS. BULKLEY'S**
2 **EVIDENCE SUPPORTING THE REASONABLENESS OF HER ESTIMATED**
3 **MARKET RISK PREMIUM USED IN HER CAPM STUDY?**

4 A. Yes. In my Opening Testimony, I criticize Ms. Bulkley's CAPM results because they
5 were based on an irrationally high market risk premium. She notes at Bulkley/114 and
6 Bulkley/115 that her market risk premium is based on an expected market return that has
7 been experienced in the past. Specifically, she outlines that 50 out of the last 96 years
8 produced a market return of 12.63%. I do not dispute that half the time the market will
9 produce high returns, but in developing an expected market return it is rational and
10 logical to expect that the market will have some years with high returns and other years
11 with low returns.

12 In projecting an expected return on the market, weight should be given to both
13 good years (high returns) and bad years (low returns) in forming an expected long-term
14 return on the market. Ms. Bulkley's analysis is weighted toward only the good years or
15 high returns on the market. She does not consider the likelihood of years with poor
16 returns. Her assessment of the expected return of large Company stocks over the period
17 2009 through 2021 does reflect a period of strong market recovery over the last major
18 market downturn in 2008. But again, reflecting only periods of market recovery and
19 strong annual market returns does not reasonably produce an outlook for an expected
20 return on the market recognizing that a market can have good and bad returns over long
21 periods of time.

1 **IV. UPDATED ANALYSIS**

2 **Q. MS. BULKLEY CRITICIZED YOU FOR USING BOND YIELDS AS OF APRIL.**
3 **WOULD UPDATING YOUR ANALYSIS CONTINUE TO SUPPORT YOUR**
4 **RECOMMENDED ROE FOR PACIFICORP?**

5 A. Yes. Indeed, in response to Ms. Bulkley's claim that my data was stale, I have updated
6 my analysis as outlined in Table Rebuttal-1 below. The results of my update indicate a
7 fair ROE for PacifiCorp in the range of 8.90% to 9.80%, with a midpoint of 9.35%. The
8 9.25% recommended in my Opening Testimony is still reasonable, and falls near this
9 updated midpoint. However, this update would suggest an ROE of approximately 9.35%
10 is reasonable at the time of this update.

| TABLE REBUTTAL-1 | |
|---|-----------------------|
| <u>Return on Common Equity Summary</u> | |
| <u>Description</u> | <u>Results</u> |
| DCF | 8.90% |
| Risk Premium | 8.95% |
| CAPM | 9.80% |

11 The update reflects an update of the DCF analysis for stock prices up through
12 August 2022, dividend yields published in *The Value Line Investment Survey* on May 13,
13 June 10, and July 20, 2022, and 13-week Treasury bond yields, A-rated utility bond
14 yields, and Baa-rated utility bond yields through July 27, 2022.

15 The results of my DCF analysis using the same methodology but with more recent
16 market data is show below in Table Rebuttal-2.

| TABLE REBUTTAL-2 | | |
|--|-----------------------|----------------------|
| <u>Summary of DCF Results</u> | | |
| Description | Electric | |
| | <u>Average</u> | <u>Median</u> |
| Constant Growth DCF Model (Analysts' Growth) | 9.60% | 9.70% |
| Constant Growth DCF Model (Sustainable Growth) | 8.23% | 7.99% |
| Multi-Stage Growth DCF Model | 8.25% | 8.24% |

1 As outlined in the attached Exhibits AWEC-CUB/201 through AWEC-CUB/212
2 supporting this updated analysis, my constant growth DCF analyses using analysts'
3 growth rates still reflect growth rates that are too high to be sustainable over long periods
4 of time. For this reason, based on a review of my DCF analysis and review of updated
5 other observable market data, I believe my DCF return supports an ROE for PacifiCorp
6 in the range of 8.20% to 9.6%, with a midpoint of 8.90%.

7 Using average risk premiums over Treasury bond yields of 5.68%, and a 13-week
8 average Treasury bond rate of 3.13% indicates a risk premium return on the market of
9 8.81%. Also, a risk premium of 4.33% in combination with a current observable utility
10 bond yield of 4.79% indicates a risk premium return of 9.12%. This updated risk
11 premium range indicates an ROE in the range of approximately 8.8% to 9.1%, with a
12 midpoint of approximately 8.95%.

13 The update of my CAPM analysis continues to rely on normalized historical betas
14 as opposed to current published betas which are skewed based on market performance of
15 utility securities during a short period of time during the worldwide pandemic. More
16 recent utility beta estimates have been more normalized, therefore requiring the CAPM to

1 be constructed with a normalized beta as opposed to current published betas. My CAPM
2 analysis in combination with a two-year projected Treasury bond yield of 3.8% indicates
3 a fair ROE for PacifiCorp in this market of 9.78%.

4 **Q. CAN YOU EXPAND ON WHY YOU BELIEVE CURRENT PUBLISHED BETAS**
5 **ARE SKEWED DUE TO RESULTS IN A RELATIVELY SHORT TIME PERIOD**
6 **THAT OCCURRED DURING THE COVID-19 PANDEMIC?**

7 A. Yes. Previous studies indicated that *Value Line* published betas which reflect five years
8 of historical weekly return data were skewed due to market and utility returns in the
9 months of March and April of 2020. These months coincided with the initial onset of the
10 worldwide COVID-19 pandemic. Importantly, in my Opening Testimony in
11 AWEC/CUB 117 at pages Gorman/2 and Gorman/3, it shows a dramatic jump in the
12 published beta in the second quarter of 2020 relative to the historical period prior to that,
13 and betas have stayed at relatively elevated levels as long as the data from March and
14 April of 2020 are included in the five-year time frame. However, if these two months are
15 excluded, the *Value Line* betas would be more consistent with normal historical betas. I
16 base this conclusion on three calculations of betas: (1) for a five-year period before
17 March 2020; (2) for all months available after April of 2020 to current; and (3) in
18 comparison to the most recent five-year period which is largely what *Value Line's*
19 published betas are currently based on, which do include the months of March and April
20 of 2020. The results of these beta regression studies are shown below in Table Rebuttal-
21 3.

| TABLE REBUTTAL-3 | | | |
|---------------------------------------|--|---|-----------------------------|
| S&P 500 Utilities vs. NYSE | | | |
| Beta Calculations | | | |
| <u>Regression Betas</u> | | | |
| <u>Period</u> | <u>Raw</u> <u>Beta</u> | <u>Adjusted</u> <u>Beta</u> | <u>R²</u> |
| 5Yr Ending Feb '20 | 0.45 | 0.65 | 0.18 |
| May '20 - Current | 0.61 | 0.76 | 0.36 |
| Most Recent 5Yr Period | 0.81 | 0.89 | 0.51 |

Note:
Calculated using Value Line's regression based beta methodology.

1 In the table above, I show a calculated beta using the S&P 500 utility index
2 relative to the New York Stock Exchange resulted in a five-year beta ending July 29,
3 2022 of 0.89. This beta methodology aligns largely with the published *Value Line* beta
4 methodology for electric and gas utility stocks. However, using this same data, but
5 measuring a beta after the initial onset of the pandemic, May 20, 2020 through July 29,
6 2022, produces a *Value Line* beta of 0.76, which is very near normal beta ranges based on
7 *Value Line* published historical betas. Also, calculating a five-year historical beta for a
8 period ending in February 2020, the month just prior to the start of the COVID-19
9 pandemic, indicates an adjusted *Value Line* beta of 0.65, again consistent with historical
10 normal beta ranges.

11 Based on this, I conclude that *Value Line* published betas are skewed due to a
12 very short time period used to measure utility betas, March and April, 2020. Excluding
13 this two-month time period, out of the roughly 60 months used in calculating betas,

1 would support betas near normal levels, which is in the range of 0.65 to 0.75. Based on
2 this analysis, I believe the *Value Line* published betas are skewed to the high side, and do
3 not produce reasonable risk assessments of investment risk of utility companies.

4 **Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?**

5 A. Yes, it does.

**BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON**

UE 399, UM 1964, UM 2134, UM 2142, UM 2167, UM 2185, UM 2186, UM 2201

In the Matters of

PACIFICORP dba PACIFIC POWER,

Request for a General Rate Revision
(UE 399),

Application for Approval of Deferred
Accounting for a Balancing Account Related
to the Transportation Electrification Program
(UM 1964),

Application to Defer Costs Relating to Cedar
Springs II (UM 2134),

Application for Approval of Deferred
Accounting for Cholla Unit 4-Related
Property Tax Expense (UM 2142),

Application for Approval of Deferred
Accounting for Revenues Associated with
Renewable Energy Credits from Pryor
Mountain, (UM 2167),

Application for Approval of Deferred
Accounting and Accounting Order Related to
Non-Contributory Defined Benefit Pension
Plans (UM 2185),

Application for Approval of Deferred
Accounting for Costs Relating to a Renewable
Resource Pursuant to ORS 469A.120
(UM 2186), and

Alliance of Western Energy Consumers,
Application for an Accounting Order
Requiring PacifiCorp to Defer Fly Ash
Revenues (UM 2201).

**EXHIBIT AWEC-CUB/201
CONSTANT GROWTH DCF MODEL
(CONSENSUS ANALYSTS'
GROWTH RATES)
(UPDATED)**

PacifiCorp
Update (13-Week Period, Ending July 29, 2022)

Constant Growth DCF Model
(Consensus Analysts' Growth Rates)

| <u>Line</u> | <u>Company</u> | <u>13-Week AVG Stock Price¹</u> (1) | <u>Analysts' Growth²</u> (2) | <u>Annualized Dividend³</u> (3) | <u>Adjusted Yield</u> (4) | <u>Constant Growth DCF</u> (5) |
|-------------|---------------------------------------|---|--|---|----------------------------------|---------------------------------------|
| | <u>Company</u> | | | | | |
| 1 | ALLETE, Inc. | \$59.72 | 7.70% | \$2.60 | 4.69% | 12.39% |
| 2 | Alliant Energy Corporation | \$58.81 | 5.68% | \$1.71 | 3.07% | 8.76% |
| 3 | Ameren Corporation | \$90.08 | 6.97% | \$2.36 | 2.80% | 9.77% |
| 4 | American Electric Power Company, Inc. | \$96.91 | 6.31% | \$3.12 | 3.42% | 9.73% |
| 5 | Avista Corporation | \$42.29 | 5.58% | \$1.76 | 4.39% | 9.98% |
| 6 | CMS Energy Corporation | \$67.33 | 8.15% | \$1.84 | 2.96% | 11.10% |
| 7 | Duke Energy Corporation | \$107.52 | 5.79% | \$3.94 | 3.88% | 9.67% |
| 8 | Entergy Corporation | \$113.80 | 6.30% | \$4.04 | 3.77% | 10.07% |
| 9 | Evergy, Inc. | \$66.06 | 5.46% | \$2.29 | 3.66% | 9.12% |
| 10 | IDACORP, Inc. | \$105.73 | 3.46% | \$3.00 | 2.94% | 6.39% |
| 11 | NextEra Energy, Inc. | \$75.93 | 9.36% | \$1.70 | 2.45% | 11.80% |
| 12 | NorthWestern Corporation | \$58.30 | 3.23% | \$2.52 | 4.46% | 7.69% |
| 13 | Otter Tail Corporation | \$65.19 | 7.88% | \$1.65 | 2.73% | 10.61% |
| 14 | Portland General Electric Company | \$48.35 | 3.98% | \$1.81 | 3.89% | 7.87% |
| 15 | The Southern Company | \$72.37 | 5.29% | \$2.72 | 3.96% | 9.24% |
| 16 | Xcel Energy Inc. | \$71.34 | 6.53% | \$1.95 | 2.91% | 9.44% |
| 18 | Average | \$74.98 | 6.10% | \$2.44 | 3.50% | 9.60% |
| 19 | Median | \$69.34 | 6.04% | \$2.33 | 3.54% | 9.70% |

Sources:

¹ S&P Global Market Intelligence, Downloaded on August 1, 2022.

² Zacks, <http://www.zacks.com>, S&P Global Market Intelligence, <https://platform.mi.spglobal.com>, and Yahoo! Finance, <https://finance.yahoo.com/>, downloaded on July 29, 2022.

³ *The Value Line Investment Survey*, May 13, June 10, and July 22, 2022.

**BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON**

UE 399, UM 1964, UM 2134, UM 2142, UM 2167, UM 2185, UM 2186, UM 2201

In the Matters of

PACIFICORP dba PACIFIC POWER,

Request for a General Rate Revision
(UE 399),

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Accounting for a Balancing Account Related
to the Transportation Electrification Program
(UM 1964),

Application to Defer Costs Relating to Cedar
Springs II (UM 2134),

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Accounting for Cholla Unit 4-Related
Property Tax Expense (UM 2142),

Application for Approval of Deferred
Accounting for Revenues Associated with
Renewable Energy Credits from Pryor
Mountain, (UM 2167),

Application for Approval of Deferred
Accounting and Accounting Order Related to
Non-Contributory Defined Benefit Pension
Plans (UM 2185),

Application for Approval of Deferred
Accounting for Costs Relating to a Renewable
Resource Pursuant to ORS 469A.120
(UM 2186), and

Alliance of Western Energy Consumers,
Application for an Accounting Order
Requiring PacifiCorp to Defer Fly Ash
Revenues (UM 2201).

EXHIBIT AWEC-CUB/202

**PAYOUT RATIOS
(UPDATED)**

PacifiCorp Update

Payout Ratios

| <u>Line</u> | <u>Company</u> | <u>Dividends Per Share</u> | | <u>Earnings Per Share</u> | | <u>Payout Ratio</u> | |
|-------------|---------------------------------------|----------------------------|------------------|---------------------------|------------------|---------------------|------------------|
| | | <u>2021</u> | <u>Projected</u> | <u>2021</u> | <u>Projected</u> | <u>2021</u> | <u>Projected</u> |
| | | (1) | (2) | (3) | (4) | (5) | (6) |
| | <u>Company</u> | | | | | | |
| 1 | ALLETE, Inc. | \$2.52 | \$3.00 | \$3.23 | \$4.75 | 78.02% | 63.16% |
| 2 | Alliant Energy Corporation | \$1.61 | \$2.15 | \$2.63 | \$3.50 | 61.22% | 61.43% |
| 3 | Ameren Corporation | \$2.20 | \$3.10 | \$3.84 | \$5.25 | 57.29% | 59.05% |
| 4 | American Electric Power Company, Inc. | \$3.00 | \$4.00 | \$4.96 | \$6.50 | 60.48% | 61.54% |
| 5 | Avista Corporation | \$1.69 | \$2.05 | \$2.10 | \$2.75 | 80.48% | 74.55% |
| 6 | CMS Energy Corporation | \$1.74 | \$2.30 | \$2.58 | \$3.75 | 67.44% | 61.33% |
| 7 | Duke Energy Corporation | \$3.90 | \$4.35 | \$4.93 | \$6.50 | 79.11% | 66.92% |
| 8 | Entergy Corporation | \$3.86 | \$5.10 | \$6.87 | \$8.50 | 56.19% | 60.00% |
| 9 | Evergy, Inc. | \$2.18 | \$3.05 | \$3.83 | \$4.75 | 56.92% | 64.21% |
| 10 | IDACORP, Inc. | \$2.88 | \$4.00 | \$4.85 | \$6.00 | 59.38% | 66.67% |
| 11 | NextEra Energy, Inc. | \$1.54 | \$2.50 | \$1.81 | \$4.00 | 85.08% | 62.50% |
| 12 | NorthWestern Corporation | \$2.48 | \$2.68 | \$3.60 | \$4.00 | 68.89% | 67.00% |
| 13 | Otter Tail Corporation | \$1.56 | \$2.20 | \$4.23 | \$3.75 | 36.88% | 58.67% |
| 14 | Portland General Electric Company | \$1.70 | \$2.25 | \$2.72 | \$3.40 | 62.50% | 66.18% |
| 15 | The Southern Company | \$2.62 | \$3.10 | \$3.42 | \$4.75 | 76.61% | 65.26% |
| 16 | Xcel Energy Inc. | \$1.83 | \$2.50 | \$2.96 | \$4.00 | 61.82% | 62.50% |
| 17 | Average | \$2.33 | \$3.02 | \$3.66 | \$4.76 | 65.52% | 63.81% |

Source:

The Value Line Investment Survey, May 13, June 10, and July 22, 2022.

**BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON**

UE 399, UM 1964, UM 2134, UM 2142, UM 2167, UM 2185, UM 2186, UM 2201

In the Matters of

PACIFICORP dba PACIFIC POWER,

Request for a General Rate Revision
(UE 399),

Application for Approval of Deferred
Accounting for a Balancing Account Related
to the Transportation Electrification Program
(UM 1964),

Application to Defer Costs Relating to Cedar
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Accounting for Cholla Unit 4-Related
Property Tax Expense (UM 2142),

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Accounting for Revenues Associated with
Renewable Energy Credits from Pryor
Mountain, (UM 2167),

Application for Approval of Deferred
Accounting and Accounting Order Related to
Non-Contributory Defined Benefit Pension
Plans (UM 2185),

Application for Approval of Deferred
Accounting for Costs Relating to a Renewable
Resource Pursuant to ORS 469A.120
(UM 2186), and

Alliance of Western Energy Consumers,
Application for an Accounting Order
Requiring PacifiCorp to Defer Fly Ash
Revenues (UM 2201).

**EXHIBIT AWEC-CUB/203
SUSTAINABLE GROWTH RATE
(UPDATED)**

PacifiCorp
Update

Sustainable Growth Rate

| Line | Company | 3 to 5 Year Projections | | | | | | | | | | Sustainable |
|------|---------------------------------------|-------------------------|---------------|----------------|--------------|---------------|-------------|---------------|---------------|---------------|--------------|--------------|
| | | Dividends | Earnings | Book Value | Book Value | Adjustment | Adjusted | Payout | Retention | Internal | Growth | |
| | | Per Share | Per Share | Per Share | Growth | ROE | ROE | Ratio | Rate | Growth Rate | Rate | |
| | | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) |
| 1 | ALLETE, Inc. | \$3.00 | \$4.75 | \$54.00 | 3.55% | 8.80% | 1.02 | 8.95% | 63.16% | 36.84% | 3.30% | 4.03% |
| 2 | Alliant Energy Corporation | \$2.15 | \$3.50 | \$30.25 | 4.82% | 11.57% | 1.02 | 11.84% | 61.43% | 38.57% | 4.57% | 4.81% |
| 3 | Ameren Corporation | \$3.10 | \$5.25 | \$51.25 | 6.37% | 10.24% | 1.03 | 10.56% | 59.05% | 40.95% | 4.32% | 6.27% |
| 4 | American Electric Power Company, Inc. | \$4.00 | \$6.50 | \$59.00 | 5.81% | 11.02% | 1.03 | 11.33% | 61.54% | 38.46% | 4.36% | 5.89% |
| 5 | Avista Corporation | \$2.05 | \$2.75 | \$34.75 | 2.89% | 7.91% | 1.01 | 8.03% | 74.55% | 25.45% | 2.04% | 3.06% |
| 6 | CMS Energy Corporation | \$2.30 | \$3.75 | \$29.25 | 5.76% | 12.82% | 1.03 | 13.18% | 61.33% | 38.67% | 5.10% | 6.28% |
| 7 | Duke Energy Corporation | \$4.35 | \$6.50 | \$70.00 | 2.61% | 9.29% | 1.01 | 9.41% | 66.92% | 33.08% | 3.11% | 3.13% |
| 8 | Energy Corporation | \$5.10 | \$8.50 | \$74.00 | 5.20% | 11.49% | 1.03 | 11.78% | 60.00% | 40.00% | 4.71% | 5.61% |
| 9 | Evergy, Inc. | \$3.05 | \$4.75 | \$47.25 | 3.22% | 10.05% | 1.02 | 10.21% | 64.21% | 35.79% | 3.65% | 3.69% |
| 10 | IDACORP, Inc. | \$4.00 | \$6.00 | \$63.45 | 3.74% | 9.46% | 1.02 | 9.63% | 66.67% | 33.33% | 3.21% | 3.69% |
| 11 | NextEra Energy, Inc. | \$2.50 | \$4.00 | \$26.50 | 6.94% | 15.09% | 1.03 | 15.60% | 62.50% | 37.50% | 5.85% | 7.41% |
| 12 | NorthWestern Corporation | \$2.68 | \$4.00 | \$49.50 | 2.72% | 8.08% | 1.01 | 8.19% | 67.00% | 33.00% | 2.70% | 3.50% |
| 13 | Otter Tail Corporation | \$2.20 | \$3.75 | \$34.25 | 7.52% | 10.95% | 1.04 | 11.35% | 58.67% | 41.33% | 4.69% | 5.34% |
| 14 | Portland General Electric Company | \$2.25 | \$3.40 | \$35.50 | 3.23% | 9.58% | 1.02 | 9.73% | 66.18% | 33.82% | 3.29% | 3.30% |
| 15 | The Southern Company | \$3.10 | \$4.75 | \$32.25 | 4.16% | 14.73% | 1.02 | 15.03% | 65.26% | 34.74% | 5.22% | 5.49% |
| 16 | Xcel Energy Inc. | \$2.50 | \$4.00 | \$37.00 | 5.21% | 10.81% | 1.03 | 11.09% | 62.50% | 37.50% | 4.16% | 4.92% |
| 17 | Average | \$3.02 | \$4.76 | \$45.51 | 4.61% | 10.74% | 1.02 | 10.99% | 63.81% | 36.19% | 4.02% | 4.78% |

Sources and Notes:

Cols. (1), (2) and (3): *The Value Line Investment Survey*, May 13, June 10, and July 22, 2022.

Col. (4): [Col. (3) / Page 2 Col. (2)] ^ (1/number of years projected) - 1.

Col. (5): Col. (2) / Col. (3).

Col. (6): [2 * (1 + Col. (4))] / (2 + Col. (4)).

Col. (7): Col. (6) * Col. (5).

Col. (8): Col. (1) / Col. (2).

Col. (9): 1 - Col. (8).

Col. (10): Col. (9) * Col. (7).

Col. (11): Col. (10) + Page 2 Col. (9).

PacifiCorp Update

Sustainable Growth Rate

| Line | Company | 13-Week | 2021 | Market | Common Shares | | Growth | S Factor ³ | V Factor ⁴ | S * V |
|------|---------------------------------------|--------------------------|------------------------|-------------|--|---------------|--------------|-----------------------|-----------------------|--------------|
| | | Average | Book Value | to Book | Outstanding (in Millions) ² | | | | | |
| | | Stock Price ¹ | Per Share ² | Ratio | 2020 | 3-5 Years | (6) | (7) | (8) | (9) |
| | | (1) | (2) | (3) | (4) | (5) | | | | |
| | Company | | | | | | | | | |
| 1 | ALLETE, Inc. | \$59.72 | \$45.36 | 1.32 | 53.20 | 61.00 | 2.31% | 3.04% | 24.04% | 0.73% |
| 2 | Alliant Energy Corporation | \$58.81 | \$23.91 | 2.46 | 250.47 | 253.00 | 0.17% | 0.41% | 59.34% | 0.24% |
| 3 | Ameren Corporation | \$90.08 | \$37.64 | 2.39 | 257.70 | 280.00 | 1.39% | 3.33% | 58.22% | 1.94% |
| 4 | American Electric Power Company, Inc. | \$96.91 | \$44.49 | 2.18 | 504.21 | 545.00 | 1.30% | 2.84% | 54.09% | 1.54% |
| 5 | Avista Corporation | \$42.29 | \$30.14 | 1.40 | 71.50 | 83.00 | 2.52% | 3.53% | 28.73% | 1.01% |
| 6 | CMS Energy Corporation | \$67.33 | \$22.11 | 3.05 | 289.76 | 300.00 | 0.58% | 1.77% | 67.16% | 1.19% |
| 7 | Duke Energy Corporation | \$107.52 | \$61.55 | 1.75 | 769.00 | 770.00 | 0.02% | 0.04% | 42.75% | 0.02% |
| 8 | Entergy Corporation | \$113.80 | \$57.42 | 1.98 | 202.65 | 214.00 | 0.91% | 1.81% | 49.54% | 0.90% |
| 9 | Evergy, Inc. | \$66.06 | \$40.32 | 1.64 | 229.30 | 230.00 | 0.05% | 0.08% | 38.96% | 0.03% |
| 10 | IDACORP, Inc. | \$105.73 | \$52.82 | 2.00 | 50.52 | 52.00 | 0.48% | 0.97% | 50.04% | 0.48% |
| 11 | NextEra Energy, Inc. | \$75.93 | \$18.95 | 4.01 | 1,963.00 | 2,025.00 | 0.52% | 2.08% | 75.04% | 1.56% |
| 12 | NorthWestern Corporation | \$58.30 | \$43.28 | 1.35 | 54.06 | 62.00 | 2.31% | 3.11% | 25.77% | 0.80% |
| 13 | Otter Tail Corporation | \$65.19 | \$23.84 | 2.73 | 41.55 | 42.50 | 0.38% | 1.03% | 63.43% | 0.65% |
| 14 | Portland General Electric Company | \$48.35 | \$30.28 | 1.60 | 89.41 | 89.50 | 0.02% | 0.03% | 37.37% | 0.01% |
| 15 | The Southern Company | \$72.37 | \$26.30 | 2.75 | 1,060.00 | 1,070.00 | 0.16% | 0.43% | 63.66% | 0.27% |
| 16 | Xcel Energy Inc. | \$71.34 | \$28.70 | 2.49 | 544.03 | 561.00 | 0.51% | 1.28% | 59.77% | 0.76% |
| 17 | Average | \$74.98 | \$36.69 | 2.19 | 401.90 | 414.88 | 0.85% | 1.61% | 49.87% | 0.76% |

Sources and Notes:

¹ S&P Global Market Intelligence, Downloaded on August 1, 2022.

² *The Value Line Investment Survey*, May 13, June 10, and July 22, 2022.

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

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

**BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON**

UE 399, UM 1964, UM 2134, UM 2142, UM 2167, UM 2185, UM 2186, UM 2201

In the Matters of

PACIFICORP dba PACIFIC POWER,

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(UE 399),

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Accounting for a Balancing Account Related
to the Transportation Electrification Program
(UM 1964),

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Springs II (UM 2134),

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Non-Contributory Defined Benefit Pension
Plans (UM 2185),

Application for Approval of Deferred
Accounting for Costs Relating to a Renewable
Resource Pursuant to ORS 469A.120
(UM 2186), and

Alliance of Western Energy Consumers,
Application for an Accounting Order
Requiring PacifiCorp to Defer Fly Ash
Revenues (UM 2201).

EXHIBIT AWEC-CUB/204

**CONSTANT GROWTH DCF MODEL
(SUSTAINABLE GROWTH RATE)
(UPDATED)**

PacifiCorp Update

Constant Growth DCF Model (Sustainable Growth Rate)

| <u>Line</u> | <u>Company</u> | <u>13-Week AVG Stock Price¹</u> (1) | <u>Sustainable Growth²</u> (2) | <u>Annualized Dividend³</u> (3) | <u>Adjusted Yield</u> (4) | <u>Constant Growth DCF</u> (5) |
|-------------|---------------------------------------|---|--|---|----------------------------------|---------------------------------------|
| | <u>Company</u> | | | | | |
| 1 | ALLETE, Inc. | \$59.72 | 4.03% | \$2.60 | 4.53% | 8.56% |
| 2 | Alliant Energy Corporation | \$58.81 | 4.81% | \$1.71 | 3.05% | 7.86% |
| 3 | Ameren Corporation | \$90.08 | 6.27% | \$2.36 | 2.78% | 9.05% |
| 4 | American Electric Power Company, Inc. | \$96.91 | 5.89% | \$3.12 | 3.41% | 9.30% |
| 5 | Avista Corporation | \$42.29 | 3.06% | \$1.76 | 4.29% | 7.35% |
| 6 | CMS Energy Corporation | \$67.33 | 6.28% | \$1.84 | 2.90% | 9.19% |
| 7 | Duke Energy Corporation | \$107.52 | 3.13% | \$3.94 | 3.78% | 6.91% |
| 8 | Entergy Corporation | \$113.80 | 5.61% | \$4.04 | 3.75% | 9.36% |
| 9 | Evergy, Inc. | \$66.06 | 3.69% | \$2.29 | 3.59% | 7.28% |
| 10 | IDACORP, Inc. | \$105.73 | 3.69% | \$3.00 | 2.94% | 6.64% |
| 11 | NextEra Energy, Inc. | \$75.93 | 7.41% | \$1.70 | 2.40% | 9.82% |
| 12 | NorthWestern Corporation | \$58.30 | 3.50% | \$2.52 | 4.47% | 7.98% |
| 13 | Otter Tail Corporation | \$65.19 | 5.34% | \$1.65 | 2.67% | 8.01% |
| 14 | Portland General Electric Company | \$48.35 | 3.30% | \$1.81 | 3.87% | 7.17% |
| 15 | The Southern Company | \$72.37 | 5.49% | \$2.72 | 3.96% | 9.46% |
| 16 | Xcel Energy Inc. | \$71.34 | 4.92% | \$1.95 | 2.87% | 7.79% |
| 17 | Average | \$74.98 | 4.78% | \$2.44 | 3.45% | 8.23% |
| 18 | Median | \$69.34 | 4.87% | \$2.33 | 3.50% | 7.99% |

Sources:

¹ S&P Global Market Intelligence, Downloaded on August 1, 2022.

² AWEC-CUB/203.

³ *The Value Line Investment Survey*, May 13, June 10, and July 22, 2022.

**BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON**

UE 399, UM 1964, UM 2134, UM 2142, UM 2167, UM 2185, UM 2186, UM 2201

In the Matters of

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Plans (UM 2185),

Application for Approval of Deferred
Accounting for Costs Relating to a Renewable
Resource Pursuant to ORS 469A.120
(UM 2186), and

Alliance of Western Energy Consumers,
Application for an Accounting Order
Requiring PacifiCorp to Defer Fly Ash
Revenues (UM 2201).

EXHIBIT AWEC-CUB/205

**MULTI-STAGE GROWTH
DCF MODEL
(UPDATED)**

PacifiCorp Update

Multi-Stage Growth DCF Model

| Line | Company | 13-Week AVG | Annualized | First Stage | Second Stage Growth | | | | | Third Stage | Multi-Stage |
|------|---------------------------------------|--------------------------|-----------------------|---------------------|---------------------|--------------|--------------|--------------|--------------|---------------------|--------------|
| | | Stock Price ¹ | Dividend ² | Growth ³ | Year 6 | Year 7 | Year 8 | Year 9 | Year 10 | Growth ⁴ | Growth DCF |
| | | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) |
| | Company | | | | | | | | | | |
| 1 | ALLETE, Inc. | \$59.72 | \$2.60 | 7.70% | 7.16% | 6.62% | 6.08% | 5.53% | 4.99% | 4.45% | 9.98% |
| 2 | Alliant Energy Corporation | \$58.81 | \$1.71 | 5.68% | 5.48% | 5.27% | 5.07% | 4.86% | 4.66% | 4.45% | 7.73% |
| 3 | Ameren Corporation | \$90.08 | \$2.36 | 6.97% | 6.55% | 6.13% | 5.71% | 5.29% | 4.87% | 4.45% | 7.66% |
| 4 | American Electric Power Company, Inc. | \$96.91 | \$3.12 | 6.31% | 6.00% | 5.69% | 5.38% | 5.07% | 4.76% | 4.45% | 8.23% |
| 5 | Avista Corporation | \$42.29 | \$1.76 | 5.58% | 5.40% | 5.21% | 5.02% | 4.83% | 4.64% | 4.45% | 9.11% |
| 6 | CMS Energy Corporation | \$67.33 | \$1.84 | 8.15% | 7.53% | 6.91% | 6.30% | 5.68% | 5.07% | 4.45% | 8.06% |
| 7 | Duke Energy Corporation | \$107.52 | \$3.94 | 5.79% | 5.57% | 5.35% | 5.12% | 4.90% | 4.67% | 4.45% | 8.61% |
| 8 | Entergy Corporation | \$113.80 | \$4.04 | 6.30% | 5.99% | 5.68% | 5.37% | 5.07% | 4.76% | 4.45% | 8.61% |
| 9 | Evergy, Inc. | \$66.06 | \$2.29 | 5.46% | 5.29% | 5.12% | 4.96% | 4.79% | 4.62% | 4.45% | 8.31% |
| 10 | IDACORP, Inc. | \$105.73 | \$3.00 | 3.46% | 3.62% | 3.79% | 3.95% | 4.12% | 4.28% | 4.45% | 7.21% |
| 11 | NextEra Energy, Inc. | \$75.93 | \$1.70 | 9.36% | 8.54% | 7.72% | 6.90% | 6.09% | 5.27% | 4.45% | 7.65% |
| 12 | NorthWestern Corporation | \$58.30 | \$2.52 | 3.23% | 3.43% | 3.64% | 3.84% | 4.04% | 4.25% | 4.45% | 8.63% |
| 13 | Otter Tail Corporation | \$65.19 | \$1.65 | 7.88% | 7.30% | 6.73% | 6.16% | 5.59% | 5.02% | 4.45% | 7.74% |
| 14 | Portland General Electric Company | \$48.35 | \$1.81 | 3.98% | 4.06% | 4.14% | 4.21% | 4.29% | 4.37% | 4.45% | 8.24% |
| 15 | The Southern Company | \$72.37 | \$2.72 | 5.29% | 5.15% | 5.01% | 4.87% | 4.73% | 4.59% | 4.45% | 8.59% |
| 16 | Xcel Energy Inc. | \$71.34 | \$1.95 | 6.53% | 6.18% | 5.84% | 5.49% | 5.14% | 4.80% | 4.45% | 7.71% |
| 17 | Average | \$74.98 | \$2.44 | 6.10% | 5.83% | 5.55% | 5.28% | 5.00% | 4.73% | 4.45% | 8.25% |
| 18 | Median | \$69.34 | \$2.33 | 6.04% | 5.78% | 5.51% | 5.25% | 4.98% | 4.72% | 4.45% | 8.24% |

Sources:

¹ S&P Global Market Intelligence, Downloaded on August 1, 2022.

² *The Value Line Investment Survey*, May 13, June 10, and July 22, 2022.

³ AWEC-CUB/201.

⁴ *Blue Chip Economic Indicators*, June 1, 2022, at 14.

**BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON**

UE 399, UM 1964, UM 2134, UM 2142, UM 2167, UM 2185, UM 2186, UM 2201

In the Matters of

PACIFICORP dba PACIFIC POWER,

Request for a General Rate Revision
(UE 399),

Application for Approval of Deferred
Accounting for a Balancing Account Related
to the Transportation Electrification Program
(UM 1964),

Application to Defer Costs Relating to Cedar
Springs II (UM 2134),

Application for Approval of Deferred
Accounting for Cholla Unit 4-Related
Property Tax Expense (UM 2142),

Application for Approval of Deferred
Accounting for Revenues Associated with
Renewable Energy Credits from Pryor
Mountain, (UM 2167),

Application for Approval of Deferred
Accounting and Accounting Order Related to
Non-Contributory Defined Benefit Pension
Plans (UM 2185),

Application for Approval of Deferred
Accounting for Costs Relating to a Renewable
Resource Pursuant to ORS 469A.120
(UM 2186), and

Alliance of Western Energy Consumers,
Application for an Accounting Order
Requiring PacifiCorp to Defer Fly Ash
Revenues (UM 2201).

**EXHIBIT AWEC-CUB/206
EQUITY RISK PREMIUM –
TREASURY BOND
(UPDATED)**

PacifiCorp Update

Equity Risk Premium - Treasury Bond

| <u>Line</u> | <u>Year</u> | <u>Authorized Electric Returns¹</u> (1) | <u>30 yr. Treasury Bond Yield²</u> (2) | <u>Indicated Risk Premium</u> (3) | <u>Rolling 5 - Year Average</u> (4) | <u>Rolling 10 - Year Average</u> (5) |
|-------------|-------------------|---|--|--|--|---|
| 1 | 1986 | 13.93% | 7.80% | 6.13% | | |
| 2 | 1987 | 12.99% | 8.58% | 4.41% | | |
| 3 | 1988 | 12.79% | 8.96% | 3.83% | | |
| 4 | 1989 | 12.97% | 8.45% | 4.52% | | |
| 5 | 1990 | 12.70% | 8.61% | 4.09% | 4.60% | |
| 6 | 1991 | 12.55% | 8.14% | 4.41% | 4.25% | |
| 7 | 1992 | 12.09% | 7.67% | 4.42% | 4.26% | |
| 8 | 1993 | 11.41% | 6.60% | 4.81% | 4.45% | |
| 9 | 1994 | 11.34% | 7.37% | 3.97% | 4.34% | |
| 10 | 1995 | 11.55% | 6.88% | 4.67% | 4.46% | 4.53% |
| 11 | 1996 | 11.39% | 6.70% | 4.69% | 4.51% | 4.38% |
| 12 | 1997 | 11.40% | 6.61% | 4.79% | 4.59% | 4.42% |
| 13 | 1998 | 11.66% | 5.58% | 6.08% | 4.84% | 4.65% |
| 14 | 1999 | 10.77% | 5.87% | 4.90% | 5.03% | 4.68% |
| 15 | 2000 | 11.43% | 5.94% | 5.49% | 5.19% | 4.82% |
| 16 | 2001 | 11.09% | 5.49% | 5.60% | 5.37% | 4.94% |
| 17 | 2002 | 11.16% | 5.43% | 5.73% | 5.56% | 5.07% |
| 18 | 2003 | 10.97% | 4.96% | 6.01% | 5.55% | 5.19% |
| 19 | 2004 | 10.75% | 5.05% | 5.70% | 5.71% | 5.37% |
| 20 | 2005 | 10.54% | 4.65% | 5.89% | 5.79% | 5.49% |
| 21 | 2006 | 10.34% | 4.87% | 5.47% | 5.76% | 5.57% |
| 22 | 2007 | 10.31% | 4.83% | 5.48% | 5.71% | 5.64% |
| 23 | 2008 | 10.37% | 4.28% | 6.09% | 5.73% | 5.64% |
| 24 | 2009 | 10.52% | 4.07% | 6.45% | 5.88% | 5.79% |
| 25 | 2010 | 10.29% | 4.25% | 6.04% | 5.90% | 5.85% |
| 26 | 2011 | 10.19% | 3.91% | 6.28% | 6.07% | 5.91% |
| 27 | 2012 | 10.01% | 2.92% | 7.09% | 6.39% | 6.05% |
| 28 | 2013 | 9.81% | 3.45% | 6.36% | 6.44% | 6.09% |
| 29 | 2014 | 9.75% | 3.34% | 6.41% | 6.44% | 6.16% |
| 30 | 2015 | 9.60% | 2.84% | 6.76% | 6.58% | 6.24% |
| 31 | 2016 | 9.60% | 2.60% | 7.00% | 6.72% | 6.40% |
| 32 | 2017 | 9.68% | 2.90% | 6.79% | 6.66% | 6.53% |
| 33 | 2018 | 9.55% | 3.11% | 6.44% | 6.68% | 6.56% |
| 34 | 2019 | 9.64% | 2.58% | 7.06% | 6.81% | 6.62% |
| 35 | 2020 | 9.39% | 1.56% | 7.83% | 7.02% | 6.80% |
| 36 | 2021 | 9.39% | 2.05% | 7.34% | 7.09% | 6.91% |
| 37 | 2022 ³ | 9.34% | 2.65% | 6.69% | 7.07% | 6.87% |
| 38 | Average | 10.90% | 5.18% | 5.72% | 5.68% | 5.68% |
| 39 | Minimum | | | | 4.25% | 4.38% |
| 40 | Maximum | | | | 7.09% | 6.91% |

Sources:

¹ Regulatory Research Associates, Inc., Regulatory Focus, Major Rate Case Decisions, Jan. 1997 p. 5, and Jan. 2011 p. 3. S&P Global Market Intelligence, RRA Regulatory Focus, Major Rate Case Decisions, January - June 2022 July 27, 2022, p. 3.

² 2006 - 2022 Authorized Returns exclude limited issue rider cases.

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

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

³ Data represents January - June, 2022.

**BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON**

UE 399, UM 1964, UM 2134, UM 2142, UM 2167, UM 2185, UM 2186, UM 2201

In the Matters of

PACIFICORP dba PACIFIC POWER,

Request for a General Rate Revision
(UE 399),

Application for Approval of Deferred
Accounting for a Balancing Account Related
to the Transportation Electrification Program
(UM 1964),

Application to Defer Costs Relating to Cedar
Springs II (UM 2134),

Application for Approval of Deferred
Accounting for Cholla Unit 4-Related
Property Tax Expense (UM 2142),

Application for Approval of Deferred
Accounting for Revenues Associated with
Renewable Energy Credits from Pryor
Mountain, (UM 2167),

Application for Approval of Deferred
Accounting and Accounting Order Related to
Non-Contributory Defined Benefit Pension
Plans (UM 2185),

Application for Approval of Deferred
Accounting for Costs Relating to a Renewable
Resource Pursuant to ORS 469A.120
(UM 2186), and

Alliance of Western Energy Consumers,
Application for an Accounting Order
Requiring PacifiCorp to Defer Fly Ash
Revenues (UM 2201).

**EXHIBIT AWEC-CUB/207
EQUITY RISK PREMIUM –
UTILITY BOND
(UPDATED)**

PacifiCorp Update

Equity Risk Premium - Utility Bond

| <u>Line</u> | <u>Year</u> | <u>Authorized Electric Returns¹</u> (1) | <u>Average "A" Rated Utility Bond Yield²</u> (2) | <u>Indicated Risk Premium</u> (3) | <u>Rolling 5 - Year Average</u> (4) | <u>Rolling 10 - Year Average</u> (5) |
|-------------|-------------------|---|--|--|--|---|
| 1 | 1986 | 13.93% | 9.58% | 4.35% | | |
| 2 | 1987 | 12.99% | 10.10% | 2.89% | | |
| 3 | 1988 | 12.79% | 10.49% | 2.30% | | |
| 4 | 1989 | 12.97% | 9.77% | 3.20% | | |
| 5 | 1990 | 12.70% | 9.86% | 2.84% | 3.12% | |
| 6 | 1991 | 12.55% | 9.36% | 3.19% | 2.88% | |
| 7 | 1992 | 12.09% | 8.69% | 3.40% | 2.99% | |
| 8 | 1993 | 11.41% | 7.59% | 3.82% | 3.29% | |
| 9 | 1994 | 11.34% | 8.31% | 3.03% | 3.26% | |
| 10 | 1995 | 11.55% | 7.89% | 3.66% | 3.42% | 3.27% |
| 11 | 1996 | 11.39% | 7.75% | 3.64% | 3.51% | 3.20% |
| 12 | 1997 | 11.40% | 7.60% | 3.80% | 3.59% | 3.29% |
| 13 | 1998 | 11.66% | 7.04% | 4.62% | 3.75% | 3.52% |
| 14 | 1999 | 10.77% | 7.62% | 3.15% | 3.77% | 3.52% |
| 15 | 2000 | 11.43% | 8.24% | 3.19% | 3.68% | 3.55% |
| 16 | 2001 | 11.09% | 7.76% | 3.33% | 3.62% | 3.56% |
| 17 | 2002 | 11.16% | 7.37% | 3.79% | 3.61% | 3.60% |
| 18 | 2003 | 10.97% | 6.58% | 4.39% | 3.57% | 3.66% |
| 19 | 2004 | 10.75% | 6.16% | 4.59% | 3.86% | 3.82% |
| 20 | 2005 | 10.54% | 5.65% | 4.89% | 4.20% | 3.94% |
| 21 | 2006 | 10.34% | 6.07% | 4.27% | 4.39% | 4.00% |
| 22 | 2007 | 10.31% | 6.07% | 4.24% | 4.48% | 4.04% |
| 23 | 2008 | 10.37% | 6.53% | 3.84% | 4.37% | 3.97% |
| 24 | 2009 | 10.52% | 6.04% | 4.48% | 4.34% | 4.10% |
| 25 | 2010 | 10.29% | 5.47% | 4.82% | 4.33% | 4.26% |
| 26 | 2011 | 10.19% | 5.04% | 5.15% | 4.51% | 4.45% |
| 27 | 2012 | 10.01% | 4.13% | 5.88% | 4.83% | 4.66% |
| 28 | 2013 | 9.81% | 4.48% | 5.33% | 5.13% | 4.75% |
| 29 | 2014 | 9.75% | 4.28% | 5.47% | 5.33% | 4.84% |
| 30 | 2015 | 9.60% | 4.12% | 5.48% | 5.46% | 4.90% |
| 31 | 2016 | 9.60% | 3.93% | 5.67% | 5.57% | 5.04% |
| 32 | 2017 | 9.68% | 4.00% | 5.68% | 5.53% | 5.18% |
| 33 | 2018 | 9.55% | 4.25% | 5.30% | 5.52% | 5.33% |
| 34 | 2019 | 9.64% | 3.77% | 5.87% | 5.60% | 5.47% |
| 35 | 2020 | 9.39% | 3.05% | 6.34% | 5.77% | 5.62% |
| 36 | 2021 | 9.39% | 3.10% | 6.29% | 5.90% | 5.73% |
| 37 | 2022 ³ | 9.34% | 4.14% | 5.20% | 5.80% | 5.66% |
| 37 | Average | 10.90% | 6.54% | 4.36% | 4.33% | 4.32% |
| 38 | Minimum | | | | 2.88% | 3.20% |
| 39 | Maximum | | | | 5.90% | 5.73% |

Sources:

¹ Regulatory Research Associates, Inc., Regulatory Focus, Major Rate Case Decisions, Jan. 1997 p. 5, and Jan. 2011 p. 3.
S&P Global Market Intelligence, RRA Regulatory Focus, Major Rate Case Decisions, January - June 2022
July 27, 2022, p. 3.

2006 - 2022 Authorized Returns exclude limited issue rider cases.

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

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

³ Data represents January - June, 2022

**BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON**

UE 399, UM 1964, UM 2134, UM 2142, UM 2167, UM 2185, UM 2186, UM 2201

In the Matters of

PACIFICORP dba PACIFIC POWER,

Request for a General Rate Revision
(UE 399),

Application for Approval of Deferred
Accounting for a Balancing Account Related
to the Transportation Electrification Program
(UM 1964),

Application to Defer Costs Relating to Cedar
Springs II (UM 2134),

Application for Approval of Deferred
Accounting for Cholla Unit 4-Related
Property Tax Expense (UM 2142),

Application for Approval of Deferred
Accounting for Revenues Associated with
Renewable Energy Credits from Pryor
Mountain, (UM 2167),

Application for Approval of Deferred
Accounting and Accounting Order Related to
Non-Contributory Defined Benefit Pension
Plans (UM 2185),

Application for Approval of Deferred
Accounting for Costs Relating to a Renewable
Resource Pursuant to ORS 469A.120
(UM 2186), and

Alliance of Western Energy Consumers,
Application for an Accounting Order
Requiring PacifiCorp to Defer Fly Ash
Revenues (UM 2201).

EXHIBIT AWEC-CUB/208

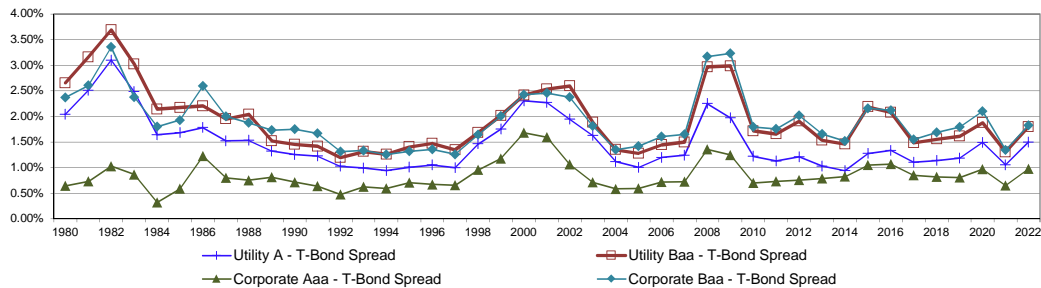
**BOND YIELD SPREADS
(UPDATED)**

PacifiCorp Update

Bond Yield Spreads

| Line | Year | Public Utility Bond | | | | | Corporate Bond | | | | Utility to Corporate | |
|------|-------------------|----------------------------------|-----------------------|-------------------------|------------------------|--------------------------|-------------------------|-------------------------|--------------------------|--------------------------|----------------------|----------------------|
| | | T-Bond Yield ¹ (1) | A ² (2) | Baa ² (3) | A-T-Bond Spread (4) | Baa-T-Bond Spread (5) | Aaa ³ (6) | Baa ³ (7) | Aaa-T-Bond Spread (8) | Baa-T-Bond Spread (9) | Baa Spread (10) | A-Aaa Spread (11) |
| 1 | 1980 | 11.30% | 13.34% | 13.95% | 2.04% | 2.65% | 11.94% | 13.67% | 0.64% | 2.37% | 0.28% | 1.40% |
| 2 | 1981 | 13.44% | 15.95% | 16.60% | 2.51% | 3.16% | 14.17% | 16.04% | 0.73% | 2.60% | 0.56% | 1.78% |
| 3 | 1982 | 12.76% | 15.86% | 16.45% | 3.10% | 3.69% | 13.79% | 16.11% | 1.03% | 3.35% | 0.34% | 2.07% |
| 4 | 1983 | 11.18% | 13.66% | 14.20% | 2.48% | 3.02% | 12.04% | 13.55% | 0.86% | 2.38% | 0.65% | 1.62% |
| 5 | 1984 | 12.39% | 14.03% | 14.53% | 1.64% | 2.14% | 12.71% | 14.19% | 0.32% | 1.80% | 0.34% | 1.32% |
| 6 | 1985 | 10.79% | 12.47% | 12.96% | 1.68% | 2.17% | 11.37% | 12.72% | 0.58% | 1.93% | 0.24% | 1.10% |
| 7 | 1986 | 7.80% | 9.58% | 10.00% | 1.78% | 2.20% | 9.02% | 10.39% | 1.22% | 2.59% | -0.39% | 0.56% |
| 8 | 1987 | 8.58% | 10.10% | 10.53% | 1.52% | 1.95% | 9.38% | 10.58% | 0.80% | 2.00% | -0.05% | 0.72% |
| 9 | 1988 | 8.96% | 10.49% | 11.00% | 1.53% | 2.04% | 9.71% | 10.83% | 0.75% | 1.87% | 0.17% | 0.78% |
| 10 | 1989 | 8.45% | 9.77% | 9.97% | 1.32% | 1.52% | 9.26% | 10.18% | 0.81% | 1.73% | -0.21% | 0.51% |
| 11 | 1990 | 8.61% | 9.86% | 10.06% | 1.25% | 1.45% | 9.32% | 10.36% | 0.71% | 1.75% | -0.30% | 0.54% |
| 12 | 1991 | 8.14% | 9.36% | 9.55% | 1.22% | 1.41% | 8.77% | 9.80% | 0.63% | 1.67% | -0.25% | 0.59% |
| 13 | 1992 | 7.67% | 8.69% | 8.86% | 1.02% | 1.19% | 8.14% | 8.98% | 0.47% | 1.31% | -0.12% | 0.55% |
| 14 | 1993 | 6.60% | 7.59% | 7.91% | 0.99% | 1.31% | 7.22% | 7.93% | 0.62% | 1.33% | -0.02% | 0.37% |
| 15 | 1994 | 7.37% | 8.31% | 8.63% | 0.94% | 1.26% | 7.96% | 8.62% | 0.59% | 1.25% | 0.01% | 0.35% |
| 16 | 1995 | 6.88% | 7.89% | 8.29% | 1.01% | 1.41% | 7.59% | 8.20% | 0.71% | 1.32% | 0.09% | 0.30% |
| 17 | 1996 | 6.70% | 7.75% | 8.17% | 1.05% | 1.47% | 7.37% | 8.05% | 0.67% | 1.35% | 0.12% | 0.38% |
| 18 | 1997 | 6.61% | 7.60% | 7.95% | 0.99% | 1.34% | 7.26% | 7.86% | 0.66% | 1.26% | 0.09% | 0.34% |
| 19 | 1998 | 5.58% | 7.04% | 7.26% | 1.46% | 1.68% | 6.53% | 7.22% | 0.95% | 1.64% | 0.04% | 0.51% |
| 20 | 1999 | 5.87% | 7.62% | 7.88% | 1.75% | 2.01% | 7.04% | 7.87% | 1.18% | 2.01% | 0.01% | 0.58% |
| 21 | 2000 | 5.94% | 8.24% | 8.36% | 2.30% | 2.42% | 7.62% | 8.36% | 1.68% | 2.42% | -0.01% | 0.62% |
| 22 | 2001 | 5.49% | 7.76% | 8.03% | 2.27% | 2.54% | 7.08% | 7.95% | 1.59% | 2.45% | 0.08% | 0.68% |
| 23 | 2002 | 5.43% | 7.37% | 8.02% | 1.94% | 2.59% | 6.49% | 7.80% | 1.06% | 2.37% | 0.22% | 0.88% |
| 24 | 2003 | 4.96% | 6.58% | 6.84% | 1.62% | 1.89% | 5.67% | 6.77% | 0.71% | 1.81% | 0.08% | 0.91% |
| 25 | 2004 | 5.05% | 6.16% | 6.40% | 1.11% | 1.35% | 5.63% | 6.39% | 0.58% | 1.35% | 0.00% | 0.53% |
| 26 | 2005 | 4.65% | 5.65% | 5.93% | 1.00% | 1.28% | 5.24% | 6.06% | 0.59% | 1.42% | -0.14% | 0.41% |
| 27 | 2006 | 4.87% | 6.07% | 6.32% | 1.20% | 1.44% | 5.59% | 6.48% | 0.71% | 1.61% | -0.16% | 0.48% |
| 28 | 2007 | 4.83% | 6.07% | 6.33% | 1.24% | 1.50% | 5.56% | 6.48% | 0.72% | 1.65% | -0.15% | 0.52% |
| 29 | 2008 | 4.28% | 6.53% | 7.25% | 2.25% | 2.97% | 5.63% | 7.45% | 1.35% | 3.17% | -0.20% | 0.90% |
| 30 | 2009 | 4.07% | 6.04% | 7.06% | 1.97% | 2.99% | 5.31% | 7.30% | 1.24% | 3.23% | -0.24% | 0.73% |
| 31 | 2010 | 4.25% | 5.47% | 5.96% | 1.22% | 1.71% | 4.95% | 6.04% | 0.70% | 1.79% | -0.08% | 0.52% |
| 32 | 2011 | 3.91% | 5.04% | 5.57% | 1.13% | 1.66% | 4.64% | 5.67% | 0.73% | 1.76% | -0.10% | 0.40% |
| 33 | 2012 | 2.92% | 4.13% | 4.83% | 1.21% | 1.90% | 3.67% | 4.94% | 0.75% | 2.02% | -0.11% | 0.46% |
| 34 | 2013 | 3.45% | 4.48% | 4.98% | 1.03% | 1.53% | 4.24% | 5.10% | 0.79% | 1.65% | -0.12% | 0.24% |
| 35 | 2014 | 3.34% | 4.28% | 4.80% | 0.94% | 1.46% | 4.16% | 4.86% | 0.82% | 1.52% | -0.06% | 0.12% |
| 36 | 2015 | 2.84% | 4.12% | 5.03% | 1.27% | 2.19% | 3.89% | 5.00% | 1.05% | 2.16% | 0.03% | 0.23% |
| 37 | 2016 | 2.60% | 3.93% | 4.67% | 1.33% | 2.08% | 3.66% | 4.71% | 1.07% | 2.12% | -0.04% | 0.27% |
| 38 | 2017 | 2.90% | 4.00% | 4.38% | 1.10% | 1.48% | 3.74% | 4.44% | 0.85% | 1.55% | -0.06% | 0.26% |
| 39 | 2018 | 3.11% | 4.25% | 4.67% | 1.14% | 1.56% | 3.93% | 4.80% | 0.82% | 1.69% | -0.13% | 0.32% |
| 40 | 2019 | 2.58% | 3.77% | 4.19% | 1.18% | 1.61% | 3.39% | 4.38% | 0.81% | 1.79% | -0.18% | 0.38% |
| 41 | 2020 | 1.56% | 3.05% | 3.44% | 1.49% | 1.87% | 2.53% | 3.66% | 0.96% | 2.10% | -0.22% | 0.53% |
| 42 | 2021 | 2.05% | 3.10% | 3.36% | 1.05% | 1.30% | 2.70% | 3.39% | 0.65% | 1.34% | -0.04% | 0.40% |
| 43 | 2022 ⁴ | 2.65% | 4.14% | 4.44% | 1.50% | 1.79% | 3.62% | 4.47% | 0.97% | 1.83% | -0.03% | 0.53% |
| 44 | Average | 6.13% | 7.61% | 8.04% | 1.48% | 1.91% | 6.97% | 8.04% | 0.84% | 1.91% | 0.00% | 0.64% |

Yield Spreads
Treasury Vs. Corporate & Treasury Vs. Utility



Sources:

- ¹ St. Louis Federal Reserve: Economic Research, <http://research.stlouisfed.org/>.
- ² The utility yields for the period 1980-2000 were obtained from Mergent Public Utility Manual, Mergent Weekly News Reports, 2003. The utility yields for the period 2001-2009 were obtained from the Mergent Bond Record. The utility yields for the period 2010-2022 were obtained from <http://credittrends.moodys.com/>.
- ³ The corporate yields for the period 1980-2009 were obtained from the St. Louis Federal Reserve: Economic Research, <http://research.stlouisfed.org/>. The corporate yields from 2010-2022 were obtained from <http://credittrends.moodys.com/>.
- ⁴ Data represents January - June, 2022

**BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON**

UE 399, UM 1964, UM 2134, UM 2142, UM 2167, UM 2185, UM 2186, UM 2201

In the Matters of

PACIFICORP dba PACIFIC POWER,

Request for a General Rate Revision
(UE 399),

Application for Approval of Deferred
Accounting for a Balancing Account Related
to the Transportation Electrification Program
(UM 1964),

Application to Defer Costs Relating to Cedar
Springs II (UM 2134),

Application for Approval of Deferred
Accounting for Cholla Unit 4-Related
Property Tax Expense (UM 2142),

Application for Approval of Deferred
Accounting for Revenues Associated with
Renewable Energy Credits from Pryor
Mountain, (UM 2167),

Application for Approval of Deferred
Accounting and Accounting Order Related to
Non-Contributory Defined Benefit Pension
Plans (UM 2185),

Application for Approval of Deferred
Accounting for Costs Relating to a Renewable
Resource Pursuant to ORS 469A.120
(UM 2186), and

Alliance of Western Energy Consumers,
Application for an Accounting Order
Requiring PacifiCorp to Defer Fly Ash
Revenues (UM 2201).

**EXHIBIT AWEC-CUB/209
TREASURY AND UTILITY
BOND YIELDS
(UPDATED)**

PacifiCorp Update

Treasury and Utility Bond Yields

| <u>Line</u> | <u>Date</u> | <u>Treasury Bond Yield¹</u> (1) | <u>"A" Rated Utility Bond Yield²</u> (2) | <u>"Baa" Rated Utility Bond Yield²</u> (3) |
|-------------|---------------------------|---|--|--|
| 1 | 07/29/22 | 3.00% | 4.62% | 4.97% |
| 2 | 07/22/22 | 3.00% | 4.64% | 4.99% |
| 3 | 07/15/22 | 3.10% | 4.79% | 5.18% |
| 4 | 07/08/22 | 3.27% | 4.98% | 5.34% |
| 5 | 07/01/22 | 3.11% | 4.85% | 5.23% |
| 6 | 06/24/22 | 3.26% | 4.93% | 5.30% |
| 7 | 06/17/22 | 3.30% | 4.97% | 5.35% |
| 8 | 06/10/22 | 3.20% | 4.79% | 5.14% |
| 9 | 06/03/22 | 3.11% | 4.66% | 5.03% |
| 10 | 05/27/22 | 2.97% | 4.62% | 4.97% |
| 11 | 05/20/22 | 2.99% | 4.74% | 5.08% |
| 12 | 05/13/22 | 3.10% | 4.80% | 5.12% |
| 13 | 05/06/22 | 3.23% | 4.87% | 5.17% |
| 14 | Average | 3.13% | 4.79% | 5.14% |
| 15 | Spread To Treasury | | 1.66% | 2.01% |

Sources:

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

² <http://credittrends.moody.com/>.

**BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON**

UE 399, UM 1964, UM 2134, UM 2142, UM 2167, UM 2185, UM 2186, UM 2201

In the Matters of

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Resource Pursuant to ORS 469A.120
(UM 2186), and

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Application for an Accounting Order
Requiring PacifiCorp to Defer Fly Ash
Revenues (UM 2201).

EXHIBIT AWEC-CUB/210

**VALUE LINE BETA
(UPDATED)**

PacifiCorp Update

Value Line Beta

| <u>Line</u> | <u>Company</u> | <u>Beta</u> |
|-------------|---------------------------------------|-------------|
| 1 | ALLETE, Inc. | 0.90 |
| 2 | Alliant Energy Corporation | 0.80 |
| 3 | Ameren Corporation | 0.80 |
| 4 | American Electric Power Company, Inc. | 0.75 |
| 5 | Avista Corporation | 0.90 |
| 6 | CMS Energy Corporation | 0.75 |
| 7 | Duke Energy Corporation | 0.85 |
| 8 | Entergy Corporation | 0.90 |
| 9 | Evergy, Inc. | 0.90 |
| 10 | IDACORP, Inc. | 0.80 |
| 11 | NextEra Energy, Inc. | 0.90 |
| 12 | NorthWestern Corporation | 0.95 |
| 13 | Otter Tail Corporation | 0.85 |
| 14 | Portland General Electric Company | 0.85 |
| 15 | The Southern Company | 0.90 |
| 17 | Average | 0.85 |

Source:
The Value Line Investment Survey,
May 13, June 10, and July 22, 2022.

PacifiCorp
Update

Value Line
Historical Betas

| Line | Company | Average | 2022 | 1022 | 4Q21 | 3Q21 | 2Q21 | 1Q21 | 4Q20 | 3Q20 | 2Q20 | 1Q20 | 4Q19 | 3Q19 | 2Q19 | 1Q19 | 4Q18 | 3Q18 | 2Q18 | 1Q18 | 4Q17 | 3Q17 | 2Q17 | 1Q17 | 4Q16 | 3Q16 | 2Q16 | 1Q16 | 4Q15 | 3Q15 | 2Q15 | 1Q15 | 4Q14 | 3Q14 | | |
|------|--|---------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| | | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) | (15) | (16) | (17) | (18) | (19) | (20) | (21) | (22) | (23) | (24) | (25) | (26) | (27) | (28) | (29) | (30) | (31) | (32) | (33) | | |
| 1 | ALLETE, Inc. | 0.79 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.85 | 0.85 | 0.85 | 0.80 | N/A | N/A | 0.65 | 0.65 | 0.65 | 0.70 | 0.75 | 0.75 | 0.80 | 0.75 | 0.80 | 0.80 | 0.75 | 0.75 | 0.75 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 |
| 2 | Alliant Energy Corporation | 0.74 | 0.80 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.80 | 0.55 | 0.60 | 0.60 | 0.60 | 0.65 | 0.60 | 0.65 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.75 | 0.75 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 |
| 3 | Ameren Corporation | 0.71 | 0.80 | 0.80 | 0.80 | 0.85 | 0.80 | 0.80 | 0.85 | 0.80 | 0.80 | 0.50 | 0.55 | 0.55 | 0.60 | 0.60 | 0.55 | 0.60 | 0.65 | 0.70 | 0.65 | 0.65 | 0.70 | 0.65 | 0.65 | 0.70 | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 | |
| 4 | American Electric Power Company, Inc. | 0.67 | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 | 0.70 | 0.50 | 0.55 | 0.55 | 0.55 | 0.60 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | |
| 5 | Atmos Energy Corporation | 0.74 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.55 | 0.60 | 0.60 | 0.65 | 0.60 | 0.60 | 0.60 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.75 | 0.80 | 0.80 | 0.85 | 0.85 | 0.85 | 0.80 | 0.80 | 0.80 | 0.80 | |
| 6 | Avangrid, Inc. | 0.59 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | N/A | 0.85 | 0.80 | 0.80 | 0.40 | 0.40 | 0.40 | 0.40 | 0.40 | 0.30 | 0.30 | 0.40 | 0.35 | NMF | NMF | NMF | NMF | NMF | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | |
| 7 | Avista Corporation | 0.77 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.90 | 0.95 | 0.60 | 0.60 | 0.60 | 0.65 | 0.65 | 0.65 | 0.70 | 0.70 | 0.75 | 0.75 | 0.70 | 0.70 | 0.70 | 0.75 | 0.75 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | |
| 8 | Black Hills Corporation | 0.89 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 0.70 | 0.70 | 0.75 | 0.80 | 0.75 | 0.80 | 0.85 | 0.90 | 0.90 | 0.90 | 0.85 | 0.85 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.95 | 0.95 | 0.95 | 0.90 | 0.90 | 0.90 | 0.85 | |
| 9 | CenterPoint Energy, Inc. | 0.91 | 1.15 | 1.15 | 1.15 | 1.15 | 1.15 | 1.15 | 1.10 | 1.10 | 1.15 | 1.10 | 0.80 | 0.80 | 0.80 | 0.80 | 0.85 | 0.85 | 0.90 | 0.85 | 0.90 | 0.90 | 0.85 | 0.85 | 0.85 | 0.85 | 0.80 | 0.85 | 0.85 | 0.85 | 0.80 | 0.80 | 0.80 | 0.80 | 0.75 | 0.75 |
| 10 | Chesapeake Utilities Corporation | 0.69 | 0.75 | 0.80 | 0.80 | 0.80 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 0.65 | 0.70 | 0.65 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.65 | 0.60 | 0.60 | 0.65 | 0.65 | 0.65 | N/A | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | |
| 11 | CMS Energy Corporation | 0.68 | 0.75 | 0.80 | 0.80 | 0.80 | 0.80 | 0.75 | 0.80 | 0.80 | 0.80 | 0.50 | 0.50 | 0.55 | 0.55 | 0.55 | 0.55 | 0.55 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.70 | 0.75 | 0.70 | 0.75 | 0.75 | 0.70 | 0.75 | 0.70 | 0.75 |
| 12 | Consolidated Edison, Inc. | 0.58 | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 | 0.40 | 0.45 | 0.45 | 0.45 | 0.45 | 0.45 | 0.45 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.55 | 0.55 | 0.55 | 0.55 | 0.60 | 0.60 | 0.60 | 0.60 | 0.60 | 0.60 | 0.60 | 0.60 | 0.60 |
| 13 | Dominion Resources, Inc. | 0.70 | 0.80 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.80 | 0.80 | 0.80 | 0.50 | 0.55 | 0.55 | 0.55 | 0.55 | 0.60 | 0.60 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | |
| 14 | DTE Energy Company | 0.73 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.90 | 0.90 | 0.50 | 0.55 | 0.55 | 0.55 | 0.55 | 0.60 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.70 | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 | |
| 15 | Duke Energy Corporation | 0.66 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.45 | N/A | N/A | 0.50 | 0.50 | 0.55 | 0.55 | 0.60 | 0.60 | 0.60 | 0.60 | 0.60 | 0.60 | 0.60 | 0.60 | 0.60 | 0.60 | 0.60 | 0.60 | 0.60 | 0.60 | 0.60 | 0.60 | 0.60 | |
| 16 | Edison International | 0.72 | 0.95 | 0.95 | 1.00 | 0.95 | 0.95 | 0.95 | 0.90 | 0.90 | 0.95 | 0.55 | 0.60 | 0.60 | 0.60 | 0.55 | 0.60 | 0.60 | 0.60 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 |
| 17 | Energy Corporation | 0.73 | 0.90 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.60 | 0.60 | 0.60 | 0.60 | 0.60 | 0.60 | 0.60 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.70 | 0.70 | 0.70 | 0.65 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | |
| 18 | Energy, Inc. | 0.97 | 0.90 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 1.00 | 1.00 | 1.05 | NMF | NMF | NMF | NMF | NMF | NMF | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| 19 | EverSource Energy | 0.74 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.55 | 0.55 | 0.60 | 0.60 | 0.60 | 0.60 | 0.60 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.70 | 0.70 | 0.70 | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 | |
| 20 | Exelon Corporation | 0.76 | NMF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.65 | N/A | N/A | 0.70 | 0.70 | 0.65 | 0.65 | 0.70 | 0.70 | 0.70 | 0.70 | 0.65 | 0.70 | 0.65 | 0.70 | 0.65 | 0.70 | 0.65 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | |
| 21 | FirstEnergy Corp. | 0.71 | 0.80 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.80 | 0.60 | 0.60 | 0.65 | 0.65 | 0.65 | 0.60 | 0.60 | 0.65 | 0.70 | 0.70 | 0.70 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.70 | 0.65 | 0.70 | 0.65 | 0.70 | 0.70 | 0.70 | 0.70 | |
| 22 | Fortis Inc. | 0.69 | N/A | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 | N/A | 0.80 | 0.80 | 0.60 | 0.60 | 0.65 | 0.65 | 0.65 | 0.60 | 0.65 | 0.70 | 0.70 | 0.70 | 0.70 | 0.65 | 0.65 | 0.65 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | |
| 23 | Hawaiian Electric Industries, Inc. | 0.72 | 0.85 | 0.85 | 0.85 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.55 | 0.55 | 0.55 | 0.60 | 0.60 | 0.60 | 0.65 | 0.65 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.75 | 0.75 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | |
| 24 | IDACORP, Inc. | 0.73 | 0.80 | 0.80 | 0.85 | 0.85 | 0.80 | 0.80 | 0.80 | 0.80 | 0.50 | 0.55 | 0.55 | 0.60 | 0.60 | 0.55 | 0.60 | 0.65 | 0.70 | 0.70 | 0.70 | 0.70 | 0.65 | 0.65 | 0.65 | 0.75 | 0.75 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | |
| 25 | New Jersey Resources Corporation | 0.82 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 0.90 | 0.90 | 0.65 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.80 | 0.75 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.85 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | |
| 26 | NexiaEnergy, Inc. | 0.72 | 0.90 | 0.95 | 0.90 | 0.95 | 0.90 | 0.90 | 0.90 | 0.85 | 0.85 | 0.50 | 0.55 | 0.55 | 0.60 | 0.60 | 0.60 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.70 | 0.70 | 0.75 | 0.70 | 0.75 | 0.70 | 0.70 | 0.70 | 0.70 | |
| 27 | NISource Inc. | 0.72 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.55 | 0.55 | 0.55 | 0.55 | 0.55 | 0.50 | 0.55 | 0.60 | 0.60 | 0.60 | NMF | NMF | NMF | NMF | NMF | NMF | NMF | NMF | NMF | NMF | NMF | NMF | NMF | NMF | NMF |
| 28 | Northwest Natural Gas Company | 0.70 | 0.80 | 0.80 | 0.85 | 0.85 | 0.85 | 0.80 | 0.80 | 0.80 | 0.80 | 0.55 | 0.60 | 0.60 | 0.60 | 0.65 | 0.60 | 0.65 | 0.70 | 0.65 | 0.70 | 0.70 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | |
| 29 | NorthWestern Corporation | 0.73 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.90 | 0.90 | 0.60 | 0.60 | 0.60 | 0.60 | 0.55 | 0.60 | 0.65 | 0.65 | 0.70 | 0.70 | 0.65 | 0.65 | 0.65 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | |
| 30 | ONE Energy Corp. | 0.93 | 1.00 | 1.05 | 1.05 | 1.05 | 1.05 | 1.05 | 1.10 | 1.05 | 1.05 | 0.70 | 0.75 | 0.80 | 0.80 | 0.85 | 0.90 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | |
| 31 | ONE Gas, Inc. | 0.72 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.60 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | |
| 32 | Oter Tail Corporation | 0.84 | 0.85 | 0.85 | 0.90 | 0.90 | 0.90 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.70 | 0.70 | 0.65 | 0.70 | 0.70 | 0.75 | 0.80 | 0.85 | 0.85 | 0.90 | 0.90 | 0.90 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | |
| 33 | Private West Capital Corporation | 0.71 | 0.90 | 0.90 | 0.95 | 0.90 | 0.90 | 0.85 | 0.85 | 0.45 | 0.50 | 0.55 | 0.55 | 0.55 | 0.55 | 0.60 | 0.65 | 0.65 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.75 | 0.75 | 0.75 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | |
| 34 | PNM Resources, Inc. | 0.80 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.90 | 0.90 | 0.50 | 0.60 | N/A | N/A | 0.65 | 0.65 | 0.60 | 0.75 | 0.70 | 0.75 | 0.75 | 0.75 | 0.70 | 0.75 | 0.80 | 0.80 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | |
| 35 | Portland General Electric Company | 0.74 | 0.85 | 0.90 | 0.90 | 0.90 | 0.90 | 0.85 | 0.85 | 0.85 | 0.85 | 0.55 | 0.60 | 0.60 | 0.60 | 0.60 | 0.65 | 0.65 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.75 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | |
| 36 | PPL Corporation | 0.80 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.15 | 1.10 | 1.05 | 1.05 | 0.65 | 0.70 | 0.65 | 0.70 | 0.70 | 0.70 | 0.75 | 0.75 | 0.75 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.65 | 0.65 | 0.60 | 0.60 | 0.65 | 0.65 | |
| 37 | Public Service Enterprise Group Incorporated | 0.76 | 0.90 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

**BEFORE THE PUBLIC UTILITY COMMISSION
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EXHIBIT AWEC-CUB/211

**CAPM RETURN
(UPDATED)**

PacifiCorp Update

CAPM Return

| <u>Line</u> | <u>Description</u> | <u>Current Market Risk Premium</u> (1) | <u>Normalized Market Risk Premium</u> (2) |
|-------------|-------------------------------|---|--|
| 1 | Risk-Free Rate ^{1,2} | 3.13% | 3.80% |
| 2 | Risk Premium ³ | 8.80% | 8.13% |
| 3 | Beta ⁴ | 0.74 | 0.74 |
| 4 | CAPM | 9.60% | 9.78% |

Sources:

¹ AWEC-CUB/209.

² *Blue Chip Financial Forecasts*, July 1, 2022, at 2.

³ *Kroll 2022 Yearbook*, at 146.

⁴ AWEC-CUB/210, Gorman/Page 2.

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(UM 2186), and

Alliance of Western Energy Consumers,
Application for an Accounting Order
Requiring PacifiCorp to Defer Fly Ash
Revenues (UM 2201).

**EXHIBIT AWEC-CUB/212
ACCURACY OF
INTEREST RATE FORECASTS
(UPDATED)**

PacifiCorp
Update

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

| Line | Date | Publication Data | | | Actual Yield in Projected Quarter | Projected Yield Higher (Lower) Than Actual Yield* |
|------|--------|---------------------|--------------|----------------|---|---|
| | | Prior Quarter | Projected | Projected | | |
| | | Actual Yield (1) | Yield (2) | Quarter (3) | | |
| 1 | Mar-15 | 3.0% | 3.7% | 2Q 16 | 2.6% | 1.1% |
| 2 | Jun-15 | 2.6% | 3.7% | 3Q 16 | 2.3% | 1.4% |
| 3 | Sep-15 | 2.9% | 3.8% | 4Q 16 | 2.8% | 1.0% |
| 4 | Dec-15 | 2.8% | 3.7% | 1Q 17 | 3.0% | 0.7% |
| 5 | Mar-16 | 3.0% | 3.5% | 2Q 17 | 2.9% | 0.6% |
| 6 | Jun-16 | 2.7% | 3.4% | 3Q 17 | 2.8% | 0.6% |
| 7 | Sep-16 | 2.6% | 3.1% | 4Q 17 | 2.8% | 0.3% |
| 8 | Dec-16 | 2.3% | 3.4% | 1Q 18 | 3.0% | 0.4% |
| 9 | Mar-17 | 2.8% | 3.7% | 2Q 18 | 3.1% | 0.6% |
| 10 | Jun-17 | 3.0% | 3.7% | 3Q 18 | 3.1% | 0.6% |
| 11 | Sep-17 | 2.9% | 3.6% | 4Q 18 | 3.3% | 0.3% |
| 12 | Dec-17 | 2.8% | 3.6% | 1Q 19 | 3.0% | 0.6% |
| 13 | Mar-18 | 2.8% | 3.7% | 2Q 19 | 2.8% | 0.9% |
| 14 | Jun-18 | 3.0% | 3.8% | 3Q 19 | 2.3% | 1.5% |
| 15 | Sep-18 | 3.1% | 3.7% | 4Q 19 | 2.3% | 1.4% |
| 16 | Dec-18 | 3.1% | 3.7% | 1Q 20 | 1.9% | 1.8% |
| 17 | Mar-19 | 3.3% | 3.4% | 2Q 20 | 1.4% | 2.0% |
| 18 | Jun-19 | 3.0% | 3.1% | 3Q 20 | 1.4% | 1.7% |
| 19 | Sep-19 | 2.8% | 2.6% | 4Q 20 | 1.6% | 1.0% |
| 20 | Oct-19 | 2.3% | 2.5% | 1Q 21 | 2.1% | 0.4% |
| 21 | Nov-19 | 2.3% | 2.5% | 1Q 21 | 2.1% | 0.4% |
| 22 | Dec-19 | 2.3% | 2.5% | 1Q 21 | 2.1% | 0.4% |
| 23 | Jan-20 | 2.3% | 2.6% | 2Q 21 | 2.3% | 0.3% |
| 24 | Feb-20 | 2.3% | 2.6% | 2Q 21 | 2.3% | 0.3% |
| 25 | Mar-20 | 2.3% | 2.5% | 2Q 21 | 2.3% | 0.2% |
| 26 | Apr-20 | 1.9% | 2.0% | 3Q 21 | 1.9% | 0.1% |
| 27 | May-20 | 1.9% | 1.8% | 3Q 21 | 1.9% | -0.1% |
| 28 | Jun-20 | 1.9% | 1.9% | 3Q 21 | 1.9% | 0.0% |
| 29 | Jul-20 | 1.4% | 1.9% | 4Q 21 | 2.0% | -0.1% |
| 30 | Aug-20 | 1.4% | 1.9% | 4Q 21 | 2.0% | -0.1% |
| 31 | Sep-20 | 1.4% | 1.8% | 4Q 21 | 2.0% | -0.2% |
| 32 | Oct-20 | 1.4% | 1.9% | 1Q 22 | 2.3% | -0.4% |
| 33 | Nov-20 | 1.4% | 2.0% | 1Q 22 | 2.3% | -0.3% |
| 34 | Dec-20 | 1.4% | 2.0% | 1Q 22 | 2.3% | -0.3% |
| 35 | Jan-21 | 1.6% | 2.1% | 2Q 22 | 3.0% | -0.9% |
| 36 | Feb-21 | 1.6% | 2.2% | 2Q 22 | | |
| 37 | Mar-21 | 1.6% | 2.4% | 2Q 22 | | |
| 38 | Apr-21 | 2.1% | 2.7% | 3Q 22 | | |
| 39 | May-21 | 2.1% | 2.8% | 3Q 22 | | |
| 40 | Jun-21 | 2.1% | 2.8% | 3Q 22 | | |
| 41 | Jul-21 | 2.3% | 2.7% | 4Q 22 | | |
| 42 | Aug-21 | 2.3% | 2.6% | 4Q 22 | | |
| 43 | Sep-21 | 2.3% | 2.6% | 4Q 22 | | |
| 44 | Oct-21 | 1.9% | 2.7% | 1Q 22 | | |
| 45 | Nov-21 | 1.9% | 2.7% | 1Q 22 | | |
| 46 | Dec-21 | 1.9% | 2.2% | 1Q 22 | | |
| 47 | Jan-22 | 2.0% | 2.8% | 2Q 23 | | |
| 48 | Feb-22 | 2.0% | 2.8% | 2Q 23 | | |
| 49 | Mar-22 | 2.0% | 3.0% | 2Q 23 | | |
| 50 | Apr-22 | 2.3% | 3.3% | 3Q 23 | | |
| 51 | May-22 | 2.3% | 3.5% | 3Q 23 | | |
| 52 | Jun-22 | 2.3% | 3.6% | 3Q 23 | | |
| 53 | Jul-22 | 3.0% | 3.8% | 4Q 23 | | |

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