Exh. AEB-1Tr
Docket UE-23~~____~~0172
Witness: Ann E. Bulkley

BEFORE THE WASHINGTON
UTILITIES AND TRANSPORTATION COMMISSION

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION, Complainant, v. PACIFICORP dba PACIFIC POWER & LIGHT COMPANY Respondent.	Docket UE-23~~____~~0172

PACIFICORP

DIRECT TESTIMONY OF ANN E. BULKLEY

~~March 2023~~REVISED April 4, 2023

returns of other businesses having similar risk, adequacy of the return to provide access to capital and support credit quality, and the requirement that the result lead to just and reasonable rates.[2]

- The effect of current and projected capital market conditions on investors' return requirements.

- The results of several analytical approaches that provide estimates of the Company's cost of equity. Because the Company's authorized ROE should be a forward-looking estimate over the period during which the rates will be in effect, these analyses rely on forward-looking inputs and assumptions (*e.g.,* projected analyst growth rates in the DCF model, forecasted risk-free rate and market risk premium in the CAPM analysis).

- Although the companies in my proxy group are generally comparable to PacifiCorp, each company is unique, and no two companies have the exact same business and financial risk profiles. Accordingly, I considered the Company's regulatory, business, and financial risks relative to the proxy group of comparable companies in determining where the Company's ROE should fall within the reasonable range of analytical results to appropriately account for any residual differences in risk.

Q. What are the results of the models that you have used to estimate the cost of equity for PacifiCorp?

A. Figure 1 summarizes the range of results produced by the Constant Growth DCF, CAPM, ECAPM, Risk Premium, and Expected Earnings analyses based on data through the end of January 2023.

[2] Federal Power Commission v. Hope Natural Gas Co., 320 U.S. 591 (1944) (Hope) https://supreme.justia.com/cases/federal/us/320/591/; Bluefield Waterworks & Improvement Co. v. Public Service Commission of West Virginia, 262 U.S. 679 (1923) (Bluefield) https://tile.loc.gov/storage-services/service/ll/usrep/usrep262/https://supreme.justia.com/cases/federal/us/320/591/usrep262679/usrep262679.pdf.

> excluding the volatile food and energy categories, core PCE prices rose 4.4 percent. The inflation data received over the past three months show a welcome reduction in the monthly pace of increases. And while recent developments are encouraging, we will need substantially more evidence to be confident that inflation is on a sustained downward path.
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> …..
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> With today's action, we have raised interest rates by 4-1/2 percentage points over the past year. We continue to anticipate that ongoing increases in the target range for the federal funds rate will be appropriate in order to attain a stance of monetary policy that is sufficiently restrictive to return inflation to 2 percent over time.
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> …..
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> At the December meeting, we all wrote down our best estimates of what we thought the ultimate level would be [of the federal funds rate], and that's obviously back in December. And the median for that was between five and five and a quarter percent. At the March meeting, we're going to update those assessments. We did not update them today. We did, however, continue to say that we believe ongoing rate hikes will be appropriate to attain a sufficiently restrictive stance of policy to bring inflation back down to 2 percent. We think we've covered a lot of ground, and financial conditions have certainly tightened. I would say we still think there's work to do there. We haven't made a decision on exactly where that will be. I think, you know, we're going to be looking carefully at the incoming data between now and the March meeting and then the May meeting. I don't feel a lot of certainty about where that will be. It could certainly be higher than we're writing down right now. If we come to the view that we need to write down to -- you know, to move rates up beyond what we said in December we would certainly do that. At the same time, if the data come in, in the other direction then we'll -- you know, we'll make data-dependent decisions at coming meetings, of course.[6]

[6] Transcript. Chair Powell Press Conference, Feb. 1, 2023; clarification added. https://www.federalreserve.gov/mediacenter/files/FOMCpresconf20230201.pdf

B. The Use of Monetary Policy to Address Inflation

Q. What policy actions has the Federal Reserve enacted to respond to increased inflation?

A. The dramatic increase in inflation has prompted the Federal Reserve to pursue an aggressive normalization of monetary policy, removing the accommodative policy programs used to mitigate the economic effects of COVID-19. As of the FOMC meeting on February 1, 2023, the Federal Reserve has taken the following actions:

- Completed its taper of Treasury bond and mortgage-backed securities purchases;[7]
- Increased the target federal funds rate beginning in March 2022 through a series of increases from a target range of 0.00 to 0.25 percent to a target range of 4.50 percent to 4.75 percent;[8]
- Anticipates ongoing increases in the target range will be appropriate to achieve its goals of maximum employment at the inflation rate of 2.00 percent over the long-run;[9]
- Began reducing its holdings of Treasury and mortgage-backed securities on June 1, 2022.[10] The Federal Reserve is reducing the size of its balance sheet by only reinvesting principal payments on owned securities after the total amount of payments received exceeds a defined cap. For Treasury securities, the cap is currently set at $60 billion per month. The cap for mortgage-backed securities is currently set at $35 billion per month.[11]

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[7] Federal Reserve Bank of New York, https://www.newyorkfed.org/markets/domestic-market-operations/monetary-policy-implementation/treasury-securities/treasury-securities-operational-details#monthly-details.
[8] Press Releases, Federal Reserve (Mar. 16, 2022) https://www.federalreserve.gov/mediacenter/files/FOMCpresconf20220316.pdf; Transcript, Chair Powell Press Conference, Feb. 1, 2023, https://www.federalreserve.gov/mediacenter/files/FOMCpresconf20230201.pdf.
[9] Transcript, Chair Powell Press Conference, Feb. 1, 2023.
[10] Press Release, Federal Reserve (May 4, 2022) https://www.federalreserve.gov/newsevents/pressreleases/monetary20220504a.htm.
[11] Press Release, Federal Reserve, Plans for Reducing the Size of the Federal Reserve's Balance Sheet (May 4, 2022) https://www.federalreserve.gov/newsevents/pressreleases/monetary20220504b.htm.

Q. Do recent changes in the Gross Domestic Product (GDP) affect the current outlook for inflation and interest rates?

A. No. While FOMC participants have recently reduced their projections for economic activity for real GDP growth to 0.5 percent in 2023,[14] which is well below the median estimate for the longer-run normal GDP growth rate, the Federal Reserve has highlighted that the labor market continues to be extremely tight, and in fact, the unemployment rate reached 3.4 percent in January 2023, the lowest it has been in over 50 years.[15] Therefore, with a tight labor market and persistently high inflation, the Federal Reserve has indicated its need to continue a restrictive monetary policy to moderate demand to better align it with supply.[16]

Q. How have interest rates and inflation changed since the Company's last rate case?

A. As shown in Figure 2 and Figure 3, current market conditions are significantly different than at the time of the Company's last rate proceeding. As summarized in Figure 4, when the Commission authorized an ROE of 9.50 percent in the Company's 2020 rate proceeding, interest rates (as measured by the 30-year Treasury bond yield) were 1.64 percent and inflation was 1.28 percent. However, since the Company's last rate proceeding, long-term interest rates have more than doubled, and, as discussed, inflation is also substantially higher.

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[14] FOMC, Summary of Economic Projections, Dec. 14, 2022, https://www.federalreserve.gov/monetarypolicy/files/fomcprojtabl20221214.pdf.

[15] Lucia Mutikani, U.S. reports blowout job growth; unemployment lowest since 1969. Reuters (Feb. 3, 2023) https://www.reuters.com/world/us/us-job-growth-accelerates-january-wage-gains-moderate-2023-02-03/.

[16] Transcript, Chair Powell, Press Conference, Feb. 1, 2023, https://www.federalreserve.gov/mediacenter/files/FOMCpresconf20230201.pdf.

Figure 4: Change in Market Conditions Since PacifiCorp's Last Rate Case[17]

Docket	Decision Date	Federal Funds Rate	30-Day Average Of 30-Year Treasury Bond Yield	Inflation Rate	Authorized ROE
UE 191024	12/14/2020	0.09%	1.64%	1.28%	9.50%
Current	1/31/2023	4.33%	3.70%	6.42%	

D. Expected Performance of Utility Stocks and the Investor-Required Return on Utility Investments

Q. Are utility share prices correlated to changes in the yields on long-term government bonds?

A. Yes. Interest rates and utility share prices are inversely correlated, which means that increases in interest rates result in declines in the share prices of utilities and vice versa. For example, Goldman Sachs and Deutsche Bank examined the sensitivity of share prices of different industries to changes in interest rates over the past five years. Both Goldman Sachs and Deutsche Bank found that utilities had one of the strongest negative relationships with bond yields (*i.e.*, increases in bond yields resulted in the decline of utility share prices).[18]

Q. How do equity analysts expect the utilities sector to perform in an increasing interest rate environment?

A. Equity analysts project that utilities will underperform the broader market given high inflation and the recent increases in interest rates. Fidelity classifies the utility sector

[17] St. Louis Federal Reserve Bank; Bureau of Labor Statistics.
[18] Justina Lee, *Wall Street Is Rethinking the Treasury Threat to Big Tech Stocks*. Bloomberg.com (Mar. 11, 2021) https://www.bloomberg.com/news/articles/2021-03-11/wall-street-is-rethinking-the-treasury-threat-to-big-tech-stocks#xj4y7vzkg.

as underweight,[19] and *Morningstar* recently noted that many of the market conditions that supported the premium valuation of utilities over the last decade mainly low inflation, interest rates and energy prices are currently reversing:

> Utilities' relative outperformance in 2022 while the market frets about the economy suggests that utilities remain a defensive haven. Utilities also outperformed ahead of the 2001 and the 2007-09 recessions. However, we think utilities' weak total returns in 2022 should concern investors. For the first time in a decade, the tailwinds supporting utilities' earnings growth and premium valuations (low inflation, low interest rates, and low energy price) are reversing Utilities' growth prospects are our biggest concern going into 2023. Utilities no longer offer a yield premium as bond yields climbed to their highest level in 15 years. Without that yield premium, the only advantage utilities offer investors is earnings growth. This is why high inflation and rising interest rates loom large for utilities in 2023. Inflation, including higher energy prices, will raise customer bills and could force utilities to re-evaluate their growth plans. Higher interest costs will sap cash flow and make infrastructure investments more expensive.[20]

Additionally, the *Wall Street Journal* noted that the S&P Utilities Index was down 14 percent over between September and October 2022, attributing the decline to the recent increase in long-term treasury yields:

> A big draw of utility stocks has become less attractive as interest rates have climbed. Utility stocks are known for their sizable dividends, offering investors a regular stream of income. Companies in the S&P 500 utilities sector offer a dividend yield of 3.3 percent, among the highest payout percentages in the index, according to FactSet.
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> But the outsize dividends of utility stocks are no match for climbing bond yields. The yield on the benchmark 10-year Treasury note finished above 4 percent on Monday for a second consecutive session. Friday marked the 10-year yield's first close above the 4 percent level since 2008 and 11 straight weeks of gains. Treasurys are viewed as essentially risk-free if held to maturity.

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[19] Fidelity, First Quarter 2023 Investment Research Update. (Feb. 8, 2023) https://www.fidelity.com/bin-public/060_www_fidelity_com/documents/learning-center/Investment-Research-Update-Q1-2023.pdf.

[20] Miller, Travis. "Can Utilities Maintain Growth Against Macroeconomic Headwinds?" *Morningstar*, January 3, 2023, https://www.morningstar.com/articles/1131198/can-utilities-maintain-growth-against-macroeconomic-headwinds.

> “The 10-year is repricing everything. I’ve got something that’s even safer and yields even more," said Kevin Barry, chief investment officer at Summit Financial, comparing Treasurys and utility stocks.[21]

Similarly, Barron’s noted that the decline in share prices can be attributed to the relatively high valuations and low dividend yields of utilities as compared to other asset classes such as Treasuries.[22] According to Barron’s, even after the recent decline in share prices, the Utilities Select ETF was yielding 2.85 percent, which is a yield that will not “lure in buyers when the ultrasafe 10-year Treasury note yields close to 4%.”[23] Therefore, Barron’s currently recommends not buying utility stocks.

Q. Why do equity analysts expect the electric utility sector to underperform over the near-term?

A. While interest rates have increased substantially over the past year, the valuations of utilities have remained elevated and have not fully reflected the effect of the recent increase in interest rates. To illustrate this point, I examined the difference between the dividend yields of utility stocks and the yields on long-term government bonds from January 2010 through January 2023 (yield spread). I selected the dividend yield on the S&P Utilities Index as the measure of the dividend yields for the utility sector and the yield on the 10-year Treasury bond as the estimate of the yield on long-term government bonds. As shown in Figure 5, the recent significant increase in long-term government bonds yields has resulted in the yield on long-term government bonds exceeding the dividend yields of utilities. The yield spread as of January 31, 2023

[21] Hannah Miao, *Utility Stock stumble as treasury yields climb.* The Wall Street Journal (Oct. 18, 2022) https://www.wsj.com/articles/utility-stocks-stumble-as-treasury-yields-climb-11666058844.
[22] Jacob Sonenshine, Utilities Stocks Have Fallen off a Cliff. They Just Got Downgraded, Too. Barron’s (Oct. 17, 2022) https://www.barrons.com/articles/utility-stocks-dividend-yields-51666038990.
[23] *Id*.

increasing interest rates has resulted in the DCF model understating the utility cost of equity, and that weight should be placed on risk premium models, such as the CAPM, in the determination of the ROE:

> To help control rising inflation, the Federal Open Market Committee has signaled that it is ending its policies designed to maintain low interest rates. Aqua Exc. at 9. Because the DCF model does not directly account for interest rates, consequently, it is slow to respond to interest rate changes. However, I&E's CAPM model uses forecasted yields on ten-year Treasury bonds, and accordingly, its methodology captures forward looking changes in interest rates.
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> Therefore, our methodology for determining Aqua's ROE shall utilize both I&E's DCF and CAPM methodologies. As noted above, the Commission recognizes the importance of informed judgment and information provided by other ROE models. In the 2012 PPL Order, the Commission considered PPL's CAPM and RP methods, tempered by informed judgment, instead of DCF-only results. We conclude that methodologies other than the DCF can be used as a check upon the reasonableness of the DCF derived ROE calculation. Historically, we have relied primarily upon the DCF methodology in arriving at ROE determinations and have utilized the results of the CAPM as a check upon the reasonableness of the DCF derived equity return. As such, where evidence based on other methods suggests that the DCF-only results may understate the utility's ROE, we will consider those other methods, to some degree, in determining the appropriate range of reasonableness for our equity return determination. In light of the above, we shall determine an appropriate ROE for Aqua using informed judgement based on I&E's DCF and CAPM methodologies.[25]
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> …..
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> We have previously determined, above, that we shall utilize I&E's DCF and CAPM methodologies. I&E's DCF and CAPM produce a range of reasonableness for the ROE in this proceeding from 8.90% [DCF] to 9.89% [CAPM]. Based upon our informed judgment, which includes consideration of a variety of factors, including increasing inflation leading to increases in interest rates and capital costs since the rate filing, we determine that a base ROE of 9.75% is reasonable and appropriate for Aqua.[26]

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[25] *Penn. Pub. Util. Comm'n et.al. v, Aqua Penn. Wastewater Inc.*, Pennsylvania Public Utility Commission, Docket Nos. R-2021-3027385 and R-2021-3027386, Opinion and Order, at 154–155 (May 12, 2022) https://www.puc.pa.gov/pcdocs/1744354.pdf.

[26] *Id.*, at 177–178.

group of companies that is both publicly traded and comparable to PacifiCorp in certain fundamental business and financial respects to serve as its "proxy" in the ROE estimation process.

Even if PacifiCorp was a publicly traded entity, it is possible that transitory events could bias its market value over a given period. A significant benefit of using a proxy group is that it moderates the effects of unusual events that may be associated with any one company. The proxy companies used in my analyses all possess a set of operating and risk characteristics that are substantially comparable to PacifiCorp, and thus provide a reasonable basis to derive an estimate of the appropriate ROE for PacifiCorp.

Q. Please provide a brief profile of PacifiCorp.

A. PacifiCorp is an indirect, wholly owned subsidiary of Berkshire Hathaway Energy Company (BHE). PacifiCorp provides electric utility service to approximately 2.0 million residential, commercial and industrial customers in California, Idaho, Oregon, Utah, Washington and Wyoming.[27] In Washington, PacifiCorp provides electric service to approximately 140,000 residential, commercial, and industrial customers.[28] As of December 31, 2021, PacifiCorp's net utility electric plant in Washington was approximately $1.48 billion.[29] In addition, PacifiCorp had 2021 electric operating revenue in Washington of approximately $375 million, made up of 41.30 percent

[27] Berkshire Hathaway Energy Co, 2021 Form 10-K at 3, https://www.sec.gov/ix?doc=/Archives/edgar/data/0001081316/000108131622000004/bhe-20211231.htm.
[28] Direct Testimony of Matthew D. McVee.
[29] PacifiCorp d/b/a Pacific Power and Light Company, 2021 Annual Report to the Washington Utilities and Transportation Commission, at 10 and 219. https://www.utc.wa.gov/sites/default/files/2022-06/140%20-%20PacifiCorp%20-%202021%20-%20AR%20-%20FERC%20Form%201.pdf.

residential, 34.70 percent commercial, 18.48 percent industrial, and 5.51 percent public lighting, sales for resale and other.[30] PacifiCorp's electric operations in Washington represented 8 percent of PacifiCorp's electric sales in 2021.[31] Approximately 78.3 percent of PacifiCorp's 2021 net generation needs in Washington were satisfied by its owned and joint owned facilities while the remaining 21.7 percent was purchased power.[32] PacifiCorp currently has an investment grade long-term rating of A (Outlook: Stable) from S&P and A3 (Outlook: Stable) from Moody's.[33]

Q. How did you select the companies included in your proxy group?

A. I began with the group of companies that Value Line classifies as Electric Utilities and applied the following screening criteria to select companies that:

- pay consistent quarterly cash dividends, because companies that do not cannot be analyzed using the Constant Growth DCF model;
- have investment grade long-term issuer ratings from S&P and/or Moody's;
- are covered by more than one utility industry analysts;
- have positive long-term earnings growth rates from at least two equity analysts;
- own regulated generation assets;
- derive at least 40.00 percent of generation from own generation;
- derive at least 60.00 percent of their total operating income from regulated operating income;
- derive at least 60.00 percent of total regulated operating income from regulated electric operating income; and
- were not parties to a transformative transaction during the analytical periods relied on.

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[30] PacifiCorp d/b/a Pacific Power and Light Company, 2021 Annual Report to the Washington Utilities and Transportation Commission, at 2, https://www.utc.wa.gov/sites/default/files/2022-06/02-NEW-PPL-Supp-FERC-Form-1-5-25-22%20%282%29.pdf.
[31] Berkshire Hathaway Energy Company, 2021 Form 10-K, at 3, https://www.sec.gov/ix?doc=/Archives/edgar/data/0001081316/000108131622000004/bhe-20211231.htm.
[32] PacifiCorp d/b/a Pacific Power and Light Company, 2021 Annual Report to the Washington Utilities and Transportation Commission, at 12a, https://www.utc.wa.gov/sites/default/files/2022-06/02-NEW-PPL-Supp-FERC-Form-1-5-25-22%20%282%29.pdf.
[33] S&P Capital IQ Pro and Moody's Investor Services, Feb. 10, 2023.

Q. Did you exclude any other companies from the proxy group?

A. Yes. I also excluded Hawaiian Electric Industries, Inc. (HE) from my proxy group. HE's operations are concentrated on the islands of Hawaii; therefore, the company faces geographic concentration risk. As HE noted in the company's 2021 Form10-K:

> The Company is subject to the risks associated with the geographic concentration of its businesses and current lack of interconnections that could result in service interruptions at the Utilities or higher default rates on loans held by ASB [American Savings Bank].[34]

The increased risk of service interruptions resulting from HE's geographic location which could result in revenue loss and increased costs is a risk unique to HE and would not apply to utilities located on the U.S. mainland. Furthermore, HE's unregulated operations which represent approximately 33 percent of the company's operation income in 2021 are concentrated in the banking sector through the ownership of American Savings Bank (ASB).[35] ASB also only operates on Hawaii; thus, all of the company's consumer and commercial loans are to customers on Hawaii. If Hawaii were to face an adverse economic or political event, ASB could face severe financial effects given the company's geographic concentration in Hawaii.[36] As a result, I have excluded HE from my proxy group considering HE's unique geographical risks.

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[34] Hawaii Electric Industries, Inc., 2021 Form 10-K, at 23, https://www.hei.com/investor-relations/reports-and-filings/sec-filings-details/default.aspx?FilingId=14751750.
[35] *Id.*, at 86.
[36] *Id.*, at 20.

Q. What is the composition of your proxy group?

A. The screening criteria just discussed resulted in a proxy group consisting of the 17 companies shown in Figure 6.

Figure 6: Proxy Group

Company	**Ticker**
ALLETE, Inc.	ALE
Alliant Energy Corporation	LNT
Ameren Corporation	AEE
American Electric Power Company, Inc.	AEP
Avista Corporation	AVA
CMS Energy Corporation	CMS
Duke Energy Corporation	DUK
Entergy Corporation	ETR
Evergy, Inc.	EVRG
IDACORP, Inc.	IDA
NextEra Energy, Inc.	NEE
NorthWestern Corporation	NWE
OGE Energy Corporation	OGE
Otter Tail Corporation	OTTR
Portland General Electric Company	POR
Southern Company	SO
Xcel Energy Inc.	XEL

Q. Do your screening criteria result in a proxy group that is risk-comparable to PacifiCorp?

A. Yes. The overall purpose of developing a set of screening criteria is to select a proxy group of companies that align with the financial and operational characteristics of PacifiCorp and that investors would view as comparable to the Company. I developed the screens and thresholds for each screen based on judgment with the intention of balancing the need to maintain a proxy group that is of sufficient size against establishing a proxy group of companies that are comparable in business and financial risk to the Company. This resulted in the group of seventeen companies shown in Figure 6 that have business and financial risks comparable to PacifiCorp.

credit metrics and, therefore, credit ratings. To that point, S&P explains the importance of regulatory support for large capital projects:

> When applicable, a jurisdiction's willingness to support large capital projects with cash during construction is an important aspect of our analysis. This is especially true when the project represents a major addition to rate base and entails long lead times and technological risks that make it susceptible to construction delays. Broad support for all capital spending is the most credit-sustaining. Support for only specific types of capital spending, such as specific environmental projects or system integrity plans, is less so, but still favorable for creditors. Allowance of a cash return on construction work-in-progress or similar ratemaking methods historically were extraordinary measures for use in unusual circumstances, but when construction costs are rising, cash flow support could be crucial to maintain credit quality through the spending program. Even more favorable are those jurisdictions that present an opportunity for a higher return on capital projects as an incentive to investors.[56]

Therefore, to the extent that PacifiCorp's rates do not permit the opportunity to recover its full cost of doing business, PacifiCorp will face increased recovery risk and thus increased pressure on its credit metrics.

Q. How do PacifiCorp's capital expenditure requirements compare to those of the proxy group companies?

A. As shown in Exhibit No. AEB-12, I calculated the ratio of expected capital expenditures to net utility plant for PacifiCorp and each of the companies in the proxy group by dividing each company's projected capital expenditures for the period from 2023-2027 by its total net utility plant as of December 31, 2022. As shown in Exhibit AEB-12 (*see* also Figure 11 below), PacifiCorp's ratio of capital expenditures as a percentage of net utility plant of 98.86 percent is approximately 1.99 times the

[56] S&P Global Ratings, Assessing U.S. Investor-Owned Utility Regulatory Environments, at 7 (Aug. 10, 2016), https://fileservice.eea.comacloud.net/FileService.Api/file/FileRoom/12143406.

Q. How do credit rating agencies consider regulatory risk in establishing a company's credit rating?

A. Both S&P and Moody's consider the overall regulatory framework in establishing credit ratings. Moody's establishes credit ratings based on four key factors: (1) regulatory framework; (2) the ability to recover costs and earn returns; (3) diversification; and (4) financial strength, liquidity, and key financial metrics. Of these criteria, regulatory framework and the ability to recover costs and earn returns are each given a broad rating factor of 25.00 percent. Therefore, Moody's assigns regulatory risk a 50.00 percent weighting in the overall assessment of business and financial risk for regulated utilities.[57]

S&P also identifies the regulatory framework as an important factor in credit ratings for regulated utilities, stating: "One significant aspect of regulatory risk that influences credit quality is the regulatory environment in the jurisdictions in which a utility operates."[58] S&P identifies four specific factors that it uses to assess the credit implications of the regulatory jurisdictions of investor-owned regulated utilities: (1) regulatory stability; (2) tariff-setting procedures and design; (3) financial stability; and (4) regulatory independence and insulation.[59]

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[57] Moody's Investors Service, Rating Methodology: Regulated Electric and Gas Utilities, June 23, 2017, at 4, https://www.moodys.com/research/doc--PBC_1072530.
[58] Standard & Poor's Global Ratings, Ratings Direct, U.S. and Canadian Regulatory Jurisdictions Support Utilities' Credit Quality—But Some More So Than Others, at 2 (June 25, 2018).
[59] *Id.*, at 1.

Q. How does the regulatory environment in which a utility operates affect its access to and cost of capital?

A. The regulatory environment can significantly affect both the access to, and cost of capital in several ways. First, the proportion and cost of debt capital available to utility companies are influenced by the rating agencies' assessment of the regulatory environment. As noted by Moody's, "[f]or rate regulated utilities, which typically operate as a monopoly, the regulatory environment and how the utility adapts to that environment are the most important credit considerations."[60] Moody's has further highlighted the relevance of a stable and predictable regulatory environment to a utility's credit quality, noting: "[b]roadly speaking, the Regulatory Framework is the foundation for how all the decisions that affect utilities are made (including the setting of rates), as well as the predictability and consistency of decision-making provided by that foundation."[61]

Q. Have you conducted any analysis of the regulatory framework in Washington relative to the jurisdictions in which the companies in your proxy group operate?

A. Yes. I have evaluated the regulatory framework in Washington considering two factors which are important to ensuring PacifiCorp maintains access to capital at reasonable terms. As I will discuss in more detail below, the two factors are: 1) cost recovery mechanisms which allow a utility to recover costs in a timely manner between rate cases and provide the utility the opportunity to earn its authorized

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[60] Moody's Investors Service, Rating Methodology: Regulated Electric and Gas Utilities, at 6 (June 23, 2017) https://www.moodys.com/research/doc--PBC_1072530.
[61] *Id.*

authorized ROE of 9.25 percent.[62] In addition, FitchRatings recently downgraded and maintained a negative outlook for APS and its parent, PNW, following the hearings conducted by the Arizona Corporation Commission (ACC) in October 2021 regarding APS' current rate case proceeding.[63] While the ACC had not issued a final order in APS' rate case at the time, FitchRatings noted that the developments at the hearing in October indicate a likely credit negative outcome that will negatively affect the financial metrics of both APS and PNW. It is also important to note that both Standard & Poor's and Moody's downgraded PNW's and APS' credit rating and put the companies on credit watch negative following the Commission's November vote that officially authorized the 8.70 percent ROE.[64]

Q. Are you aware of any utilities whose market data has been affected by adverse rate case developments?

A. Yes, I am. The market has responded negatively to recent returns authorized by the ACC. As noted above, the most recent ROE determination in Arizona was for APS. The Recommended Opinion and Order (ROO) issued in the APS rate proceeding on August 2, 2021, recommended an ROE of 9.16 percent. In October 2021, that recommendation was amended to reduce the company's ROE to 8.70 percent. The

[62] Moody's Investors Service, Credit Opinion: ALLETE, Inc. Update following downgrade, at 3 (Apr. 3, 2019) https://www.moodys.com/research/Moodys-downgrades-Pinnacle-West-to-Baa1-and-Arizona-Public-Service--PR_456814.

[63] FitchRatings, Fitch Downgrades Pinnacle West Capital & Arizona Public Service to 'BBB+'; Outlooks Remain Negative, (Oct. 12, 2021) https://www.fitchratings.com/research/corporate-finance/fitch-downgrades-pinnacle-west-capital-arizona-public-service-to-bbb-outlooks-remain-negative-12-10-2021.

[64] *See* S&P Capital IQ and Moody's Investors Service, "Rating Actions: Moody's downgrades Pinnacle West to Baa1 and Arizona Public Service to A3; outlook negative," (Nov. 17, 2021) https://www.moodys.com/research/Moodys-downgrades-Pinnacle-Rating-Action--PR_456814.

final ROE that was established for APS was 8.70 percent.[65] The market reacted strongly to the proposed order and subsequent amendment and final decision. Guggenheim Securities LLC, an equity analyst that follows PNW, the parent company of APS, informed its clients that

> [T]he "Arizona Corporation Commission is now confirmed to be the single most value destructive regulatory environment in the country as far as investor-owned utilities are concerned".[66]

S&P Global Market Intelligence (Regulatory Research Associates) noted that this decision was "among the lowest ROEs RRA had encountered in its coverage of vertically integrated electric utilities in the past 30 years."[67]

As shown in Figure 13 below, PNW's stock price declined approximately 24 percent from August 2, 2021 to November 4, 2021 following the issuance of the ROO, which recommended an ROE of 9.16 percent, and then the subsequent amendment to that opinion recommending the 8.70 percent ROE ultimately adopted by the ACC. Moreover, the Value Line five-year projected EPS growth rates for this company have fallen from 5.0 percent in July 2021, prior to the deliberations in the rate proceeding to "Nil" in October 2021 and most recently 0.5 percent in January 20, 2023. For PNW, the APS decision has had a significant effect on the share price and growth rate assumptions used in the DCF model.

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[65] In the Matter of the Application of Arizona Public Service Company for a Hearing to Determine the Fair Value of the Utility Property of the Company for Ratemaking Purposes, to Fix a Just and Reasonable Rate of Return Thereon, to Approve Rate Schedules Designed to Develop Such Return, Arizona Corporation Commission Docket No. E-01345A-19-0236, Commissioner Olson Proposed Amendment No. 1 to the Recommended Opinion and Order (~~Oct~~Sept. 429, 2021) https://docket.images.azcc.gov/E000015911.pdf?i=1680374997736.

[66] S&P Global Market Intelligence, Pinnacle West shares tumble after regulators slash returns in rate case, (Oct. 7, 2021) https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/pinnacle-west-shares-tumble-after-regulators-slash-returns-in-rate-case-66991920.

[67] S&P Global Market Intelligence, RRA Regulatory Focus, Commission accords Arizona Public Service Company a well below average ROE, (Oct. 8, 2021).

reasons, I conclude that without the modifications sought by PacifiCorp to its mechanisms, the Company's business risks are somewhat higher than the proxy group which should be reflected in the authorized ROE.

C. Generation Ownership / Washington Clean Energy Transformation Act

Q. How does the business risk of vertically integrated electric utilities compare to the business risk of other regulated utilities?

A. According to Moody's, generation ownership causes vertically integrated electric utilities to have higher business risk than either electric transmission and distribution companies, or natural gas distribution or transportation companies.[68] As a result of this higher business risk, integrated electric utilities typically require a higher ROE or percentage of equity in the capital structure than other electric or gas utilities.

Q. Are there other risk factors specific to vertically integrated electric utilities that the credit rating agencies consider when determining the credit rating of a company that owns generation?

A. Yes. As discussed above, Moody's establishes credit ratings based on four key factors: (1) regulatory framework; (2) the ability to recover costs and earn returns; (3) diversification; and (4) financial strength, liquidity and key financial metrics. The third factor diversification, which Moody's assigns a 10.00 percent weighting in the overall assessments of a company's business risk, considers the fuel source diversity of a utility with generation. Moody's notes:

> For utilities with electric generation, fuel source diversity can mitigate the impact (to the utility and to its rate-payers) of changes in commodity prices, hydrology and water flow, and environmental or

[68] Moody's Investors Service, *Rating Methodology: Regulated Electric and Gas Utilities*, at 21-22 (June 23, 2017) https://ratings.moodys.com/api/rmc-documents/68547.

adjusted sales revenues to customers of two percent more than the previous year without demonstrating to the Commission that they have maximized investment in renewable resources and non-emitting resources prior to using alternative compliance measures.[70] Failure to meet these requirements and investor-owned utilities must pay an administrative penalty in the amount of one hundred dollars, times generation specific multipliers, for every megawatt-hour of electricity generation that does not come from non-emitting electric generation or a renewable resource.[71]

Q. Has the Company developed plans to meet these targets?

A. Yes. The Company has demonstrated its commitment to meeting these public policy goals. Specifically, PacifiCorp filed the Company's first Clean Energy Implementation Plan (CEIP) in January 2022, which outlined the Company's action plan over the four-year period of 2022 to 2025 to meet CETA's clean energy goals. The basis for the Company's CEIP was the 2021 Integrated Resource Plan which outlined its long-term resource plan that includes substantial investment in renewables generation from 2022 through 2040. For example, as discussed in PacifiCorp's update to its 2021 IRP, the Company has planned to add 5,297 MW of new solar generation, 4,160 MW of new wind generation, 5,546 MW of new storage resources and 500 MW of advanced nuclear generation.[72] Moreover, the Company plans to integrate the new renewable generation resources through significant

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[70] Senate Bill 511~~9~~6, May 7, 2019, at 20, https://lawfilesext.leg.wa.gov/biennium/2019-20/Pdf/Bills/Session%20Laws/Senate/5116-S2.SL.pdf.
[71] ~~Senate Bill 5119, May 7, 2019~~*Id.*, at 23.
[72] PacifiCorp 2021 Integrated Resource Plan Update, March 31, 2022, at 3, https://www.pacificorp.com/content/dam/pcorp/documents/en/pacificorp/energy/integrated-resource-plan/2021-irp/Volume%20I%20-%209.15.2021%20Final.pdf.

investments that strengthen and modernize its transmission network. Finally, PacifiCorp plans to retire 14 of its 22 remaining coal units by 2030 and 19 of the 22 remaining units by 2040 while also retiring 1,554 MW of natural gas generation by 2040.[73] It is important to note that consistent with CETA, while PacifiCorp will still have coal generation assets operating after 2025, PacifiCorp will remove all coal generation assets from Washington's allocation of electricity.[74] Therefore, the Company has outlined significant plans to meet the clean energy goals of CETA.

Q. Have the credit rating agencies commented on PacifiCorp's capital spending plans?

A. Yes. S&P has noted that PacifiCorp's elevated capital spending plan, which includes plans to invest $2.5 billion in 3,900 MW of new and repowered wind and solar generation, will contribute to negative cash flow for the Company over the near-term.[75] Thus, S&P expects the capital spending plan will be partially funded with debt. This highlights the importance of a constructive regulatory outcome in this proceeding to sustain credit quality as the Company implements its CEIP.

Q. How does PacifiCorp's generation investment plan affect its business risk?

A. PacifiCorp's plan includes significant investment in building transmission and adding new renewable generation. This significant investment in transmission and renewable energy will as S&P notes require continued access to capital markets, which highlights the importance of granting PacifiCorp an allowed ROE and equity ratio that is sufficient to attract capital at reasonable terms.

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[73] ~~PacifiCorp 2021 Integrated Resource Plan Update, March 31, 2022~~ *Id.*, at 12-13.
[74] ~~PacifiCorp 2021 Integrated Resource Plan, September 1, 2021, at 290~~ *Id.*
[75] S&P Global Ratings, "PacifiCorp", at 1-2 (April 21, 2022).

interest costs," and that some offset in managing these headwinds include "higher authorized ROEs and the use of tools such as securitization of under-recovered fuel balances."[78]

Likewise, S&P also continues to maintain a negative outlook for the utility industry, noting that downgrades have outpaced upgrades for the third consecutive year in 2022 with a median investor-owned utility credit rating of "BBB+".[79] Further, S&P expects the industry to have negative discretionary cash flow as a result of significant capital spending and consistent dividends.[80] Therefore, the utility industry will need ongoing access to capital markets to fund the capital expenditures. However, S&P notes that inflation, rising interests rates and decreasing equity prices may "hamper" consistent access to capital markets and result in additional pressure on cash flows.[81] Moreover, S&P indicates that if inflation risks persist over the near-term and customer bills increase, regulatory credit support could decrease resulting in weaker financial metrics for the industry:

> Over the past decade the industry's financial measures have weakened from a combination of rising capital spending, regulatory lag, and lower authorized return on equity (ROE). The industry's return on capital was about 6% a decade ago and today is closer to 4%. More recently, we have seen instances where not only is the authorized ROE lowered but also the equity ratio is lowered. These results have weakened the industry's financial measures, pressuring credit quality. Under our base case of moderating inflationary risks during 2023, we expect the industry's credit measures to generally remain flat. However, if inflationary risks persist, it may further pressure the

[78] Fitch Ratings. North American Utilities, Power & Gas Outlook 2023. at 1-2 (Dec. 7, 2022) https://www.fitchratings.com/research/corporate-finance/north-american-utilities-power-gas-outlook-2023-07-12-2022.
[79] S&P Global Ratings. Industry Top Trends, North American Regulated Utilities: The industries outlook remains negative. (Jan. 23, 2023).
[80] *Id*.
[81] *Id*.

Exh. AEB-1Tr
Docket UE-230172
Witness: Ann E. Bulkley

BEFORE THE WASHINGTON
UTILITIES AND TRANSPORTATION COMMISSION

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION, Complainant, v. PACIFICORP dba PACIFIC POWER & LIGHT COMPANY Respondent.	Docket UE-230172

PACIFICORP

DIRECT TESTIMONY OF ANN E. BULKLEY

REVISED April 4, 2023

returns of other businesses having similar risk, adequacy of the return to provide access to capital and support credit quality, and the requirement that the result lead to just and reasonable rates.[2]

- The effect of current and projected capital market conditions on investors' return requirements.

- The results of several analytical approaches that provide estimates of the Company's cost of equity. Because the Company's authorized ROE should be a forward-looking estimate over the period during which the rates will be in effect, these analyses rely on forward-looking inputs and assumptions (*e.g.,* projected analyst growth rates in the DCF model, forecasted risk-free rate and market risk premium in the CAPM analysis).

- Although the companies in my proxy group are generally comparable to PacifiCorp, each company is unique, and no two companies have the exact same business and financial risk profiles. Accordingly, I considered the Company's regulatory, business, and financial risks relative to the proxy group of comparable companies in determining where the Company's ROE should fall within the reasonable range of analytical results to appropriately account for any residual differences in risk.

Q. What are the results of the models that you have used to estimate the cost of equity for PacifiCorp?

A. Figure 1 summarizes the range of results produced by the Constant Growth DCF, CAPM, ECAPM, Risk Premium, and Expected Earnings analyses based on data through the end of January 2023.

[2] Federal Power Commission v. Hope Natural Gas Co., 320 U.S. 591 (1944) (Hope) https://supreme.justia.com/cases/federal/us/320/591/; Bluefield Waterworks & Improvement Co. v. Public Service Commission of West Virginia, 262 U.S. 679 (1923) (Bluefield) https://tile.loc.gov/storage-services/service/ll/usrep/usrep262/https://supreme.justia.com/cases/federal/us/320/591/usrep262679/usrep262679.pdf.

excluding the volatile food and energy categories, core PCE prices rose 4.4 percent. The inflation data received over the past three months show a welcome reduction in the monthly pace of increases. And while recent developments are encouraging, we will need substantially more evidence to be confident that inflation is on a sustained downward path.

…..

With today's action, we have raised interest rates by 4-1/2 percentage points over the past year. We continue to anticipate that ongoing increases in the target range for the federal funds rate will be appropriate in order to attain a stance of monetary policy that is sufficiently restrictive to return inflation to 2 percent over time.

…..

At the December meeting, we all wrote down our best estimates of what we thought the ultimate level would be [of the federal funds rate], and that's obviously back in December. And the median for that was between five and five and a quarter percent. At the March meeting, we're going to update those assessments. We did not update them today. We did, however, continue to say that we believe ongoing rate hikes will be appropriate to attain a sufficiently restrictive stance of policy to bring inflation back down to 2 percent. We think we've covered a lot of ground, and financial conditions have certainly tightened. I would say we still think there's work to do there. We haven't made a decision on exactly where that will be. I think, you know, we're going to be looking carefully at the incoming data between now and the March meeting and then the May meeting. I don't feel a lot of certainty about where that will be. It could certainly be higher than we're writing down right now. If we come to the view that we need to write down to -- you know, to move rates up beyond what we said in December we would certainly do that. At the same time, if the data come in, in the other direction then we'll -- you know, we'll make data-dependent decisions at coming meetings, of course.[6]

[6] Transcript. Chair Powell Press Conference, Feb. 1, 2023; clarification added. https://www.federalreserve.gov/mediacenter/files/FOMCpresconf20230201.pdf

B. The Use of Monetary Policy to Address Inflation

Q. What policy actions has the Federal Reserve enacted to respond to increased inflation?

A. The dramatic increase in inflation has prompted the Federal Reserve to pursue an aggressive normalization of monetary policy, removing the accommodative policy programs used to mitigate the economic effects of COVID-19. As of the FOMC meeting on February 1, 2023, the Federal Reserve has taken the following actions:

- Completed its taper of Treasury bond and mortgage-backed securities purchases;[7]
- Increased the target federal funds rate beginning in March 2022 through a series of increases from a target range of 0.00 to 0.25 percent to a target range of 4.50 percent to 4.75 percent;[8]
- Anticipates ongoing increases in the target range will be appropriate to achieve its goals of maximum employment at the inflation rate of 2.00 percent over the long-run;[9]
- Began reducing its holdings of Treasury and mortgage-backed securities on June 1, 2022.[10] The Federal Reserve is reducing the size of its balance sheet by only reinvesting principal payments on owned securities after the total amount of payments received exceeds a defined cap. For Treasury securities, the cap is currently set at $60 billion per month. The cap for mortgage-backed securities is currently set at $35 billion per month.[11]

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[7] Federal Reserve Bank of New York, https://www.newyorkfed.org/markets/domestic-market-operations/monetary-policy-implementation/treasury-securities/treasury-securities-operational-details#monthly-details.

[8] Press Releases, Federal Reserve (Mar. 16, 2022) https://www.federalreserve.gov/mediacenter/files/FOMCpresconf20220316.pdf; Transcript, Chair Powell Press Conference, Feb. 1, 2023, https://www.federalreserve.gov/mediacenter/files/FOMCpresconf20230201.pdf.

[9] Transcript, Chair Powell Press Conference, Feb. 1, 2023.

[10] Press Release, Federal Reserve (May 4, 2022) https://www.federalreserve.gov/newsevents/pressreleases/monetary20220504a.htm.

[11] Press Release, Federal Reserve, Plans for Reducing the Size of the Federal Reserve's Balance Sheet (May 4, 2022) https://www.federalreserve.gov/newsevents/pressreleases/monetary20220504b.htm.

Q. Do recent changes in the Gross Domestic Product (GDP) affect the current outlook for inflation and interest rates?

A. No. While FOMC participants have recently reduced their projections for economic activity for real GDP growth to 0.5 percent in 2023,[14] which is well below the median estimate for the longer-run normal GDP growth rate, the Federal Reserve has highlighted that the labor market continues to be extremely tight, and in fact, the unemployment rate reached 3.4 percent in January 2023, the lowest it has been in over 50 years.[15] Therefore, with a tight labor market and persistently high inflation, the Federal Reserve has indicated its need to continue a restrictive monetary policy to moderate demand to better align it with supply.[16]

Q. How have interest rates and inflation changed since the Company's last rate case?

A. As shown in Figure 2 and Figure 3, current market conditions are significantly different than at the time of the Company's last rate proceeding. As summarized in Figure 4, when the Commission authorized an ROE of 9.50 percent in the Company's 2020 rate proceeding, interest rates (as measured by the 30-year Treasury bond yield) were 1.64 percent and inflation was 1.28 percent. However, since the Company's last rate proceeding, long-term interest rates have more than doubled, and, as discussed, inflation is also substantially higher.

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[14] FOMC, Summary of Economic Projections, Dec. 14, 2022, https://www.federalreserve.gov/monetarypolicy/files/fomcprojtabl20221214.pdf.
[15] Lucia Mutikani, U.S. reports blowout job growth; unemployment lowest since 1969. Reuters (Feb. 3, 2023) https://www.reuters.com/world/us/us-job-growth-accelerates-january-wage-gains-moderate-2023-02-03/.
[16] Transcript, Chair Powell, Press Conference, Feb. 1, 2023, https://www.federalreserve.gov/mediacenter/files/FOMCpresconf20230201.pdf.

Figure 4: Change in Market Conditions Since PacifiCorp's Last Rate Case[17]

Docket	Decision Date	Federal Funds Rate	30-Day Average Of 30-Year Treasury Bond Yield	Inflation Rate	Authorized ROE
UE 191024	12/14/2020	0.09%	1.64%	1.28%	9.50%
Current	1/31/2023	4.33%	3.70%	6.42%	

D. Expected Performance of Utility Stocks and the Investor-Required Return on Utility Investments

Q. Are utility share prices correlated to changes in the yields on long-term government bonds?

A. Yes. Interest rates and utility share prices are inversely correlated, which means that increases in interest rates result in declines in the share prices of utilities and vice versa. For example, Goldman Sachs and Deutsche Bank examined the sensitivity of share prices of different industries to changes in interest rates over the past five years. Both Goldman Sachs and Deutsche Bank found that utilities had one of the strongest negative relationships with bond yields (*i.e.*, increases in bond yields resulted in the decline of utility share prices).[18]

Q. How do equity analysts expect the utilities sector to perform in an increasing interest rate environment?

A. Equity analysts project that utilities will underperform the broader market given high inflation and the recent increases in interest rates. Fidelity classifies the utility sector

[17] St. Louis Federal Reserve Bank; Bureau of Labor Statistics.
[18] Justina Lee, *Wall Street Is Rethinking the Treasury Threat to Big Tech Stocks*. Bloomberg.com (Mar. 11, 2021) https://www.bloomberg.com/news/articles/2021-03-11/wall-street-is-rethinking-the-treasury-threat-to-big-tech-stocks#xj4y7vzkg.

as underweight,[19] and *Morningstar* recently noted that many of the market conditions that supported the premium valuation of utilities over the last decade mainly low inflation, interest rates and energy prices are currently reversing:

> Utilities' relative outperformance in 2022 while the market frets about the economy suggests that utilities remain a defensive haven. Utilities also outperformed ahead of the 2001 and the 2007-09 recessions. However, we think utilities' weak total returns in 2022 should concern investors. For the first time in a decade, the tailwinds supporting utilities' earnings growth and premium valuations (low inflation, low interest rates, and low energy price) are reversing Utilities' growth prospects are our biggest concern going into 2023. Utilities no longer offer a yield premium as bond yields climbed to their highest level in 15 years. Without that yield premium, the only advantage utilities offer investors is earnings growth. This is why high inflation and rising interest rates loom large for utilities in 2023. Inflation, including higher energy prices, will raise customer bills and could force utilities to re-evaluate their growth plans. Higher interest costs will sap cash flow and make infrastructure investments more expensive.[20]

Additionally, the *Wall Street Journal* noted that the S&P Utilities Index was down 14 percent over between September and October 2022, attributing the decline to the recent increase in long-term treasury yields:

> A big draw of utility stocks has become less attractive as interest rates have climbed. Utility stocks are known for their sizable dividends, offering investors a regular stream of income. Companies in the S&P 500 utilities sector offer a dividend yield of 3.3 percent, among the highest payout percentages in the index, according to FactSet.
>
> But the outsize dividends of utility stocks are no match for climbing bond yields. The yield on the benchmark 10-year Treasury note finished above 4 percent on Monday for a second consecutive session. Friday marked the 10-year yield's first close above the 4 percent level since 2008 and 11 straight weeks of gains. Treasurys are viewed as essentially risk-free if held to maturity.

[19] Fidelity, First Quarter 2023 Investment Research Update. (Feb. 8, 2023) https://www.fidelity.com/bin-public/060_www_fidelity_com/documents/learning-center/Investment-Research-Update-Q1-2023.pdf.
[20] Miller, Travis. "Can Utilities Maintain Growth Against Macroeconomic Headwinds?" *Morningstar*, January 3, 2023, https://www.morningstar.com/articles/1131198/can-utilities-maintain-growth-against-macroeconomic-headwinds.

> "The 10-year is repricing everything. I've got something that's even safer and yields even more," said Kevin Barry, chief investment officer at Summit Financial, comparing Treasurys and utility stocks.[21]

Similarly, Barron's noted that the decline in share prices can be attributed to the relatively high valuations and low dividend yields of utilities as compared to other asset classes such as Treasuries.[22] According to Barron's, even after the recent decline in share prices, the Utilities Select ETF was yielding 2.85 percent, which is a yield that will not "lure in buyers when the ultrasafe 10-year Treasury note yields close to 4%."[23] Therefore, Barron's currently recommends not buying utility stocks.

Q. Why do equity analysts expect the electric utility sector to underperform over the near-term?

A. While interest rates have increased substantially over the past year, the valuations of utilities have remained elevated and have not fully reflected the effect of the recent increase in interest rates. To illustrate this point, I examined the difference between the dividend yields of utility stocks and the yields on long-term government bonds from January 2010 through January 2023 (yield spread). I selected the dividend yield on the S&P Utilities Index as the measure of the dividend yields for the utility sector and the yield on the 10-year Treasury bond as the estimate of the yield on long-term government bonds. As shown in Figure 5, the recent significant increase in long-term government bonds yields has resulted in the yield on long-term government bonds exceeding the dividend yields of utilities. The yield spread as of January 31, 2023

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[21] Hannah Miao, *Utility Stock stumble as treasury yields climb.* The Wall Street Journal (Oct. 18, 2022) https://www.wsj.com/articles/utility-stocks-stumble-as-treasury-yields-climb-11666058844.
[22] Jacob Sonenshine, Utilities Stocks Have Fallen off a Cliff. They Just Got Downgraded, Too. Barron's (Oct. 17, 2022) https://www.barrons.com/articles/utility-stocks-dividend-yields-51666038990.
[23] *Id*.

increasing interest rates has resulted in the DCF model understating the utility cost of equity, and that weight should be placed on risk premium models, such as the CAPM, in the determination of the ROE:

> To help control rising inflation, the Federal Open Market Committee has signaled that it is ending its policies designed to maintain low interest rates. Aqua Exc. at 9. Because the DCF model does not directly account for interest rates, consequently, it is slow to respond to interest rate changes. However, I&E's CAPM model uses forecasted yields on ten-year Treasury bonds, and accordingly, its methodology captures forward looking changes in interest rates.
>
> Therefore, our methodology for determining Aqua's ROE shall utilize both I&E's DCF and CAPM methodologies. As noted above, the Commission recognizes the importance of informed judgment and information provided by other ROE models. In the 2012 PPL Order, the Commission considered PPL's CAPM and RP methods, tempered by informed judgment, instead of DCF-only results. We conclude that methodologies other than the DCF can be used as a check upon the reasonableness of the DCF derived ROE calculation. Historically, we have relied primarily upon the DCF methodology in arriving at ROE determinations and have utilized the results of the CAPM as a check upon the reasonableness of the DCF derived equity return. As such, where evidence based on other methods suggests that the DCF-only results may understate the utility's ROE, we will consider those other methods, to some degree, in determining the appropriate range of reasonableness for our equity return determination. In light of the above, we shall determine an appropriate ROE for Aqua using informed judgement based on I&E's DCF and CAPM methodologies.[25]
>
> …..
>
> We have previously determined, above, that we shall utilize I&E's DCF and CAPM methodologies. I&E's DCF and CAPM produce a range of reasonableness for the ROE in this proceeding from 8.90% [DCF] to 9.89% [CAPM]. Based upon our informed judgment, which includes consideration of a variety of factors, including increasing inflation leading to increases in interest rates and capital costs since the rate filing, we determine that a base ROE of 9.75% is reasonable and appropriate for Aqua.[26]

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[25] *Penn. Pub. Util. Comm'n et.al. v, Aqua Penn. Wastewater Inc.*, Pennsylvania Public Utility Commission, Docket Nos. R-2021-3027385 and R-2021-3027386, Opinion and Order, at 154–155 (May 12, 2022) https://www.puc.pa.gov/pcdocs/1744354.pdf.

[26] *Id.*, at 177–178.

group of companies that is both publicly traded and comparable to PacifiCorp in certain fundamental business and financial respects to serve as its "proxy" in the ROE estimation process.

Even if PacifiCorp was a publicly traded entity, it is possible that transitory events could bias its market value over a given period. A significant benefit of using a proxy group is that it moderates the effects of unusual events that may be associated with any one company. The proxy companies used in my analyses all possess a set of operating and risk characteristics that are substantially comparable to PacifiCorp, and thus provide a reasonable basis to derive an estimate of the appropriate ROE for PacifiCorp.

Q. Please provide a brief profile of PacifiCorp.

A. PacifiCorp is an indirect, wholly owned subsidiary of Berkshire Hathaway Energy Company (BHE). PacifiCorp provides electric utility service to approximately 2.0 million residential, commercial and industrial customers in California, Idaho, Oregon, Utah, Washington and Wyoming.[27] In Washington, PacifiCorp provides electric service to approximately 140,000 residential, commercial, and industrial customers.[28] As of December 31, 2021, PacifiCorp's net utility electric plant in Washington was approximately $1.48 billion.[29] In addition, PacifiCorp had 2021 electric operating revenue in Washington of approximately $375 million, made up of 41.30 percent

[27] Berkshire Hathaway Energy Co, 2021 Form 10-K at 3, https://www.sec.gov/ix?doc=/Archives/edgar/data/0001081316/000108131622000004/bhe-20211231.htm.
[28] Direct Testimony of Matthew D. McVee.
[29] PacifiCorp d/b/a Pacific Power and Light Company, 2021 Annual Report to the Washington Utilities and Transportation Commission, at 10 and 219. https://www.utc.wa.gov/sites/default/files/2022-06/140%20-%20PacifiCorp%20-%202021%20-%20AR%20-%20FERC%20Form%201.pdf.

residential, 34.70 percent commercial, 18.48 percent industrial, and 5.51 percent public lighting, sales for resale and other.[30] PacifiCorp's electric operations in Washington represented 8 percent of PacifiCorp's electric sales in 2021.[31] Approximately 78.3 percent of PacifiCorp's 2021 net generation needs in Washington were satisfied by its owned and joint owned facilities while the remaining 21.7 percent was purchased power.[32] PacifiCorp currently has an investment grade long-term rating of A (Outlook: Stable) from S&P and A3 (Outlook: Stable) from Moody's.[33]

Q. How did you select the companies included in your proxy group?

A. I began with the group of companies that Value Line classifies as Electric Utilities and applied the following screening criteria to select companies that:

- pay consistent quarterly cash dividends, because companies that do not cannot be analyzed using the Constant Growth DCF model;
- have investment grade long-term issuer ratings from S&P and/or Moody's;
- are covered by more than one utility industry analysts;
- have positive long-term earnings growth rates from at least two equity analysts;
- own regulated generation assets;
- derive at least 40.00 percent of generation from own generation;
- derive at least 60.00 percent of their total operating income from regulated operating income;
- derive at least 60.00 percent of total regulated operating income from regulated electric operating income; and
- were not parties to a transformative transaction during the analytical periods relied on.

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[30] PacifiCorp d/b/a Pacific Power and Light Company, 2021 Annual Report to the Washington Utilities and Transportation Commission, at 2, https://www.utc.wa.gov/sites/default/files/2022-06/02-NEW-PPL-Supp-FERC-Form-1-5-25-22%20%282%29.pdf.

[31] Berkshire Hathaway Energy Company, 2021 Form 10-K, at 3, https://www.sec.gov/ix?doc=/Archives/edgar/data/0001081316/000108131622000004/bhe-20211231.htm.

[32] PacifiCorp d/b/a Pacific Power and Light Company, 2021 Annual Report to the Washington Utilities and Transportation Commission, at 12a, https://www.utc.wa.gov/sites/default/files/2022-06/02-NEW-PPL-Supp-FERC-Form-1-5-25-22%20%282%29.pdf.

[33] S&P Capital IQ Pro and Moody's Investor Services, Feb. 10, 2023.

Q. Did you exclude any other companies from the proxy group?

A. Yes. I also excluded Hawaiian Electric Industries, Inc. (HE) from my proxy group. HE's operations are concentrated on the islands of Hawaii; therefore, the company faces geographic concentration risk. As HE noted in the company's 2021 Form10-K:

> The Company is subject to the risks associated with the geographic concentration of its businesses and current lack of interconnections that could result in service interruptions at the Utilities or higher default rates on loans held by ASB [American Savings Bank].[34]

The increased risk of service interruptions resulting from HE's geographic location which could result in revenue loss and increased costs is a risk unique to HE and would not apply to utilities located on the U.S. mainland. Furthermore, HE's unregulated operations which represent approximately 33 percent of the company's operation income in 2021 are concentrated in the banking sector through the ownership of American Savings Bank (ASB).[35] ASB also only operates on Hawaii; thus, all of the company's consumer and commercial loans are to customers on Hawaii. If Hawaii were to face an adverse economic or political event, ASB could face severe financial effects given the company's geographic concentration in Hawaii.[36] As a result, I have excluded HE from my proxy group considering HE's unique geographical risks.

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[34] Hawaii Electric Industries, Inc., 2021 Form 10-K, at 23, https://www.hei.com/investor-relations/reports-and-filings/sec-filings-details/default.aspx?FilingId=14751750.
[35] *Id.*, at 86.
[36] *Id.*, at 20.

Q. What is the composition of your proxy group?

A. The screening criteria just discussed resulted in a proxy group consisting of the 17 companies shown in Figure 6.

Figure 6: Proxy Group

Company	**Ticker**
ALLETE, Inc.	ALE
Alliant Energy Corporation	LNT
Ameren Corporation	AEE
American Electric Power Company, Inc.	AEP
Avista Corporation	AVA
CMS Energy Corporation	CMS
Duke Energy Corporation	DUK
Entergy Corporation	ETR
Evergy, Inc.	EVRG
IDACORP, Inc.	IDA
NextEra Energy, Inc.	NEE
NorthWestern Corporation	NWE
OGE Energy Corporation	OGE
Otter Tail Corporation	OTTR
Portland General Electric Company	POR
Southern Company	SO
Xcel Energy Inc.	XEL

Q. Do your screening criteria result in a proxy group that is risk-comparable to PacifiCorp?

A. Yes. The overall purpose of developing a set of screening criteria is to select a proxy group of companies that align with the financial and operational characteristics of PacifiCorp and that investors would view as comparable to the Company. I developed the screens and thresholds for each screen based on judgment with the intention of balancing the need to maintain a proxy group that is of sufficient size against establishing a proxy group of companies that are comparable in business and financial risk to the Company. This resulted in the group of seventeen companies shown in Figure 6 that have business and financial risks comparable to PacifiCorp.

credit metrics and, therefore, credit ratings. To that point, S&P explains the importance of regulatory support for large capital projects:

> When applicable, a jurisdiction's willingness to support large capital projects with cash during construction is an important aspect of our analysis. This is especially true when the project represents a major addition to rate base and entails long lead times and technological risks that make it susceptible to construction delays. Broad support for all capital spending is the most credit-sustaining. Support for only specific types of capital spending, such as specific environmental projects or system integrity plans, is less so, but still favorable for creditors. Allowance of a cash return on construction work-in-progress or similar ratemaking methods historically were extraordinary measures for use in unusual circumstances, but when construction costs are rising, cash flow support could be crucial to maintain credit quality through the spending program. Even more favorable are those jurisdictions that present an opportunity for a higher return on capital projects as an incentive to investors.[56]

Therefore, to the extent that PacifiCorp's rates do not permit the opportunity to recover its full cost of doing business, PacifiCorp will face increased recovery risk and thus increased pressure on its credit metrics.

Q. How do PacifiCorp's capital expenditure requirements compare to those of the proxy group companies?

A. As shown in Exhibit No. AEB-12, I calculated the ratio of expected capital expenditures to net utility plant for PacifiCorp and each of the companies in the proxy group by dividing each company's projected capital expenditures for the period from 2023-2027 by its total net utility plant as of December 31, 2022. As shown in Exhibit AEB-12 (*see* also Figure 11 below), PacifiCorp's ratio of capital expenditures as a percentage of net utility plant of 98.86 percent is approximately 1.99 times the

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[56] S&P Global Ratings, Assessing U.S. Investor-Owned Utility Regulatory Environments, at 7 (Aug. 10, 2016), https://fileservice.eea.comacloud.net/FileService.Api/file/FileRoom/12143406.

Q. How do credit rating agencies consider regulatory risk in establishing a company's credit rating?

A. Both S&P and Moody's consider the overall regulatory framework in establishing credit ratings. Moody's establishes credit ratings based on four key factors: (1) regulatory framework; (2) the ability to recover costs and earn returns; (3) diversification; and (4) financial strength, liquidity, and key financial metrics. Of these criteria, regulatory framework and the ability to recover costs and earn returns are each given a broad rating factor of 25.00 percent. Therefore, Moody's assigns regulatory risk a 50.00 percent weighting in the overall assessment of business and financial risk for regulated utilities.[57]

S&P also identifies the regulatory framework as an important factor in credit ratings for regulated utilities, stating: "One significant aspect of regulatory risk that influences credit quality is the regulatory environment in the jurisdictions in which a utility operates."[58] S&P identifies four specific factors that it uses to assess the credit implications of the regulatory jurisdictions of investor-owned regulated utilities: (1) regulatory stability; (2) tariff-setting procedures and design; (3) financial stability; and (4) regulatory independence and insulation.[59]

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[57] Moody's Investors Service, Rating Methodology: Regulated Electric and Gas Utilities, June 23, 2017, at 4, https://www.moodys.com/research/doc--PBC_1072530.

[58] Standard & Poor's Global Ratings, Ratings Direct, U.S. and Canadian Regulatory Jurisdictions Support Utilities' Credit Quality—But Some More So Than Others, at 2 (June 25, 2018).

[59] *Id.*, at 1.

Q. How does the regulatory environment in which a utility operates affect its access to and cost of capital?

A. The regulatory environment can significantly affect both the access to, and cost of capital in several ways. First, the proportion and cost of debt capital available to utility companies are influenced by the rating agencies' assessment of the regulatory environment. As noted by Moody's, "[f]or rate regulated utilities, which typically operate as a monopoly, the regulatory environment and how the utility adapts to that environment are the most important credit considerations."[60] Moody's has further highlighted the relevance of a stable and predictable regulatory environment to a utility's credit quality, noting: "[b]roadly speaking, the Regulatory Framework is the foundation for how all the decisions that affect utilities are made (including the setting of rates), as well as the predictability and consistency of decision-making provided by that foundation."[61]

Q. Have you conducted any analysis of the regulatory framework in Washington relative to the jurisdictions in which the companies in your proxy group operate?

A. Yes. I have evaluated the regulatory framework in Washington considering two factors which are important to ensuring PacifiCorp maintains access to capital at reasonable terms. As I will discuss in more detail below, the two factors are: 1) cost recovery mechanisms which allow a utility to recover costs in a timely manner between rate cases and provide the utility the opportunity to earn its authorized

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[60] Moody's Investors Service, Rating Methodology: Regulated Electric and Gas Utilities, at 6 (June 23, 2017) https://www.moodys.com/research/doc--PBC_1072530.
[61] *Id.*

authorized ROE of 9.25 percent.[62] In addition, FitchRatings recently downgraded and maintained a negative outlook for APS and its parent, PNW, following the hearings conducted by the Arizona Corporation Commission (ACC) in October 2021 regarding APS' current rate case proceeding.[63] While the ACC had not issued a final order in APS' rate case at the time, FitchRatings noted that the developments at the hearing in October indicate a likely credit negative outcome that will negatively affect the financial metrics of both APS and PNW. It is also important to note that both Standard & Poor's and Moody's downgraded PNW's and APS' credit rating and put the companies on credit watch negative following the Commission's November vote that officially authorized the 8.70 percent ROE.[64]

Q. Are you aware of any utilities whose market data has been affected by adverse rate case developments?

A. Yes, I am. The market has responded negatively to recent returns authorized by the ACC. As noted above, the most recent ROE determination in Arizona was for APS. The Recommended Opinion and Order (ROO) issued in the APS rate proceeding on August 2, 2021, recommended an ROE of 9.16 percent. In October 2021, that recommendation was amended to reduce the company's ROE to 8.70 percent. The

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[62] Moody's Investors Service, Credit Opinion: ALLETE, Inc. Update following downgrade, at 3 (Apr. 3, 2019) https://www.moodys.com/research/Moodys-downgrades-Pinnacle-West-to-Baa1-and-Arizona-Public-Service--PR_456814.

[63] FitchRatings, Fitch Downgrades Pinnacle West Capital & Arizona Public Service to 'BBB+'; Outlooks Remain Negative, (Oct. 12, 2021) https://www.fitchratings.com/research/corporate-finance/fitch-downgrades-pinnacle-west-capital-arizona-public-service-to-bbb-outlooks-remain-negative-12-10-2021.

[64] *See* S&P Capital IQ and Moody's Investors Service, "Rating Actions: Moody's downgrades Pinnacle West to Baa1 and Arizona Public Service to A3; outlook negative," (Nov. 17, 2021) https://www.moodys.com/research/Moodys-downgrades-Pinnacle-Rating-Action--PR_456814.

final ROE that was established for APS was 8.70 percent.[65] The market reacted strongly to the proposed order and subsequent amendment and final decision. Guggenheim Securities LLC, an equity analyst that follows PNW, the parent company of APS, informed its clients that

> [T]he "Arizona Corporation Commission is now confirmed to be the single most value destructive regulatory environment in the country as far as investor-owned utilities are concerned".[66]

S&P Global Market Intelligence (Regulatory Research Associates) noted that this decision was "among the lowest ROEs RRA had encountered in its coverage of vertically integrated electric utilities in the past 30 years."[67]

As shown in Figure 13 below, PNW's stock price declined approximately 24 percent from August 2, 2021 to November 4, 2021 following the issuance of the ROO, which recommended an ROE of 9.16 percent, and then the subsequent amendment to that opinion recommending the 8.70 percent ROE ultimately adopted by the ACC. Moreover, the Value Line five-year projected EPS growth rates for this company have fallen from 5.0 percent in July 2021, prior to the deliberations in the rate proceeding to "Nil" in October 2021 and most recently 0.5 percent in January 20, 2023. For PNW, the APS decision has had a significant effect on the share price and growth rate assumptions used in the DCF model.

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[65] In the Matter of the Application of Arizona Public Service Company for a Hearing to Determine the Fair Value of the Utility Property of the Company for Ratemaking Purposes, to Fix a Just and Reasonable Rate of Return Thereon, to Approve Rate Schedules Designed to Develop Such Return, Arizona Corporation Commission Docket No. E-01345A-19-0236, Commissioner Olson Proposed Amendment No. 1 to the Recommended Opinion and Order (Sept. 29, 2021) https://docket.images.azcc.gov/E000015911.pdf?i=1680374997736.

[66] S&P Global Market Intelligence, Pinnacle West shares tumble after regulators slash returns in rate case, (Oct. 7, 2021) https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/pinnacle-west-shares-tumble-after-regulators-slash-returns-in-rate-case-66991920.

[67] S&P Global Market Intelligence, RRA Regulatory Focus, Commission accords Arizona Public Service Company a well below average ROE, (Oct. 8, 2021).

reasons, I conclude that without the modifications sought by PacifiCorp to its mechanisms, the Company's business risks are somewhat higher than the proxy group which should be reflected in the authorized ROE.

C. Generation Ownership / Washington Clean Energy Transformation Act

Q. How does the business risk of vertically integrated electric utilities compare to the business risk of other regulated utilities?

A. According to Moody's, generation ownership causes vertically integrated electric utilities to have higher business risk than either electric transmission and distribution companies, or natural gas distribution or transportation companies.[68] As a result of this higher business risk, integrated electric utilities typically require a higher ROE or percentage of equity in the capital structure than other electric or gas utilities.

Q. Are there other risk factors specific to vertically integrated electric utilities that the credit rating agencies consider when determining the credit rating of a company that owns generation?

A. Yes. As discussed above, Moody's establishes credit ratings based on four key factors: (1) regulatory framework; (2) the ability to recover costs and earn returns; (3) diversification; and (4) financial strength, liquidity and key financial metrics. The third factor diversification, which Moody's assigns a 10.00 percent weighting in the overall assessments of a company's business risk, considers the fuel source diversity of a utility with generation. Moody's notes:

> For utilities with electric generation, fuel source diversity can mitigate the impact (to the utility and to its rate-payers) of changes in commodity prices, hydrology and water flow, and environmental or

[68] Moody's Investors Service, *Rating Methodology: Regulated Electric and Gas Utilities*, at 21-22 (June 23, 2017) https://ratings.moodys.com/api/rmc-documents/68547.

adjusted sales revenues to customers of two percent more than the previous year without demonstrating to the Commission that they have maximized investment in renewable resources and non-emitting resources prior to using alternative compliance measures.[70] Failure to meet these requirements and investor-owned utilities must pay an administrative penalty in the amount of one hundred dollars, times generation specific multipliers, for every megawatt-hour of electricity generation that does not come from non-emitting electric generation or a renewable resource.[71]

Q. Has the Company developed plans to meet these targets?

A. Yes. The Company has demonstrated its commitment to meeting these public policy goals. Specifically, PacifiCorp filed the Company's first Clean Energy Implementation Plan (CEIP) in January 2022, which outlined the Company's action plan over the four-year period of 2022 to 2025 to meet CETA's clean energy goals. The basis for the Company's CEIP was the 2021 Integrated Resource Plan which outlined its long-term resource plan that includes substantial investment in renewables generation from 2022 through 2040. For example, as discussed in PacifiCorp's update to its 2021 IRP, the Company has planned to add 5,297 MW of new solar generation, 4,160 MW of new wind generation, 5,546 MW of new storage resources and 500 MW of advanced nuclear generation.[72] Moreover, the Company plans to integrate the new renewable generation resources through significant

[70] Senate Bill 511~~9~~6, May 7, 2019, at 20, https://lawfilesext.leg.wa.gov/biennium/2019-20/Pdf/Bills/Session%20Laws/Senate/5116-S2.SL.pdf.
[71] *Id.*, at 23.
[72] PacifiCorp 2021 Integrated Resource Plan Update, March 31, 2022, at 3, https://www.pacificorp.com/content/dam/pcorp/documents/en/pacificorp/energy/integrated-resource-plan/2021-irp/Volume%20I%20-%209.15.2021%20Final.pdf.

investments that strengthen and modernize its transmission network. Finally, PacifiCorp plans to retire 14 of its 22 remaining coal units by 2030 and 19 of the 22 remaining units by 2040 while also retiring 1,554 MW of natural gas generation by 2040.[73] It is important to note that consistent with CETA, while PacifiCorp will still have coal generation assets operating after 2025, PacifiCorp will remove all coal generation assets from Washington's allocation of electricity.[74] Therefore, the Company has outlined significant plans to meet the clean energy goals of CETA.

Q. Have the credit rating agencies commented on PacifiCorp's capital spending plans?

A. Yes. S&P has noted that PacifiCorp's elevated capital spending plan, which includes plans to invest $2.5 billion in 3,900 MW of new and repowered wind and solar generation, will contribute to negative cash flow for the Company over the near-term.[75] Thus, S&P expects the capital spending plan will be partially funded with debt. This highlights the importance of a constructive regulatory outcome in this proceeding to sustain credit quality as the Company implements its CEIP.

Q. How does PacifiCorp's generation investment plan affect its business risk?

A. PacifiCorp's plan includes significant investment in building transmission and adding new renewable generation. This significant investment in transmission and renewable energy will as S&P notes require continued access to capital markets, which highlights the importance of granting PacifiCorp an allowed ROE and equity ratio that is sufficient to attract capital at reasonable terms.

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[73] *Id.*, at 12-13.
[74] *Id.*
[75] S&P Global Ratings, "PacifiCorp", at 1-2 (April 21, 2022).

interest costs," and that some offset in managing these headwinds include "higher authorized ROEs and the use of tools such as securitization of under-recovered fuel balances."[78]

Likewise, S&P also continues to maintain a negative outlook for the utility industry, noting that downgrades have outpaced upgrades for the third consecutive year in 2022 with a median investor-owned utility credit rating of "BBB+".[79] Further, S&P expects the industry to have negative discretionary cash flow as a result of significant capital spending and consistent dividends.[80] Therefore, the utility industry will need ongoing access to capital markets to fund the capital expenditures. However, S&P notes that inflation, rising interests rates and decreasing equity prices may "hamper" consistent access to capital markets and result in additional pressure on cash flows.[81] Moreover, S&P indicates that if inflation risks persist over the near-term and customer bills increase, regulatory credit support could decrease resulting in weaker financial metrics for the industry:

> Over the past decade the industry's financial measures have weakened from a combination of rising capital spending, regulatory lag, and lower authorized return on equity (ROE). The industry's return on capital was about 6% a decade ago and today is closer to 4%. More recently, we have seen instances where not only is the authorized ROE lowered but also the equity ratio is lowered. These results have weakened the industry's financial measures, pressuring credit quality. Under our base case of moderating inflationary risks during 2023, we expect the industry's credit measures to generally remain flat. However, if inflationary risks persist, it may further pressure the

[78] Fitch Ratings. North American Utilities, Power & Gas Outlook 2023. at 1-2 (Dec. 7, 2022) https://www.fitchratings.com/research/corporate-finance/north-american-utilities-power-gas-outlook-2023-07-12-2022.
[79] S&P Global Ratings. Industry Top Trends, North American Regulated Utilities: The industries outlook remains negative. (Jan. 23, 2023).
[80] *Id*.
[81] *Id*.