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BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

In the Matter of the Application of PACIFICORP (U901E), an Oregon Company, for an Order Authorizing a General Rate Increase Effective January 1, 2019.	Application 18-04-002
And Related Matters.	Investigation 17-04-019

OPENING BRIEF OF THE PUBLIC ADVOCATES OFFICE

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I. EXECUTIVE SUMMARY/INTRODUCTION

Pursuant to Rule 13.11 of the California Public Utilities Commission's (Commission) Rules of Practice and Procedure (Rules), and the Scoping Memo issued on July 19, 2018 the Public Advocates Office at the California Public Utilities Commission, hereby submits this opening brief on PacifiCorp's (PacifiCorp) Application (A.) 18-04-002. PacifiCorp requests that the Commission authorize a TY 2019 base rate revenue requirement (BRR) increase effective January 1, 2019[1] from a currently authorized level of $77.786 million to $78.846 million.[2] PacifiCorp requests a $1.06 million or 1.36% increase for Test Year 2019.

A.18-04-002 is PacifiCorp's first GRC filing since 2011.[3] PacifiCorp requests authorization for revenue increases associated with its Electric operations that fall within the Commission's jurisdiction.

In contrast, the Public Advocates Office recommends a GRC base revenue decrease of $2.746 million or $75.040 million for TY 2019, which is a 3.5% decrease for Test Year 2019.

Table 1-1 compares the Public Advocates Office's and PacifiCorp's forecasts of TY 2019 GRC revenues relative to PacifiCorp's authorized level of 2019 revenues.

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[1] *Id.,*at p. 3.

[2] Ex. PAC\1101, p. 1.1. - PacifiCorp's proposed base revenue requirement increase excludes net power costs (NPC) and other operating revenues.

[3] PacifiCorp's Application at p. 2.

Table 1-1[4]
Public Advocates Office Recommended vs PacifiCorp's Proposed 2019 Base Revenue Requirement
(in Thousands of Dollars)

Description (a)	PacifiCorp 2019 Authorized Revenues (b)	PacifiCorp 2019 Proposed Revenues (c)	PacifiCorp Forecast Increase over 2019 Authorized Revenues (d=c-b)	Public Advocates Office 2019 Recommended Revenues (e)	Public Advocates Office Recommended Decrease over 2019 Authorized Revenues (f=e-b)
Total Base Revenues	$77.786	$78.846	$1.060	$75.040	$2.746

PacifiCorp requests that the Commission authorize a base rate revenue requirement of $78.846 million for TY 2019 to be effective January 1, 2019.[5] PacifiCorp's request represents a base rate revenue increase of $1.060 million over its current authorized base rate revenues of $77.786 million for TY 2019.[6]

The Public Advocates Office recommends that the Commission authorize $75.040 million in base rate revenues for TY 2019. This represents a $2.746 million decrease to authorized revenues and is $3.806 million (5.07%) lower than PacifiCorp's request.

A. Post Test Year Ratemaking

In D.10-09-010, the Commission authorized an annual Post Test Year Adjustment Mechanism (PTAM) Attrition Factor adjustment that allows PacifiCorp to adjust base rates for changes in inflation with an offsetting productivity factor of 0.5 percent. The PTAM Attrition Factor Adjustment was effective on January 1 for the years when PacifiCorp did not file a general rate case.[7] PacifiCorp requests that the PTAM Attrition Factor adjustment be authorized for setting rates in the calendar years between general rate cases on a going-forward basis, based on the same formula and applied to the same

[4] Ex. PAC\1101, p. 1.0.

[5] PacifiCorp's Application, p. 1.

[6] Ex. PAC\1101, p.1.1. - PacifiCorp's proposed base revenue requirement increase excludes net power costs (NPC) and other operating revenues.

[7] Ex. PAC\100, Bolton/9:6-7.

rate elements as was used for calculating the adjustment for calendar year 2011, and approved in D.10-09-010.[8]

The Public Advocates Office agrees with PacifiCorp's proposal for its Post Test Year Adjustment Mechanism.

B. PacifiCorp's Taxes

Decision (D.) 18-05-030 approved PacifiCorp's request to establish a Tax Reform Memorandum Account effective January 1, 2018, in order for PacifiCorp to track the full impact of the tax reform bill or Tax Act.[9] In response to a Public Advocates Office's data request, PacifiCorp stated that an estimate for its 2018 taxes continues to be deferred to the memorandum account to be returned to customers at a later date and that an initial estimate for 2019 was included in its GRC filed April 12, 2018.[10]

The Public Advocates Office recommends that the refund of all tax savings be returned to ratepayers.

C. Background

On April 12, 2018, PacifiCorp filed its Test Year 2019 GRC Application A.18-04-002, with the Commission. The Public Advocates Office filed a timely Protest on May 14, 2018.

A Prehearing Conference (PHC) was held on July 5, 2018. The Assigned Commissioner's Ruling and Scoping Memo was issued on July 19, 2018 and established the procedural schedule. The Public Advocates Office served its testimony on October 19, 2018. PacifiCorp served its Rebuttal on November 20, 2018. And Evidentiary Hearings were from December 12-13th.

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[8] Ex. PAC\100, Bolton/11:2-6.

[9] On December 22, 2017, H.R.1, an Act to provide reconciliation pursuant to titles II and V of the concurrent resolution on the budget for the fiscal year 2018, more commonly known as the tax reform bill (Tax Act), became law.

[10] Response to Cal PA Data Request 62.1.

D. The Public Advocates Office's Testimony & Recommendations

The Public Advocates Office's testimony and exhibits respond to PacifiCorp's request for a revenue requirement increase as proposed in the TY 2019 GRC A.18-04-002. The Public Advocates Office submitted the following reports in support of its recommendations:

- Report on the Results of Operations for PacifiCorp General Rate Case Text Year 2019 (Exhibits Cal Advocates-01 through Cal Advocates-09 and ORA-11);
- Report on the Results of Examination for PacifiCorp General Rate Case Test Year 2019 (Exhibit Cal Advocates-10). The Public Advocates Office concluded with this Audit of PacifiCorp's financial records that no adjustments to Operations and Maintenance expenses, Plant, or Administrative and General expenses are necessary.[11]

For "Summary of Earnings, Escalation, & Taxes," the Public Advocates Office does not oppose PacifiCorp's proposals for Labor & Non-labor escalation or PacifiCorp's methodologies for computing obligations and forecasts for tax rates. The Public Advocates Office recommends authorizing a net decrease of $3,805,909 or 5.072% to PacifiCorp's $78,846,144 for TY 2019 revenue requirement at proposed rates under California's jurisdiction.

For "Sales, Customers & Operating Expenses," the Public Advocates Office does not oppose PacifiCorp's forecasts in these categories for TY 2019.

For "Operation & Maintenance & Administrative & General Expenses," the Public Advocates Office recommends adjusting PacifiCorp's 2017 Base Year O&M/A&G costs by $406,599 related to incentive compensation. PacifiCorp requests $609,868 in incentive compensation. The Public Advocates Office recommends ratepayer funding of $203,269 for individual performance awards resulting in a decrease to PacifiCorp's requested funding of $406,599.

[11] Ex. Cal Advocates-10.

For “Cost Allocation & Rate Design,” the Public Advocates Office recommends denying PacifiCorp’s request to increase the non-CARE residential customer charge or “basic charge” from $7.20 to $7.35.

For “Plant,” the Public Advocates Office does not recommend any adjustments to PacifiCorp’s proposed plant additions for TY 2019.

For “Depreciation Expense & Reserve,” the Public Advocates Office did not make any adjustments to PacifiCorp’s proposed depreciation parameters. The Public Advocates Office supports PacifiCorp’s proposal to accelerate the depreciation of its coal-fired power plants. PacifiCorp’s proposal would return its coal-fired power plants to the depreciation schedules that were in effect prior to the company’s 2007 depreciation study.

The Public Advocates Office recommends the Commission direct PacifiCorp to include information that are conventional general rate case items (e.g. details regarding depreciation proposals, net salvage data) with its prepared direct testimony and workpapers in future GRCs.

For “Rate Base,” the Public Advocates Office recommends the Commission reject PacifiCorp’s proposal for inclusion of Weatherization Loan Programs costs of $20,971.

For “Cost of Capital,” the Public Advocates Office recommends a Rate of Return (ROR) of 7.08% based on a proposed capital structure of 48.02% debt and 51.98% equity coupled with a debt cost rate of 5.05% and an equity cost rate of 8.94% compared to PacifiCorp proposed ROR of 7.94% based on a proposed capital structure consisting of 48.02% debt and 51.98% equity coupled with a debt cost rate of 5.05% and an equity cost rate of 10.60%.

For the “Risk-Based Decision-Making Framework,” the Public Advocates Office recommends PacifiCorp include additional analyses in its future GRC applications pursuant to D.14-12-025.

The Public Advocates Office’s audit of PacifiCorp’s financial records resulted in no adjustments to Operations & Maintenance, Administrative & General, and Plant expenses.

II. POLICY TESTIMONY

A. Retention of ECAC Mechanism - including PTAM mechanism for attrition and major capital additions - *See Introduction for PTAM discussion*.

B. Executive Compensation - Incentive Compensation - *See Section X. Revenue Requirement*

C. Treatment of 2018 Income Tax Adjustment - *See Introduction on Taxes*.

III. INTER-JURISDICTIONAL COST ALLOCATION METHODOLOGY

A. Issues from OII - Reasonableness of Rates from existing Cost Allocation - *Not Applicable*.

B. Issues from GRC - Adoption of 2017 Allocation Methodology - *The Public Advocates Office does not object to the methodology*.

IV. COST OF CAPITAL

The Weighted Average Cost of Capital (WACC) or Rate of Return (ROR) is the sum of the cost of common equity, preferred equity, and long-term debt, which is based on the value of common equity, preferred equity, and long-term debt in a company's capital structure. PacifiCorp requests a WACC of 7.94 percent, while the Public Advocates Office recommends a WACC of 7.08 percent.

The Public Advocates Office recommends a rate of return of 7.08 percent for PacifiCorp. The difference between the Public Advocates Office and PacifiCorp's recommendations is due to different cost of equity estimates. The Public Advocates Office recommends a rate of return on equity of 8.94% compared to PacifiCorp's request of 10.60%. The Public Advocates Office accepts PacifiCorp's proposed capital structure, cost of long-term debt and preferred stock estimates. Table 1-2 summarizes the Public Advocates Office and PacifiCorp's recommendations.

Table 1-2: Capital Structure and Cost of Capital Recommendations

	PacifiCorp			Public Advocates Office		
Component	% of Total	Cost %	WACC %	% of Total	Cost %	WACC %
LT Debt	48.02%	5.05%	2.43%	48.02%	5.05%	2.43%
Preferred Stock	0.02%	6.75%	-	0.02%	6.75%	-
Common Equity	51.96%	10.60%	5.51%	51.96%	8.94%	4.65%
	100%		7.94%	100%		7.08%

A. Capital Structure

1. The Public Advocates Office Does Not Oppose PacifiCorp's Capital Structure Request

Table 1-3, below, summarizes the capital structure PacifiCorp proposed in this GRC compared to the capital structure adopted in PacifiCorp's last GRC.

Table 1-3: Capital Structure Overview[12]

	2019 GRC Proposal	Adopted in Last GRC (A.09-11-015)
Long-Term Debt	48.02%	47.50%
Preferred Stock	0.02%	0.30%
Common Equity	51.96%	52.20%

PacifiCorp's proposed capital structure "is based on the actual capital structure at September 30, 2017, and forecasted capital activity, including known and measurable changes, through December 31, 2019. PacifiCorp has averaged the five quarter-end capital structures measured beginning at December 31, 2018, concluding with December 31, 2019. The capital activity includes known maturities of certain debt issues that were outstanding at September 30, 2017, subsequent issuances of long-term debt and any capital contributions received or dividends paid. The known and measurable changes represent actual and forecasted capital activity since September 30, 2017".[13]

The Public Advocates Office reviewed PacifiCorp's testimony, workpapers, analysis, and responses to data requests. PacifiCorp's recommended capital structure is comparable to the one the Commission adopted in its last GRC,[14] to PacifiCorp's capital

[12] Ex. PAC/300, p. 13, Table 3.

[13] Ex. PAC/300, p. 12:15-22.

[14] D.10-09-010.

structures in other states' jurisdictions,[15] and to its expected capital structure in the 2019 test year. The Public Advocates Office does not oppose PacifiCorp's proposed capital structure in this proceeding.

B. Cost of Debt and Preferred Stock

1. The Public Advocates Office Does Not Oppose PacifiCorp's Cost of Long-Term Debt

PacifiCorp requests a long-term cost of debt of 5.05 percent for the period ending December 31, 2019[16] as shown by the calculations in Exhibit PAC/301. PacifiCorp calculated the cost of debt by first "[producing] a bond yield to maturity for each series of debt. […] Each bond yield was then multiplied by the principal amount outstanding of each debt issue, resulting in an annualized cost of each debt issue. Aggregating the annual cost of each debt issue produces the total annualized cost of debt. Dividing the total annualized cost of debt by the total principal amount of debt outstanding produces the weighted average cost for all debt issues."[17]

PacifiCorp's methodology follows what has been utilized in PacifiCorp's prior GRC in A.09-11-015. The Public Advocates Office reviewed PacifiCorp's testimony, workpapers, and analysis and does not oppose PacifiCorp's long-term debt cost rate of 5.05 percent.

2. The Public Advocates Office Does Not Oppose PacifiCorp's Cost of Preferred Equity

PacifiCorp requests a preferred equity cost rate of 6.75 percent. PacifiCorp calculates the annual cost for the entire preferred stock portfolio by, first, calculating the total par value of its two preferred stock issues.[18] The total par value of each issue is calculated by multiplying the number of shares of each issue by 100.

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[15] ORA-PacifiCorp-005-CC3-1.

[16] Ex. PAC/300, p. 18:5.

[17] Ex. PAC/300, p. 6:8-16.

[18] Ex. PAC/306, p. 1 of 1.

Second, the annual cost of each issue is determined by multiplying the total par value of each issue by the issue's annual dividend rate. Finally, the cost of the entire preferred stock portfolio is calculated by dividing the total annual cost of PacifiCorp's two preferred stock issues by the total par value of the two preferred stock issues.

The Public Advocates Office reviewed PacifiCorp's testimony, workpapers and analysis and does not oppose PacifiCorp's preferred equity cost rate of 6.75 percent.

C. Return on Equity

PacifiCorp requests a rate of return on equity of 10.60 percent and developed its proposed 10.6 figure based on the following factors:[19]

- Return on Equity (ROE) model estimates that range from 8.37 percent to 12.10 percent;
- Rising interest rates;
- Heightened volatility in the equity markets;
- The need to assure credit quality throughout a period of large capital expenditures; and
- Perceived risks of community choice aggregation (CCA).

The Public Advocates Office recommends a rate of return on equity of 8.94%, which is based on the results obtained from the DCF, historical risk premium (HRP) and capital asset pricing model (CAPM) models. The Public Advocates Office utilizes these three models because they have been historically used by the Commission. For example, in the most recent cost of capital decision for the major utilities, D.12-12-034, the Commission stated: "The financial models commonly used in ROE proceedings are the Capital Asset Pricing Model (CAPM), Risk Premium Model (RPM), and DCF Model."[20]

The following table summarizes the Public Advocates Office's results from the three models utilized to reach its 8.94 percent return on equity. An 8.94 percent return on equity is the average of the DCF, CAPM and HRP model results. For comparison

[19] Ex. PAC/200, pp. 3:22; 4:15.

[20] D.12-12-034, p. 22.

purposes, the results of PacifiCorp's estimates for these three same models are presented as well.

Table 1-4: Return on Equity Model Results

Model	PacifiCorp	Public Advocates Office
Discounted Cash Flow	8.37%	8.61%
CAPM	8.47%	8.26%
Historic Risk Premium	9.89%21	9.96%
Average	8.91%	8.94%

1. Proxy Group

PacifiCorp's proxy group is made-up of 25 companies. These 25 companies are listed in Exhibit PAC/207. PacifiCorp arrives at this proxy group by applying a series of screening criteria to identify firms that have similar characteristics as PacifiCorp. The following is a summary of these specific characteristics:[22]

1. That a company is considered an "Electric Utility" by the Value Line Investment Survey.
2. That a company has a credit rating from Moody's or S&P that is comparable to that of PacifiCorp, i.e., not more than one rating up or down.
3. That a company has 10 quarters of constant or increasing dividends.
4. That a company has a positive five-year growth forecast.
5. That a company does not have a merger or other extraordinary activity within the past six months, significant enough to distort the DCF inputs.
6. That a company operates primarily in regulated businesses.
7. That there is data available regarding a company to perform DCF analysis.

The Public Advocates Office does not object to PacifiCorp's application of the above screening criteria. The Public Advocates Office applied this criteria and modified

[21] ORA-PacifiCorp-050-YNL-4 and Attachment ORA 50.4.

[22] Ex. PAC/200, pp. 15:10; 17:2.

PacifiCorp's proxy group to exclude Great Plains Energy Incorporated and Westar Energy, Inc. The Public Advocates Office discovered that FERC[23] and the state regulators[24] in Kansas and Missouri approved the merger between the two aforementioned companies. The new combined utility has been renamed Energy and follows an unsuccessful merger attempt between the same two companies last year when Kansas commissioners rejected the merger.[25] PacifiCorp has agreed "it would not be unreasonable to remove Great Plains Energy and Westar Energy from the proxy group."[26]

In D.07-12-049, the Commission developed guidelines for constructing a comparison group and found that:

> Three basic screens should be used in selecting a comparable proxy group. These screens are: (1) to exclude companies that do not have a history of investment grade credit ratings; (2) exclude companies that do not have a history of paying dividends and (3) exclude companies undergoing a restructuring or merger. Additional screens may be used to the extent that justification is provided.[27]

Consistent with Commission precedent and the screening criteria utilized by PacifiCorp, the Public Advocates Office uses PacifiCorp's proposed proxy group with the exclusion of Great Plains Energy Incorporated and Westar Energy, Inc.

2. Discounted Cash Flow (DCF)

The conventional single-stage DCF model relates the firm's share price to the next period's dividends, the required return, and future growth. The DCF model is founded on a well-established principle that "[t]he fundamental value of the asset is the discounted

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[23] https://www.utilitydive.com/news/ferc-approves-westar-great-plains-energy-merger/518201/

[24] https://www.utilitydive.com/news/state-regulators-approve-westar-great-plains-energy-15b-merger/524471/

[25] https://www.kansas.com/news/politics-government/article211832124.html

[26] ORA-PacifiCorp-046-YNL-1.

[27] D.07-12-049, 2007 Cal PUC (LEXIS 593 at 19).

sum of all future cash flows that will be received by the owner of the asset."[28] The single-stage DCF model can be expressed as:

P(t) = D(t+1) / (k-g)

Where: P(t) = the current share price

D(t+1) = Next period's dividend

k = the required return

g = the expected growth in dividends

Solving equation above for the required return, k, yields:

k = D(t+1) / P(t) + g

Estimates of future dividends D(t+1) are typically derived by multiplying the current dividend by one plus the growth rate, or, D(t+1) = D(t) * (1+g). Using this result, the second equation can be rewritten as:

k = D(t)/P(t) * (1+g) + g

Thus, deriving estimates of the cost of equity from the single-stage DCF model requires estimates of the current dividend yield, D(t)/P(t), and the expected growth rate, g.

i. Current Dividend Yield

To obtain the current dividend yield, PacifiCorp relied on the following inputs: common stock prices for proxy group companies, obtained from Bloomberg Finance LP, and current dividends, obtained from Bloomberg Finance LP and/or FactSet Data Systems.[29] The dividend yield is then calculated as (last 4 quarterly dividends) / (12 month average price) as of February 7, 2018.[30] PacifiCorp determined that the average dividend yield for the proxy group is 3.17 percent after excluding estimates for Consolidated Edison Inc., Duke Energy Corporation, IDACORP Inc., PG&E Corporation

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[28] Morin, Roger, A. "New Regulatory Finance", Public Utility Reports, Inc. at 245 (2006).
[29] Ex. PAC/200, p. 19:6-9.
[30] Ex. PAC/209, p. 1 of 1.

and Public Service Enterprise Group Inc. because the ROE estimates for these companies did not represent realistic cost of equity estimates.[31]

The Public Advocates Office used a similar approach to obtain the current dividend yield and relied on common stock prices for proxy group companies, obtained from Yahoo! Finance, and current dividends, obtained from *The Value Line Investment Survey: June 15, 2018, July 27, 2018 and August 17, 2018* and/or Yahoo! Finance accessed on September 4th, 2018. The dividend yield was then calculated as (last 4 quarterly dividends) / (12-month average price) as of August 31, 2018. The Public Advocates Office estimates that the average dividend yield for the proxy group is 3.383 percent using the same sample size as PacifiCorp[32] with the exception of excluding Great Plains Energy Incorporated and Westar Energy, Inc.

ii. Expected Growth Rate

To obtain the current dividend yield, PacifiCorp relied on the forecast earnings growth rates, summarized by the Institutional Brokers' Estimate System (IBES) and obtained from Yahoo Finance and FactSet Data Systems, and sustainable growth rates estimated using data obtained from Value Line.[33] PacifiCorp's witness explains:

> "[these two datasets] represent different ways of assessing investors' growth expectations. For my first method, I rely upon consensus forecasts for earnings growth. The second method is the development of a sustainable growth rate, reflecting the firm's retained earnings as well as its expected returns from the sale of new stock at a premium to book value. The sustainable growth inputs can be found in Exhibit PAC/208. My DCF analysis relies upon an average of the two results (consensus forecast and sustainable growth) when determining the ROE."[34]

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[31] *Id.*

[32] PacifiCorp excludes estimates for Consolidated Edison Inc., Duke Energy Corporation, IDACORP Inc., PG&E Corporation and Public Service Enterprise Group Inc.

[33] Ex. PAC/200, p. 19:10-14.

[34] Ex. PAC/200, p. 19:16-22.

The average growth rate based on the first method is 5.41% while calculations based on development of a sustainable growth rate show the average growth rate of 4.67%.[35] The average of both methods yields a 5.04% estimated growth rate.

The Public Advocates Office applies PacifiCorp's methodology of estimating the expected growth rate. The Public Advocates Office estimated growth rate differs from PacifiCorp's because the Public Advocates Office excludes Great Plains Energy Incorporated and Westar Energy, Inc. Excluding these two companies from the sample size yields an average growth rate of 5.52% using the first method and 4.60% using the second method. The average of these methods yields a 5.06% estimated growth rate.

iii. DFC Cost of Equity

Once the average current dividend yield and average estimated growth rates are known for the proxy group, the estimated cost of equity can be calculated using **k = D(t)/P(t) * (1+g) + g**. Using the inputs summarized in the table below, the Public Advocates Office estimates a cost of equity for PacifiCorp of 8.61 percent based on a single-period DCF analysis.

Table 1-5: DCF Cost of Equity

	Dividend Yield D(t)/P(t)	(1+g)	Growth g	Cost of Equity k
PacifiCorp	3.17%	1.0504	5.04%	**8.37%**
Public Advocates Office	3.38%	1.0506	5.06%	**8.61%**

3. Capital Asset Pricing Model (CAPM)

The traditional Capital Asset Pricing Model or CAPM, relates the investor's required return to the risk-free rate, (Rf), the riskiness of the asset relative to the entire market as measured by beta, (β), and the market risk premium (Rm – Rf). The CAPM model can be expressed as:

[35] Ex. PAC/209.

$k = Rf + \beta(Rm\text{-}Rf)$

Three inputs are required to implement the traditional CAPM: the risk-free rate, (Rf), the riskiness of the security relative to the market, (β), and a measure of the equity risk premium (Rm-Rf).

i. Equity Risk Premium

PacifiCorp relied on the forward-looking market risk premium "because, in the current interest rate environment, the historical market risk premium does not always categorize investors' forward-looking return requirements as accurately as the forward-looking premium does."[36] Accordingly, PacifiCorp calculates this premium as "the difference between the expected return on the S&P 500 index and the yield on long-term U.S. treasury bonds. In equation form, the premium can be expressed as follows:

$ERP = D/P * (1+g) + g - Rf$

Where:

ERP is the equity risk premium;

D/P is the market dividend yield;

g is the current analyst expected growth rate for the S&P 500;

Rf is the current expected risk-free return.

Exhibit PAC/211 presents this calculation."[37]

PacifiCorp estimates the S&P 500's forward-looking market risk premium to be 7.80 percent based on a dividend yield of 1.90%, an estimated earnings per share growth rate for the S&P 500 of 8.85%, and a risk-free return based on a 30-year Treasury Yield as of February 7, 2018 of 3.12%.

The Public Advocates Office used a similar approach to estimate the S&P 500 forward-looking market risk premium with some modifications to the risk premium equation inputs. The Public Advocates Office estimates the forward-looking market risk premium to be 8.007 percent based on the following equation:

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[36] Ex. PAC/200, p. 24:20-23.

[37] Ex. PAC/200, p. 24:4-12.

$$8.007\% = 2.00\%^{38} * (1+8.85\%^{39}) + 8.85\% - 3.02\%^{40}$$

ii. *Risk Free Rate*

PacifiCorp bases its estimates on the U.S. 30-year Treasury yield reported by the U.S. Department of Treasury on February 7, 2018. The U.S. Treasury yield on that day was 3.12%. The Public Advocates Office bases its estimate of the risk-free rate on the U.S. 30-year Treasury yield, which was 3.02 percent as of August 31, 2018.

Utilizing the 30-year Treasury yields as an estimate of the risk-free rate is a standard approach in CAPM studies. Roger Morin of Public Utility Reports, for example concludes that: "At the conceptual level, because common stock is a long-term investment and because the cash flows to investors in the form of dividends last indefinitely, the yield on very long-term government bonds, namely, the yield on 30-year Treasury bonds is the best measure of the risk-free rate for use in the CAPM and Risk Premium methods."[41]

iii. Beta

Beta is a measure of the relative riskiness of a particular security relative to the overall market. In technical terms, the β of a particular security is defined as the covariance between the return on a particular security and the market return divided by the variance of the overall market return. Securities with a β of less than one are considered to be less risky than the overall market while securities with a β of greater than one are more risky than the overall market.[42]

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[38] The median of estimated dividend yields (next 12 months) of all dividend paying stocks under review by *The Value Line Investment Survey: August 17, 2018*.

[39] Ex. PAC/211. Source: Bloomberg Financial, L.P., Composite of Long-Term EPS Analyst Estimates for the S&P 500, February 7, 2018.

[40] Source: US Treasury, Constant Maturity 30-year Treasury Yield, August 31, 2018.

[41] Morin, Roger, A. "New Regulatory Finance", Public Utility Reports, Inc. at 151 (2006).

[42] Estimates of β are typically derived by regressing the return on a particular security on the return on an overall market index such as Standard and Poor's 500 index.

PacifiCorp obtained the betas for an electric group of 25 companies that it used as a proxy for PacifiCorp's electric operations in California from *The Value Line Investment Survey: November 17, 2017, December 15, 2017, and January 26, 2018.* The average of the betas was 0.69.

The Public Advocates Office similarly obtained betas for the proxy group from *The Value Line Investments Survey* using the most recent issues published on June 15, 2018, July 27, 2018 and August 17, 2018. The average beta value of the 23 companies in the proxy group[43] is 0.65. The Public Advocates Office excluded Great Plains Energy and Westar Energy from PacifiCorp's proxy group in calculating the average beta value of 0.65.

Once the three required inputs to the implementation of CAPM are established, the cost of equity can be estimated based on the equation: **k = Rf + β(Rm-Rf)**. The Public Advocates Office estimates a CAPM of 8.26% compared to PacifiCorp's estimate of 8.47%.

Table 1-6: CAPM Cost of Equity

	30-Year T-Bond Return	Average Proxy Group Beta	Forward Looking Market Risk Premium	CAPM Cost of Equity
PacifiCorp	3.12%	0.6860	7.8%	8.47%
Public Advocates Office	3.02%	0.6543	8.007%	8.26%

4. Historic Risk Premium (HRP)

Risk premium models explicitly recognize that equity securities are riskier than debt. Therefore, equity investors demand a higher rate of return. The difference between the return on equity and the return on debt is typically defined as the risk premium. PacifiCorp relies "on the Risk Premium model to estimate a cost of equity estimate for the electric utility industry broadly, whereas […] the CAPM model focuses on using

[43] The Public Advocates Office recommends an exclusion of Great Plains Energy Incorporated and Westar Energy, Inc. from the final proxy group based on PacifiCorp's use of the fifth screening criteria, as described above.

observed capital market data to develop the cost of equity for the companies in the proxy group."[44]

> The Risk Premium model uses the historical relationship between electric (and gas) utility returns and bond yields to predict the cost of equity today using the yields currently observed on bonds. [PacifiCorp models] this historical relationship by developing a least-squares regression analysis that uses the bond yield to explain the average allowed return for electric utilities as a function of the level of interest rates (as reflected in the yields on government bonds, A-rated utility bonds, and BBB-rated utility bonds). Specifying the model in this fashion takes account of the fact that the equity risk premium varies with the overall level of interest rates.[45]

The Public Advocates Office risk premium models are derived similar to PacifiCorp's methodology with more updated information. The Public Advocates Office based its results on updates to the current bond yields and the risk-free rate, as of August 24, 2018.

The Public Advocates Office reviewed PacifiCorp's workpapers on input accuracy of regression models and does not dispute the models' coefficient outputs. PacifiCorp relied on the intercept and x variable (risk-free rate or corporate yield) coefficients to estimate the risk differential of utilities relative to bond yields based on historical data. The risk differential is estimated based on the linear equation of:

$$\mathbf{y = mX + b}$$

Where:

Y is the risk differential of utilities relative to bond yields;

M is the slope of the linear regression line of historical data;

X is the current bond yields;

B is the intercept of the linear regression line of historical data.

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[44] Ex. PAC/200, p. 27:3-6.

[45] Ex. PAC/200, p. 27:8-15.

The linear regression calculates an equation that minimizes the distance between the best fitted linear regression line and all of the data points. Here, the data points are a plot of utilities' annual historically authorized returns against an average of annual historic bond yields. Because the slope and intercept of the best fitted line are model parameters based on historically available authorized returns, risk free rate, and bond yields, the Public Advocates Office does not dispute PacifiCorp's use of the following model parameters as shown in Table 1-7.

Table 1-7: Accepted Model Parameters

	Model Parameters	
Analysis	Slope	Intercept
(1) Authorized Returns to Risk Free Rate	-0.598256321	0.087375
(2) Authorized Returns to BBB Utility Bond Yield	-0.725523411	0.090236
(3) Authorized Returns to Baa Corporate Bond Yield	-0.589606502	0.079301
(4) Authorized Returns to A Corporate Bond Yield	-0.609200972	0.08261
(5) Authorized Returns to BBB Corporate Bond Yield	-0.572873268	0.077343

Once the model parameters (slope and intercept) have been established, the only component that is needed to calculate the risk differential is current bond yields and risk-free rate. PacifiCorp used bond yields and rates as of February 7, 2018, while the Public Advocates Office uses bond rates as of August 24, 2018.[46] The sum of risk differential and the current bond rate/yield produces a risk premium model equity return. The following table is similar to PacifiCorp's Exhibit PAC/213 and summarizes the Public Advocates Office's findings:

Table 1-8: Risk Premium (RP) Model Equity Returns

Analysis (a)	Bond Rate (b)	Slope (c)	Intercept (d)	Risk Differential e = b*c + d	RP Equity Return f = b + e
(1)	2.97	-0.598256321	0.087375	6.96	9.93
(2)	4.31	-0.725523411	0.090236	5.90	10.21
(3)	4.72	-0.589606502	0.079301	5.15	9.87
(4)	4.19	-0.609200972	0.08261	5.71	9.90
(5)	5.03	-0.572873268	0.077343	4.85	9.88
Average					9.96%

46 ORA-PacifiCorp-050-YNL-5 and Attachment ORA 50.5.

5. The Public Advocates Office's ROE Recommendation

The Public Advocates Office recommends an 8.94 percent return on equity. This recommendation is based on the average of DCF, CAPM and HRP model results discussed above. The following table summarizes the Public Advocates Office ROE model results. For comparison purposes, the results of PacifiCorp's estimates for these three same models are also provided.

Table 1-9: Return on Equity Model Results

Model	PacifiCorp	Public Advocates Office
Discounted Cash Flow	8.37%	8.61%
CAPM	8.47%	8.26%
Historic Risk Premium	9.89%47	9.96%
Average	8.91%	8.94%

6. Aggregation and Customer Choice Issues Are Not Concerning

PacifiCorp devotes Section VIII of its testimony to discuss heightened risks caused by community choice aggregation (CCA) and customer choice. The testimony references utilities' informal comments[48] which state that "[f]orecasts of aggregation in the coming years indicate that as much as 85 percent of loads currently served by investor-owned utilities could participate in the CCA program by 2020."[49] In response to the Public Advocates Office data request on whether PacifiCorp made its own projections about its load departure to CCAs in California, PacifiCorp states: "The reference from the testimony cites the CPUC Staff's forecast. Mr. Strunk has not made his own forecast and understands that PacifiCorp has not either."[50] However, "PacifiCorp was notified that

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[47] ORA-PacifiCorp-050-YNL-4 and Attachment ORA 50.4.

[48] Informal Comments of Southern California Edison Company, Pacific Gas & Electric Company and San Diego Gas & Electric Company on the October 31, 2017 California Public Utilities Commission (CPUC) California Customer Choice Project Workshop, November 28, 2017, p. 6.

[49] Ex. PAC/200, p. 33:16-18.

[50] ORA-PacifiCorp-019-YNL-21.

Del Norte County was investigating the possible formation of a Community Choice Aggregator (CCA). Over the April 2017 through March 2018 period, Del Norte County customers accounted for approximately 28 percent of PacifiCorp's total California sales."[51]

Discussing CCAs, PacifiCorp identifies "the biggest risk for incumbent utilities is that certain costs associated with the transition may not be recoverable […such as…] stranded generation costs and Provider of Last Resort (POLR) costs."[52]

One of the principles in finance is that higher returns are demanded by investors to compensate for higher risk. When discussing the stranded generation costs, PacifiCorp's testimony cites to Value Line analyst commentary and concludes that:

> [M]any utility stocks were falling out of favor with investors given the heightened risks associated with restructuring, and particularly with the prospect of inadequate stranded cost recovery. When stocks fall out of favor, it means that the companies need to offer more attractive returns to entice investors. In the simplest terms, the heightened risk perceived by investors raises the cost of capital.[53]

"Community choice aggregation (CCA) was a consideration in determining where the allowed returns on equity capital (ROE) should fall within the range of observed results, however, Mr. Strunk did not assign a specific basis point cost to it."[54] Thus, Community choice aggregation is not a concern for PacifiCorp.

The Public Advocates Office is unconvinced that the departing load to CCA will affect the number of PacifiCorp's customer accounts in California in the near future or result in increased risk above the model results. PacifiCorp's service territory in California encompasses all of the Del Norte and Siskiyou

[51] ORA-PacifiCorp-019-YNL-22.

[52] Ex. PAC/200, pp. 34:25; 35:1.

[53] Ex. PAC/200, p. 38:33-38.

[54] ORA-PacifiCorp-019-YNL-24

counties, most of the Modoc and a part of Shasta County.[55] According to Clean Power Exchange,[56] as of August 29, 2018, Modoc County is ineligible to participate in California's CCA program, while Del Norte, Siskiyou and Shasta counties are eligible to participate, but there has been no activity to form a CCA. It remains speculative whether a CCA will be established in PacifiCorp's service territory. Furthermore, because it takes at least two years[57] from the earliest stages of exploration to official launch, the possibility of a CCA forming in PacifiCorp's service territory in northern California will not pose an increased risk above the model results used to determine the return on equity capital in this rate case.

Furthermore, the California allotted portion of PacifiCorp's generation assets are included in rate base for TY 2019, and PacifiCorp will earn a full return on these assets. Thus, there is no risk to PacifiCorp from the CCA program.

V. WHETHER PACIFICORP HAS DEMONSTRATED THAT ITS ACCELERATED DEPRECIATION PLAN FOR COAL UNITS BENEFITS CUSTOMERS.

The Public Advocates Office asserts PacifiCorp's Accelerated Depreciation Plan for its coal units is beneficial to customers. Depreciation is the ratemaking mechanism that allocates the original cost of capital investments for recovery over the useful life of each asset. Depreciation expense is related to the magnitude of the company's plant-in-service. As new plant is placed in service, the level of depreciation concomitantly increases.

The Public Advocates Office's reference to *amortization* refers to the analogous ratemaking mechanism for non-depreciable plant, such as software and land rights. The depreciation and amortization expenses and reserve balances for the test year are calculated in the Results of Operations (RO) model, which incorporates estimated

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[55] ORA-PacifiCorp-019-YNL-22 and Attachment ORA 19.22-1.

[56] https://cleanpowerexchange.org/california-community-choice/#top Accessed 8/29/18

[57] https://sonomacleanpower.org/about/history-of-scp

expenses based on net plant addition forecasts and automatically calculates the reserve requirement for the test year.

PacifiCorp proposes three substantive changes to its depreciation parameters:

1. PacifiCorp proposes revising the depreciation parameters of its distribution plant accounts to incorporate the results of its 2013 depreciation study.[58]
2. PacifiCorp proposes increasing the depreciation rates of its coal-fired power plants, such that all coal units will be fully depreciated by 2029.[59] This accelerated depreciation schedule would return PacifiCorp to the depreciation rates that were in use prior to the adoption of PacifiCorp's 2007 depreciation study.[60]
3. PacifiCorp proposes adjusting the depreciation expense to correct for two previous allocation errors.[61] In both cases, PacifiCorp allocated depreciation adjustments on a system-wide basis that should have been allocated on a *situs* basis to states other than California.

PacifiCorp does not propose adjustments to the parameters of other plant accounts. PacifiCorp adjusted these account parameters, subsequent to PacifiCorp's 2013 depreciation study.

A. PacifiCorp's Accelerated Depreciation Of Coal Plants Is Appropriate

The Public Advocates Office has reviewed PacifiCorp's depreciation proposals and does not propose adjustments. The Public Advocates Office's review included analysis of PacifiCorp's testimony, supporting workpapers, and responses to Public Advocates Office data requests issued to PacifiCorp in order to obtain additional information necessary to complete the Public Advocates Office's review.

The Public Advocates Office recommends the Commission direct PacifiCorp to include certain information within its prepared direct testimony and workpapers in future

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[58] Ex. PAC-1100, p. 17:6-10.

[59] Ex. PAC-1100, p. 18:11-18.

[60] Ex. PAC-100, p. 11:14-16.

[61] *Id.*, at p. 19:3-14.

general rate cases (GRCs). In this proceeding, PacifiCorp's prepared direct testimony and workpapers did not include basic information regarding PacifiCorp's depreciation proposals, including PacifiCorp's presentation of account-specific proposals and its supporting depreciation study. The Public Advocates Office obtained these materials through discovery. The depreciation expense is a conventional general rate case item, and PacifiCorp should include this information with its prepared direct testimony and workpapers.

In addition, PacifiCorp's Application did not include the pre-funded removal cost (net salvage) data required by the Commission in D.10-09-010.[62] The Public Advocates Office requested this information through discovery. The Commission should require PacifiCorp to include this information with its direct testimony and workpapers in its future GRC filings. PacifiCorp should also provide additional data, representing its historical expenditures and its regulatory liability balances that pertain to pre-funded net salvage and asset retirement obligations.

PacifiCorp proposes to increase the depreciation rates of its coal-fired power plants, such that all coal units will be fully depreciated by 2029.[63] If adopted by the Commission, this accelerated depreciation schedule would return PacifiCorp to the depreciation schedule used prior to the adoption of PacifiCorp's 2007 depreciation study.[64] Depreciation expenses for these coal-fired power plants are allocated on a system-generation (SG) basis. California ratepayers' share of SG costs is 1.580%. The Public Advocates Office has reviewed the proposed depreciation parameters for

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[62] D.10-09-010 at 13: "In the Settlement Agreement, the Joint Parties agree that PacifiCorp will provide the following information in subsequent rate case filings, with California distribution pre-funded removal costs shown separately: / • The most current balance of pre-funded removal costs; / • A year-by-year projection of: (1) when the then-existing balance of prefunded removal costs will be consumed; and (2) the implicit inflation rate for future asset removal costs; and / • A five-year projection of the year-end balance of pre-funded removal costs that shows for each year: (1) the gross additions to the balance; (2) the gross expenditures for removal costs; and (3) the net change in the balance of pre-funded removal costs."

[63] Ex. PAC-1100, p. 18:11-18.

[64] Ex. PAC-100, p. 11:14-16.

PacifiCorp's coal-fired power plants and does not have any adjustments. These parameters are included in Table 7-2 of Exhibit Cal Advocates -07.[65]

PacifiCorp's prepared testimony cites state climate policy risks in support of its proposal.[66] PacifiCorp's testimony describes the environmental goals of the state governments of California, Oregon, and Washington, as exemplified by joint statements from these states' utility regulatory commissions[67] and Governors' offices.[68] PacifiCorp also characterizes its proposal as consistent with the early retirement of its Carbon coal plant in response to federal regulations.[69] In response to a data request, PacifiCorp also cites identified risks like renewable energy, distributed energy resources, energy efficiency programs, the western Energy Imbalance Market, the Clean Air Act, and the Clean Water Act.[70]

The Public Advocates Office acknowledges the risks PacifiCorp cited. Over the existing remaining lives of PacifiCorp's coal plants, these assets also face stranding risks from future changes to state compliance plans with the federal Environmental Protection Agency's Regional Haze Program and from the future possibility of stronger federal regulation of greenhouse gas emissions. Market pressures also contribute risk in the form of possible economic obsolescence, as the U.S. Energy Information Administration projects that natural gas and renewables will continue to exert increasing market pressure on coal-fired power plants.[71]

Accelerating the depreciation of PacifiCorp's coal-fired power plants is a reasonable risk mitigation measure. If the accelerated depreciation parameters are not

[65] See Column (b) for the relevant proposed retirement dates.

[66] Ex. PAC-100, p. 12:9-11.

[67] Ex. PAC-102.

[68] Ex. PAC-103.

[69] Ex. PAC-100, p. 12:14-18.

[70] PacifiCorp response to data request ORA-PacifiCorp-003-CL8, Question 1(a-b).

[71] U.S. Energy Information Administration. *Short-Term Energy Outlook September 2018.* September 11, 2018. Available at [https://www.eia.gov/outlooks/steo/pdf/steo_full.pdf]. Accessed September 14, 2018.

adopted, the early retirement of a coal unit could produce significant ratepayer impacts. These include not only PacifiCorp's unrecovered investments, but potentially unfunded decommissioning costs as well. PacifiCorp's current net salvage rates are based upon the current expected retirement dates of its coal plants. Should PacifiCorp's coal plants retire before these dates are reached, the accumulated net salvage funds may be insufficient to provide for all of its decommissioning activities.

B. What is Necessary for PacifiCorp's Future Evidentiary Showings

The Public Advocates Office obtained PacifiCorp's current account-level parameters, proposals, and supporting depreciation study through discovery. PacifiCorp should have these materials as part of its prepared direct testimony and workpapers. The depreciation expense is a conventional GRC item, and these materials are necessary for the Commission to review the company's evidentiary showing to determine if the resulting rates are just and reasonable.

The Public Advocates Office recommends that the Commission direct PacifiCorp to file this basic depreciation information, inclusive of all plant accounts subject to depreciation or amortization, within its prepared direct testimony and workpapers in all future GRC applications. The information provided will enable the Commission and parties to review the calculation of the proposed account-specific depreciation rates. PacifiCorp should provide the following information at a minimum:

1. The supporting depreciation study;
2. The current and proposed parameters for each plant account (or sub-account, where necessary), including the survivor curve types, average service lives, and net salvage rates;
3. Composite remaining life values for each plant account or sub-account, including the vintage plant balances supporting the calculations of these values; and
4. The values of gross plant (original cost) and book depreciation reserve used to calculate the annual accrual rates.

PacifiCorp's Application did not include certain data pertaining to PacifiCorp's collection of net salvage funds, as specified in D.10-09-010.[72] Pursuant to the terms of the adopted Settlement Agreement in D.10-09-010, the Commission directed PacifiCorp to provide the following information in this and subsequent proceedings, with California distribution amounts shown separately:

- "The most current balance of pre-funded removal costs;
- A year-by-year projection of: (1) when the then-existing balance of prefunded removal costs will be consumed; and (2) the implicit inflation rate for future asset removal costs; and
- A five-year projection of the year-end balance of pre-funded removal costs that shows for each year: (1) the gross additions to the balance; (2) the gross expenditures for removal costs; and (3) the net change in the balance of pre-funded removal costs."

PacifiCorp did not include this information in its prepared direct testimony and workpapers for this proceeding. In response to a data request, PacifiCorp described this as an "oversight."[73] In its response, PacifiCorp provided neither the requested year-by-year projections of its removal costs, nor the implicit inflation rate of its future asset removal costs. PacifiCorp did supply the current balances of accumulated removal costs, including a June 2017 balance for pre-funded California distribution-related removal costs of approximately $36.252 million; "high level projections" of the California distribution removal cost expenditure, accrual, and balance; and a calculation that the current balance would be consumed in 49.5 years if spending remains at the average level of the three years ending in June 2017. PacifiCorp's provision of this information supports the Public Advocates Office's conclusion that the company's net salvage rates remain within reasonable bounds.

[72] D.10-09-010, p. 13.

[73] PacifiCorp response to data request CalPA-PacifiCorp-063-CL8, Question 1.

For future GRC evidentiary showings, the Commission should direct PacifiCorp to include net salvage-related information in its testimony and workpapers. This information should include the data ordered in D.10-09-010, as well as historical spending and accrual data that would provide necessary context for the determination of long-term trends in net salvage. The account-level data presented in PacifiCorp's 2013 depreciation study generally included 20 years (1992-2011) of data. PacifiCorp's future showings should aggregate the historical data from each year of its most recent depreciation study, with additional data collected to represent any years between the most recent study year and the GRC base year.

The Public Advocates Office recommends that the Commission direct PacifiCorp to report the annual weighted average balances of the regulatory liabilities that PacifiCorp records for its pre-funded net salvage costs and its asset retirement obligations. These regulatory liabilities formalize PacifiCorp's responsibility to use its net salvage collections for actual net salvage expenditures or refunds to customers.

The Commission has previously addressed this issue with respect to other regulated utilities. In D.06-05-016[74] and D.07-03-044,[75] the Commission directed Southern California Edison Company and Pacific Gas and Electric Company (PG&E) to record regulatory liabilities for their pre-funded net salvage accumulations. The Commission identified the following rationales:[76]

> *…First, doing so accurately reflects the regulatory bargain. Second, it is consistent with GAAP [Generally Accepted Accounting Principles] as demonstrated by the way PG&E reports pre-funded removal costs on its external financial statements. Finally, it provides an extra measure of assurance that PG&E will only use the amounts that it collects to pre-fund removal costs for their intended purpose.*
>
> *…With the stakes so high and the actual incurrence of the removal costs far in the future, we conclude that it is*

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[74] D.06-05-016, pp. 204-205.

[75] D.07-03-044, pp. 215-218.

[76] Id.

> *appropriate to establish the regulatory liability as a reasonable protection of ratepayers' interest in making sure the huge amount of money collected for removal costs is either spent for that purposes or returned to ratepayers (either in the form of a rate reduction or as an offset to other costs).*

The Commission emphasized how regulatory liability can reasonably protect ratepayer interests.

VI. RECOVERY OF CAPITAL EXPENDITURES ON COAL GENERATION UNITS

PacifiCorp requests adding $1.004 billion[77] to its Electric Plant in Service (EPIS) on a total company basis. PacifiCorp proposes allocating approximately 1.58% of the total company's EPIS resulting in an increase of $33,273,096 from the current EPIS amount of $597,057,169 to $650,357,058.

The Public Advocates Office reviewed PacifiCorp's request, conducted discovery and analyzed PacifiCorp's EPIS. The Public Advocates Office does not oppose PacifiCorp's proposed $33,273,096 in plant additions for TY 2019.

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[77] Direct Testimony of Shelley E. McCoy, Ex. PAC/1100 at p. 8 of 374.

A. Issues from OII and GRC-Least Cost Planning by System/Balancing Area and IRP Modeling of Coal Generation Units - *See the Public Advocates Office's description above of its non-opposition to PacifiCorp's capital request*.

B. Recovery of Spending at Coal-Burning Units Beyond 2022 - *See the Public Advocates Office's description above of its non-opposition to PacifiCorp's capital request*.

C. Recovery of Emissions Control Equipment Expenditures - *See the Public Advocates Office's description above of its non-opposition to PacifiCorp's capital request*.

D. Recovery of Other Capital Costs and Expenses - *See the Public Advocates Office's description above of its non-opposition to PacifiCorp's capital request*.

VII. CAPITAL EXPENDITURES FOR WIND REPOWERING, WIND GENERATION AND TRANSMISSION/DISTRIBUTION UPGRADES

PacifiCorp requests adding $1.004 billion[78] to its Electric Plant in Service (EPIS) on a total company basis. PacifiCorp proposes allocating approximately 1.58% of the total company's EPIS resulting in an increase of $33,273,096 from the current EPIS amount of $597,057,169 to $650,357,058.

The Public Advocates Office reviewed PacifiCorp's request, conducted discovery and analyzed PacifiCorp's EPIS. The Public Advocates Office does not oppose PacifiCorp's proposed $33,273,096 in plant additions for TY 2019.

[78] Direct Testimony of Shelley E. McCoy, Ex. PAC/1100, p. 8 of 374.

A. EV2020 Projects - *See the Public Advocates Office's description above of its non-opposition to PacifiCorp's capital request***.**

B. Other substation and transmission projects - *See the Public Advocates Office's description above of its non-opposition to PacifiCorp's capital request***.**

VIII. ADVANCED METERING INFRASTRUCTURE

PacifiCorp requests adding $1.004 billion[79] to its Electric Plant in Service (EPIS) on a total company basis. PacifiCorp proposes allocating approximately 1.58% of the total company's EPIS resulting in an increase of $33,273,096 from the current EPIS amount of $597,057,169 to $650,357,058.

The Public Advocates Office reviewed PacifiCorp's request, conducted discovery and analyzed PacifiCorp's EPIS. The Public Advocates Office does not oppose PacifiCorp's proposed $33,273,096 in plant additions for TY 2019.

A. Connection and Reconnection Fees for Customers with Smart Meters - *See the Public Advocates Office's description above of its non-opposition to PacifiCorp's capital request***.**

IX. IMPLEMENTATION OF RISK-BASED INVESTMENT DECISION MAKING FRAMEWORK

A. PacifiCorp should provide post-mitigation risk scores, costs, and a Risk-Spend Efficiency (RSE) calculation to provide meaningful optimization of risk mitigations.

In Decision (D.) 14-12-025 the Commission ordered the large energy utilities to incorporate a risk-based decision-making framework into their General Rate Cases (GRCs), requiring them to file separate Safety Model Assessment Proceeding (S-MAP) applications and submit a separate Risk Assessment and Mitigation Phase (RAMP) prior to their GRC filings.[80] In addition, the Commission required the small and multi-

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[79] Direct Testimony of Shelley E. McCoy, Ex. PAC/1100, p. 8 of 374.

[80] D.14-12-025 issued in R.13-11-006 (*Rulemaking to Develop a Risk-Based Decision-Making Framework to Evaluate Safety and Reliability Improvements and Revise the General Rate Case Plan for Energy Utilities*), found at

jurisdictional energy utilities (Small Utilities) to "transition to including a risk-based decision-making framework into their General Rate Case application filings" starting in December 2017, but has thus far deferred requiring the Small Utilities to make separate RAMP filings.[81] To date, Bear Valley Electric Services (BVES) and PacifiCorp have included such frameworks, respectively, in Application (A.) 17-05-004[82] and in this proceeding.[83]

On August 30, 2018, PacifiCorp, BVES and two other small energy utilities in California entered into an agreement (The Voluntary Agreement) with the Safety and Enforcement Division (SED) Risk Assessment & Safety Advisory (RASA) section whereby the Small Utilities would dedicate one chapter of their GRC testimony to describe their risk-based decision-making framework, in lieu of making a separate RAMP filing.[84] The Small Utilities agreed to "adapt as relevant the Guidance" from the RAMP filings and "adhere to the 10 Elements in their rate case testimony" and agreed upon General Principles for their filings.[85]

The Commission stated that "[a]dopting a common framework will ultimately streamline proceedings, and minimize the amount of resources and time devoted to understanding the intricacies of various models and provide useful comparisons [among utilities]" in the Interim Decision of S-MAP applicable to large energy utilities.[86] The same philosophy should apply to the Small Utilities.

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http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M143/K549/143549328.PDF

[81] Attachment XXX for D.14-12-025, pp. 18-19, 55 (Ordering Paragraph No. 4).

[82] Attachment XXX for Direct Testimony of BVES, A.17-05-004, Vol. 7.

[83] See Ex. PAC/1000, Direct Testimony of Brett S. Allsup (Implementation of a Risk-Based Investment Decision Making Framework), A.18-04-002.

[84] Attachment XXX for *Voluntary Agreement between Risk Assessment Section of the Safety and Enforcement Division and Small and Multi-Jurisdictional Utilities for a Risk-Based Decision-Making Framework*, August 30, 2018, A.15-05-002, p. 2.

[85] See *Voluntary Agreement between Risk Assessment Section of the Safety and Enforcement Division and Small and Multi-Jurisdictional Utilities for a Risk-Based Decision-Making Framework*, August 30, 2018, A.15-05-002, p. 6.

[86] Attachment XXX for D.16-08-018, p. 180 (Findings of Fact #19).

Given what BVES had filed in its GRC and what the Small Utilities had agreed with SED RASA in the Voluntary Agreement,[87,] [88] the Public Advocates Office agrees PacifiCorp's implementation of its risk-based decision-making framework is subject to the progress attained in the S-MAP proceeding (A.15-05-002) and recommends PacifiCorp include the following analysis in its future GRC applications:

1. For each risk mitigation program, at the minimum, PacifiCorp should provide the following as year-to-year, recorded and forecasted figures of:
    a. Expenses and capital expenditures (both in dollar-amount),
    b. Pre-mitigation risk scores and post-mitigation risk scores,
    c. Risk Spending Efficiency (RSE),
    d. If the program is new or existing, and
    e. Workpapers supporting the above items.[89]
2. The top risks PacifiCorp identified by should be linked to specific risk mitigation programs. The associated risk reduction, as well as expenses and capital expenditures that incur revenue requirement for each top risk, should be clearly defined.
3. PacifiCorp should quantify its Safety Impact Level (e.g. mirroring existing industry standards in measuring occupational safety and health as established by the Occupational Safety and Hazard Administration (OSHA) of the U.S. Federal Government).[90]

The Commission initiated Rulemaking (R.) 13-11-006 with the end goal "to revise the RCP [Rate Case Plan] to better facilitate utility revenue requirement showings based

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[87] Attachment XXX for Direct Testimony of BVES, A.17-05-004, Vol. 7.

[88] Attachment XXX for *Voluntary Agreement between Risk Assessment Section of the Safety and Enforcement Division and Small and Multi-Jurisdictional Utilities for a Risk-Based Decision-Making Framework*, August 30, 2018, A.15-05-002, p. 9.

[89] Attachment XXX for Ex. ORA-13, A.17-05-004, p. 7.

[90] Attachment XXX for How To Compute a Firm's Incidence Rate for Safety Management, Bureau of Labor Statistics, or: https://www.bls.gov/iif/osheval.htm

on a risk-informed decision-making process that will lead to safe and reliable service levels that are in compliance with state and federal guidelines, rational, well-informed and comparable to the best industry practices, and that the adopted rates are just and reasonable."[91, 92]

The Commission intended that the adoption of additional procedures — the filings of S-MAP and RAMP — "will result in additional transparency and participation on how the safety risks for energy utilities are prioritized by the Commission and the energy utilities, ***and provide accountability*** for how these safety risks are managed, mitigated and minimized."[93]

The Commission also ordered the Small Utilities to "transition to including a risk-based decision-making framework into their General Rate Case application filings" starting in December 2017.[94] Pursuant to D.14-12-025, PacifiCorp filed the direct testimony of Brett S. Allsup in this proceeding.

Comparing PacifiCorp's testimony with BVES' voluntary risk filing demonstrates that PacifiCorp's risk based approach requires more transparency and data availability.[95] Similar to BVES, PacifiCorp's approach requires more accountability of risk mitigation spending.[96] Therefore, the Public Advocates Office recommends that PacifiCorp address this in its future GRC filings.

The Public Advocates Office recommends that, prior to its next GRC filing, PacifiCorp and SED host a public workshop to allow PacifiCorp to present its forthcoming risk-based decision-making framework, and allow parties to provide

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[91] Attachment XXX for D.14-12-025, p. 49 (Findings of Fact #5).

[92] Attachment XXX for D.14-12-025, p. 49 (Conclusions of Law #2).

[93] Attachment XXX for D.14-12-025, p. 3. (Emphasis added.).

[94] Attachment XXX for D.14-12-025, p. 55 (Ordering Paragraph No. 4).

[95] In response to D.14-12-025, BVES filed its first framework on a voluntary basis in its GRC application in May 2017, before the mandatory deadline of December 2017. Attachment XXX for Direct Testimony of BVES, A.17-05-004, Vol. 7.

[96] Attachment XXX for Ex. ORA-13, A.17-05-004, p. 6-7.

recommended feedback ahead of the preparation and serving PacifiCorp's direct testimony. For example, given that a decent proportion of PacifiCorp's service territory is in "high threat zones" for wildfires, as designated by US Fire Safety, the company's risk mitigation measures should be robust, mature, and readily presentable with metrics demonstrating how risk is reduced. If the company's risk mitigation cannot be significantly reduced, PacifiCorp should explain why such risk cannot be significantly reduced.[97]

1. The Commission defined RSE.

As a safety priority policy consistent with the principle of "just and reasonable cost-based rates,"[98] the Commission emphasized the need to hold utilities' spending accountable in their risk mitigation programs. In D.16-08-018, the Commission stated:

> Without quantifying risk reduction, no meaningful ranking, prioritization or optimization of risk mitigations is possible, and the Commission's goals and processes set forth in D.14-12-025 are compromised.[99]

Mirroring the format employed by BVES' and PacifiCorp's GRC testimonies, SED proposed a template for GRC risk testimonies (Template for GRC Risk Testimony) for small and multi-jurisdictional utilities. This includes "Risk-Spend Efficiency calculation per mitigation," which conceptually is an estimate of "risk reduction per dollar spent."[100] Although this voluntary agreement has not yet been accepted by the Commission and is still subject to review and comment by parties, the Public Advocates Office recommends that PacifiCorp provide a RSE calculation for its top 3 risks.

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[97] Attachment XXX for the CPUC Fire Threat Map, or: ftp://ftp.cpuc.ca.gov/safety/fire-threat_map/2018/PrintablePDFs/8.5X11inch_PDF/CPUC_Fire-Threat_Map_final.pdf

[98] Attachment XXX for D.16-08-018, p. 188 (Conclusions of Law #1).

[99] Attachment XXX for D.16-08-018, p. 182 (Findings of Facts #33).

[100] Attachment XXX for *Voluntary Agreement between Risk Assessment Section of the Safety and Enforcement Division and Small and Multi-Jurisdictional Utilities for a Risk-Based Decision-Making Framework*, August 30, 2018, A.15-05-002, pp. 7, 9.

2. PacifiCorp should provide Post-mitigation risk scores.

PacifiCorp provides no post-mitigation risk score for any of its identified top 10 risks in its risk testimony.[101] In response to the Public Advocates Office's data request, PacifiCorp acknowledged it:

> Did not, as part of its risk-based investment decision-making framework process, calculate after-implementation risk scores [essentially, post-mitigation risk scores]. Since the primary driver for changes to the [mitigation] programs as delivered by [the] company were the substantial regulatory changes over the recent past, programs proposed were responsive to those changes, and risk scores were not recalculated.[102]

Even when PacifiCorp later identified their "expected risk reductions", those reductions were not quantitatively but qualitatively defined.[103] They were only described as a "decrease in frequency of events" or a "minor decrease in frequency of events."[104]

Without any concrete estimates of post-mitigation risk scores, PacifiCorp cannot substantiate the amount of "expected risk reductions." PacifiCorp provides little metrics for any parties to properly evaluate the efficacy of its risk programs and, hence, RSE. In BVES' GRC A.17-05-004, BVES voluntarily provided such metrics.[105] PacifiCorp should do the same by estimating the amount of risks reduced.

In future GRC filings, PacifiCorp can determine risk reduction using the Joint Intervenor Approach equation in D.16-08-018, or any subsequent equation adopted by the Commission:

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[101] See Ex. PAC/1000 and Ex. PAC/1002, A.18-04-002.

[102] Attachment XXX for PacifiCorp's response to data request 31.3, ORA-PacifiCorp-031-PWL-3.

[103] Attachment XXX for PacifiCorp's response to data request 31.3, ORA-PacifiCorp-031-PWL-3.

[104] Attachment XXX for PacifiCorp's response to data request ORA-PacifiCorp-031-PWL-3, Attachment ORA 31.3.

[105] Attachment XXX for Direct Testimony of BVES, A.17-05-004, Vol. 7, p. 22.

Risk = Likelihood of Failure x Consequence of Failure or
Risk = LoF x CoF

Risk Reduction = (LoF x CoF) Before – (LoF x CoF) After[106]

That is, the difference between the risk before and the risk after the implemented mitigation.

Consistent with the Public Advocates Office's recommendations for BVES' GRC, PacifiCorp should include an explanation of, what risks were altered after the initial calculation, the extent risk scores were altered (e.g. the level of changes incurred to various impact categories), and any given risk score that was altered during internal work sessions.[107]

3. PacifiCorp should also provide Expenses and capital expenditures, in dollars, for each risk mitigation program.

PacifiCorp should present the dollar-amount cost associated with each risk mitigation program — broken down by expense, capital expenditure, by test-year and post-test years. The associated risk reduction, as well as expenses and capital expenditures that incur revenue requirement for each top risk should be clearly defined.

PacifiCorp has alleged it has "limited detailed workpapers that explicitly define costs" of each risk program. At first, the company provided cost groups developed "ranging from 1 (inexpensive) to 5 (quite expensive) to support Figure 7 in Exhibit PAC/1000," where exact scores were not available in the direct testimony.[108, 109] For newly proposed risk programs, the Public Advocates Office ultimately was able to obtain

[106] Attachment XXX for D.16-08-018, p. 184 (Findings of Fact #59, #61).

[107] Attachment XXX for Ex ORA-13, A.17-05-004, p. 5.

[108] Attachment XXX for PacifiCorp's response to data request ORA-PacifiCorp-031-PWL-1.

[109] Attachment XXX for PacifiCorp's response to data request ORA-PacifiCorp-031-PWL-1, Attachment ORA 31.1-1.

PacifiCorp's program dollar-amount costs.[110, 111] For existing programs, PacifiCorp referred to the approximate "range estimates for each cost group:"

> Cost group 1-2: less than $100,000 annually;
>
> Cost group 2-3: between $100,000 and $350,000 annually;
>
> Cost group 3-4: between $350,000 and $700,000 annually;
>
> and
>
> Cost group 4-5: more than $750,000/annually.[112]

When asked to identify the location of each of the legacy risk mitigation programs in the Results of Operations model of this GRC, PacifiCorp responded (emphasis added):

> The costs of exiting risk mitigation programs are integrally built into and account for as part of the operational and maintenance (O&M) expenses or capital expenditures in the base period; *the costs are not tracked on a program basis*. As a result, these expenses or expenditures are reflected in unadjusted transmission or distribution O&M balances and corresponding rate base balances reflected in Exhibit PAC/1101 [Ms. Shelley McCoy's direct testimony], and specific dollar amounts cannot be quantified. *Detailed workpapers that explicitly define costs on a program-by-program basis are not prepared in the normal course of business and are not readily available*.[113]

4. PacifiCorp should provide the timeframe used to calculate the costs, risk reduction, and RSE.

As PacifiCorp might aggregate costs over a 30-year period instead of a fiscal or calendar year for each of its risk programs, it needs to specify the timeframe it uses to record costs associated with these programs. Similarly, the same timeframe should be used for the corresponding risk reduction when calculating RSE. This recommendation is consistent with The Public Advocates Office's previous report on BVES' GRC risk

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[110] Attachment XXX for ORA-PacifiCorp-031-PWL, supporting attachment XXX for ORA-PacifiCorp-036-PWL, and supporting attachment XXX for ORA-PacifiCorp-049-PWL.

[111] Attachment XXX for PacifiCorp's response to data request ORA-PacifiCorp-049-PWL-2.

[112] Attachment XXX for PacifiCorp's response to data request ORA-PacifiCorp-049-PWL-3.

[113] Attachment XXX for PacifiCorp's response to data request ORA-PacifiCorp-049-PWL-1.

testimony.[114] This will also help establish spending accountability and facilitate the scrutiny of risk programs by external parties.

PacifiCorp should be able to track its risk-mitigation expenses in the future, because the company was able to track its expenses on drought-related fire hazard mitigation measures in its Catastrophic Events Memorandum Account (CEMA account).[115] PacifiCorp recovered such expenses recorded from March 11, 2015 to March 31, 2017 with a CEMA surcharge authorized in D.18-02-009.[116] This demonstrates PacifiCorp has at least some level of expense tracking capability.[117] The Commission should require PacifiCorp to do the same in future GRCs.

B. PacifiCorp should link the top risks to specific proposed risk mitigation programs in its direct testimony.

PacifiCorp would facilitate accountability and enhance transparency by clearly associating the top risks of the company with the proposed mitigation programs. For example, PacifiCorp correlated its top 10 risks with the mitigation programs intending to reduce those risks.[118] The Public Advocates Office recommends the Commission require PacifiCorp to make this information readily available in PacifiCorp's future direct testimony, workpapers, or attachments to its direct testimony.

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[114] Attachment XXX for Ex ORA-13, A.17-05-004, p. 6.

[115] Attachment XXX for D. 18-02-009, pp. 3-4, or: http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M209/K764/209764076.PDF

[116] Attachment XXX for D. 18-02-009, pp. 12-13 (Ordering Paragraphs 2, 3, and 4), or: http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M209/K764/209764076.PDF

[117] Attachment XXX for A.17-04-023, pp. 1-4, or: http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M185/K576/185576192.PDF

[118] Attachment XXX for PacifiCorp's response to data request ORA-PacifiCorp-031-PWL-2. Note: The title for the far right column should refer to the line items as listed in Attachment ORA 31.1-1 to ORA-PacifiCorp-031-PWL-1. See

Table **1**.

Table 1-10:
PacifiCorp links the mitigation programs (far right column) to the top 10 risks they intend to mitigate.

Asset Group	Asset	Event Description	Exhibit PAC/1000, Figure 7, Page 30
Substation	Transformers	Transformer Failure	3,4,19,23,24,25,49
Substation	Breakers	Breaker Failure	3,4,19,23,24,25,49
Substation	Transformers	Bushing Failure	3,19,24,25
Substation	Breakers	Major Oil/SF6 Leak	4,19,23,24,25
Substation	Transformers	Radiator Failure	4,19,24,25
Substation	Relays	Relay Mis-operation	4,25
Dist UG	Conductor	Age/Deteriorat ion	2,4,5,6,7,14,15,18
Dist OH	Poles	Fire	3,8,9,10,11,12,15,16,18,20,21,22,26,27,28,30, 31,33,35,36,37,38,39,44,45,46,47,48,50,52,53
Dist OH	Conductor	Vegetation	4,6,7,15,18,22,28,31,37,50,52
Dist OH	Pole Mounted Equip	Equip Failure	4,5,6,15,16,18,20,32,40,41,49,51,52,53

C. PacifiCorp should quantify Safety Impact Levels.

In its direct testimony, PacifiCorp assigns "impact scores" to safety,[119] which should be more quantifiable. PacifiCorp breaks down the safety impact level into seven categories. The categories were mostly descriptive rather than quantitative. For example, a catastrophic impact level for safety (the highest level) involves "[f]atalities: Many fatalities and life-threatening injuries to the public or employees."[120] Using words such as "many fatalities" or "few serious injuries" offer little insight or idea of the seriousness of the catastrophic events, particularly to external parties or the general public.[121]

[119] See Ex. PAC/1001, Ex. Accompanying Direct Testimony of Brett S. Allsup (Six Impact Groups and the Seven Impact Level Scores), p. 1 of 5.

[120] See Ex. PAC/1000, Direct Testimony of Brett S. Allsup, (Implementation of a Risk-Based Investment Decision Making Framework) at p. Allsup/13. See Ex. PAC/1001, Ex. Accompanying Direct Testimony of Brett S. Allsup (Six Impact Groups and the Seven Impact Level Scores), p. 1 of 5.

[121] See PacifiCorp's safety impact levels,

Table **1**.

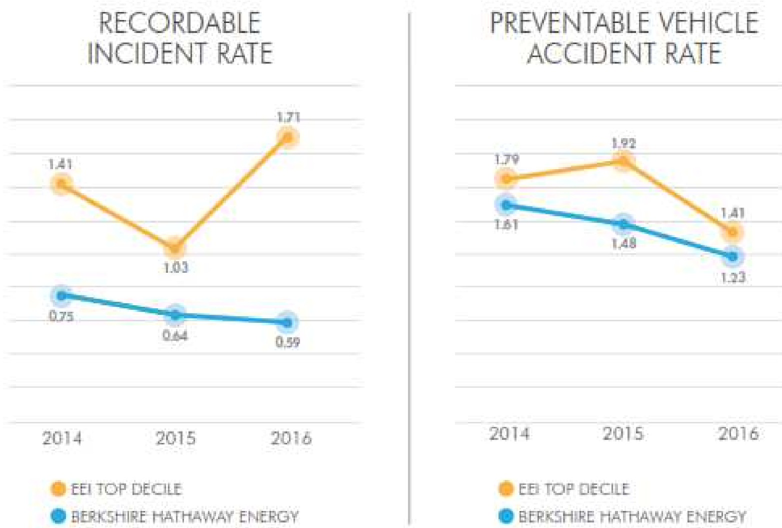
Table 1-11:
PacifiCorp's safety impact description should be quantifiable.[122]

SAFETY IMPACT DESCRIPTION

Impact Level	Description
Catastrophic (7)	**Fatalities:** Many fatalities and life threatening injuries to the public or employees.
Severe (6)	**Fatalities:** Few fatalities and life threatening injuries to the public or employees.
Extensive (5)	**Permanent/Serious Injuries or Illnesses:** Many serious injuries or illnesses to the public or employees.
Major (4)	**Permanent/Serious Injuries or Illnesses:** Few serious injuries or illnesses to the public or employees.
Moderate (3)	**Minor Injuries or illnesses:** Minor injuries or illnesses to many public members or employees.
Minor (2)	**Minor Injuries or illnesses:** Minor injuries or illnesses to few public members or employees.
Negligible (1)	No injury or illness or up to an un-reported negligible injury.

[122] See Ex. PAC/1000, Direct Testimony of Brett S. Allsup, (Implementation of a Risk-Based Investment Decision Making Framework), at p. Allsup/13. See Ex. PAC/1001, Ex. Accompanying Direct Testimony of Brett S. Allsup (Six Impact Groups and the Seven Impact Level Scores), p. 1 of 5.

Figure 1:
Reporting standards for occupational safety, Corporate Brochure of Berkshire Hathaway Energy Co.[123]



PacifiCorp's parent company, Berkshire Hathaway Energy Co. (Berkshire Hathaway Energy), uses the minimum standard of occupational safety metrics that the Public Advocates Office was expecting. In its Corporate Brochure, Berkshire Hathaway Energy reported the "recordable incident rate" and "preventative vehicle accident rate" among its employees from year 2014 to 2016.[124]

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[123] Attachment XXX for Berkshire Hathaway Energy Co.'s Corporate Brochure at p.18, or: https://www.sempra.com/sites/default/files/content/files/node-page/file-list/2018/2017-corporate-sustainability-report-sempra.pdf

[124] Attachment XXX for Berkshire Hathaway Energy Co.'s Corporate Brochure at p.18, or: https://www.sempra.com/sites/default/files/content/files/node-page/file-list/2018/2017-corporate-sustainability-report-sempra.pdf.

Figure 2:
Safety performance reported by employees and contractors categories, Sempra Corporate Responsibility Report.[125]

SAFETY

At Sempra Energy, we are not satisfied unless each employee and contractor returns home safely after every workday. We encourage a safety-focused culture in which everyone feels responsible for their own safety as well as the safety of their co-workers.

In 2017, our employee safety performance continued to improve. We had no employee fatalities and no contractor fatalities; we also achieved decreases in both the rate of recordable injuries and illnesses and the rate of injuries that resulted in time away from work.

The most common employee injuries at Sempra Energy's businesses are body sprains and strains. We work to minimize these types of injuries through specific training programs on body mechanics and ergonomics. We also focus on safety during pre-work briefings before crews head out to the field. At safety stand-downs, we review safety lessons learned.

Employees share safety best practices, near-misses, alerts and messages both within and across our businesses. A corporate-led environmental, health, safety and security council meets every other month to discuss safety incidents and provide safety leadership and direction to Sempra Energy's principal subsidiaries.

Safety performance

	2014	2015	2016	2017
Employee work-related fatalities	0	1	0	0
Employee OSHA recordable injury rate[1]	2.41	2.35	2.31	2.24
Employee lost work time case rate[2]	0.8	0.77	0.73	0.66
Contractor work-related fatalities	0	1	0	0
Contractor OSHA recordable injury rate[3]	n/a	n/a	0.8	0.83

[1] The number of recordable injuries or illnesses per 100 full-time workers.
[2] The number of lost time cases per 100 full-time workers.
[3] Data from 2014-2015 are not available.

PacifiCorp should use industry reporting standards, such as the OSHA metrics for occupational safety incidents. Other standardized metrics such as Days Away/Restricted or Transfer Rate (DART) indicate the number of recordable injuries and illnesses per 100

[125] Attachment XXX for Sempra's Corporate Responsibility Report 2017, p.47, or: https://www.sempra.com/sites/default/files/content/files/node-page/file-list/2018/2017-corporate-sustainability-report-sempra.pdf

full-time employees that resulted in days away from work, restricted work activity or job transfer during a given period of time, and are a uniform metric.[126] Reporting these figures and further separating them by employees and contractors, are a reliable method to show that PacifiCorp prioritizes the safety of its own workers and can reveal any significant differences between the two categories that may help further reduce risk.[127]

The Commission should also develop a uniform system for characterizing and categorizing the relevant safety impact for fatalities, injuries and illnesses involving the general public due to utilities' operations.

The Public Advocates Office acknowledges PacifiCorp provided its risk-based decision-making framework in this GRC and that implementation of its risk-based decision-making framework is subject to the progress attained in the S-MAP proceeding (A.15-05-002). Consistent with its previous report on BVES' risk-based decision-making framework, the Public Advocates Office recommends PacifiCorp include at a minimum, the following:

a) Expense and capital expenditure (in dollar amount),
b) Pre-mitigation risk scores and post-mitigation risk scores,
c) Risk-Spend Efficiency (RSE),
d) Workpapers, direct inputs and calculations of these risk scores for each mitigation program,
e) Clear association between the top risk identified and the relevant mitigation programs, and
f) Quantifiable safety impact level.[128]

This will allow for a clearer and more transparent understanding of its framework in its future GRC applications.

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[126] Attachment XXX for How To Compute a Firm's Incidence Rate for Safety Management, Bureau of Labor Statistics, or: https://www.bls.gov/iif/osheval.htm

[127] Attachment XXX for Sempra's Corporate Responsibility Report 2017, p. 47, or: https://www.sempra.com/sites/default/files/content/files/node-page/file-list/2018/2017-corporate-sustainability-report-sempra.pdf. See **Error! Reference source not found.**.

[128] Attachment XXX for Ex ORA-13, A.17-05-004, p. 6.

PacifiCorp should clearly specify in its direct testimony in future GRCs the time-frame employed in aggregating cost, estimating risk reduction, and calculating RSE of the associated risk programs.[129] Also, PacifiCorp should specify and use a consistent timeframe in recording costs and calculating the corresponding amount of risk reduced and RSE. This helps establish spending accountability and facilitate the scrutiny of risk programs by external parties.

The Public Advocates Office suggests, prior to the next GRC filing, PacifiCorp and SED host a public workshop to allow PacifiCorp to present its forthcoming risk-based decision-making framework, and allow parties to provide recommended feedback ahead of the preparation and serving of direct testimony by PacifiCorp. For a company with a decent proportion of its service territory designated as "high threat zones" for wildfires by US Fire Safety, PacifiCorp's risk mitigation measures should be robust, mature, and readily presentable with metrics demonstrating how for risk is reduced or if it cannot be significantly reduced, and with explanations as to why PacifiCorp has found that this risk cannot be significantly reduced.[130]

X. REVENUE REQUIREMENT

A. Summary of Earnings, Escalation, and Taxes

PacifiCorp uses a Results of Operations model, called the Jurisdictional Allocation Model or "JAM,"[131] to compile its witnesses' quantitative forecasts for incorporation into its revenue requirement for its California jurisdiction. The Public Advocates Office does not contest the JAM and is relying on it extensively to calculate its TY 2019 revenue requirement for PacifiCorp.

To accommodate this complex multi-jurisdictional service territory, PacifiCorp has revised and updated its system of jurisdictional cost allocation factors, which is called

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[129] Attachment XXX for Ex ORA-13, A.17-05-004, p. 6.

[130] Attachment XXX for the CPUC Fire Threat Map, or: ftp://ftp.cpuc.ca.gov/safety/fire-threat_map/2018/PrintablePDFs/8.5X11inch_PDF/CPUC_Fire-Threat_Map_final.pdf

[131] PacifiCorp's response to ORA Informal Data Request 2-1.

the 2017 Protocol.[132] The Public Advocates Office does not contest the 2017 Protocol and is relying on it extensively to calculate the revenue requirement.

PacifiCorp segregates escalation of costs into Labor, Non-labor, and Other. Labor-related costs are driven by payroll and include salaries, wages, pecuniary incentives, and certain benefits, such as 401(k) plans. Labor escalation factors are taken from actual union contracts or from budget planning. Nonlabor inflation is a construct of indices Global Insight developed. It is a series of indices for materials and services selected because they are generally representative of electric utilities' Uniform System of Accounts[133] as defined by the Federal Energy Regulatory Commission. Expenditures that fall outside Labor and Nonlabor are categorized as Other.

PacifiCorp's tax obligations fall into three categories: 1) federal income taxes and California corporate income taxes, 2) payroll taxes, and 3) ad valorem or property taxes. Differences in tax expense are due to dollar differences in deductions, such as Schedule M and regulatory books versus tax filings, rather than methods.

The Public Advocates Office recommends regarding PacifiCorp's summary of earnings the Commission authorize a net decrease of $3,805,909 or 5.072% to PacifiCorp's proposal of $78,846,144[134] for TY 2019 revenue requirement at proposed rates under California jurisdiction. The Public Advocates Office does not oppose PacifiCorp's methodologies for computing obligations and forecasts for tax rates. The Public Advocates Office does not oppose PacifiCorp's proposals for Labor and Non-labor escalation.

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[132] Ex. PAC\100, Direct Testimony of Scott D. Bolton, pp. 14-33.

[133] 18 CFR § 141.1 (FERC Form No. 1, Annual report of Major electric utilities, licensees and others).

[134] Excluding net power costs, which are assigned to Energy Cost Adjustment Clause proceedings, and Other Operating Revenues. See Table 2-2.

1. The Public Advocates Office recommends a decrease to PacifiCorp's Earnings

At TY 2019 proposed rates, the Public Advocates Office recommends a net revenue requirement of $75,040,235, which is an adjustment of ($2,745,387) or (3.53%) less than the Base Year.[135] For TY 2019, at proposed rates the Public Advocates Office's recommendation is ($3,805,909) or 5.072% less than PacifiCorp's proposal of $78,846,144. These results are included in Tables 1-12 through 1-14, below:

Table 1-12
Test Year 2019
Increase in Revenue Requirement *

		Cal Advocates	PacifiCorp	PacifiCorp Exceeds Cal Advocates	
1	Present Rate Revenues	$ 77,785,622	$77,785,622	$ -	NA
2	Proposed Rate Revenues	75,040,235	78,846,144	3,805,909	5.072%
3	Increase in Revenues	(2,745,387)	1,060,522	3,805,909	139%
4	Percentage Change	-3.53%	1.36%		

* Excluding ECAC Revenues and Other Operating Revenues

[135] Excluding Other Operating Revenues. The Public Advocates Office uses "Base Year" and "Base Period" (Ex. PAC/1100, p. 4, Direct Testimony of Shelly McCoy) interchangeably.

	Table 1-13 Proposed Rate Revenues CALIFORNIA Twelve Months Ending December 31, 2019				
		Cal Advocates	PacifiCorp	PacifiCorp Exceeds Cal Advocates	
1	Operating Revenues:				
2	General Business Revenues	$ 75,040,235	$ 78,846,144	$ 3,805,909	5.072%
3	Interdepartmental	-	-	-	NA
4	Special Sales	-	-	-	NA
5	Other Operating Revenues	3,420,035	3,420,035	-	0.000%
6	Total Operating Revenues	78,460,270	82,266,179	3,805,909	4.851%
7					
8	Operating Expenses:				
9	Steam Production	5,186,131	5,186,131	-	0.000%
10	Nuclear Production	-	-	-	NA
11	Hydro Production	727,735	727,735	-	0.000%
12	Other Power Supply	1,658,818	1,658,818	-	0.000%
13	Transmission	1,191,052	1,191,052	-	0.000%
14	Distribution	14,264,755	14,671,354	406,599	2.850%
15	Customer Accounting	2,461,658	2,495,240	33,582	1.364%
16	Customer Service & Info	235,888	235,888	-	0.000%
17	Sales	-	-	-	NA
18	Administrative & General	1,109,952	1,109,952	-	0.000%
19					
20	Total O&M Expenses	26,835,987	27,276,168	440,181	1.640%
21					
22	Depreciation	21,986,116	21,986,116	-	0.000%
23	Amortization	1,417,397	1,417,397	-	0.000%
24	Taxes Other Than Income	4,770,760	4,814,146	43,386	0.909%
25	Income Taxes - Federal	2,808,388	3,474,276	665,888	23.711%
26	Income Taxes - State	636,022	786,827	150,805	23.711%
27	Income Taxes - Def Net	(507,877)	(507,877)	0	0.000%
28	Investment Tax Credit Adj.	-	-	-	NA
29	Misc Revenue & Expense	(60,809)	(60,809)	-	0.000%
30					
31	Total Operating Expenses:	57,885,984	59,186,244	1,300,260	2.246%
32					
33	Operating Rev For Return:	20,574,286	23,079,935	2,505,649	12.179%
34					
35	Rate Base:		-		
36	Electric Plant In Service	630,330,265	630,330,265	-	0.000%
37	Plant Held for Future Use	882,150	882,150	0	0.000%
38	Misc Deferred Debits	14,674,173	14,674,173	-	0.000%
39	Elec Plant Acq Adj	257,411	257,411	-	0.000%
40	Nuclear Fuel	-	-	-	NA
41	Prepayments	447,258	447,258	-	0.000%
42	Fuel Stock	(78,578)	(78,578)	-	0.000%
43	Material & Supplies	3,387,190	3,387,190	-	0.000%
44	Working Capital	435,445	436,218	773	0.177%
45	Weatherization Loans	-	20,971	20,971	NA
46	Misc Rate Base	-	-	-	NA
47					
48	Total Electric Plant:	650,335,314	650,357,058	21,744	0.003%
49					
50	Rate Base Deductions:				
51	Accum Prov For Deprec	(241,922,298)	(241,922,298)	-	0.000%
52	Accum Prov For Amort	(13,266,924)	(13,266,924)	-	0.000%
53	Accum Def Income Tax	(96,684,465)	(96,685,971)	(1,506)	0.002%
54	Unamortized ITC	(4,062)	(4,062)	-	0.000%
55	Customer Adv For Const	(500,901)	(500,901)	-	0.000%
56	Customer Service Deposits	-	-	-	NA
57	Misc Rate Base Deductions	(7,084,090)	(7,084,090)	-	0.000%
58					
59	Total Rate Base Deductions	(359,462,740)	(359,464,245)	(1,506)	0.000%
60					
61	Total Rate Base:	290,872,574	290,892,813	20,238	0.007%
62					
63	**Return on Rate Base**	**7.073%**	**7.934%**	0.861%	12.171%
64					
65	**Return on Equity**	**8.943%**	**10.600%**	1.657%	18.526%

		Table 1-14			
		Present Rate Revenues			
		CALIFORNIA			
		Twelve Months Ending December 31, 2019			
		Cal Advocates	PacifiCorp	PacifiCorp Exceeds Cal Advocates	
1	Operating Revenues:				
2	General Business Revenues	$ 77,785,622	$ 77,785,622	$ -	0%
3	Interdepartmental	-	-	-	NA
4	Special Sales	-	-	-	NA
5	Other Operating Revenues	3,420,035	3,420,035	-	0%
6	Total Operating Revenues	81,205,657	81,205,657	-	0%
7					
8	Operating Expenses:				
9	Steam Production	5,186,131	5,186,131	-	0%
10	Nuclear Production	-	-	-	NA
11	Hydro Production	727,735	727,735	-	0%
12	Other Power Supply	1,658,818	1,658,818	-	0%
13	Transmission	1,191,052	1,191,052	-	0%
14	Distribution	14,264,755	14,671,354	406,599	3%
15	Customer Accounting	2,485,883	2,485,883	-	0%
16	Customer Service & Info	235,888	235,888	-	0%
17	Sales	-	-	-	NA
18	Administrative & General	1,109,952	1,109,952	-	0%
19				-	
20	Total O&M Expenses	26,860,213	27,266,812	406,599	2%
21				-	
22	Depreciation	21,986,116	21,986,116	-	0%
23	Amortization	1,417,397	1,417,397	-	0%
24	Taxes Other Than Income	4,802,057	4,802,057	-	0%
25	Income Taxes - Federal	3,347,614	3,266,007	(81,608)	-2%
26	Income Taxes - State	758,142	739,660	(18,482)	-2%
27	Income Taxes - Def Net	(507,877)	(507,877)	0	0%
28	Investment Tax Credit Adj.	-	-	-	NA
29	Misc Revenue & Expense	(60,809)	(60,809)	-	0%
30				-	
31	Total Operating Expenses:	58,602,853	58,909,362	306,509	1%
32				-	
33	Operating Rev For Return:	22,602,804	22,296,294	(306,509)	-1%
34					
35	Rate Base:			-	
36	Electric Plant In Service	630,330,265	630,330,265	-	0%
37	Plant Held for Future Use	882,150	882,150	0	0%
38	Misc Deferred Debits	14,674,173	14,674,173	-	0%
39	Elec Plant Acq Adj	257,411	257,411	-	0%
40	Nuclear Fuel	-	-	-	NA
41	Prepayments	447,258	447,258	-	0%
42	Fuel Stock	(78,578)	(78,578)	-	0%
43	Material & Supplies	3,387,190	3,387,190	-	0%
44	Working Capital	435,445	436,218	773	0%
45	Weatherization Loans	-	20,971	20,971	NA
46	Misc Rate Base	-	-	-	NA
47					
48	Total Electric Plant:	650,335,314	650,357,058	21,744	0%
49					
50	Rate Base Deductions:				
51	Accum Prov For Deprec	(241,922,298)	(241,922,298)	-	0%
52	Accum Prov For Amort	(13,266,924)	(13,266,924)	-	0%
53	Accum Def Income Tax	(96,684,465)	(96,685,971)	(1,506)	0%
54	Unamortized ITC	(4,062)	(4,062)	-	0%
55	Customer Adv For Const	(500,901)	(500,901)	-	0%
56	Customer Service Deposits	-	-	-	NA
57	Misc Rate Base Deductions	(7,084,090)	(7,084,090)	-	0%
58					
59	Total Rate Base Deductions	(359,462,740)	(359,464,245)	(1,506)	0%
60					
61	Total Rate Base:	290,872,574	290,892,813	20,238	0%
62					
63	**Return on Rate Base**	**7.771%**	**7.665%**	-0.106%	-1%
64					
65	**Return on Equity**	**10.285%**	**10.082%**	-0.204%	-2%

2. The Public Advocates Office does not object to PacifiCorp's Escalation

The Public Advocates Office independently examined PacifiCorp's methodologies, supporting work papers, and responses to requests for information regarding Global Insight. As a result, the Public Advocates Office does not object to PacifiCorp's forecasts for Labor and Nonlabor escalation.

B. Rate Base

The Public Advocates Office reviewed PacifiCorp rate base components for TY 2019 and has one recommendation that differs from PacifiCorp's proposal. For the Weatherization Loan Programs, Public Advocates Office recommends the Commission reject PacifiCorp's proposal to recover as part of rate base the Weatherization Loan Programs cost of $20,971.

Table 1-15 below compares the Public Advocates Office and PacifiCorp's TY 2019 forecasts of rate base components.

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Table 1-15[136]
PacifiCorp TY 2019 Rate Base Components in Nominal Dollars

Description (A)	Cal Advocates Recommendation (B)	PacifiCorp Proposed (C)	Difference (D=C-B)
Rate Base:			
Electric Plant in Service	$630,330,265	$630,330,265	$0
Plant Held for Future Use	$882,150	$882,150	$0
Misc Deferred Debits	$14,674,173	$14,674,173	$0
Elec Plant Acq Adj	$257,411	$257,411	$0
Nuclear Fuel	-	-	$0
Prepayments	$447,258	$447,258	$0
Fuel Stock	$(78,578)	$(78,578)	$0
Materials & Supplies	$3,387,190	$3,387,190	$0
Working Capital	$436,217	$436,217	$0
Weatherization Loans	$0	$20,971	$20,971
Misc Rate Base	-	-	$0
Total Electric Plant	$650,336,087	$650,357,058	$20,971
Rate Base Deductions:			
Accum Prov for Deprec	$(241,922,298)	$(241,922,298)	$0
Accum Prov for Amort	$(13,266,924)	$(13,266,924)	$0
Accum Def Income Tax	$(96,684,465)	$(96,684,465)	$0
Unamortized ITC	$(4,062)	$(4,062)	$0
Customer Adv for Const	$(500,901)	$(500,901)	$0
Customer Service Deposits	-	-	$0
Misc Rate Base Deductions	$(7,084,090)	$(7,084,090)	$0
Total Rate Base Deductions	$(359,462,740)	$(359,462,740)	$0
Total Rate Base (Total Electric Plant- Total Rate Base Deductions)	$290,873,347	$290,894,318	$20,971

Table 8-2 below compares the Public Advocates Office and PacifiCorp's TY 2019 forecasts of rate base adjustments.

136 Workpaper: CA GRC JAM Dec 2019 Test Period. ORA Informal 2. Tab Results, Cells C77-C102.

Table 1-16[137]
PacifiCorp TY 2019 Rate Base Adjustments in Nominal Dollars

Description (A)	Cal Advocates Recommendation (B)	PacifiCorp Proposed (C)	Difference (D=C-B)
Cash Working Capital	$91,000	$91,000	$0
Trapper Mine Rate Base	$102,464	$102,464	$0
Jim Bridger Mine Rate Base	$1,741,230	$1,741,230	$0
Customer Advances for Construction	$100,659	$100,659	$0
Pro Forma Plant Additions & Retirements	$30,629,807	$30,629,807	$0
Misc. Rate Base	$(3,203,165)	$(3,203,165)	$0
Regulatory Asset Amort.	$(152,649)	$(152,649)	$0
Carbon Decom. Cost Amort.	$639,313	$639,313	$0
Deer Creek Mine Closure	$(156,813)	$(156,813)	$0
Prepaid Pension Net Asset	$1,499,069	$1,499,069	$0
Wind Repowering Project Capital Additions	$3,574,027	$3,574,027	$0
Wind Repowering Capital Additions Annualization	$11,322,339	$11,322,339	$0
Total	$46,187,281	$46,187,281	$0

[137] A. 18-04-002: *General Rate Case Application of PacifiCorp, PAC/110*1, pp. 171, 172 of 374.

1. The Public Advocates Office's Rate Base Adjustment on Weatherization Loan Programs

The Public Advocates Office recommends that the Commission reject PacifiCorp's proposal to recover as part of rate base Weatherization Loan Program costs of $20,971. The Public Advocates Office recommends excluding the Weatherization Loan Program cost in FERC account 124 because it was inadvertently included in rate base. As set forth in a data request response, PacifiCorp removed this amount from rate base.

PacifiCorp stated in the data request, "the Weatherization Loan Program includes various conservation loan programs offered to residential, commercial and industrial customers to encourage the use of energy efficient measures. The offer varied by program and customer sector and the $20,971 recorded in FERC account 124 represents residual balances on Weatherization Loan Programs that were discontinued over ten years ago. The company will remove this balance from rate base in its rebuttal revenue requirement calculations."[138]

2. The Public Advocates Office Does Not Object to PacifiCorp's Rate Base Adjustments

PacifiCorp's rate base adjustments are separated into thirteen components and the Public Advocates Office does not object to their requests for: 1) Cash working capital; 2) Trapper Mine Rate Base; 3) Jim Bridger Mine Rate Base; 4) Customer Advances for Construction; 5) Pro Forma Plants Additions and Retirements; 6) Miscellaneous Rate Base; 7) Regulatory Asset Authorization; 8) Carbon Decommissioning Costs Amortization; 9) Deer Creek Mine Closure; 10) Status of Joy Longwall Memorandum Account; 11) Prepaid Pension Net Asset; 12) Wind Repowering Project Capital Additions; and 13) Wind Repowering Capital Additions Annualizations.

[138] PacifiCorp's response to data request Cal PA-PacifiCorp-065-MW5, Q1.

C. Operations and Maintenance Expenses and Administrative and General Expenses

PacifiCorp forecasts $26.166 million in Operation and Maintenance (O&M) and $1.110 million in Administrative and General (A&G) expenses for TY 2019. Table 1-17 below presents the Public Advocates Office's recommendations versus PacifiCorp's proposed TY 2019 forecast. The Public Advocates Office made one adjustment to PacifiCorp's TY 2019 forecast:

- The Public Advocates Office adjusts PacifiCorp's 2017 Base Year O&M/A&G costs by $406,599 related to incentive compensation. PacifiCorp requests $609,868 in incentive compensation. The Public Advocates Office recommends ratepayer funding of $203,269 resulting in the $406,599 adjustment.
- The Public Advocates Office recommends a global adjustment through the Results of Operation model given that incentive compensation is included in various accounts.

Table 1-17:
Public Advocates Office Recommended and PacifiCorp Proposed 2019 A&G/O&M Expenses (in Millions of Dollars)

Description (a)	Cal Advocates Recommended (b)	PacifiCorp Proposed (c)	Amount PacifiCorp> Cal Advocates (d=c-b)
Steam Production	$5.186	$5.186	$0
Hydro Production	0.728	0.728	0
Other Power Supply	1.659	1.659	0
Transmission	1.191	1.191	0
Distribution	14.671	14.671	0
Customer Accounting	2.495	2.495	0
Customer Service	0.236	0.236	0
Total Operations and Maintenance	$26.166	$26.166	$0
Total Administrative and General	$1.110	$1.110	$0
Less: Global Incentive Plan Adj.	$(0.407)	$0	$0.407
Total California TY 2019 Forecast	$26.869	$27.276	$0.407

Source: PacifiCorp – Exhibit PAC 1101, Section 1, pg. 2 of 374.

PacifiCorp primarily uses historical information (the base period for the 12 months ended June 30, 2017), then adjusts the base period to determine its TY 2019 forecast. For the period 2013-2017, the Public Advocates Office compiled both total company and

California allocated cost data. The Public Advocates Office uses the same base year as PacifiCorp. As part of its analysis, the Public Advocates Office also performed the following:

- Analyzed historic FERC Account fluctuation analysis for selected accounts on both a total company and California allocated basis;
- Reviewed and questioned PacifiCorp's O&M and A&G adjustments (e.g. fire safety regulations increase, wages and benefits increase, amortization removal decrease, O&M escalation increase, advanced metering initiative decrease, insurance coverage decrease);
- Reviewed, analyzed and questioned PacifiCorp's allocation factors.

The derivation of PacifiCorp's TY 2019 forecast is included in Table 1-18 below:

Table 1-18
PacifiCorp Proposed 2019 Adjusted A&G/O&M Expenses
(in Millions of Dollars)

Category	Total Company Unadjusted June 2017	California Unadjusted June 2017	O&M and Rate-base Adjust.	Net Power Cost Adjust.	Total California 2019 Forecast
Steam Production	$1,109.451	$16.484	$0.293	$(11.591)	$5.186
Hydro Production	43.470	0.687	0.041		0.728
Other Power	929.658	13.252	0.325	(11.918)	1.659
Transmission	203.206	3.209	0.054	(2.073)	1.191
Distribution	195.148	11.781	2.891		14.671
Customer Acctg	86.087	2.823	(0.328)		2.495
Customer Service	123.879	0.224	0.012		0.236
Admin. & General	139.215	3.097	(1.987)		1.110
Total	$2,830.114	$51.556	$1.293	$(25.582)	$27.276

Source: Exhibit PAC/1101 Section 1 pg. 5 and 6 with O&M, Rate-base, and Cust. Acctg adjustment combined in a single column.

1. Steam Production

PacifiCorp records Steam Production costs in FERC accounts 500-514 and removes net power costs of $11.591 million related to FERC Account 501 as cost recovery is included in its Energy Cost Allocation Clause Application (A.17-08-005). After removal of net power costs and adjustments to the 2017 base year, PacifiCorp requests recovery of $5.186 million for TY 2019. The Public Advocates Office does not oppose the TY 2019 forecast (with the exception of any incentive plan awards discussed later), because the forecast approximates historic costs (see Table 1-19).

Table 1-19
Steam Production
PacifiCorp Total Company and California Allocated Historic Data
Net Power Costs Excluded
(in Millions of Dollars)

	2013	2014	2015	2016	2017
Total Company	$304.564	$317.769	$315.741	$263.385	$292.710
California Allocated	$5.255	$5.416	$5.427	$4.939	$4.989

Source: Total Company – Compiled from McCoy/Ex. PAC 1106-A, pg. 6 of 79
Source: California Allocated - Compiled from PacifiCorp's response to Cal Advocates Informal 1

2. Hydro Production

PacifiCorp records Hydro Production costs in FERC accounts 535-545 and requests recovery of $0.728 million for TY 2019. The Public Advocates Office does not oppose the TY 2019 forecast (with the exception to the incentive plan awards discussed later), because this forecast approximates the 2017 base year historic costs (as shown in Table 1-20).

Table 1-20
Hydro Production
PacifiCorp Total Company and California Allocated Historic Data
(in Millions of Dollars)

	2013	2014	2015	2016	2017
Total Company	$35.234	$42.817	$40.537	$42.487	$43.470
California Allocated	$0.627	$0.693	$0.651	$0.679	$0.687

Source: Total Company – Compiled from McCoy/Ex. PAC 1106-A, pg. 6 of 79
Source: California Allocated - Compiled from PacifiCorp's response to Cal Advocates Informal 1

3. Other Power Supply

PacifiCorp records Other Power Supply costs in FERC accounts 546-557 and removed net power costs of $11.918 million related to FERC Accounts 547 and 555 as these costs are included in its Energy Cost Allocation Clause Application (A.17-08-005). After removal of net power costs and adjustments to the 2017 base period, PacifiCorp requests recovery of $1.659 million for TY 2019. The Public Advocates Office's review of PacifiCorp's testimony and workpapers, determined it does not oppose the TY 2019 forecast (with the exception to the incentive plan awards discussed later).

Table 1-21
Other Power Supply
PacifiCorp Total Company and California Allocated Historic Data
Net Power Costs Excluded
(in Millions of Dollars)

	2013	**2014**	**2015**	**2016**	**2017**
Total Company	$121.030	$117.399	$116.654	$99.989	$88.767
California Allocated	$1.985	$1.895	$1.857	$1.540	$1.334

Source: Total Company – Compiled from McCoy/Ex. PAC 1106-A, pgs. 6-7 of 79
Source: California Allocated - Compiled from PacifiCorp's response to Cal Advocates Informal 1

4. Transmission

PacifiCorp records Transmission costs in FERC accounts 560-573 and removes net power costs of $2.073 million related to FERC Account 565 as these costs are included in its Energy Cost Allocation Clause Application (A.17-08-005). After removal of net power costs, PacifiCorp requests recovery of $1.191 million for TY 2019. The Public Advocates Office does not oppose the TY 2019 forecast (with the exception of any incentive plan awards as discussed later) because this forecast approximates historic costs (as shown in Table 1-22).

Table 1-22:
Transmission
PacifiCorp Total Company and California Allocated Historic Data
Net Power Costs Excluded
(in Millions of Dollars)

	2013	2014	2015	2016	2017
Total Company	$65.290	$58.210	$65.678	$70.838	$69.977
California Allocated	$1.071	$0.942	$1.055	$1.116	$1.136

Source: Total Company - Compiled from McCoy/Ex. PAC 1106-A, pgs. 7-8 of 79
Source: California Allocated - Compiled from PacifiCorp's response to Cal Advocates Informal 1

5. Distribution

PacifiCorp records Distribution costs in FERC accounts 580-598 and requests recovery of $14.671 million for TY 2019. The Public Advocates Office proposes no adjustments to PacifiCorp's TY 2019 forecast of distribution expenses (with the exception to the incentive plan awards as discussed later).

Table 1-23
Distribution
PacifiCorp Total Company and California Allocated Historic Data
(in Millions of Dollars)

	2013	2014	2015	2016	2017
Total Company	$204.448	$208.568	$207.234	$206.509	$195.148
California Allocated	$12.242	$11.180	$10.260	$10.169	$11.781

Source: Total Company - Compiled from McCoy/Ex. PAC 1106-A, pgs. 8-10 of 79
Source: California Allocated - Compiled from PacifiCorp's response to Cal Advocates Informal 1

6. Customer Accounting

PacifiCorp records Customer accounting costs in FERC accounts 901-905 and requests recovery of $2.495 million for TY 2019. The Public Advocates Office does not oppose the TY 2019 forecast (with the exception to the incentive plan awards as discussed later and changes in the Results of Operation model resulting from adjustments in the uncollectible expense).

Table 1-24
Customer Accounting
PacifiCorp Total Company and California Allocated Historic Data
(in Millions of Dollars)

	2013	2014	2015	2016	2017
Total Company	$87.552	$88.536	$81.178	$83.684	$86.087
California Allocated	$2.996	$2.931	$2.825	$2.644	$2.823

Source: Total Company - Compiled from McCoy/Ex. PAC 1106-A, pgs. 10-11 of 79
Source: California Allocated - Compiled from PacifiCorp's response to Cal Advocates Informal 1

7. Customer Service

PacifiCorp records Customer service costs in FERC accounts 907-910 and requests recovery of $0.236 million for TY 2019. The Public Advocates Office does not oppose PacifiCorp's TY 2019 forecast (with the exception of any incentive plan awards as discussed later) because it approximates the recent historic cost years (2015 to 2017) as shown in Table 1-25.

Table 1-25
Customer Service
PacifiCorp Total Company and California Allocated Historic Data
(in Millions of Dollars)

	2013	2014	2015	2016	2017
Total Company	$109.337	$131.777	$132.925	$140.834	$123.879
California Allocated	$0.088	$0.364	$0.276	$0.258	$0.224

Source: Total Company - Compiled from McCoy/Ex. PAC 1106-A, pg. 11 of 79
Source: California Allocated - Compiled from PacifiCorp's response to Cal Advocates Informal 1

8. Administrative and General

PacifiCorp records Administrative and General costs in FERC accounts 920-935 and requests recovery of $1.110 million for TY 2019. The Public Advocates Office does not oppose PacifiCorp's TY 2019 forecast (with the exception of the incentive plan awards as discussed later)

Table 1-26
Administrative and General
PacifiCorp Total Company and California Allocated Historic Data
(in Millions of Dollars)

	2013	2014	2015	2016	2017
Total Company	$193.796	$126.266	$137.780	$126.015	$139.215
California Allocated	$4.656	$3.808	$2.832	$2.022	$3.097

Source: Total Company - Compiled from McCoy/Ex. PAC 1106-A, pgs. 11-12 of 79
Source: California Allocated - Compiled from PacifiCorp's response to Cal Advocates Informal 1

9. The Public Advocates Office's Incentive Compensation Adjustment

As summarized earlier, the Public Advocates Office recommends adjusting PacifiCorp's 2017 Base Year O&M and A&G costs by $406,599 for incentive compensation, which would result in ratepayers funding $203,269. PacifiCorp refers to a Wages and Salaries Adjustment, noting "an adjustment was made to the total-company incentive compensation to the Test Period level. The Test Period level of incentive compensation is calculated as the three-year average payment rate of PacifiCorp's actual incentive expenses in calendar years 2014 through 2016 multiplied by Test Period wages.

PacifiCorp utilizes an incentive compensation program as part of its market competitive pay structure."[139] Because PacifiCorp's initial testimony lacked sufficient information or detail related to the incentive compensation program. (e.g. to whom it applies or eligibility criteria), the Public Advocates Office issued a data request which prompted PacifiCorp to provide documentation outlining the plan as follows:

> "Awards will be made based upon measurable achievement of results. This approach supports the philosophy of incentive compensation as pay at risk that is earned based on the company, business unit and individual performance."[140]

PacifiCorp provided no indication of the allocation of company performance versus business unit performance versus individual performance for any of its employees. Of the $609,868[141] PacifiCorp forecasts as incentive compensation for TY 2019, the Public Advocates Office recommends that ratepayers fund 33.33% or $203,269 for individual performance awards only. The derivation of the recommended 33.33% funding is based on the Public Advocates Office equally allocating the incentive compensation over the three types of performance awards (company, business unit, and individual). The result is a 66.67% decrease (an adjustment of $406,599) to PacifiCorp's TY 2019 requested funding.

PacifiCorp has not met its burden of demonstrating that ratepayers should fund the entire incentive compensation program related to company and business unit performance. Because PacifiCorp has not provided any specific information or explanation demonstrating the reasonableness of its request, it has failed to show that company or business unit performance awards result in a direct benefit to ratepayers. There is a tangible benefit directly linked to shareholders in the form of meeting certain company and business unit goals (e.g. company profit). The portion of the incentive

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[139] Ex. PAC 1100 Page McCoy/10 Lines 21-23; McCoy/11 Lines 1-5.

[140] Cal Advocates-PacifiCorp-051-LMW. Response to Cal Advocates Data Request 51.1, Attachment Cal Advocates 51.-1, p. 1 of 2 (2018 Annual Incentive Plan).

[141] Cal Advocates-PacifiCorp-051-LMW. Response to Cal Advocates Data Request 51.1, Attachment Cal Advocates 51.1-2, p. 8 of 8.

based program that is tied to company and business unit goals may involve payouts that are potentially driven by shareholder benefits rather than ratepayer benefits. Therefore, the Public Advocates Office recommends no ratepayer funding for this portion of the incentive based program.

The Commission's post precedent regarding incentive compensation supports the Public Advocates Office recommendation. As noted in Decision (D).14-08-032, the Commission found that it is inappropriate for ratepayers to fund incentives that do not have a clear benefit to ratepayers.

> "In particular, we conclude that the two elements of STIP compensation essentially benefit shareholders, but without a clear demonstrable benefit to ratepayers."[142]

> "Based on PG&E's past behavior, we conclude that incentives to increase earnings can potentially work at cross purposes with incentives to address safety or reliability issues."[143]

> "247. Two elements of STIP compensation essentially benefit shareholders, but without a clear demonstrable benefit to ratepayers. These are: (a) the measure of Earnings from Operations (EFO) and (b) the Customer Satisfaction metric."[144]

Additionally, in D.15-11-021, the Commission found it inappropriate to fund incentives that are driven by shareholder benefits rather than ratepayer benefits.

> "As TURN and ORA demonstrate here, significant portions of the payout criteria are directly related to shareholder benefits such as achieving decisions in CPUC proceedings (GRC, cost of capital) with certain outcomes and achieving specified public policy objectives that may or may not provide secondary benefits to ratepayers. As discussed above, SCE bears the burden of proving that incentive programs are

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[142] Pacific Gas & Electric (PG&E) D.14-08-032, p. 521.

[143] PG&E D.14-08-032, p. 521.

[144] PG&E D.14-08-032 Finding of Fact, p. 711.

> a reasonable cost-of-service and has not demonstrated that costs related to these criteria are reasonable."[145]
>
> "341. Significant portions of the STIP payout criteria are directly related to shareholder benefits that may or may not provide secondary benefits to ratepayers."[146]

The Commission should only allow PacifiCorp to recover from ratepayers 33.33% or $204,269 for individual performance awards.

XI. COST OF SERVICE, RATE SPREAD AND RATE DESIGN

A. Cost Allocation & Rate Design

The Public Advocates Office recommends the Commission adopt the following:

- PacifiCorp's request to increase the non-CARE residential customer charge (referred to in PacifiCorp's testimony as the "basic charge") from $7.20 to $7.35 should not be approved.
- For other rates and charges, revenues for each class of service an adjustment by an equal-proportion to all rate schedules.
- PacifiCorp's proposal to cancel Schedule A-33, General Service Partial Requirements Service Less than 500 kW.
- PacifiCorp's proposal to cancel Schedule LS-52, Special Street and Highway Lighting Service, Utility-Owned System.
- PacifiCorp's proposal to remove unused lamp types on Schedule LS-58, Street and Highway Lighting Service, Customer-Owned System.
- PacifiCorp's proposal to revise annual burn hours in Schedule LS-53 for Non-listed Luminaires from 3,940 annual hours to 4,167 annual hours.

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[145] Southern California Edison (SCE) D.15-11-021, p. 264.

[146] SCE D.15-11-021, Finding of Fact, p. 514.

1. The Public Advocates Office Does Not Oppose PacifiCorp's Marginal Cost Study

PacifiCorp's Marginal Cost of Service Study for its California jurisdiction shows, by customer class, PacifiCorp's marginal cost of resources required to produce one additional unit of electricity or add one additional customer.[147] PacifiCorp's Marginal Cost of Service Study is used as the basis to determine the functionalized class revenue requirement, which is used to allocate the overall revenue requirement to each customer class.

PacifiCorp uses a Marginal Cost Study similar to the study used in prior cases. It employs the New Customer Only (NCO) method for determining marginal transformer, meter and service costs.[148] PacifiCorp's Marginal Cost Study submitted in this proceeding, made several modifications from its previously filed studies that included changes to:[149]

1. Measurement of demand;
2. Marginal cost of complying with California's Renewables Portfolio Standard (RPS);
3. Weighted averages of distribution peaks;
4. Marginal cost of transmission and distribution substations;
5. Marginal cost of meter reading set to zero; and
6. Method incremental new customers are measured for NCO method.

PacifiCorp's Marginal Cost Study is similar to that of its previous rate case (A.09-11-015), which was originally approved by the Commission in (D.) 93-12-016. The Public Advocates Office reviewed PacifiCorp's Marginal Cost Study and has not proposed any adjustments or changes.

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[147] PAC/1200, Meredith/4:16-18.

[148] PAC/1200, Meredith/5:16-18.

[149] PAC/1200, Meredith/6:6-23.

2. The Public Advocates Office's Recommended Rate Spread Reflects Net Price Changes By Schedule

Rate spread, also known as revenue allocation, is the apportionment of the overall revenue requirement among the different classes of service. The Marginal Cost Study can be used as a guide to rate spread. Caps and/or floors are often used to limit the impact of a revenue change to any individual class.

PacifiCorp's proposed rate spread results in the following net price changes by rate schedule:[150]

Table 1-27
PacifiCorp's Proposed Net Price Changes by Rate Schedule

Rate Schedule	Proposed Price Change
Residential	1.90%
General Service	
Schedule A-25	0.00%
Schedule A-32	0.00%
Schedule A-36	0.00%
Large General Service	
Schedule AT-48	0.00%
Irrigation-Schedule PA-20	0.00%
Lighting (overall)	-8.80%

Table 1-28 below shows how PacifiCorp's proposed price changes will affect net average rates for each customer class.[151]

[150] Table 5-1 reproduced from PAC/1300, Ridenour/2:7-16.

[151] Cal Advocates-05 Workpapers

Table 1-28 PacifiCorp's Proposed Average Rates

Net Average Rates (cents/kwh)		
Customer Class	Present	Proposed
Residential	16.11	16.42
Commercial	15.03	15.01
Industrial	11.33	11.36
Irrigation	15.11	15.11
Public Street Lighting	24.14	22.29
Total sales average	15.32	15.46

In the Rate Spread and Rate Design testimony, PacifiCorp states that its proposed rate changes reflect the cost of service results from its testimony[152] while "also proposing to mitigate rate impacts."[153] PacifiCorp's proposed rate spread results in a net rate increase for residential customers of 1.9%. PacifiCorp proposes setting the rate increase for General Service Schedules A-25, A-32 and A-36 along with Large General Service Schedule AT-48 and Irrigation Schedule PA-20 at zero percent. For lighting schedules, PacifiCorp proposes a net decrease for the class of 8.8%.

Table 1-29 below shows the Public Advocates Office's recommended rate spread, which reflects net price changes by schedule.

[152] Ex. PAC/1201

[153] PAC/1300, Ridenour/2:22-25.

Table 1-29 Cal Advocates' Recommended Rate Schedule[154]

Rate Schedule	Proposed Price Change
Residential	-2.77%
General Service	
Schedule A-25	-2.77%
Schedule A-32	-2.77%
Schedule A-36	-2.77%
Large General Service	
Schedule AT-48	-2.77%
Irrigation-Schedule	
PA-20	-2.77%
Lighting (overall)	-2.77%

The Public Advocates Office recommends that its proposed revenue requirement decrease be applied on a system average percentage basis such that each customer class is treated equally. The values in Table 1-29 reflect the net price changes by schedule that will result from the Public Advocates Office proposed revenue requirement, with the net decrease spread evenly for each class of service. This type of rate spread mitigates significant changes to rates to any one class of service and results in an equitable sharing of the proposed revenue decrease.

Table 1-30 below shows how the Public Advocates Office's proposed price changes will affect net average rates for each customer class.[155]

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[154] Copy of Ridenour Workpaper CA Blocking Dec2019 GRC Cal Advocates-05.xlsx

[155] Cal Advocates-05 Work papers

Table 1-30 Cal Advocates' Proposed Average Rates

Net Average Rates (cents/kwh)		
Customer Class	Present	Proposed
Residential	16.11	15.72
Commercial	15.03	14.66
Industrial	11.33	11.07
Irrigation	15.11	14.74
Public Street Lighting	24.14	23.69
Total sales average	15.33	14.96

For the Post Test years, the Public Advocates Office recommends that any revenue increases or decreases be spread evenly across all customer classes to develop rates.

3. The Public Advocates Office Disagrees With PacifiCorp's Rate Design Increases

Rate design is the development and calculation of individual rate components (monthly charges, kWh charges, demand charges, etc.) to recover each rate schedule's allocated revenue requirement.

PacifiCorp proposed an increase to the residential (Schedule D) monthly basic charge is a customer charge, while adjusting energy charges based on the functionalized cost of service results for the residential class.[156] The current residential basic charge is $7.20 and PacifiCorp proposes a residential basic charge of $7.35.

The Public Advocates Office opposes an increase to the residential basic charge because it reviewed PacifiCorp's analysis including PacifiCorp's spreadsheets,[157] and determined that it was not necessary to increase the basic charge for residential customers to meet the revenue requirement. An increased basic charge will serve to decrease the control PacifiCorp's residential customers have over the energy costs in their monthly bills.

[156] PAC/1300, Ridenour/5:4-6.

[157] PacifiCorp's Responses to Cal Advocates Informal (5).

Regarding rates for PacifiCorp's other customers, the Public Advocates Office believes it is reasonable to decrease each individual rate element within a schedule on an equal percentage. This allows for a mitigated impact on rates for all customer classes.

4. The Public Advocates Office Does Not Oppose PacifiCorp's Other Tariff Changes

PacifiCorp proposed a variety of other tariff changes, as detailed in its testimony.[158]

The Public Advocates Office does not oppose these tariff changes which includes:

- PacifiCorp's proposal to cancel Schedule A-33, General Service Partial Requirements Service Less than 500 kW;[159]
- PacifiCorp's proposal to cancel Schedule LS-52, Special Street and Highway Lighting Service, Utility-Owned System;[160]
- PacifiCorp's proposal to remove unused lamp types on Schedule LS-58, Street and Highway Lighting Service, Customer-Owned System;[161] and
- PacifiCorp's proposal to revise annual burn hours in Schedule LS-53 for Non-listed Luminaires from 3,940 annual hours to 4,167 annual hours to better reflect actual operating hours.[162]

B. Sales, Customers, & Operating Revenues

The Public Advocates Office does not oppose PacifiCorp's TY 2019 sales and customer forecasts summarized in Table 1-31 and Table 1-32, below. The Public Advocates Office recommends that in PacifiCorp's next General Rate Case (GRC) the company write a chapter within its testimony to explain its sales and customer forecasts.

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[158] PAC 1300 at pp. Ridenour/8-Ridenour/10.

[159] PAC/1300 at Ridenour/8:16-19.

[160] PAC/1300 at Ridenour 8:21-23.

[161] PAC/1300 at Ridenour/9:3-4.

[162] PAC/1300 at Ridenour/9:5-7.

The Public Advocates Office also recommends that in the next GRC PacifiCorp file a description of their econometric forecasting equations, results of statistical analysis for each equation and include recorded data for each equation in Excel format. Lastly, the Public Advocates Office does not oppose PacifiCorp's revenue calculations and adjustments for TY 2019, as summarized in Table 1-31, below.

Table 1-31
PacifiCorp Sales
12 Months Ending December 2019
Total California Forecast kWh

	A	B	C	D	E	F
	Total kWh	Normalization Adjustment kWh1	Temperature Adjustment kWh	Total Normalized kWh	Adjustment to Forecast kWh	Total California Forecast kWh
Residential	364,592,455	494,665	1,625,344	366,712,464	4,392,631	371,105,095
Commercial	234,243,227	329,478	204,615	234,777,320	(13,580,630)	221,196,690
Industrial	55,672,742	114,433	0	55,787,175	1,336,931	57,124,106
Irrigation	88,292,468	(247,736)	(391,875)	87,652,857	8,343,468	95,996,325
Public St & Hwy	2,052,604	568	0	2,053,172	(15,376)	2,037,796
Total California	744,853,496	691,408	1,438,084	746,982,988	477,024	747,460,012
Source / Formula	3.1.3 - 3.1.4	3.1.3 - 3.1.4	3.1.3 - 3.1.4	A + B + C	3.1.3 - 3.1.4	D + E

Source: PacifiCorp 3.1-Pro Forma Revenues, p. 46.

Table 1-32
PacifiCorp Customers
12 Months Ending December 2019
Revenue, kWh and Customer Adjustments

	RVN Average Customers	Type 1 Adjustments	Normalized Average Customers	Adjustment to Forecast	Forecast Average Customers	Booked kWh	Out of Period kWh	Bill Cheaper Adjustment kWh	Blocking Adjustment kWh[1]	Subtotal Normalization Adjustment kWh	Temperature Adjustment kWh	Total Adjustment kWh	Total Normalized kWh	Forecast Adjustment kWh	Total Forecast kWh	Booked Revenues	Total Type 1 Adjustments[2] $	Total Type 2 Adjustments[3] $	Total Type 3 Adjustments[4] $	Total Forecast Revenues
Residential																				
Schedule D	24,379	-183	24,196	221	24,417	252,081,098	258,964		-136,715	122,249	1,133,719	1,255,968	253,337,066	-3,542,829	249,794,237	$34,519,767	$1,152,041	$250,643	($454,092)	$35,468,359
Schedule DL-6	11,288	68	11,356	65	11,421	120,170,739	224,995		136,752	361,747	484,572	846,319	121,017,058	-2,672,124	118,344,934	$16,459,171	$451,214	$141,191	($349,235)	$16,702,341
ScheduleDM-9	7	0	7	0	7	166,515	-2,302		0	-2,302	0	-2,302	164,213	2,554	166,767	$18,676	$3,333	$149	$335	$22,493
Schedule DS-8	16	0	16	0	16	1,252,553	7,520		0	7,520	7,053	14,573	1,267,126	-23,386	1,243,740	$128,015	$21,702	$1,136	($2,968)	$147,885
Schedule A-25	480	0	480	0	480	1,297,224	8,049		-4,022	4,027	0	4,027	1,301,251	-13,452	1,287,799	$283,899	($15,243)	$1,561	($1,942)	$268,275
Schedule OL-15	307	2	309	-20	289	285,326	1,422		2	1,424	0	1,424	286,750	-19,132	267,618	$82,746	($9,160)	$602	($4,937)	$69,251
Subtotal	36,477	-113	36,364	266	36,630	375,253,455	498,648	0	-3,983	494,665	1,625,344	2,120,009	377,373,464	-6,268,369	371,105,095	$51,492,274	$1,603,887	$395,283	($812,839)	$52,678,604
Unbilled	0	0	0	0	0	-10,661,000	0		0	0	0	0	-10,661,000	10,661,000	0	($1,768,000)	$0	$0	$1,768,000	$0
Blue Sky	0	0	0	0	0	0	0		0	0	0	0	0	0	0	$24,720	($24,720)	$0	$0	$0
Demand Side Management	0	0	0	0	0	0	0		0	0	0	0	0	0	0	$1,667,354	($1,667,354)	$0	$0	$0
Revenue Accounting	0	0	0	0	0	0	0		0	0	0	0	0	0	0	($1,946,564)	$1,946,564	$0	$0	$0
Solar Feed-in	0	0	0	0	0	0	0		0	0	0	0	0	0	0	$106,756	($106,756)	$0	$0	$0
AGA	0	0	0	0	0	0	0		0	0	0	0	0	0	0	$0	$0	$0	$0	$0
Total Residential	**36,477**	**-113**	**36,364**	**266**	**36,630**	**364,592,455**	**498,648**	**0**	**-3,983**	**494,665**	**1,625,344**	**2,120,009**	**366,712,464**	**4,392,631**	**371,105,095**	**$49,576,539**	**$1,751,621**	**$395,283**	**$955,161**	**$52,678,604**
Commercial																				
Schedule A-25	6,578	119	6,697	-133	6,564	55,805,471	16,105		6,574	22,679	27,757	50,436	55,855,907	-5,869,272	49,986,635	$10,055,446	($717,568)	$79,062	($893,383)	$8,523,556
Schedule A-32	1,065	-30	1,035	66	1,101	85,482,631	373,369	-12,180,996	1	-11,807,626	42,644	-11,764,982	73,717,649	-8,995,172	64,722,477	$13,516,430	($1,726,691)	($1,393,036)	($1,231,418)	$9,165,285
Schedule A-36	159	28	187	-7	180	66,111,848	-9,020	12,180,996	-69,920	12,102,056	81,324	12,183,380	78,295,228	-6,378,955	71,916,273	$8,882,432	($1,177,339)	$1,340,262	($712,894)	$8,332,460
Schedule AT-48	10	0	10	0	10	33,641,960	12,300		0	12,300	52,890	65,190	33,707,150	64,950	33,772,100	$3,609,032	($497,913)	$23,457	$6,404	$3,140,980
Schedule OL-15	480	2	482	-12	470	661,452	-7		-4	-11	0	-11	661,441	-16,433	645,008	$194,123	($22,057)	$1,425	($4,312)	$169,179
Schedule OL-42	36	0	36	0	36	156,865	80		0	80	0	80	156,945	-2,748	154,197	$36,331	($4,439)	$313	($472)	$31,733
Subtotal	8,328	118	8,446	-86	8,360	241,860,227	392,827	0	-63,349	329,478	204,615	534,093	242,394,320	-21,197,630	221,196,690	$36,293,794	($4,146,008)	$51,482	($2,836,075)	$29,363,193
Unbilled	0	0	0	0	0	-7,617,000	0		0	0	0	0	-7,617,000	7,617,000	0	($1,100,000)	$0	$0	$1,100,000	$0
Blue Sky	0	0	0	0	0	0	0		0	0	0	0	0	0	0	$2,380	($2,380)	$0	$0	$0
Demand Side Management	0	0	0	0	0	0	0		0	0	0	0	0	0	0	$1,048,701	($1,048,701)	$0	$0	$0
Revenue Accounting	0	0	0	0	0	0	0		0	0	0	0	0	0	0	($1,251,930)	$1,251,930	$0	$0	$0
Solar Feed-in	0	0	0	0	0	0	0		0	0	0	0	0	0	0	$100,866	($100,866)	$0	$0	$0
AGA	0	0	0	0	0	0	0		0	0	0	0	0	0	0	$130,591	$0	$0	$0	$130,591
Total Commercial	**8,328**	**118**	**8,446**	**-86**	**8,360**	**234,243,227**	**392,827**	**0**	**-63,349**	**329,478**	**204,615**	**534,093**	**234,777,320**	**-13,580,630**	**221,196,690**	**$35,224,402**	**($4,046,025)**	**$51,482**	**($1,736,075)**	**$29,493,785**
Industrial																				
Schedule A-25	88	-1	87	0	87	653,225	753		-560	193	0	193	653,418	-10,063	643,355	$120,585	($7,463)	($130)	($1,558)	$111,434
Schedule A-32	20	3	23	1	24	2,724,436	-3,360	-356,360	0	-359,720	0	-359,720	2,364,716	27,901	2,392,617	$452,175	($58,249)	($26,886)	$4,461	$371,501
Schedule A-36	14	-3	11	0	11	7,727,841	0	356,360	69,920	426,280	0	426,280	8,154,121	37,000	8,191,121	$1,060,447	($138,132)	$12,362	$4,098	$938,774
Schedule AT-48	8	0	8	0	8	42,607,240	47,680		0	47,680	0	47,680	42,654,920	3,242,093	45,897,013	$4,608,622	($631,925)	$26,728	$300,769	$4,304,193
Subtotal	130	-1	129	1	130	53,712,742	45,073	0	69,360	114,433	0	114,433	53,827,175	3,296,931	57,124,106	$6,241,828	($835,770)	$12,074	$307,770	$5,725,903
Unbilled	0	0	0	0	0	1,960,000	0		0	0	0	0	1,960,000	-1,960,000	0	$200,000	$0	$0	($200,000)	$0
Blue Sky	0	0	0	0	0	0	0		0	0	0	0	0	0	0	$22	($22)	$0	$0	$0
Demand Side Management	0	0	0	0	0	0	0		0	0	0	0	0	0	0	$162,687	($162,687)	$0	$0	$0
Revenue Accounting	0	0	0	0	0	0	0		0	0	0	0	0	0	0	($202,226)	$202,226	$0	$0	$0
Solar Feed-in	0	0	0	0	0	0	0		0	0	0	0	0	0	0	$19,965	($19,965)	$0	$0	$0
AGA	0	0	0	0	0	0	0		0	0	0	0	0	0	0	$0	$0	$0	$0	$0
Total Industrial	**130**	**-1**	**129**	**1**	**130**	**55,672,742**	**45,073**	**0**	**69,360**	**114,433**	**0**	**114,433**	**55,787,175**	**1,336,931**	**57,124,106**	**$6,422,277**	**($816,218)**	**$12,074**	**$107,770**	**$5,725,903**
Irrigation																				
Schedule PA-20	2,018	0	2,018	8	2,026	84,235,268	-247,736		0	-247,736	-391,875	-639,611	83,595,657	10,696,847	94,292,504	$12,796,926	($1,682,193)	$115,795	$1,413,018	$12,643,546
Schedule AT-48	1	0	1	0	1	2,595,200	0		0	0	0	0	2,595,200	-891,379	1,703,821	$310,801	($37,811)	$1,400	($92,291)	$182,099
Subtotal	2,019	0	2,019	8	2,027	86,830,468	-247,736	0	0	-247,736	-391,875	-639,611	86,190,857	9,805,468	95,996,325	$13,107,727	($1,720,004)	$117,195	$1,320,727	$12,825,646
Unbilled	0	0	0	0	0	1,462,000	0		0	0	0	0	1,462,000	-1,462,000	0	$144,000	$0	$0	($144,000)	$0
Blue Sky	0	0	0	0	0	0	0		0	0	0	0	0	0	0	$25	($25)	$0	$0	$0
Demand Side Management	0	0	0	0	0	0	0		0	0	0	0	0	0	0	$452,407	($452,407)	$0	$0	$0
Revenue Accounting	0	0	0	0	0	0	0		0	0	0	0	0	0	0	($448,724)	$448,724	$0	$0	$0
Solar Feed-in	0	0	0	0	0	0	0		0	0	0	0	0	0	0	$46,308	($46,308)	$0	$0	$0
Demand Accrual	0	0	0	0	0	0	0		0	0	0	0	0	0	0	($16,000)	$16,000	$0	$0	$0
AGA	0	0	0	0	0	0	0		0	0	0	0	0	0	0	$63,882	$0	$0	$0	$63,882
Total Irrigation	**2,019**	**0**	**2,019**	**8**	**2,027**	**88,292,468**	**-247,736**	**0**	**0**	**-247,736**	**-391,875**	**-639,611**	**87,652,857**	**8,343,468**	**95,996,325**	**$13,349,624**	**($1,754,020)**	**$117,195**	**$1,176,727**	**$12,889,527**
Public Street Lighting																				
Schedule OL-15	1	0	1	0	1	912	0		0	0	0	0	912	0	912	$247	($31)	$2	$0	$218
Schedule LS-51	78	0	78	0	78	679,396	572		0	572	0	572	679,968	165,655	845,623	$220,389	($25,180)	$1,664	$47,958	$244,831
Schedule LS-52	0	0	0	0	0	0	0		0	0	0	0	0	0	0	$0	$0	$0	$0	$0
Schedule LS-53	105	0	105	0	105	1,138,854	0		-2	-2	0	-2	1,138,852	-31	1,138,821	$204,372	($25,324)	$1,288	$0	$180,337
Schedule LS-58	20	0	20	0	20	52,442	0		-2	-2	0	-2	52,440	0	52,440	$10,486	($1,272)	$65	$0	$9,279
Subtotal	204	0	204	0	204	1,871,604	572	0	-4	568	0	568	1,872,172	165,624	2,037,796	$435,495	($51,807)	$3,019	$47,958	$434,665
Unbilled	0	0	0	0	0	181,000			0	0	0	0	181,000	-181,000	0	$42,000	$0	$0	($42,000)	$0
Demand Side Management	0	0	0	0	0	0			0	0	0	0	0	0	0	$13,118	($13,118)	$0	$0	$0
Revenue Accounting	0	0	0	0	0	0			0	0	0	0	0	0	0	($11,190)	$11,190	$0	$0	$0
Solar Feed-in	0	0	0	0	0	0			0	0	0	0	0	0	0	$1,391	($1,391)	$0	$0	$0
AGA	0	0	0	0	0	0	0		0	0	0	0	0	0	0	$0	$0	$0	$0	$0
Total Public Street Lighting	**204**	**0**	**204**	**0**	**204**	**2,052,604**	**572**	**0**	**-4**	**568**	**0**	**568**	**2,053,172**	**-15,376**	**2,037,796**	**$480,814**	**($55,126)**	**$3,019**	**$5,958**	**$434,665**
TOTAL CALIFORNIA	**47,158**	**5**	**47,163**	**189**	**47,351**	**744,853,496**	**689,384**	**0**	**2,024**	**691,408**	**1,438,084**	**2,129,492**	**746,982,988**	**477,024**	**747,460,012**	**$105,053,657**	**($4,919,768)**	**$579,054**	**$509,541**	**$101,222,484**

Source: PacifiCorp 3.1-Pro Forma Revenues at p. 47.

Table 1-33
PacifiCorp Revenues & Adjustments
12 Months Ending December 2019
Non-NPC Revenue Adjustment Summary

	A	B	C	D	E
	Unadjusted Revenues	Base Period ECAC Revenues	Base Period Non-NPC Revenues	Projected Non-NPC Revenues	**Pro Forma Adjustment**
Residential	$47,777,516	$11,217,521	$36,559,995	$41,047,014	**$4,487,018**
Commercial	$34,072,455	$7,999,756	$26,072,699	$22,588,061	**($3,484,638)**
Industrial	$6,239,603	$1,464,975	$4,774,628	$3,918,176	**($856,452)**
Irrigation	$12,850,884	$3,017,216	$9,833,669	$9,861,548	**$27,879**
Public St & Hwy	$466,304	$109,482	$356,822	$370,823	**$14,001**
Total California	$101,406,763	$23,808,951	$77,597,813	$77,785,622	**$187,809**
Source / Formula	**3.1.2 Column C**	**5.1.1**	**A-B**	**3.1.2 Column M**	**3.1**

Source: PacifiCorp 3.1-Pro Forma Revenues at p. 44.

1. Sales and Customer Forecast

The Public Advocates Office reviewed and analyzed PacifiCorp's electric use per customer and PacifiCorp's customer models, but PacifiCorp did not provide any written testimony explaining its sales forecasts. The Public Advocates Office gathered all the information through data requests to PacifiCorp. After reviewing and analyzing the regressions and econometric equations PacifiCorp provided, the Public Advocates Office has determined that it does not object to PacifiCorp's sales and customer forecasts for TY 2019.

2. Operating Revenues

The Public Advocates Office's recommendation to adopt PacifiCorp's sales and customer forecast in Table 3-C column D means that there are no adjustments to PacifiCorp's Operating Revenues for TY 2019. PacifiCorp used actual revenues for the twelve months ended June 2017 as the starting point for the calculation of pro forma revenue.[163] PacifiCorp adjusted its actual revenue by using the following normalization adjustments: Pro Forma Revenues, SO_2 Emission Allowances, Renewable Energy

163 PacifiCorp Ex. PAC/1101, Workpapers, p. 41.

Credits Revenues, Wheeling Revenue and Ancillary Services and Other Revenues to calculate revenues for December TY 2019.

PacifiCorp's Pro Forma Revenues normalize general business revenues by adjusting to the pro forma revenue level for the test period based on forecasted loads.[164] ECAC revenues are not included as part of this adjustment.[165]

The SO_2 Emission Allowances- The Environmental Protection Agency (EPA) has established guidelines that govern the volume of sulfur dioxide (SO_2) that can be emitted from power plants and granted the issuance of SO_2 emission allowances to cover each ton emitted.[166] Plants that emit more than the allowance the EPA prescribed guidelines may purchase emission allowances from other companies that have excess allowances.[167] This adjustment removes the sales that occurred in the Base Period and includes the amortization of actual and forecasted sales based on a 15-year amortization period.[168]

The Renewable Energy Credits (RECs) Revenues adjustment removes base period REC revenues because such revenues relate to other states' that do not have renewable portfolio standards.[169] PacifiCorp does not sell California, Oregon or Washington eligible RECs.[170] Instead, PacifiCorp uses the renewable output to comply with current-year or future-year renewable portfolio requirements.[171]

The Wheeling Revenues adjustment reflects the level of wheeling revenues PacifiCorp expects in the Test Period by adjusting the actual revenues in the Base Period for normalizing, annualizing and pro forma changes.[172]

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[164] Ex. PAC/1100, Shelley E. McCoy, p. McCoy/7.
[165] Ex. PAC/1100, Shelley E. McCoy, p. McCoy/7.
[166] Ex. PAC/1100, Shelley E. McCoy, p. McCoy/7.
[167] Ex. PAC/1100, Shelley E. McCoy, p. McCoy/7.
[168] Ex. PAC/1100, Shelley E. McCoy, pp. McCoy/7-8.
[169] Ex. PAC/1100, Shelley E. McCoy, p. McCoy/8.
[170] Ex. PAC/1100, Shelley E. McCoy, p. McCoy/8.
[171] Ex. PAC/1100, Shelley E. McCoy, p. McCoy/8.
[172] Ex. PAC/1100, Shelley E. McCoy, p. McCoy/8.

The Ancillary Services and Other Revenues adjustment reflects ancillary revenue contract changes in the Test Period, and removes the final month of revenue related to the Bonneville Power Administration (BPA) South Idaho Exchange agreement.[173] The BPA South Idaho Exchange agreement expired in June 2016, but was booked in PacifiCorp's accounting system in July 2016, and are therefore included in unadjusted Base period results.[174]

The Public Advocates Office reviewed and revised these revenue adjustments for PacifiCorp and recommends the Commission adopt PacifiCorp's Operating Revenues for TY 2019.

XII. REMAINING OII ISSUES - *NOT APPLICABLE*

A. Emissions Performance Standard

1. PacifiCorp's Compliance with EPS

2. Alternative Compliance Mechanism

XIII. CONCLUSION AND SUMMARY OF RECOMMENDATIONS

The Commission should adopt the Public Advocates Office's recommendations in PacifiCorp's GRC application. The following again is a summary of the Cal Advocates' recommendations for the Commission to adopt.

For "Summary of Earnings, Escalation, & Taxes," the Public Advocates Office does not oppose PacifiCorp's proposals for Labor & Non-labor escalation or PacifiCorp's methodologies for computing obligations and forecasts for tax rates. The Public Advocates Office recommends authorizing a net decrease of $3,805,909 or 5.072% to PacifiCorp's $78,846,144 for TY 2019 revenue requirement at proposed rates under California's jurisdiction.

For "Sales, Customers & Operating Expenses," the Public Advocates Office does not oppose PacifiCorp's forecasts in these categories for TY 2019.

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[173] Ex. PAC/1100, Shelley E. McCoy, p. McCoy/8.

[174] Ex. PAC/1100, Shelley E. McCoy, p. McCoy/8.

For “Operation & Maintenance & Administrative & General Expenses,” the Public Advocates Office recommends adjusting PacifiCorp’s 2017 Base Year O&M/A&G costs by $406,599 related to incentive compensation. PacifiCorp requests $609,868 in incentive compensation. The Public Advocates Office recommends ratepayer funding of $203,269 for individual performance awards resulting in a decrease to PacifiCorp’s requested funding for a total of $406,599. Additionally, the Public Advocates Office recommends a global adjustment through the Results of Operation model given that incentive compensation is included in various accounts.

For “Cost Allocation & Rate Design,” the Public Advocates Office recommends denying PacifiCorp’s request to increase the non-CARE residential customer charge or “basic charge” from $7.20 to $7.35.

For “Plant,” the Public Advocates Office does not recommend any adjustments to PacifiCorp’s proposed plant additions for TY 2019.

For “Depreciation Expense & Reserve,” the Public Advocates Office did not make any adjustments to PacifiCorp’s proposed depreciation parameters. In particular, the Public Advocates Office supports PacifiCorp’s proposal to accelerate the depreciation of its coal-fired power plants.

The Public Advocates Office recommends the Commission direct PacifiCorp to include information that are conventional general rate case items (e.g. details regarding depreciation proposals, net salvage data) with its prepared direct testimony and workpapers in future general rate cases (GRCs).

For “Rate Base,” the Public Advocates Office recommends the Commission reject PacifiCorp’s proposal to recover under rate base Weatherization Loan Programs costs of $20,971.

For “Cost of Capital,” the Public Advocates Office recommends a Rate of Return (ROR) of 7.08% based on a proposed capital structure of 48.02% debt and 51.98% equity coupled with a debt cost rate of 5.05% and an equity cost rate of 8.94% compared to PacifiCorp proposed ROR of 7.94% based on a proposed capital structure consisting of

48.02% debt and 51.98% equity coupled with a debt cost rate of 5.05% and an equity cost rate of 10.60%.

For "Risk-Based Decision-making Framework," the Public Advocates Office recommends PacifiCorp include additional analyses in its future GRC applications pursuant to D.14.12-025.

Lastly, the Public Advocates Office's audit of PacifiCorp's financial records resulted in no adjustments to Operations & Maintenance, Administrative & General, and Plant expenses.

Respectfully submitted,

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