BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION,

Complainant,

v.

PUGET SOUND ENERGY,

Respondent.

DOCKETS UE-190529, UG-190530, UE-190991, UG-190992, UE-190274, UG-190275, UE-171225, and UG-171226 (Consolidated)

INITIAL POST-HEARING BRIEF OF PUBLIC COUNSEL

TABLE OF CONTENTS

I.	INTRODUCTION		
II.	I. CAPITAL STRUCTURE AND COST OF CAPITAL		2
	A.	PSE's Capital Structure is Acceptable for Ratemaking Purposes	3
	B.	PSE's Requested Return on Equity is Excessive	5
		The status of capital markets support reducing PSE's authorized return on equity	6
		a. Utility ROEs have been higher than necessary for many years	7
		2. Model results support lowering PSE's return on equity	7
		3. PSE and Commission Staff's ROE analyses are flawed	9
		a. PSE	9
		c. Commission Staff	11
	C.	While PSE's Long-Term Cost of Debt is Acceptable, the Short-Term Cost of Debt Should Be Reduced to Reflect Current Market Rates	12
III.	RE	VENUE REQUIREMENT	13
	A.	The Commission Should Reject PSE's Attrition Adjustment	13
	B. PSE Improperly Characterized Benefits from the Tax Cut and Jobs Act as Income Between Rate Cases, Effectively Shifting the Benefit Away from Ratepayers and to its Shareholders		16
	C.	The Commission Should Disallow 50 Percent of the Cost of PSE's Short-Term Incentive Compensation Plan	18
	D.	Public Counsel Proposes Post-Test Year Adjustments, Limited to the Pro Forma Period Ending June 20, 2019	22
IV.		E COMMISSION SHOULD RELY ON PUBLIC COUNSEL'S RATE SPREAD TE DESIGN ANALYSIS	23
	A.	Electric COSS is Reasonably Reflected in PSE's Peak Credit Analysis, as Demonstrated by Mr. Watkins' Analysis Using Multiple Methodologies	24
		1. Application of the Peak Credit methodology	25

i

		2.	Probability of Dispatch and Base-Intermediate-Peak methods produce reasonable results and use higher quality data	26
	В.		Reasonable to Use an Electric Rate Spread that Allocates Any Rate Change Equal Percentages Across PSE's Customer Classes	27
	C.	Rat	e Design	28
		1.	No change is appropriate for PSE's electric residential customer charge and a modest increase is appropriate for the natural gas residential customer charge	28
		2.	Evaluating PSE's first electric usage block would be beneficial	28
	D.		e Commission Should Reject PSE's Proposed Allocation of Distribution ins	29
	E.	Nat	rural Gas Rate Spread	30
	F.	Pot	e Commission Should Not Adopt Staff's Recommendation Regarding ential Use of Deferred Accounting for Costs Associated with Certain commended Pilot Programs	31
V.			OMMISSION SHOULD REQUIRE ACCOUNTABILITY WITH RESPECT	32
	A.		E's Get to Zero Proposal Places Financial Risk on Customers While Offering certain Benefits	33
	В.	Coı	stomer Education about Digital Interactions with the Company and mmission Monitoring of PSE's Progress and Customer Experiences is portant for a Smooth Transition	35
	C.		E's Service Quality Indicators should be updated during the transition to a ital customer interface	36
	D.		venting Disconnection for Nonpayment and Monitoring Disconnection Data mportant Public Policy	37
VI.			OMMISSION SHOULD NOT ALLOW PSE TO CHARGE CUSTOMERS S IMPRUDENT INVESTMENT IN AMI	39
	A.	Leg	gal Standard for Cost Recovery	40
	В.	Sys	E's Investment to Implement a Full Replacement of the Existing AMR stem with AMI Was Not Necessary to Address Alleged Obsolescence of the sting AMR System	41

ii

	C.	PSE Understates Costs and Overstates Benefits of its AMI Project in its Business Case to Justify its Imprudent Investment in AMI		
		1.	PSE underestimated costs of its AMI investment	47
		2.	PSE overstates benefits of its AMI investment	49
	D.		Cost-Saving Benefits of PSE's AMI Investment Should Return to tomers	53
	Е.		lic Counsel Recommends Disallowance of PSE's AMI Investment Because Company Failed to Present an Adequate Business Case	54
VII.			THEATER RENTAL PROGRAM IS SUBJECT TO A SEPARATE TAND DOES NOT NEED TO BE DECIDED IN THIS CASE	56
VIII.	GR	EEN	DIRECT PROGRAM	57
	A.	Liq	uidated Damages	58
IX.	PU	BLIC	COMMENT	59
X.	CO	NCL	USION	62

TABLE OF AUTHORITIES

Cases

Bluefield Waterworks & Improvement v. Public Service Comm'n of West Virginia 262 U.S. 679, 43 S.Ct. 675 (1923)	5
Colorado Interstate Gas Co. v. Fed. Power Comm'n 324 U.S. 581, 65 S. Ct. 829, 89 L. Ed. 1206 (1945)	25
Federal Power Comm'n v. Hope Natural Gas Co. 320 U.S. 591, 64 S.Ct. 281 (1944)	5
In re Zia Natural Gas Co. 128 N.M. 728, 998 P.2d 564 (2000)	3
Pioneer Natural Res. USE, Inc. v. Pub. Util. Comm'n of Texas 303 S.W.3d 363 (Tex. App. 2009)	4
Federal Administrative Cases	
169 FERC ¶ 61,129, Opinion No. 569 (2019)	11
State Administrative Cases	
American Electric Power's Public Service Co. of Oklahoma Cause No. PUD 201500208, Final Order (Okla. Corp. Comm'n Nov. 10, 2016)	20
Application for CenterPoint Houston Elec. for Authority to Change Rates Tex. PUC Docket No. 49421, Proposal for Decision (Sept. 16, 2019)	20
Application of Southwestern Elec. Power Co. for Authority to Change Rates PUC Docket No. 43695, Order on Rehearing (Tex. PUC, Dec. 18, 2015)	20
In re the Application of Wisconsin Pub. Serv. Corp. for Authority to Adjust Electric and Natural Gas Rates 6690-UR-123, 2016 WL 3577406 (Wis. P.S.C. June 28, 2016)	59
In re: Application Entergy Ark. For Approval of Changes in Rates for Retail Elec. Svc. Docket No. 13-028-U, Order 21 (Dec. 30. 2013)	
In re: Application of Entergy Ark. For Approval of Changes in Rates for Retail Elec. Svc. Docket No. 15-015-U, Order 18 (Ark. Pub. Svc. Comm'n Feb. 23, 2016)	20

iv

Spokane Energy, Inc. v. Washington Water Power Co. Docket U-86-114, Commission Order Granting Exceptions; Reversing Proposed Order; and Dismissing Complaint (April 22, 1987)
WUTC v. Avista Corp. Dockets UE-150204 & UG-150205, Order 05 (Jan. 6, 2016)
WUTC v. Avista Corp. Dockets UE-160228 & UG-160229, Order 07 (Feb. 27, 2017)
WUTC v. Avista Corp. Dockets UE-170485 & UG-170486, Order 07 (Apr. 26, 2018)
WUTC v. Cascade Natural Gas Docket UG-170929, Order 06 (July 20, 2018)
WUTC v. Cascade Natural Gas Docket UG-190210, Order 5: Final Order (Feb. 3, 2020)
WUTC v. NW Natural Gas Co. Docket UG-181053, Order 06 (Oct. 21, 2019)
WUTC v. PacifiCorp Docket UE-050684, Order 04 (Apr. 17, 2006)
WUTC v. PacifiCorp Docket UE-140762, Order 08 (Mar. 25, 2015)
WUTC v. PacifiCorp Docket UE-152253, Order 12 (2016 WL 7245476) (Oct. 21, 2019)
WUTC v. Puget Sound Energy Docket UE-180899 & UG-180900, Order 05: Final Order (Feb. 21, 2019)
WUTC v. Puget Sound Energy Dockets UE-121697 & UG-121705 (Consolidated), Order 15 (June 29, 2015)
WUTC v. Puget Sound Energy Dockets UE-130137 & UG-130138 (Consolidated), Order 14 (June 29, 2015)
WUTC v. Puget Sound Energy Dockets UE-170033 & UG-170034, Order 08 (Dec. 5, 2017)
WUTC v. Puget Sound Energy Dockets UG-040640, UE-040641, UE-031471, UE-032043, Order 06 (Feb. 15, 2005)

WUTC v. The Wash. Water Power Co.	
Docket UG-901459, Third Supp. Order (Mar. 9, 1992)	29
WUTC v. US West Commc'ns, Inc.	
Docket UT-950200, Fifteenth Supplemental Order (Apr. 11, 1996)	19, 21

I. INTRODUCTION

1. Puget Sound Energy (PSE) requests substantial rate increases for both its electric and

natural gas services. If PSE's request is granted, electric customers will see a rate increase of

\$139.9 million, and natural gas customers will see a rate increase of \$65.5 million. The rate

change resulting from this case will become effective while customers struggle to manage

current events, such as the novel coronavirus.

2.

3.

4.

PSE's tremendous rate increase request is based on application of multiple preferential

rate making methodologies. For example, PSE uses end-of-period rate base, but does not stop at

the end of the rate year. Rather, PSE calculates the end-of-period value six months after the end

of the test year. Additionally, PSE applies an attrition adjustment on top of the extended end-of-

period calculation, projecting costs approximately two years past the end of the test year.

PSE's remarkable request is too generous and unsupported. PSE fails to establish a need

for preferential ratemaking treatment. The Public Counsel Unit of the Washington Attorney

General's Office ("Public Counsel") submits a response case that clearly illustrates the bloated

excess of PSE's request. Public Counsel's case removes unnecessarily generous adjustments that

substantially increase PSE's request and establishes a reasonable rate of return. Public Counsel

recommends a rate decrease for electric customers of \$36.7 million and a modest rate increase

for natural gas customers of \$5.8 million.

Additionally, Public Counsel evaluates PSE's Get to Zero program and its proposal to

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install advanced metering infrastructure (AMI), or smart meters, across its electric and natural

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gas service territories.¹ While there are efficiencies possible with automating certain customer service functions, Public Counsel remains concerned about the uncertainty of benefits and potential harm to customers that may occur if the appropriate supports are removed as PSE transitions to a more digital existence. With respect to AMI, Public Counsel asserts that PSE has not met its burden in showing that the wholesale replacement of its existing meters is necessary or beneficial. As a result, Public Counsel suggests that the Commission consider disallowing one-half of PSE's Get to Zero costs and fully disallow PSE's AMI costs at this time.

Public Counsel also addresses in this brief PSE's Green Direct Program and its Water Heater Rental Program. We address PSE's rate spread and rate design. And, we present a sample of public comments received in the case.

II. CAPITAL STRUCTURE AND COST OF CAPITAL

In a competitive industry, a company's return on equity is determined through the competitive market for its goods and services. Public utilities, however, are natural monopolies that provide essential services without the presence of market competition. As such, it is not appropriate to permit monopoly utilities to set their own prices.² Instead, regulation seeks to balance fair prices with the utility's need to attract investors.³

In this case, PSE requests that the Commission approve a capital structure consisting of 48.5 percent common equity, 49.2 percent long-term debt, and 2.3 percent short-term debt. PSE proposes a short-term debt cost of 4.18 percent and a long-term debt cost of 5.51 percent.

Additionally, PSE proposes a generous return on equity of 9.5 percent (decreased from its

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5.

6.

¹ For electric customers, they will receive a new AMI meter. For natural gas customers, they will receive a two-way communicating module.

² Prefiled Response Testimony of J. Randall Woolridge, Exh. JRW-1T at 18:4-12.

³ Woolridge, Exh. JRW-1T at 18:12-14.

request of 9.8 percent in the initial filing) and an overall rate of return of 7.48 percent (decreased from its request of 7.62 percent in the initial filing).

Public Counsel accepts PSE's capital structure because it generally reflects the capital structures of the proxy groups used in our analysis.⁴ Public Counsel proposes a more appropriate cost of equity, short-term debt cost, and overall rate of return.⁵ In particular, Public Counsel witness Dr. J. Randall Woolridge accepted PSE's long-term debt costs of 5.51 percent. Dr. Wooldridge's analysis indicates an appropriate return on equity of 8.75 percent, which is in the upper end of his cost of equity range. Dr. Woolridge calculates an overall rate of return of 7.07 percent for PSE.⁶ In analyzing this case, Dr. Woolridge explains that capital markets remain at low levels and PSE's shorter-term debt and equity cost rates are out of date.⁷ Mr. Woolridge uses traditional modeling approaches to calculating PSE's return on equity, including the Discounted Cash Flow (DCF) Model, and Capital Asset Pricing Model (CAPM), and the risk premium approach, and he identifies flaws in both PSE and Commission Staff's return on equity analyses.

A. PSE's Capital Structure is Acceptable for Ratemaking Purposes

9. In setting a utility's rates, the Commission employs a capital structure for ratemaking purposes. The capital structure used for ratemaking purposes should present an optimal mix of equity and debt to balance capital costs with financial risk. A capital structure weighted too heavily towards equity can result in unreasonably high costs for customers, while a capital

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⁴ Woolridge, Exh. JRW-1T at 3:16-20.

⁵ *Id.* at 4:1-11; Woolridge, Exh. JRW-3.

⁶ Woolridge, Exh. JRW-1T at 4:2, 4:7-11.

⁷ *Id.* at 4:15-5:6.

⁸ In re Zia Natural Gas Co., 128 N.M. 728, 731, 998 P.2d 564, 567 (2000).

structure weighted too heavily towards debt can jeopardize a utility's access to capital markets and financial viability.⁹

10.

The Commission has recognized that the capital structure used for ratemaking purposes materially impacts customer rates and requires a capital structure that fairly balances "safety" and "economy." "Safety" refers to the idea that a capital structure with more equity and less debt may result in higher overall costs and higher rates for customers, but has enhanced financial integrity. "Economy" refers to the idea that a capital structure with more debt and less equity may result in lower overall costs and lower rates for customers, but has enhanced financial risk.

11.

PSE's proposed capital structure of 2.3 percent short-term debt, 49.2 percent long-term debt and 48.5 percent common equity generally reflects the capital structures of the proxy groups considered by Dr. Woolridge for electric, combination electric and natural gas, and gas distribution companies. The proxy groups considered in Dr. Woolridge's analysis were the Electric Proxy Group, the Morin Proxy Group, and the Gas Proxy Group, which are described in more detail below. The common equity percentages of the proxy groups averaged 45.5 percent 44.8 percent, and 46.2 percent equity respectively. PSE's proposed equity ratio of 48.5 percent is above the average of the proxy groups, meaning that the proposed capital structure includes more equity and less financial risk than the proxy groups. Nevertheless, PSE's proposed capital structure is reasonable and is not out of line with the capital structures of electric utility and gas distribution companies generally. Further, the proposed capital structure adequately balances

⁹ Pioneer Natural Res. USE, Inc. v. Pub. Util. Comm'n of Texas, 303 S.W.3d 363, 373 (Tex. App. 2009).

¹⁰ WUTC v. Puget Sound Energy, Dockets UE-111048 & UG-111049, Order 08, ¶¶ 35-36 (May 7, 2012).

¹¹ Woolridge, Exh. JRW-1T at 3:16-4:1.

¹² *Id.* at 17:1-9.

safety and economy and is in line with the capital structures the Commission has used in several recent general rate cases.¹³

B. PSE's Requested Return on Equity is Excessive

12.

Regulators are tasked with providing regulated utilities with the opportunity to earn a fair return within the guiding principles established in two seminal United States Supreme Court cases, *Hope*¹⁵ and *Bluefield*. ¹⁶ Through *Hope* and *Bluefield*, the United States Supreme Court recognized that rates for regulated monopoly utilities must incorporate a fair rate of return on equity that is comparable to returns investors would expect to receive on other investments of similar risk, sufficient to assure confidence in the utility's financial integrity, and adequate to maintain and support the company's credit and to attract capital at reasonable costs. ¹⁷ To set a utility's return on equity, the Commission must determine the market-based cost of capital. ¹⁸ Economic models used by cost of capital experts seek to use market-based information to set an appropriate return on equity for regulated utilities. Examples of such models are the Discounted Cash Flow (DCF) Model and Capital Asset Pricing Model (CAPM).

¹³ See, WUTC v. Cascade Natural Gas, Docket UG-190210, Order 5: Final Order, ¶ 10 (Feb. 3, 2020) (Capital structure with 49.1 percent equity approved); WUTC v. NW Natural Gas Company, Docket UG-181053, Order 06, ¶¶ 51, 53 (Oct. 21, 2019) (Capital structure with 49 percent equity approved); WUTC v. PacifiCorp, Docket UE-152253, Order 12 (Oct. 21, 2019) (Capital structure with 49 percent equity approved); WUTC v. Avista Corp., Dockets UE-170485 & UG-170486, Order 07, ¶ 111 (Apr. 26, 2018) (Capital structure with 48.5 percent equity approved); WUTC v. Puget Sound Energy, Dockets UE-170033 & UG-170034, Order 08, ¶ 83 (Dec. 5, 2017) (Capital structure with 48.5 percent equity approved).

¹⁴ Woolridge, Exh. JRW-1T at 2:12.

¹⁵ Federal Power Comm'n v. Hope Natural Gas Co., 320 U.S. 591, 64 S.Ct. 281 (1944).

¹⁶ Bluefield Waterworks & Improvement v. Public Service Comm'n of West Virginia, 262 U.S. 679, 43 S.Ct. 675 (1923).

¹⁷ Woolridge, Exh. JRW-1T at 2:17-3:5.

¹⁸ *Id.* at 3:6-7.

1. The status of capital markets support reducing PSE's authorized return on equity

Over the past five years, interest rates and capital costs have been at historically low levels. In turn, authorized returns on equity (ROE) for electric and natural gas utilities have slowly declined to reflect the low capital costs reflected in the market. ¹⁹ This trend has been reflected in the Commission's decisions as well. For example, the Commission authorized an ROE of 9.8 percent for PSE on remand for joint proceedings in Dockets UE-121697/UG-121698 and UE-130137/UG-130138²⁰, and authorized an ROE of 9.5 percent two years later in Docket UE-170033 and UG-170034.²¹

To develop a fair rate of return recommendation in this case, Public Counsel's witness Dr. Woolridge evaluated the return on equity expectations of investors in common stock of companies in three proxy groups. The three proxy groups consisted of publically held electric utility companies (Electric Proxy Group), natural gas distribution companies (Gas Proxy Group), and the companies considered by Dr. Morin, PSE's witness (Morin Proxy Group).²² The bond ratings of the proxy group companies are comparable to PSE's bond ratings from Moody's and S&P.²³ Bond ratings provide an assessment of a company's investment risk, and PSE's investment risk is in line with that of the proxy groups.²⁴

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¹⁹ Woolridge, Exh. JRW-1T at 10:1-5. See also, Woolridge, Exh. JRW-1T at 10:5-11:2.

 $^{^{20}}$ WUTC v. Puget Sound Energy, Dockets UE-121697 & UG-121705 (Consolidated), Order 15, ¶ 163 (June 29, 2015); WUTC v. Puget Sound Energy, Dockets UE-130137 & UG-130138 (Consolidated), Order 14, ¶ 163 (June 29, 2015).

²¹ WUTC v. Puget Sound Energy, Dockets UE-170033 & UG-170034, Order 08, ¶ 94 (Dec. 5, 2017).

²² Woolridge, Exh. JRW-1T at 11:3-9. *See* also, Woolridge, Exh. JRW-1T at 12:1-13:17 (Describing the proxy group characteristics).

²³ Woolridge, Exh. JRW-1T at 13:18-15:4.

²⁴ *Id.* at 13:20-21, 16:1-3. *See* also Woolridge, Exh. JRW-4 (showing an assessment of the proxy group risk; Dr. Woolridge concludes that the investment risk of the proxy group companies is very low and similar to each other at Woolridge, Exh. JRW-1T at 16:11-12).

Utility ROEs have been higher than necessary for many years a.

Economic theory of perfect competition describes long-term equilibrium, where the company's price for goods and services equals the company's cost, including the company's capital costs.²⁵ In competitive markets, companies can acquire competitive advantage and, as a result, charge more than average cost and earn more than required to cover capital costs.²⁶ This results in a company's market value exceeding its book value. Dr. Woolridge performed a regression study of estimated ROE and market-to-book ratios. Through his analysis, he discovered that the dividend yields for electric and natural gas utilities have declined over the past decade. However, over the same time period, the average market-to-book ratios increased to 1.75 to 2.0 range. This indicates that utility ROEs have been greater than the cost of capital – or higher than necessary to meet investor's required returns. Moreover, this means that customers have been paying more than necessary to support the opportunity to earn a fair return.²⁷

2. Model results support lowering PSE's return on equity

Cost of capital experts have long used models to ascertain the cost of equity. As Dr. Woolridge notes, the models were developed using restrictive economic assumptions, requiring judgment in selecting the appropriate financial valuation models, determining the data inputs, and interpreting the results. 28 The judgment exercised in ascertaining the cost of equity for a given company must consider the particular company at question, current market conditions, and the state of the economy.²⁹

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²⁵ Woolridge, Exh. JRW-1T at 19:3-12.

²⁶ *Id.* at 19:13-20.

²⁷ Id. at 21:1-23:3; Woolridge, Exh. JRW-6; Woolridge, Exh. JRW-7.

²⁸ Woolridge, Exh. JRW-1T at 25:3-7.

²⁹ *Id.* at 25:7-8.

17. In his analysis, Public Counsel's witness Dr. Woolridge relied primarily on the DCF model. He also used CAPM, but gave these results less weight as it provides a less reliable indication of equity costs for public utilities.³⁰ The results of Dr. Woolridge's models range from 6.9 percent to 8.95 percent and are set forth in the table below.³¹

ROEs Derived from DCF and CAPM Models

	DCF	CAPM
Electric Proxy Group	8.45%	6.90%
Morin Proxy Group	8.35%	6.90%
Gas Proxy Group	8.95%	7.50%

As a general matter, authorized ROEs have lagged behind capital markets and have been slow to reflect low capital market cost rates.³² Indeed, ratings companies anticipate that utility ROEs will continue to decline. Moody's stated, "The credit profiles of US regulated utilities will remain intact over the next few years despite our expectation that regulators will continue to trim the sector's profitability by lowering its authorized returns on equity (ROE)."³³ Moody's further stated that falling authorized ROEs reflects regulators' struggle to justify the gap between utility authorized ROEs and persistently low interest rates.³⁴

Given the model results, and the primary weight given to the DCF model results, Public Counsel recommends an ROE of 8.75 percent for PSE.³⁵ Although lower than the national

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³⁰ Woolridge, Exh. JRW-1T at 25:10-16. Dr. Woolridge's DCF analysis can be found at Woolridge, Exh. JRW-1T at 25:17-39:6, Woolridge, Exh. JRW-8, and Woolridge, Exh. JRW-9. Dr. Woolridge's CAPM analysis can be found at Woolridge, Exh. JRW-1T at 39:7-51:8, and Woolridge, Exh. JRW-10. While CAPM produces less reliable results, Dr. Woolridge recognizes that it is a well-recognized methodology that has been widely used since the 1970s. *See*, Prefiled Cross-Answering Testimony of J. Randall Woolridge, Exh. JRW-13T at 6:8-12.

³¹ Woolridge, Exh. JRW-1T at 51:9-52:3.

³² *Id.* at 53:5-7.

³³ *Id.* at 54:6 (quote from Moody's Investors Service, *Lower Authorized Equity Returns Will Not Hurt Near-Term Credit Profiles* (Mar. 10, 2015)).

³⁴ *Id.* at 54:10-55:3.

³⁵ *Id.* at 52:3-5.

average for electric and natural gas utilities, Public Counsel's recommendation appropriately reflects the downward trend in utility authorized and earned ROEs.³⁶

Public Counsel's recommended 8.75 percent ROE also complies with *Hope* and *Bluefield*. Our recommendation is in line with comparable returns expected by investors of investments of comparable risk, is sufficient to assure confidence in PSE's financial integrity, and is adequate to maintain support of PSE's credit and ability to attract capital investment.³⁷ As Dr. Woolridge testified, utilities have been earning ROEs in the range of 8.0 percent to 10.0 percent in recent years. Despite the lower ROEs, their credit profiles have not been impaired, utilities have been able to collectively raise over \$50 billion per year in capital, and utility stock prices have performed right along with the S&P 500.³⁸ As a result, the Commission should adopt Public Counsel's ROE recommendation.

3. PSE and Commission Staff's ROE analyses are flawed

21. Both PSE and Commission Staff present ROE analysis in their cases. While Staff's analysis results in a lower ROE recommendation than presented by PSE, both parties' analysis have flaws that the Commission should consider when evaluating their recommendations.

a. PSE

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22.

PSE's witness Dr. Morin's analysis, results, and recommendations are based on assumptions of higher interest rates and capital costs.³⁹ However, Dr. Woolridge demonstrates that interest rates and capital costs remained at low levels despite the Federal Reserve's moves to

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³⁶ Woolridge, Exh. JRW-1T at 53:19-54:2.

³⁷ *Id.* at 53:14-17.

³⁸ *Id.* at 53:1-56:1 and Figure 6.

³⁹ *Id.* at 56:9-10.

increase the federal funds rate between 2015 and 2018, and interest rates fell dramatically in 2019.⁴⁰ With respect to Dr. Morin's DCF analysis, he adjusts the dividend yield by a full year of growth. As Dr. Woolridge noted, using a full year of growth is inappropriate and inconsistent with the approach used by the Federal Energy Regulatory Commission (FERC), which adjusts dividend yield by one-half year of growth.⁴¹

23.

Additionally, Dr. Morin relied exclusively on the earnings per share forecasts of Wall Street analysts and *Value Line*. As Dr. Woolridge noted, it is well-known and documented in numerous studies that the projected earnings growth rate of Wall Street analysts and *Value Line* "overly optimistic and upwardly biased." Further, Dr. Morin's CAPM and risk premium analyses also contained flaws that result in overstated investor return requirements and inflating ROEs. Significantly, his CAPM and risk premium analyses are based on a projected long-term Treasury yield of 4.20 percent. When Dr. Woolridge prepared his testimony, the projected long-term Treasury rate was 230 basis points above the yield on long-term Treasury bonds. The Woolridge recommended that the Commission base its ROE for PSE based on current interest rates and not speculate on where interest rates are headed in the future. Notably, in his rebuttal testimony, Dr. Morin reduced his ROE recommendation from 9.80 percent to 9.50 percent, further indicating that the approved ROE for PSE should decrease.

⁴⁰ Woolridge, Exh. JRW-1T at 56:11-57:2.

⁴¹ *Id.* at 57:9-13, 58:14-62:2.

⁴² *Id.* at 60:14-16.

⁴³ *Id.* at 62:3-88:14.

⁴⁴ *Id.* at 64:1-10.

c. Commission Staff

24.

While Staff witness Mr. Parcell accurately describes falling interest rate and capital costs, his ROE recommendation does not adequately reflect his modeling results. Indeed, Mr. Parcell's three studies indicate a significantly lower ROE than he recommends. ⁴⁵ The overall range of results from his studies is 5.5 percent to 10.0 percent. The midpoint of Mr. Parcell's DCF study is 8.35 percent, the midpoint of his CAPM study is 5.55 percent, and the midpoint of his "CE" study is 9.5 percent. ⁴⁶ Mr. Parcell's CE study is a model of his own creation that is not widely recognized as an approach to estimate the cost of equity for utilities. ⁴⁷ Moreover, FERC recently rejected the CE approach (called "Expected Earnings") to modeling ROE. In rejecting the CE approach, FERC highlighted why this approach does not effectively measure the cost of equity capital:

While it may be true that the Expected Earnings model does not involve the same complexities as the market-based approaches, we find that this is because it does not reflect a utility's cost of equity. It is simpler because it does not consider the market price that an investor must pay to make its investment and other factors such as projected growth rates for the subject utility. Factors such as these—in particular the market price that an investor must pay for an investment, which is the basis for determining the return on that investment—are critical to determining a utility's cost of equity. While it may be simpler to use a model that does not consider such factors, doing so renders that model unable to effectively estimate the rate of return that investors require to invest in the market-priced common equity capital of a utility, which is the utility's cost of equity capital. We find that it is not appropriate to use a model that does not accurately measure the "return to the equity owner" as required by *Hope* merely because it may be simpler to administer. We are cognizant of the administrative burden that is placed on parties to evaluate models that are used in analyzing ROEs, but the mere simplicity of one model as compared to others does not justify using that model if it does not assist us in ensuring that returns to equity owners are just and reasonable.⁴⁸

⁴⁵ Woolridge, Exh. JRW-13T at 2:12-16.

⁴⁶ *Id.* at 4:12-5:12.

⁴⁷ *Id.* at 3:3-6.

⁴⁸ 169 FERC ¶ 61,129, Opinion No. 569, ¶ 204 (2019).

25. Mr. Parcell's ROE recommendation wholly ignores the results from his CAPM study. The range Mr. Parcell relies upon is defined as the high point of his DCF study and the midpoint of his CE study, and this range closely correlates to his CE study. ⁴⁹ By defining the range in this manner, Mr. Parcell's recommendation is unreasonably inflated. ⁵⁰

26. The Commission should consider the analytical flaws in PSE and Staff's ROE analysis and decline their invitation to adopt their respective recommendations.

C. While PSE's Long-Term Cost of Debt is Acceptable, the Short-Term Cost of Debt Should Be Reduced to Reflect Current Market Rates

PSE's proposed debt cost for long-term debt is 5.51 percent, and its proposed debt cost for short-term debt is 4.18 percent. Both recommendations include adjustments of 0.03 percent for commitment and amortization fees.⁵¹

Public Counsel's witness Dr. Woolridge accepted PSE's long-term debt cost, including the 0.03 percent adjustment for commitment and amortization fees, which he viewed as being reasonable. However, PSE's short-term debt cost is outdated and excessively high as presented by the Company. As described below, Dr. Woolridge recommends reducing the proposed short-term debt cost from 4.18 percent to 2.38 percent, including the proposed 0.03 percent adjustment.

⁴⁹ Woolridge, Exh. JRW-13T at 6:1-5.

⁵⁰ Interestingly, as Dr. Woolridge notes, Mr. Parcells recommended a 9.2 percent ROE in PSE's last rate case, in Dockets UE-170033 and UG-170034. This is the same recommendation Mr. Parcells makes in this case, despite the fact that interest rates have fallen over 50 basis points. Additionally, the results of Mr. Parcell's cost of equity studies were lower in this case than in the 2017 case, except for his CE approach. Woolridge, Exh. JRW-13T at 15:1-10, and Figure 1. This further indicates that his recommendation in this case is inflated.

⁵¹ Woolridge, Exh. JRW-1T at 16:18-20; Woolridge, Exh. JRW-5.

PSE's witness Mr. McArthur used the projected one-month London Interbank Offered Rate (LIBOR) rates from March 2020 to March 2021.⁵² Since PSE made its initial filing in May 2019, the Federal Reserve cut the federal fund rate three times, and the projected LIBOR rates have declined significantly with those cuts.⁵³ While Mr. McArthur used the LIBOR rates from May 2019,⁵⁴ Dr. Woolridge used the LIBOR rates from November 2019.⁵⁵ The resulting cost of short-term debt is 2.38 percent, as shown on page two of Exhibit JRW-5, and the Commission should use this rate in PSE's overall rate of return calculation.

III. REVENUE REQUIREMENT

Public Counsel's witness Mr. Mark E. Garrett analysis demonstrates that PSE's rate requests for electric and natural gas services is excessive. Mr. Garrett presents Public Counsel's recommendation to reduce electric rates by \$36.7 million and slightly increase natural gas rates by \$5.8 million. ⁵⁶

A. The Commission Should Reject PSE's Attrition Adjustment

Ratemaking based on a modified test year approach synchronizes major costs components of a utility's revenue requirement (rate base, revenues, operating expenses, depreciation, and taxes) during a test year. The modified test year approach allows adjustments for known and measurable changes that occur during or shortly after the test year. In this case, PSE's rate proposal does not follow the customary ratemaking approach. Rather, PSE asks the

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⁵² Woolridge, Exh. JRW-1T at 17:14-16; Matthew D. McArthur, Exh. MDM-5 at 3.

⁵³ Woolridge, Exh. JRW-1T at 17:13-17.

⁵⁴ McArthur, Exh. MDM-5 at 3.

⁵⁵ Woolridge Exh. JRW-1T at 17:16-22; Woolridge, Exh. JRW-5 at 3.

⁵⁶ Prefiled Response Testimony of Mark E. Garrett, Exh. MEG-1T at 3 (Table 1).

Commission to approve a request, which starts with a historical test year -2018 – but projects costs through April 2021.⁵⁷

32. After establishing its 2018 test year, PSE performs restating adjustments through the end of period and pro forma adjustments for changes PSE expects to occur after the test period, including plant expected to be in service by June 2019. PSE then applies an attrition adjustment in addition to the increases through June 2019. As Public Counsel's witness Mr. Garrett notes, PSE's attrition adjustment "could be better described as a projected or forecasted test year for the rate effective period going through April 2021." ⁵⁸

Indeed, PSE's cost projection runs two years after the test year for many cost components.⁵⁹

The Commission's current standard for allowing an attrition adjustment requires utilities to "demonstrate that the cause of the mismatch between revenues, rate base and expenses is not within the utility's control." It is necessary for a utility "seeking an attrition adjustment to demonstrate that its need to invest in non-revenue generating plant, particularly distribution plant, is so necessary and immediate as to be beyond its control." The Commission reasons that this standard is required because without it, "a utility could plan for a level of expenditures that would exceed revenues and rate base recovery creating the need for an attrition adjustment."

PSE's attrition case does not present a situation where forces outside of its control cause costs to rise or necessitate rapid capital investment. Rather, PSE presents an ambitious capital

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⁵⁷ Garrett, Exh. MEG-1T at 5:1-11.

⁵⁸ *Id.* at 4:13-15; *see* also Garrett, Exh. MEG-1T at 4:4-13.

⁵⁹ *Id.* at 5:9-11.

⁶⁰ WUTC v. Avista Corp., Dockets UE-150204 & UG-150205, Order 05, ¶ 110 (Jan. 6, 2016).

⁶¹ WUTC v. Avista Corp., Dockets UE-160228 & UG-160229, Order 07, ¶ 29 (Feb. 27, 2017).

⁶² WUTC v. Avista Corp., Dockets UE-150204 & UG-150205, Order 05, ¶ 110 (Jan. 6, 2016).

investment plan consisting of discretionary expenditures.⁶³ Moreover, PSE attempts to dilute the Commission's attrition standard by arguing that the Commission no longer requires a utility to show extraordinary circumstances or extreme financial distress, but now merely requires a utility to show that it has under-earned and will not likely be able to achieve its authorized return absent an attrition adjustment.⁶⁴

PSE's arguments misrepresent the Commission's attrition standard. Moreover, lowering the standard as the company suggests increases the risk that an attrition adjustment becomes a self-fulfilling prophecy, a risk the Commission has explicitly acknowledged. Indeed, Mr. Garrett observes, "Given additional money to spend, management will spend it and continue in future proceedings to seek increases based upon extraordinary ratemaking measures."

PSE is a healthy utility, as illustrated by data showing that PSE has over-earned in four of the last five years.⁶⁷ While the company argues that it would have under-earned over this period without preferential rate treatment,⁶⁸ PSE would likely have adjusted its spending to better match its available resources.⁶⁹

Moreover, it would be inappropriate to provide adjustments for potential cost increases while ignoring significant potential cost decreases over the same period. While PSE claims cost increases will adversely affect its ability to earn its authorized return, it does not take into

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⁶³ Garrett, Exh. MEG-1T at 10:4-7.

⁶⁴ *Id.* at 12:20-13:2.

⁶⁵ WUTC v. Avista Corp., Docket UE-150204 & UG-150205, Order 05, ¶ 119 (citing Investigation of Possible Ratemaking Mechanisms to Address Utility Earnings Attrition, Docket U-150040, Public Counsel's Comments, ¶ 40 (Mar. 27, 2015) (quoting the testimony of David C. Gomez in Avista's 2014 GRC, Dockets UE-140148/UG-140149)).

⁶⁶ Garrett, Exh. MEG-1T at 13:5-7.

⁶⁷ *Id.* at 14:17-20, 15:1 (Table 4).

⁶⁸ Prefiled Direct Testimony of Ronald J. Amen, Exh. RJA-1T at 18:7-12.

⁶⁹ Garrett, Exh. MEG-1T at 15:1-6.

consideration reduced borrowing costs that might exist during the period July 2019 through March 2021.⁷⁰

39. Simply put, PSE fails to demonstrate that it needs an attrition adjustment, and the Commission should decline the invitation to set rates using an attrition adjustment in this case.

B. PSE Improperly Characterized Benefits from the Tax Cut and Jobs Act as Income Between Rate Cases, Effectively Shifting the Benefit Away from Ratepayers and to its Shareholders

The Tax Cut and Jobs Act (TCJA) reduced taxes for corporations, including PSE, from 35 percent to 21 percent effective January 1, 2018. As Public Counsel witness Mr. Garrett explains, the tax reduction generated two sources of savings for ratepayers. The first savings come from the lower annual tax expense that must be included in rates. The second comes from the excess accumulated deferred federal income taxes ("ADIT") produced by the tax reduction. ADIT was collected from customers at the 35 percent rate, but will be remitted to the Internal Revenue Service (IRS) at the lower 21 percent rate. 71 The excess must be returned to ratepayers.

Excess ADIT ("EDIT") is separated into two categories: protected EDIT and unprotected EDIT. Protected EDIT mainly relates to utility plant and must be amortized back to ratepayers based on a schedule that is no faster than the Average Rate Assumption Method (ARAM) prescribed by the IRS. Unprotected EDIT is not subject to normalization rules and can be returned to ratepayers over any time period set forth by the Commission.⁷²

In this case, PSE bases its income tax expense calculation on the lower 21 percent corporate income tax rate provided for in the TCJA, and the company will continue to refund the

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⁷⁰ Garrett, Exh. MEG-1T at 15:7-16:2.

⁷¹ *Id.* at 49:3-10.

⁷² *Id.* at 49:10-14.

protected EDIT using the ARAM methodology.⁷³ PSE proposes to amortize the unprotected EDIT over a four-year period.⁷⁴ Public Counsel takes no issue with these proposals.

However, Public Counsel disagrees with PSE's proposal regarding protected ADIT for the period January 1, 2018 through February 28, 2019. PSE treats protected ADIT for that interim period as current income to PSE. This treatment improperly transfers the TCJA tax benefit from ratepayers to PSE's shareholders. These funds were over-collected from customers and are ratepayer funds that must ultimately be returned to ratepayers. Instead of being treated as income between rate cases, the protected EDIT amount should be held in a segregated regulatory liability account.

This Commission has addressed a utility's desire to use TCJA to benefit shareholders. In Cascade Natural Gas's 2017 rate case, Cascade argued that it should be able to keep the EDIT from the interim period, defined as the period between when the TCJA became effective and when new rates were put in place for Cascade incorporating the new lower corporate tax rate. The Commission soundly rejected Cascade's argument and required the company to return the interim EDIT to ratepayers.⁷⁷

Additionally, PSE's argument that returning the protected EDIT to ratepayers would violate normalization rules is unpersuasive. PSE has already amortized the amount pursuant to IRS rules. Mr. Garrett explains that the funds can be treated as unprotected EDIT because the

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⁷³ Garrett, Exh. MEG-1T at 50:5-7. *See WUTC v. Puget Sound Energy,* Docket UE-180899 & UG-180900, Order 05: Final Order, Settlement Stipulation and Agreement (Feb. 21, 2019).

⁷⁴ Garrett, Exh. MEG-1T at 50:7-8.

⁷⁵ *Id.* at 50:9-12.

⁷⁶ *Id.* at 50:15-20.

⁷⁷ WUTC v. Cascade Natural Gas, Docket UG-170929, Order 06 (July 20, 2018) (ordering Cascade to return all of the protected EDIT from January 1, 2018 to ratepayers). Additionally, the Commission approved a settlement that would require Avista Corp. to return all of the protected EDIT as of December 31, 2018 to ratepayers. WUTC v. Avista Corp., UE-170485 & UG-170486, Order 07, ¶ 21 (Apr. 26, 2018).

ARAM reversal period has passed. As unprotected EDIT, the funds can be returned to ratepayers over any period the Commission determines to be appropriate. In any event, the amounts should be returned to ratepayers and not retained by the company. Moreover, the same normalization rules apply to PSE that also apply to all other regulated utilities. The normalization rules did not prevent either Avista or Cascade from returning all amounts to their customers. Similarly, nothing prevents PSE from returning all benefits of the TCJA to its customers.

C. The Commission Should Disallow 50 Percent of the Cost of PSE's Short-Term Incentive Compensation Plan

As a general matter, the Commission allows incentive payment plans to be included in rates only if they benefit ratepayers. The Commission has allowed incentive payment plans that have a dual benefit under some circumstances. 80 The Commission stated in PSE's 2004 general rate case:

While PSE incentive plans have changed over time, this appears in part to be in recognition of direction from the Commission that such plans should be tied to performance and not simply to earnings. We find that while a portion of PSE's incentive plan payments turn on the Company reaching certain earnings goals, there is a second threshold for such payments that is based on service quality, safety, and reliability considerations. These are the criteria we have looked for in authorizing, or not, the recovery of incentive payment plans.⁸¹

The Commission has recognized that incentive programs are not in the public interest where they have financial elements that factor heavily in the payment structure, particularly

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⁷⁸ Garrett, Exh. MEG-1T at 55:14-21.

⁷⁹ Doyle, TR. 366:14-21.

⁸⁰ WUTC v. PacifiCorp, Docket UE-050684, Order 04, ¶ 128 (Apr. 17, 2006), citing WUTC v. Puget Sound Energy, Inc., Dockets UG-040640, UE-040641, UE-031471, UE-032043, Order 06, ¶ 144 (Feb. 15, 2005).

⁸¹ WUTC v. Puget Sound Energy, Inc., Dockets UG-040640, UE-040641, UE-031471, UE-032043, Order 06, ¶ 144 (Feb. 15, 2005).

where the financial rewards eclipse the service quality rewards.⁸² In *US West*, bonuses were awarded based on customer service measures, quality indicators, company net income, and business units.⁸³ The Commission noted the potential tension between service quality and earnings, stating that a utility "can concentrate on financial elements so heavily that it can lose sight of the importance of providing customer service."⁸⁴

An acceptable incentive plan ties payments to goals that clearly and directly benefit ratepayers. In *US West*, the incentive goals were completely separate, meaning that the company did not need to meet both service quality and financial goals for incentive payments. In this case, while PSE's incentive program does have a dual funding trigger, payment of the incentive is heavily dependent on financial performance measures.⁸⁵

Indeed, Public Counsel's witness Mr. Garrett states that while PSE's incentive award levels are "based on a combination of earnings goals and operational goals, the *funding* for annual incentive compensation is based on PSE's earnings; specifically, Earnings before Interest, Taxes, Depreciation, and Amortization (EBITDA)." In order to receive any payment under PSE's incentive plan, 90 percent of EBITDA must be achieved. Anything less than 90 percent results in no amount of incentive being paid, regardless of how the company performs with respect to the safety and SQI results.

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⁸² WUTC v. US West Commc'ns, Inc., Docket UT-950200, Fifteenth Supplemental Order at 47-49 (Apr. 11, 1996).

⁸³ *Id*. at 47.

⁸⁴ Id. at 48.

⁸⁵ Garrett, Exh. MEG-1T at 22:8-9.

⁸⁶ *Id.* at 22:9-12.

⁸⁷ *Id.* at 22:12-23:7. PSE does allow for funding below the funding threshold for "extenuating circumstances." Thomas M. Hunt, Exh. TMH-11X; Hunt, TR. 396:4-25.

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If only 90 percent of EBITDA is achieved and 10 of 10 safety and SQI results are met, the incentive payment is reduced to 50 percent. However, if the circumstances are flipped and PSE meets six of 10 safety and SQI and achieves 100 percent of the EBITDA target, the incentive payment is only reduced to 60 percent. ⁸⁸ Assuming that 10 of 10 safety and SQI results are met, PSE would pay 100 percent of the incentive only if 100 percent of the EBITDA target is met. ⁸⁹ This illustrates that company earnings (EBITDA) is "by far the most important factor in determining whether incentive compensation will be paid and to what extent." ⁹⁰

Other jurisdictions have disallowed amounts associated with incentive compensation plans where funding mechanism is based on an earnings trigger, similar to PSE's plan structure. For example, the Oklahoma Corporation Commission removed a portion of the utility's annual incentive program where the incentive compensation is "funded primarily based on the company's financial performance." In Texas, the Public Utility Commission disallows 100 percent of annual incentives that are directly tied to financial performance measures and disallows 50 percent of incentives that are tied to operational measures with financial performance funding mechanisms. 92

⁸⁸ Garrett, Exh. MEG-1T at 23, Short-Term Incentive Plan (Table).

⁸⁹ *Id.* at 23:8-12.

⁹⁰ *Id.* at 23:5-7.

⁹¹ American Electric Power's Public Service Company of Oklahoma, Cause No. PUD 201500208, Final Order at 161-162 (Okla. Corp. Comm'n Nov. 10, 2016).

⁹² Garrett, Exh. MEG-1T at 26:1-12, 26:13-28:9; See Application of Southwestern Elec. Power Co. for Authority to Change Rates, PUC Docket No. 43695, Order on Rehearing at 5-6 (Tex. PUC, Dec. 18, 2015); see also, Application for CenterPoint Houston Elec. for Authority to Change Rates, Tex. PUC Docket No. 49421, Proposal for Decision at 431-432, ¶¶ 228-236 (Sept. 16, 2019); In re: Application Entergy Ark. For Approval of Changes in Rates for Retail Elec. Svc., Docket No. 13-028-U, Order 21 at 54 (Dec. 30. 2013); In re: Application of Entergy Ark. For Approval of Changes in Rates for Retail Elec. Svc., Docket No. 15-015-U, Order 18 at 18-20 (Ark. Pub. Svc. Comm'n Feb. 23, 2016).

52. Plans, such as PSE's, that have a financial-based funding trigger prioritize maximizing shareholder wealth and benefit shareholders more than ratepayers. 93 "Financial goals are at best a very crude way to measure specific efficiencies that employees can accomplish."94 Moreover, PSE's incentive plan is structured to benefit its highly compensated senior level employees more than its rank and file employees. In Mr. Garrett's experience, plans that favor a company's senior level employees with financially based funding triggers "tend to promote the interests of shareholders more than the interests of ratepayers."95 Thus, it is not enough that an incentive

In this case, PSE's incentive plan is heavily weighted towards the financial trigger. The incentive plan is primarily designed to increase shareholder wealth rather than to enhance and encourage provision of safe and reliable utility service. Recognizing, however, that the safety and SQI metrics benefit customers, Public Counsel recommends that the Commission disallow 50 percent of the costs of the incentive plan. This recommended disallowance is consistent with the consensus view that financial-based incentives benefit shareholders more than they do ratepayers, and thus should be funded – at least in part – by shareholders. ⁹⁶

plan have metrics linked to service quality.

⁹³ Garrett, Exh. MEG-1T at 24:3-10. See also, Garrett, Exh. MEG-1T at 28:10-46:12.

⁹⁴ WUTC v. US West Commc'ns, Inc., Docket UT-950200, Fifteenth Supplemental Order at 49 (Apr. 11, 1996).

⁹⁵ Garrett, Exh. MEG-1T at 24:11-18.

⁹⁶ *Id.* at 46:18-20.

D. Public Counsel Proposes Post-Test Year Adjustments, Limited to the Pro Forma Period Ending June 20, 2019

Public Counsel makes several post-test year adjustments in our case. ⁹⁷ Public Counsel recommends that post-test year adjustments be limited to the pro forma period on an average-of-monthly averages approach. ⁹⁸ PSE presents an end-of-period analysis of its rate base.

The Commission has "traditionally required that utility rates be established relying on the measurement of rate base using the AMA approach. The Commission, however, has occasionally recognized that the alternative approach of utilizing end-of-test period rate base may be appropriate in a variety of circumstances." Those circumstances include growth in plant at a faster pace than customer growth; however, use of average rate base is preferred. ¹⁰⁰ In this case, PSE has not established that preferential rate base treatment is needed.

Public Counsel adjusts plant in service, accumulated depreciation, accumulated deferred income taxes, and depreciation expense on an AMA basis for the pro forma period ended June 30, 2019. The adjustments are based on actual account balances for the test period and the pro forma period. ¹⁰¹ For electric, the adjustment to AMA increases rate base by \$121.4 million. For natural gas, rate base is adjusted by \$117.6 million. ¹⁰²

Public Counsel adjusts the wage increase proposed by PSE. PSE includes pay increases that will be implemented well after the end of the pro forma period and as late as October 2020. Public Counsel recommends limiting the wage increases to the pro forma period. This

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⁹⁷ Garrett, Exh. MEG-1T at 16:3-20:14.

⁹⁸ *Id.* at 16:17-18.

 $^{^{99}}$ WUTC v. PacifiCorp, Docket UE-140762, Order 08, ¶ 145 (Mar. 25, 2015) (citations omitted).

¹⁰⁰ *Id*.

¹⁰¹ Garrett, Exh. MEG-1T at 17:14-18; Garrett, Exh. MEG-3; Garrett, Exh. MEG-4.

¹⁰² Garrett, Exh. MEG-1T at 17:14-18.

adjustment reduces PSE's net operating income by \$2.2 million for electric and \$0.6 for natural gas. 103

Public Counsel also recommends removal of costs associated with AMI, which increases the electric net operating income by \$6.8 million and reduces electric rate base by \$56.2 million. For natural gas, Public Counsel's adjustment increases net operating income by \$3.3 million and reduces rate base by \$21.9 million. The basis for disallowing AMI expense is discussed below.

Based on Public Counsel's other adjustments which reduce rate base, Public Counsel adjusts the long-term debt interest. This has the effect of increasing income tax and reducing net operating income. The adjustment reduces electric net operating income by \$2.1 million and natural gas by \$0.9 million.

IV. THE COMMISSION SHOULD RELY ON PUBLIC COUNSEL'S RATE SPREAD RATE DESIGN ANALYSIS

Rate spread determines how much of the resulting change in revenue requirement is allocated to each of PSE's customer classes. One factor in determining the rate spread is the cost of service study, which seeks to determine the cost to serve each of the customer classes. Other factors the Commission considers are gradualism, rate stability, affordability, and public policy concerning economic conditions and economic development. ¹⁰⁵

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¹⁰³ Garrett, Exh. MEG-1T at 18:10-19:5.

¹⁰⁴ *Id.* at 19:6-16.

¹⁰⁵ Prefiled Response Testimony of Glenn A. Watkins, Exh. GAW-1T at 36:3-37:3; *WUTC v. PacifiCorp*, Docket UE-140762, Order 08, ¶ 202 (Mar. 25, 2015) (The Commission accepted the company's proposal to move each customer class closer to parity with its cost of service, while emphasizing principles of fairness, perceptions of equity, economic conditions in the service territory, gradualism, and rate stability).

Rate design determines how much of PSE's revenue is collected through fixed charges and how much is collected through volumetric charges. While determining the size of the rate change is important, determining how that rate change is spread across a utility's customer base and how the rate is collected has a direct effect on customer bills and how customers will experience the outcome of the rate case. Public Counsel presents a well-balanced approach to PSE's rate spread and rate design that the Commission should follow.

A. Electric COSS is Reasonably Reflected in PSE's Peak Credit Analysis, as Demonstrated by Mr. Watkins' Analysis Using Multiple Methodologies

As a general matter, costs that can be specifically attributed to a particular customer or group of customers is allocated directly to that customer or group of customers. However, most of a utility's plant investment and expenses are incurred to serve all customers and cannot be specifically allocated. Rather, they must be allocated across all of the utility's customers. ¹⁰⁶ It is generally accepted that joint costs are allocated to the customer classes based on cost causation to the extent possible. ¹⁰⁷

While cost-causation is a straight-forward concept, some utility costs must be subjectively allocated because they cannot be attributed to "specific exogenous measures or factors." Additionally, with respect to costs that can be allocated based on cost causation, cost of service experts disagree regarding the appropriate measure to use to determine cost causation. Examples of measures commonly used by various experts include peak demand, energy usage, and number of customers, among others. There are several recognized cost of service study

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¹⁰⁶ Watkins, Exh. GAW-1T at 3:17-4:3.

¹⁰⁷ *Id.* at 3:4-5.

¹⁰⁸ *Id.* at 4:4-10.

¹⁰⁹ *Id.* at 4:10-13.

methodologies, including Single Coincident Peak, Four Coincident Peak, Summer and Winter Coincident Peak, Coincident Peak, Peak and Average, Average and Excess, Base-Intermediate-Peak, Probability of Dispatch, and Peak Credit ("Equivalent Peaker") approach. 110

The cost of service study is important to consider for ratemaking purposes. However, it serves as a data point, rather than conclusively determining how costs should be allocated to the customer classes, because of the variation of results depending on the assumptions, judgment, and methodology used. ¹¹¹ The United States Supreme Court has acknowledged the judgment exercised in cost allocation, noting that cost allocation is not a "matter for the slide-rule," involves judgment based on a myriad of facts, and is not an exact science. ¹¹²

1. Application of the Peak Credit methodology

65. In this case, PSE used the Peak Credit methodology to conduct its cost of service study. Public Counsel's witness, Mr. Watkins, independently analyzed the structure and organization of PSE's cost of service study and examined the accuracy and completeness of the allocators used to assign costs to rate schedules and classes. Mr. Watkins ran his own computer models to verify results and accuracy. 114

Additionally, Mr. Watkins adjusted certain aspects of PSE's study to better reflect rate schedule and customer class cost causation and cost incidence, as described more fully in his

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Watkins, Exh. GAW-1T at 8:3-14. The strengths and weaknesses of each methodology are presented in Watkins, Exh. GAW-1T at 8:9-17:11.

Watkins, Exh. GAW-1T at 4:14-5:5, 5:8-6:2. *See WUTC v. Avista Corp.*, Dockets UE-170485 & UG-170486, Order 07, ¶ 244 (Apr. 26, 2018) (Staff witness argued that "a COSS is a tool that informs but does not dictate rate spread.").

¹¹² Colorado Interstate Gas Co. v. Fed. Power Comm'n, 324 U.S. 581, 65 S. Ct. 829, 89 L. Ed. 1206 (1945).

¹¹³ Watkins, Exh. GAW-1T at 19:13-15.

¹¹⁴ *Id.* at 19:15-18.

testimony. 115 The parity ratios from Mr. Watkins' analysis were similar to the parity ratios from PSE witness Mr. Jhaveri's analysis, indicating that the disagreement Public Counsel has with PSE's cost of service study does not result in any material change to class parity ratios. 116

2. Probability of Dispatch and Base-Intermediate-Peak methods produce reasonable results and use higher quality data

While cost of service study results may vary and are not surgically precise, they are informative. For example, if various cost of service study results consistently show that certain classes are over or under collecting the costs to serve them, there is a strong rationale for assigning smaller or greater than system average rate increase to those classes. ¹¹⁷ Mr. Watkins noted, "(a)lthough there is no single, or absolute, correct method to allocate joint generation costs, some methods are superior to others." ¹¹⁸ Thus, the Commission should consider the results of multiple reasonable methods in evaluating class profitability and class revenue responsibility. ¹¹⁹

Mr. Watkins conducted two additional studies based on the Probability of Dispatch and Base-Intermediate-Peak methodologies. In conducting the Probability of Dispatch study, Mr. Watkins used hourly system demand and hourly generation by unit. ¹²⁰ While the Probability of Dispatch method is the most theoretically correct method to assign generation plant to rate and customer classes, the data needed is not always available. In this case, PSE was able to provide

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¹¹⁵ *Id.* at 19:18-23:14.

¹¹⁶ Watkins, Exh. GAW-1T at 23:15-24:1.

¹¹⁷ *Id.* at 5:11-6:2.

¹¹⁸ *Id.* at 24:4-5.

¹¹⁹ *Id.* at 24:5-7.

¹²⁰ *Id.* at 25:8-9; Watkins, Exh. GAW-12.

hourly output data for each generation unit and hourly class loads. 121 After assigning the costs for each generation unit to each hour of the test year, Mr. Watkins was able to assign the costs to individual rate classes on an hour-by-hour basis. 122

Comparing the results from Mr. Watkins' Probability of Dispatch cost of service study with the Peak Credit studies, some of the class parity values differ. However, the directional relationship of the class parity ratios remain the same. 123

Mr. Watkins conducted a base-intermediate-peak cost of service study, "which evaluates each plant based on its capacity factor and variable fuel costs to determine whether the plant operates to serve primarily energy needs throughout the year, only peak loads, or is of an intermediate type that serves both energy and peak load requirements."124 As with the Probability of Dispatch method, the directional relationship of the class parity ratios held and are similar to the results using Peak Credit. 125 Mr. Watkins noted, "although the Peak Credit, Probability of Dispatch, and Base-Intermediate-Peak methods are all vastly different in concept, it is apparent that the results obtained by Mr. Jhaveri's Peak Credit study are within the range of reasonableness."126

B. It is Reasonable to Use an Electric Rate Spread that Allocates Any Rate Change in **Equal Percentages Across PSE's Customer Classes**

With respect to electric rate classes, the parity results from the various cost of service studies conducted by Mr. Watkins, and the Peak Credit study conducted by PSE witness Mr.

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¹²¹ Watkins, Exh. GAW-1T at 26:7-12.

¹²² Watkins, Exh. GAW-1T at 26:13-27:11.

¹²³ *Id.* at 32:6-8.

¹²⁴ *Id.* at 33:8-12.

¹²⁵ *Id.* at 34:16-26:1; Watkins, Exh. GAW-8.

¹²⁶ Watkins, Exh. GAW-1T at 35:6-9.

Jhaveri, are reasonably close to unity, with the exception of three rate schedules: Rates Choice/Retail Wheeling, Special Contract, and Firm Resale. For rate classes other than Rates Choice/Retail Wheeling, Special Contract, and Firm Resale, Public Counsel recommends that all rate classes receive an equal percentage increase (or decrease). 127

C. Rate Design

- 1. No change is appropriate for PSE's electric residential customer charge and a modest increase is appropriate for the natural gas residential customer charge
- Customer charges are the amount ratepayers pay regardless of how much energy they use. Customer charges reflect only direct customer costs, such as meter reading and billing. PSE proposes to leave the electric customer charge unchanged at \$7.49. Regarding the natural gas customer charge, PSE proposes to increase the charge from \$11 to \$11.52.
- Public Counsel's witness Mr. Watkins conducted an analysis of the proposed customer charges, analyzing the direct customer costs. For electric, Mr. Watkins' analysis shows a cost between \$5.51 and \$5.61, supporting the proposal to maintain the current customer charge. 129

 For natural gas, Mr. Watkins' analysis shows a cost between \$11.20 and \$11.40. Public Counsel recommends that the natural gas basic charge be increased no more than \$11.20.130

2. Evaluating PSE's first electric usage block would be beneficial

¹²⁷ Watkins, Exh. GAW-1T at 39:9-40:8. Public Counsel erroneously stated that the Commission's range of accuracy for parity is +/- 10 percent. The Commission clarified in Docket UE-152253 that its preferred range of accuracy is +/- five percent. Certain schedules present at 106 to 107 percent; however, the results vary with COSS methodology. As we anticipate final rules in the COSS rulemaking, Dockets UE-170002 and UG-170003, it is appropriate and reasonable to maintain the status quo.

¹²⁸ WUTC v. PacifiCorp, Docket UE-140762, Order 08 at 86-87 (Mar. 25, 2015).

¹²⁹ Watkins, Exh. GAW-1T at 42:12-43:14.

¹³⁰ *Id.* at 59:7-60:10.

The Energy Project's witness Shawn Collins has suggested that PSE should study the strengths and weaknesses of maintaining a two tiered energy rate structure and also whether the first block should increase from 600 kWh to 800 kWh. ¹³¹ Increasing the size of the first usage block could serve as a lifeline rate by covering a larger portion of essential services. ¹³² This could be an important protection for customers, and Public Counsel supports the Energy Project's suggestion.

D. The Commission Should Reject PSE's Proposed Allocation of Distribution Mains

With respect to natural gas cost allocation, the leading issue is allocation of distribution mains. Several rate base and operating income accounts are allocated to classes based on the assignment of distribution mains, making the issue highly important and often controversial. ¹³³

In this case, PSE proposes a new approach to assign mains than the company has used in its past several rate cases. Additionally, PSE's new approach conflicts with Commission policy.

While direct assignment of costs to customers, when it can be achieved, is preferred, the Commission rejected direct assignment of distribution mains to large volume customers. The Commission stated:

Removing and directly assigning plant only for a select group of customers with lower costs is not consistent with the embedded cost class allocations underlying the rest of the company study. As described by Public Counsel on brief, direct assignment could be considered to be cost-based only if it were applied to the entire utility rather than to one customer with competitive alternatives. ¹³⁴

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¹³¹ Watkins, Exh. GAW-1T at 47:3-6.

¹³² *Id.* at 47:6-10.

¹³³ *Id.* at 47:14-19.

¹³⁴ WUTC v. The Wash. Water Power Co., Docket UG-901459, Third Supp. Order at 7 (Mar. 9, 1992).

PSE used geographic information system (GIS) mapping to assign mains cost to special contract customers. The GIS study tracked all mains utilized by a special contract customer from the customer's meter back to the city gate. Based on the GIS study, PSE assigned 0.1315 percent of the mains to special contract customers. However, this assignment is not a direct assignment of plant because the mains are not dedicated facilities, but rather facilities that serve a multitude of customers. PSE did not conduct GIS studies with respect to any other customer or customer classes, nor did any other party.

This directly conflicts with the Commission's ruling in *The Wash. Water Power Co.*,

Docket UG-901459. Not only does the proposed methodology conflict with Commission

precedent, the impact significantly shifts cost responsibility away from the Interruptible and

Special Contract classes to the Firm and Small Volume classes, including the residential class. 140

Just as the Commission rejected the proposal in Docket UG-101459, the Commission should reject the proposal to allocate mains to special contract customers in the way proposed by PSE and supported by Alliance of Western Energy Consumers.

E. Natural Gas Rate Spread

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Public Counsel accepts PSE's proposed rate spread, except with respect to special contracts and rentals. Special Contracts shows a wide range of parity results, and given the large difference, Public Counsel recommends that the Special Contracts class receive an increase equal

¹³⁵ Prefiled Direct Testimony of John D. Taylor, Exh. JDT-1T at 12:17-13:3; Taylor, TR. 252:20-253:2.

¹³⁶ Taylor, TR. 258:3-10.

¹³⁷ Taylor, Exh. JDT-1T at 16:15-16; Taylor, TR. 253:3-9.

¹³⁸ Taylor, TR. 258:11-259:4; Brian C. Collins, TR. 446:12-16, 447:19-448:2.

¹³⁹ Collins, TR. 448:5-19.

¹⁴⁰ Watkins, GAW-1T at 53:3-10.

to the system average increase. ¹⁴¹ With respect to Rentals, Public Counsel recommends that no change be made to the allocation of cost responsibility. ¹⁴²

F. The Commission Should Not Adopt Staff's Recommendation Regarding Potential Use of Deferred Accounting for Costs Associated with Certain Recommended Pilot Programs

Commission Staff recommends that PSE implement and offer certain voluntary pilot programs. 143 Staff also recommends that the Commission "entertain future accounting petitions for costs associated with setting up and administering these programs." 144

Public Counsel does not object to the idea of PSE offering pilot programs. The specifics of each proposed pilot would be evaluated and approved by the Commission, and voluntary pilots can provide valuable information that can inform future programs. Public Counsel is concerned, however, with the recommendation to consider using deferred accounting for the costs associated with pilot programs. ¹⁴⁵ While Public Counsel agrees that PSE should generally be afforded the opportunity to recover its prudent costs, the expenses associated with developing and administering the proposed pilots would be costs already embedded in PSE's rates. ¹⁴⁶ PSE's employees would likely be tasked with developing, implementing, and administering the proposed pilots, and their salaries, wages, benefits, and other overheads would already be incorporated and reflected in PSE's revenue requirement. ¹⁴⁷ If PSE were allowed deferred

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¹⁴¹ *Id.* at 56:7-57:4.

¹⁴² *Id.* at 57:5-7.

¹⁴³ Prefiled Response Testimony of Jason L. Ball, Exh. JLB-1T at 36:3-37:5, 36:3-67:2.

¹⁴⁴ Ball, Exh. JLB-1T at 67:12-19.

¹⁴⁵ Prefiled Cross-Answering Testimony of Watkins, Exh. GAW-13T at 17:17-21.

¹⁴⁶ Watkins, Exh. GAW-13T at 17:22-18:1.

¹⁴⁷ *Id.* at 18:1-3.

accounting on these costs, PSE would double-recover most – if not all – of the costs required to fulfill Staff witness Mr. Ball's recommendation regarding pilot programs. ¹⁴⁸ This double-recovery would not be in the public interest and, ultimately, would not result in fair, just, reasonable, and sufficient rates. As a result, Public Counsel recommends that the Commission disregard Mr. Ball's recommendation regarding deferred accounting associated with these pilot programs. ¹⁴⁹

V. THE COMMISSION SHOULD REQUIRE ACCOUNTABILITY WITH RESPECT TO GET TO ZERO

PSE's Get to Zero project seeks to "minimize customer calls to [PSE] by eliminating the problems that drive customers to call PSE."¹⁵⁰ Get to Zero is a multi-year initiative spanning 2016 to 2021, and consists of a broad range of projects and a large amount of capital. The Get to Zero projects are intended to transition PSE's customers to automated interfaces for various customer service needs, such as bill payment, service initiation and disconnection, enrollment in financial assistance programs, tracking energy usage, and phone-based communications. ¹⁵²

Public Counsel witness Ms. Baldwin stated, "Public Counsel recognizes that the project does offer customer benefits, but the benefits are less defined and some are difficult to monetize." In particular, while Public Counsel recognizes that PSE could achieve certain efficiencies by automating certain customer service functions, Public Counsel is concerned about

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¹⁴⁸ *Id.* at 18:3-8.

¹⁴⁹ Public Counsel's recommendation does not preclude the Commission from authorizing deferred accounting, if appropriate. Public Counsel's recommendation seeks to avoid establishing a presumption that deferred accounting for the proposed pilot programs is appropriate.

¹⁵⁰ Prefiled Direct Testimony of Joshua J. Jacobs, Exh. JJJ-1T at 3; Prefiled Response Testimony of Susan M. Baldwin, Ex. SMB-3.

¹⁵¹ Baldwin, Exh SMB-1T at 4:13-6:12-13.

¹⁵² *Id.* at 6:16-7:1.

¹⁵³ *Id.* at 4:14-15.

the level of cost required and the corresponding benefit, about whether the needs of all customers will be met or if some will be left behind, and about whether the program will adversely affect disconnection practices. 154

A. PSE's Get to Zero Proposal Places Financial Risk on Customers While Offering Uncertain Benefits

PSE states that financial benefits are not the main driver for the Get to Zero program. PSE relies heavily on its perception of its customers' expectations regarding interacting with the company digitally, although currently only one-third of PSE's customers interact digitally. Looking at the costs and benefits illuminates the high financial risks and uncertain financial benefits of Get to Zero. 157

PSE expects to expend a significant amount of capital on Get to Zero projects, as shown in Public Counsel witness Susan M. Baldwin's Exhibit SMB-11C and Exhibit SMB-15C.

Indeed, since the test year used in PSE's 2017 general rate case through December 31, 2018, PSE spent approximately \$90 million in capital expense. Between January 1, 2019 and June 30, 2019, PSE estimates that it will spend another \$32.5 million. SMB-Baldwin summarizes the revenue impact of PSE's proposed recovery of projects related to Get to Zero in Exhibit SMB-25. SMB-160 In addition to the capital expenditures, PSE would also have operating expenses, which are projected out to 2032 in calculations of future costs and benefits associated with the project.

¹⁵⁴ *Id.* at 25:16-26:6.

¹⁵⁵ Jacobs, Exh. JJJ-1T at 5:10-15; Baldwin, Exh. SMB-1T at 23:11-24:3.

¹⁵⁶ Baldwin, Exh. SMB-1T at 24:5-17.

¹⁵⁷ *Id.* at 23:2-3.

¹⁵⁸ Jacobs, Exh. JJJ-1T at 15:4-6; Baldwin, Exh. SMB-1T at 20:16-18.

¹⁵⁹ Jacobs, Exh. JJJ-1T at 48:10-11; Baldwin, Exh. SMB-1T at 20:18-21:2.

¹⁶⁰ Baldwin, Exh. SMB-1T at 21:2-7.

¹⁶¹ Id. at 21:8-13 and Baldwin, Exh. SMB-11C.

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The savings PSE projects for the projects are highly dependent on customer adoption of the digital platforms. ¹⁶² PSE anticipates operational savings related to reducing bad debt, lower postage expense, and lower call center expense, but its net present value analysis of the project varies widely due to the uncertainly regarding PSE's achievement of those savings. ¹⁶³

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PSE provided three difference scenarios when computing the net present value of the Get to Zero program based on current. The results show benefits exceeding cost by \$11 million in one scenario, but also show costs exceeding benefits by \$168 million in another scenario. Indeed two of the three scenarios showed costs significantly dwarfing benefits. ¹⁶⁴ While the Get to Zero program could provide benefits to customers, there is a real risk that it will end up costing much more than might be prudent. PSE stresses the nonfinancial benefits of Get to Zero, but those benefits should only be considered if PSE commits to (and does) educating all of its customers, including the two-thirds who are not now digitally engaged, on how to take advantage of the program. ¹⁶⁵ Indeed, Ms. Baldwin aptly notes, "(t)heoretical benefits ascribed to technological advancements should not be included as real tangible benefits." ¹⁶⁶

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While customer behavior drives success, PSE has primary control over Get to Zero's ability to succeed. Passing through the costs of Get to Zero well before the benefits are achieved places the risk squarely on ratepayers. The uncertainty of benefits and the risk imbalance could lead the Commission to disallow one-half of the test-year Get to Zero cost recovery to hold PSE

¹⁶² Baldwin, Exh. SMB-1T at 21:17-22:17.

¹⁶³ Baldwin, Exh. SMB-1T at 22:6-17.

¹⁶⁴ *Id.* at 22:9-23:1 (Table 4).

¹⁶⁵ *Id.* at 1-14.

¹⁶⁶ *Id.* at 25:14-15.

accountable for achieving benefits and to balance the risk between ratepayers and shareholders. ¹⁶⁷ Additionally, the Commission should disallow 2019 capital costs at this time.

Additional, or alternative, customer protections are also appropriate. The Commission should require PSE to educate its customers to facilitate the transition to digital platforms, monitor PSE's implementation of Get to Zero to ensure that the transition to automation is smooth, require PSE to engage its advisory committees, and require PSE to report annually regarding the costs and benefits of Get to Zero.¹⁶⁸

B. Customer Education about Digital Interactions with the Company and Commission Monitoring of PSE's Progress and Customer Experiences is Important for a Smooth Transition

While some of PSE's customers have demonstrated that they are digitally proficient to adequately use the Get to Zero program, two-thirds of PSE's customers are either not digitally engaging with PSE or have signed up for a digital account but are inactive. ¹⁶⁹ PSE, if authorized by the Commission, will recover costs for Get to Zero from all customers, but the majority of PSE's customers continue to engage in non-digital transactions with PSE. ¹⁷⁰

Public Counsel witness Ms. Baldwin notes that digital interfaces must be supported by adequate customer education.¹⁷¹ This education must occur in ways and in places where customers will see the information. Additionally, the interfaces must be user-friendly, or customers will not enjoy the experience. Moreover, with two-thirds of customers not yet digitally

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¹⁶⁷ *Id.* at 23:2-10.

¹⁶⁸ Baldwin, Exh. SMB-1T at 26:7-20.

¹⁶⁹ *Id.* at 9:6-10:1 (Figure 1).

¹⁷⁰ *Id.* at 10:3-5.

¹⁷¹ *Id.* at 11:12-21.

interfacing with the company, human interaction remains necessary to provide adequate customer service. 172

One major component of Get to Zero is PSE's integrated voice recognition (IVR) system, to which PSE seeks to direct calls. ¹⁷³ PSE's IVR script consists of a 162-page document, and PSE does not have specific changes or improvements to its IVR. ¹⁷⁴ An on-going assessment of how user-friendly PSE's IVR system is important to ensure that the quality of customer service does not erode as PSE implements Get to Zero. This could warrant development of a new SQI metric to assess the quality of PSE's IVR. ¹⁷⁵

C. PSE's Service Quality Indicators should be updated during the transition to a digital customer interface

As PSE transitions to more digital interactions with its customers, the Commission should hold PSE accountable for maintaining high quality customer service. In other words, PSE's customer service should not suffer during the digital transition. Currently, PSE operates under a matrix of Service Quality Indicators (SQI). PSE's performance with respect to some of these indicators may be enhanced by Get to Zero. However, the current SQI metrics do not fully address an automated customer interface, so new SQIs should be developed at some point. ¹⁷⁶

In the meantime, SQI #5 could be enhanced by adding a call-abandonment criteria and having PSE report on its average speed of answer. Additionally, PSE successfully kept 100

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¹⁷² *Id.* at 12:1-4.

¹⁷³ *Id.* at 7:7-8.

¹⁷⁴ Baldwin, Exh. SMB-1T at 16:2-7; Baldwin, Exh. SMB-8.

¹⁷⁵ Baldwin, Exh. SMB-1T at 19:17-20:6.

¹⁷⁶ *Id.* at 35:15-21, 38:14-15.

percent of its service appointments for five years. The current metric is 92 percent. Public Counsel recommends that the standard be raised to 100 percent. 177

D. Preventing Disconnection for Nonpayment and Monitoring Disconnection Data is Important Public Policy

PSE offers an essential service to captive customers as utility service is necessary for modern life. However, high energy burdens pose challenges for customers who fall behind to pay both current charges and past-due amounts. ¹⁷⁸ Utility service is critically important for customer security, health, and well-being.

PSE intends to fully enable remote disconnections by the first quarter of 2020, and it believes that the Get to Zero program will have the "biggest impact on disconnections through the remote disconnection process for electric residential meters." The Commission is considering remote disconnection rules in Docket U-180525. PSE states that it will follow the rules adopted in that docket. ¹⁸⁰

With the changing modes of disconnection, Ms. Baldwin underscores the importance of preventing residential disconnections for nonpayment and of the Commission monitoring disconnection trends. ¹⁸¹ One potential benefit of Get to Zero is facilitating customer enrollment in financial assistance programs and payment arrangements, which would minimize the number of disconnections for non-payment. ¹⁸²

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¹⁷⁷ *Id.* at 37:1-38:7.

¹⁷⁸ Baldwin, Exh. SMB-1T at 32:8-10.

¹⁷⁹ *Id.* at 27:4-8; Baldwin, Exh. SMB-6.

¹⁸⁰ Baldwin, Exh. SMB-1T at 27:12-15; Baldwin, Exh. SMB-6. In Dockets UE-180899 and UG-180900, PSE committed to notifying the Settling Parties in that case 30 days prior to implementing its procedures for remote disconnection for nonpayment. Settlement Stipulation and Agreement at ¶ 16, WUTC v. Puget Sound Energy (2019) (Dockets UE-180899 & UG-180900).

¹⁸¹ Baldwin, Exh. SMB-1T at 27:17-18.

¹⁸² Id. at 27:18-28:1.

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The threshold PSE uses to qualify a customer for disconnection for nonpayment is a balance that is greater than \$70. Between 2014 and 2019, the average amount owned at disconnection dropped from \$414.70 to \$294.95. 183 Additionally, data from PSE shows similar numbers of disconnections as avoided disconnections due to payment received through field collections. Through Get to Zero, PSE intends to reduce the number of field collections. Depending on customer comfort with automated processes implemented to replace field collections, the number of disconnections for non-payment may increase. 185 Moreover, customers may be harmed due to an inability to navigate the automated system if human interactions are excluded through Get to Zero. 186 This result would not be in the public interest.

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To avoid unnecessary harm, PSE should work with its advisory groups to identify information to be reported to the Commission regarding field payments, remote disconnections, and payments through automated channels. Tracking disconnection and avoided disconnections will help the Commission and stakeholders evaluate the impact of Get to Zero on disconnections.¹⁸⁷

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Similarly, PSE should report the numbers of deferred payment arrangements that are entered into through Get to Zero and outside of Get to Zero. This might be defined as arrangement of payment options through digital self-help channels or through customer service representatives. PSE should work with its advisory group to examine what factors make deferred payments successful.

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¹⁸³ *Id.* at 28:5-8 (Table 5).

¹⁸⁴ *Id.* at 29 (Table 6), 30 (Table 7).

¹⁸⁵ Baldwin, Exh. SMB-1T at 30:2-4.

¹⁸⁶ *Id.* at 31:4-6.

¹⁸⁷ Id. at 31:8-12.

VI. THE COMMISSION SHOULD NOT ALLOW PSE TO CHARGE CUSTOMERS FOR ITS IMPRUDENT INVESTMENT IN AMI

PSE plans to spend \$473 million to replace its entire Automatic Meter Reading (AMR) system with an Advanced Metering Infrastructure (AMI) system over approximately six years. ¹⁸⁸ The existing AMR system is still functioning and had several years left of depreciable life. ¹⁸⁹ In its Business Case for the AMI project, PSE overstated the benefits and understated the costs of the full AMI deployment. ¹⁹⁰ The actual benefits of the AMI deployment do not exceed the actual costs to PSE's customers. Less costly options were available to PSE in continuing to operate the existing AMR system and to achieve similar conservation voltage reduction (CVR) outcomes it claims as a benefit of its AMI investment. ¹⁹¹ Therefore, Commission should not allow PSE to charge ratepayers for the almost half a billion dollars in capital and return on investment that PSE plans to spend on the wholesale AMR system replacement with AMI.

102. If the Commission chooses to allow cost recovery of PSE's AMI deployment, the Commission should disallow cost recovery for the \$126.8 million in book value of the existing metering system replaced prematurely to avoid forcing customers to pay for two metering systems—the new AMI system and the undepreciated legacy AMR system that PSE chose to replace. 192 Further, the Commission should not allow PSE to collect \$62.5 million in carrying

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¹⁸⁸ See Prefiled Rebuttal Testimony of Catherine A. Koch, Exh. CAK-6Tr, at 4:7-5:6; Prefiled Direct Testimony of Catherine A. Koch, Exh. CAK-1Tr at 26:5; Koch, CAK-4r at 1; Koch, TR. 282-88.

¹⁸⁹ See Koch TR. at 291:14-294:19; Prefiled Response Testimony of Paul J. Alvarez, Exh. PJA-1T at 10 (citing Alvarez, Exh. PJA-5, PSE Response to Public Counsel Data Request No. 146, Attachment A, lines 68 (electric), 76 (gas), & 91 (AMR nodes).

¹⁹⁰ See Alvarez, Exh. PJA-1T at 5-21.

¹⁹¹ *Id.* at 11-17.

¹⁹² *Id.* at 6-7; see also Alvarez, Prefiled Cross-Answering Testimony of Paul J. Alvarez, Exh. PJA-8T at 5-6.

charges on the legacy AMR assets that are no longer in service but remain in rates due to the premature removal. 193

In addition, PSE should be held accountable for all available benefits of the AMI deployment, including those discussed in the Get to Zero program. A requirement to report the benefits from AMI annually for five years after PSE achieves full deployment would serve to hold PSE accountable for delivering benefits to customers.

104. The Commission also should take steps to make distribution planning and capital budgeting more transparent and stakeholder-engaged. 194 An approach similar to the Commission's integrated resource planning process would help discourage similar imprudent investment in smart-grid technology in the future.

A. Legal Standard for Cost Recovery

105. Regulated public service companies bear the burden of proof that their decisions are prudent, just as they are required to demonstrate generally that their proposed rates are just and reasonable reflecting capital expenditures that are used and useful to end-users. ¹⁹⁵ In the instant case, the Company, PSE, bears the burden of demonstrating that its decision to replace fully its existing AMR metering system with an AMI system over six years, as opposed to other alternatives, was prudent with respect to recovery of the associated costs—\$473 million—from Washington ratepayers. ¹⁹⁶

¹⁹³ See id.

¹⁹⁴ See id. at 21-23.

¹⁹⁵ WUTC v. Pacificorp, Docket UE-152253, Order 12 (2016 WL 7245476) (Sept. 1, 2016) (citing WUTC v. Cascade Nat'l Gas Corp., Docket UT-941408, Third Supplemental Order (Oct. 30, 1995)); see also RCW 80.04.130(4).

¹⁹⁶ WUTC v. Pacificorp, Docket UE-152253, Order 12 (2016 WL 7245476) (Sept. 1, 2016).

106. The Commission has often cited the prudence legal standard as: "What would a reasonable board of directors and company management have decided given what they knew or reasonably should have known to be true at the time they made a decision?" In other words, the analysis should not use the benefit of hindsight in evaluation of PSE's decision to pursue a full replacement of the legacy AMR system with the AMI system. Moreover, the prudence standard applies both to the question of need and the appropriateness of the substantial capital investment in the AMI system. 198

107. The Commission in the past has considered three factors in evaluating whether a Company's decision was prudent: 1) if the initiation of the project was prudent 2) if the continued construction of the project was prudent and 3) if the associated expenses were prudently incurred. ¹⁹⁹ In other words, the examination of prudence on a specific capital expenditure is not limited to a single point in time, but is considered in the continuum of the specifics of the action. ²⁰⁰

B. PSE's Investment to Implement a Full Replacement of the Existing AMR System with AMI Was Not Necessary to Address Alleged Obsolescence of the Existing AMR System

108. To justify its six-year expenditure of \$473 million to replace the existing AMR metering system with AMI, PSE claims that the AMR system was obsolete and failing to an unreasonable degree, that certain new equipment was discontinued and not obtainable, and that certain devices

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²⁰⁰ *Id*.

¹⁹⁷ *Id.* (citing *WUTC v. Puget Sound Power & Light Co.*, Docket No. U-83-54, Fourth Supplemental Order at 32 (Sept. 28, 1984)).

¹⁹⁸ Id.
199 Id. (citing WUTC v. Wash. Water Power Co., Docket No. U-83-26, Fifth Supplemental Order (Jan. 19, 1984)).

required reprogramming.²⁰¹ However, in fully replacing the AMR system with AMI, PSE removed functioning in-service AMR equipment with low failure rates and several years of undepreciated asset life remaining.²⁰² PSE was still able to obtain allegedly discontinued replacement AMR equipment well after PSE began deploying AMI equipment in 2018²⁰³ and was able to reprogram devices at a proportionally small cost.²⁰⁴

109. PSE describes its AMI investment to replace its AMR system as one of several programs that are aimed at supporting a reliable and resilient grid. PSE's AMR system was installed between 1998 and 2001 across its service territory that now serves 1.2 million electric customers and 800,000 gas customers. Despite nine years of undepreciated asset life remaining for AMR electric meters and 14 years for AMR gas modules, PSE began replacing these assets in 2018 claiming design life of only 15 years and that the entire AMR system is obsolete. PSE describes how the contractual life of AMR gas meters is 15 years, but "the true operational life is unknown." PSE

110. In 2013 PSE assessed the performance of its AMR system and observed the following annual failure rates:²⁰⁹

Network equipment 4%
Electric meters 1.6%

²⁰¹ See Prefiled Rebuttal Testimony of Catherine A. Koch, Exh. CAK-6Tr, at 4:7-5:6; Prefiled Direct Testimony of Catherine A. Koch, Exh. CAK-1Tr at 26:5; Koch, CAK-4r at 1; Koch, TR. 282-88.

²⁰² See Catherine A. Koch, TR. 294:11-19; Koch, Exh. CAK-6Tr at 10:1-4; Alvarez, Exh. PJA-5.

²⁰³ See Koch, Exh. CAK-8X; Koch, TR. 282:21-287:2.

²⁰⁴ See Koch, Exh. CAK-9X; Koch, TR. 288:3-17.

²⁰⁵ Prefiled Direct Testimony of Catherina A. Koch, Exh. CAK-1Tr at 22:13-17.

²⁰⁶ Koch, Exh. CAK-1Tr at 26; Koch, Exh. CAK-4r at 4:11-12.

²⁰⁷ *Id*; Alvarez, Exh. PJA-5, PSE Response to Public Counsel Data Request No. 146, Attachment A, lines 68 (electric), 76 (gas), & 91 (AMR nodes). Based on undepreciated balances as of 2018 divided by annual depreciation amounts of 8.99 years and 13.7 years for electric meters and gas AMR modules, respectively. *See* Alvarez, Exh. PJA-5, Attachment A. In Public Counsel exhibit PJA-5, PSE demonstrates that it is depreciating AMR meters over a mere 12 years as shown by dividing the original cost of the assets by the annual depreciation. *See id*.

²⁰⁸ Koch, Exh. CAK-4, Appendix. B at 4.

²⁰⁹ Koch, Exh. CAK-4r at 4-5; Koch, TR 288:18-289:20; Koch, Exh. CAK-4, Appendix B at 3.

• Gas AMR batteries reaching "end of life" 36%

• Commercial AMR gas modules 11%

• All gas modules 2%

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Thus, with the possible exception of gas AMR batteries and commercial AMR gas modules, failure rates were less than five percent annually for network equipment and two percent annually or less for gas modules and electric meters, respectively. ²¹⁰ These failure rates hardly indicate that the entire system is failing. To the contrary, these failure rates indicate that PSE's existing meter equipment was performing well for equipment designed to last 20 to 30 years, and the AMR nodes were performing as expected for equipment designed to last 10 years on average with an expected five percent annual failure rate. ²¹¹ PSE could have replaced its batteries instead of replacing its entire metering system. Nevertheless, as PSE confirmed during cross examination, it proceeded with its AMI implementation and replaced AMR equipment despite it being functional and in use prior to removal. ²¹² These failure rates for PSE's AMR equipment are not significant and did not warrant immediate action for wholesale removal of the AMR system and abandonment of \$126.8 million of assets still in use and far from being fully depreciated. ²¹³

To lend support to its claim that "the AMR network is failing and deficient," PSE states that the AMR system "requires 50,000-60,000 meters to be manually read monthly, which is an additional monthly expense that would not be required for a properly functioning system." At the same time, PSE did not include the cost of the 50,000-60,000 manual meter reads in its

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²¹⁰ See id.

²¹¹ Alvarez, Exh. PJA-1T at 8; Alvarez, Exh. PJA-5. The low failure rates PSE provides in its testimony indicates at least 20 to 30 years of useful life. *See id*.

²¹² Koch, TR. 294:11-19.

²¹³ Alvarez, Exh. PJA-1T at 10.

²¹⁴ Koch, Exh. CAK-6Tr at 5-6.

business case calculation of the cost of maintenance obligations for continuing to operate the AMR system. ²¹⁵ PSE explains that because Landis + Gyr owned all the AMR equipment and managed the system for PSE, PSE "would have paid the same . . . whether they provided an automated read or a manual read." ²¹⁶ Yet PSE references the need to perform 50,000-60,000 manual meter readings monthly as one of its reasons for fully replacing the AMR system.

113. PSE also claims that the AMR system was obsolete because of an "inability to obtain new electric replacement equipment" due to the equipment being "discontinued." PSE began replacing the AMR network with AMI equipment in 2016, and began meter installation in 2018.

In response to Public Counsel Data Request 256, PSE provided a list of the five AMR equipment items that were discontinued by PSE's contractor, Landis + Gyr.²¹⁹ When asked to provide documentation of the discontinuation, PSE provided notices of "End-of-Sale" and a "Last Time Buy Opportunity" for the five equipment items.²²⁰ For one item, the Focus AX S4, a notice issued on May 29, 2019, states that the item was "sunsetting" but that the window of time to buy new units was open and would not expire until December 1, 2019.²²¹

For a second item, the Focus AL 1 way, a notice dated February 13, 2019 states that effective January 18, 2019, no new units would be produced but that Landis + Gyr would "work on a customized plan to support maintenance and growth operations for each customer." For a

²¹⁵ Koch, Exh. CAK-4r at 7-8; Koch, Exh. CAK-10X.

²¹⁶ Koch, Exh. CAK-10X; Koch, TR. 289:21-291:7.

²¹⁷ Koch, Exh. CAK-6Tr at 4:15-17.

²¹⁸ See Koch, Exh. CAK-9X; Koch, TR. 283:6-8.

²¹⁹ See Koch, Exh. CAK-8X.

²²⁰ Id.

²²¹ *Id.* at Attachment A; Koch, TR. 284:14-285:4.

²²² *Id.* at Attachment B; Koch, TR. 285:6-19.

third item, the Focus AX USC, a notice dated September 6, 2019, announces a last opportunity to buy the item that would expire on December 1, 2019.²²³ A fourth item, the Series 4 kV2c, is dated January 6, 2020, and announces a last time to buy that would expire March 31, 2020.²²⁴ For a fifth item, the Gridstream RF, a notice announces end-of-sale effective March 31, 2012, and for a sixth, the Elster A2, a notice announces end-of-availability in 2016.²²⁵

The last two of these five items appear to have been phasing out in 2012 and 2016, respectively, and yet PSE was somehow able to manage continued use of its AMR system prior to beginning its AMI meter replacements in 2018. And for the other four discontinued items, replacements were available at least through 2019, and for one item, well into 2020. In each of the notices, contractor, Landis + Gyr offered to provide continued support and maintenance for these equipment items.

Based on the information in these notices attached to PSE's response to Public Counsel Data Request No. 256, the AMR system was not failing when it began its AMI implementation in 2016 and replacement of electric meters and gas modules in 2018. Nevertheless, PSE pursued replacement of its entire AMR system with an average annual replacement rate of 195,000 electric meters and 175,000 gas modules each year from 2018 through 2023. PSE's full AMI implementation will remove AMR assets with a net book value totaling approximately \$127 million. PSE intends for this \$127 million worth of unnecessarily stranded assets to go into customer rate base. Public Counsel estimates that these stranded assets will incur carrying

116.

²²³ *Id.* at Attachment C; Koch, TR. 285:20-286:5.

²²⁴ *Id.* at Attachment E; Koch, TR. 286:6-17.

²²⁵ *Id.* at Attachments D and F.

²²⁶ Koch, Exh. CAK-4r at 3.

²²⁷ Koch, TR. 291-93; Koch, Exh. CAK-11X; Koch, Exh. CAK-13X.

charges of \$62.5 million absent Commission action.²²⁸ Carrying charges include 1) PSE's authorized return on equity, 2) federal income taxes on profits, 3) state sales taxes on revenues, and 4) interest expense.²²⁹ Thus, PSE intends to recover a total of approximately \$189 million for metering equipment assets not in use, in addition to similar costs for the new AMI system. In effect, PSE's customers would pay for two metering systems, while only one is in use.

PSE also claims that AMR system is obsolete because of "the need to perform reprogramming of devices because different network equipment must be installed." However, in 2017, which was the last full year before PSE began to install AMI meters, the total cost of reprogramming for that year was only \$139,000—a small amount considering the alleged widespread failure of the entire AMR system.²³⁰

AMR metering system was still functioning and, at most, was failing at rates lower than five percent for residential customers. For units that needed it, reprogramming or replacements appear to have been readily available at relatively low cost. It is unreasonable and thus imprudent to replace 100 percent of the system before it is warranted at a cost of \$473 million to customers.

C. PSE Understates Costs and Overstates Benefits of its AMI Project in its Business Case to Justify its Imprudent Investment in AMI

120. In its business case for the AMI investment, PSE understates costs and overstates benefits of the AMI project. PSE uses this flawed analysis to justify an imprudent capital investment in AMI that will disadvantage customers by unnecessarily inflating rate base.²³¹ PSE estimates

²²⁸ See Alvarez, Exh. PJA-3; Alvarez, Exh. PJA-1T at 6-7; Koch, Exh. CAK-11X; Koch, Exh. CAK-13X; Koch, TR. 291:21-294:19.

²²⁹ Alvarez, Exh. PJA-1T at 9.

²³⁰ Koch, Exh. CAK-9X; Koch, TR. 288:8-17.

²³¹ Alvarez, Exh. PJA-1T at 20.

costs of its AMI deployment at \$473 million²³² and benefits at \$668 million.²³³ Subtracting this cost value from the benefit value yields a net benefit of \$195 million.²³⁴

However, the AMI business case cost figure of \$473 million omits the \$127 million net book value of the legacy AMR equipment abandoned in the AMI implementation and \$62.5 million in associated carrying charges.²³⁵ Also, the \$668 million benefits sum improperly includes 1) \$230 million of avoided costs PSE claims would otherwise have been incurred in maintaining the existing AMR system; and 2) \$416 million in CVR benefits that could have been attained through a more selective placement of fewer smart meters at a lower cost.²³⁶

1. PSE underestimated costs of its AMI investment

deployment in two ways. First, PSE omitted the cost of the approximately \$127 million book value of the legacy meter equipment abandoned to make way for the AMI system. ²³⁷ Second, PSE did not include carrying charges that customers will pay on the abandoned legacy AMR meter equipment that is not fully depreciated. ²³⁸ These carrying charges include 1) PSE's authorized return on equity, 2) federal income taxes on profits, 3) state sales taxes on revenues, and 4) interest expense. ²³⁹ Public Counsel estimates these carrying charges to amount to an approximate \$62.5 million omission from the PSE Businesses Case. ²⁴⁰ Thus, the book value of

²³² Koch, CAK-4, Appendix A (AMI Business Case) at 5-6.

²³³ *Id.* at 7.

²³⁴ Alvarez, Exh. PJA-1T at 5:14-17.

²³⁵ Alvarez, Exh. PJA-1T at 6.

²³⁶ *Id.* at 12-16.

²³⁷ *Id.* at 6-7.

²³⁸ *Id.* at 6-7, 9.

²³⁹ *Id*.

²⁴⁰ *Id*.

the removed AMR assets and their associated carrying charges totals approximately \$189 million that were omitted from PSE's business case cost calculation for the AMI project.²⁴¹

- 123. With regard to the book value of the legacy AMR equipment replaced, PSE estimates that as of June 30, 2019, \$102.8 million was invested for electric meters, \$23.8 million for gas meter data transmitters, and \$0.2 million for AMR nodes, for a total of \$126.8 million. ²⁴² Public Counsel witness Paul Alvarez estimates that the \$126.8 million net book value of removed AMR equipment amounts to about \$90.66 per electric customer and \$28.45 per gas customer, not including the \$62.5 million in carrying charges those customers would pay in addition to these capital balances. ²⁴³
- 124. Carrying charges are costs that customers must pay to cover a utility's investment financing costs, including its return on equity, interest expense on debt, federal income taxes on utility profits, and state sales taxes on revenues.²⁴⁴ Carrying charges are a part of the costs that utility customers pay in rates. Thus, carrying charges should be included in an accurate estimation of costs and benefits of the AMI investment.²⁴⁵
- In calculating \$62.5 million in carrying charges associated with the \$126.8 million of stranded AMR assets, Public Counsel witness Paul Alvarez considered the remaining years of life on these assets, their remaining book value, and PSE's own revenue requirements calculations. Alvarez estimated total revenue requirements over the remaining useful lives of the assets removed, and then subtracted the return of capital (depreciation expense) to

48

²⁴¹ Id.

²⁴² Alvarez, Exh. PJA-4 (PSE Response to Public Counsel Data Request No. 70 (First Revised Response) (Nov. 22, 2019)).

²⁴³ Alvarez, Exh. PJA-1T at 7.

²⁴⁴ *Id.* at 9.

²⁴⁵ *Id.* at 9-10.

²⁴⁶ Alvarez, Exh. PJA-5.

determine the amount customers will pay over and above the return of capital. Mr. Alvarez took the following steps in estimating revenue requirements by:

- adding the requested rate of return (9.8 percent) on the equity portion of the rate base (48.5 percent);
- adding federal income taxes on that return (21 percent);
- adding the interest expense (5.57 percent weighted average cost of debt) on the debt portion of the rate base (51.5 percent); and
- grossing the resulting amount by the state sales tax (4.52 percent). 247

After completing this process for the first year, Mr. Alvarez repeated it for every subsequent year of the remaining undepreciated asset lives, which was nine years for the electric meters removed and 14 years for both the gas meter data transmitters and AMR nodes,²⁴⁸ and then reducing the size of the rate base each year by the amount of the previous year's depreciation until the equipment was fully depreciated (*i.e.*, \$0 book value remaining).²⁴⁹

In sum, PSE's cost estimate for the AMI project should be increased to include the value of equipment removed from service prematurely and the carrying charges on this value. The value of the equipment removed from service prematurely should be \$126.8 million, and carrying charges should be an additional \$62.5 million, for a total increase of \$189.3 million, which is a 40 percent increase over PSE's AMI cost estimate of \$473 million.

2. PSE overstates benefits of its AMI investment

127. PSE's AMI business case identifies three sources of benefit: 1) \$436 million in CVR; 2) \$1.5 million from Distribution Automation; and 3) \$230 million of avoided costs that it would

²⁴⁷ Alvarez, Exh. PJA-1T at 10-11 (citing Alvarez, Exh. PJA-5).

²⁴⁸ Alvarez, Exh. PJA-5.

²⁴⁹ Alvarez, Exh. PJA-1T at 10-11.

otherwise incur to maintain its AMR system if it had chosen not to implement AMI.²⁵⁰ However, these estimates overstate the benefits of AMI in two ways.

128. First, full scale AMI deployment to replace the entire existing AMR system is not necessary to secure the CVR benefits which PSE attributes to AMI. PSE conducted a CVR Pilot on Mercer Island in 2013 to 2014 that included 10 circuits as part of a distribution efficiency initiative. ²⁵¹ In this Pilot, PSE secured CVR benefits with just three smart meters per circuit that are substantially similar to those PSE claims for its full-scale AMI project.

PSE's proposed AMI deployment will install about 1,000 smart meters per circuit. Public Counsel calculated this value by dividing PSE's 1,135,000 customers by 1,118 circuits based on information in PSE's response to Public Counsel Data Request No. 85, subpart (d). As described in greater detail in the testimony of Public Counsel witness Paul Alvarez, the goal of CVR is to reduce voltage all along the circuit without violating the minimum 110-volt limit at the end of the circuit. To implement CVR, a utility needs a way to measure voltage throughout a circuit's length to take advantage of voltage reduction opportunities while simultaneously ensuring that voltage does not drop below the 110-volt limit at the end of the circuit. Section 255

While line voltage measurement devices such as line sensors have been available to utilities for quite some time, smart meters can also measure voltage. Thus, utilities may employ smart meters as line voltage measurement devices to achieve CVR. PSE used smart meters in

²⁵⁰ Koch, Exh. CAK-4, Appendix A at 8; see also Koch, Exh. CAK-14X, item b.

²⁵¹ Alvarez, Exh. PJA-1T at 12.

²⁵² Id.; Koch, TR. 298:20-299:1.

²⁵³ *Id.* (citing Alvarez, Exh. PJA-6, PSE Response to Public Counsel Data Request No. 85, subpart (d)).

²⁵⁴ Alvarez, Exh. PJA-1T at 13-14.

²⁵⁵ Id

precisely this manner in its Mercer Island CVR Pilot, installing 30 meters to measure the voltage on ten circuits, i.e., three meters per circuit, to secure the 1.09 percent conservation impact. 256

131. More smart meters along a circuit enable greater energy reductions, but the marginal improvement from full smart meter voltage monitoring versus more strategic smart meter placement is tiny relative to the dramatic incremental costs of a full smart meter deployment.²⁵⁷ For example, PSE assumed a 1.14 percent reduction in energy use from CVR in its AMI business case. 258 This is a 4.6 percent improvement over the results observed in the Mercer Island CVR Pilot of 1.09 percent reduction in energy use. PSE estimates that CVR benefits from full smart meter deployment will be \$436.41 million.²⁵⁹ Because the energy use for a full deployment of AMI is assumed to be 1.14 percent less than typical voltage used, and this is only a 4.6 percent improvement over the 1.09 percent reduction in energy use observed in the Mercer Island Pilot, the \$436.41 in CVR benefits that PSE calculates minus the 4.6 percent improvement could still be derived from AMI implementation to the same extent as that observed in the Mercer Island Pilot.

The \$436.41 million of CVR benefits PSE claims reduced by 4.6 percent is \$416.34 in benefit that PSE could have derived from installation of a far fewer number of AMI meters per circuit. In other words, 95.4 percent of the \$436.41 million could have been obtained with a significantly less extensive deployment of AMI meters. 260 Thus, PSE could have secured 95.4 percent of the CVR benefits of a full smart meter deployment with just a few smart meters per

132.

(206) 464-7744

²⁵⁶ Alvarez, Exh. PJA-7 at 7 ("There are 30 meters placed on Mercer Island for the 10 feeders... on the island.").

²⁵⁷ *Id.* at 15.

²⁵⁸ Alvarez, Exh. PJA-6, PSE Response to Public Counsel Data Request No. 85, Attachment A, tab "Assumptions," cell C28.

²⁵⁹ Koch, Exh. CAK-4, Confidential Appendix G, tab "Scope Summary," cell D77.

²⁶⁰ Alvarez, Exh. PJA-1T at 16.

circuit, or even a few dozen smart meters per circuit.²⁶¹ For this reason, it is inappropriate for PSE to claim that \$436.41 million of CVR benefits are derived from full AMI deployment when substantially the same benefit could have been derived from a significantly smaller deployment.

Second, PSE counts as a benefit of the AMI deployment the avoided costs it would otherwise have incurred if PSE had pursued the option of continuing to use the AMR metering system. PSE evaluated three AMI options for replacing its AMR system, including deployments over six years starting immediately, ten years starting immediately, and five years but starting in 2023 to coincide with the expiration of PSE's existing meter reading managed services contract.²⁶² PSE also estimated the cost of continuing its AMR system. However, when comparing alternatives, it is inappropriate to consider avoided costs of paths not chosen as benefits. Even if it were appropriate to consider avoided costs as benefits, PSE did not do the same for the option to continue the AMR system, which would have avoided the \$473 million cost of implementing AMI. 263 PSE should have uniformly evaluated the costs and benefits of each metering option on a stand-alone basis, and selected the best option on behalf of customers. In its options analysis, PSE compared the AMI alternatives to continuing AMR. PSE estimated the cost of continuing the AMR system at \$230.3 million.²⁶⁴ PSE estimated the cost of its AMI deployment at \$472.7 million. PSE's analysis of the AMI option should be corrected to remove the \$230 million of AMR costs from the benefits of AMI, just as PSE's AMR cost estimate does not include the benefit of avoided AMI option costs. This would correct the over-inflated

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52

(206) 464-7744

 $^{^{261}}$ Id

²⁶² Alvarez, Exh. PJA-1T at 16.

²⁶³ *Id.* at 12-13.

²⁶⁴ Koch, Exh. CAK-4, Confidential Appendix G, tab "Scope Summary" cell D 76.

benefits calculation of the AMR benefits.²⁶⁵ If PSE had done so, it may have chosen the \$230 million AMR continuation option over the \$473 million option of full AMI deployment.

134. In sum, PSE's benefits calculation should be reduced by the overstated CVR benefits attributed to the full AMI deployment and the inappropriate application of "Avoided AMR Investment." Public Counsel estimates that removing the overstated CVR benefits and the inappropriately included avoided AMR cost would decrease the total benefits of the AMI system by \$646.6 million. These benefit reductions, combined with the \$189 million of costs omitted from PSE's \$473 million AMI cost estimate, paint a very different and more accurate picture of the costs and benefits of PSE's AMI deployment. PSE's decision to deploy AMI was not prudent, particularly when compared to the \$230 million cost to continue the AMR system. ²⁶⁶

D. All Cost-Saving Benefits of PSE's AMI Investment Should Return to Customers

all cost saving benefits of the AMI deployment should likewise go back to customers through reduction in revenue requirement, including the benefits PSE discusses in its "Get to Zero" program. Despite attributing various cost-saving benefits of PSE's AMI investment in its discussion of the Get to Zero program, PSE states that it is not willing to commit to reductions in revenue requirement for these benefits. PSE claims that the Commission's ongoing AMI Rulemaking under Docket U-180525 prevents it from quantifying these benefits at this time.

However, despite pendency of the AMI rulemaking, PSE was able to estimate these benefits in CAK-4, Appendix G, for remote disconnections and reconnections and move-ins and

²⁶⁵ Alvarez, Exh. PJA-1T at 19.

²⁶⁶ Id.

²⁶⁷ See Alvarez, Exh. PJA-8T at 3-4.

²⁶⁸ Koch, Exh. CAK-15X; Koch, TR. 300:11-301:18.

move-outs made possible by the AMI system. PSE discusses these alleged cost-saving benefits from its AMI investment in its "Get to Zero" program. PSE insists that it should be responsible for maximizing smart meter benefits. PSE's estimation of these AMI benefits belies PSE's claimed inability to quantify the same benefits at this time. Indeed, PSE can and does quantify estimates for AMI benefits in its "Get to Zero" program, and it should return those benefits to customers through a reduction in revenue requirement. A requirement to report the benefits from AMI annually for five years after PSE achieves full deployment would serve to hold PSE accountable for delivering benefits to customers.

E. Public Counsel Recommends Disallowance of PSE's AMI Investment Because the Company Failed to Present an Adequate Business Case

- 137. The Commission should disallow \$473 million for costs PSE plans to spend imprudently to implement its AMI system because:
 - PSE did not consider the \$189 million cost of abandoned equipment customers must pay in making its decision.
 - PSE improperly attributed \$416 million in CVR benefits to its full AMI deployment, even though PSE's own CVR Pilot indicated it could have secured these benefits through selective smart meter placement at a fraction of the cost.
 - PSE did not conduct stand-alone benefit-cost analyses on the various metering options available, further biasing its decision to install AMI.
 - After making adjustments for the artificial inflation of benefits and omission of costs, customers will pay \$641 million for the AMI investment, whereas the alternative fixes to PSE's existing AMR system would have only cost \$230 million.
- 138. PSE has not demonstrated that its decision to replace fully its existing AMR metering system with an AMI system, as opposed to other alternatives, was prudent with respect to recovery of the associated costs—\$473 million plus an additional \$189 million in stranded assets

 $^{^{269}}$ *Id*

and associated carrying charges—from Washington ratepayers.²⁷⁰ The record shows that PSE's existing AMR system was functioning at low failure rates and system reprogramming and other maintenance costs were low, if not nonexistent, prior to commencing the AMI deployment. This information was known at the time the AMI project was initiated and throughout the multi-year process of the AMI rollout. A reasonable board of directors and company management would understand that the AMI replacement was not necessary or appropriate at the substantial capital investment level of \$473 million in the AMI system.²⁷¹

The choices utilities make regarding grid investments and operation and maintenance costs impact customer rates. Less costly options were available to attain the outcomes PSE claims from AMI. PSE made the decision to invest in AMI at a faster pace than necessary and more extensively than necessary, despite the high book value of the existing metering infrastructure. PSE chose to pursue a much higher capital investment rather than the greatest value to customers. Unless and until PSE can show that the benefits to customers of the AMI deployment exceed the deployment's costs, the investment should not be included in customer rates.

If the Commission finds PSE's AMI deployment for cost recovery prudent, Public Counsel recommends the Commission disallow cost recovery for the \$126.8 million in book value of the existing metering system that was replaced prematurely and \$62.5 million in associated carrying charges. The Commission should not allow cost recovery of the stranded assets that exist solely because of PSE's choice to pursue a wholesale conversion to AMI at great cost to ratepayers. Appropriate accounting for this option would involve writing the book value

²⁷⁰ WUTC v. PacifiCorp, Docket UE-152253, Order 12 (2016 WL 7245476) (Sept. 1, 2016).

²⁷¹ *Id*

of the existing metering system down to zero with the offset being a reduction in PSE income as an extraordinary expense.²⁷²

141. Public Counsel also recommends that the Commission hold PSE accountable for delivering benefits to customers by requiring PSE to report the benefits from AMI annually for five years after PSE achieves full deployment. The Commission should also establish a proceeding to consider how to improve the distribution investment decisions of Washington's regulated utilities through the implementation of a transparent, stakeholder-engaged distribution planning and capital budgeting process under regulatory review. This would increase the alignment of utility distribution investment decisions with state, community, and customer goals. The Commission's experience with its integrated resource planning process could help inform the design of a distribution planning and capital budgeting process and discourage imprudent investment in smart-grid technology in the future. 273

VII. WATER HEATER RENTAL PROGRAM IS SUBJECT TO A SEPARATE DOCKET AND DOES NOT NEED TO BE DECIDED IN THIS CASE

142. PSE leases water heating equipment to customers under a tariff that has been in existence since 1965, but is closed to new customers.²⁷⁴ The program includes both residential and commercial rentals and has experienced annual declining participation rates.²⁷⁵ In this case, PSE submitted testimony that it plans to cease providing the service or to sell the service if the

²⁷² Alvarez, Exh. PJA-1T at 25.

²⁷³ *Id.*; *see also* Comments on behalf of Public Counsel, from Carla A. Colamonici, U-161024, (May 17, 2018) (In Docket U-161024, Public Counsel recommended incorporating distribution planning into the Commission's integrated resource planning process.).

²⁷⁴ Prefiled Direct Testimony of William T. Einstein, Exh. WTE-1CT at 2:14-15, 2:21; Prefiled Response Testimony of Carla A. Colamonici, Exh. CAC-1T at 4:16-5:3. Ms. Colamonici is no longer an Analyst with Public Counsel. Ms. Laycock, Regulatory Analyst, adopted Ms. Colamonici's testimony in this proceeding. Prefiled Response Testimony of Sarah E Laycock, Exh. SEL-1T.

²⁷⁵ Colamonici, Exh. CAC-1T at 5:1-3.

Company can find a buyer.²⁷⁶ Public Counsel witness Ms. Colamonici discussed the water heater leasing program, including the amount of depreciated versus non-depreciated heaters, options PSE should provide to customers being served with fully depreciated heaters, and treatment of gain on sale.²⁷⁷

143. On February 19, 2020, PSE filed an application asking the Commission to determine that the lease program property is no longer useful or, alternatively, to authorize the sale of the program. ²⁷⁸ That docket is pending before the Commission, and while parties presented testimony regarding the program and its potential pending sale, the Commission does not need to decide the issue in this case.

VIII. GREEN DIRECT PROGRAM

The Green Direct Program is a voluntary long-term renewable energy program for large customers with usage over 10,000 MWh per year. The program allows customers to choose contracts between 10 and 20 years for access to renewable energy. PSE executed two Open Seasons to procure resources needed for the Program, which resulted in the acquisition of two Purchase Power Agreements (PPAs). The first Open Season resulted in a 43 aMW Skookumchuck Wind Project in Lewis County, and the second was a 42 aMW Lund Hill Solar Project in Klickitat County. 280

²⁷⁶ Einstein, Exh. WTE-1CT at 5:3-19.

²⁷⁷ Colamonici, Exh. CAC-1T at 7:17-12:2.

²⁷⁸ In re the Application of Puget Sound Energy for an Order Determining Property is no Longer Necessary or Useful or Alternatively Authorizing the Sale of Puget Sound Energy's Water Heater Rental Service, Docket UG-200112.

²⁷⁹ Colamonici, Exh. CAC-1T at 12:4-6.

²⁸⁰ *Id.* at 12:17-18, 13:1-2.

PSE expected the Skookumchuck Wind Project to be completed in the first quarter of 2019; however, the project has not come online due to delays. The Lund Hill Project is also not yet in service, and is anticipated to be completed in 2021. PSE included both PPAs in this rate case. While reasonable and prudent PPAs are included in rates, ratepayers should not incur the cost of PPAs that are not yet benefitting customers. Because neither PPA is providing benefits to customers Public Counsel recommends that they be excluded until they are in service and delivering energy.

A. Liquidated Damages

authorizing deferral accounting for liquidated damages under Schedule 139. PSE's accounting petition was consolidated with its general rate case. PSE seeks authority to defer liquidated damages and use them to offset costs which are not already covered by the tariff. In particular, PSE is proposing to acquire Renewable Energy Credits (RECs) to cover the period until the Skookumchuck Project comes online and to offset the cost of those RECs with the liquidated damages. To the extent that the liquidated damages exceed the cost of RECs, PSE proposes to use the liquidated damages to offset other unanticipated costs, and lastly, to offset future tariff rates. PSE

²⁸¹ *Id.* at 13:1-11.

 $^{^{282}}$ WUTC v. Puget Sound Energy, Dockets UE-190529 & UG-190529, Order 06: Consolidation Order (Feb. 5, 2020).

²⁸³ Petition of Puget Sound Energy for an Accounting Order at ¶ 5, *In the Matter of the Petition of Puget Sound Energy For an Order Authorizing Deferral Accounting for Liquidated Damages Under Schedule 139 Voluntary Long Term Renewable Energy Purchase Rider* (2019) (Dockets UE-190991 and UG-190992).

 $^{^{284}}$ *Id.* at ¶ 10.

 $^{^{285}}$ *Id.* at ¶ 11.

The liquidated damages resulted from delays in completing the Skookumchuck Project.

While no liquidated damages have been incurred for the Lund Hill Project, the PPA contains similar liquidated damages clauses. 286

The Commission has expressed support for including liquidated damages clauses in PPAs,²⁸⁷ but it appears that the Commission has not determined how such amounts should be treated once received. The Wisconsin Public Service Commission considered and approved a proposal to refund amounts to customers equal to liquidated damages received by the regulated utility.²⁸⁸ By providing refunds to customers in the amount of the liquidated damages, the Wisconsin Public Service Commission reduced the costs to ratepayers.

Public Counsel believes the liquidated damages should not be used to purchase RECs or be deferred for theoretical future expenses related to the Green Direct Program. Rather, these funds should be used to offset program costs and decrease Schedule 139 rates for customers.²⁸⁹

This result would be consistent with the treatment used by the Wisconsin Public Service Commission and would be in the public interest.

IX. PUBLIC COMMENT

150. Puget Sound Energy's customers report that the company's repeated rate increases continue to create a real and substantial impact on their lives. The force of this continuing impact must factor into the Commission's deliberations as it considers whether a rate increase or rate decrease is necessary for PSE's electric operations, and the extent to which a rate increase may

 $^{^{286}}$ *Id.* at ¶ 8.

²⁸⁷ Spokane Energy, Inc. v. Washington Water Power Co., Docket U-86-114, Commission Order Granting Exceptions; Reversing Proposed Order; and Dismissing Complaint (April 22, 1987).

²⁸⁸ In re the Application of Wisconsin Pub. Serv. Corp. for Authority to Adjust Electric and Natural Gas Rates, 6690-UR-123, 2016 WL 3577406, at *2 (Wis. P.S.C. June 28, 2016).

²⁸⁹ Colamonici, Exh. CAC-1T at 16:3-6.

be necessary for PSE's natural gas operations. Many customers have submitted written comments and testified at public hearings in this proceeding, and describe the impact of rate increases and the concerns they have with rising energy costs.²⁹⁰

is the "only supplier for a necessary utility" in describing PSE increasing its rate despite a reduction in market price. ²⁹¹ One senior electric customer reports, "I try so hard to keep my electric bill down. I keep my temperature down to 59 degrees. I have had pneumonia four times just trying to keep it—keep the electric bill down. . . but it seems like each year the increase that PSE is granted, the rates go up even though I'm using less electricity. I'm trying so hard to go down, down, down and the rates are going up, up, up. So there's no way I can ever even come out ahead on this game." ²⁹²

increase. "Well, they just shut down our local billing station . . . I got to wrangle up the share of the bills from three other people who don't have much money. I know some people who have all their bills ready . . . but you know, that's not how it is for people who don't have a lot." A natural gas customer criticized high reconnection fees PSE charges to "the poorest of the poor" after a shutoff for inability to pay. She found it "beyond symbolic" for PSE to eliminate its own customer service centers and direct ratepayers needing in-person services to "payday loan stations." A commenter who was also a Technical Advisory Group member disputed PSE's

60

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²⁹⁰ Public Counsel has filed these comments in Offer of Public Comment Exhibit Bench No. BR-10, Public Comment Matrix Attachment.

²⁹¹ *Id.*, Kathy Preciado-Partida at 36-37 of the Public Comment Matrix Attachment; Public Comment Matrix; Preciado-Partida, TR. 95:19-20.

²⁹² D. Shaw, TR. 39:8-20.

²⁹³ Bruce Wilkinson, TR. 46:4-21.

²⁹⁴ Exh. BR-10, Claudia Riedener at 253-254 of the Public Comment Matrix Attachment; Riedener, TR. 73:5-12.

justification of shifting to such technology for customer service. Having closely observed the 2017 and 2019 IRP processes, he reported that "no customers asked for a better interface to Puget Sound Energy." He further noted, "(t)hese are the things that companies do to increase their efficiency and sometimes to actually reduce their work force." ²⁹⁵

153. To another customer, PSE's removal of its service centers "looks like additional efforts to eliminate the human element and the human interaction with customers," as he found when he "was unable to get anywhere" trying to engage PSE "regarding the public health safety of the systems and the personal safety of the homeowner." ²⁹⁶ Previous rate increases led one low-income customer's family to transition its household energy uses away from PSE as much as possible, but when PSE's bills stayed high, they had to pursue the company for "six months or more." They learned that PSE had been "guessing" what they owed, and despite contacting Commission staff, had yet to find resolution. ²⁹⁷

Customers submitting comments in these dockets also expressed concerns about the return PSE was seeking for its investors. One customer noted, "(a)nd, I don't understand why they get a rate of return that's so high in general."²⁹⁸ Another said that "for working families and people," rewarding PSE shareholders is "simply egregious, a slap in the face."²⁹⁹

As for the investments themselves, customers urged the Commission to examine the allocation to ratepayers of these costs, particularly PSE's Tacoma LNG facility. One was concerned that it would become a "stranded asset" if LNG use falls as climate change policies

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61

²⁹⁵ *Id.*, Kevin Jones at 20-21 of the Public Comment Matrix Attachment; Jones, TR. 114:11-14.

²⁹⁶ John Brottem, TR. 29:5-14.

²⁹⁷ Stephon Shelly, TR. 35:5-6, 37:3.

²⁹⁸ Wilkinson, TR. 46:21-22.

²⁹⁹ Exh. BR-10, Nathaniel Tillman at 163 of the Public Comment Matrix Attachment; Tillman, TR. 44:12-15.

progress, calling it "not a bet the PSE rate payers should be required to fund." ³⁰⁰ An 18-year-old commenter said, "to deny this rate increase is a kind of suggestion, I would say, to get them to reconsider the way that they've been conducting their business, as well as to consider whether natural gas is a sustainable option outside of the very short term." ³⁰¹

The robust attendance at the public comment hearings, the number of written comments, and the overall substance of comments make clear that customers are relying on the Commission to weigh PSE's rate requests carefully. One customer who has followed PSE's earlier rate cases, described the Commission as "the only thing that's standing between us and the worst abuses of a monopoly," urging, "you're regulators: regulate." 302 While this customer may have been expressing frustration, he highlights the important role the Commission plays. As rates continue to rise, customers find themselves in difficult situations, making it imperative that the Commission carefully consider each case and require the utility to meet its burden of proof.

X. CONCLUSION

\$36.7 million and increase natural gas rates by a modest \$5.8 million. In doing so, Public Counsel requests that the Commission adopt its recommendations regarding capital structure, return on equity, debt cost, and rate of return. Public Counsel recommends that the Commission deny PSE's request to use end-of-period rate base valuation and an attrition adjustment. PSE should return all of the EDIT to ratepayers and can do so without violating the IRS's normalization rules. The Commission should order PSE to share the costs of its incentive

³⁰⁰ Neal Anderson, TR. 124:20-21, 125:24-25.

³⁰¹ Aeden McCall, TR. 146:3-8.

³⁰² William Kupinski, TR. 58:25-59:1, 60:4.

program 50/50 between shareholders and ratepayers. And, the Commission should adopt Public Counsel's post-test year adjustments.

Public Counsel also asks the Commission to disallow PSE's investment in AMI and to consider disallowing one-half of the costs of Get to Zero. Additionally, the Commission should instruct PSE to use liquidated damages from related to its Green Direct Program to offset program costs. The Commission should adopt Public Counsel's rate spread and rate design positions.

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