

Public Utility Commission

201 High St SE Suite 100

Salem, OR 97301

Mailing Address: PO Box 1088

Salem, OR 97308-1088

Consumer Services

1-800-522-2404

Local: 503-378-6600

Administrative Services

503-373-7394

June 24, 2020

Via Electronic Filing

OREGON PUBLIC UTILITY COMMISSION

ATTENTION: FILING CENTER

PO BOX: 1088

SALEM OR 97308-1088

RE: <u>Docket No. UE 374 - In the Matter of PACIFICORP, dba PACIFIC POWER, Request for a General Rate Revision.</u>

Attached for errata filing are the following exhibits:

Exhibit 101 Gardner

Exhibit 202 Enright

Exhibit 301 Fjeldhjeim

Exhibit 401 Cohen

Exhibit 501 Beitzel

Exhibit 601 Moore

Exhibit 701 Soldavini

Exhibit 801 Storm

Exhibit 901 Peng

Exhibit 1001 Fox

Exhibit 1101 St. Brown

Exhibit 1301 Gibbens

Exhibit 1401 Hanhan

Exhibit 1501 Anderson and

Exhibit 1601 Zarate

/s/ Kay Barnes

Kay Barnes

PUC- Utility Program

kay.barnes@state.or.us

CASE: UE 374 WITNESS: MARIANNE GARDNER

PUBLIC UTILITY COMMISSION OF OREGON

STAFF EXHIBIT 101

Witness Qualifications Statement

Docket No. UE 374 Staff/101
Gardner/1

WITNESS QUALIFICATION STATEMENT

NAME: Marianne Gardner

EMPLOYER: Public Utility Commission of Oregon

TITLE: Senior Financial Analyst

Energy Rates, Finance and Audit Division

ADDRESS: 201 High Street SE., Suite 100 Salem,

OR. 97301

EDUCATION: Master of Business Administration

Oregon State University, Corvallis, Oregon

Bachelor of Science in Accounting

Montana State University, Bozeman, Montana

CPA, Oregon

EXPERIENCE:

I have been employed by the Public Utility Commission of Oregon since March 2013. I retired June 1, 2020 from my position as the Rates and Accounting Manager, in the Rates, Finance and Audit Division. Currently, I am working parttime as a Senior Financial Analyst with the division. My responsibilities include research, analysis, and recommendations on a range of cost, revenue and policy issues for electric and natural gas utilities. As the revenue requirement summary witness, I have provided testimony in dockets UE 263, UG 246, UE 283, UE 294, UG 284, UG 287, UG 288, UG 305, UE 335, UG 344, UE 335, UG 388, and UE 374.

I have approximately 20 years of professional accounting experience, including:

- Thirteen years as a cost accountant with responsibilities including cost accounting, budgeting, product costing, and the preparation of management reports;
- Four years experience in public accounting working in the areas of audit, tax and financial accounting for individual and small business clientele; and,
- Three years experience in non-profit accounting for an agency administrating funds under the Federal Job Training Partnership Act.

CASE: UE 374 WITNESS: MOYA ENRIGHT

PUBLIC UTILITY COMMISSION OF OREGON

STAFF EXHIBIT 202

Witness Qualifications Statement

Docket No. UE 374 Staff/202 Enright/1

WITNESS QUALIFICATIONS STATEMENT

NAME: Moya Enright

EMPLOYER: Public Utility Commission of Oregon

TITLE: Senior Economist

Energy Rates Finance and Audit Division

ADDRESS: 201 High Street SE. Suite 100

Salem, OR. 97301

EDUCATION: Energy Risk Professional Certification (part-qualified).

Global Association of Risk Professionals.

M.Sc. Political Science, 2015. University of Amsterdam.

M.Sc. Investment, Treasury and Banking, 2011.

Dublin City University.

B.A. International Business and Languages, 2008.

Dublin City University through a joint curriculum with École

Supérieure de Commerce de Montpellier.

EXPERIENCE: I have been employed as a Senior Utility and Energy Analyst at

OPUC since January 2019. My current responsibilities include financial analysis, with an emphasis on Cost of Capital (CoC) and

power cost forecasting.

I have worked on CoC in the following general rate case dockets: AVA UG 366 and pending NWN UG 388; AVA UG 389; CNG UG 390.

Prior to joining OPUC I was employed as an Energy Trader for Meridian Energy, a hydro and wind energy generator in New Zealand from 2015 to 2019; as a Trading and Operations Analyst at

Tynagh Energy, a gas focused independent power producer Ireland from 2011 to 2013; as a Senior Electricity Market Controller at EirGrid, the Irish Transmission System Operator from 2008 to 2011;

and in various Accounts Assistant roles from 2004 to 2008, including

Audit Intern at KPMG.

CASE: UE 374 WITNESS: BRIAN FJELDHEIM

PUBLIC UTILITY COMMISSION OF OREGON

STAFF EXHIBIT 301

Witness Qualifications Statement

Staff/301 Fjeldheim/1

Docket No. UE 374

WITNESS QUALIFICATION STATEMENT

NAME: Brian Fjeldheim

EMPLOYER: Public Utility Commission of Oregon

TITLE: Senior Financial Analyst

Energy Rates, Finance and Planning Division

ADDRESS: 201 High Street SE. Suite 100

Salem, OR. 97301

EDUCATION: Bachelor of Science, Business Accountancy

Regis University, Denver, CO

Bachelor of Science, Aviation Technology

Metropolitan State College of Denver, Denver, CO

EXPERIENCE: I have been employed as a Senior Financial Analyst by the Oregon

Public Utility Commission since May of 2018 in the Energy, Rates and Finance Division. I currently perform a range of financial analysis duties related to natural gas and electric utilities, with a focus on rate case, operational audit, and annual Purchased Gas Adjustment (PGA) filings. I have participated in utility general rate cases in the following dockets: Cascade Natural Gas – UG 347, Avista Utilities – UG 366, NW Natural – UG 388 (pending),

PacifiCorp – UE 374 (pending), Avista Utilities – UG 389 (pending),

and Cascade Natural Gas - UG 390 (pending).

I have seven years of professional level financial analysis and accounting experience. I was previously employed as a Budget and Fiscal Analyst with the Oregon Department of Justice (DOJ), where I was responsible for the budget build and ongoing budget execution of four legal divisions with 165 staff members and a biennial budget of \$75 million. Prior to DOJ, I was employed as a Senior Budget Analyst with the Oregon Department of Administrative Services (DAS) and was responsible for the budget build, ongoing budget execution and cash flow analysis for the state data center with a biennial budget of \$165 million. Prior to DAS, I worked as a Financial Analyst for the Insurance Division of the Department of Consumer and Business Services (DCBS), where I performed financial analysis and solvency surveillance of nine Oregon insurers with annual revenues of \$1.4 billion and assets of \$1.1 billion.

CASE: UE 374 WITNESS: HEATHER COHEN

PUBLIC UTILITY COMMISSION OF OREGON

STAFF EXHIBIT 401

Witness Qualifications Statement

WITNESS QUALIFICATION STATEMENT

NAME: Heather Cohen

EMPLOYER: Public Utility Commission of Oregon

TITLE: Senior Utility Analyst

Energy Rates, Finance and Audit Division

ADDRESS: 201 High Street SE., Suite

100 Salem, OR. 97301

EDUCATION: Bachelor of Arts, Political Science

Fordham University, New York, NY

Master of Public Policy

American University, Washington, DC.

EXPERIENCE: I have been employed as a Senior Financial Analyst by the

Oregon Public Utility Commission since January 2020 in the Energy, Rates and Finance Division. I currently perform a range of financial analysis duties related to natural gas and electric utilities, with a focus on operations and maintenance. I have worked on the following general rate dockets: UG 388, UG 389

(current) and UG 390 (current).

I have ten years of professional level budget and fiscal analysis experience. I was previously employed as a Budget Analyst with the Oregon Department of Education (ODE), where I was the lead analyst for the Early Learning Division (ELD) which includes the federal \$97M Child Care Development Fund (CCDF) and \$37M Preschool Promise program. Prior to ODE, I was a Senior Financial Analyst for the state of Texas's Department of Family and Protective Services and Health and Human Services. Before that, I was a Project Manager for the University of Southern California where I directed data collection and analysis, staffing and deliverables for a \$1.2M federal grant related to the provision of mental health services in Los Angeles County. Prior to USC, I was a Senior Budget Analyst for the City of New York responsible for the \$1B expense budget of the Administration for Children's Services (ACS).

CASE: UE 374

WITNESS: RUSSELL (RUSS) BEITZEL

PUBLIC UTILITY COMMISSION OF OREGON

STAFF EXHIBIT 501

Witness Qualification Statement

WITNESS QUALIFICATIONS STATEMENT

NAME: Russell (Russ) Beitzel

EMPLOYER: Public Utility Commission of Oregon

TITLE: Senior Utility Analyst

Telecommunications and Water Division

ADDRESS: 201 High Street SE. Suite 100

Salem, OR. 97301

EDUCATION: Bachelor of Science in Accounting, Otterbein University

EXPERIENCE: I am currently a Senior Utility Analyst for the PUC, focused

primarily on regulated water companies. My rate case

experience consists of the following:

UW 175 as Staff Lead, UW 174 as Staff, UW 177 as Staff Lead,

UG 388 (Pending) as Staff, UE 374 (Pending) as Staff.

I worked at Ashland, Inc for twenty years as a manufacturing and corporate accountant and business analyst for a business unit with approximately one billion dollars in global annual sales. My accountant duties included product cost analysis, general ledger account analysis, SOX compliance, and internal and external audit compliance. My analyst duties included budgeting, forecasting, financial statement analysis, acquisition tracking, and division financial support for a global business

unit.

CASE: UE 374 WITNESS: MITCHELL MOORE

PUBLIC UTILITY COMMISSION OF OREGON

STAFF EXHIBIT 601

Witness Qualifications Statement

WITNESS QUALIFICATIONS STATEMENT

NAME: Mitchell Moore

EMPLOYER: Public Utility Commission of Oregon

TITLE: Senior Utility Analyst

Energy Rates, Finance and Audit Division

ADDRESS: 201 High Street SE. Suite 100

Salem Oregon 97301-3612

EDUCATION: Bachelor of Arts, Journalism and Political Science

University of Hawaii at Manoa (1992)

EXPERIENCE: I have been employed by the Public Utility Commission of Oregon

since 2009, with my current position being a Senior Utility Analyst in the utility program's Energy Rates, Finance and Audit division. I have provided expert witness testimony on a number of general rate case dockets, including: UE 294, UE 319, UE 335, UG 288, UG 305, UG

325, UG 344, UG 347, UG 366, and UG 388.

My prior position at the Commission was as a Senior

Telecommunications Analyst, where my assignments included reviewing carrier interconnection agreements, wholesale service

quality, and resolution of carrier-to-carrier complaints.

Prior to my utility regulatory career, I worked with AT&T as a loop electronics coordinator, designing and implementing high-speed broadband and fiber optic services in Los Angeles. I have also worked as an outside plant design engineer with Qwest

Corporation, and I spent several years as a newspaper reporter with

the Honolulu Star-Bulletin.

CASE: UE 374 WITNESS: SABRINNA SOLDAVINI

PUBLIC UTILITY COMMISSION OF OREGON

STAFF EXHIBIT 701

Witness Qualifications Statement

Docket No. UE 374 Staff/701 Soldavini/1

WITNESS QUALIFICATION STATEMENT

NAME: Sabrinna Soldavini

EMPLOYER: Public Utility Commission of Oregon

TITLE: Senior Regulatory Analyst

Energy Rates, Finance, and Audit Division

ADDRESS: 201 High St. SE. Suite 100

Salem, OR 97301-3612

EDUCATION: Master of Science, Agricultural Economics

Purdue University, West Lafayette, Indiana

Bachelor of Science, Economics

University of Oregon, Eugene, Oregon

EXPERIENCE: I have been employed by the Oregon Public Utility Commission (OPUC) since

August 2018 in the Energy Rates, Finance, and Audit Division. My

responsibilities include providing research, analysis, and recommendations on a range of regulatory issues. I have sponsored testimony before the OPUC in the following dockets: UE 350, UE 356, UE 358, UE 359, UE 374, UE 374, UE 374, UE 377 (Pending), UG 347, UG 366, UG 388, UG 389 (Pending), and

UG 390 (Pending).

Prior to working for the Commission I was employed as a consulting analyst for MGT Consulting, primarily working on projects to assist large public school districts prepare for bond proposals through budget analysis and statistical

modelling/projections of student and demographic data.

From June 2015 – June 2017, I was a Research Assistant at Purdue University where I conducted research on the economic feasibility of biofuel feedstocks.

Additionally, I have experience working in data analysis and program

coordination within the technology sector.

CASE: UE 374 WITNESS: STEVE STORM

PUBLIC UTILITY COMMISSION OF OREGON

STAFF EXHIBIT 801

Witness Qualification Statement

Docket No: UE 374 Staff/801 Storm/1

WITNESS QUALIFICATION STATEMENT

Steve Storm NAME

EMPLOYER Public Utility Commission of Oregon

Senior Economist TITLE

ADDRESS 201 High Street SE, Suite 100

Salem, OR 97301

EDUCATION MBA; University of Oregon; AB (Economics); Harvard University

EXPERIENCE I have been recently employed by the Public Utility Commission of Oregon since October 2018 as a Senior Economist. I was previously employed by the Commission as a Senior Economist 2007-2008, as the Program Manager of the Economic and Policy Analysis section 2008-2012, and as an Economist 4 2012-2013. My responsibilities have included performing as well as leading a team of analysts performing economic and financial research and providing technical support on a wide range of policy issues involving electric, natural gas, and telecommunications utilities. I have sponsored testimony in the following proceedings of the Public Utility Commission of Oregon: Docket Nos. UG 221, UG 388, UE 197, UE 210, UE 213, UE 215, UE 217, UE 233, UE 352, UE 369, UE 370 (pending), and UE 374 (pending).

> I have over 35 years of professional experience performing and directing the performing of economic, financial, and other quantitative analysis.

> I was employed by NW Natural as a Senior Economist in its IRP team 2013-2018, where my responsibilities included customer and industrial load forecasting; performing cost of service and related financial analysis on a variety of infrastructure projects and alternatives; and preparing quarterly economic information for executive communications.

> I was a self-employed financial planner for eight years following an 18year career in management positions responsible for pricing and cost analysis; financial analysis, planning and management; and strategic planning in the publishing and telecommunications industries. I managed the pricing and cost accounting functions for Pacific Northwest Bell's Directory department and its successor company, US WEST Direct, for five years. I managed the departmental budgeting and management reporting functions at US WEST Direct for three years and had seven years management experience in capital budgeting, financial analysis, and strategic planning functions at US WEST Communications. I managed the corporate financial planning, analysis, and management reporting functions for one year at Electric Lightwave.

CASE: UE 374 WITNESS: MING PENG

PUBLIC UTILITY COMMISSION OF OREGON

STAFF EXHIBIT 901

Witness Qualifications Statement

WITNESS QUALIFICATIONS STATEMENT

NAME: Ming Peng (Ms.)

EMPLOYER: Public Utility Commission of Oregon

TITLE: Senior Econometrician

Energy Rates, Finance and Audit Division

ADDRESS: 201 High Street SE. Suite 100

Salem, OR. 97301

EDUCATION & TRAINING:

M.S. Applied Economics
University of Idaho, Moscow

B.S. Statistics

People's University of China, Beijing

CRRA Certified Rate of Return Analyst in 2002 Society of Utility and Regulatory Financial Analysts

Depreciation studies - the Society of

Depreciation Professionals

NARUC Annual Regulatory Studies Program Michigan State University, East Lansing

350+ credit hours on 30+ training topics in the public utility

industry

EXPERIENCE: 1/11/1999 – Present, Public Utility Commission of Oregon

I have been employed by the Public Utility Commission of Oregon (Commission) for 21 years. My roles include:

Expert Witness, Case Manager, Principal Analyst, Econometrician, Economist, Utility Analyst, and Policy Analyst:

I have testified in various formal state hearings and performed numerous analyses including economic, financial, statistical, mathematical, marketing, and policy analyses in public utility industry.

Principal Analyst & Case Manager, Settlement Lead/Negotiator for Depreciation Ratemaking:

I have served as a Principal Analyst and Case Manager for the determination of Energy Property Depreciation Rates (Oregon Revised Statute 757.140) for the past 12 years. In this role, I had a strong focus on Depreciation Rate Determination (fixed cost allocation, and capital recovery). I was also a Principal Analyst and Case Manager for the determination of Energy Property Depreciation Rates (Oregon Revised Statute 757.140) during this time period.

In this position, I investigated, analyzed, and calculated energy asset retirement cost and impact, as well as power plant decommissioning cost and impact, on customer rates. I reviewed, calculated, and analyzed fixed asset depreciation and proposed depreciation parameters for each of FERC accounts on Generation, Transmission, Distribution, General, and Coal Mining Plants. The energy sources I have worked on Steam/Coal, Hydraulic, Natural Gas, Wind, Solar, and Geothermal.

My analyses of "Power-Plant-Shutdown" activities (accelerated plant retirement, and decommissioning cost recovery) include the following cases:

- 1. PGE closes Boardman Coal-fired plant (UM 1679 & UE 215).
- 2. PacifiCorp closes Carbon Coal Plant in Utah (UE 246).
- Multi-state PacifiCorp <u>Klamath Hydro Dam</u> Removal Cost recovery for (1) J. C. Boyle Dam, (2) Copco 1 Dam, (3) Copco 2 Dam, and (4) Iron Gate Dam removal under the ORS 757.734 – Recovery of investment in Klamath River dams in OPUC UE 219.
- 4. Idaho Power Valmy Coal-fired power plant Shutdown (UE 316).
- 5. PGE Colstrip Coal-fired power plant Shutdown (UM 1809).

I conduct case investigation and analysis on Utility's filings, make rate adjustments, lead settlement negotiation, prepare testimony, and appear on behalf of the Commission. The energy companies I work with are: (1) PacifiCorp (serves 6 states), (2) PGE, (3) Northwest Natural Gas (NWN), (4) Idaho Power, (5) Avista Corp (Washington), and (6) Cascade Gas (CNG, Montana).

Lead Analyst and Case Manager on Financial Dockets:

Prior to my current position, I was a Lead Analyst and Case Manager for cost of debt capital for nine years. I reviewed market risks, derivatives and hedging, debt issuance, and stock flotation. My analysis directly informed utility and energy policy.

I advised the Commission on over 60 financial dockets. The Commission incorporated all of my recommendations into final orders.

I was certified by the Society of Utility and Regulatory Financial Analysts, as a Certified Rate of Return Analyst in 2002.

Public Utility & Policy Analyst:

<u>Rulemaking</u>: I have formulated energy regulation rules for utility performance incentives and cost-of-service regulation.

Energy Utility Merger & Acquisition: I have testified in formal state hearings involving utility mergers & acquisitions. I conducted Acquisition Premiums & Credit Risk Analysis and testified on behalf of the Commission in MidAmerican Energy Company's application to purchase PacifiCorp. I also reviewed Scottish Power's earlier purchase of PacifiCorp, and PGE's emergence from Enron after the Enron bankruptcy.

Integrated Resource Planning (IRP, Least Cost Planning): I provided comments on Boardman to Hemingway (B2H), a 500-kV transmission power line to the Commission for the decision-making, which included a cost and benefit list, a pros and cons list, alternatives, and the relevant legal risks. I also provided comments on utility's IRPs, such as total cost for power generation, power capacity (MW) replacement cost, avoided cost for free fuel, and emission trading cost.

<u>Clean Energy – Dollar Impact on Customer Rates</u>: I analyzed and calculated the rate impact and comparative advantage of clean energy. I built the portfolio optimization models to analyze the coal-fired generating capacity replacement.

General Rate Cases: I have been a part of <u>almost every energy rate case</u> since I joined the Oregon PUC on 1/11/1999. Historically, my review included fuel price forecasting, property sales, load forecasting, weather normalizations, cost of debt, and capital structures. Currently, my reviews are focused on depreciation and reserve, and AFUDC Capitalization Policy.

<u>Survey Sampling Design:</u> Results of my statistical sampling design and sampling procedures are incorporated into my revenue requirement testimony in Commission Docket No. UM 1288.

<u>Auditing, Interest Rate, Late Payment</u>: I audited cost of capital and financial components. My survey report and analyses are published annually for Oregon (UM 779).

<u>Survey for Market Competition & Economic Policy</u>: I conducted and wrote the report on Telecommunications, "Market Competition and Economic

Policy Survey Analysis" for House Bill 2577. This report has been published on the OPUC web annually for 15 years.

Mentor in the ICER - International Confederation of Energy Regulators: I was selected to act as a mentor in the ICER (International Confederation of Energy Regulators) Women in Energy (ICER WIE) pilot mentoring program. My "Mentoring Topics" focus on Incentive Regulation; Rate and Economic Impacts of "Cost-of-Service" regulation in the U.S. and "Price-Cap Performance Based Regulation" in Europe; Cost of Capital, Energy Demand and Price Forecasting Modeling; Least Cost Planning; Regulatory Policy; and Renewable Energy issues within regulated rate structures.

CASE: UE 374 WITNESS: JOHN L FOX

PUBLIC UTILITY COMMISSION OF OREGON

STAFF EXHIBIT 1001

Witness Qualifications Statement

Docket No. UE 374 Staff/1001 Fox/1

WITNESS QUALIFICATIONS STATEMENT

NAME: John L. Fox

EMPLOYER: Public Utility Commission of Oregon

TITLE: Senior Financial Analyst

Energy Rates, Finance and Audit Division

ADDRESS: 201 High Street SE. Suite 100

Salem, OR. 97301

EDUCATION: I hold a Bachelor of Science degree in Business Administration /

Accounting from the University of Oregon (1989). I also completed the Certificate in Public Management program at Willamette

University (2010).

I have been licensed as a Certified Public Accountant in Oregon since 1991. Maintaining active status has required a minimum of 80

hours continuing professional education every two years.

EXPERIENCE: From 1989 to 1999 I was in general practice with several CPA firms

in Southern Oregon and the Mid-Willamette Valley. My tax experience includes individuals, trusts and estates, qualified retirement plans, and extensive corporate, partnership, and LLC work. Accounting experience during this time includes client write up, compilation and review, and significant audit and attest work.

I have been employed in the executive branch of Oregon state government since 1999. My experience prior to joining the Commission staff includes 3 years as a cost accountant, 11 years as a senior budget analyst, and 4 years in an oversight role as a budget

team lead.

I have extensive experience in capital construction and financing, complex cost modeling, rate development, fiscal projections, expenditure analysis, and cost control for programs with biennial

revenues between \$100 million and \$300 million.

PRIOR DOCKETS: I have provided testimony as a Staff witness in the following OPUC

proceedings; UE 335, UE 374 (pending), UG 344, UG 347, UG 366, UG 388 (pending), UG 389 (pending), UG 390 (pending), UM 1992,

UM 2004, UM 2026.

CASE: UE 374

WITNESS: MAX ST. BROWN

PUBLIC UTILITY COMMISSION OF OREGON

STAFF EXHIBIT 1101

Witness Qualifications Statement

Docket No. UE 374 Staff/1101 St. Brown/1

WITNESS QUALIFICATIONS STATEMENT

NAME: Max St. Brown

EMPLOYER: Public Utility Commission of Oregon

TITLE: Senior Utility Analyst

Energy Resources and Planning Division

ADDRESS: 201 High Street SE. Suite 100

Salem, OR. 97301

EDUCATION: Ph.D., Economics (2013) Washington State University

B.S., Economics (2009) Central Washington University

EXPERIENCE: I have been employed by the Public Utility Commission from July

2015 to December 2018 and since April 2020, with my current position being a Senior Utility Analyst, in the Utility Program's

Energy Resources and Planning Division.

Prior to rejoining the OPUC, I worked as a Senior Economist in the

Research Section at the Oregon Department of Revenue.

From 2013 to 2015 I served as an Assistant Professor of Economics at Eckerd College, teaching courses including: Econometrics, Labor

Economics, and Intermediate Microeconomics.

My published research in peer-reviewed academic journals includes

a study of the U.S. renewable energy industry and includes

international economic impact studies.

I have been a witness in Oregon PUC general rate cases:

UE 319, UG 287, UG 288, UG 305, UG 325.

CASE: UE 374 WITNESS: SCOTT GIBBENS

PUBLIC UTILITY COMMISSION OF OREGON

STAFF EXHIBIT 1301

Witness Qualifications Statement

Docket No. UE 374 Staff/1301 Gibbens/1

WITNESS QUALIFICATION STATEMENT

NAME: Scott Gibbens

EMPLOYER: Public Utility Commission of Oregon

TITLE: Senior Economist

Energy Rates, Finance and Audit

ADDRESS: 201 High St. SE Ste. 100

Salem, OR 97301-3612

EDUCATION: Bachelor of Science, Economics, University of Oregon

Masters of Science, Economics, University of Oregon

EXPERIENCE: I have been employed at the Oregon Public Utility Commission (Commission)

since August of 2015. My current responsibilities include analysis and

technical support for electric power cost recovery proceedings with a focus

in model evaluation. I have been the power cost team manager since January 2017. I have worked on the following power cost dockets: PAC UE 307, UE 309, UE 323, UE 327, UE 339, UE 344, UE 356, UE 361, and current

307, UE 309, UE 323, UE 327, UE 339, UE 344, UE 356, UE 361, and current UE 375 and UE 379. PGE UE 308, UE 310, UE 319, UE 329, UE 335, UE 346, UE 359, UE 362, and current UE 377. IPC UE 301, 305, UE 314, UE 320, UE

333, UE 336, UE 350, UE 354, UE 366, and current UE 376. I've also performed analysis and review on a variety of other issues at the

Commission. I have reviewed issues and made recommendations to the Commission in the following general rate cases: AVA UG 325, UG 366 and current UG 389; NWN UG 344, and current UG 388; PAC current UE 374; PGE UE 319, and UE 335; and CNG UG 305, UG 347 and current UG 390. Prior to working for the OPUC I was the operations director at Bracket LLC.

My responsibilities at Bracket included quarterly financial analysis, product pricing, cost study analysis, and production streamlining. Previous to

working for Bracket, I was a manager for US Bank in San Francisco where my responsibilities included coaching and team leadership, branch sales and

campaign oversight, and customer experience management.

CASE: UE 374 WITNESS: NADINE HANHAN

PUBLIC UTILITY COMMISSION OF OREGON

STAFF EXHIBIT 1401

Witness Qualifications Statement

Docket No. UE 374 Staff/1401 Hanhan/1

WITNESS QUALIFICATIONS STATEMENT

NAME: Nadine Hanhan

EMPLOYER: Public Utility Commission of Oregon

TITLE: Senior Utility Analyst, Transmission & Distribution

Energy Resources and Planning Division

ADDRESS: 201 High Street SE. Suite 100

Salem, OR. 97301

EDUCATION: Bachelor of Arts in Economics, CSUSB (2010)

Bachelor of Arts in Philosophy, CSUSB (2010)

Master of Science in Applied Economics, Oregon State University

(2015)

EXPERIENCE: I have 7 years of utility regulation experience. For four years, I

worked at the Citizens' Utility Board of Oregon as a ratepayer advocate for residential customers. While there, I provided analysis, expert testimony, and comments in a variety of dockets with topics including gas and electric integrated resource planning, solar resource value, renewable contribution to capacity, smart grids, power costs, natural gas hedging, and electric vehicles. Cases I worked on at CUB include, but are not limited to: UE 264, UE 296, UM 1505, UM 1657, UM 1667, UM 1675, UM 1716, UM 1719, UM 1746, LC 55, LC 56, LC 57, LC 58, LC 59, LC 60, LC 61, LC

62, and LC 63.

For four years I have been employed at the OPUC, where I have provided analysis, testimony, and comments in a variety of dockets and proceedings including smart grids, integrated resource plans, voluntary green energy tariffs, electric vehicles, renewable portfolio standard rules, renewable portfolio standard compliance, certificates of public convenience and necessity, and transmission planning, among others. Cases I have worked on at the OPUC include, but are not limited to: ADV 901, AR 609, AR 610, AR 626, LC 62, LC 64, LC 68, LC 70, LC 71, LC 73, LC 74, PCN 2, PCN 4, UE 347, UE 348, UE 355, UM 1810, UM 1811, UM 1815, UM 1846, UM 1847, and UM 2031.

CASE: UE 374 WITNESS: ROSE ANDERSON

PUBLIC UTILITY COMMISSION OF OREGON

STAFF EXHIBIT 1501

Witness Qualifications Statement

Docket No. UE 374 Staff/1501
Anderson/1

WITNESS QUALIFICATION STATEMENT

NAME: Rose Anderson

EMPLOYER: Public Utility Commission of Oregon

TITLE: Senior Economist

Energy Resources and Planning Division

ADDRESS: 201 High Street SE. Suite 100

Salem, OR. 97301

EDUCATION: Master of Science, Agriculture and Resource Economics, University of

California Davis, Davis, CA

Bachelor of Arts, International Political Economy

University of Puget Sound, Tacoma, WA

EXPERIENCE: I have been employed at the Public Utility Commission of Oregon

since September of 2016. My position is Senior Economist in the Energy Resources and Planning Division. I perform economic and policy analysis, including analysis of net present value revenue requirement and load forecasts, in Rate Cases and planning dockets. I have participated in OPUC rate cases including UE 319, UG 325, and UG 344, and OPUC power cost dockets including UE 320, UE 323, UE 333, and UE 335. Prior to working for the PUC I was a Research Associate at McCullough Research for two years. My responsibilities

included economic analysis of energy markets and utilities.

CASE: UE 374 WITNESS: KATHY ZARATE

PUBLIC UTILITY COMMISSION OF OREGON

STAFF EXHIBIT 1601

Witness Qualifications Statement

Docket No. UE 374 Staff/1601 Zarate/1

WITNESS QUALIFICATION STATEMENT

NAME: Kathy Zarate

EMPLOYER: Public Utility Commission of Oregon

TITLE: Utility Economist

Energy Rates, Finance and Audit Division

ADDRESS: 201 High Street SE., Suite 100

Salem, OR. 97301

EDUCATION: Bachelor of Arts, Economics

Oregon State University, Corvallis, Oregon

Bachelor Degree in Law

Republic University, Santiago, Chile

EXPERIENCE: I have been employed by the Public Utility Commission of Oregon

(OPUC) since April 2016, with my current position being a Utility Analyst, in the Energy - Rates, Finance and Audit Division. My responsibilities include research, analysis, and recommendations on a range of regulatory issues such as review of affiliated interest

filings, property sales applications and rate proposals.

I have approximately 10 years of professional experience in

contracting and audit review work, including:

I spent six years as a contract specialist for 3 Com, Santiago, Chile, with responsibilities including coordinating and preparing contracts with resellers, reviewing company books and records, coordinating logistics in business, and working as or with an Expert Witness, Case Manager, Principal Analyst, Econometrician, Economist, Utility Analyst, and Policy Analyst.

I have testified in various formal state hearings and performed numerous analyses including economic, financial, statistical, mathematical, marketing, and policy analyses in public utility industry.

I have served as a Principal Analyst at the OPUC for the determination of Energy Property Sales (Oregon Revised Statute 757.140) for the past 3 years. In this position, I investigated, analyzed, and calculated energy cost and impact.

<u>I also support work related to power costs</u>, plant, and associated impact on customer rates. I have reviewed, calculated, and analyzed QFs, wheeling, forced outage rates and Scheduled maintenance outages, PURPA, Solar forecast, wind forecast (UE 366).

I has worked on power cost issues in the below representative cases:

- 1. UE 366 Idaho Power.
- 2. UE 375 PacifiCorp
- 3. UE 377 Portland General Electric PGE

I generally conduct case investigation and analysis on Utility's filings, make rate adjustments, lead settlement negotiation, prepare testimony, and appear on behalf of the Commission. The energy companies I work with are:

- PacifiCorp
- PGE
- Northwest Natural Gas
- Idaho Power
- Avista Corp
- Cascade Gas

General Rate Cases: I have been a part of almost every energy rate case since I joined the Oregon PUC in 2016. Historically, my review has included, property sales, material and supply, donations, marketing cost. Currently, my review includes property sales and low-income issues. My work is generally represented in the last four General Rate cases, as examples:

- UG 388 NW Natural
- UE 374 Pacificorp
- UG 389 Avista
- UG 390 Cascade

<u>Rulemaking</u>: I have formulated energy regulation rules for utility performance incentives and cost-of-service regulation.

<u>Low-Income</u>: Results of my statistical sampling design and sampling procedures are incorporated into my revenue requirement testimony in Commission Docket No. UM 2058.

<u>Auditing, Interest Rate, Affiliated Interest</u>: I audited cost of capital and financial components (IU 437)