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| **BENCH EXHIBITS** |
| **BR-1** | Public Counsel |  |  | 1. **Supporting Workpapers (WP-1 and WP-2) for Exhibits RCS-3 and RCS-4**
2. **Public Counsel’s Proposed Adjustments; RCS-3 Supplemental and RCS-4r Supplemental**
3. **Adjustment Reconciliation to JAP-44**
 |
| **BR-2** | PSE |  |  | 1. **Summary of FERC Account 928 for 2009**
2. **Supporting Workpapers for Company Adjustments 13.12 and 11.12**
 |
| **BR-3** | Staff |  |  | **Exhibits in Native Format:****BAE-2****BAE-3****BAE-4 (Attachment A)****BAE-5 (Attachment A)** |
| **PSE WITNESSES** |
| Roque Bamba, Manager, Major Projects, PSE |
| **RB-1T** | **Roque Bamba** |  |  | **Prefiled Direct Testimony of Roque Bamba (15 pages)****(1/13/17)** |
| **RB-2** | **Roque Bamba** |  |  | **Professional Qualifications of Roque Bamba**  |
| **RB-3** | **Roque Bamba** |  |  | **Photos of Geologic Conditions**  |
| **CROSS-EXAMINATION EXHIBITS** |
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| **Katherine J. Barnard, Director, Revenue Requirements and Regulatory Compliance, PSE** |
| **KJB-1T** | **Katherine J. Barnard** |  |  | **Prefiled Direct Testimony of Katherine J. Barnard (85 pages) (1/13/17)** |
| **KJB-2** | **Katherine J. Barnard** |  |  | **Professional Qualifications of Katherine J. Barnard** |
| **KJB-3** | **Katherine J. Barnard** |  |  | **Adj. 3.01: General Rate Increase****Adj. 3.02: Pro Forma Cost of Capital****Adj. 3.03: Conversion Factor** |
| **KJB-4** | **Katherine J. Barnard** |  |  | **Adj. 4.01, 4.02, 4.03, 4.04, 4.05, 4.06: Statement of Operating Income and Adjustments** |
| **KJB-5** | **Katherine J. Barnard** |  |  | **Periodic Allocated Results of Operations; Balance Sheet; Electric Rate Base; Combined Working Capital; Allocation Methods** |
| **KJB-6** | **Katherine J. Barnard** |  |  | **ELECTRIC****Adj. 6.01: Revenues and Expenses****Adj. 6.02: Temperature Normalization****Adj. 6.03: Pass Through Revenue and Expense****Adj. 6.04: Federal Income Tax****Adj. 6.05: Tax Benefit of Pro Forma Interest****Adj. 6.06: Depreciation Study****Adj. 6.07: Normalize Injuries and Damages****Adj. 6.08: Bad Debts****Adj. 6.09: Incentive Pay****Adj. 6.10: D&O Insurance****Adj. 6.11: Interest on Customer Deposits****Adj. 6.12: Rate Case Expenses****Adj. 6.13: Deferred Gains/Losses on Property Sales****Adj. 6.14: Property and Liability Insurance****Adj. 6.15: Pension Plan****Adj. 6.16: Wage Increase****Adj. 6.17: Investment Plan****Adj. 6.18: Employee Insurance****Adj. 6.19: Environmental Remediation****Adj. 6.20: Payment Processing Costs****Adj. 6.21: South King Service Center****Adj. 6.22: Filing Fee and Excise Tax** |
| **KJB-7** | **Katherine J. Barnard** |  |  | **ELECTRIC****Adj. 7.01: Power Costs****Adj. 7.02: Montana Electric Energy Tax****Adj. 7.03: Wild Horse Solar****Adj. 7.04: Accounting Standards Codification 815****Adj. 7.05: Storm Damage****Adj. 7.06: Regulatory Assets and Liabilities****Adj. 7.07: Glacier Battery Storage****Adj. 7.08: Energy Imbalance Market****Adj. 7.09: Goldendale Capacity Upgrade****Adj. 7.10: Mint Farm Capacity Upgrade****Adj. 7.11: White River****Adj. 7.12: Transfer of Hydro Treasury Grants in Rate base****Adj. 7.13: Production Adjustment** |
| **KJB-8** | **Katherine J. Barnard** |  |  | **Power Cost Baseline Rate** |
| **KJB-9** | **Katherine J. Barnard** |  |  | **Electric CRM Revenue Requirement Model** |
| **KJB-10T** | **Katherine J. Barnard** |  |  | **Prefiled Supplemental Testimony of Katherine J. Barnard (13 pages) (4/3/17)** |
| **KJB-11** | **Katherine J. Barnard** |  |  | **Adj. 11.01: Updated General Rate Increase****Adj. 11.02: Updated Pro Forma Cost of Capital****Adj. 11.03: Updated Conversion Factor** |
| **KJB-12** | **Katherine J. Barnard** |  |  | **Adj. 12.01, 12.02, 12.03, 12.04, 12.05, 12.06: Updated Statement of Operating Income and Adjustments** |
| **KJB-13** | **Katherine J. Barnard** |  |  | **ELECTRIC – UPDATED****Adj. 13.01: Revenues and Expenses****Adj. 13.02: Temperature Normalization****Adj. 13.03: Pass Through Revenue and Expense****Adj. 13.04: Federal Income Tax****Adj. 13.05: Tax Benefit of Pro Forma Interest****Adj. 13.06: Depreciation Study****Adj. 13.07: Normalize Injuries and Damages****Adj. 13.08: Bad Debts****Adj. 13.09: Incentive Pay****Adj. 13.10: D&O Insurance****Adj. 13.11: Interest on Customer Deposits****Adj. 13.12: Rate Case Expenses****Adj. 13.13: Deferred Gains/Losses on Property Sales****Adj. 13.14: Property and Liability Insurance****Adj. 13.15: Pension Plan****Adj. 13.16: Wage Increase****Adj. 13.17: Investment Plan****Adj. 13.18: Employee Insurance****Adj. 13.19: Environmental Remediation****Adj. 13.20: Payment Processing Costs****Adj. 13.21: South King Service Center****Adj. 13.22: Filing Fee and Excise Tax** |
| **KJB-14** | **Katherine J. Barnard** |  |  | **ELECTRIC – UPDATED****Adj. 14.01: Power Costs****Adj. 14.02: Montana Electric Energy Tax****Adj. 14.03: Wild Horse Solar****Adj. 14.04: Accounting Standards Codification 815****Adj. 14.05: Storm Damage****Adj. 14.06: Regulatory Assets and Liabilities****Adj. 14.07: Glacier Battery Storage****Adj. 14.08: Energy Imbalance Market****Adj. 14.09: Goldendale Capacity Upgrade****Adj. 14.10: Mint Farm Capacity Upgrade****Adj. 14.11: White River****Adj. 14.12: Transfer of Hydro Treasury Grants in Rate base****Adj. 14.13: Production Adjustment** |
| **KJB-15** | **Katherine J. Barnard** |  |  | **Updated Power Cost Baseline Rate** |
| **KJB-16** | **Katherine J. Barnard** |  |  | **Revenue Deficiency Calculation; Power Cost Baseline Rate Without Microsoft** |
| **KJB-17T** | **Katherine J. Barnard** |  |  | **Prefiled Rebuttal Testimony of Katherine J. Barnard (105 pages) (8/9/17)** |
| **KJB-18** | **Katherine J. Barnard** |  |  | **Electric Base Rates General Rate Increase** |
| **KJB-19** | **Katherine J. Barnard** |  |  | **Summary of Electric Proforma and Restating Adjustments and their Impact on the Actual Results of Operations** |
| **KJB-20** | **Katherine J. Barnard** |  |  | **Individual Adjustments – Common Assigned to Electric** |
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| **KJB-22** | **Katherine J. Barnard** |  |  | **Power Cost Adjustment Mechanism Exhibit A-1 Power Cost Rate** |
| **KJB-23** | **Katherine J. Barnard** |  |  | **Comparison of the Electric Revenue Deficiencies by Adjustment Currently Filed by the Company and Opposing Parties** |
| **KJB-24** | **Katherine J. Barnard** |  |  | **Excerpts from Staff’s Response to PSE DR 27 – Impact on Staff’s Electric Revenue Requirement for Various Corrections** |
| **KJB-25** | **Katherine J. Barnard** |  |  | **Staff’s Response to PSE DR 17 – differences between PSE and Staff Related to Depreciation for Colstrip Units 3 and 4** |
| **KJB-26** | **Katherine J. Barnard** |  |  | **Electric Depreciation Study Adjustment KJB-20 with Colstrip Units 3 and 4 at Varying Probable Retirement Years** |
| **KJB-27** | **Katherine J. Barnard** |  |  | **Excerpts from Public Counsel’s Response to PSE DR 12** |
| **KJB-28** | **Katherine J. Barnard** |  |  | **Demonstration of Alleged Errors in Public Counsel’s Depreciation Study Adjustments** |
| **KJB-29C** | **Katherine J. Barnard** |  |  | **PSE’s Response to ICNU DR 58** |
| **KJB-30** | **Katherine J. Barnard** |  |  | **PSE’s Response to Staff DR 134** |
| **KJB-31** | **Katherine J. Barnard** |  |  | **Staff’s Response to PSE DR 2** |
| **KJB-32** | **Katherine J. Barnard** |  |  | **Staff’s Response to PSE DR 9** |
| **KJB-33** | **Katherine J. Barnard** |  |  | **Comparison of PSE’s and Staff’s 6 Year Average Normal Storm Proposals** |
| **KJB-34** | **Katherine J. Barnard** |  |  | **Work Paper filed by Staff Supporting Exhibit TES-2** |
| **KJB-35** | **Katherine J. Barnard** |  |  | **Impacts on Earnings Sharing for Staff’s Proposal on Storm** |
| **KJB-36** | **Katherine J. Barnard** |  |  | **Staff’s Response to Public Counsel DRs 2, 4, 6, and 7** |
| **KJB-37** | **Katherine J. Barnard** |  |  | **Extract from Attachment A to PSE’s Response to Public Counsel DR 72 Showing Regulatory Lag Associated with the Electric Reliability Plan Absent an Electric Cost Recovery Mechanism** |
| **KJB-38** | **Katherine J. Barnard** |  |  | **Update to Electric Cost Recovery Mechanism Revenue Requirements** |
| **KJB-39** | **Katherine J. Barnard** |  |  | **ICNU’s Response to PSE’s Response to PSE DR 6** |
| **KJB-40** | **Katherine J. Barnard** |  |  | **Recalculation of Exhibit BGM-6 for a Correction to the Calculation of Carrying Charges** |
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| **Chun K. Chang, Regulatory Consultant in Pricing and Cost of Service, PSE** |
| **CKC-1T** | **Chun K. Chang** |  |  | **Prefiled Direct Testimony of Chun K. Chang****(15 pages) (1/13/17)** |
| **CKC-2** | **Chun K. Chang** |  |  | **Professional Qualifications of Dr. Chun K. Chang** |
| **CKC-3T** | **Chun K. Chang** |  |  | **Prefiled Rebuttal Testimony of Chun K. Chang (22 pages) (8/9/17)** |
| **CKC-4** | **Chun K. Chang** |  |  | **PSE’s Responses to Staff DRs 6, 9, 11, and 46** |
| **CKC-5** | **Chun K. Chang** |  |  | **PSE’s Rate Schedule Model Specifications and Statistical Test Results** |
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| **Daniel A. Doyle, Senior Vice President and Chief Financial Officer of PSE** |
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| **DAD-7T** | **Daniel A. Doyle** |  |  | **Prefiled Rebuttal Testimony of Daniel A. Doyle (64 pages) (8/9/17)** |
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| **Susan E. Free, Manager of Revenue Requirement, PSE** |
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| **SEF-2** | **Susan E. Free** |  |  | **Professional Qualifications of Susan E. Free** |
| **SEF-3** | **Susan E. Free** |  |  | **General Rate Increase; Pro Forma Cost of Capital; Conversion Factor** |
| **SEF-4** | **Susan E. Free** |  |  | **Results of Operations; Statement of Operating Income and Adjustments** |
| **SEF-5** | **Susan E. Free** |  |  | **Periodic Allocated Results of Operations; Balance Sheet; Gas Rate Base; Combined Working Capital; Allocation Methods** |
| **SEF-6** | **Susan E. Free** |  |  | **GAS****Adj. 6.01: Revenue and Expenses****Adj. 6.02: Temperature Normalization****Adj. 6.03: Pass Through Revenue and Expense****Adj. 6.04: Federal Income Tax****Adj. 6.05: Tax Benefit of Pro Forma Interest****Adj. 6.06: Depreciation Study****Adj. 6.07: Normalize Injuries and Damages****Adj. 6.08: Bad Debts****Adj. 6.09: Incentive Pay****Adj. 6.10: D&O Insurance****Adj. 6.11: Interest on Customer Deposits****Adj. 6.12: Rate Case Expenses****Adj. 6.13: Deferred Gains/Losses on Property Sales****Adj. 6.14: Property and Liability Insurance****Adj. 6.15: Pension Plan****Adj. 6.16: Wage Increase****Adj. 6.17: Investment Plan****Adj. 6.18: Employee Insurance****Adj. 6.19: Environmental Remediation****Adj. 6.20: Payment Processing Costs****Adj. 6.21: South King Service Center****Adj. 6.22: Filing Fee and Excise Tax** |
| **SEF-7** | **Susan E. Free** |  |  | **Cost Recovery Mechanism** |
| **SEF-8T** | **Susan E. Free** |  |  | **Prefiled Supplemental Testimony of Susan E. Free****(8 pages) (4/3/17)** |
| **SEF-9** | **Susan E. Free** |  |  | **Updated General Rate Increase; Pro Forma Cost of Capital; Conversion Factor** |
| **SEF-10** | **Susan E. Free** |  |  | **Updated Results of Operations; Statement of Operating Income and Adjustments** |
| **SEF-11** | **Susan E. Free** |  |  | **GAS – UPDATED****Adj. 11.01: Revenue and Expenses****Adj. 11.02: Temperature Normalization****Adj. 11.03: Pass Through Revenue and Expense****Adj. 11.04: Federal Income Tax****Adj. 11.05: Tax Benefit of Pro Forma Interest****Adj. 11.06: Depreciation Study****Adj. 11.07: Normalize Injuries and Damages****Adj. 11.08: Bad Debts****Adj. 11.09: Incentive Pay****Adj. 11.10: D&O Insurance****Adj. 11.11: Interest on Customer Deposits****Adj. 11.12: Rate Case Expenses****Adj. 11.13: Deferred Gains/Losses on Property Sales****Adj. 11.14: Property and Liability Insurance****Adj. 11.15: Pension Plan****Adj. 11.16: Wage Increase****Adj. 11.17: Investment Plan****Adj. 11.18: Employee Insurance****Adj. 11.19: Environmental Remediation****Adj. 11.20: Payment Processing Costs****Adj. 11.21: South King Service Center****Adj. 11.22: Filing Fee and Excise Tax** |
| **SEF-12T** | **Susan E. Free** |  |  | **Prefiled Rebuttal Testimony of Susan E. Free (59 pages) (8/9/17)** |
| **SEF-13** | **Susan E. Free** |  |  | **Natural Gas Base Rates General Rate Increase** |
| **SEF-14** | **Susan E. Free** |  |  | **Summary of Natural Gas Proforma and Restating Adjustments and their Impact on the Actual Results of Operations** |
| **SEF-15** | **Susan E. Free** |  |  | **Individual Adjustments – Common Assigned to Natural Gas** |
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| **Booga K. Gilbertson, Senior Vice President, Operations, PSE** |
| **BKG-1T** | **Booga K. Gilbertson** |  |  | **Prefiled Direct Testimony of Booga K. Gilbertson (38 pages) (1/13/17)** |
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| **BKG-3** | **Booga K. Gilbertson** |  |  | **Capital Expenditures by Category (1/11-9/16)** |
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| **Thomas M. Hunt, Director of Compensation and Benefits, PSE** |
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| **TMH-3C** | **Thomas M. Hunt** |  |  | **\*\*\*CONFIDENTIAL\*\*\*****Historic Merit Average Increases** |
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| **TMH-6C** | **Thomas M. Hunt** |  |  | **\*\*\*CONFIDENTIAL\*\*\*****PSE Retirement Plan – Monthly Assets and PBO from 1/2012 to 9/30/16** |
| **TMH-7C** | **Thomas M. Hunt** |  |  | **\*\*\*CONFIDENTIAL\*\*\*****Retirement Plan for Employees of Puget Sound Energy Ten Year Deterministic Projection (2016-2025) Baseline: 2016 Preliminary Valuation Results** |
| **TMH-8** | **Thomas M. Hunt** |  |  | **PSE 2016 Goals and Incentive Plan** |
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| **Catherine A. Koch, Director, Planning, PSE** |
| **CAK-1TC** | **Catherine A. Koch** |  |  | **\*\*\*CONFIDENTIAL\*\*\*****Confidential Prefiled Direct Testimony of Catherine A. Koch****(20 pages) (1/13/17)** |
| **CAK-2** | **Catherine A. Koch** |  |  | **Professional Qualifications of Catherine A. Koch** |
| **CAK-3C** | **Catherine A. Koch** |  |  | **\*\*\*CONFIDENTIAL\*\*\*****2017 and 2018 Electric Reliability Plan** |
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| **CAK-6** | **Catherine A. Koch** |  |  | **PSE Response to Public Counsel DR 25** |
| **CAK-7** | **Catherine A. Koch** |  |  | **PSE Response to ICNU DR 24** |
| **CAK-8** | **Catherine A. Koch** |  |  | **Ardmore Project Chronology** |
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| **Brandon J. Lohse, Corporate Treasurer for PSE** |
| **BJL-1T** | **Brandon H. Lohse** |  |  | **Prefiled Direct Testimony of Brandon H. Lohse (21 pages)****(1/13/17)** |
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| **BJL-4** | **Brandon H. Lohse** |  |  | **Utility Capital Structure Proposed Cost of Capital and Rate of Return Requested for Rate Year 2018; Requested Cost of Debt; Short Term Debt Interest and Fees Details; Interest Calculation on $250M Jr. Subordinated Security; Schedule of Annual Charges on Reacquired Debt** |
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| **Matthew R. Marcelia, Controller and Principal Accounting Officer** |
| **MRM-1T** | **Matthew R. Marcelia** |  |  | **Prefiled Rebuttal Testimony of Matthew R. Marcelia (39 pages) (8/9/17)** |
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| **MRM-3** | **Matthew R. Marcelia** |  |  | **Colstrip Units 1 and 2 Historical Depreciation Rates** |
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| **George E. Marshall, Manager, Transmission Policy and Contracts** |
| **GEM-1T** | **George E. Marshall** |  |  | **Prefiled Rebuttal Testimony of George E. Marshall (18 pages) (8/9/17)** |
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| **David E. Mills, Vice President, Energy Operations for PSE** |
| **DEM-1T** | **David E. Mills** |  |  | **Prefiled Direct Testimony of David E. Mills (29 pages)****(1/13/17, revised 2/3/17)** |
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| **DEM-3** | **David E. Mills** |  |  | **Benefits Analysis of PSE’s Participation in the ISO Energy Imbalance Market** |
| **DEM-4T** | **David E. Mills** |  |  | **Prefiled Rebuttal Testimony of David E. Mills (8 pages) (8/9/17)** |
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| **Joel L. Molander, Director, IT Business Partner Engagement, PSE** |
| **JLM-1T** | **Joel L. Molander** |  |  | **Prefiled Direct Testimony of Joel L. Molander (13 pages)****(1/13/17)** |
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| **JLM-3** | **Joel L. Molander** |  |  | **South King Complex Strategy Assumptions, Analysis and Opinion Memorandum RE: PSE Strategic Real Estate Options, Prepared by CBRE Brokerage** |
| **JLM-4** | **Joel L. Molander** |  |  | **South King Complex Pro Forma Summary** |
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| **Roger A. Morin, Emeritus Professor of Finance at Robinson College of Business, Georgia State University** |
| **RAM-1T** | **Roger A. Morin** |  |  | **Prefiled Direct Testimony of Roger A. Morin****(58 pages) (1/13/17)** |
| **RAM-2** | **Roger A. Morin** |  |  | **Professional Qualifications of Roger A. Morin** |
| **RAM-3** | **Roger A. Morin** |  |  | **Investment-Grade Dividend-Paying Combination Gas and Electric Utilities Covered in Value Line’s Electric Utility Industry Group** |
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| **RAM-6** | **Roger A. Morin** |  |  | **Combination of Electric and Gas Utilities DCF Analysis Analysts’ Growth Forecasts** |
| **RAM-7** | **Roger A. Morin** |  |  | **Combination Electric and Gas Beta Estimates** |
| **RAM-8** | **Roger A. Morin** |  |  | **CAPM, Empirical CAPM** |
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| **RAM-11** | **Roger A. Morin** |  |  | **Proxy Group for PSE Common Equity Ratios** |
| **RAM-12T** | **Roger A. Morin** |  |  | **Prefiled Rebuttal Testimony of Roger A. Morin (97 pages) (8/9/17)** |
| **RAM-13** | **Roger A. Morin** |  |  | **PSE’s Response to Public Counsel DR 333** |
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| **Michael Mulally, Manager, Business Initiatives, Strategic Initiatives Department** |
| **MM-1THC** | **Michael Mulally** |  |  | **\*\*\* HIGHLY CONFIDENTIAL\*\*\*****Confidential Prefiled Direct Testimony of Michael Mulally****(38 pages) (1/13/17)** |
| **MM-2** | **Michael Mulally** |  |  | **Professional Qualifications of Michael Mulally** |
| **MM-3** | **Michael Mulally** |  |  | **RFP City of Buckley Sale of Natural Gas Utility** |
| **MM-4C** | **Michael Mulally** |  |  | **\*\*\*CONFIDENTIAL\*\*\*****Buckley Natural Gas System RFP Overview**  |
| **MM-5** | **Michael Mulally** |  |  | **June 13, 2013, Letter to City of Buckley from PSE RE: RFPs City of Buckley Sale of Natural Gas Utility** |
| **MM-6** | **Michael Mulally** |  |  | **October 15, 2013, Letter to PSE from GeoEngineers RE: Historic Research to Identify Properties of Potential Environmental Concern in Close Proximity to City of Buckley’s Natural Gas Distribution Lines** |
| **MM-7** | **Michael Mulally** |  |  | **Assignment Agreement Between City of Buckley and PSE** |
| **MM-8** | **Michael Mulally** |  |  | **Firm Natural Gas Service Agreement Between City of Enumclaw and PSE, Docket UG-140088** |
| **MM-9C** | **Michael Mulally** |  |  | **\*\*\*CONFIDENTIAL\*\*\*****Memorandum RE: Buckley Valuation Method with Appendices (revised 1/27/17)** |
| **MM-10HC** | **Michael Mulally** |  |  | **\*\*\* HIGHLY CONFIDENTIAL\*\*\*****Energy Storage EPC Scoring Matrix – Clean Energy Fund Proposal (October 2014)** |
| **MM-11** | **Michael Mulally** |  |  | **PSE IRP Electric Analysis** |
| **MM-12C** | **Michael Mulally** |  |  | **\*\*\*CONFIDENTIAL\*\*\*****New Douglas PUD (Wells Project) PPA, EMC Informational 4/16/15****Prepared by Brennan Mueller, Energy Contract Administrator** |
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| **Jon A. Piliaris, Manager of Pricing and Cost of Service, PSE** |
| **JAP-1T** | **Jon A. Piliaris** |  |  | **Prefiled Direct Testimony of Jon A. Piliaris****(159 pages) (1/13/17)** |
| **JAP-2** | **Jon A. Piliaris** |  |  | **Professional Qualifications of Jon A. Piliaris** |
| **JAP-3** | **Jon A. Piliaris** |  |  | **Proforma Delivered Sales Electric Rates** |
| **JAP-4** | **Jon A. Piliaris** |  |  | **Gas Adjustments to Volume (Therms) by Rate Schedule** |
| **JAP-5C** | **Jon A. Piliaris** |  |  | **\*\*\*CONFIDENTIAL\*\*\*****Peak Credit Method for 2014 Filing, Company Proposal** |
| **JAP-6C** | **Jon A. Piliaris** |  |  | **\*\*\*CONFIDENTIAL\*\*\*****Peak Credit Method with Updated Data, Company Proposal** |
| **JAP-7** | **Jon A. Piliaris** |  |  | **Electric Cost of Service Summary** |
| **JAP-8** | **Jon A. Piliaris** |  |  | **2017 Gas Cost of Service Study Proposed Test Year Without Gas** |
| **JAP-9** | **Jon A. Piliaris** |  |  | **2017 Gas Cost of Service Study Proposed Test Year With Gas** |
| **JAP-10** | **Jon A. Piliaris** |  |  | **2017 Gas Account Detail by Classification and Rate Class** |
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| **JAP-12** | **Jon A. Piliaris** |  |  | **2017 Gas Cost of Service Study External Allocators** |
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| **JAP-14** | **Jon A. Piliaris** |  |  | **Summary of Gas Cost Allocation Proforma Test Year with Gas** |
| **JAP-15** | **Jon A. Piliaris** |  |  | **PSE Non-Lighting Tariffed Rate Components; Lighting Tariffed Rate Components; Summary Rate Spread; Summary of Proposed Rate Design Present and Proposed Rates; Estimated Effect of Proposed Rate Base Increase on Revenues from Electric Sales; Residential Rate Design; Secondary Voltage Rate Design; Primary Voltage Rate Design; Campus Rate Design; High Voltage Rate Design; Transportation and Wholesale for Resale; Area and Street Lighting Rate Design** |
| **JAP-16** | **Jon A. Piliaris** |  |  | **Proposed Electric Schedules 7, 7A, 24-26, 29, 31, 35, 40, 43, 46, 49, 50-55, 57, 58, 95, 141, 142, 149, 448, 458, and 459** |
| **JAP-17** | **Jon A. Piliaris** |  |  | **Survey of Basic Charges of US Electric Utilities** |
| **JAP-18** | **Jon A. Piliaris** |  |  | **Schedule 40 Coincident Factors by Customer** |
| **JAP-19** | **Jon A. Piliaris** |  |  | **GRC Rate Impacts** |
| **JAP-20** | **Jon A. Piliaris** |  |  | **Lighting Schedules, Classification of Lighting Costs** |
| **JAP-21** | **Jon A. Piliaris** |  |  | **Development of Unitized Lighting Costs** |
| **JAP-22** | **Jon A. Piliaris** |  |  | **Summary of Allocated Costs** |
| **JAP-23** | **Jon A. Piliaris** |  |  | **Lighting Revenues Summary Base Rate vs. Proposed 2017 GRC** |
| **JAP-24** | **Jon A. Piliaris** |  |  | **Allocation of Revenue Deficiency to Rate Classes at Existing PGA Allocation** |
| **JAP-25** | **Jon A. Piliaris** |  |  | **Current and Proposed Natural Gas Tariff Rules 21, 23, and 29, Schedules 16, 23, 31, 31T, 41, 41T, 53, 85, 85T, 185T, 86, 86T, 87, 87T, 141, Supplemental Schedule 142** |
| **JAP-26** | **Jon A. Piliaris** |  |  | **Survey of Residential Monthly Minimum Charges of Gas Utilities**  |
| **JAP-27** | **Jon A. Piliaris** |  |  | **2017 Gas Cost of Service Study Procurement Charge Calculation Proforma Test Year Without Gas** |
| **JAP-28** | **Jon A. Piliaris** |  |  | **2017 Gas Proposed Rates, Estimated Combined Impact on Total Bills** |
| **JAP-29** | **Jon A. Piliaris** |  |  | **PSE Electric and Natural Gas Evaluation: Three Years of Decoupling; Independent Third-Party Evaluation of PSE’s Decoupling Mechanisms, Prepared by H. Gil Peach & Associates, Forefront Economics, Inc., and Joseph Associates, Inc. (12/31/16)** |
| **JAP-30** | **Jon A. Piliaris** |  |  | **Electric Decoupling Mechanism Development of Decoupled Delivery and Power Cost Revenue by Decoupling Group; Development of Allowed Delivery Revenue & Fixed Power Cost Revenue Per Customer; Development of Delivery Revenue & Fixed Power Cost Per Unit Rates; Development of Delivery Revenue Per Unit Rates; Development of Monthly Allowed Delivery Revenue Per Customer; Development of Monthly Allowed Fixed Power Cost Revenue Per Customer; Delivery Revenue Deferral and Amortization Calculations; Fixed Power Cost Deferral and Amortization Calculations** |
| **JAP-31** | **Jon A. Piliaris** |  |  | **Gas Decoupling Mechanism Development of Decoupled Revenue by Decoupling Group; Development of Allowed Delivery Revenue Per Customer; Development of Delivery Revenue Per Unit Rates; Development of Monthly Allowed Delivery Revenue Per Customer; Delivery Revenue Deferral and Amortization Calculations** |
| **JAP-32** | **Jon A. Piliaris** |  |  | **Electric CRM Revenue Requirement Model; Calculation of Schedule 149 Electric Rider Rates** |
| **JAP-33C** | **Jon A. Piliaris** |  |  | **\*\*\*CONFIDENTIAL\*\*\*****Electric Decoupling Mechanism Development of Decoupled Delivery and Power Cost Revenue by Decoupling Group** |
| **JAP-34T** | **Jon A. Piliaris** |  |  | **Prefiled Supplemental Testimony of Jon A. Piliaris****(20 pages) (4/3/17)** |
| **JAP-35** | **Jon A. Piliaris** |  |  | **PSE Response to Staff DR 101** |
| **JAP-36** | **Jon A. Piliaris** |  |  | **PSE Response to Staff DR 6** |
| **JAP-37** | **Jon A. Piliaris** |  |  | **2017 GRC Supplemental – Gas Adjustments to Volume (Therms) by Rate Schedule; Reconciliation of Revenue at Actual Rates by Rate Schedule** |
| **JAP-38** | **Jon A. Piliaris** |  |  | **Calculation of Schedule 96 Rate; Statement of Proforma and Proposed Revenue for Schedule 95** |
| **JAP-39** | **Jon A. Piliaris** |  |  | **Tariffed Rate Components; Summary Rate Spread; Estimated Effect of Proposed Base Rate Increase on Revenues from Electric Sales; Residential Rate Design; Secondary Voltage Rate Design; Primary Voltage Rate Design; Campus Rate Design; High Voltage Rate Design; Transportation and Wholesale for Resale; Area and Street Lighting Rate Design** |
| **JAP-40** | **Jon A. Piliaris** |  |  | **Allocation of Revenue Deficiency to Rate Classes at Existing PGA Allocations; Current and Proposed Rates by Rate Schedule; Rental Schedules 71, 72, and 74** |
| **JAP-41** | **Jon A. Piliaris** |  |  | **Electric Decoupling Mechanism Calculations** |
| **JAP-42** | **Jon A. Piliaris** |  |  | **Gas Decoupling Mechanism Calculations** |
| **JAP-43C** | **Jon A. Piliaris** |  |  | **Electric Decoupling Mechanism Calculations** |
| **JAP-44** | **Jon A. Piliaris** |  |  | **GRC Rate Impacts; Monthly Billing Comparison by Schedule** |
| **JAP-45** | **Jon A. Piliaris** |  |  | **2017 Gas GRC Proposed Rates Estimated Combined Impact on Total Bills; Typical Residential Bill Impacts of Proposed Rate Changes** |
| **JAP-46TC** | **Jon A. Piliaris** |  |  | **\*\*\*CONFIDENTIAL\*\*\*****Confidential Prefiled Rebuttal Testimony of Jon A. Piliaris (86 pages) (8/9/17)** |
| **JAP-47** | **Jon A. Piliaris** |  |  | **Alternative Decoupling Calculations for Fixed Production Cost** |
| **JAP-48** | **Jon A. Piliaris** |  |  | **The Energy Project Response to PSE DR 2** |
| **JAP-49** | **Jon A. Piliaris** |  |  | **Joint Motion to Amend Order 03 and Settlement Agreement in Docket UE-141368** |
| **JAP-50** | **Jon A. Piliaris** |  |  | **Modified Parity Ratio Calculation for Schedule 40** |
| **JAP-51** | **Jon A. Piliaris** |  |  | **Sample PSE Residential Electric Customer Bill** |
| **JAP-52** | **Jon A. Piliaris** |  |  | **PSE Residential Electric Rate Summary** |
| **JAP-53** | **Jon A. Piliaris** |  |  | **Staff Response to PSE DR 24** |
| **CROSS-EXAMINATION EXHIBITS** |
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| **Ronald J. Roberts, Director of Thermal Resources, PSE** |
| **RJR-1TC** | **Ronald J. Roberts** |  |  | **\*\*\*CONFIDENTIAL\*\*\*****Confidential Prefiled Direct Testimony of Ronald J. Roberts (76 pages)****(1/13/17)** |
| **RJR-2** | **Ronald J. Roberts** |  |  | **Professional Qualifications of Ronald J. Roberts** |
| **RJR-3** | **Ronald J. Roberts** |  |  | **Construction and Ownership Agreement Between Montana Power Company and PSE** |
| **RJR-4** | **Ronald J. Roberts** |  |  | **Agreement for the Operation and Maintenance of Colstrip Steam Electric Generating Plant Between Montana Power Company and PSE** |
| **RJR-5** | **Ronald J. Roberts** |  |  | **Common Facilities Agreement Between Montana Power Company, PSE, Washington Water Power Company, Portland General Electric Company, Pacific Power, and Basin Electric Power Cooperative for Colstrip Units 1-4** |
| **RJR-6** | **Ronald J. Roberts** |  |  | **Coal Purchase and Sale Agreement By and Among PPL Montana, LLC and PSE as Buyers and Western Energy Company as Seller** |
| **RJR-7** | **Ronald J. Roberts** |  |  | **Colstrip Project Transmission Agreement between Northwestern Energy, PSE, Avista, Portland General Electric Company, and PacifiCorp**  |
| **RJR-8** | **Ronald J. Roberts** |  |  | **Transmission Agreement Between Montana Power Company and PSE for Colstrip Units 1 and 2** |
| **RJR-9** | **Ronald J. Roberts** |  |  | **Amended and Restated Transmission Agreement Executed by US DOE Acting by and through the Bonneville Power Administration and Montana Intertie Users (Colstrip Project)** |
| **RJR-10** | **Ronald J. Roberts** |  |  | **EPA Rules and Proposed Rules** |
| **RJR-11** | **Ronald J. Roberts** |  |  | **US Energy Information Administration article, “Coal Made up more than 80% of Retired Electricity Generating Capacity in 2015” March 8, 2016** |
| **RJR-12** | **Ronald J. Roberts** |  |  | **“A Bleak Future for Colstrip Units 1 and 2,” Institute for Energy Economics and Financial Analysis, June 2015** |
| **RJR-13** | **Ronald J. Roberts** |  |  | **Statement of Talen Energy, Jeremy McGuire, Senior VP, CFO, before the Montana Energy and Telecommunications Interim Committee, July 14, 2016** |
| **RJR-14** | **Ronald J. Roberts** |  |  | **Talen Montana Colstrip Power Plant Shutdown Water Management Options Analysis, Prepared by WorleyParsons Resources and Energy** |
| **RJR-15** | **Ronald J. Roberts** |  |  | **Feasibility Capital Cost Estimate Colstrip Units 1-4 SCR Retrofit, prepared by David Bowen for Burns & McDonnell** |
| **RJR-16** | **Ronald J. Roberts** |  |  | **USDC District of Montana Sierra Club and Montana Environmental Information Center v. Talen Montana, LLC, Avista, PSE, Portland General Electric Company, Northwestern Energy, and PacifiCorp****Declaration of Gordon Criswell in Opposition of Plaintiff’s Motion for Attorney’s Fees;** |
| **RJR-17** | **Ronald J. Roberts** |  |  | **Forecast of Possible Cost Impacts of I-732** |
| **RJR-18** | **Ronald J. Roberts** |  |  | **Consent Decree from USDC District of Montana between Sierra Club, Montana Environmental Information Center and Talen Montana, LLC, Avista, PSE, Portland General Electric Company, Northwestern Energy, PacifiCorp** |
| **RJR-19** | **Ronald J. Roberts** |  |  | **General Release and Settlement Agreement between Sierra Club, Montana Environmental Information Center, National Wildlife Federation and Talen Montana, LLC, Avista, PSE, Portland General Electric Company, Northwestern Energy, PacifiCorp** |
| **RJR-20** | **Ronald J. Roberts** |  |  | **Cost Estimate to Retire and Decommission Colstrip Units 1 and 2, Black & Veatch Corporation** |
| **RJR-21** | **Ronald J. Roberts** |  |  | **Colstrip Units 1 and 2 Demolition Cost Estimate, HDR Engineering, Inc.** |
| **RJR-22** | **Ronald J. Roberts** |  |  | **Brandenburg Quote – Demolition Budget Colstrip Units 1 and 2** |
| **RJR-23** | **Ronald J. Roberts** |  |  | **Total Projected Decommissioning and Demolition Costs and CCR Plan Costs Colstrip Units 1 and 2** |
| **RJR-24** | **Ronald J. Roberts** |  |  | **Master Plan Summary Report Update Colstrip Steam Electric Station Prepared by Geosyntec Consultants, Revised 9/23/16** |
| **RJR-25** | **Ronald J. Roberts** |  |  | **2017 GRC vs. 2014 PCORC as filed** |
| **RJR-26C** | **Ronald J. Roberts** |  |  | **\*\*\*CONFIDENTIAL\*\*\*****Amortization for Rate Years Major Maintenance Expense** |
| **RJR-27** | **Ronald J. Roberts** |  |  | **Lower Snake River Operations and Maintenance Cost Benchmark and Forecast Study** |
| **RJR-28** | **Ronald J. Roberts** |  |  | **RFP for Lower Snake River Service and Maintenance on Behalf of PSE** |
| **RJR-29C** | **Ronald J. Roberts** |  |  | **\*\*\*CONFIDENTIAL\*\*\*****New Siemens Wind Turbine Services Agreement** |
| **RJR-30T** | **Ronald J. Roberts** |  |  | **Prefiled Rebuttal Testimony of Ronald J. Roberts (18 pages) (8/9/17)** |
| **RJR-31** | **Ronald J. Roberts** |  |  | **The Application for a Construction Permit to the Montana Department of Health and Environmental Services for Colstrip Units 1 and 2** |
| **RJR-32** | **Ronald J. Roberts** |  |  | **Study of Alternate Ash Disposal Methods For Colstrip Units No. 1 and No. 2, issued by the Montana Power Company in February 1985** |
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| **John K. Rork, Manager, Environmental Programs & Sciences Department, PSE** |
| **JKR-1T** | **John K. Rork** |  |  | **Prefiled Direct Testimony of John K. Rork (14 pages)****(1/13/17)** |
| **JKR-2** | **John K. Rork** |  |  | **Professional Qualifications of John K. Rork** |
| **JKR-3** | **John K. Rork** |  |  | **Electric Sites and Former Manufactured Gas SitesActual Costs and Insurance Recoveries through 9/16** |
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| **Suzanne M. Sasville, Supervisor for Energy Assistance Programs, PSE** |
| **SMS-1T** | **Suzanne M. Sasville** |  |  | **Prefiled Direct Testimony of Suzanne M. Sasville (8 pages)****(1/13/17)** |
| **SMS-2** | **Suzanne M. Sasville** |  |  | **Professional Qualifications of Suzanne M. Sasville** |
| **SMS-3** | **Suzanne M. Sasville** |  |  | **PSE Customers Below Poverty Levels** |
| **SMS-4T** | **Suzanne M. Sasville** |  |  | **Prefiled Rebuttal Testimony of Suzanne M. Sasville (8 pages) (8/9/17)** |
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| **Steven R. Secrist, Senior Vice President, General Counsel, Chief Ethics and Compliance Officer** |
| **SRS-1T** | **Steven R. Secrist** |  |  | **Prefiled Rebuttal Testimony of Steven R. Secrist (13 pages) (8/9/17)** |
| **SRS-2** | **Steven R. Secrist** |  |  | **Professional Qualifications of Steven R. Secrist** |
| **SRS-3** | **Steven R. Secrist** |  |  | **Letter to Steve McLellan, Washington Utilities and Transportation Commission (April 2, 1998)** |
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| **John J. Spanos, Senior Vice President, Gannett Fleming Valuation and Rate Consultants**  |
| **JJS-1T** | **John J. Spanos** |  |  | **Prefiled Direct Testimony of John J. Spanos (18 pages)****(1/13/17)** |
| **JJS-2** | **John J. Spanos** |  |  | **Professional Qualifications of John J. Spanos** |
| **JJS-3** | **John J. Spanos** |  |  | **2016 Depreciation Study: Calculated Annual Depreciation Accruals Related to Electric, Gas, and Common Plant as of 9/30/16, Prepared by Gannett Fleming** |
| **JJS-4T** | **John J. Spanos** |  |  | **Prefiled Rebuttal Testimony of John J. Spanos (39 pages) (8/9/17)** |
| **JJS-5** | **John J. Spanos** |  |  | **Comparison of Theoretical Net Plant as of Sept. 30, 2016** |
| **JJS-6** | **John J. Spanos** |  |  | **Depreciation Expense for Colstrip Units 3 and 4 (2025 & 2029)** |
| **CROSS-EXAMINATION EXHIBITS** |
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|  |  |  |  |  |
| **Paul K. Wetherbee, Director, Energy Supply Merchant for PSE** |
| **PKW-1TC** | **Paul K. Wetherbee** |  |  | **\*\*\*CONFIDENTIAL\*\*\*****Confidential Prefiled Direct Testimony of Paul K. Wetherbee (83 pages)****(1/13/17)** |
| **PKW-2** | **Paul K. Wetherbee** |  |  | **Professional Qualifications of Paul K. Wetherbee** |
| **PKW-3C** | **Paul K. Wetherbee** |  |  | **\*\*\*CONFIDENTIAL\*\*\*****2017 GRC As Filed Power Costs Projections – AURORA + Not in Models Rate Year January 2018 through December 2018; Gas Price Date: 9/23/16** |
| **PKW-4C** | **Paul K. Wetherbee** |  |  | **\*\*\*CONFIDENTIAL\*\*\*****2017 GRC As Filed vs 2016 Power Costs Update Power Costs Comparison** |
| **PKW-5** | **Paul K. Wetherbee** |  |  | **Greenhouse Gas Emissions Caps Metric Tons CO2 Equivalent** |
| **PKW-6C** | **Paul K. Wetherbee** |  |  | **\*\*\*CONFIDENTIAL\*\*\*****Change in Power Costs & Generation Due to Emission Constraints** |
| **PKW-7** | **Paul K. Wetherbee** |  |  | **PSE White River Land Parcels in Regulatory Asset Account** |
| **PKW-8CT** | **Paul K. Wetherbee** |  |  | **\*\*\*CONFIDENTIAL\*\*\*****Confidential Prefiled Supplemental Testimony of Paul K. Wetherbee (8 pages)****(4/3/17)** |
| **PKW-9C** | **Paul K. Wetherbee** |  |  | **\*\*\*CONFIDENTIAL\*\*\*****2017 GRC Supplemental Power Costs Projections – AURORA + Not in Models Rate Year January 2018 through December 2018; Gas Price Date: 2/3/17** |
| **PKW-10C** | **Paul K. Wetherbee** |  |  | **\*\*\*CONFIDENTIAL\*\*\*****2017 GRC Supplemental vs 2017 GRC As Filed Power Costs Comparison** |
| **PKW-11C** | **Paul K. Wetherbee** |  |  | **\*\*\*CONFIDENTIAL\*\*\*****2017 GRC Supplemental vs 2016 Power Costs Update Power Costs Comparison** |
| **PKW-12C** | **Paul K. Wetherbee** |  |  | **\*\*\*CONFIDENTIAL\*\*\*****Change in Power Costs & Generation Due to Emission Constraints** |
| **PKW-13C** | **Paul K. Wetherbee** |  |  | **\*\*\*CONFIDENTIAL\*\*\*****2017 GRC Supplemental Contingent Calculation Power Costs Projections – AURORA + Not in Models Raye Year January 2018 through December 2018; Gas Price Date: 2/3/17** |
| **PKW-14C** | **Paul K. Wetherbee** |  |  | **\*\*\*CONFIDENTIAL\*\*\*****2017 GRC Supplemental Contingent Calculation vs 2017 GRC Supplemental Power Costs Comparison** |
| **PKW-15TC** | **Paul K. Wetherbee** |  |  | **\*\*\*CONFIDENTIAL\*\*\*****Confidential Prefiled Rebuttal Testimony of Paul K. Wetherbee (50 pages) (8/9/17)** |
| **PKW-16** | **Paul K. Wetherbee** |  |  | **PSE Clean Air Rule Baseline Emissions Limits and 2018 Caps (2012 through 2016)** |
| **PKW-17C** | **Paul K. Wetherbee** |  |  | **\*\*\*CONFIDENTIAL\*\*\*****Clean Air Rule Compliance Cost Estimate** |
| **PKW-18C** | **Paul K. Wetherbee** |  |  | **\*\*\*CONFIDENTIAL\*\*\*****Comparisons of Actual Wind Generation with the Preconstruction, 2010 DNV, and 2016 Wind Forecasts** |
| **PKW-19C** | **Paul K. Wetherbee** |  |  | **\*\*\*CONFIDENTIAL\*\*\*****Capacity factors for PSE’s Wind Resource from Various Forecasts** |
| **PKW-20C** | **Paul K. Wetherbee** |  |  | **\*\*\*CONFIDENTIAL\*\*\*****Vaisala Forecasts for All of PSE’s Owned Wind Resources** |
| **PKW-21C** | **Paul K. Wetherbee** |  |  | **\*\*\*CONFIDENTIAL\*\*\*****Updated Summary of Power Costs** |
| **PKW-22C** | **Paul K. Wetherbee** |  |  | **\*\*\*CONFIDENTIAL\*\*\*****Comparison of Projected Power Costs Presented in This Rebuttal Testimony with the Projected Power Costs Presented in PSE’s Supplemental Testimony filed on April 3, 2017** |
| **PKW-23C** | **Paul K. Wetherbee** |  |  | **\*\*\*CONFIDENTIAL\*\*\*****Comparison of Projected Power Costs Presented in this Rebuttal Testimony with the Projected Power Costs Presented in the 2016 Power Costs Update** |
| **PKW-24C** | **Paul K. Wetherbee** |  |  | **\*\*\*CONFIDENTIAL\*\*\*****Projected Power Costs with the Microsoft Special Contract Qualifying Load Removed** |
| **PKW-25C** | **Paul K. Wetherbee** |  |  | **\*\*\*CONFIDENTIAL\*\*\*****Comparison of Projected Power Costs Presented in this Rebuttal Testimony with the Microsoft Qualifying Load Removed with Projected Power Costs Presented in PSE’s Supplemental Testimony Filed on April 3, 2017, with the Microsoft Special Contract Qualifying Load Removed** |
| **CROSS-EXAMINATION EXHIBITS** |
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| **Greg J. Zeller, Director Customer Care, PSE**  |
| **GJZ-1T** | **Greg J. Zeller** |  |  | **Prefiled Direct Testimony of Greg J. Zeller (22 pages)****(1/13/17)** |
| **GJZ-2** | **Greg J. Zeller** |  |  | **Professional Qualifications of Greg J. Zeller** |
| **GJZ-3T** | **Greg J. Zeller** |  |  | **Prefiled Rebuttal Testimony of Greg J. Zeller (21 pages) (8/9/17)** |
| **GJZ-4** | **Greg J. Zeller** |  |  | **Public Counsel Response to PSE DR 7** |
| **GJZ-5** | **Greg J. Zeller** |  |  | **Public Counsel Response to PSE DR 9** |
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| **Commission Regulatory Staff** |
|  **Jason L. Ball, Regulatory Analyst** |
| **JLB-1T** | **Jason L. Ball** |  |  | **Prefiled Response Testimony of Jason L. Ball (56 pages)****(6/30/17)** |
| **JLB-2** | **Jason L. Ball** |  |  | **Comparison of Staff and Company Electric Cost of Service Study Results and Rate Design Proposals** |
| **JLB-3** | **Jason L. Ball** |  |  | **Comparison of Staff and Company Natural Gas Rates** |
| **JLB-4C** | **Jason L. Ball** |  |  | **\*\*\*CONFIDENTIAL\*\*\*****Seasonal Rate Design Technical Appendix** |
| **JLB-5** | **Jason L. Ball** |  |  | **Bill Impact of Increased Basic Charge** |
| **JLB-6** | **Jason L. Ball** |  |  | **Third Block Technical Appendix** |
| **JLB-7** | **Jason L. Ball** |  |  | **PSE Response to Staff DRs 103 and 104** |
| **JLB-8T** | **Jason L. Ball** |  |  | **Supplemental Testimony of Jason L. Ball (8/7/17) (8 pages)** |
| **JLB-9** | **Jason L. Ball** |  |  | **Cross-Walk of Impacts on Cost of Service from Various Updates** |
| **JLB-10** | **Jason L. Ball** |  |  | **PSE 1st Revised Response to Staff DR 443** |
| **JLB-11** | **Jason L. Ball** |  |  | **Staff Response to PSE DR 24** |
| **JLB-12T** | **Jason L. Ball** |  |  | **Prefiled Cross-Answering Testimony of Jason L. Ball (8 pages) (8/9/17)** |
| **CROSS-EXAMINATION EXHIBITS** |
|  |  |  |  |  |
| **Melissa C. Cheesman, Regulatory Analyst** |
| **MCC-1T** | **Melissa C. Cheesman** |  |  | **Prefiled Response Testimony of Melissa C. Cheesman** **(30 pages) (6/30/17)** |
| **MCC-2** | **Melissa C. Cheesman** |  |  | **Electric Results of Operations for 12 Months Ending 9/30/16** |
| **MCC-3** | **Melissa C. Cheesman** |  |  | **Calculation of Electric Revenue Requirement Sufficiency** |
| **MCC-4** | **Melissa C. Cheesman** |  |  | **Comparison of PSE-Staff Electric Revenue Requirements** |
| **MCC-5** | **Melissa C. Cheesman** |  |  | **Comparison of PSE-Staff Working Capital (Electric)** |
| **MCC-6** | **Melissa C. Cheesman** |  |  | **PSE Requested Overall Electric Revenue Sufficiency** |
| **MCC-7** | **Melissa C. Cheesman** |  |  | **Gas Results of Operations for 12 Months Ending 9/30/16** |
| **MCC-8** | **Melissa C. Cheesman** |  |  | **Calculation of Gas Revenue Requirement Deficiency** |
| **MCC-9** | **Melissa C. Cheesman** |  |  | **Comparison of PSE-Staff Gas Revenue Requirements** |
| **MCC-10** | **Melissa C. Cheesman** |  |  | **Comparison of PSE-Staff Working Capital (Gas)** |
| **MCC-11** | **Melissa C. Cheesman** |  |  | **PSE Requested Overall Gas Revenue Sufficiency** |
| **MCC-12** | **Melissa C. Cheesman** |  |  | **Electric Revenue Bridge** |
| **MCC-13** | **Melissa C. Cheesman** |  |  | **Gas Revenue Bridge** |
| **MCC-14** | **Melissa C. Cheesman** |  |  | **PSE Response to Staff DR 382**  |
| **MCC-15** | **Melissa C. Cheesman** |  |  | **PSE Response to Staff DR 382** |
| **MCC-16** | **Melissa C. Cheesman** |  |  | **PSE Response to Staff DR 371**  |
| **MCC-17** | **Melissa C. Cheesman** |  |  | **PSE Response to Staff DR 372** |
| **MCC-18** | **Melissa C. Cheesman** |  |  | **PSE Witness, Ms. Susan Free Natural Gas Work Paper Adjustment 11.13**  |
| **CROSS-EXAMINATION EXHIBITS** |
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| **Betty A. Erdahl, Regulatory Analyst** |
| **BAE-1T** | **Betty A. Erdahl** |  |  | **Prefiled Response Testimony of Betty A. Erdahl (16 pages)****(6/30/17)** |
| **BAE-2** | **Betty A. Erdahl** |  |  | **Comparison of Staff and PSE Working Capital Adjustments** |
| **BAE-3** | **Betty A. Erdahl** |  |  | **Detailed Staff Working Capital Calculation 13.23 and 11.23** |
| **BAE-4** | **Betty A. Erdahl** |  |  | **PSE Response to Staff DR 337** |
| **BAE-5** | **Betty A. Erdahl** |  |  | **PSE Response to Staff DR 339** |
| **BAE-6** | **Betty A. Erdahl** |  |  | **PSE Response to Staff DR 204** |
| **CROSS-EXAMINATION EXHIBITS** |
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| **Kyle A. Frankiewich, Regulatory Analyst** |
| **KAF-1T** | **Kyle A. Frankiewich** |  |  | **Prefiled Response Testimony of Kyle A. Frankiewich** **(31 pages) (6/30/17)** |
| **KAF-2** | **Kyle A. Frankiewich** |  |  | **PSE’s Response to Public Counsel DR 290** |
| **KAF-3** | **Kyle A. Frankiewich** |  |  | **PSE Response to Staff DR 323 (Including Attachments A-E) and PSE’s Response to UTC Staff DR 410 (Including Attachment A)** |
| **KAF-4** | **Kyle A. Frankiewich** |  |  | **PSE Response to Staff DR 327 (Including Attachment A)** |
| **KAF-5** | **Kyle A. Frankiewich** |  |  | **PSE Response to Staff DR 331** |
| **KAF-6** | **Kyle A. Frankiewich** |  |  | **PSE Response to Staff DR 329** |
| **KAF-7** | **Kyle A. Frankiewich** |  |  | **PSE First Supplemental Response to Staff DR 328 (Including Attachment E)** |
| **KAF-8** | **Kyle A. Frankiewich** |  |  | **Staff Example of Variance in Reasonable Estimates of CAR Baseline (expansion of Exh. PKW-5)** |
| **KAF-9** | **Kyle A. Frankiewich** |  |  | **PSE Response to Staff DR 419** |
| **CROSS-EXAMINATION EXHIBITS** |
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| **David C. Gomez, Assistant Power Supply Manager** |
| **DCG-1TC** | **David C. Gomez** |  |  | **\*\*\*CONFIDENTIAL\*\*\*****Confidential Prefiled Response Testimony of David C. Gomez (35 pages) (6/30/17)** |
| **DCG-2** | **David C. Gomez** |  |  | **PSE 2015 IRP, Appendix D** |
| **DCG-3C** | **David C. Gomez** |  |  | **\*\*\*CONFIDENTIAL\*\*\*****PSE Response to Staff DR 175, Attachments A&B** |
| **DCG-4C** | **David C. Gomez** |  |  | **\*\*\*CONFIDENTIAL\*\*\*****PSE Response to Staff DR 177** |
| **DCG-5** | **David C. Gomez** |  |  | **PSE Response to Staff DR 177, Attachment G** |
| **DCG-6** | **David C. Gomez** |  |  | **PSE Response to Staff DR 177, Attachment C** |
| **DCG-7C** | **David C. Gomez** |  |  | **\*\*\*CONFIDENTIAL\*\*\*****PSE Response to Staff DR 176, Attachments C-F** |
| **DCG-8C** | **David C. Gomez** |  |  | **\*\*\*CONFIDENTIAL\*\*\*****PSE Response to Staff DR 259** |
| **DCG-9C** | **David C. Gomez** |  |  | **\*\*\*CONFIDENTIAL\*\*\*****PSE Response to Staff DR 176, Attachment G** |
| **DCG-10** | **David C. Gomez** |  |  | **2015 Wind Technologies Market Report, p. 41** |
| **DCG-11C** | **David C. Gomez** |  |  | **\*\*\*CONFIDENTIAL\*\*\*****PSE Response to Staff DR 311, Attachments B-F** |
| **DCG-12C** | **David C. Gomez** |  |  | **\*\*\*CONFIDENTIAL\*\*\*****PSE Response to Staff DR 177, Attachment A** |
| **DCG-13C** | **David C. Gomez** |  |  | **\*\*\*CONFIDENTIAL\*\*\*****Portions of Testimony of David C. Gomez, Exh. DCG-1TC, and Gregory N. Duvall, Exh. GND-1TC, in Docket UE-130043** |
| **DCG-14** | **David C. Gomez** |  |  | **Portions of Testimony of David E. Mills, Exh. DEM-11TC, in Dockets UE-111048 and UG-111049** |
| **DCG-15C** | **David C. Gomez** |  |  | **\*\*\*CONFIDENTIAL\*\*\*****Portions of Testimony of David E. Mills, Exh. DEM-1TC, in Dockets UE-111048 and UG-111049** |
| **CROSS-EXAMINATION EXHIBITS** |
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| **Christopher S. Hancock, Regulatory Analyst** |
| **CSH-1TC** | **Christopher S. Hancock** |  |  | **\*\*\*CONFIDENTIAL\*\*\*****Confidential Prefiled Testimony of Christopher S. Hancock (30 pages)****(6/30/17)** |
| **CSH-2C** | **Christopher S. Hancock** |  |  | **\*\*\*CONFIDENTIAL\*\*\*****PSE Response to Staff DR 185** |
| **CSH-3** | **Christopher S. Hancock** |  |  | **PSE Response to Staff DR 143** |
| **CSH-4** | **Christopher S. Hancock** |  |  | **PSE Response to Staff DR 16** |
| **CSH-5** | **Christopher S. Hancock** |  |  | **Montana Response to Staff DR 13** |
| **CSH-6T** | **Christopher S. Hancock** |  |  | **Prefiled Cross-Answering Testimony of Christopher S. Hancock (9 pages) (8/9/17)** |
| **CROSS-EXAMINATION EXHIBITS** |
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| **Jing Liu, Regulatory Analyst** |
| **JL-1TC** | **Jing Liu** |  |  | **\*\*\*CONFIDENTIAL\*\*\*****Confidential Prefiled Response Testimony of Jing Liu (76 pages) (6/30/17)****(Revised 7/11/17)** |
| **JL-2** | **Jing Liu** |  |  | **Output of Electric Temperature Normalization Models** |
| **JL-3** | **Jing Liu** |  |  | **Calculation of Electric Temperature Normalization Adjustment** |
| **JL-4** | **Jing Liu** |  |  | **Calculation of Gas Temperature Normalization Adjustment** |
| **JL-5** | **Jing Liu** |  |  | **Output of Gas Temperature Normalization Models Using Ten Year Data** |
| **JL-6** | **Jing Liu** |  |  | **Comparison of Ten Year and Five Year Models for Natural Gas Temperature Normalization** |
| **JL-7C** | **Jing Liu** |  |  | **\*\*\*CONFIDENTIAL\*\*\*****PSE Production Cost Trend Analysis**  |
| **JL-8** | **Jing Liu** |  |  | **Summary of PSE’s Electric Non-Residential Proposed Grouping Backcast** |
| **CROSS-EXAMINATION EXHIBITS** |
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| **Chris R. McGuire, Energy Policy Strategist** |
| **CRM-1T** | **Chris R. McGuire** |  |  | **Prefiled Response Testimony of Chris R. McGuire****(37 pages) (6/30/17)** |
| **CRM-2** | **Chris R. McGuire** |  |  | **Colstrip 1 & 2 Pro Rata Depreciation Estimate** |
| **CRM-3** | **Chris R. McGuire** |  |  | **Colstrip 1 & 2 Regulatory Asset** |
| **CRM-4** | **Chris R. McGuire** |  |  | **Report to the Audit Committees (Excerpt)** |
| **CRM-5** | **Chris R. McGuire** |  |  | **PSE Response to Public Counsel DR 424** |
| **CRM-6T** | **Chris R. McGuire** |  |  | **Prefiled Cross-Answering Testimony of Chris R. McGuire (13 pages) (8/9/17)** |
| **CROSS-EXAMINATION EXHIBITS** |
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| **Elizabeth C. O’Connell, Regulatory Analyst** |
| **ECO-1TC** | **Elizabeth C. O’Connell** |  |  | **\*\*\*CONFIDENTIAL\*\*\*****Confidential Prefiled Direct Testimony of Elizabeth C. O’Connell (33 pages)****(6/30/17)** |
| **ECO-2C** | **Elizabeth C. O’Connell** |  |  | **\*\*\*CONFIDENTIAL\*\*\*****Staff’s Proposed Environmental Remediation Adjustments** |
| **ECO-3** | **Elizabeth C. O’Connell** |  |  | **Environmental Remediation Commission Orders, Start Dates, and Costs** |
| **ECO-4** | **Elizabeth C. O’Connell** |  |  | **PSE Environmental Remediation Quarterly Reports, Q1 2017** |
| **ECO-5** | **Elizabeth C. O’Connell** |  |  | **PSE Response to Staff DR 279** |
| **ECO-6** | **Elizabeth C. O’Connell** |  |  | **PSE Response to Staff DR 284** |
| **ECO-7** | **Elizabeth C. O’Connell** |  |  | **PSE Response to Staff DR 282** |
| **ECO-8** | **Elizabeth C. O’Connell** |  |  | **PSE Response to Staff DR 280** |
| **ECO-9** | **Elizabeth C. O’Connell** |  |  | **PSE Response to Staff DR 270 and 271** |
| **ECO-10C** | **Elizabeth C. O’Connell** |  |  | **\*\*\*CONFIDENTIAL\*\*\*****PSE Response to Staff DR 401, Attachment W** |
| **ECO-11** | **Elizabeth C. O’Connell** |  |  | **PSE Response to Staff DR 278** |
| **ECO-12** | **Elizabeth C. O’Connell** |  |  | **PSE Response to Staff DR 269, Attachment A** |
| **ECO-13C** | **Elizabeth C. O’Connell** |  |  | **\*\*\*CONFIDENTIAL\*\*\*****Tacoma Tide Flats Letter** |
| **ECO-14C** | **Elizabeth C. O’Connell** |  |  | **\*\*\*CONFIDENTIAL\*\*\*****PSE Response to Staff DR 401, Attachment K** |
| **ECO-15** | **Elizabeth C. O’Connell** |  |  | **PSE Response to Staff DR 281** |
| **ECO-16** | **Elizabeth C. O’Connell** |  |  | **Washington Natural Gas and PSE’s Environmental Projects Quarterly Reports Excluding Tacoma Tide Flats** |
| **ECO-17** | **Elizabeth C. O’Connell** |  |  | **PSE’s Summary of Environmental Remediation Costs for Gas Sites Including Tacoma Tide Flats, 12/31/97** |
| **ECO-18** | **Elizabeth C. O’Connell** |  |  | **PSE Response to Staff DR 364, Attachment A** |
| **ECO-19** | **Elizabeth C. O’Connell** |  |  | **PSE Response to Staff DR 364** |
| **ECO-20** | **Elizabeth C. O’Connell** |  |  | **PSE Response to Staff DR 221** |
| **ECO-21** | **Elizabeth C. O’Connell** |  |  | **PSE Response to Staff DR 312 and 408** |
| **ECO-22** | **Elizabeth C. O’Connell** |  |  | **Staff’s Proposed Legal Costs Adjustments** |
| **ECO-23** | **Elizabeth C. O’Connell** |  |  | **PSE Response to Staff DR 218, Attachment A** |
| **CROSS-EXAMINATION EXHIBITS** |
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| **David C. Parcell, Senior Economist, Technical Associates, Inc.** |
| **DCP-1T** | **David C. Parcell** |  |  | **Prefiled Response Testimony of David C. Parcell (55 pages)****(6/30/17)** |
| **DCP-2** | **David C. Parcell** |  |  | **Background and Experience** |
| **DCP-3** | **David C. Parcell** |  |  | **PSE Total Cost of Capital** |
| **DCP-4** | **David C. Parcell** |  |  | **Economic Indicators** |
| **DCP-5** | **David C. Parcell** |  |  | **PSE History of Credit Ratings** |
| **DCP-6** | **David C. Parcell** |  |  | **PSE Capital Structure Ratios** |
| **DCP-7** | **David C. Parcell** |  |  | **Proxy Companies Average Common Equity Ratios** |
| **DCP-8** | **David C. Parcell** |  |  | **Proxy Companies Basis for Selection** |
| **DCP-9** | **David C. Parcell** |  |  | **Proxy Companies DCF Cost Rates** |
| **DCP-10** | **David C. Parcell** |  |  | **Standard & Poor’s 500 ROE and 20-Year Treasury Bond Returns** |
| **DCP-11** | **David C. Parcell** |  |  | **Proxy Companies CAPM Cost Rates** |
| **DCP-12** | **David C. Parcell** |  |  | **Proxy Companies ROE and Market to Book Ratios** |
| **DCP-13** | **David C. Parcell** |  |  | **Standard & Poor’s 500 ROE and Market to Book Ratios** |
| **DCP-14** | **David C. Parcell** |  |  | **Risk Indicators** |
| **DCP-15** | **David C. Parcell** |  |  | **Risk Indicators of Electric Utilities by Size** |
| **CROSS-EXAMINATION EXHIBITS** |
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| **Andrew Roberts, Regulatory Analyst** |
| **AR-1T** | **Andrew Roberts** |  |  | **Prefiled Response Testimony of Andrew Roberts (9 pages)****(6/30/17)** |
| **AR-2** | **Andrew Roberts** |  |  | **PSE Response to Staff DR 387** |
| **AR-3** | **Andrew Roberts** |  |  | **PSE Response to Staff DR 468** |
| **AR-4** | **Andrew Roberts** |  |  | **PSE Response to Staff DR 43** |
| **AR-5** | **Andrew Roberts** |  |  | **PSE Response to Staff DR 40** |
| **AR-6** | **Andrew Roberts** |  |  | **PSE Response to Staff DR 44** |
| **AR-7** | **Andrew Roberts** |  |  | **Effect of IVR Transaction Data on SQI No. 5 Calculation** |
| **AR-8** | **Andrew Roberts** |  |  | **In the Matters of Puget Sound Power and Light Co. Dockets UE-951270 and UE-960195, Fourteenth Supplemental Order Accepting Stipulation; Approving Merger** |
| **AR-9** | **Andrew Roberts** |  |  | **PSE Response to Staff DR 386** |
| **CROSS-EXAMINATION EXHIBITS** |
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| **Thomas E. Schooley, Assistant Director – Energy Regulation, Regulatory Services Division** |
| **TES-1T** | **Thomas E. Schooley** |  |  | **Prefiled Response Testimony of Thomas E. Schooley** **(31 pages) (6/30/17)** |
| **TES-2** | **Thomas E. Schooley** |  |  | **Charts of Storm Events** |
| **TES-3** | **Thomas E. Schooley** |  |  | **Storm Damage Expenses by Periods Ending September 30** |
| **CROSS-EXAMINATION EXHIBITS** |
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| **Jennifer Snyder, Regulatory Analyst** |
| **JES-1T** | **Jennifer Snyder** |  |  | **Prefiled Response Testimony of Jennifer Snyder (8 pages) (6/30/17)** |
| **JES-2** | **Jennifer Snyder** |  |  | **PSE Response to Staff DR 253** |
| **JES-3** | **Jennifer Snyder** |  |  | **PSE Response to Staff DR 394** |
| **JES-4C** | **Jennifer Snyder** |  |  | **\*\*\*CONFIDENTIAL\*\*\*****PSE Response to Staff DR 252, Attachment A** |
| **JES-5** | **Jennifer Snyder** |  |  | **PSE Response to Staff DR 392** |
| **JES-6** | **Jennifer Snyder** |  |  | **PSE Supplemental Response to Staff DR 392** |
| **JES-7** | **Jennifer Snyder** |  |  | **Lazard, “Lazard’s Levelized Cost of Storage Analysis 2.0 – Key Findings”** |
| **JES-8** | **Jennifer Snyder** |  |  | **PSE Response to Staff DR 247** |
| **JES-9** | **Jennifer Snyder** |  |  | **PSE Response to Staff DR 250** |
| **CROSS-EXAMINATION EXHIBITS** |
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| **E. Cooper Wright, Regulatory Analyst** |
| **ECW-1T** | **E. Cooper Wright** |  |  | **Prefiled Response Testimony of E. Cooper Wright (27 pages) (6/30/17)** |
| **CROSS-EXAMINATION EXHIBITS** |
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| **PUBLIC COUNSEL**  |
| **Barbara R. Alexander, Independent Consultant** |
| **BRA-1T** | **Barbara R. Alexander** |  |  | **Prefiled Response Testimony of Barbara R. Alexander** **(33 pages) (6/30/17)** |
| **BRA-2** | **Barbara R. Alexander** |  |  | **Resume** |
| **BRA-3** | **Barbara R. Alexander** |  |  | **PSE Response to Public Counsel DR 22** |
| **BRA-4** | **Barbara R. Alexander** |  |  | **PSE Response to Public Counsel DR 19, Attachment A** |
| **BRA-5** | **Barbara R. Alexander** |  |  | **PSE Response to Public Counsel DR 27, Attachments B, C, and D** |
| **BRA-6** | **Barbara R. Alexander** |  |  | **PSE Response to Public Counsel DR 14** |
| **BRA-7** | **Barbara R. Alexander** |  |  | **PSE Response to Public Counsel DR 15** |
| **BRA-8** | **Barbara R. Alexander** |  |  | **PSE Response to Public Counsel DR 443** |
| **BRA-9** | **Barbara R. Alexander** |  |  | **PSE Response to Public Counsel DR 28, Attachment A** |
| **BRA-10** | **Barbara R. Alexander** |  |  | **PSE Response to Public Counsel DR 358** |
| **BRA-11** | **Barbara R. Alexander** |  |  | **PSE Response to Public Counsel DR 363, Attachment A** |
| **BRA-12** | **Barbara R. Alexander** |  |  | **Customer Care Center Abandonment Rate Data** |
| **BRA-13** | **Barbara R. Alexander** |  |  | **Copy of PAC Customer Service Guarantees** |
| **BRA-14** | **Barbara R. Alexander** |  |  | **Code of Maryland Regulations, 20.50.12.08** |
| **BRA-15** | **Barbara R. Alexander** |  |  | **Pennsylvania PUC Customer Service Report** |
| **BRA-16** | **Barbara R. Alexander** |  |  | **Xcel Energy Tariffs: Sections 6 and 1.9** |
| **BRA-17** | **Barbara R. Alexander** |  |  | **PSE Response to Staff DR 43** |
| **BRA-18** | **Barbara R. Alexander** |  |  | **PSE Response to Staff DR 468** |
| **BRA-19** | **Barbara R. Alexander** |  |  | **PSE Response to Public Counsel DR 13** |
| **BRA-20** | **Barbara R. Alexander** |  |  | **PSE Response to Public Counsel DR 361** |
| **BRA-21** | **Barbara R. Alexander** |  |  | **PSE Response to Public Counsel DR 362** |
| **BRA-22** | **Barbara R. Alexander** |  |  | **PSE Response to Public Counsel DR 25, Attachments A and B** |
| **BRA-23** | **Barbara R. Alexander** |  |  | **PSE Response to Public Counsel DR 56** |
| **BRA-24** | **Barbara R. Alexander** |  |  | **PSE Response to Public Counsel DR 6** |
| **BRA-25** | **Barbara R. Alexander** |  |  | **PSE Responses to Public Counsel DRs 9, 10, 42, and 43** |
| **CROSS-EXAMINATION EXHIBITS** |
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| **Michael L. Brosch, President, Utilitech, Inc.** |
| **MLB-1T** | **Michael L. Brosch** |  |  | **Prefiled Response Testimony of Michael L. Brosch** **(70 pages) (6/30/17)** |
| **MLB-2** | **Michael L. Brosch** |  |  | **Qualifications** |
| **MLB-3** | **Michael L. Brosch** |  |  | **PSE Response to Public Counsel DR 62, with Attachment A** |
| **MLB-4** | **Michael L. Brosch** |  |  | **Hawaiian Electric Company RBA Tariff** |
| **MLB-5** | **Michael L. Brosch** |  |  | **PSE Responses to Public Counsel DRs 61 and 283** |
| **MLB-6** | **Michael L. Brosch** |  |  | **PSE Responses to Public Counsel DRs 48, 51, and 73** |
| **MLB-7** | **Michael L. Brosch** |  |  | **Puget Energy/PSE 2016 Year End Update Presentation** |
| **MLB-8** | **Michael L. Brosch** |  |  | **PSE Responses to Public Counsel DRs 71, 72, and 75** |
| **MLB-9** | **Michael L. Brosch** |  |  | **PSE Response to Public Counsel DR 388** |
| **MLB-10** | **Michael L. Brosch** |  |  | **PSE Response to Public Counsel DR 393, with Attachment A** |
| **CROSS-EXAMINATION EXHIBITS** |
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| **Roxie M. McCullar, CPA and Consultant, William Dunkel and Associates** |
| **RMM-1T** | **Roxie M. McCullar** |  |  | **Prefiled Response Testimony of Roxie M. McCullar** **(31 pages) (6/30/17)** |
| **RMM-2** | **Roxie M. McCullar** |  |  | **Qualifications** |
| **RMM-3** | **Roxie M. McCullar** |  |  | **Comparison of Current Approved, PSE Proposed, and Public Counsel Proposed Accrual Rate and Annual Accrual Amounts** |
| **RMM-4** | **Roxie M. McCullar** |  |  | **Public Counsel’s Proposed Depreciation Rates for PSE’s Electric Plant** |
| **RMM-5** | **Roxie M. McCullar** |  |  | **Public Counsel’s Proposed Depreciation Rates for PSE’s Natural Gas Plant** |
| **RMM-6** | **Roxie M. McCullar** |  |  | **Referenced Pages from NARUC’s Public Utility Depreciation Practices (August 1996)** |
| **RMM-7** | **Roxie M. McCullar** |  |  | **PSE Response to ICNU DR 27, Attachment A (PSE – 2016 – Production Net Salvage Calculations)** |
| **RMM-8** | **Roxie M. McCullar** |  |  | **Comparison of PSE Proposed Future Net Salvage Accrual and Average Net Salvage Actually Incurred in Recent Years for Natural Gas Plant** |
| **RMM-9** | **Roxie M. McCullar** |  |  | **Comparison of Public Counsel’s Proposed Future Net Salvage Accrual and Average Net Salvage Actually Incurred in Recent Years for Natural Gas Plant** |
| **RMM-10** | **Roxie M. McCullar** |  |  | **Comparison of PSE Proposed Future Net Salvage Accrual and Average Net Salvage Actually Incurred in Recent Years for Electric Plant**  |
| **RMM-11** | **Roxie M. McCullar** |  |  | **Comparison of Public Counsel’s Proposed Future Net Salvage Accrual and Average Net Salvage Actually Incurred in Recent Years for Electric Plant** |
| **CROSS-EXAMINATION EXHIBITS** |
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|  |  |  |  |  |
| **Ralph C. Smith, CPA and Senior Regulatory Utility Consultant, Larkin & Associates, PLLC** |
| **RCS-1TC** | **Ralph C. Smith** |  |  | **\*\*\*CONFIDENTIAL\*\*\*Confidential Prefiled Response Testimony of Ralph C. Smith (89 pages) (6/30/17)** |
| **RCS-2** | **Ralph C. Smith** |  |  | **Qualifications** |
| **RCS-3** | **Ralph C. Smith** |  |  | **Electric Revenue Requirement** |
| **RCS-4** | **Ralph C. Smith** |  |  | **Natural Gas Revenue Requirement** |
| **RCS-5** | **Ralph C. Smith** |  |  | **PSE Responses to Public Counsel DR 297 and ICNU DRs 63, 65, and 67** |
| **RCS-6** | **Ralph C. Smith** |  |  | **PSE Responses to Staff DRs 6 and 46** |
| **RCS-7** | **Ralph C. Smith** |  |  | **PSE Responses to Public Counsel DR 126 and ICNU DR 60** |
| **RCS-8C** | **Ralph C. Smith** |  |  | **\*\*\*CONFIDENTIAL\*\*\*PSE Responses to ICNU DRs 56 and 57 (with Attachment A) and Staff DR 212** |
| **RCS-9** | **Ralph C. Smith** |  |  | **PSE Responses to Staff DR 278 (with Attachment A) and 284** |
| **RCS-10C** | **Ralph C. Smith** |  |  | **\*\*\*CONFIDENTIAL\*\*\*****PSE Responses to Public Counsel DRs 355, 394, 395, 420, 426 (with Attachment A); Sierra Club DR 4 (with Attachment A); Staff DRs 142, 296, 359, 359 (revised with Attachments A and B), and 461** |
| **RCS-11C** | **Ralph C. Smith** |  |  | **\*\*\*CONFIDENTIAL\*\*\*Colstrip Strategic Planning Update, dated 3/2/17** |
| **RCS-12C** | **Ralph C. Smith** |  |  | **\*\*\*CONFIDENTIAL\*\*\*****Analysis of Pension Plans** |
| **CROSS-EXAMINATION EXHIBITS** |
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| **Glenn A. Watkins, Principal and Senior Economist, Technical Associates, Inc.** |
| **GAW-1T** | **Glenn A. Watkins** |  |  | **Prefiled Response Testimony of Glenn A. Watkins** **(70 pages) (6/30/17)** |
| **GAW-2** | **Glenn A. Watkins** |  |  | **Background and Experience Profile** |
| **GAW-3** | **Glenn A. Watkins** |  |  | **Public Counsel DR 300** |
| **GAW-4** | **Glenn A. Watkins** |  |  | **Public Counsel DR 301** |
| **GAW-5** | **Glenn A. Watkins** |  |  | **PSE Wind/Hydro Production During Peak Hours** |
| **GAW-6** | **Glenn A. Watkins** |  |  | **Base-Intermediate-Peak Classification** |
| **GAW-7** | **Glenn A. Watkins** |  |  | **Gross Plant and Depreciation Reserve Hourly Assignments** |
| **GAW-8** | **Glenn A. Watkins** |  |  | **Probability of Dispatch Summary of Class Allocation Factors** |
| **GAW-9** | **Glenn A. Watkins** |  |  | **Probability of Dispatch Class Cost of Service Study** |
| **GAW-10** | **Glenn A. Watkins** |  |  | **Class Cost of Service Studies Parity Ratios** |
| **GAW-11** | **Glenn A. Watkins** |  |  | **Electric Residential Customer Cost Analysis** |
| **GAW-12** | **Glenn A. Watkins** |  |  | **Natural Gas Residential Customer Cost Analysis** |
| **GAW-13T** | **Glenn A. Watkins** |  |  | **Prefiled Cross-Answering Testimony of Glenn A. Watkins (10 pages) (8/9/17)** |
| **CROSS-EXAMINATION EXHIBITS** |
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|  |  |  |  |  |
| **J. Randall Woolridge, Professor of Finance, Pennsylvania State University** |
| **JRW-1T** | **J. Randall Woolridge** |  |  | **Prefiled Response Testimony of J. Randall Woolridge** **(75 pages) (6/30/17)** |
| **JRW-2** | **J. Randall Woolridge** |  |  | **Background & Experience Profile** |
| **JRW-3** | **J. Randall Woolridge** |  |  | **Recommended Cost of Capital** |
| **JRW-4** | **J. Randall Woolridge** |  |  | **Ten Year Treasury Yield** |
| **JRW-5** | **J. Randall Woolridge** |  |  | **Public Utility Bond Yields** |
| **JRW-6** | **J. Randall Woolridge** |  |  | **Summary Financial Statistics for Proxy Groups**  |
| **JRW-7** | **J. Randall Woolridge** |  |  | **Capital Structures Ratios and Debt Cost Rates** |
| **JRW-8** | **J. Randall Woolridge** |  |  | **Relationship Between Expected ROE and Market-to-Book Ratios** |
| **JRW-9** | **J. Randall Woolridge** |  |  | **Public Utility Capital Cost Indicators** |
| **JRW-10** | **J. Randall Woolridge** |  |  | **Industry Average Betas** |
| **JRW-11** | **J. Randall Woolridge** |  |  | **Discount Cash Flow Model** |
| **JRW-12** | **J. Randall Woolridge** |  |  | **Discount Cash Flow Study** |
| **JRW-13** | **J. Randall Woolridge** |  |  | **Capital Asset Pricing Model Study** |
| **JRW-14** | **J. Randall Woolridge** |  |  | **PSE’s Proposed Cost of Capital** |
| **JRW-15** | **J. Randall Woolridge** |  |  | **PSE ROE Results** |
| **JRW-16** | **J. Randall Woolridge** |  |  | **PSE Response to Public Counsel DR 333** |
| **JRW-17T** | **J. Randall Woolridge** |  |  | **Prefiled Cross-Answering Testimony of J. Randall Woolridge (12 pages) (8/9/17)** |
| **CROSS-EXAMINATION EXHIBITS** |
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| **THE ENERGY PROJECT** |
| **Shawn M. Collins, Director, The Energy Project** |
| **SMC-1T** | **Shawn M. Collins** |  |  | **Prefiled Response Testimony of Shawn M. Collins (32 pages) (6/30/17)** |
| **SMC-2** | **Shawn M. Collins** |  |  | **Professional Qualifications** |
| **SMC-3T** | **Shawn M. Collins** |  |  | **Prefiled Cross-Answering Testimony of Shawn M. Collins (9 pages) (8/9/17)**  |
| **CROSS-EXAMINATION EXHIBITS** |
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| **ICNU**  |
| **Michael P. Gorman, Consultant and Managing Principal, Brubaker & Associates, Inc.** |
| **MPG-1T** | **Michael P. Gorman** |  |  | **Prefiled Response Testimony of Michael P. Gorman (44 pages) (6/30/17)** |
| **MPG-2** | **Michael P. Gorman** |  |  | **Professional Qualifications** |
| **MPG-3** | **Michael P. Gorman** |  |  | **Treasury and Utility Bond Yields** |
| **MPG-4** | **Michael P. Gorman** |  |  | **Valuation Metrics** |
| **MPG-5** | **Michael P. Gorman** |  |  | **Accuracy of Interest Rate Forecasts** |
| **MPG-6** | **Michael P. Gorman** |  |  | **ICNU’s Proposed Electric Revenue Distribution** |
| **MPG-7T** | **Michael P. Gorman** |  |  | **Prefiled Cross-Answering Testimony of Michael P. Gorman (13 pages) (8/9/17)** |
| **CROSS-EXAMINATION EXHIBITS** |
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| **NWIGU** |
| **Brian C. Collins, Consultant and Principal, Brubaker & Associates, Inc.** |
| **BCC-1T** | **Brian C. Collins** |  |  | **Prefiled Response Testimony of Brian C. Collins (19 pages) (6/30/17)** |
| **BCC-2** | **Brian C. Collins** |  |  | **Qualifications** |
| **BCC-3** | **Brian C. Collins** |  |  | **Proposed Class Cost of Service** |
| **BCC-4** | **Brian C. Collins** |  |  | **Proposed Class Margin Revenue Allocation** |
| **BCC-5T** | **Brian C. Collins** |  |  | **Prefiled Cross-Answering Testimony of Brian C. Collins (8/9/17) (9 pages)** |
| **CROSS-EXAMINATION EXHIBITS** |
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| **ICNU AND NWIGU** |
| **Bradley G. Mullins, Independent Consultant** |
| **BGM-1TCr** | **Bradley G. Mullins** |  |  | **\*\*\* CONFIDENTIAL\*\*\*****Prefiled Response Testimony of Bradley G. Mullins (56 pages) (6/30/17) (Revised 7/7/17)** |
| **BGM-2** | **Bradley G. Mullins** |  |  | **List of Regulatory Appearances** |
| **BGM-3** | **Bradley G. Mullins** |  |  | **Electric Services Revenue Requirement** |
| **BGM-4** | **Bradley G. Mullins** |  |  | **Natural Gas Services Revenue Requirement** |
| **BGM-5C** | **Bradley G. Mullins** |  |  | **\*\*\* CONFIDENTIAL\*\*\*****PSE Responses to DRs** |
| **BGM-6** | **Bradley G. Mullins** |  |  | **Proposed Amortization Schedule of Early Retirement Costs** |
| **BGM-7** | **Bradley G. Mullins** |  |  | **PSE Response to ICNU DR 24** |
| **BGM-8** | **Bradley G. Mullins** |  |  | **Ardmore Substation 10 Year Planning Documents** |
| **BGM-9** | **Bradley G. Mullins** |  |  | **Ardmore Substation Project Implementation Plan** |
| **BGM-10** | **Bradley G. Mullins** |  |  | **PSE Response to ICNU DR 91, with Attachment B** |
| **BGM-11** | **Bradley G. Mullins** |  |  | **PSE Responses to ICNU DRs 24 (Supplemental), 25, 85, 86, and 87** |
| **BGM-12T** | **Bradley G. Mullins** |  |  | **Prefiled Cross-Answering Testimony of Bradley G. Mullins (16 pages) (8/9/17)** |
| **BGM-13** | **Bradley G. Mullins** |  |  | **Updated Electric Services Revenue Requirement** |
| **BGM-14** | **Bradley G. Mullins** |  |  | **Updated Natural Gas Services Revenue Requirement** |
| **BGM-15** | **Bradley G. Mullins** |  |  | **Updated Colstrip Units 1 and 2 Regulatory Asset Amortization** |
| **BGM-16** | **Bradley G. Mullins** |  |  | **PSE’s Supplemental Response to ICNU DR 15** |
| **CROSS-EXAMINATION EXHIBITS** |
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| **NWEC/RNW/NRDC** |
| **Amanda M. Levin, Energy and Climate Analyst, Natural Resources Defense Council** |
| **AML-1T** | **Amanda M. Levin** |  |  | **Prefiled Response Testimony of Amanda M. Levin** **(27 pages) (6/30/17)** |
| **AML-2** | **Amanda M. Levin** |  |  | **Professional Qualifications** |
| **AML-3** | **Amanda M. Levin** |  |  | **1992 Letter from WUTC Staff to NARUC** |
| **AML-4** | **Amanda M. Levin** |  |  | **PSE Response to NWEC/RNW/NRDC DR 43** |
| **AML-5** | **Amanda M. Levin** |  |  | **PSE Response to NWEC/RNW/NRDC DR 36** |
| **AML-6** | **Amanda M. Levin** |  |  | **PSE Response to NWEC/RNW/NRDC DR 40** |
| **AML-7** | **Amanda M. Levin** |  |  | **Chapter 4 of 2015 IRP** |
| **AML-8** | **Amanda M. Levin** |  |  | **PSE Response to NWEC/RNW/NRDC DR 49, Attachment A** |
| **AML-9** | **Amanda M. Levin** |  |  | **PSE Response to NWEC/RNW/NRDC DR 50** |
| **AML-10** | **Amanda M. Levin** |  |  | **PSE Response to NWEC/RNW/NRDC DR 47** |
| **AML-11** | **Amanda M. Levin** |  |  | **PSE Response to Public Counsel DR 62, Attachment A** |
| **AML-12** | **Amanda M. Levin** |  |  | **PSE Response to Public Counsel DR 60, Part C** |
| **AML-13T** | **Amanda M. Levin** |  |  | **Prefiled Cross-Answering Testimony of Amanda M. Levin (11 pages) (8/9/17)** |
| **AML-14** | **Amanda M. Levin** |  |  | **FEA Response to NWEC/RNW/NRDC DR 1** |
| **AML-15** | **Amanda M. Levin** |  |  | **FEA Response to NWEC/RNW/NRDC DR 3** |
| **AML-16** | **Amanda M. Levin** |  |  | **Direct Testimony of Paul Chernick, Case. No. 16-1852-EL-SSO (May 2, 2017), Public Utilities Council of Ohio (PUCO)** |
| **AML-17** | **Amanda M. Levin** |  |  | **Rebuttal Testimony (Non-Confidential) of Ralph C. Cavanagh, Docket No. UE-121697** |
| **AML-18** | **Amanda M. Levin** |  |  | **Morgan, Pamela, “A Decade of Decoupling for US Energy Utilities: Rate Impacts, Designs, and Observations” (November 2012)** |
| **AML-19** | **Amanda M. Levin** |  |  | **Vilbert, Michael, Joseph B. Wharton, Charles Gibbons, Melanie Rosenberg, and Yang Wei Neo, “The impact of revenue decoupling on the cost of capital for electric utilities: an empirical investigation,” BRATTLE GROUP, Prepared for The Energy Foundation (2014)** |
| **CROSS-EXAMINATION EXHIBITS** |
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| **Michael H. O’Brien, Research Director, Renewable Northwest** |
| **MHO-1T** | **Michael H. O’Brien** |  |  | **Prefiled Response Testimony of Michael H. O’Brien (3 pages) (6/30/17)** |
| **MHO-2** | **Michael H. O’Brien** |  |  | **Professional Qualifications of Michael H. O’Brien** |
| **CROSS-EXAMINATION EXHIBITS** |
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| **Thomas M. Power, Research Professor, University of Montana at Missoula** |
| **TMP-1T** | **Thomas M. Power** |  |  | **Prefiled Response Testimony of Thomas M. Power (48 pages) (6/30/17)** |
| **TMP-2** | **Thomas M. Power** |  |  | **Professional Qualifications of Thomas M. Power** |
| **TMP-3** | **Thomas M. Power** |  |  | **PSE Response to Staff DR 359, Revision 1 of Attachment B** |
| **TMP-4** | **Thomas M. Power** |  |  | **PSE Response to Staff DR 359, Attachment A** |
| **TMP-5** | **Thomas M. Power** |  |  | **PSE Response to Staff DR 185 and Supplemental Response** |
| **TMP-6** | **Thomas M. Power** |  |  | **PSE Response to NWEC/RNW/NRDC DR 10** |
| **TMP-7** | **Thomas M. Power** |  |  | **PSE Response to NWEC/RNW/NRDC DR 11** |
| **TMP-8** | **Thomas M. Power** |  |  | **PSE Response to NWEC/RNW/NRDC DR 12** |
| **TMP-9T** | **Thomas M. Power** |  |  | **Prefiled Cross-Answering Testimony of Thomas M. Power (22 pages) (8/9/17)** |
| **TMP-10** | **Thomas M. Power** |  |  | **PSE Response to ICNU DR 103** |
| **TMP-11** | **Thomas M. Power** |  |  | **PSE Response to ICNU DR 111** |
| **TMP-12** | **Thomas M. Power** |  |  | **PSE Supplemental Response to ICNU DR 111** |
| **TMP-13** | **Thomas M. Power** |  |  | **PSE Response to Staff DR 185** |
| **TMP-14C** | **Thomas M. Power** |  |  | **\*\*\* CONFIDENTIAL\*\*\*****PSE Supplemental Response to Staff DR 185** |
| **CROSS-EXAMINATION EXHIBITS** |
| **TMP-\_\_\_** | **Montana** |  |  | **Montana Response to Staff Data Request No. 8 (35 pages) (4/17/17)** |
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| **Cameron B. Yourowski, Senior Policy Manager, Renewable Northwest** |
| **CBY-1T** | **Cameron B. Yourowski** |  |  | **Prefiled Response Testimony of Cameron B. Yourowski (20 pages) (6/30/17)** |
| **CBY-2** | **Cameron B. Yourowski** |  |  | **Qualifications** |
| **CBY-3** | **Cameron B. Yourowski** |  |  | **PSE Response to NWEC/RNW/NRDC DR 3(a)** |
| **CBY-4** | **Cameron B. Yourowski** |  |  | **PSE Response to NWEC/RNW/NRDC DR 2, Attachment C** |
| **CBY-5** | **Cameron B. Yourowski** |  |  | **PSE Response to NWEC/RNW/NRDC DR 14** |
| **CBY-6** | **Cameron B. Yourowski** |  |  | **PSE Response to NWEC/RNW/NRDC DR 16** |
| **CBY-7** | **Cameron B. Yourowski** |  |  | **PSE Response to NWEC/RNW/NRDC DR 17** |
| **CBY-8** | **Cameron B. Yourowski** |  |  | **PSE Response to NWEC/RNW/NRDC DR 13** |
| **CBY-9** | **Cameron B. Yourowski** |  |  | **PSE Response to NWEC/RNW/NRDC DR 22** |
| **CBY-10** | **Cameron B. Yourowski** |  |  | **PSE Response to NWEC/RNW/NRDC DR 19** |
| **CBY-11** | **Cameron B. Yourowski** |  |  | **PSE Response to NWEC/RNW/NRDC DR 2, Attachment A** |
| **CBY-12** | **Cameron B. Yourowski** |  |  | **PSE Response to NWEC/RNW/NRDC DR 18** |
| **CBY-13** | **Cameron B. Yourowski** |  |  | **PSE Response to NWEC/RNW/NRDC DR 15** |
| **CBY-14** | **Cameron B. Yourowski** |  |  | **PSE Response to NWEC/RNW/NRDC DR 27** |
| **CBY-15** | **Cameron B. Yourowski** |  |  | **PSE Response to NWEC/RNW/NRDC DR 2, Attachment B** |
| **CROSS-EXAMINATION EXHIBITS** |
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| **SIERRA CLUB** |
| **Ezra D. Hausman, Independent Consultant, Ezra Hausman Consulting** |
| **EDH-1T** | **Ezra D. Hausman** |  |  | **Prefiled Response Testimony of Ezra D. Hausman (41 pages) (6/30/17)** |
| **EDH-2** | **Ezra D. Hausman** |  |  | **Professional Qualifications of Ezra D. Hausman** |
| **EDH-3** | **Ezra D. Hausman** |  |  | **Docket UE-072300, Excerpt from Second Exhibit to Prefiled Direct Testimony of C. Richard Clarke** |
| **EDH-4** | **Ezra D. Hausman** |  |  | **Docket UE-072300, Testimony of William H. Weinman** |
| **EDH-5** | **Ezra D. Hausman** |  |  | **Docket UE-072300, Direct Testimony of Charles W. King** |
| **EDH-6** | **Ezra D. Hausman** |  |  | **Docket UE-072300, Prefiled Rebuttal Testimony of Michael J. Jones** |
| **EDH-7** | **Ezra D. Hausman** |  |  | **PSE Responses to DRs** |
| **EDH-8** | **Ezra D. Hausman** |  |  | **PSE Response to Staff DR 459, Attachment A** |
| **EDH-9** | **Ezra D. Hausman** |  |  | **PSE Response to Public Counsel DR 286, Attachment A** |
| **EDH-10** | **Ezra D. Hausman** |  |  | **Prefiled Cross-Answering Testimony of Ezra D. Hausman (7 pages) (8/9/17)** |
| **CROSS-EXAMINATION EXHIBITS** |
| **EDH-\_\_** | **Montana** |  |  | **Washington Utilities and Transportation Commission, Investigation Report: Investigation of coal-fired generating unit decommissioning and remediation costs UE-151500 (24 pages) (2/1/16)** |
| **EDH-\_\_\_** | **Montana** |  |  | **Montana Public Service Commission, Final Order, in re Application by NorthWestern Corp. for Approval of its Interest in Colstrip Unit 4 (16 Pages) (11/13/08)** |
| **KROGER** |
| **Kevin C. Higgins, Principal, Energy Strategies, LLC** |
| **KCH-1T** | **Kevin C. Higgins** |  |  | **Prefiled Response Testimony of Kevin C. Higgins (23 pages) (6/30/17)** |
| **KCH-2** | **Kevin C. Higgins** |  |  | **Comparison of PSE’s Proposed Rate Spread and Kroger’s Proposed Rate Spread at PSE’s Proposed Revenue Requirement** |
| **KCH-3** | **Kevin C. Higgins** |  |  | **Kroger Proposed Rate Schedule 25 Design at PSE Requested Revenue Requirement and Spread** |
| **KCH-4T** | **Kevin C. Higgins** |  |  | **Prefiled Cross-Answering Testimony of Kevin C. Higgins (10 pages) (8/9/17)** |
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| **FEDERAL EXECUTIVE AGENCIES** |
| **Ali Z. Al-Jabir, Energy Advisor and Senior Consultant, Brubaker & Associates, Inc.** |
| **AZA-1T** | **Ali Z. Al-Jabir** |  |  | **Prefiled Response Testimony of Ali Z. Al-Jabir (32 pages) (6/30/17)** |
| **AZA-2** | **Ali Z. Al-Jabir** |  |  | **Professional Qualifications of Ali Z. Al-Jabir** |
| **AZA-3** | **Ali Z. Al-Jabir** |  |  | **Electric Class Cost of Service Study Results at Present and Proposed Rates Adjusted Test Year 12 Months Ended September 2016 at Pro Forma Revenue Requirement** |
| **AZA-4** | **Ali Z. Al-Jabir** |  |  | **PSE’s Proposed Electric Base Rate Revenue Increase vs. Cost-Based Rates Adjusted Test Year 12 Months Ended September 2016 at Pro Forma Revenue Requirement** |
| **AZA-5** | **Ali Z. Al-Jabir** |  |  | **FEA’s Proposed Electric Revenue Allocation Adjusted Test Year 12 Months Ended September 2016 at Pro Forma Revenue Requirement** |
| **AZA-6T** | **Ali Z. Al-Jabir** |  |  | **Prefiled Cross-Answering Testimony of Ali Z. Al-Jabir (10 pages) (8/9/17)**  |
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| **NUCOR STEEL** |
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| **CROSS-EXAMINATION EXHIBITS** |
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| **STATE OF MONTANA** |
| **Patrick M. Risken, Assistant Attorney General for the State of Montana** |
| **PMR-1T** | **Patrick M. Risken** |  |  | **Prefiled Cross-Answering Testimony of Patrick M. Risken (12 pages) (8/9/17)** |
| **PMR-2** | **Patrick M. Risken** |  |  | **PSE Response to Public Counsel DR 415** |
| **PMR-3** | **Patrick M. Risken** |  |  | **PSE Response to NWEC/RNW/NRDC DR 5** |
| **PMR-4** | **Patrick M. Risken** |  |  | **PSE Response to NWEC/RNW/NRDC DR 6** |
| **PMR-5** | **Patrick M. Risken** |  |  | **PSE Response to NWEC/RNW/NRDC DR 7** |
| **PMR-6** | **Patrick M. Risken** |  |  | **Staff Response to NWEC/RNW/NRDC DRs 2-9** |
| **PMR-7** | **Patrick M. Risken** |  |  | **June 23, 2017, Letter to Chris Cavazos from Steve Gross, International Union of Operating Engineers** |
| **PMR-8** | **Patrick M. Risken** |  |  | **PSE Response to Sierra Club DR 3** |
| **PMR-9** | **Patrick M. Risken** |  |  | **Governor Gregoire’s Executive Order 09-05, Washington’s Leadership on Climate Change** |
| **PMR-10** | **Patrick M. Risken** |  |  | **Docket UE-121373, Order 03, Final Order Granting Petition Subject to Conditions** |
| **PMR-11** | **Patrick M. Risken** |  |  | **MOU Between State of Washington and Transalta Centralia Generation LLC (April 26, 2010)** |
| **PMR-12** | **Patrick M. Risken** |  |  | **PSE’s Response to NWEC/RNW/NRDC DR 12** |
| **PMR-13** | **Patrick M. Risken** |  |  | **Commission Notice of Ex Parte Communication (August 1, 2017)** |
| **CROSS-EXAMINATION EXHIBITS** |
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