Okanogan County Public Utility District
April 10, 2013

Review Panel Workshop –
2013 Equity Management Plan and Rate Study

Richard Cuthbert, Senior Project Manager
Gina Baxter, Senior Analyst
Workshop Agenda

• Review of electric utility ratemaking process
• Review of the equity management plan (EMP) and how it impacts the ratemaking process
• Review preliminary draft 2013 results
  ─ EMP Base Case and Alternative Scenarios
  ─ Cost-of-Service Analysis
  ─ Rate Design Analysis
• Next Steps
Feedback Needed from Review Panel

• What level of rate increases should the District adopt over the next three years?
• If rate increases are adopted, what rate components should be increased?
  – Basic Charges?
  – Energy Charge?
Review of the Ratemaking Process
Steps in Electric Utility Ratemaking Process

- **Utility information**
  - Customer and sales projections
  - Operating budgets and CIP
  - Other assumptions

  → **Revenue requirements**

  → **Check adequacy of rates**

  → **Cost-of-service analysis**

  → **Rate design**

  → **Rate recommendation**
Revenue Requirements

- Determines the overall level of revenue needed to provide electric service
- Items included in the revenue requirement:
  - Operation and maintenance costs
  - Other operating costs (e.g., taxes)
  - Interest expense
  - Depreciation
  - Other income (e.g., interest earnings)
  - Margins
Cost-of-Service Analysis

• Cost-of-service (COS) equals total cost of providing utility service to groups of similar customers or customer classes

• COS analysis is the process of classifying and allocating a utility’s revenue requirements to customer classes
Typical Electric Utility System

- Generating Station
- High Voltage Transmission
- Secondary Voltage Residential Customer
- Primary Voltage Commercial Customer
- Distribution Substation
- Sub-transmission Voltage Industrial Customer
- Transmission Substation

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Cost-of-Service Analysis

Embedded Cost-of-Service Analysis

- **Step 1: Functionalization** –
  “What costs are incurred to provide electric service?”

- **Step 2: Classification** –
  “Why were the costs incurred?”

- **Step 3: Allocation** –
  “Who benefits from these services and costs?”
Principles Used in Rate Design

• Promote revenue stability
• Reflect the cost of providing services
• Easily understood by customers
• Promote rate continuity over time
• Fair, equitable and non-discriminatory test
• Easy to administer
• Meet and reflect the District’s policy objectives
Equity Management Plan (EMP)

- Spreadsheet-based model
- Projects District’s financial performance over a 10-year period
- Equity management plan is used to evaluate
  - Financial metrics
  - Relative equity and debt levels
  - Debt financing options and long-term cost impacts
  - Available cash balances
  - Review of necessary rate adjustments over time
- Allows analysis of alternative scenarios
Key Factors in the EMP Analysis

• Model Inputs
  – Power supply assumptions
  – Load forecast
  – Operating expenses
  – Capital improvements

• Model Outputs
  – Equity levels / Equity ratio
  – Debt Service Coverage Ratios (DSC)
  – Times Interest Earned Ratios (TIER)
  – Cash reserves
  – Rate adjustments
Draft 2013 Equity Management Plan Results – Base Case
2013 EMP

- New study period: 2013-2022
- Updated with 2012 actual information:
  - Number of customers
  - Sales
  - Revenues
  - Operating and maintenance expenses
- Projections for 2013 reflect District’s final O&M Budget
- District’s load forecast allocated among customer classes
- Borrowing assumptions updated
Load Forecast

- Total retail load requirements
  - 2013-2022: 1.0% growth
- Customer class projections based on historical allocations
- Energy resources not needed to serve retail sales requirements are assumed to be sold in wholesale market
Power Supply Assumptions

- **BPA Power Supply**
  - 9.6% increase beginning in October 2013 for two years
  - 6% increases thereafter (every other year).

- **BPA Transmission Service**
  - 13% increase for two years beginning in October 2013
  - 6% increases thereafter (every other year)

- **Enloe Dam power available in 2017**
Base Case Capital Requirements and Funding

• **10-year Capital Expenditures:**
  - Enloe Dam- $35.2 million (2013-2016)
  - Transmission - $17.3 million ($9 million - 2013-2014 for PT Transmission Line)
  - Substations - $9.8 million
  - Normal Replacements and Additions - $24.8 million
  - Other Projects - $15.3 million
  - Total - **$102.4 million**

• **Bond Proceeds - $64.2 million**
  - 2014 – $35.2 million for Enloe Dam
  - 2016 - $29 million for General Capital Improvements

• **Use of Unspent Bond Proceeds - $7.3 million in 2013**
Operating Expenses

- 2012 Actual expenditures
- 2013 Final Budget expenditures
- 2014 and beyond - escalated from 2013 budget over projection period
- 2014 – Enloe Dam debt service payments begin
- 2017 – Enloe Dam operating costs begin
Actual / Projected Sales

Projected Energy Sales (MWh)

- Sales for Resale
- Street Lighting
- Frost Control
- Irrigation
- Industrial
- General Service
- Residential

<table>
<thead>
<tr>
<th>Year</th>
<th>ACTUAL</th>
<th>PROJECTED</th>
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<td>2022</td>
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Base Case Preliminary Unit Revenues from Retail Sales Including COPA (¢/kWh)

Projected Rate Increases
- 13% in 2013 and 2014
- 3% in 2015, 2016 and 2017

Retail Unit Revenue Including COPA (cents per kWh)
• Due to significant decline in wholesale revenues and moderate retail sales growth, District faces significant need for revenue increases in 2013 and 2014.
• Approximately two-thirds of capital additions are assumed to be funded with debt over 10-year horizon.
• Unless wholesale revenue outlook changes significantly, District has few options other than retail rate increases.
Draft 2013 Equity Management Plan Results – Alternative Scenarios
2013 EMP Alternative Scenarios

• Scenario 1: Reduced capital improvements by 30% over the study period (2013-2022)
• Scenario 2:
  – Projected O&M using 2012 actuals as the base year.
  – Assumed 3% escalation
  – Moved $2.9M in annual capitalized labor from operating expenses to be included with capital improvement expenditures.
• Scenario 3: Combination of both Scenarios 1 and 2
2013 EMP Alternative – Scenario 1

- Reduced capital improvements by 30% over the study period (2013-2022); no adjustments to Enloe Dam
- Reduced the second debt issuance assumed for 2016 to $7M from $29M in 2016 in the Base Case EMP
- Adjustments decrease depreciation and interest expenses
- Projected Rate Increases
  - 13.0% in 2013 and 2014
  - 2.0% in 2016 and 2017
2013 EMP Alternative – Scenario 2

- Projected O&M using 2012 actuals as the base year.
- Assumed 3% escalation
- Moved $2.9M in annual capitalized labor from operating expenses to be included with capital improvement expenditures.
- Increases the debt issuance assumed for 2016 to $34M from the $29M in the Base Case EMP
- Assumes additional debt issuances of $25.5M (2015, 2018 and 2020)
- Projected Rate Increases
  - 7.5% in 2013
  - 6.5% in 2014, 2015 and 2016
  - 5.5% in 2017
2013 EMP Alternative – Scenario 3

• Combines both Scenarios 1 and 2
• Assumes $26.5M in debt issuances in 2016 and 2017
• Projected Rate Increases
  – 7.5% in 2013
  – 6.0% in 2014
  – 4.5% in 2015, 2016 and 2017
Comparison of Draft Unit Revenues from Retail Sales Including COPA (¢/kWh)

- **Base Case**
- **Scenario 1: Reduced CIP**
- **Scenario 2: Reduced O&M, 3% Inflation and $2.9M in Capitalized Labor**
- **Scenario 3: Combination of Scenarios 1 and 2**

Retail Unit Revenue Including COPA (cents per kWh)

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ACTUAL | PROJECTED
Preliminary Draft 2013 Cost-of-Service and Rate Design Results
Steps in Electric Utility Ratemaking Process

Utility information
- Customer and sales projections
- Operating budgets and CIP
- Other assumptions

Revenue requirements

Check adequacy of rates

Cost-of-service analysis

Rate design

Rate recommendation
## District’s Draft TY 2013 Revenue Requirement

<table>
<thead>
<tr>
<th>Description</th>
<th>Projected Test Year 2013</th>
<th>Pro forma Adjustments (1)</th>
<th>Adjusted Test Year 2013</th>
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<td>Total Revenues From Sales of Electricity</td>
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<td>$4,703,167</td>
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<td>Other Electric Revenues</td>
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<td>Total Revenues</td>
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<td>Operating Expenses</td>
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<td>Other Expenses</td>
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<td>Total Operating Cost of Service</td>
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<td>$48,386,885</td>
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<td>Margins or Increase in Net Assets</td>
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<td>6,664</td>
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<td>Operating Revenue Requirements</td>
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<td>Total Non-Operating Revenues</td>
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<td>Total Revenue Requirements</td>
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<td>$4,703,167</td>
<td>$48,393,549</td>
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<td>Less Interest Income</td>
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<td>Less Use of Rate Stabilization Funds</td>
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<td>Less Other Revenues</td>
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<td>Less Wholesale Revenues</td>
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<td>Revenue Requirements from Rates</td>
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<td>Revenue Increase (Decrease)</td>
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<td>Percent Change</td>
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<td>Debt Service Coverage Ratio (DSC)</td>
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<td>TIER (Operating)</td>
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<td>TIER (Total)</td>
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**Notes**

(1) Assumes retail revenue increase equal to 13% retail rate increase effective for a 12 month period.
Cost-of-Service Analysis

Embedded Cost-of-Service Analysis

— Step 1: Functionalization –
  “What costs are incurred to provide electric service?”

— Step 2: Classification –
  “Why were the costs incurred?”

— Step 3: Allocation –
  “Who benefits from these services and costs?”
These figures are the amount of increases needed to meet cost of service.

These rate classes are already paying their cost of service.
## Draft TY 2013 COS Results – A&E Method Unit Costs

### Base Case

#### Average and Excess Method Unit Costs

<table>
<thead>
<tr>
<th>Service</th>
<th>Residential</th>
<th>Small General</th>
<th>Large General</th>
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<tbody>
<tr>
<td>Customer</td>
<td>$27.61</td>
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<tr>
<td>Energy</td>
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<td>0.03079</td>
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<tr>
<td>Demand</td>
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<td>n/a</td>
<td>$6.21</td>
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<td>Fixed Costs</td>
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<td>$95.67</td>
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<td>Variable Costs</td>
<td>0.03079</td>
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#### Unit Costs including Sales for Resale

<table>
<thead>
<tr>
<th>Service</th>
<th>Residential</th>
<th>Small General</th>
<th>Large General</th>
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</thead>
<tbody>
<tr>
<td>Energy</td>
<td>0.06121</td>
<td>0.05631</td>
<td>0.02714</td>
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<tr>
<td>Variable Costs</td>
<td>0.02572</td>
<td>0.02632</td>
<td>0.02714</td>
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</table>
2013 Residential Costs and Revenues

Note: Assumes the Basic Charge and Minimum Energy Charge will not change and that increases in rate revenues will be reflected in changes to the Energy charges.
Comparison of Unit Costs to Existing Rates

Okanogan County PUD

Residential Customer Class

Customer Costs ($/customer-month)

- Existing Basic Charge and Minimum Energy Charge
- COS Customer Costs
- COS Fixed Costs

April 2013 - Review Panel Meeting

4/10/2013
Principles Used in Rate Design

- Promote revenue stability
- Reflect the cost of providing services
- Easily understood by customers
- Promote rate continuity over time
- Fair, equitable and non-discriminatory test
- Easy to administer
- Promote efficient use of electricity
- Meet and reflect utility’s policy objectives
Elements of Rate Design

- Energy rates (cents/kWh)
- Demand rates ($/kW)
- Customer charges ($/month)
- Minimum Energy Charge
## Option 1 for Schedule No. 2 – Residential – Increase Energy Charges

<table>
<thead>
<tr>
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<tr>
<td><strong>Base Rates</strong></td>
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<tr>
<td>Basic Charge ($/month)</td>
<td>$10.00</td>
<td>$27.61</td>
<td>$10.00</td>
<td>$10.00</td>
<td>$10.00</td>
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<tr>
<td>Energy Charge ($/kWh)</td>
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<td>$0.06121</td>
<td>$0.06963</td>
<td>$0.07743</td>
<td>$0.08094</td>
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<tr>
<td>&lt; 2,000 kWh (2)</td>
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<td>$0.06121</td>
<td>$0.07649</td>
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<td>&gt; 2,000 kWh</td>
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<td>Minimum Charge ($/month)</td>
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<td>$78.27</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
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<td>Minimum Energy Charge ($/month)</td>
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<td>$25.00</td>
<td>$25.00</td>
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<td>kWh in Minimum Energy Charge</td>
<td>500</td>
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<tr>
<td>Percent Change in Revenue</td>
<td>17.4%</td>
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<td>3.0%</td>
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**Notes**
(1) Cost of Service rates include allocation of wholesale revenues.
(2) Charged on all energy in excess of kWh in minimum energy charge.
## Option 2 for Schedule No. 2 – Residential – Increase in Base Charge and Energy Charges

### Schedule No. 2 - Residential

**Base Rates**

<table>
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<th>TY 2013</th>
<th>Proposed Rates</th>
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<td>Basic Charge ($/month)</td>
<td>$10.00</td>
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<tr>
<td>Energy Charge ($/kWh)</td>
<td>0.05750</td>
<td>0.06121</td>
</tr>
<tr>
<td>&lt; 2,000 kWh (2)</td>
<td>0.06316</td>
<td>0.06121</td>
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<tr>
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<td>Minimum Energy Charge ($/month)</td>
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<tr>
<td>Percent Change in Revenue</td>
<td>17.4%</td>
<td>13.0%</td>
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<tr>
<td>Cost of Power Adjustment</td>
<td>0.00240</td>
<td>n/a</td>
</tr>
</tbody>
</table>

### Notes

(1) Cost of Service rates include allocation of wholesale revenues.
(2) Charged on all energy in excess of kWh in minimum energy charge.
Next Steps

• Finalize EMP and alternative scenarios - April
• Completion of final rate proposal – April
• Public meetings – April/May
• Board to vote on rates – May
• Rates implemented – July
Feedback Needed from Review Panel

• What level of rate increases should the District adopt over the next three years?
• If rate increases are adopted, what rate components should be increased?
  – Basic Charges?
  – Energy Charge?
Questions?