

Jefferson County PUD

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Cost of Service and Rate Design

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Agenda

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- **Overview**
- **Revenue Requirements**
- **CIP Options**
- **Cost of Service Impacts**
- **Rate Design by Class**
- **Misc. Fees and Programs**
- **Questions / Answers**

Overview of Rate Setting Approach

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- **Setting rates is a multi-step process**
- **Need to consider many factors – not just pure numbers**
- **Need direction on several issues prior to finalizing specific rate proposal**
- **Steps in ratemaking:**
 - **Step 1 – determine revenue requirement (budget) and associated overall rate increase required**
 - **Step 2 – use COSA to determine if any classes need above- or below-average rate increase**
 - **Step 3 – develop rate design for each class based on level of rate increase, per unit costs from the COSA, other rate making principles**

Revenue Requirements

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- **Developed projected revenue requirements for 2017-2020**
 - 2016 budget as starting point
 - Inflationary increases
 - BPA rates for power supply
 - Staffing plan that fills open positions
- **Modest rate increases prior to CIP spending**

Table 1: Revenue Requirement Prior to CIP

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(\$ millions)	2017	2018	2019	2020
REVENUES AT CURRENT RATES				
Residential	\$20.3	\$20.4	\$20.5	\$20.6
Non-Residential	\$8.6	\$8.7	\$8.7	\$8.7
PTP	\$2.8	\$2.8	\$2.8	\$2.8
Total Retail Revenues	\$31.7	\$31.8	\$31.9	\$32.1
COST OF SERVICE REVENUE REQUIREMENTS				
Purchased Power	\$15.9	\$16.8	\$17.1	\$18.0
Transmission & Distribution	\$3.8	\$3.9	\$3.9	\$4.0
Customer Accounting, etc.	\$1.5	\$1.6	\$1.6	\$1.6
Admin & General	\$1.1	\$1.1	\$1.1	\$1.2
Taxes	\$1.9	\$2.0	\$2.0	\$2.1
Debt Service	\$6.0	\$6.0	\$6.0	\$6.0
CIP from Rates				
Other Revenues	\$0.2	\$0.2	\$0.2	\$0.2
REVENUE REQUIREMENT BEFORE CIP	\$30.4	\$31.5	\$32.1	\$33.2
Amount Available for CIP	\$1.4	\$0.4	-\$0.1	-\$1.1

CIP Spending Alternatives

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- **Budget for CIP**
 - \$8.1 million in 2017
 - \$5.5 - \$7.0 million per year 2018-2020
 - Smoothed amount of \$6.8 million per year
- **Can pay with debt, cash or combination**
 - 100% Cash – big rate increase, DSC over 2.0
 - 75% Cash/25% Debt – DSC about 1.8
 - 50% Cash/50% Debt – DSC about 1.5
 - 100% Debt – insufficient DSC
- **Borrowing at 4% for 20 Years**

Table 2 – Impact of CIP Alternatives

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(\$ millions)	2017	2018	2019	2020
Case 1 - 100% Cash Financed				
CIP & New Debt Service in Rates (Smoothed)	\$6.9	\$6.9	\$6.9	\$6.9
Incremental Rate Increase Required	16.1%	3.0%	1.5%	2.8%
Case 2 - 75% Cash Financed				
CIP & New Debt Service in Rates (Smoothed)	\$5.3	\$5.4	\$5.5	\$5.6
Incremental Rate Increase Required	11.0%	3.4%	1.8%	3.1%
Case 3 - 50% Cash Financed				
CIP & New Debt Service in Rates (Smoothed)	\$3.6	\$3.8	\$4.0	\$4.2
Sensitivity to Changes in CIP Budget	5.8%	3.7%	2.1%	3.5%

- Reduce by \$1 million per year – 14.3% with no debt, 9.6% with 25% debt, 6.9% with 40% debt
- Eliminate New Building & Metering (\$3.5 million/ year) - 6.9% with no debt, 2.4% with 40% debt

Need Decision on CIP Funding

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- **Trade-off between rate increase and debt**
 - 100% cash financing - rate increase too large
 - 50%/50% leaves DSC too low – need higher rate increase to meet DSC
- **Recommendations**
 - Recommend 25% - 40% debt for CIP
 - Results in rate increase of 8-11% for 2017
 - Could be lower with reduction in CIP budget
 - Inflationary increases thereafter
 - Implementation prior to January builds reserves
- **Board Input**

Cost of Service Results

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- **COSA Allocated Costs Among Various Rate Classes**
 - Results in Revenue to Cost Ratios by class – indicates whether each class is paying its fair share
 - Range of reasonableness - 90% to 110%
 - Also provides unit costs (i.e. customer-related vs energy-related)
- **2017 results based on 75% cash financing**
 - Results won't change much with alternative for CIP or future year costs
 - Adjusted to reflect overall 11% rate increase

Cost of Service Results

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■ 2017 COSA Results by Class

- 98.9% = Residential
- 100.5% = General Service (24)
- 124.0% = Small Demand (25)
- 122.8% = Large Demand (26)
- 106.1% = Primary
- 44.8% = Irrigation
- 55.8% = Schools
- 66.9% - Street Lighting
- 101.4% = PTP

Recommendations on Interclass Adjustments

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- **Based on COSA Results**
 - Residential, General Service, Primary and PTP well within range
 - Small and Large Demand Customers – potential decrease
 - Irrigation, Schools, Lighting – potential increase
- **Factors to Consider**
 - Difficult to make adjustments at the same time as a large rate increase
 - Simplification of rates more important at the current time
 - May want to see impacts of rate design adjustments (i.e. change to flat rate, combining or eliminating classes, etc.)
- **Recommend No Specific Interclass Adjustments until after 2017**
- **Board Input**

Principles to Consider for Rate Design

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- **Collects Sufficient Revenues**
- **Based on COSA Results – Fair and Equitable**
- **Proper Price Signals to Customers**
- **Rate Stability**
- **Easy to Understand and Administer**
- **Customer Acceptance**
- **Comparable to Neighboring Utilities**

Residential/Farm Rates

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- **Rate 7**
 - **Elimination of block rates has large bill impacts but better matches cost causation and other PUD rates**
 - Current rate differential = 1.8 cents per kWh
 - Tier 1/Tier 2 BPA rate differential = 0.5 cents per kWh
 - **Per unit cost per customer from COSA**
 - \$12.23 with 100% demand
 - \$32.95 with minimum system
 - **Recommend reduction or elimination of blocks**
 - **Recommend increase in customer charge to at least \$12.00**

Comparison to Other PUD Residential Rates

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	Base Charge	Energy (Block 1 or Flat)	Energy (Block 2)	Energy (Block 3)
Grays	\$39.00	\$0.054	\$0.082	
Mason 1	\$31.66	\$0.075		
Mason 3	\$31.42	\$0.070		
Clallam	\$27.68	\$0.072		
Lewis	\$22.81	\$0.055		
Peninsula	\$20.50	\$0.072	\$0.077	\$0.079
Cowlitz	\$18.50	\$0.071		
Snohomish	\$15.51	\$0.099		
Pacific	\$13.00	\$0.065		
Clark	\$12.00	\$0.082		
Jefferson	\$7.49	\$0.085	\$0.104	

Residential/Farm Rates (cont'd)

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- **Rate 8**
 - **Rate 8 has 859 customers**
 - **Recommend eliminating separate farm rate**
 - **No difference in COSA**
 - **Most move to Rate 7, very large move to Rate 24**
 - **203 customers used more than 600 kWh (block 2)**
 - **11 customers used more than 4,000 kWh**
 - **Recommend users over 3,000 or 4,000 kWh/month move to Rate 24**

Small Commercial Rates (<50 kW)

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- **Eliminate Seasonal Difference**
 - Rate 24 has 2,054 customers
 - Would result in an increase for large summer users but less than 1% change (not significant)
- **Basic charge of \$9.66 per month**
 - \$33.67 with 100% demand
 - \$54.39 with minimum system
- **Recommendations**
 - Higher basic charge (higher than residential)
 - Flat energy charge (lower than residential)

Large Commercial Rates (>50 kW)

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- Rate 25 has 68 customers, Rate 26 has 3 customers
- COSA shows little difference in unit costs between the two classes

	Current Rate 25	Current Rate 26
Basic Charge	\$51.67	\$104.46
Demand Charge		
Winter	\$9.01	\$8.94
Summer	\$6.01	\$5.96
Energy Charge		\$0.06706
Winter	\$0.09479	
Summer	\$0.08664	
Block 2	\$0.06928	

Large Commercial (Cont'd)

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- **Recommend Combining Rates 25 and 26**
- **Eliminate First 50 kW Free/Declining Block**
 - Leads to Moderate Decrease for Large Users and Small Users with High Peaks
- **Eliminate Seasonal Difference in Demand Charge**
 - But keep at higher winter level based on COSA results
- **Keep Rate 25 Basic Charge of \$51.67 or slight increase**
 - COSA results of \$42.89 with 100% demand
 - COSA results of \$63.61 with minimum system

Rate 31

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- **Possibly combine with Rates 25/26 with \$/kW discount for primary service (COSA discount is \$1.75 per kW)**
- **Keep Current Basic Charge of \$339.51 or perhaps reduce**
 - COSA results of \$102.80 with 100% demand
 - COSA results of \$123.52 with minimum system
- **Eliminate Seasonal Difference in Demand Charge**
 - Current = \$8.64 Winter and \$5.76 Summer
 - Keep at higher winter level to reflect COSA results

Other Rates

- **Irrigation – Move to Small Commercial Rates**

kWh/mo	Monthly Bills		% Impact
	Current	Rate 24	
101	\$30.72	\$22.12	-28.0%
5,850	\$397.03	\$561.95	41.5%
9,340	\$619.41	\$889.66	43.6%

- **Interruptible Schools – Move to Rate 31**

- Move off primary rates if advantageous

kWh/mo	kW Demand	Load Factor	Monthly Bills		% Impact
			Current	Rate 25	
48,000	207.6	31%	\$4,206	\$4,961	18%
84,600 (Average 2 customers)	624.6	18%	\$8,345	\$10,360	24%
220,800	1,002.0	30%	\$18,342	\$21,938	20%

Summary of Rate Recommendations

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- **Consider timing**
 - As part of large rate increase or later when rate increase is small?
 - Move towards recommended changes over multiple years?
- **Residential**
 - Higher customer charge and flat energy rate
 - Combine rate 7 and 8
- **Small Commercial**
 - Higher customer charge and no seasonal difference
- **Large Commercial**
 - Combine rates 25 and 26 (and maybe 31 with discount),
 - Apply demand charge to all kW and no seasonal difference
 - Flat energy rate
- **Other**
 - Move 3 irrigation customers to rate 24
 - Move 4 schools to Rate 31

Policy Input and Next Steps for Rate Design

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- **Incorporate appropriate cash/debt for CIP – total rate increase**
- **Incorporate appropriate interclass adjustments**
- **Direction on combining rate classes (now, later, never?)**
- **One-time or gradual move towards recommendations**
- **Design actual rate alternatives**
 - Rate increase for each rate class
 - Changes in rate structure
 - Level of each rate component
 - Look at bill impacts to customers at different usage levels
- **Direction for future years**
- **Other Policies/Fees, etc.**

Power Factor Adjustment

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■ Options

- Power factor penalty clause
- Bill on kVA instead of kW
- Install capacitors

■ Recommendation

- Most PUD's have same penalty clause
- Demand charge is increased by 1% for each 1% that the power factor is below 95% (or 97%) lagging.

Net Metering Policy

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- **Higher customer charges**
 - Better reflects COSA
 - Better reflects other PUD rates
 - Customers pay greater share of fixed costs of the system
 - Potential for additional administrative charge due to added complexity
- **Credit for generated power**
 - Avoid full energy rate
 - Simultaneous buy/sell for power sold
 - Hybrid – balance out each month, surplus power credit based on BPA energy rate

New Large Single Loads

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- **Based on Potential of Causing Tier 2 BPA Power Purchases**
 - Tier 2 amount tied for historic loads
 - 2.5 MWa added load could trigger Tier 2 for JPUD
 - Want to hold existing customers harmless from rate increases due to NLSL
- **Initial Staff Proposal**
 - NLSL over 1 MW has tiered rate
 - First 1 MW at standard large commercial rate
 - Over 1 MW charged premium to reflect the difference between Tier 1 and Tier 2 rates (Currently 0.5 cents per kWh)
- **Policy Question**
 - Apply to growth of existing customers?

Low Income Program

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- **Citizens Advisory Board**
 - Recommended \$500,000 in assistance (1,000 customers at \$500)
 - Another \$100,000 administrative costs
 - Not in current budget for 2017– would have 1.9% rate impact
- **Apply to all low income or just seniors/disabled?**
- **Grants or forgive basic charges?**

Questions / Answers