



**Okanogan County Public Utility District  
April 10, 2013**

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**Review Panel Workshop –  
2013 Equity Management Plan and Rate Study**

**Richard Cuthbert, Senior Project Manager  
Gina Baxter, Senior Analyst**

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## 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**

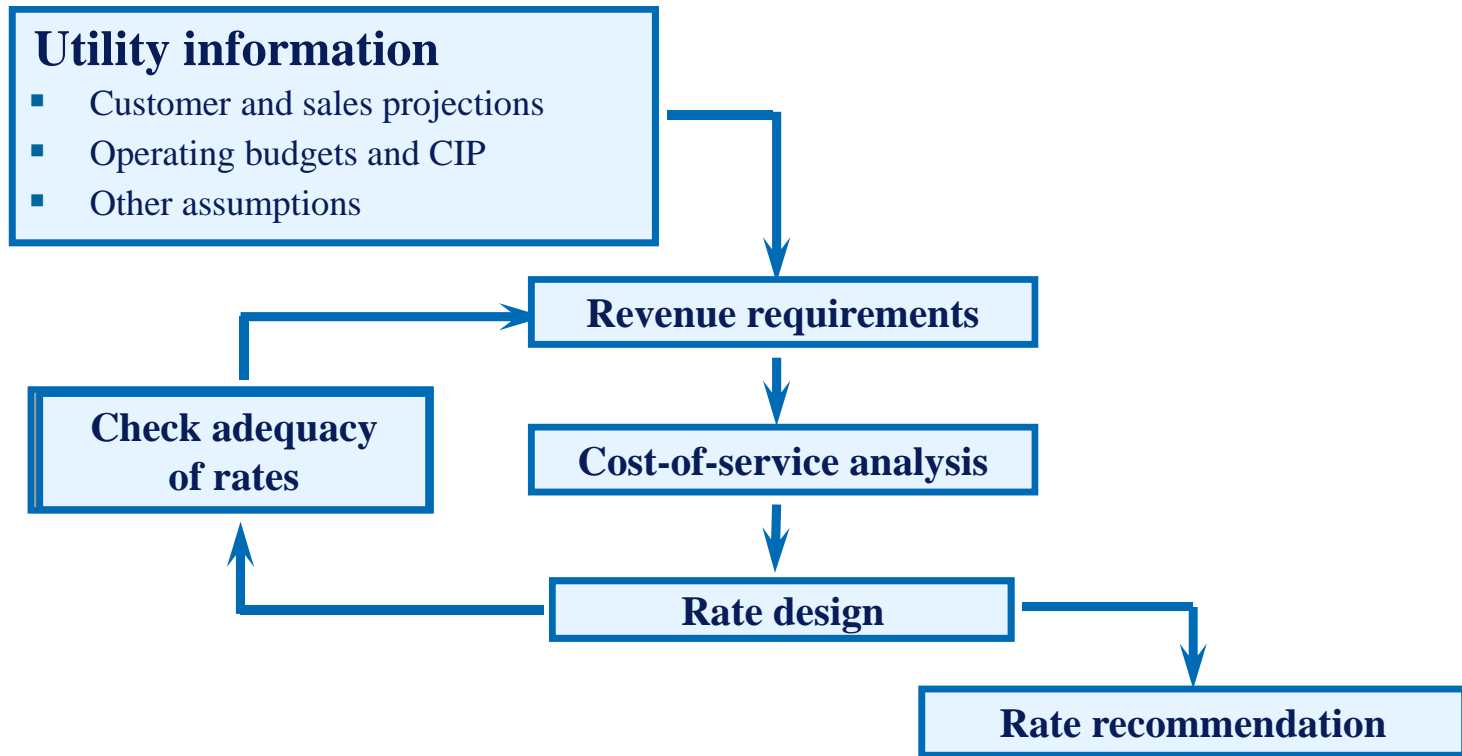
## Feedback Needed from Review Panel

- **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



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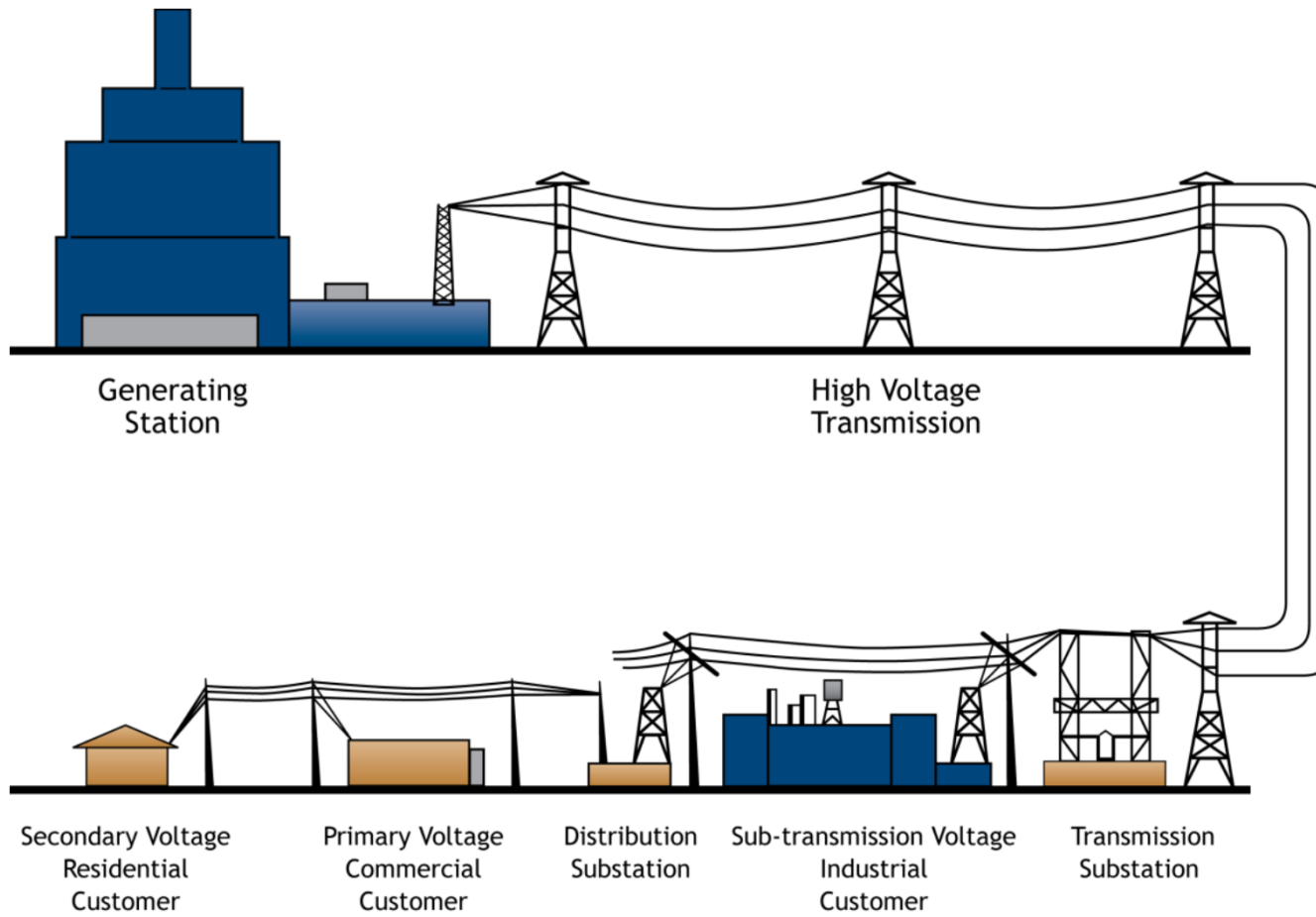
## Revenue Requirements

- **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



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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**

# Review of Equity Management Plan



## 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

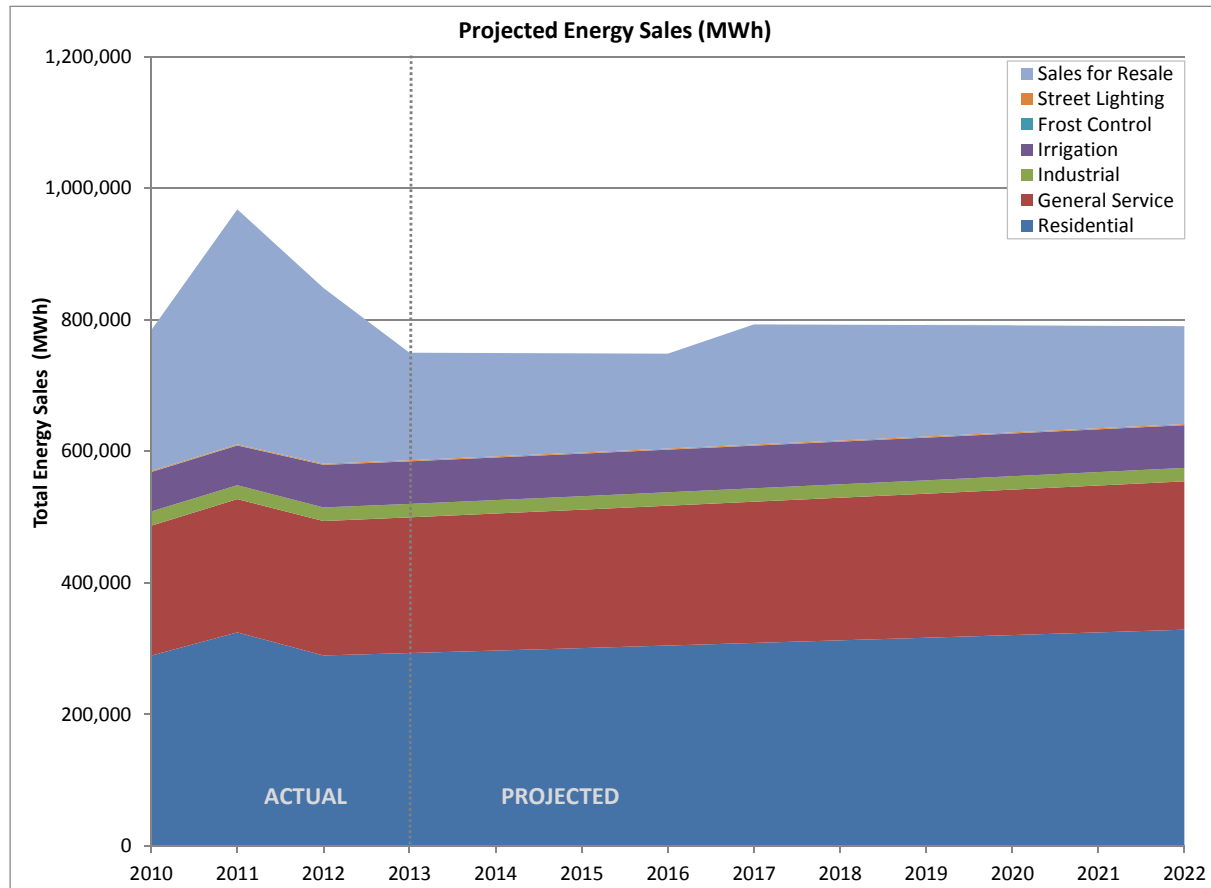
# Base Case Capital Requirements and Funding

- **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**

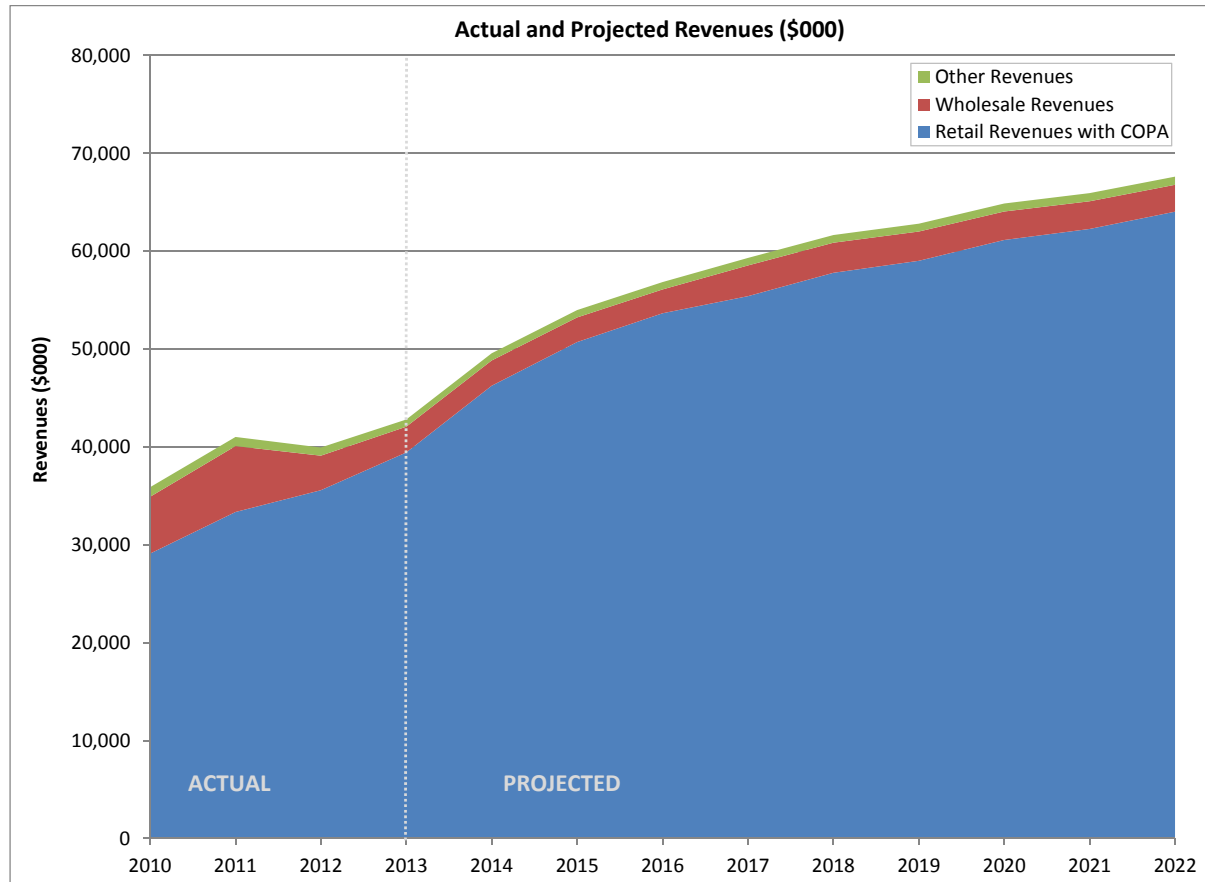
# Operating Expenses

- **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**

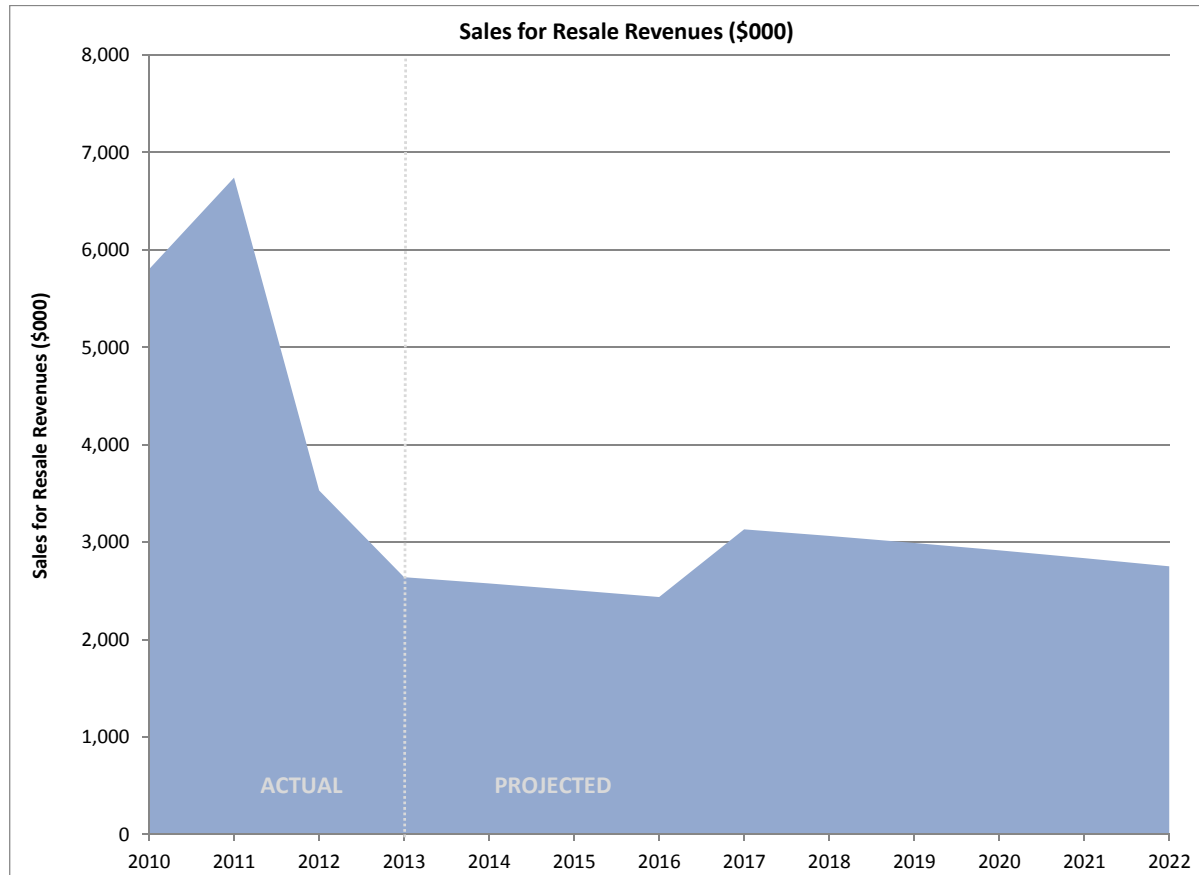
# Actual / Projected Sales



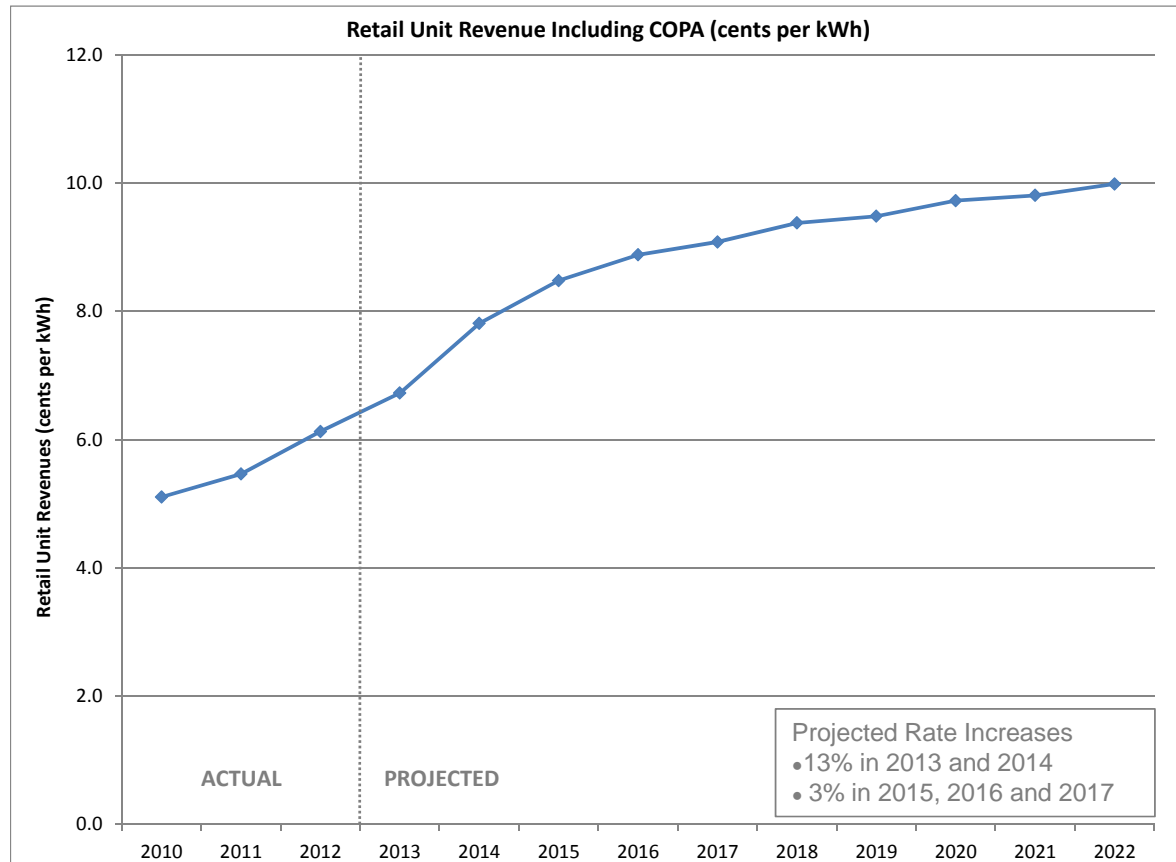
# Actual / Projected Revenue Requirements



# Sales for Resale Revenues



# Base Case Preliminary Unit Revenues from Retail Sales Including COPA (¢/kWh)



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## Preliminary Draft Base Case EMP Conclusions

- **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**

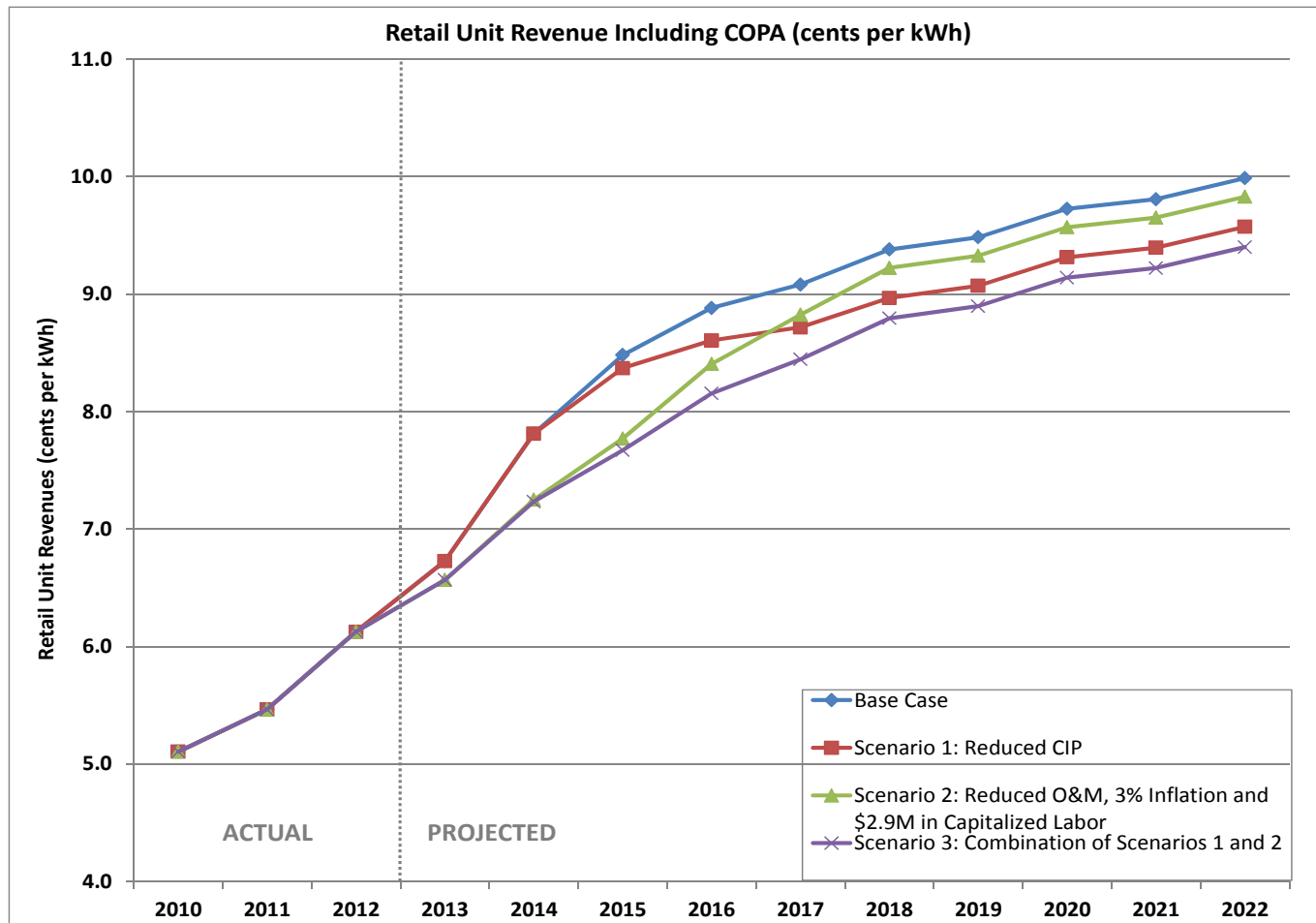
## 2013 EMP Alternative – Scenario 2

- **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**

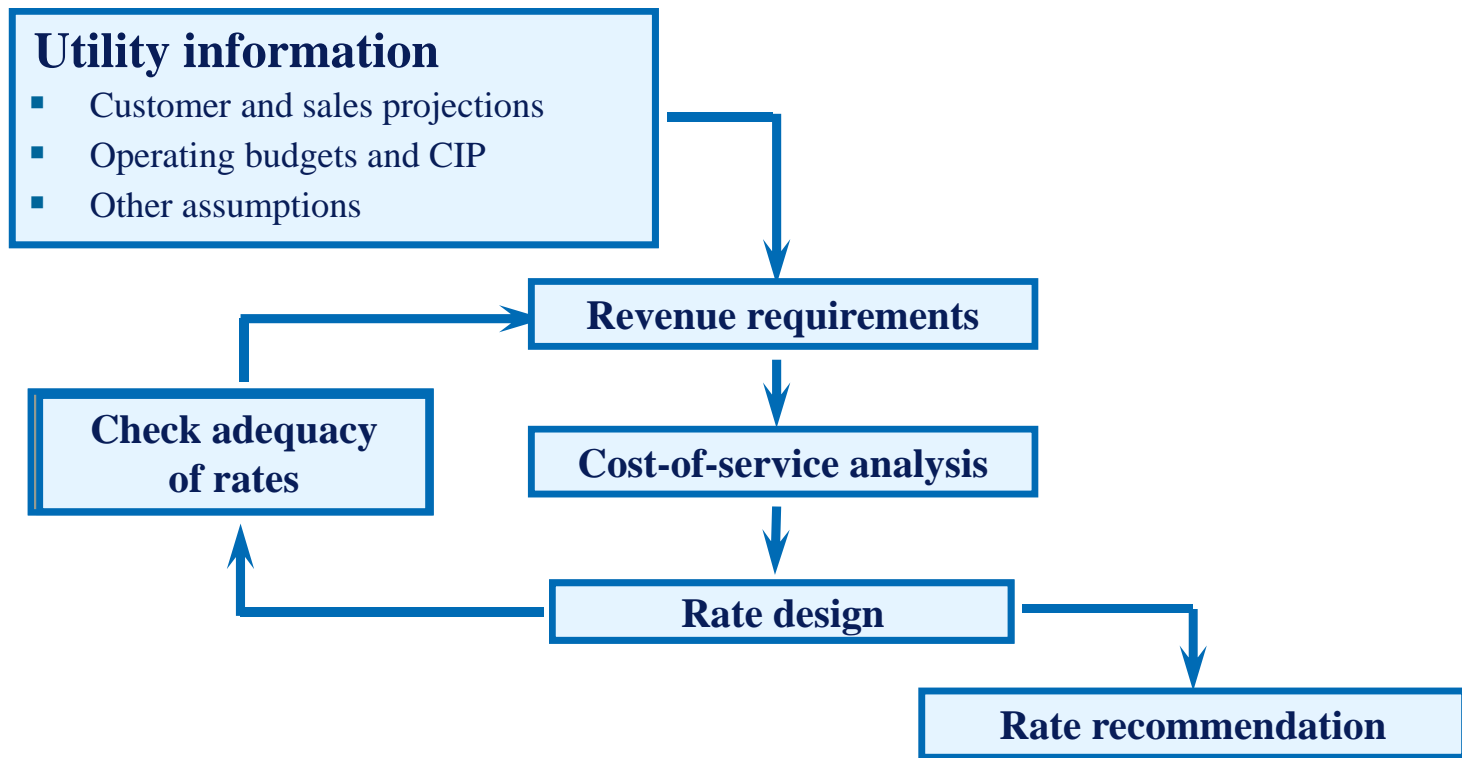
# Comparison of Draft Unit Revenues from Retail Sales Including COPA (¢/kWh)



# Preliminary Draft 2013 Cost-of-Service and Rate Design Results



# Steps in Electric Utility Ratemaking Process



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# District's Draft TY 2013 Revenue Requirement

Description	Projected Test Year 2013	Pro forma Adjustments (1)	Adjusted Test Year 2013
Total Revenues From Sales of Electricity	\$39,868,382	\$4,703,167	\$44,571,549
Other Electric Revenues	727,000	-	727,000
Total Revenues	\$40,595,382	\$4,703,167	\$45,298,549
Operating Expenses	\$46,427,249	\$0	\$46,427,249
Other Expenses	1,959,636	0	1,959,636
Total Operating Cost of Service	\$48,386,885	\$0	\$48,386,885
Margins or Increase in Net Assets	(4,696,503)	4,703,167	6,664
Operating Revenue Requirements	\$43,690,382	\$4,703,167	\$48,393,549
Total Non-Operating Revenues	\$3,095,000	\$0	\$3,095,000
Total Revenue Requirements	\$43,690,382	\$4,703,167	\$48,393,549
Less Interest Income	(991,000)	-	(991,000)
Less Contributions in Aid of Construction	(1,104,000)	-	(1,104,000)
Less Use of Rate Stabilization Funds	(1,000,000)	-	(1,000,000)
Less Other Revenues	(727,000)	-	(727,000)
Less Wholesale Revenues	(2,640,925)	-	(2,640,925)
Revenue Requirements from Rates	\$37,227,457	\$4,703,167	\$41,930,624
Revenue Increase (Decrease)	-		\$4,703,167
Percent Change	-		13.0%
Debt Service Coverage Ratio (DSC)	0.28		1.63
TIER (Operating)	(3.11)		(0.60)
TIER (Total)	(1.40)		1.00

Notes

(1) Assumes retail revenue increase equal to 13% retail rate increase effective for a 12 month period.

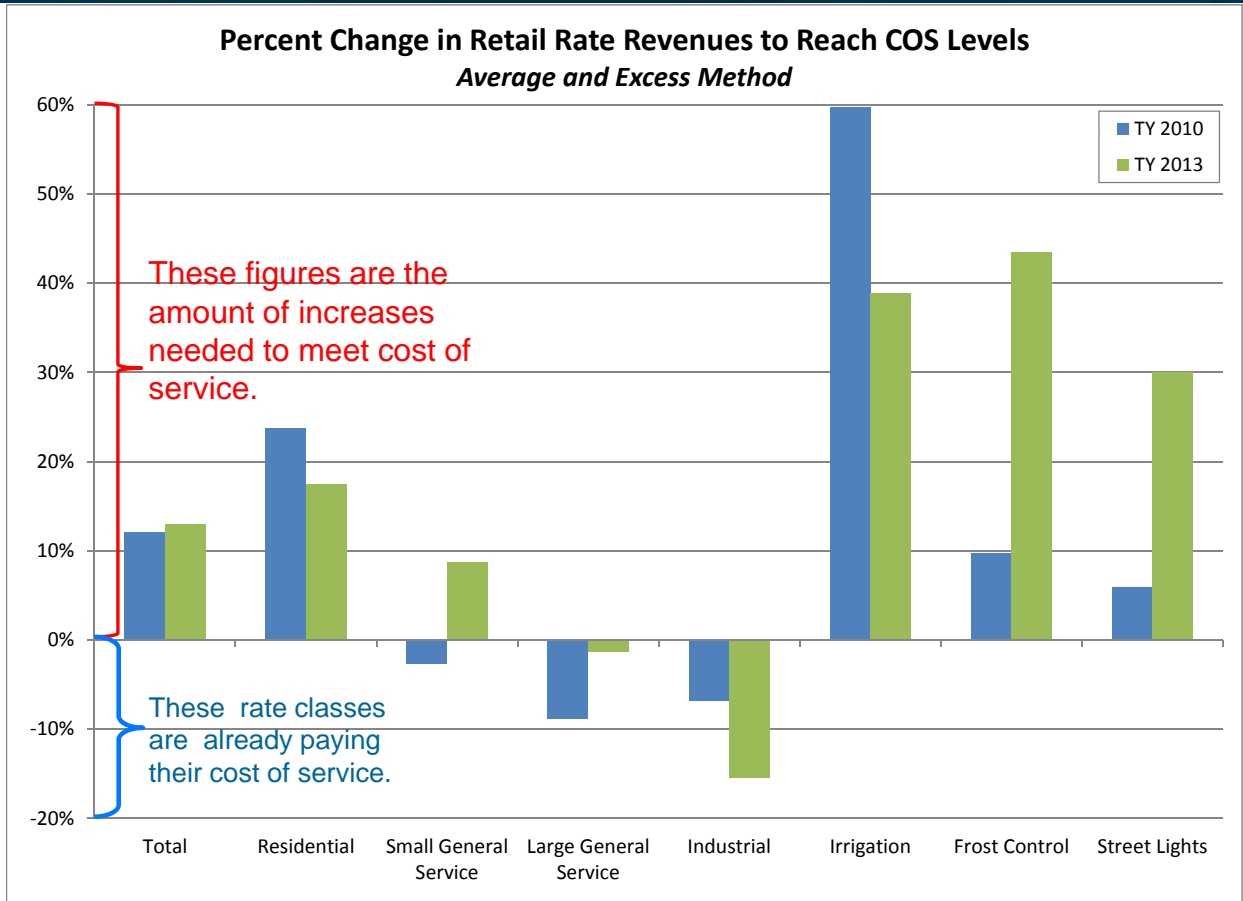
# Cost-of-Service Analysis

## Embedded Cost-of-Service Analysis

- **Step 1: Functionalization –**  
“What costs are incurred to provide electric service?”
- **Step 2: Classification –**  
“Why were the costs incurred?”
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“Who benefits from these services and costs?”

# Draft Cost-of-Service Results

Percent of change needed to reach COS



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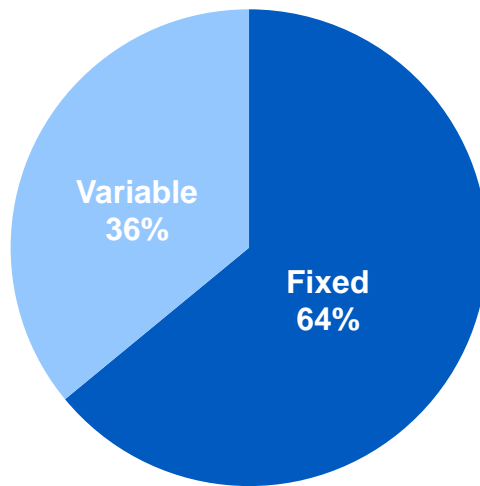
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## Draft TY 2013 COS Results – A&E Method Unit Costs

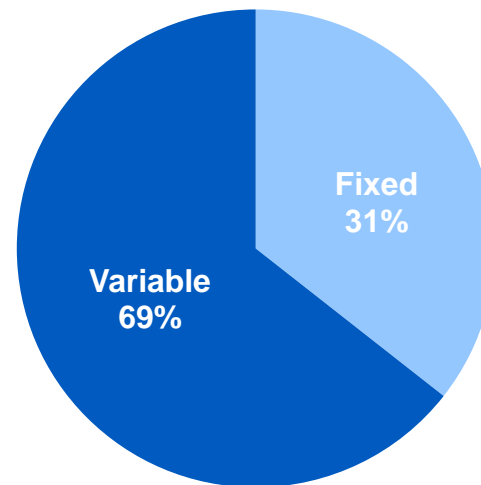
	Base Case						
	Average and Excess Method Unit Costs						
	Residential	Small General Service	Large General Service	Industrial	Irrigation	Frost Control	Street Lights
<b>Unit Costs not including Sales for Resale</b>							
Customer - \$/Customer-Month	\$27.61	\$31.55	\$44.03	\$171.52	\$41.35	n/a	\$14.89
Energy - \$/kWh	0.06628	0.06079	0.03079	0.03079	0.03079	0.03079	0.13346
Demand - \$/kW-Month	n/a	n/a	\$6.21	\$6.08	\$10.81	n/a	n/a
Fixed Costs (\$/Customer-Month)	\$78.27	\$95.67	\$1,404.72	\$10,983.92	\$186.57	\$53.31	\$568.81
Variable Costs (\$/kWh)	0.03079	0.03079	0.03079	0.03079	0.03079	0.03079	0.03079
<b>Unit Costs including Sales for Resale</b>							
Energy - \$/kWh	0.06121	0.05631	0.02714	0.02782	0.02651	0.01416	0.12539
Variable Costs (\$/kWh)	0.02572	0.02632	0.02714	0.02782	0.02651	0.01416	0.02272

# 2013 Residential Costs and Revenues

**Costs**

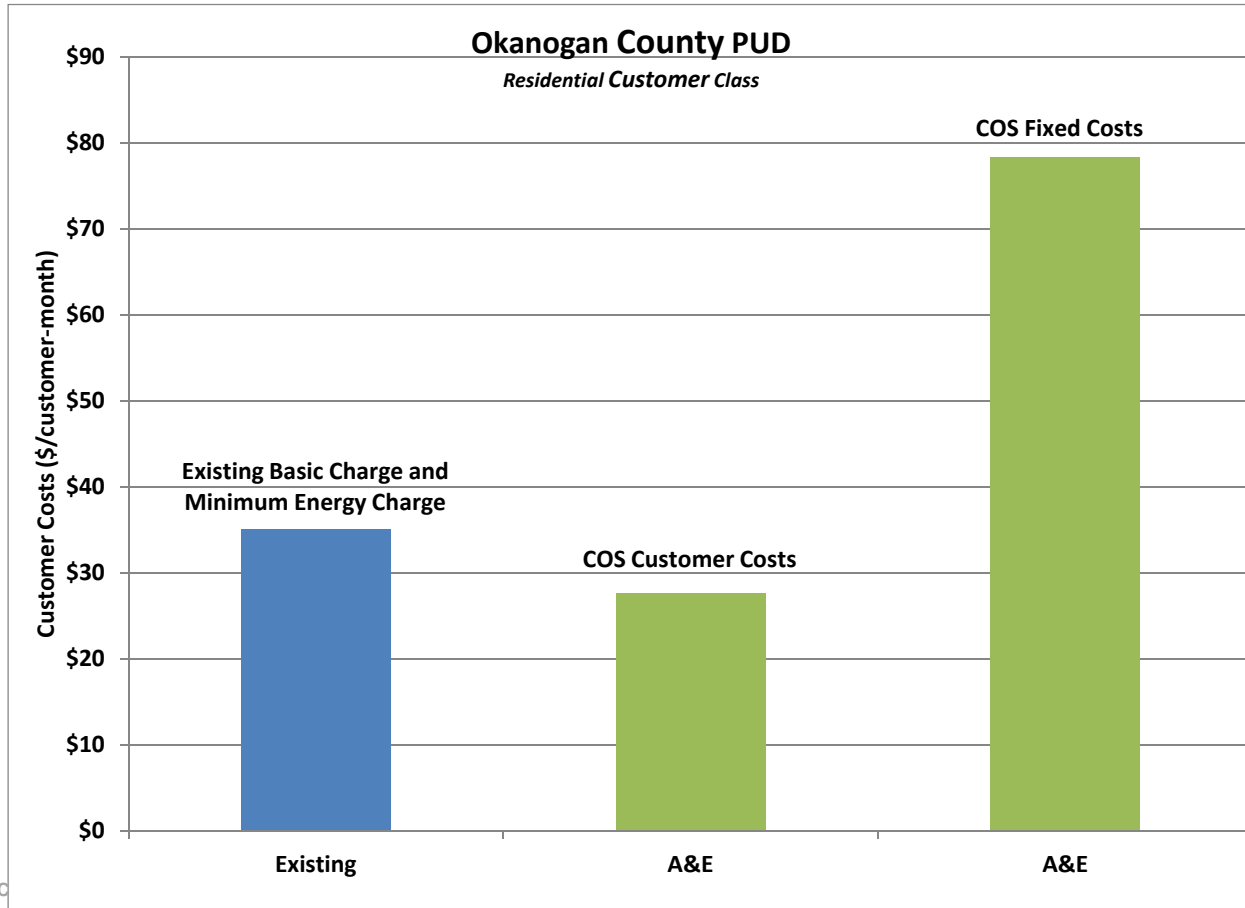


**Revenues\***



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



## 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

Schedule No. 2 - Residential	Existing Rates	TY 2013 Cost of Service (1)	Proposed Rates		
			July 2013	July 2014	July 2015
<u>Base Rates</u>					
Basic Charge (\$/month)	\$10.00	\$27.61	\$10.00	\$10.00	\$10.00
Energy Charge (\$/kWh)					
< 2,000 kWh (2)	0.05750	0.06121	0.06963	0.07743	0.08094
> 2,000 kWh	0.06316	0.06121	0.07649	0.08505	0.08891
Minimum Charge (\$/month)	n/a	\$78.27	n/a	n/a	n/a
Minimum Energy Charge (\$/month)	\$25.00	n/a	\$25.00	\$25.00	\$25.00
kWh in Minimum Energy Charge	500		500	500	500
Percent Change in Revenue		17.4%	13.0%	13.0%	3.0%
<u>Cost of Power Adjustment</u>	0.00240	n/a	0.00179	0.00411	0.00487

**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	Existing Rates	TY 2013 Cost of Service (1)	Proposed Rates		
			July 2013	July 2014	July 2015
<u>Base Rates</u>					
Basic Charge (\$/month)	\$10.00	\$27.61	\$13.00	\$16.00	\$19.00
Energy Charge (\$/kWh)					
< 2,000 kWh (2)	0.05750	0.06121	0.06676	0.07170	0.07241
> 2,000 kWh	0.06316	0.06121	0.07333	0.07876	0.07954
Minimum Charge (\$/month)	n/a	\$78.27	n/a	n/a	n/a
Minimum Energy Charge (\$/month)	\$25.00	n/a	\$25.00	\$25.00	\$25.00
kWh in Minimum Energy Charge	500		500	500	500
Percent Change in Revenue		17.4%	13.0%	13.0%	3.0%
<u>Cost of Power Adjustment</u>	0.00240	n/a	0.00179	0.00411	0.00487

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?

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