



# Strategic Pricing Plan

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Rates & Contracts

July 6, 2017

## Agenda

Rate Change Discussion

1 hour

Cass Larson

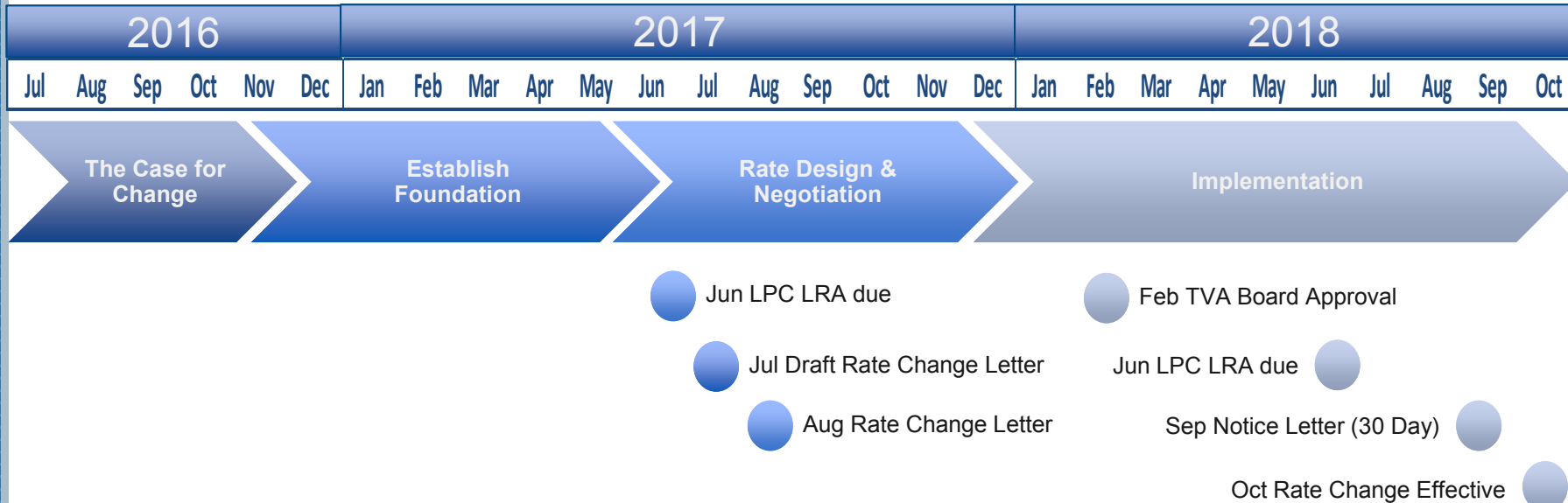
Draft Rate Change Letter

1 hour

Cass Larson

# Rate Change Discussion

# Project Plan



# Benefits of Rate Restructuring

Essentially ALL “normal” large commercial customers would benefit economically from some amount of on-site solar installations

*-Based on reasonable assumptions (cost of solar & current rates)*

## Recommended Rate Restructuring Benefits

- The number of economic installations decrease by ~40%
- Loss of fixed cost recovery is minimized by more than 50%

Changes at retail reduce of uneconomic DER penetration across the Valley

Changes at wholesale minimize cross-subsidies between LPCs

Modest reductions in rate levels and changes in structure dramatically reduce the risk of stranded cost and cost shifting

# FCR – Where does it come from?

| Functions                 | Costs Included  | 2012                  | 2013                  | 2014                  | 2015                  | 2016                  |
|---------------------------|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Generation Fixed Costs    | <i>Operations and Maintenance, Depreciation, Interest</i>           | <b>36%</b><br>\$4,079 | <b>42%</b><br>\$4,608 | <b>41%</b><br>\$4,676 | <b>41%</b><br>\$4,513 | <b>40%</b><br>\$4,292 |
| Generation Variable Costs | <i>Fuel, Purchased Power</i>  | <b>35%</b><br>\$3,928 | <b>34%</b><br>\$3,780 | <b>33%</b><br>\$3,748 | <b>30%</b><br>\$3,311 | <b>28%</b><br>\$3,008 |
| Transmission              | <i>Transmission, Ancillary Services</i>                             | <b>7%</b><br>\$804    | <b>8%</b><br>\$910    | <b>8%</b><br>\$926    | <b>8%</b><br>\$907    | <b>8%</b><br>\$908    |
| Other Fixed Costs         | <i>Corp A&amp;G, Reg. Asset, General Depreciation, Customer Exp</i> | <b>17%</b><br>\$1,907 | <b>11%</b><br>\$1,252 | <b>13%</b><br>\$1,413 | <b>17%</b><br>\$1,882 | <b>19%</b><br>\$2,113 |
| Taxes                     | <i>Payment In Lieu of Taxes</i>                                     | <b>5%</b><br>\$622    | <b>5%</b><br>\$548    | <b>5%</b><br>\$540    | <b>5%</b><br>\$525    | <b>5%</b><br>\$522    |
| <b>Total Costs</b>        |   | <b>\$11,340</b>       | <b>\$11,098</b>       | <b>\$11,303</b>       | <b>\$11,138</b>       | <b>\$10,843</b>       |



Specific to TVA's proposal – fixed costs are > \$6.3 B

# Rate Change Proposals

## Proposal A

- 1 Penny
- ¼ Penny (Option 3)
- 0 Penny, GSA2, GSA3 Rates only (Option 1)



## Proposal B

- Optional end-use wholesale rates (Option 2)



## Proposal C

- 1 Penny on-peak kWh (Option 4)
- 1 Penny top 200 hours (Option 5)



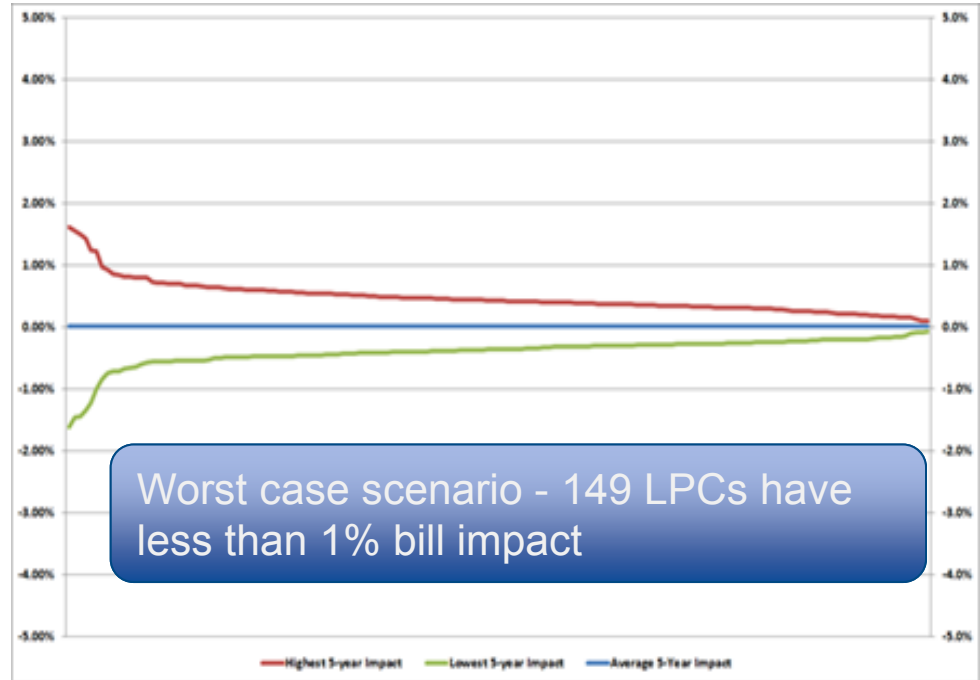
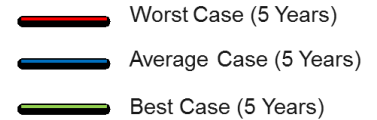
# “Proposal A” Comparison & Analysis



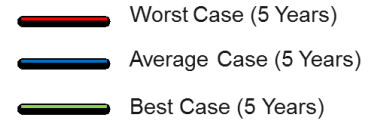
# Rate Change Discussion – “Penny Proposal”

## Terms

- **\$0.0103 / kWh / ~ \$1,200 M FCR**
- All LPC Bill impacts  $\leq$  **1.61%**
- **Allocation methodology** – percentage contribution to the total average standard service energy
- **Reset** – no reset until TVA and TVPPA create and apply a methodology, either later in this rate change or in the course of the next rate change
- **Default rates** – TVA will provide optional default rates for standard service classes – LPCs may opt-out

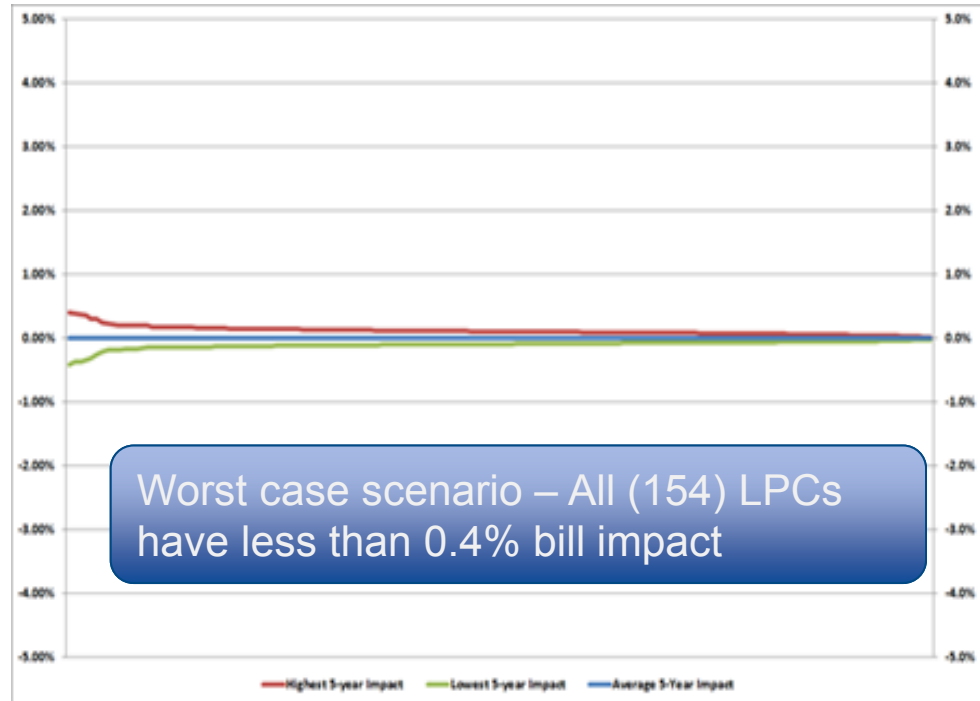


# Rate Change Discussion – “1/4 Penny Proposal”



## Terms

- **\$0.00258 / kWh / ~ \$300 M FCR**
- All LPC bill impacts  $\leq$  **0.4%**
- **Allocation methodology** – percentage contribution to the total average standard service energy
- **Reset** – no reset until TVA and TVPPA create and apply a methodology, either later in this rate change or in the course of the next rate change
- **Default rates** – TVA will provide default rates for GSA2 / 3 with guidelines



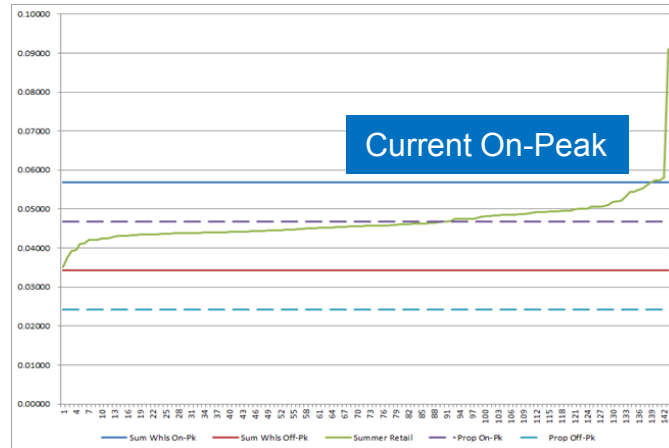
# GSA3 Relationships – Penny Proposal

## Observations

Currently, GSA3 retail energy rates (green line inclusive of adders) is below wholesale on-peak energy rates in summer and winter.

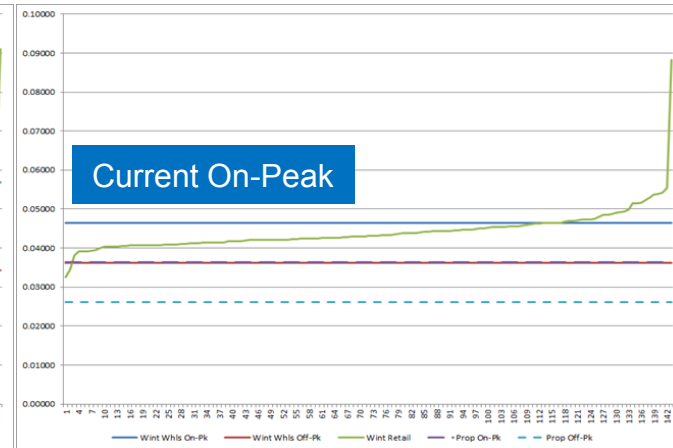
The proposed wholesale energy rates (purple dashed line) does not solve the mismatch between retail and wholesale energy rates. The problem is solved through retail TOU with energy rates aligned to wholesale.

## Summer



91 LPC retail energy rates are less than the proposed wholesale on-peak energy rate (Purple dashed line)

## Winter



2 LPC retail energy rates are less than the proposed wholesale on-peak energy rate (Purple dashed line)

The Penny Proposal goes a long way toward fixing the impacts of cost shifting

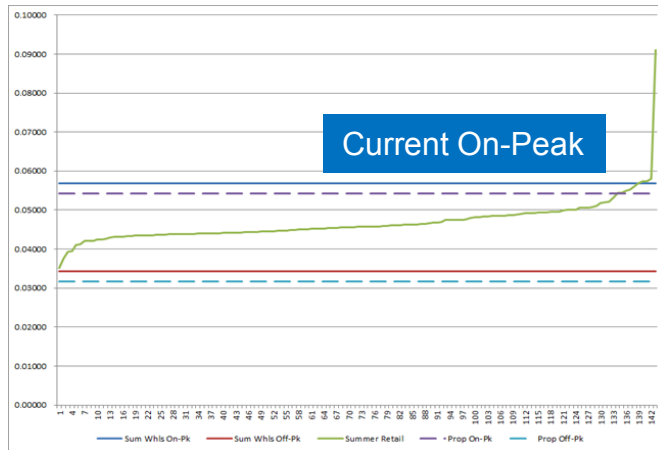
# GSA3 Relationships – ¼ Penny Proposal

## Observations

Currently, GSA3 retail energy rates (green line inclusive of adders) is below wholesale on-peak energy rates in summer and winter.

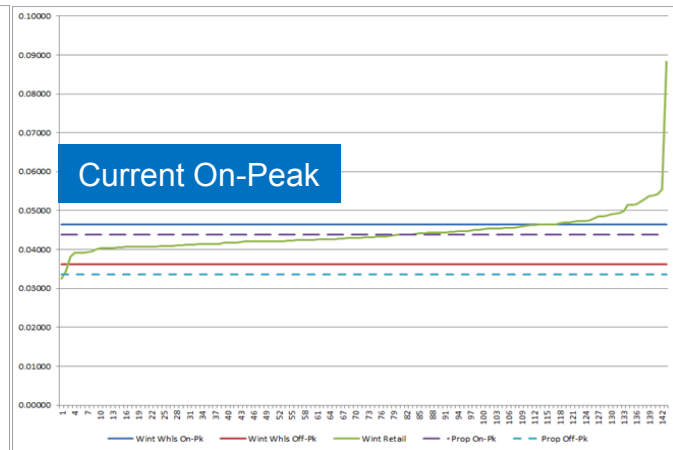
The proposed wholesale energy rates (purple dashed line) does not solve the mismatch between retail and wholesale energy rates. The problem is solved through retail TOU with energy rates aligned to wholesale.

## Summer



138 LPC retail energy rates are less than the proposed Wholesale On-Peak energy rate (Purple dashed line)

## Winter



80 LPC retail energy rates are less than the proposed Wholesale On-Peak energy rate (Purple dashed line)

The ¼ Penny Proposal doesn't deter the impacts of cost shifting

# Proposal Comparisons

| Terms & Considerations & Suggestions      |   |   |
|---|---|---|
| Terms                                     | Penny Proposal  | ¼ Penny Proposal                                      |
| FCR Proposal                              | \$1,200 M   | \$300 M   |
| Contract Flexibility & Equity Discussion  | TVA is willing to engage in separate discussions      | TVA is willing to engage in separate discussions      |
| Fixed Cost Recovery Schedule              | See Separate Slide                                    |   |
| Risk Premium                              | Worst-case scenario over 5 years                      | No Adjustment   |
| Reset for loss of load                    | Per Rules TBD   | Not necessary   |
| Intra-Class Cost Shifting Limits (Retail) | LPC imposed limit<br>No more than 1% to other classes | TVA imposed Limit<br>No more than 2% to other classes |
| Hydro-Redesign                            | TVA Open To Redesign Discussions                      | Not necessary   |

# Comparison of GSA2/3 Retail Rate Designs

| GSA2 / GSA3 Design |   |  |
|--------------------|---|--|
| Design             | Penny Proposal  | ¼ Penny Proposal   |
| GSA3 Design        | <p>LPC Flexibility in Retail Rates</p> <p>TVA recommends a Time of Use Structure with rate alignment,</p> <p>Set Contract Demand Coincidence at 90%, Align energy rates, Introduce Contract Demand Charges Maintain kW &amp; kWh adders</p> | <p>Rate Alignment Design – subject to Re-allocation Limits</p> <p><b>Time Of Use Structure,</b> Align Retail Energy Prices w/ Wholesale Plus losses</p> <p>Adjust Demand Coincidence Levels Introduce Contract Demand Charges Maintain kW &amp; kWh adders</p> |
| GSA2 Design        | <p>LPC Flexibility</p> <p>Similar changes as described under GSA3, but for GSA2 Block 2 rates</p>   | <p>End Use Style Design</p> <p>Similar changes as described under GSA3, but for GSA2 Block 2 rates NOT Requiring TOU</p>   |

Rate designs & results demonstrated in following slides

# Comparison of Rate Change Proposals Path Forward

| Rate Change Path Forward   |   |   |
|--|---|---|
| Considerations   | Penny Proposal                                      | ¼ Penny Proposal                            |
| Fixed Cost Recovery Schedule   | <b>FY2022</b> Target of \$3,000 M                   | <b>FY2022</b> Target of \$3,000 M ??        |
|  | <b>FY2018</b> – Allocation based on \$1,200 M       | <b>FY2018</b> – Allocation based on \$300 M |
| Allocation performed using Standard Service data from 2012 and forward | <b>FY2019</b> – None                                | <b>FY2019</b> - ?                           |
|  | <b>FY2020</b> – based on Allocation up to \$2,400 M | <b>FY2020</b> - ?                           |
|  | <b>FY2021</b> – based on FY2020 election            | <b>FY2021</b> - ?                           |
|  | <b>FY2022</b> - based on Allocation up to \$3,000 M | <b>FY2022</b> - ?                           |

# What is Most Effective Way of Mitigating The Effects of DER for GSA 3 (& GSA2) ?

→ Wholesale Level Changes →

Retail Level Changes ↓

| No Wholesale Changes<br>No Retail Changes                    | 1/4 Penny Proposal<br>No Retail Changes                     | Penny Proposal<br>No Retail Changes                           |
|--|---|---|
| OPTION 1 (from TVPPA)<br>0 Penny Proposal<br>Revenue Neutral | OPTION 3 (from TVPPA)<br>1/4 Penny Proposal<br>Rev. Neutral | Penny Proposal<br>Revenue Neutral                             |
| 0 Penny Proposal<br>Minor Shift In Revenues                  | 1/4 Penny Proposal<br>Larger Shift in Revenues              | TVA CTC Proposal<br>Penny Proposal<br>Minor Shift in Revenues |

**Wholesale changes address cost shifting across LPCs**  
**Retail changes address impacts to individual customers within classes**





# What is Most Effective Way of Mitigating The Effects of DER for GSA 3 ?

→ Wholesale Level Changes →  
Minimize Cost Shifting Between LPCs

Retail Level Changes  
More Competitive w/ DER ↓

|                                       |                   | Impacts in Millions         |                           |                       |
|---------------------------------------|-------------------|-----------------------------|---------------------------|-----------------------|
| <u>Retail Changes</u>                 | <u>Impact to:</u> | <u>No Wholesale Changes</u> | <u>1/4 Penny Proposal</u> | <u>Penny Proposal</u> |
| No Retail Changes                     | TVA / All LPCs    | (\$51.0)                    | (\$49.0)                  | (\$33.0)              |
|                                       | Individual LPC    | \$2.2                       | \$1.0                     | (\$5.8) ==> \$0       |
| Revenue Neutral W/in Class            | TVA / All LPCs    | (\$36.0)                    | (\$31.0)                  | (\$25.0)              |
|                                       | Individual LPC    |                             |                           |                       |
| TVA Recommended - Minor Revenue Shift | TVA / All LPCs    | (\$31.0)                    | (\$25.0)                  | (\$16.0)              |
|                                       | Individual LPC    |                             |                           | (\$1.6) ==> \$0       |

A combination of wholesale, retail, and reduction in subsidies (where they exist) is the most effective way to address the effects of DER

# Redesign Considerations & Illustrations

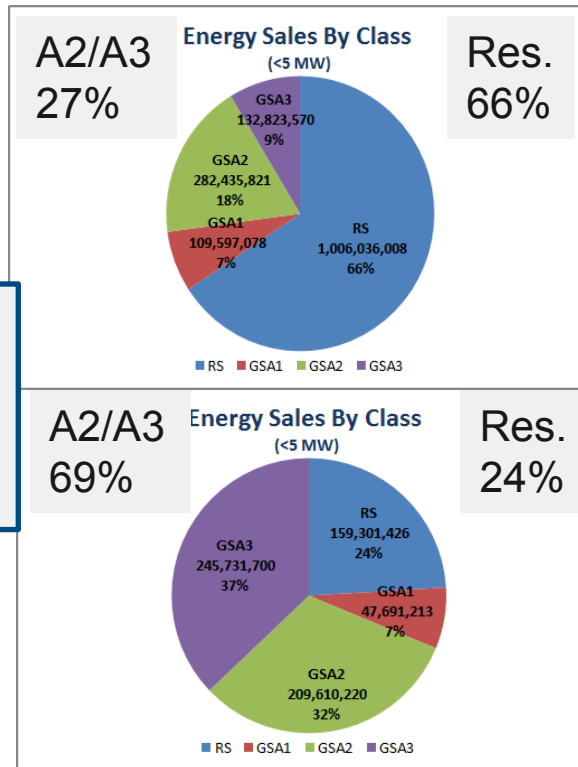
## Cooperatives

- Large % of Residential Sales
- Smaller % GSA2 / 3 Sales
- Increased Flexibility
- Opportunity for more aggressive approach to GSA2/3 designs

## Municipals

- Smaller % of Residential Sales
- Larger % GSA2 / 3 Sales
- Diminished Flexibility
- Less opportunities for more aggressive approach to GSA2/3 designs

Retail rate design recommendations recognize the significant differences among LPCs



TVA recommends limitations on retail rate redesigns to ensure gradualism

# GSA3 Redesign Illustration – ¼ Penny Proposal

## 2% Reduction in Class Level Revenues

|                        | <b>Summer</b> | <b>Winter</b> | <b>Transition</b> | <b>% Change Summer</b> |
|------------------------|---------------|---------------|-------------------|------------------------|
| Customer Charge        | \$275.08      | \$275.08      | \$275.08          |                        |
| Customer Charge        | \$275.08      | \$275.08      | \$275.08          | 0.00%                  |
| Demand Rate - Block 1  | \$13.32       | \$12.39       | \$12.39           |                        |
| Demand Rate - Block 1  | \$11.52       | \$10.74       | \$10.74           | -13.51%                |
| Demand Rate - Block 2  | \$15.32       | \$14.39       | \$14.39           |                        |
| Demand Rate - Block 2  | \$11.52       | \$10.74       | \$10.74           | -24.80%                |
| Contract Demand Charge | \$0.00        | \$0.00        | \$0.00            |                        |
| Contract Demand Charge | \$0.86        | \$0.86        | \$0.86            | N/A                    |
| Energy Rate - Onpeak   | \$0.04        | \$0.04        | \$0.04            |                        |
| Energy Rate - On-Peak  | \$0.06        | \$0.05        | \$0.04            | 39.58%                 |
| Energy Rate - Onpeak   | \$0.04        | \$0.04        | \$0.04            |                        |
| Energy Rate - Off-Peak | \$0.04        | \$0.04        | \$0.04            | -11.30%                |

New - Contract Demand Rate

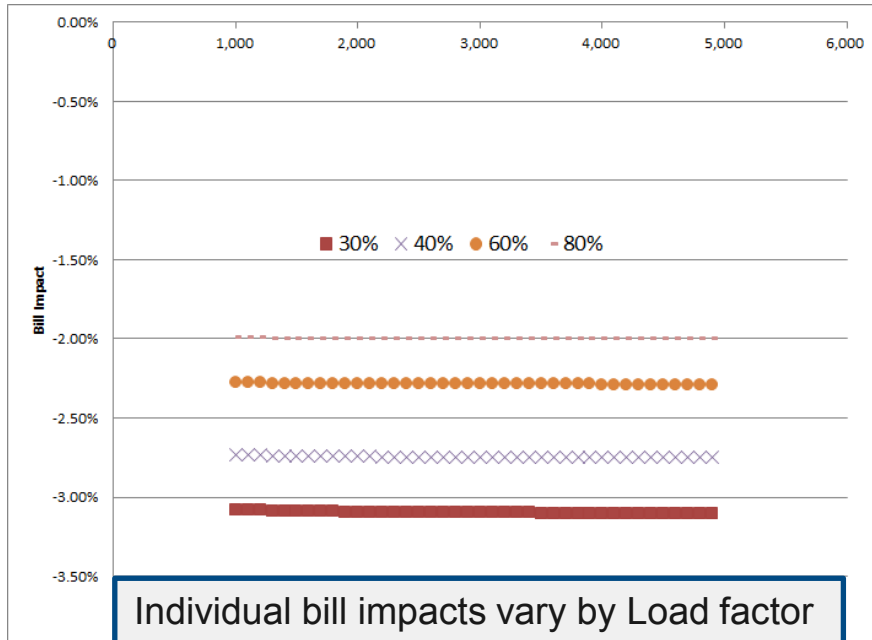
Reductions in Demand Rates

New - Aligned TOU Rate Structures

Current  
Proposed

Reduction in wholesale energy of ¼ cent plus retail re-design and reduce subsidies

# GSA3 Redesign & Customer Level Bill Impacts – ¼ Penny Proposal – 2% Red.



Small Rev. Reduction removes the bill impacts to higher load factor customers (Assumes 85% Coincidence) but does not address (as well) DER.

| Billing Parameter | Current      | Proposed     | Change      | %Change |
|-------------------|--------------|--------------|-------------|---------|
| Customer          | \$111,132    | \$111,132    | \$0         | 0%      |
| Demand Block 1    | \$4,600,268  | \$3,984,409  | (\$615,859) | -13%    |
| Demand Block 2    | \$2,549,732  | \$1,908,785  | (\$640,947) | -25%    |
| Contract Demand   | \$0          | \$616,055    | \$616,055   | N/A     |
| On-Peak Energy    | \$0          | \$2,671,820  | \$2,671,820 | N/A     |
| Off-Peak Energy   | \$0          | \$7,932,035  | \$7,932,035 | N/A     |
| Total Energy      | \$10,312,241 | \$10,603,855 | \$291,614   | 3%      |
| Grand Total       | \$17,573,373 | \$17,224,236 | (\$349,137) | -2.00%  |

Although better, this design does not limit transfers between LPCs

# GSA3 Redesign & Revenue Impacts – Impacts – ¼ Penny Proposal – 2% Reduction

| Optional Reallocation to Residential or GSA |                  |                   |               |              |
|---|------------------|-------------------|---------------|--------------|
| Assignment percentage to RS                 | 70%              |                   |               | \$244,396    |
| Assignment percentage to GSA1               | 30%              |                   |               | \$104,741    |
| GSA3 Reallocation to Residential            |                  |                   |               |              |
| Residential Revenue                         |                  |                   |               | \$18,098,241 |
| Reallocation Amount to Residential          |                  |                   |               | \$244,396    |
|   |                  |                   |               | 1.4%         |
| Increase if Applied to Residential          | \$244,396        | \$244,396         |               |              |
| Customer Units                              | 142,582          | 159,301,426       |               |              |
| Per Residential Monthly Customer Impact     | \$1.71           | \$0.00153         | (either / or) |              |
|   | <i>Inc to CC</i> | <i>Inc to kWh</i> |               |              |
| GSA3 Reallocation to GSA1                   |                  |                   |               |              |
| GSA1 Current Revenue                        |                  |                   |               | \$5,620,012  |
| Reallocation Amount to GSA1                 |                  |                   |               | \$104,741    |
|   |                  |                   |               | 1.9%         |
| Increase if Applied to GSA1                 | \$104,741        | \$104,741         |               |              |
| Customer Units                              | 25,866           | 47,691,213        |               |              |
| Per GSA1 Monthly Customer Impact            | \$4.05           | \$0.00220         | (either / or) |              |
|   | <i>Inc to CC</i> | <i>Inc to kWh</i> |               |              |

Although there is an overall class reduction of 2%, the revenue shift and impact to other customers is held to a minimum.

In this example, Residential impact of 1.4%.  
Results in less than \$2 per customer or 1.5 mill / kWh.

# Spectrum of Redesign Illustrations

## 1/4 Penny Proposal

### Customer A - Coop Heavy Residential

#### GSA3 – 10% Reduction

- **90%** of revenue shift to Residential – 0.7% increase
  - Customer Impact - \$1.18 increase to Customer Charge, or
  - \$0.00087 increase per kWh
- **10%** of revenue shift to GSA-1 – 0.6% increase
  - Customer Impact
    - \$0.80 increase to Customer Charge, or
    - \$0.00089 increase per kWh

### Customer B - Muni Heavy GSA2/3

#### GSA3 – 1.0% Reduction

- **70%** of revenue shift to Residential – 0.7% increase
  - Customer Impact - **\$1.71** increase to Customer Charge, or
  - **\$0.00153** increase per kWh
- **30%** of revenue shift to GSA-1 – 1.9% increase
  - Customer Impact
    - **\$4.05** increase to Customer Charge, or
    - **\$0.0022** increase per kWh

# GSA3 Redesign Illustration – Penny Proposal

## 1% Reduction

|                        | <u>Summer</u> | <u>Winter</u> | <u>Transition</u> | <u>% Change Summer</u> |
|------------------------|---------------|---------------|-------------------|------------------------|
| Customer Charge        | \$275.08      | \$275.08      | \$275.08          |                        |
| Customer Charge        | \$275.08      | \$275.08      | \$275.08          | 0.00%                  |
| Demand Rate - Block 1  | \$13.32       | \$12.39       | \$12.39           |                        |
| Demand Rate - Block 1  | \$12.07       | \$11.24       | \$11.24           | -9.38%                 |
| Demand Rate - Block 2  | \$15.32       | \$14.39       | \$14.39           |                        |
| Demand Rate - Block 2  | \$12.07       | \$11.24       | \$11.24           | -21.21%                |
| Contract Demand Charge | \$0.00        | \$0.00        | \$0.00            |                        |
| Contract Demand Charge | \$3.43        | \$3.43        | \$3.43            | N/A                    |
| Energy Rate - Onpeak   | \$0.04        | \$0.04        | \$0.04            |                        |
| Energy Rate - On-Peak  | \$0.05        | \$0.04        | \$0.03            | 21.67%                 |
| Energy Rate - Onpeak   | \$0.04        | \$0.04        | \$0.04            |                        |
| Energy Rate - Off-Peak | \$0.03        | \$0.03        | \$0.03            | -29.23%                |

New - Contract Demand Rate

Reductions in Demand Rates

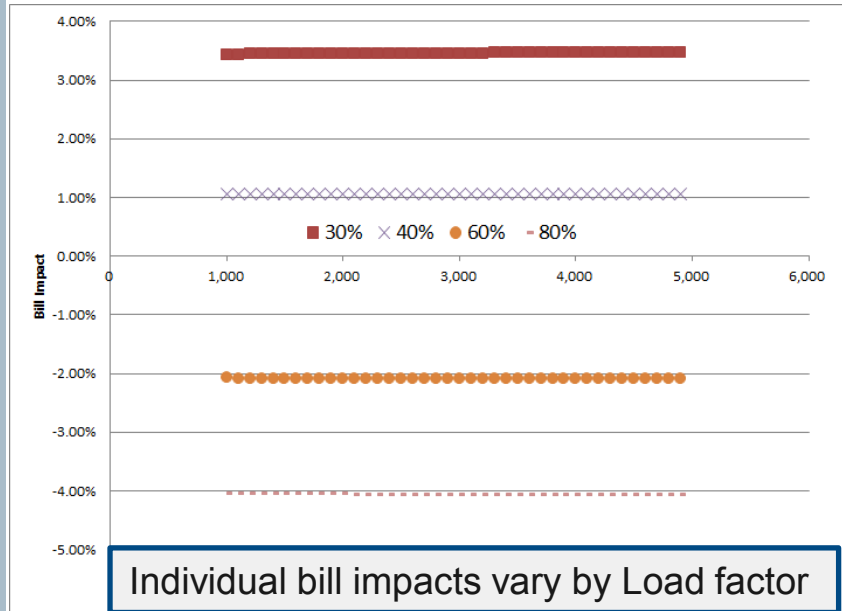
New - Aligned TOU Rate Structures

Current

Proposed

Reduction in wholesale energy of ¼ cent plus retail re-design and reduction – 1%

# GSA3 Redesign & Customer Level Bill Impacts – Penny Proposal – 1% Reduction



The Penny proposal combined with modest revenue reduction more appropriately addresses DER (higher load factor customers)

| Billing Parameter | Current      | Proposed     | Change        | %Change |
|-------------------|--------------|--------------|---------------|---------|
| Customer          | \$111,132    | \$111,132    | \$0           | 0%      |
| Demand Block 1    | \$4,600,268  | \$4,171,595  | (\$428,673)   | -9%     |
| Demand Block 2    | \$2,549,732  | \$1,998,571  | (\$551,161)   | -22%    |
| Contract Demand   | \$0          | \$2,457,058  | \$2,457,058   | N/A     |
| On-Peak Energy    | \$0          | \$2,266,519  | \$2,266,519   | N/A     |
| Off-Peak Energy   | \$0          | \$6,385,514  | \$6,385,514   | N/A     |
| Total Energy      | \$10,312,241 | \$8,652,033  | (\$1,660,208) | -16%    |
| Grand Total       | \$17,573,373 | \$17,390,389 | (\$182,984)   | -1.00%  |

This design does a better job limiting cost shifting among LPCs and more adequately addresses DER by targeting energy intensive customers.



# GSA3 Redesign & Revenue Impacts – Penny Proposal – 1% Reduction

| Optional Reallocation to Residential or GSA |   |                  |                         |              |
|---|---|------------------|-------------------------|--------------|
| Assignment percentage to RS                 | 70%                                     |                  |                         | \$128,089    |
| Assignment percentage to GSA1               | 30%                                     |                  |                         | \$54,895     |
| GSA3 Reallocation to Residential            |   |                  |                         |              |
| Residential Revenue                         |   |                  |                         | \$18,098,241 |
| Reallocation Amount to Residential          |   |                  |                         | \$128,089    |
|   |   |                  |                         | 0.7%         |
|   | Increase if Applied to Residential      | \$128,089        | \$128,089               |              |
|   | Customer Units                          | 142,582          | 159,301,426             |              |
|   | Per Residential Monthly Customer Impact | \$0.90           | \$0.00080 (either / or) |              |
|   |   | <i>Inc to CC</i> | <i>Inc to kWh</i>       |              |
| GSA3 Reallocation to GSA1                   |   |                  |                         |              |
| GSA1 Current Revenue                        |   |                  |                         | \$5,620,012  |
| Reallocation Amount to GSA1                 |   |                  |                         | \$54,895     |
|   |   |                  |                         | 1.0%         |
|   | Increase if Applied to GSA1             | \$54,895         | \$54,895                |              |
|   | Customer Units                          | 25,866           | 47,691,213              |              |
|   | Per GSA1 Monthly Customer Impact        | \$2.12           | \$0.00115 (either / or) |              |
|   |   | <i>Inc to CC</i> | <i>Inc to kWh</i>       |              |

Although there is an overall class reduction of 1%, the revenue shift and impact to other customers is held to a minimum.

In this example, Residential impact of 0.7%. Results in less than \$1 per customer or 1 mill / kWh.

# Spectrum of Redesign Illustrations

## Penny Proposal

### Customer A - Coop Heavy Residential

#### GSA3 – 8.8% Reduction

- **90%** of revenue shift to Residential – 0.7% increase
  - Customer Impact - \$1.04 increase to Customer Charge, or
  - \$0.00077 increase per kWh
- **10%** of revenue shift to GSA-1 – 0.6% increase
  - Customer Impact
    - \$0.70 increase to Customer Charge, or
    - \$0.00078 increase per kWh

### Customer B - Muni Heavy GSA2/3

#### GSA3 – 1.0% Reduction

- **70%** of revenue shift to Residential – 0.7% increase
  - Customer Impact - **\$0.90** increase to Customer Charge, or
  - **\$0.00080** increase per kWh
- **30%** of revenue shift to GSA-1 – 1.0% increase
  - Customer Impact
    - **\$2.12** increase to Customer Charge, or
    - **\$0.00115** increase per kWh

# Equalization for Pricing of Manufacturing Customers

**Perceived Concerns** – LPC concerns over GSA3 (with/without the SMC) vs. TDMSA (TDGSA) rates

## **Background:**

- In 2009, at the request of TVPPA, there was a request for “more competitive GSA3 rates”.
- TDMSA/TDGSA were introduced as optional wholesale rates
- Currently TDMSA / TDGSA offered by 110 LPCs

## **LPC Concerns:**

- Delivery adders – intended to be GSA3 (some LPCs have elected “B” class adders)
- Lost Margin – Today, most GSA3 Demand rates have Enhanced Power Cost Recovery
  - Power cost recovery from pre-rate change
  - Rates reflect  $\geq 100\%$  coincidence assumptions

TVA’s proposed approach to GSA3 rates would equalize pricing

# TVAPPA Response – June 9, 2017

## TVPPA Rates & Contracts Committee

### Comments to TVA

June 9, 2017

- ✓ We need more time to finalize details of a complete counterproposal.
- ✓ If we agree to a fixed cost component in the rate structure, we need to understand exactly what is allocated into that component.
- ✓ In order to move forward in considering this fixed cost component, we need agreement that TVA will enter into serious discussions related to contract flexibility, equity and equalization of pricing for manufacturing customers.
  - To signify TVA's commitment to equity discussions, they will collaborate to provide a joint legal opinion regarding the process that must be executed to engage in affecting change to existing equity potential
- ✓ We recognize that TVA will look for a mechanism to insure that implementation of retail rate changes for GSA-2 and 3 are coincident with the wholesale rate change

### Elements of Agreement

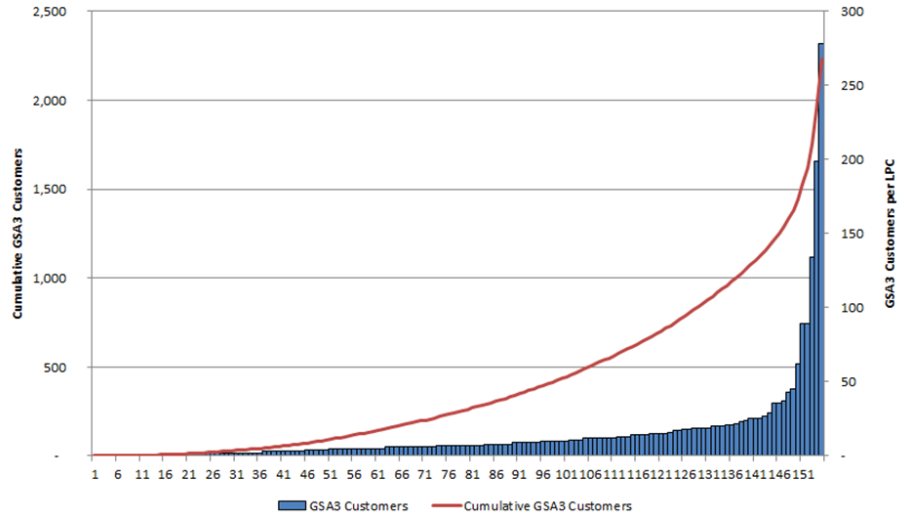
- ✓ 5-year annual average of most recent 5 years of total Standard Service kWh at wholesale, multiplied by 0.25/kWh for a dollar amount of approximately \$300 million of total fixed cost.
- ✓ There needs to be an established timeframe to assess and reallocate each LPCs portion of the fixed cost component, regardless of rate change schedule.
- ✓ Concentrate on GSA-2 and 3, taking Residential and GSA-1 off the table at this time.

# GSA3 and Local Power Companies

Overall, there are ~ 2,300 GSA3 customers 50% of the GSA3s are with 13 LPCs

There are ~ 100 LPCs with 10 GSA3s or less

Currently, 80% of LPCs offer a time of use rate to their customers (but with minimal subscription)

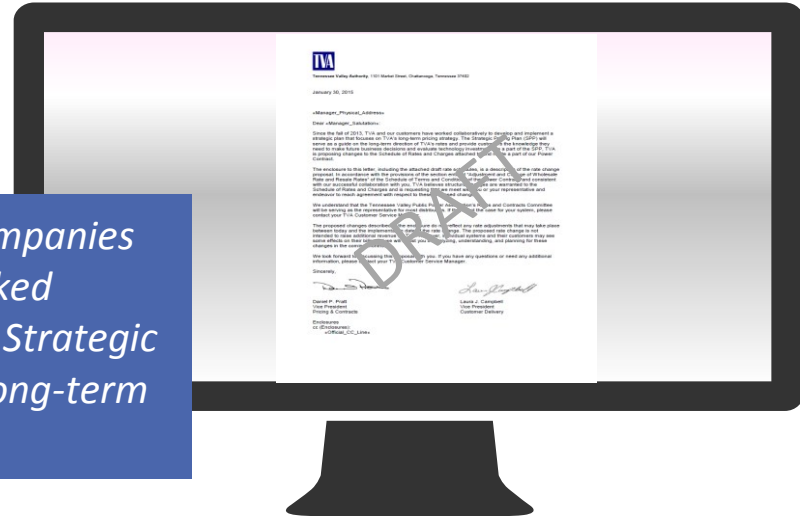
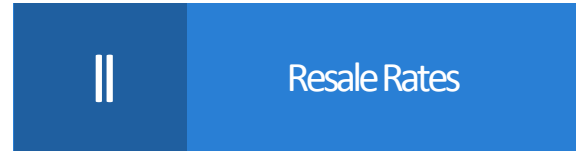


Data Source: ESS as of 12 months ending September 30, 2016

# Draft Rate Change Letter

# Rate Change Letter Guide

*The Rate Change Letter captures the changes we are considering and begins the 180 day negotiation period*



*Since the fall of 2013, TVA, local power companies (LPCs), and their customers have worked collaboratively to develop and implement a Strategic Pricing Plan (SPP) which focuses on TVA's long-term pricing efforts.*



# I. Wholesale Rates – Section 1

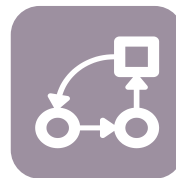
Reduce Standard Service energy charges and introduce a new wholesale fixed-cost recovery (FCR) charge on a revenue-neutral basis.

*...TVA and TVPPA will meet and endeavor to reach agreement on one of the proposed wholesale designs presented...*



## I. 1(a) FCR Allocation Methodology Option

**A:** FCR allocated to each LPC based on each LPC's **percentage contribution** to the total TVA standard service energy usage during a historical baseline period



**I. 1(para 2) – TVA will consider other FCR allocation methodologies jointly developed with TVPPA.**



## I. 1(b) - FCR Allocation Methodology Option

**B:** FCR allocated based on a **contract demand determined**



## I. 1(c) - FCR Allocation Methodology

**Option C:** FCR allocated to each LPC based on its share of **capacity cost allocations** relative to the 2015/2016 **COS**

*This is intended to serve as a guide to, and not a substitute for, the draft rate change letter - to the extent they do not agree, the draft rate change letter prevails*



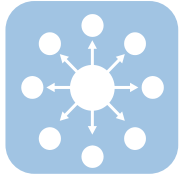
# I. Wholesale Rates – Section 2-9



**I. 2 - Improve wholesale FCR for Large Customers** by implementing a new **contract demand charge**



**I. 3 - Move standard service Hydro Allocation Adjustment** debit and credit amounts from the wholesale schedule to the adjustment addendum



**I. 4 - Move Large Customer Hydro Allocation Adjustment** amounts, which are currently embedded in the base rates, to the adjustment addendum



**I. 5 – Consider changes to the Hydro Allocation Adjustment** demand and energy debit/credit methodology with a focus on residential customer impacts.



**I. 6 - Decrease wholesale GSB, GSC and GSD rates. Increase Standard Service and/or MSB, MSC, and MSD rates** to maintain revenue neutrality.



**I. 7 - Roll adjustment addendum amounts, including the Environmental Adjustment,** into the base rates



**I. 8 - Eliminate or phase out mid-month billing**



**I. 9 - Change fuel cost adjustment allocation methodology** to more precisely factor large manufacturing-class customers.

# II. Resale Rates

To enable LPCs to continue operating on a financially sound basis after the wholesale rate change, TVA will make the following changes to resale rate schedules:



**II. 1** - Change **resale rates** to reflect changes in wholesale power costs



**II. 2** - **Align new wholesale FCR charges** with retail. Address timing as new contract demand charges will require customer care.



**II. 3** - Move **hydro allocation** adjustment amounts which are currently embedded in the base resale rates, to the **adjustment addendum**



**II. 4** - Roll adjustment addendum amounts, **including the Environmental Adjustment**, into the base resale rates



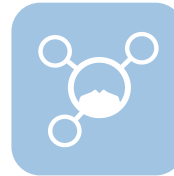
**II. 5** - **Increase resale rates** to account for worst case **LPC bill impacts**

# III. Other Matters

Explore additional opportunities to provide simplicity and process improvement



**III. 1** – Correct and generalize **ESS reporting** contract provisions to fix outdated references



**III. 3** - Combine the six general and manufacturing **B, C, and D rate schedules** into two documents (does not affect rates)



**III. 2** - Revise part B of the **Outdoor Lighting** rate schedule to implement a formula eliminating the need to process an LRA to update the fixture charges.



**III. 4** - Rebalance the **hydro allocation debit and credit** amounts to account for changes between residential and commercial customer class characteristics

# Appendix

# GSA3 Redesign Illustration – 0 Penny Proposal

## Revenue Neutral

| Revenue Neutral - No Change at Wholesale |           |           |            |                 |
|--|-----------|-----------|------------|-----------------|
|  | Summer    | Winter    | Transition | % Change Summer |
| Customer Charge                          | \$275.08  | \$275.08  | \$275.08   |                 |
| Customer Charge                          | \$275.08  | \$275.08  | \$275.08   | 0.00%           |
| Demand Rate - Bloc                       | \$13.32   | \$12.39   | \$12.39    |                 |
| Demand Rate - Bloc                       | \$12.52   | \$11.65   | \$11.65    | -6.01%          |
| Demand Rate - Bloc                       | \$15.32   | \$14.39   | \$14.39    |                 |
| Demand Rate - Bloc                       | \$12.52   | \$11.65   | \$11.65    | -18.28%         |
| Contract Demand C                        | \$0.00    | \$0.00    | \$0.00     |                 |
| Contract Demand C                        | \$0.00    | \$0.00    | \$0.00     | N/A             |
| Energy Rate - Onpe                       | \$0.04434 | \$0.04126 | \$0.03994  |                 |
| Energy Rate - On-Pe                      | \$0.06381 | \$0.05336 | \$0.04383  | 43.91%          |
| Energy Rate - Onpe                       | \$0.04434 | \$0.04126 | \$0.03994  |                 |
| Energy Rate - Off-P                      | \$0.04124 | \$0.04310 | \$0.04383  | -6.99%          |

No Contract Demand Rate

Reductions in Demand Rates

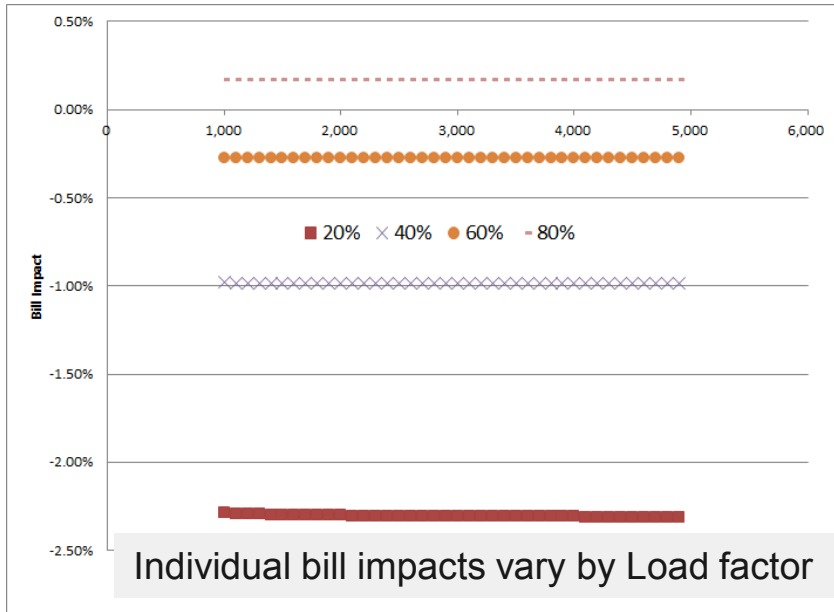
New - Aligned TOU Rate Structures

Current  
Proposed

Simply redesigning retail rates with no changes at wholesale



# GSA3 Redesign & Customer Level Bill Impacts – 0 Penny – Revenue Neutral



Rev. Neutral approach causes higher bill impacts for higher load factor customers (Assumes 94% Coincidence)

| <u>Billing Parameter</u> | <u>Current</u> | <u>Proposed</u> | <u>Change</u> | <u>%Change</u> |
|--------------------------|----------------|-----------------|---------------|----------------|
| Customer                 | \$111,132      | \$111,132       | \$0           | 0%             |
| Demand Block 1           | \$4,600,268    | \$4,343,064     | -\$257,204    | -6%            |
| Demand Block 2           | \$2,549,732    | \$2,080,770     | -\$468,962    | -18%           |
| Contract Demand          | \$0            | \$0             | \$0           | N/A            |
| On-Peak Energy           | \$0            | \$2,769,828     | \$2,769,828   | N/A            |
| Off-Peak Energy          | \$0            | \$8,305,120     | \$8,305,120   | N/A            |
| Total Energy             | \$10,312,241   | \$11,074,948    | \$762,707     | 7%             |
| Grand Total              | \$17,573,373   | \$17,609,914    | \$36,541      | 0.2%           |

Rate designed to be Revenue Neutral by class; individual bill impacts vary

# GSA3 Redesign Illustration – ¼ Penny Proposal Revenue Neutral

| 1/4 Penny Proposal Revenue Neutral |           |           |            |                 |
|------------------------------------|-----------|-----------|------------|-----------------|
|                                    | Summer    | Winter    | Transition | % Change Summer |
| Customer Charge                    | \$275.08  | \$275.08  | \$275.08   |                 |
| Customer Charge                    | \$275.08  | \$275.08  | \$275.08   | 0.00%           |
| Demand Rate - Bloc                 | \$13.32   | \$12.39   | \$12.39    |                 |
| Demand Rate - Bloc                 | \$12.52   | \$11.65   | \$11.65    | -6.01%          |
| Demand Rate - Bloc                 | \$15.32   | \$14.39   | \$14.39    |                 |
| Demand Rate - Bloc                 | \$12.52   | \$11.65   | \$11.65    | -18.28%         |
| Contract Demand C                  | \$0.00    | \$0.00    | \$0.00     |                 |
| Contract Demand C                  | \$0.86    | \$0.86    | \$0.86     | N/A             |
| Energy Rate - Onpe                 | \$0.04434 | \$0.04126 | \$0.03994  |                 |
| Energy Rate - On-Pe                | \$0.06124 | \$0.05079 | \$0.04126  | 38.11%          |
| Energy Rate - Onpe                 | \$0.04434 | \$0.04126 | \$0.03994  |                 |
| Energy Rate - Off-P                | \$0.03868 | \$0.04053 | \$0.04126  | -12.76%         |

New - Contract Demand Rate

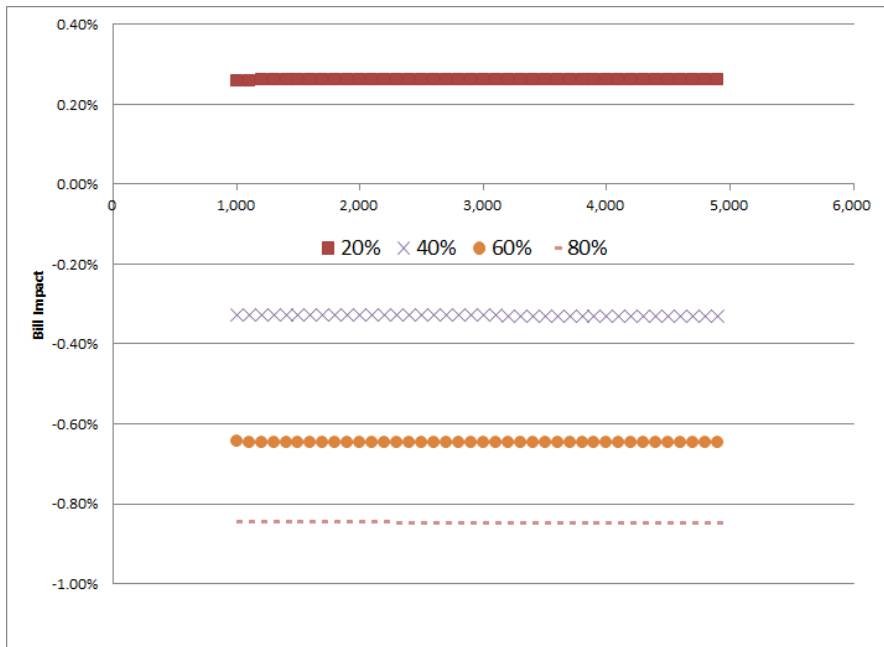
Reductions in Demand Rates

New - Aligned TOU Rate Structures

Current  
Proposed

Reduction in wholesale energy of ¼ cent plus revenue neutral retail re-design

# GSA3 Redesign & Customer Level Bill Impacts – ¼ Penny Proposal – Rev. Neut.



Rev. Neutral approach causes higher bill impacts for higher load factor customers (Assumes 94% Coincidence)

| Billing Parameter | Current      | Proposed     | Change      | %Change |
|-------------------|--------------|--------------|-------------|---------|
| Customer          | \$111,132    | \$111,132    | \$0         | 0%      |
| Demand Block 1    | \$4,600,268  | \$4,324,963  | -\$275,304  | -6%     |
| Demand Block 2    | \$2,549,732  | \$2,072,128  | -\$477,604  | -19%    |
| Contract Demand   | \$0          | \$616,055    | \$616,055   | N/A     |
| On-Peak Energy    | \$0          | \$2,638,641  | \$2,638,641 | N/A     |
| Off-Peak Energy   | \$0          | \$7,805,489  | \$7,805,489 | N/A     |
| Total Energy      | \$10,312,241 | \$10,444,129 | \$131,889   | 1%      |
| Grand Total       | \$17,573,373 | \$17,568,409 | -\$4,965    | 0.0%    |

Overall Rate Design is Revenue Neutral, Individual bill impacts range around +/- 0.5%



# GSA3 Redesign Illustration – Penny Proposal Revenue Neutral

| Penny Proposal Revenue Neutral |           |           |            |               |
|--------------------------------|-----------|-----------|------------|---------------|
|                                | Summer    | Winter    | Transition | Change Summer |
| Customer Charge                | \$275.08  | \$275.08  | \$275.08   |               |
| Customer Charge                | \$275.08  | \$275.08  | \$275.08   | 0.00%         |
| Demand Rate -                  | \$13.32   | \$12.39   | \$12.39    |               |
| Demand Rate -                  | \$12.57   | \$11.70   | \$11.70    | -5.63%        |
| Demand Rate -                  | \$15.32   | \$14.39   | \$14.39    |               |
| Demand Rate -                  | \$12.57   | \$11.70   | \$11.70    | -17.95%       |
| Contract Demand                | \$0.00    | \$0.00    | \$0.00     |               |
| Contract Demand                | \$3.43    | \$3.43    | \$3.43     | N/A           |
| Energy Rate - O                | \$0.04434 | \$0.04126 | \$0.03994  |               |
| Energy Rate - O                | \$0.05366 | \$0.04321 | \$0.03368  | 21.02%        |
| Energy Rate - O                | \$0.04434 | \$0.04126 | \$0.03994  |               |
| Energy Rate - O                | \$0.03109 | \$0.03295 | \$0.03368  | -29.88%       |

New - Contract Demand Rate

Reductions in Demand Rates

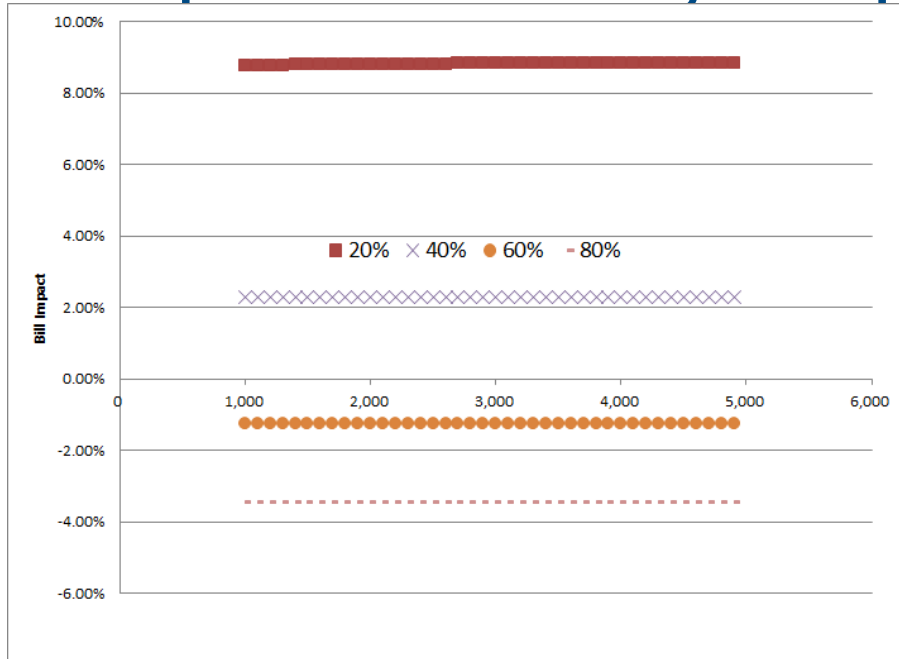
New - Aligned TOU Rate Structures

Current

Proposed

Reduction in wholesale energy of ¼ cent plus revenue neutral retail re-design

# GSA3 Redesign & Customer Level Bill Impacts – Penny Proposal – Rev. Neut.



Rev. Neutral approach causes higher bill impacts for Lower load factor customers (Assumes 95% Coincidence)

| <u>Billing Parameter</u> | <u>Current</u> | <u>Proposed</u> | <u>Change</u> | <u>%Change</u> |
|--------------------------|----------------|-----------------|---------------|----------------|
| Customer                 | \$111,132      | \$111,132       | \$0           | 0%             |
| Demand Block 1           | \$4,600,268    | \$4,343,064     | -\$257,204    | -6%            |
| Demand Block 2           | \$2,549,732    | \$2,080,770     | -\$468,962    | -18%           |
| Contract Demand          | \$0            | \$2,457,058     | \$2,457,058   | N/A            |
| On-Peak Energy           | \$0            | \$2,251,205     | \$2,251,205   | N/A            |
| Off-Peak Energy          | \$0            | \$6,327,108     | \$6,327,108   | N/A            |
| Total Energy             | \$10,312,241   | \$8,578,314     | -\$1,733,927  | -17%           |
| Grand Total              | \$17,573,373   | \$17,570,337    | -\$3,036      | 0.0%           |

Rate designed to be Revenue Neutral by class; individual bill impacts vary