<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre 2000</td>
<td>City Charter, Resolution 1, general state law</td>
</tr>
<tr>
<td>2000</td>
<td>Conflict of interest added to By-laws</td>
</tr>
<tr>
<td>2005</td>
<td>Employee Conflict of Interest Policy and required annual disclosure</td>
</tr>
<tr>
<td>2006</td>
<td>TN State Ethics Commission established</td>
</tr>
<tr>
<td>2007</td>
<td>Board adopted Ethics Policy</td>
</tr>
<tr>
<td>2012</td>
<td>By-laws ethics section updated</td>
</tr>
<tr>
<td>2013</td>
<td>Annual disclosure requirement adopted</td>
</tr>
</tbody>
</table>
Ethics Policy Components

- Aligns with governing statutes and guidelines
- Certifies compliance with ethical standards
  - Political activity
  - Nepotism
  - Gifts and gratuities
  - Personal and financial interests
  - Improper use of position or authority
  - Improper use of KUB time, facilities, and equipment
- Requires disclosure if a conflict exists
Annual Disclosure Form

- Form included in today’s agenda packet
- Annual disclosure occurs in January
- Return forms before end of January
New Three-Year Rate Forecast

- No electric rate increases for two years
- No natural gas rate increases for three years
- Wastewater rates reduced from prior projections
- No increase in basic service charges
- Electric rate structure changes
  - Pilot Time of Use electric rate options for residential and business customers
  - Commercial demand charges
# New Rate Forecast Benefits Customers

<table>
<thead>
<tr>
<th>FY 21 – 23 Rate Increases</th>
<th>New Forecast</th>
<th>Prior Forecast</th>
<th>3-Year Residential Bill Savings*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electric</td>
<td>0%, 0%, 1%</td>
<td>1%, 1%, 1%</td>
<td>$78</td>
</tr>
<tr>
<td>Natural Gas</td>
<td>0%, 0%, 0%</td>
<td>1%, 1%, 1%</td>
<td>$36</td>
</tr>
<tr>
<td>Water</td>
<td>5%, 5%, 5%</td>
<td>5%, 5%, 5%</td>
<td>---</td>
</tr>
<tr>
<td>Wastewater</td>
<td>2.3%, 2.3%, 2.3%</td>
<td>3.5%, 3.5%, 3.5%</td>
<td>$36</td>
</tr>
</tbody>
</table>

* *Compared to Prior Forecast*
Average Monthly Bill Impacts

201,000 Residential Households
Only 16% have all four services

- Electric only: 16%
- Gas only: 13%
- Electric and Gas: 14%
- Electric, Water, and Wastewater: 14%
- All four: 6%
- Other: 37%

201,000 Residential Households
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- Electric and Gas: 14%
- Electric, Water, and Wastewater: 14%
- All four: 6%
- Other: 37%

<table>
<thead>
<tr>
<th>Service</th>
<th>FY 21</th>
<th>FY 22</th>
<th>FY 23</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electric</td>
<td>---</td>
<td>---</td>
<td>$1.00</td>
</tr>
<tr>
<td>Natural Gas</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Water</td>
<td>$1.50</td>
<td>$1.50</td>
<td>$1.50</td>
</tr>
<tr>
<td>Wastewater</td>
<td>$1.50</td>
<td>$1.50</td>
<td>$1.50</td>
</tr>
</tbody>
</table>

- Water and Wastewater increases reflected on August bills
- Electric increase reflected on November bills
- Rate increases applied to Commodity Charges; No increase in Basic Service Charges
Proposed Rate Structure Changes

- **Existing rates**
  - Introduce small demand charge for small to mid-sized business customers

- **New rates**
  - Introduce Time of Use (TOU) Pilot for residential
  - Introduce TOU Pilots for small to mid-sized business customers
Demand Charge for Small and Mid-sized Business Customers

- Introduce small demand charge offset by reduction to energy charges
  - Improves cost alignment
  - Minimal bill impacts
  - Increases customer control of bill
  - Revenue neutral to KUB

- Impacts customers < 1,000 kW
  - All business customers would have demand charges
## Proposed Rates for Small and Mid-sized Business Customers

<table>
<thead>
<tr>
<th></th>
<th>GSA1</th>
<th>Proposed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Current</td>
<td>FY 21</td>
</tr>
<tr>
<td>Customer charge</td>
<td>$29.00</td>
<td>$29.00</td>
</tr>
<tr>
<td>Demand (kW)</td>
<td>$0.00</td>
<td>$0.50↑</td>
</tr>
<tr>
<td>Energy (kWh)</td>
<td>$0.11175</td>
<td>$0.10985↓</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>GSA2</th>
<th>Proposed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Current</td>
<td>FY 21</td>
</tr>
<tr>
<td>Customer charge</td>
<td>$95.00</td>
<td>$95.00</td>
</tr>
<tr>
<td>Demand first 50 (kW)</td>
<td>$0.00</td>
<td>$0.50↑</td>
</tr>
<tr>
<td>Demand &gt;50 (kW)</td>
<td>$15.18</td>
<td>$15.18</td>
</tr>
<tr>
<td>Energy first 15,000 (kWh)</td>
<td>$0.13863</td>
<td>$0.13727↓</td>
</tr>
<tr>
<td>Energy &gt; 15,000 (kWh)</td>
<td>$0.06123</td>
<td>$0.06123</td>
</tr>
</tbody>
</table>

*Indicative rates based on October 2019 variables; subject to purchased power adjustment.*
Projected Bill Impacts

- Small Business: GSA1 (19,630 customers)
  - 50% will have slight bill decrease
  - Most increases less than 1%
  - Maximum annualized increase 2.9%

- Mid-sized Business: GSA2 (2,770 customers)
  - 50% will have slight bill decrease
  - Most increases less than 1%
  - Maximum annualized increase 2.3%
Proposed TOU Pilot Programs

- Introduce optional Time of Use Pilots
  - Residential
  - Business customers < 1,000 kW

- All customers would have TOU rates available
  - Residential – new schedule is optional
  - GSA1 and GSA2 – new schedules are optional
  - GSA3 – existing TOU schedule is optional
  - Business customers > 5,000 kW – existing schedules are TOU
TOU Pilot Program Goals

- Offer TOU to all customers
- Appropriate power cost recovery
  - Retail rate reflects power supply TOU wholesale rates
  - Power supply cost recovery not at risk
- Maintain KUB margin per unit
  - KUB indifferent to customer selection
- Learn during pilot
Proposed Residential TOU Rates

- Basic service charge: $20.50
- Demand charge: $0.00 per kW
- Energy charge
  - On peak energy: $0.19838 per kWh
  - Off peak energy: $0.06662 per kWh

Indicative rates based on October 2019 variables; subject to purchased power adjustment.
Proposed Residential TOU Rates Compared to Existing Rates

<table>
<thead>
<tr>
<th></th>
<th>Current Rate</th>
<th>Proposed TOU Rates (margin neutral)</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Service</td>
<td>$20.50</td>
<td>$20.50</td>
<td>$ -</td>
</tr>
<tr>
<td>Demand (KW) rate</td>
<td>$ 0.00</td>
<td>$ 0.00</td>
<td>$ -</td>
</tr>
<tr>
<td>Summer On-Peak Energy</td>
<td>$0.09159</td>
<td>$0.19838</td>
<td>$0.10679</td>
</tr>
<tr>
<td>Summer Off-Peak Energy</td>
<td>$0.09159</td>
<td>$0.06662</td>
<td>($0.02497)</td>
</tr>
<tr>
<td>Winter On-Peak Energy</td>
<td>$0.09118</td>
<td>$0.19838</td>
<td>$0.10720</td>
</tr>
<tr>
<td>Winter Off-Peak Energy</td>
<td>$0.09118</td>
<td>$0.06662</td>
<td>($0.02456)</td>
</tr>
</tbody>
</table>

Indicative rates based on October 2019 variables; subject to purchased power adjustment.
Proposed Business TOU Rates – GSA1

GSA1: <50 kW

- Basic service charge: $29.00
- Demand charge: $2.00 per kW
- Energy charge
  - On peak energy: $0.20610 per kWh
  - Off peak energy: $0.07435 per kWh

Proforma rates based on October 2019 variables; subject to purchased power adjustment.
Proposed Business TOU Rates – GSA2

GSA2: <1,000 kW

- Non-homogeneous class
- Large bill impacts for TOU
- Recommend sub-classes
  - GSA2 small up to 100kW
  - GSA2 large 100kW to 1,000kW
Proposed Business TOU Rates – GSA2

<table>
<thead>
<tr>
<th></th>
<th>TOU GSA2 Small</th>
<th>TOU GSA2 Large</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Service</td>
<td>$95.00</td>
<td>$110.00</td>
</tr>
<tr>
<td>Max Peak Demand (per kW)</td>
<td>$4.45</td>
<td>$6.56</td>
</tr>
<tr>
<td>On-Peak Energy (per kWh)</td>
<td>$0.21794</td>
<td>$0.19509</td>
</tr>
<tr>
<td>Off-Peak Energy (per kWh)</td>
<td>$0.08618</td>
<td>$0.06333</td>
</tr>
</tbody>
</table>

*Indicative rates based on October 2019 variables; subject to purchased power adjustment.*
How Do Customers Save By Choosing TOU?

- 83% of hours are off-peak
- Some customers would save automatically
  - Usage is already occurring off-peak
- Some customers would need to intentionally shift load to save
  - Choose the weekend
  - Install programmable thermostats and other devices
Key TOU Participation Guidelines

- Optional
- Initial participation limited to
  - Residential: 200
  - GSA1: 100
  - GSA2: 50
  - No limit for electric vehicle or solar customers
  - Participation limits will be reviewed as needed

- Business customers reclassification determined by demand (kW), same as with traditional schedules
- Customer opt-out provision
Century II Funding Considerations Timeline

August 2019 . . . . . . . . . . Three-Year Rates Forecast
October 2019 . . . . . . . . . Century II Update
November 2019 . . . . . . . 10-Year Plan Financial Discussion
January 2020 . . . . . . . . . Rate Structure Discussion
April 2020 . . . . . . . . . . Financial Workshop
May 2020 . . . . . . . FY 21 Budget, Rates, and Debt Considerations
June 2020 . . . . . . . Rates (Second Reading)
Natural Gas Water Heater Program

- Incentive for property owners with inactive gas service
- Extended 2,160 offers to date
- 130 installations completed since December 2017
Natural Gas Appliance Rebates

- Incentive for existing gas customers to convert appliances to natural gas
- Rebate amounts range from $100 to $600
- 319 rebates totaling ~$71,200 since December 2017
Electric Vehicle (EV) Charger Rebate

- Incentive for residential electric customers to install Level 2 EV chargers
- Covers 100% equipment costs up to $400
- 43 rebates totaling ~ $16,700 since August 2019
Smart Thermostat Pilot Program

- Provides free installed ecobee thermostat for residential electric customers
- Designed to help manage system peaks
- 81 thermostats installed since November 2019
Energy and Water Efficiency Workshops

- 29 workshops completed and 680 customers served since April
- Primarily serving lower-income customers
- Potential energy savings of 450 megawatt-hours with take home kits
- New youth workshop ready to launch
Proposed Low-Income Efficiency Program

- Replace older toilets (pre-1994) with free installed low-flow toilet
- Direct installation of energy savings measures while on site for toilet replacement
- Funded by KUB; administered by CAC
- Owners and renters eligible
- Projected start date this summer
Proposed “Easy Connect” Program

- Targeting residential property owners within 200 feet of an existing KUB gas main
- Turnkey installation for gas service and single appliance
- Appliance and installation costs eligible for zero interest on-bill financing
- Future appliances eligible for gas rebates
- Projected start date of May 2020
Customer Programs Reflect KUB’s Mission of Service

- KUB exists to serve its customers
- Programs aim to help customers save money
- Benefits include environmental stewardship