Pre-Live Meeting Preparation

- No business is to be discussed until meeting is live
- Test video, microphone & audio
- Turn on chat & use for technical difficulty only
- Commissioners will be muted after approval of minutes (if on cell phone: *6 to unmute)
- Questions will be requested at end of each presentation
KUB
Public Comments

- There will be a 30 second pause in the meeting to allow transition to public comments
- Members of the public who will address the Board are asked to mute any devices in the background to reduce audio difficulties
All Level 4 (social distancing) actions completed

Transitioned to Level 3 (safer at home/work)
- Over 300 employees working from home
- Most routine work continues (no planned in-home work)
- Customer Service Centers closed April 1

Prepared to continue operations
- Routine work suspended at Level 2
- Critical work only at Level 1
Focusing on Employee Health

- Enhanced facility and vehicle cleaning
- Maintaining supply of personal hygiene and protective equipment
- Employee health and work decisions guided by our Occupational Health team
- Requiring social distancing and working from home
- Communicating with employees daily
Continuing to Serve Our Customers

- Suspended disconnections for nonpayment
- Waiving transaction fees
- Increased communication through social media
- Maintaining systems to provide safe and reliable service
Our Vision:
KUB exists to serve its customers, improving their quality of life by providing utility services that are safe, reliable and affordable.

Shared Values:
- We value the safety and well-being of our customers and employees.
- We value fairness, and try always to make decisions that provide the greatest good for the most people.
- We are in a position of trust and hold ourselves to high ethical standards.
- We improve the value of our services through efficiency, innovation and communication.
- We value the commitment and hard work of our employees.
- We are environmentally responsible in our operations and support the sustainability of our communities’ natural resources.
- We participate in the communities we serve.

Our Mission:
Our mission is to act as good stewards of our communities’ resources: utility assets, customer dollars, and the environment. We work to safeguard those resources and enhance their value for the people of the communities we serve and generations to come.

We Measure Our Success by:
- Customer Satisfaction
- System Performance
- Financial Performance
- Safety Performance

Keys to Success:
- Managing Our Utility System Infrastructure
  - Electric
  - Natural Gas
  - Water
  - Wastewater
- Improving The Customer Experience
- Managing Our Finances Effectively
- Meeting Or Exceeding Regulatory Standards
- Partnering For Economic Development
- Being Environmentally Responsible
10-Year Plan Still Reflects Our Vision

- Continue Century II and Water Plant Resiliency
- Complete advanced meter deployment in 2020
- Complete Consent Decree in 2021
- Significant increase in sustainability investments
- O&M and Capital savings
- Lower level of rate increases
- Lower system debt levels
Pandemic Drives Changes to Plan

- New economic assumptions
  - Interest rates/investment returns
  - Timing of capital projects
- Adjustments to rate recommendations
- Proposed budget down slightly from FY 20
- Deferral of decision on use of TVA credit except for Green Invest and low-income program
No Rate Increases in FY 2021

- November forecast
  - No electric rate increases for two years
  - No natural gas rate increases for three years
  - Reduction in wastewater rate increases
  - No increase in basic service charges

- New reductions
  - Water rate increase deferred until next year
  - Wastewater rate increase deferred until next year
Defer changes to electric GSA rate structures to spring 2021

Move forward with Pilot Time of Use (TOU) electric rates for residential and business customers

Move forward with Purchased Power Adjustment amendments
Today’s Agenda

- Susan Edwards  Low-Income and Sustainability Programs
- Derwin Hagood  FY 21 System Improvements
- Mark Walker  Financial Plan
  - Long Term Financial Plans
  - FY 21 Rates and Budget Overview
Customer Care And Environmental Stewardship Are Key to KUB’s Mission

- KUB exists to serve its customers
- KUB has a long legacy of customer assistance and environmental stewardship
- Investments require balance with needs for safe, reliable, and affordable utility services
Continuing Dedication to Helping Those in Need

- Customer counseling
- Project Help
- Energy & Water Savings Workshops
- United Way campaigns
- Vol Time with community agencies
Building on Legacy of Environmental Stewardship

- Efficiency in operations
  - Alternative fuel fleet
  - Biosolids beneficial reuse
  - Renewable energy at facilities

- Early adopter of TVA pilots
  - Green Power Switch/Generation Partners
  - Enel X demand response program
  - Home Uplift
  - Smart Thermostats

- Electric vehicle charger rebate
$1.3M New Investment in Weatherization

- 1,700+ served with $20M since 2015
- Customers contribute ~$700K/year through Round It Up
- KUB proposed budget adds $1M/year
- TVA Home Uplift provides $361K in matching funds
- Partners continue to seek new funding sources
New Low-Income Efficiency Program

- Replace older toilets with free, installed low-flow toilet
- Direct installation of energy savings measures while on site
- Funded by KUB with $500K/year
- TVA providing direct-install energy saving kits
- Administered by CAC
- Owners and renters eligible
Community Solar Initiative

- A TVA Flexibility Research Project in partnership with City of Knoxville
- $1.5M investment
- Up to 700 kW of solar on City-owned site
- Provides option for customers to invest in local solar
Green Invest Solar Purchase

- 212 MW of new solar power for $825K/year
- First-of-its-kind investment by a municipal utility in the Valley
- Enough power for 35,000 homes
- Significantly advances carbon emissions reduction in KUB service area
Support for low-income customers

- New investments in weatherization help address long-term energy affordability
- New water efficiency program helps address dual impacts of water and wastewater costs

Support for a sustainable environment

- Community solar provides a new customer option
- Green Invest solar purchase benefits all customers
Overview

- Current focus of each utility
- Century II accomplishments
- Major upcoming projects and programs
Electric: Focus on Reliability

- Data drives prioritization of system upgrades
- Pick "right tool for task"
  - Vegetation Management
  - Century II replacements
  - Reclosers and fuses
  - Line relocations
  - Looped circuits
  - Strategic undergrounding
  - Animal guarding

FY19 Outage Causes

- Vegetation Out of Zone 43%
- Vegetation In Zone 18%
- Equip Failure 13%
- Lightning
- Unknown 7%
- Animals 5%
- Damage By Others 12%
Century II Accomplishments

- Substations – about halfway through a 20-year program
- Poles – modifying replacement rate
  - First cycle replaced over 20,000 poles
  - New replacements based on upcoming pole assessment
- Underground Cable – XLP 90% complete on a 30-year program, with other cable types yet to be replaced
- Transmission Lines and Fiber Optic Cable – 118 of 265 miles complete, remainder by FY 30
Upcoming Projects and Programs

- Western Avenue Infeed Substation: $17M in FY 21-22
- 69kV - Eastbridge to Strawberry Plains: $2.1M in FY 21
- Pole Inspection: $1.4M in FY21
- Veg Management: $12M in FY21
  - Focus on transmission lines
  - Removing more hazard trees
  - Bringing Foresters in-house
- Electric Master Plan: $215K
  - Consultant through RFQ
  - Final Report by Fall 2020
Natural Gas: Focus on Growth

- Pipeline extensions provide customer choice

Connect To Comfort
- New customers on existing or nearby mains
- Turnkey installation for service and appliance
- KUB crews perform work
- On-bill financing and rebates
Century II Phasing Out Older Pipe Types

- Newest system
- Cast iron/ductile iron virtually eliminated in 40-year program
- Data analytics prioritize steel pipe replacements

![Pie chart showing pipe types distribution](chart.png)

Total 2415 miles

Newer Types:
- Polyethylene 7%
- High-pressure Steel 3%

Older Types:
- Low-pressure Steel 90%
Upcoming Projects and Programs

- **Growth Projects**
  - Raccoon Valley: $7.4M
  - Choto Road: $1M

- **System Improvements**
  - South Loop Phase 5: $4.2M
  - John Sevier Highway: $4.2M
  - Downtown West: $2.5M

- **Gas Master Plan: $115K**
  - Consultant through RFQ
  - Final Report by Fall 2020
Water: Focus on Resiliency

- **Water plant**
  - Single source of water for community
  - Providing dual treatment trains

- **Distribution system**
  - Redundant transmission lines
  - Additional pump stations
Century II Reducing Water Main Repairs

- Repairs down 50% since FY 08
- Steady replacement of pipe
  - 190 miles replaced since 2006
  - Galvanized nearly eliminated
  - Reduced older pipe types from 50% of system to 36%
- Extreme weather (cold, rain, drought) increases breaks on older pipe types
Upcoming Projects and Programs

- Water Plant Resiliency
  - Generators: complete in FY 21
  - Filters: $58M in FY 21-23

- Distribution Resiliency
  - Strawberry Plains Pike Pump Station and transmission main: $5.5M in FY 20-21
  - Hilton Road Booster Pump Station: $2.6M in FY 21-23
Wastewater: Focus on Sanitary Sewer Overflows (SSOs)

- Wastewater plants
  - Finalizing Consent Decree by June 2021
  - Modernizing treatment disinfection methods
- Collection system
  - Continuing to upgrade lines
  - Expanding and updating pump stations
Century II Reduces SSOs

- Significant reductions in SSOs
- Steady replacement of pipe
  - 400 miles of pipe replaced since 2004
  - Reduced older pipe types from 75% of system to 40%
- 80% of pump stations upgraded
- Installed six new storage tanks
## Consent Decree Projects on Target

<table>
<thead>
<tr>
<th>Due Date</th>
<th>Project</th>
<th>Cost</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dec 2012</td>
<td>Kuwahee WWTP – CCP Phase I</td>
<td>$51M</td>
<td>✔️</td>
</tr>
<tr>
<td>Dec 2013</td>
<td>Fourth Creek WWTP – CCP Phase I</td>
<td>$20M</td>
<td>✔️</td>
</tr>
<tr>
<td>Dec 2016</td>
<td>134 Collection System Projects</td>
<td>$530M</td>
<td>✔️</td>
</tr>
<tr>
<td>June 2018</td>
<td>Fourth Creek WWTP – CCP Phase II</td>
<td>$5M</td>
<td>✔️</td>
</tr>
<tr>
<td>June 2021</td>
<td>Kuwahee WWTP – CCP Phase II</td>
<td>$49M</td>
<td>60%</td>
</tr>
</tbody>
</table>
Upcoming Projects and Programs

- Kuwahee BEHRC: $49M, complete in FY 21
- Jones Street Pump Station: $15M in FY 21-22
- Kuwahee, Fourth Creek Disinfection: $11M in FY 21-24
- Sequoyah Hills Phase 3: $3.2M in FY 21
Community Involvement

Ijams Nature Center
River Rescue

Natural Gas Safety Demo

Electric Safety Demo

H₂O to Go
Continued funding for Century II, Water Plant Resiliency, and other key initiatives

Increased funding for sustainability and energy/water efficiency projects

O&M and Capital savings

Eliminated multiple rate increases and deferred others

Lower debt funding levels

Reflects $1.3M of TVA partnership annual credit for Green Invest (solar purchases) and home weatherization

Proposed FY 21 budget of $962M
Plan Modifications Due to Pandemic

- Deferred FY 21 water and wastewater rate increases
- Reduced investment returns
- Increased funding for future Pension/OPEB Trust contributions from contingency cash reserves, based on recent market downturn
- Use of remainder of TVA credit deferred pending assessment of Pandemic impacts
FY 21 Rate Recommendations

- No rate increases
- Pilot Time Of Use (TOU) electric rates for residential and business customers
- Purchased Power Adjustment amendments
## Key Assumptions and Indicators

<table>
<thead>
<tr>
<th></th>
<th>Electric</th>
<th>Gas *</th>
<th>Water</th>
<th>Wastewater</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Annual Customer Additions</strong></td>
<td>1,700 – 1,750</td>
<td>1,100 – 1,300</td>
<td>375</td>
<td>400</td>
</tr>
<tr>
<td><strong>Residential Annual Use</strong></td>
<td>0.7% ↓</td>
<td>0.5% ↓</td>
<td>1% ↓</td>
<td>1% ↓</td>
</tr>
<tr>
<td><strong>Interest Rate on New Debt</strong></td>
<td></td>
<td></td>
<td>3.25% – 5.0%</td>
<td></td>
</tr>
<tr>
<td><strong>Term of New Debt</strong></td>
<td></td>
<td></td>
<td>30 Years</td>
<td></td>
</tr>
<tr>
<td><strong>Debt Ratio (FY 20)</strong></td>
<td>45% or less</td>
<td>30% or less</td>
<td>50% or less</td>
<td>60% or less</td>
</tr>
<tr>
<td><strong>Debt Ratio (By FY 25)</strong></td>
<td>40% or less</td>
<td>25% or less</td>
<td>47.5% or less</td>
<td>53% or less</td>
</tr>
<tr>
<td><strong>Debt Ratio (By FY 30)</strong></td>
<td>35% or less</td>
<td>20% or less</td>
<td>40% or less</td>
<td>47% or less</td>
</tr>
<tr>
<td><strong>Debt Coverage</strong></td>
<td>3.0 or more</td>
<td>3.0 or more</td>
<td>2.0 or more</td>
<td>1.5 or more</td>
</tr>
</tbody>
</table>

* * 6% warmer than normal winter for Gas
**Electric Plan Funding Summary**

10-Year Capital = $695 Million

- **Revenue**: 76%  
- **Debt**: 24%

<table>
<thead>
<tr>
<th>Date</th>
<th>Electric Bonds</th>
<th>Debt Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 1, 2020</td>
<td>$309M</td>
<td>43%</td>
</tr>
<tr>
<td>(+) New Bonds</td>
<td>$102M</td>
<td></td>
</tr>
<tr>
<td>(-) Payments</td>
<td>$ 83M</td>
<td></td>
</tr>
<tr>
<td>June 30, 2025</td>
<td>$328M</td>
<td>39%</td>
</tr>
<tr>
<td>(+) New Bonds</td>
<td>$ 65M</td>
<td></td>
</tr>
<tr>
<td>(-) Payments</td>
<td>$ 87M</td>
<td></td>
</tr>
<tr>
<td>June 30, 2030</td>
<td>$306M</td>
<td>33%</td>
</tr>
</tbody>
</table>

**Future Projected Rate Increases**

<table>
<thead>
<tr>
<th>FY</th>
<th>FY 22</th>
<th>FY 23</th>
<th>FY 24</th>
<th>FY 25</th>
<th>FY 26</th>
<th>FY 27</th>
<th>FY 28</th>
<th>FY 29</th>
<th>FY 30</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
</tr>
</tbody>
</table>

**Rate Increase for Consideration**

- **FY 21**: ---

**Debt Service Coverage**

- Good: 3.00 or more

- Future Projected Rate Increases:
  - FY 22: 1%
  - FY 23: 1%
  - FY 24: 1%
  - FY 25: 1%
  - FY 26: 1%
  - FY 27: 1%
  - FY 28: 1%
  - FY 29: 1%
  - FY 30: 1%

*Target: 3.00 or more*
Natural Gas Plan Funding Summary

10-Year Capital = $265 Million

- Revenue - 80%
- Debt - 20%

$212
$53

Future Projected Rate Increases

<table>
<thead>
<tr>
<th>FY</th>
<th>FY 22</th>
<th>FY 23</th>
<th>FY 24</th>
<th>FY 25</th>
<th>FY 26</th>
<th>FY 27</th>
<th>FY 28</th>
<th>FY 29</th>
<th>FY 30</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>---</td>
<td>---</td>
<td>.5%</td>
<td>.5%</td>
<td>.5%</td>
<td>.5%</td>
<td>.5%</td>
<td>.5%</td>
<td>.5%</td>
</tr>
</tbody>
</table>

Rate Increase for Consideration

- FY 21
- ---

Debt Service Coverage

Target: 3.00 or more

Gas Bonds | Debt Ratio
--- | ---
July 1, 2020 | $106M | 30%
(+) New Bonds | $ 27M
(-) Payments | $ 37M
June 30, 2025 | $ 96M | 24%
(+) New Bonds | $ 26M
(-) Payments | $ 38M
June 30, 2030 | $ 84M | 20%
Water Plan Funding Summary

10-Year Capital = $346 Million

- Revenue - 62%
- Debt - 38%

Rate Increase for Consideration
FY 21: ---

Future Projected Rate Increases
<table>
<thead>
<tr>
<th>FY 22</th>
<th>FY 23</th>
<th>FY 24</th>
<th>FY 25</th>
<th>FY 26</th>
<th>FY 27</th>
<th>FY 28</th>
<th>FY 29</th>
<th>FY 30</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.5%</td>
<td>5.5%</td>
<td>5.5%</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
</tr>
</tbody>
</table>

Debt Service Coverage

<table>
<thead>
<tr>
<th></th>
<th>FY 21</th>
<th>FY 22</th>
<th>FY 23</th>
<th>FY 24</th>
<th>FY 25</th>
<th>FY 26</th>
<th>FY 27</th>
<th>FY 28</th>
<th>FY 29</th>
<th>FY 30</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5.5%</td>
<td>5.5%</td>
<td>5.5%</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
</tr>
</tbody>
</table>

- Water Bonds
- Debt Ratio

July 1, 2020
- Water Bonds: $207M
- Debt Ratio: 50%

(+) New Bonds: $75M
(-) Payments: $44M

June 30, 2025
- Water Bonds: $238M
- Debt Ratio: 48%

(+), New Bonds: $57M
(-) Payments: $57M

June 30, 2030
- Water Bonds: $238M
- Debt Ratio: 40%

Target: 2.00 or more

Good
## Wastewater Plan Funding Summary

10-Year Capital = $393 Million

- **Revenue** - 65%
- **Debt** - 35%

### Rate Increase for Consideration

<table>
<thead>
<tr>
<th>FY</th>
<th>Rate Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>21</td>
<td>---</td>
</tr>
</tbody>
</table>

### Future Projected Rate Increases

<table>
<thead>
<tr>
<th>FY</th>
<th>Rate Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>22</td>
<td>3.5%</td>
</tr>
<tr>
<td>23</td>
<td>3.5%</td>
</tr>
<tr>
<td>24</td>
<td>3.5%</td>
</tr>
<tr>
<td>25</td>
<td>2%</td>
</tr>
<tr>
<td>26</td>
<td>2%</td>
</tr>
<tr>
<td>27</td>
<td>2%</td>
</tr>
<tr>
<td>28</td>
<td>1%</td>
</tr>
<tr>
<td>29</td>
<td>1%</td>
</tr>
<tr>
<td>30</td>
<td>1%</td>
</tr>
</tbody>
</table>

### WW Bonds and Debt Ratio

<table>
<thead>
<tr>
<th>Date</th>
<th>WW Bonds</th>
<th>Debt Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 1, 2020</td>
<td>$515M</td>
<td>60%</td>
</tr>
<tr>
<td>(+) New Bonds</td>
<td>$ 71M</td>
<td></td>
</tr>
<tr>
<td>(-) Payments</td>
<td>$ 88M</td>
<td></td>
</tr>
<tr>
<td>June 30, 2025</td>
<td>$498M</td>
<td>53%</td>
</tr>
<tr>
<td>(+) New Bonds</td>
<td>$ 68M</td>
<td></td>
</tr>
<tr>
<td>(-) Payments</td>
<td>$ 99M</td>
<td></td>
</tr>
<tr>
<td>June 30, 2030</td>
<td>$467M</td>
<td>46%</td>
</tr>
</tbody>
</table>

### Debt Service Coverage

- **Target:** 1.50 or more
- **Good**
## Proposed FY 21 Budget: $962M

<table>
<thead>
<tr>
<th></th>
<th>Electric</th>
<th>Gas</th>
<th>Water</th>
<th>Water</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Energy Cost</strong></td>
<td>$412.7</td>
<td>$55.1</td>
<td>$</td>
<td>$</td>
<td>$467.8</td>
</tr>
<tr>
<td><strong>O&amp;M</strong></td>
<td>$66.9</td>
<td>$22.8</td>
<td>$30.1</td>
<td>$38.4</td>
<td>$158.2</td>
</tr>
<tr>
<td><strong>Capital</strong></td>
<td>$75.9</td>
<td>$32.0</td>
<td>$44.6</td>
<td>$58.6</td>
<td>$211.1</td>
</tr>
<tr>
<td><strong>Debt Service</strong></td>
<td>$24.9</td>
<td>$10.5</td>
<td>$14.9</td>
<td>$35.6</td>
<td>$85.9</td>
</tr>
<tr>
<td><strong>Taxes and Equivalents</strong></td>
<td>$20.3</td>
<td>$8.3</td>
<td>$4.6</td>
<td>$5.9</td>
<td>$39.1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$962.1</td>
</tr>
</tbody>
</table>

$ in Millions

- Electric: $600.7
- Gas: $128.7
- Water: $94.2
- Total: $138.5
- Total: $962.1
## Proposed FY 21 Budget Down Slightly

<table>
<thead>
<tr>
<th></th>
<th>FY 21</th>
<th>FY 20</th>
<th>Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Proposed</td>
<td>Budget</td>
<td>(Decrease)</td>
</tr>
<tr>
<td>Energy Cost</td>
<td>$467.8</td>
<td>$481.6</td>
<td>($13.8)</td>
</tr>
<tr>
<td>O&amp;M</td>
<td>$158.2</td>
<td>$145.8</td>
<td>$12.4</td>
</tr>
<tr>
<td>Capital</td>
<td>$211.1</td>
<td>$210.9</td>
<td>$0.2</td>
</tr>
<tr>
<td>Debt Service</td>
<td>$85.9</td>
<td>$86.2</td>
<td>($0.3)</td>
</tr>
<tr>
<td>Taxes &amp; Equivalents</td>
<td>$39.1</td>
<td>$39.8</td>
<td>($0.7)</td>
</tr>
</tbody>
</table>

Total: $962.1 vs $964.3 ($2.2 million decrease)

$ in Millions
Funding FY 21 Budget: $962M

Revenue = $857M
- Wholesale Energy = 55%
- O&M = 18%
- Capital = 12%
- Debt Service = 10%
- Taxes and Equivalents = 5%

Capital = $211M
- System Revenues = 50%
- Bond Proceeds = 22%
- General Fund Cash = 28%
May 2020 Board Meeting: Official Action

- FY 21 budget appropriations
- FY 21 commitment appropriations
- $47M revenue bonds
  - $17M water
  - $30M wastewater
- Pilot TOU electric rates
- Purchased Power Adjustment amendments
- Housekeeping changes on rate schedules
Pandemic Adjustments Will Continue

- Economic impacts
  - Customer bills
  - Loss of revenue to fund operations
  - Uncertainty in municipal bond market

- Mitigation strategies
  - Slowing down capital work
  - Use of contingency cash reserves