Sale of Surplus Real Property

April 18, 2019

Resolution 1392
Description of Property

- Approximately 6.74 acres south of KUB’s Westland Drive Substation
- Property not needed for KUB’s electric system or any other utility system
Resolution 1392

- Declares 6.74 acres surplus real property
- Authorizes President and CEO to sell the property
  - Best interest of KUB and Electric Division
  - Consistent with Procurement Procedures and state law
- Directs proceeds of sale to Electric Division
FY 2020 Budget Workshop

April 18, 2019

KUB
### 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 Vision:
KUB exists to serve its customers, improving their quality of life by providing utility services that are safe, reliable and affordable.

### 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
- Investing in A Skilled, Diverse Work Force
- Managing Our Finances Effectively
- Partnering For Economic Development
- Meeting Or Exceeding Regulatory Standards
- Being Environmentally Responsible
Century II Remains Strong

- Benefits of investments for customers
  - Major improvements in electric reliability
  - Gas system more resilient and growing
  - Water Plant resiliency project and pipe replacement programs on track
  - Sewer overflows reduced by 80% and final Consent Decree project underway

- $176 million in system investments in KUB’s FY 20 budget
Century II Puts KUB Ahead of the Curve

“Both as Mayor and as a Knoxville resident, I very much appreciate the investment KUB is making to replace and upgrade aging infrastructure…..it is absolutely crucial to the future of our city.”

– Mayor Madeline Rogero
KUB is in a Great Place

Reliable Public Power Provider

Associated with:
- Association of Metropolitan Water Agencies: Platinum Award for Utility Excellence
- Water Resources Utility of the Future
- Tree Line USA
- American Public Gas Association: Silver System Operational Achievement Recognition
- National Biogas Partnership: Certified Program
- Tennessee Municipal Electric Power Agency: Community Service Award
- Governor's Environmental Stewardship Awards
- American Gas Association: Safety Achievement Award
- Peak Performance Awards

Knox News: 2013 Best of Knoxville Favorite

Knox Stars: 2013 Best of Knoxville Favorite
# High Quality Bond Ratings Reflect Financial Soundness of Systems

<table>
<thead>
<tr>
<th>Current Bond Ratings</th>
<th>S&amp;P</th>
<th>Moody’s</th>
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<tbody>
<tr>
<td>Electric</td>
<td>AA+</td>
<td>Aa2</td>
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<tr>
<td>Natural Gas</td>
<td>AA</td>
<td>Aa2</td>
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<tr>
<td>Water</td>
<td>AAA</td>
<td>Aa1</td>
</tr>
<tr>
<td>Wastewater</td>
<td>AA+</td>
<td>Aa2</td>
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</table>

“Based on S&P’s financial management assessment, we view KUB to be ‘1’ on a scale of 1-6, with ‘1’ being the strongest.”

— Standard & Poor’s (August 2018)

“The Knoxville Utilities Board has a long-standing history of well-managed operations, sound fiscal planning, and a well-developed asset management plan that spans a period of 10 years.”

— Moody’s Investors Service (August 2018)
FY 20 Highlights

- Century II priorities continue
  - System replacement plans continue to be refined
  - Better data means better decisions
- No changes to previously adopted rate increases
- FY 20 budget totals $962M
Today’s Agenda

- John Gresham  FY 20 Electric and Natural Gas System Investments
- Break
- Billie Jo McCarley  FY 20 Water and Wastewater System Investments
- Mark Walker  FY 20 Budget Request
- Gabe Bolas  Closing comments
Electric and Natural Gas System Investments

John Gresham, Vice President
Customers: 207,228

Service Territory: 688 square miles

Electric Lines: 5,368 miles
  Distribution Overhead: 4,039 miles
  Distribution Underground: 1,069 miles
  Transmission: 260 miles

Infeed Substations: 9

Substations: 63

System Capacity: 3,030 MW

Peak Hourly Demands:
  Winter: 1,332 MW (Feb. 2015)
  Summer: 1,235 MW (Aug. 2007)
FY 20 Continues Century II
Improves Reliability and Supports Growth

- Capital Investment
  - Asset renewal programs
  - Asset addition and upgrade projects
- Maintenance
  - System asset programs
  - Vegetation management
- Grid Modernization
  - Meter deployment
  - Fiber build-out
  - System automation projects
FY 20 Major Capital Projects

- **Substation improvements**
  - National Drive: $3.6M
  - Coster Road: $500K
  - Walker Springs Road: $600K

- **Transmission line projects**
  - $11M upgrades 17 miles
  - 50% of 260 miles complete

- **Distribution system improvements**
  - Tazewell Pike: $700K
  - Union County Highway 370: $300K
FY 20 Asset Replacement Programs

- Underground cable
  - $2M replaces 9.5 miles
  - 31 miles remain to be completed by 2023
- 13 kV switches
  - $500K replaces 30 switches
- Switchgear
  - $450K replaces five units
  - 10 of 25 units remain
- LED private lights
  - $2.1M replaces 6,900 lights
Changes in Pole Replacement Program

- First 12-year cycle of inspection complete
  - Fewer issues
  - Poles in good condition
- Modify inspection method
- Reduce poles replaced via inspection
- Saves $1.9M in FY 20
Century II Maintenance Enhances Reliability

- Investing $4M in FY 20
- Substations
  - Transformers: 4 years
  - Breakers: 4 years
  - Control systems: 3 years
  - Oil analysis: 6 months
  - Control house: 15 years
Vegetation Management Enhances Reliability

- Tree Line USA® Utility since 2001
- Partner with local agencies
  - City of Knoxville Tree Board
  - Trees Knoxville
  - University of Tennessee (UT)
- $10.5M in FY 20
  - Distribution system: 800 miles $7.4M
  - Transmission system: 50 miles $250K
  - Reactive/storm work: $1.1M
Grid Modernization Meter Deployment

- Final year of four year deployment
- Completes the deployment of all meters
- $2.2M expected annual savings by end of FY 20

<table>
<thead>
<tr>
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<th>FY 17–19</th>
<th>FY 20</th>
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<tbody>
<tr>
<td>Dollars Spent/Budgeted</td>
<td>$34M</td>
<td>$5M</td>
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<tr>
<td>Meters Deployed</td>
<td>143,898</td>
<td>55,421</td>
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<tr>
<td>Savings to Date</td>
<td>$1.1M</td>
<td>$1.07M</td>
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</table>
Grid Modernization Fiber Buildout

- KUB service territory
- Fiber installed (133 miles)
- FY 20 planned fiber (21 miles)
- Electric Substation

<table>
<thead>
<tr>
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<th>Deployed</th>
<th>FY 20</th>
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<tr>
<td>Fiber (miles)</td>
<td>48</td>
<td>21</td>
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<tr>
<td>Substations</td>
<td>27</td>
<td>8</td>
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<tr>
<td>Leased circuits</td>
<td>14</td>
<td>6</td>
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<tr>
<td>eliminated</td>
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<tr>
<td>Annual savings</td>
<td>$210K</td>
<td>$90K</td>
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</table>
Distribution Automation Reduces Outage Duration

- Smart reclosers
  - Investing $1M in FY 20
  - 38 devices
- Projected savings of 850,000 minutes of interruption in FY 19
  - 700,000 minutes saved year-to-date
- Implement advanced distribution management system
Growth Continues

- Supporting customer needs
  - Parkwest Medical Center: 2,400 kW
  - Joyson Safety Systems: 1,800 kW
  - UT Student Union Building: 1,500 kW
  - Fresenius: 500 kW
- Serving new development
  - Southside Flats: 1,200 kW
  - Fresenius Warehouse: 1,500 kW
  - Old Kern’s Bakery: 1,000 kW
  - Supreme Court Building: 1,500 kW
Hoskins Campus Building Projects

- Engineering Building
  - Complete summer 2019
  - $823K in FY 20

- Operations Building
  - Begins summer 2019
  - $2.2M in FY 20
Improving Reliability

- Diamond level RP3 designation
- Focus on reliability
  - Century II programs
  - Technology advancements
Natural Gas System

Customers: 102,874

Service Territory:
288 square miles

Mains: 2,444 miles
  Distribution
  Steel: 174 miles
  Plastic: 2,199 miles
  Higher pressure: 71 miles

Gate Stations: 3

Regulator Stations: 49

System Capacity: 157,381 dth

Peak Demand
140,204 dth (Jan. 2018)
FY 20 Continues Century II
Supports Safety, Integrity, and Growth

- Regulatory compliance
  - Distribution Integrity Management Program (DIMP) prioritizes investments
  - Strategic shift to holistic system health
- Capital investment
  - System improvements further resiliency, reliability, and enable growth
  - Coordinating with major road projects
- Maintenance
  - System assets
  - Leak detection program
**DIMP Objectives**
- Know your system
- Identify risk
- Evaluate and rank priorities
- Identify and implement measures
- Measure and evaluate performance for effectiveness
- Evaluate and improve if needed
- Report results

**DIMP Programs**
- Low Pressure Steel Replacement
- Resiliency Program
- Leak survey
- Cathodic protection
- Records management
FY 20 Capital Main Projects

- Distribution steel
  - Data driven program
  - $4.8M replaces 15 miles

- Distribution plastic
  - System model prioritizes resiliency projects
  - $2.2M installs 3 miles

<table>
<thead>
<tr>
<th>FY 20 Distribution Steel</th>
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</thead>
<tbody>
<tr>
<td>Fountain City Area</td>
</tr>
<tr>
<td>Holston Hills</td>
</tr>
<tr>
<td>Temple Acres</td>
</tr>
<tr>
<td>Deane Hill</td>
</tr>
<tr>
<td>Glen Cove</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FY 20 Resiliency Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Everett Loop</td>
</tr>
<tr>
<td>Pleasant Ridge</td>
</tr>
<tr>
<td>Sterchi Hills</td>
</tr>
</tbody>
</table>
Road Improvements Impact Capital Budget

- **Tennessee Department of Transportation**
  - Chapman Highway: $1M
  - Emory Road at Thompson School: $260K
  - Concord Road: $200K
  - Kingston Pike at Watt Road: $250K
  - Alcoa Highway: $100K

- **City of Knoxville**
  - I-275 Business Park: $700K

- **Knox County**
  - Ball Camp Pike: $100K
Century II Maintenance Ensures Integrity

- Invest $1.7M in FY 20
- Programs
  - Regulator stations: annual
  - Control systems: annual
  - Odorization: monthly
  - Bridges: quarterly
  - Critical valves: annual
  - Cathodic protection: annual
Leak Detection Program
Critical for System Integrity

- Mains
- Services
  - Residential: 34,000 per year
  - Non-residential: 12,000 per year
  - Higher pressure: 80 per year
- Targeted surveys
Growth Continues

- **Supporting new business**
  - Oil extract plant in Westbridge
  - PRI Asphalt in Forks of the River

- **Serving new development**
  - Maryville Pike
  - Ball Road
  - Campbell Station Road
  - Virtue Road
  - Toole’s Bend

- **Enabling future growth**
  - Choto Road
  - Buttermilk Road
  - Everett Road
Leveraging Road Projects

- Ball Road at Ball Camp Road
  - 8,300’ of 4-inch main
  - Provide service to Carter Cove subdivision with 70 lots
  - Potential for additional development

- Ball Camp Road at Andes Road
  - 6,800’ of 4-inch main
  - Improves system resiliency
Maryville Pike Project

- Creates a key system loop
- 6,900’ of 8-inch plastic main
- Provides service to Sevier Meadows subdivision
  - 69 lots in first phase
Natural Gas Master Plan

- Comprehensive corrosion assessment
- Data analytics
  - Long-term planning horizon
  - Growth
  - Reliability/resiliency (system integrity)
  - Prioritize future steel projects
Focus on System Management

- Active participation in industry
  - Tennessee Gas Association (TGA)
  - American Public Gas Association (APGA)
  - TN 811 Board of Directors

- Focus on system integrity
  - Regulatory compliance
  - DIMP

- SOAR program recognizes performance
  - System integrity
  - System improvement
  - Employee safety
  - Workforce development

“KUB is recognized as a leader in Operational Achievement through APGA’s SOAR program. Their participation in APGA Committees is valued for system integrity and safety.”

– Erin Kurilla, APGA VP, Operations and Pipeline Safety
Water and Wastewater System Investments

Billie Jo McCarley, Director
Water System

Customers: 79,908

Service Territory: 188 square miles

Treatment Plant: 1

Pump Stations: 24

Storage Facilities: 28

Distribution Mains: 1,409 miles

Plant Capacity:
61.2 million gallons/day (MGD)

Reservoir Capacity: 37 million gallons

Treated Water: 12.2 billion gallons annually
FY 20 Focus on Water Quality and System Reliability

- Century II Capital Investments
  - Pipes and pump station replacements
  - Increased resiliency at Mark B. Whitaker (MBW) Water Treatment Plant and in our distribution system

- Maintenance programs

- System growth

- Smart system/data analytics
American Water Works Association’s top quartile infrastructure investment

- All galvanized main replaced by FY 24
- FY 20 investment $10.9M for 15.4 miles
FY 20 Century II Pipe Projects

- Galvanized projects: $4.6M
  - Utilizing contractors and KUB crews
  - Program 71% complete with 35 miles remaining
- Cast iron and cement: $4.1M
  - Atchley Street: $1.7M
  - Homberg Drive: $465K
  - KUB crew projects: $970K
KUB’s Topography Requires Pressure Zones
Strawberry Plains Pike Resiliency Project

- FY 20
  - Booster pump station: $1.1M
  - 24-inch piping: $1.1M
- Provides secondary feed
- Supports growth
## Water Plant Resiliency Plan

<table>
<thead>
<tr>
<th>Project</th>
<th>Cost</th>
<th>Timing</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Service Main (Complete)</td>
<td>$4.2M</td>
<td>FY 17-18</td>
</tr>
<tr>
<td>Electrical Improvements (Construction)</td>
<td>$15.4M</td>
<td>FY 17-21</td>
</tr>
<tr>
<td>Filters/Clearwell Backwash (Design)</td>
<td>$42.5M</td>
<td>FY 18-22</td>
</tr>
<tr>
<td>High Service Pump Station and piping</td>
<td>$18.5M</td>
<td>FY 23-26</td>
</tr>
<tr>
<td>Intake</td>
<td>$46.8M</td>
<td>FY 24-27+</td>
</tr>
</tbody>
</table>
Generators Improve Reliability at MBW

- Three 2,500 kW diesel generators and switchgear
- Housed in new building
- Investing $6.8M in FY 20
Filter Project Supports Resiliency

- Filter site preparation at MBW
- Fall 2019 construction start
- Six filters in new building, backwash tank, and a four MG clearwell
- Investing $12.7M in FY 20
Future Water System Growth

- Urban revitalization
- Multi-residential/mixed use
- Adding new customers on existing water lines
  - Supreme Court site
  - Riverfront development
- Fresenius
Water System Maintenance Programs: $1.1M

- Storage tank painting
- Pressure management
- Transmission valves
- Corrosion protection
- Booster pump stations
Smart System and Data Analytics

- District metering with TaKaDu software
- Grid Modernization
  - 81% of meters replaced to date
  - Completion of water meter upgrades by June 2020
  - Savings to date: $376K
Fleming Operations Center Improvements

- Underground Construction (UGC) and Laboratory Services
- More space needed for Century II staffing in UGC
  - Two-story addition for assembly and training space
  - Renovations to locker room and foreman/dispatch area
- FY 20: $4.3M
Investments Support Quality and Reliability

“The Division would like to commend KUB on well exceeding the minimum monitoring requirements in order to further document the quality of the water being produced at the treatment plant and served to customers.”

– Greg Mize, Tennessee Department of Environment and Conservation
Wastewater System

Customers: 71,281
Service Territory: 243 square miles
Treatment Plants: 4
Pump Stations: 70
Collection Mains: 1,318 miles
Storage Capacity: 34 MG
Plant Capacity: 178 MGD
Average Flow: 36.5 MGD
Consent Decree: 2005 – 2021
FY 20 Focus on Century II Projects and Regulatory Compliance

- Consent Decree: final project
- Century II: pipes and pumps
- Capacity upgrades: supporting system growth
- Maintenance programs: optimizing asset lifespan
- Improved system performance
## Consent Decree Projects on Target

<table>
<thead>
<tr>
<th>Due Date</th>
<th>Project</th>
<th>Cost</th>
<th>Status</th>
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</thead>
<tbody>
<tr>
<td>Dec 2012</td>
<td>Kuwahee WWTP – CCP Phase I</td>
<td>$51M</td>
<td>✔</td>
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<tr>
<td>Dec 2013</td>
<td>Fourth Creek WWTP – CCP Phase I</td>
<td>$20M</td>
<td>✔</td>
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<tr>
<td>Dec 2016</td>
<td>134 Collection System Projects</td>
<td>$530M</td>
<td>✔</td>
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<tr>
<td>June 2018</td>
<td>Fourth Creek WWTP – CCP Phase II</td>
<td>$4.7M</td>
<td>✔</td>
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<tr>
<td>June 2021</td>
<td>Kuwahee WWTP – CCP Phase II</td>
<td>$48.4M</td>
<td>15%</td>
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</table>
Kuwahee Wastewater Treatment Plant
Biologically Enhanced High Rate Clarification

- Investing $19M in FY 20
- Mobilized fall 2018
- Progress to date
  - Drilled pier foundations
  - Sludge piping
Century II Projects at Treatment Facilities

- Kuwahee secondary sludge pumps and digester heaters: $1.25M
- Fourth Creek plant water and control room: $675K
- Loves Creek electric upgrades: $2.1M
Century II Sewer Rehabilitation Program

- Focus on clay and concrete pipe
- FY 20 investment $26M for 20 miles
Utilizing Trenchless Rehabilitation

- Reduces cost and neighborhood disruption
  - Cured-in-place liner
  - Pipe-bursting
- Sequoyah Hills Phase 2: $3.3M
- Atchley Street: $1.8M
- Loves Creek area: $5.3M
Upgrading Pump Stations

- Jones Street: $3M
  - New force main under river
  - Serves south Knoxville
- Lyons Creek: $800K
- Wayland Road: $200K
- Forks of the River: $725K
Upgrades Support East Knox County Growth

- John Sevier Force Main upsizes river crossing: $1.7M
- Eastwood Trunkline increases capacity: $1.6M
- Rutledge Pike Force Main extends 12-inch force main to larger trunkline: $2.6M
### Wastewater Maintenance Programs: $3.1M

<table>
<thead>
<tr>
<th>Asset</th>
<th>Cycle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pipe cleaning</td>
<td>As needed</td>
</tr>
<tr>
<td>Line and manhole inspection</td>
<td>12-year</td>
</tr>
<tr>
<td>Pump and motor refurbishment</td>
<td>5-7 year</td>
</tr>
<tr>
<td>Gearbox rebuild/replace</td>
<td>25-year</td>
</tr>
<tr>
<td>Grinder pumps rebuild/replace</td>
<td>5-year</td>
</tr>
<tr>
<td>Variable frequency drive replacement</td>
<td>7-year</td>
</tr>
</tbody>
</table>
KUB Maintains Platinum-Level National Biosolids Partnership Certification

- KUB biosolids are certified as fertilizer by Tennessee Department of Agriculture
- Program recertified in 2018
- 100% land application of 28,000 wet tons annually
System Investment Improves Performance

“KUB has shown tremendous progress in controlling unpermitted discharges since entering into the Consent Decree.”

– Dennis Sayre, Acting Chief Municipal & Industrial Enforcement Section, NPDES Permitting & Enforcement Branch, Environmental Protection Agency
FY 20 Budget Request

Mark Walker, Senior Vice President and CFO
Proposed Budget Focused on Maintaining Safe, Reliable, and Affordable Services

- Proposed budget $962M
- Flat compared to FY 19 forecast
- Capital budget includes $105M for Century II and $15.4M for Grid/Meter Modernization
- $63M new bonds help fund capital budget
- FY 20 rate increases already adopted
FY 20 Rate Increases Already Adopted

<table>
<thead>
<tr>
<th></th>
<th>Avg. Monthly Residential Bill</th>
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<tr>
<td>Electric (Nov 2019)</td>
<td>$108 ($1.50)</td>
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<tr>
<td>Natural Gas (Nov 2019)</td>
<td>$57 ($0.75)</td>
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<tr>
<td>Water (Aug 2019)</td>
<td>$26 ($1.50)</td>
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<tr>
<td>Wastewater (Aug 2019)</td>
<td>$63 ($3.00)</td>
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Residential Monthly Bills

Electric – Big 8

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<th>Utility</th>
<th>Bill Amount</th>
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<td>MLGW</td>
<td>$98</td>
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<tr>
<td>HU</td>
<td>$101</td>
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<tr>
<td>MTEMC</td>
<td>$107</td>
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<td>KUB</td>
<td>$108</td>
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<tr>
<td>EPB</td>
<td>$111</td>
</tr>
<tr>
<td>VEC</td>
<td>$112</td>
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<tr>
<td>NGA</td>
<td>$115</td>
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<tr>
<td>NES</td>
<td>$120</td>
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1,000 kWh Monthly Use – 12 month ended December 2018

Gas – Regional ETNG

<table>
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<tr>
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<th>Bill Amount</th>
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<tbody>
<tr>
<td>ORUD</td>
<td>$56</td>
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<td>LCUB</td>
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<td>KUB</td>
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<tr>
<td>SCUD</td>
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<tr>
<td>PCUD</td>
<td>$59</td>
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<tr>
<td>JCCUD</td>
<td>$61</td>
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50 Therms Monthly Use – 12 months ended December 2018

Water – Local

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<th>Bill Amount</th>
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<tr>
<td>NEKUD</td>
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<tr>
<td>WKUD</td>
<td>$26</td>
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<tr>
<td>KUB</td>
<td>$26</td>
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<tr>
<td>Knox-Chap</td>
<td>$40</td>
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<tr>
<td>HPUD</td>
<td>$43</td>
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5 CCF Monthly Use - December 2018

Wastewater – Local

<table>
<thead>
<tr>
<th>Utility</th>
<th>Bill Amount</th>
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</thead>
<tbody>
<tr>
<td>FUD</td>
<td>$31</td>
</tr>
<tr>
<td>Knox-Chap</td>
<td>$44</td>
</tr>
<tr>
<td>WKUD</td>
<td>$49</td>
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<tr>
<td>HPUD</td>
<td>$54</td>
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<tr>
<td>KUB</td>
<td>$63</td>
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</tbody>
</table>

5 CCF Monthly Use - December 2018

With FY 20 rate increases
### Proposed FY 20 Budget: $962M

<table>
<thead>
<tr>
<th></th>
<th>Electric</th>
<th>Gas</th>
<th>Water</th>
<th>WWater</th>
<th>Total</th>
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<tbody>
<tr>
<td>Energy Cost</td>
<td>$429.3</td>
<td>$52.3</td>
<td>$ ---</td>
<td>$ ---</td>
<td>$481.6</td>
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<tr>
<td>O&amp;M</td>
<td>$61.3</td>
<td>$21.2</td>
<td>$27.1</td>
<td>$36.2</td>
<td>$145.8</td>
</tr>
<tr>
<td>Capital</td>
<td>$75.7</td>
<td>$26.8</td>
<td>$44.8</td>
<td>$61.6</td>
<td>$208.9</td>
</tr>
<tr>
<td>Debt Service</td>
<td>$26.2</td>
<td>$10.9</td>
<td>$14.5</td>
<td>$34.6</td>
<td>$86.2</td>
</tr>
<tr>
<td>Taxes and Equivalents</td>
<td>$20.6</td>
<td>$8.6</td>
<td>$4.9</td>
<td>$5.7</td>
<td>$39.8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$613.1</td>
<td>$119.8</td>
<td>$91.3</td>
<td>$138.1</td>
<td>$962.3</td>
</tr>
</tbody>
</table>

$ in Millions
## Proposed FY 20 Budget Flat

<table>
<thead>
<tr>
<th></th>
<th>FY 20</th>
<th>FY 19</th>
<th>Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Proposed</td>
<td>Forecast</td>
<td>(Decrease)</td>
</tr>
<tr>
<td>Energy Cost</td>
<td>$481.6</td>
<td>$476.3</td>
<td>$5.3</td>
</tr>
<tr>
<td></td>
<td>TVA rate increase and customer growth</td>
<td></td>
<td></td>
</tr>
<tr>
<td>O&amp;M</td>
<td>$145.8</td>
<td>$141.9</td>
<td>$3.9</td>
</tr>
<tr>
<td></td>
<td>Labor-related costs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capital</td>
<td>$208.9</td>
<td>$224.3</td>
<td>($15.4)</td>
</tr>
<tr>
<td></td>
<td>Engineering Building construction in FY 19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Debt Service</td>
<td>$86.2</td>
<td>$83.1</td>
<td>$3.1</td>
</tr>
<tr>
<td></td>
<td>$63M in new bonds</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taxes &amp; Equivalents</td>
<td>$39.8</td>
<td>$36.9</td>
<td>$2.9</td>
</tr>
<tr>
<td></td>
<td>Investment in utility infrastructure</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>$962.3</td>
<td>$962.5</td>
<td>($0.2)</td>
</tr>
</tbody>
</table>

$ in Millions
FY 20 Electric Budget: $613M

Budget Uses

- Purchased Power Cost: $28
- Century II Capital Projects: $21
- Grid/Meter Modernization: $5
- Other Capital: $10
- System Maintenance: $43
- System Growth: $429
- Debt Service: $34
- Taxes & Equivalents: $17
- All Other: $17

Budget Funding

- Revenue: $583
- Bonds: $17
- General Fund Cash: $13

$ in Millions
<table>
<thead>
<tr>
<th>Key Assumptions and Indicators</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Customer Additions</td>
<td>1,600</td>
</tr>
<tr>
<td>Residential Per Capita Use</td>
<td>0.5% decline</td>
</tr>
<tr>
<td>Interest Rate on New Debt (30 years)</td>
<td>4.00%</td>
</tr>
<tr>
<td>Debt Ratio (Target 45% or less)</td>
<td>44%</td>
</tr>
<tr>
<td>Debt Coverage (Target 3.0 or more)</td>
<td>3.40</td>
</tr>
<tr>
<td>Debt Ratings</td>
<td>AA+/Aa2</td>
</tr>
<tr>
<td>Ending General Fund Cash (Target $15M)</td>
<td>$16M</td>
</tr>
</tbody>
</table>
FY 20 Natural Gas Budget: $120M

Budget Uses
- Purchased Gas Cost: $52M
- Century II Capital Projects: $13M
- Meter Modernization: $4M
- Other Capital: $11M
- System Maintenance: $11M
- System Growth: $9M
- Debt Service: $9M
- Taxes & Equivalents: $9M
- All Other: $2M

Budget Funding
- Revenue: $115M
- General Fund Cash: $5M

$ in Millions
## FY 20 Natural Gas Budget
### Key Assumptions and Indicators

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Winter Weather</strong></td>
<td>6% warmer than normal</td>
</tr>
<tr>
<td><strong>Net Customer Additions</strong></td>
<td>1,200</td>
</tr>
<tr>
<td><strong>Residential Per Capita Use</strong></td>
<td>1% decline</td>
</tr>
<tr>
<td><strong>Debt Ratio</strong> (Target 35% or less)</td>
<td>31%</td>
</tr>
<tr>
<td><strong>Debt Coverage</strong> (Target 3.0 or more)</td>
<td>3.65</td>
</tr>
<tr>
<td><strong>Debt Ratings</strong></td>
<td>AA/Aa2</td>
</tr>
<tr>
<td><strong>Ending General Fund Cash</strong> (Target $10M)</td>
<td>$19.2M</td>
</tr>
</tbody>
</table>
FY 20 Water Budget: $91M

**Budget Uses**
- Century II Capital Projects: $20
- Water Plant Resiliency: $15
- Meter Modernization: $14
- Other Capital: $11
- System Maintenance: $11
- Debt Service: $10
- Taxes & Equivalents: $9
- All Other: $8

**Budget Funding**
- Revenue: $64
- Bonds: $26
- General Fund Cash: $1

$ in Millions
# FY 20 Water Budget

## Key Assumptions and Indicators

<table>
<thead>
<tr>
<th>Assumption</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Net Customer Additions</td>
<td>500</td>
</tr>
<tr>
<td>Residential and Business Per Capita Use</td>
<td>1% decline</td>
</tr>
<tr>
<td>Interest Rate on New Debt (30 years)</td>
<td>4.00%</td>
</tr>
<tr>
<td>Debt Ratio (Target 50% or less)</td>
<td>52%</td>
</tr>
<tr>
<td>Debt Coverage (Target 2.0 or more)</td>
<td>2.36</td>
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<tr>
<td>Debt Ratings</td>
<td>AAA/Aa1</td>
</tr>
<tr>
<td>Ending General Fund Cash (Target $5M)</td>
<td>$5.4M</td>
</tr>
</tbody>
</table>
FY 20 Wastewater Budget: $138M

Budget Uses:
- Century II Capital Projects: $19M
- Consent Decree - Plants: $6M
- Other Capital: $22M
- System Maintenance: $34M
- System Growth: $14M
- Debt Service: $6M
- Taxes & Equivalents: $35M
- All Other: $2M

Budget Funding:
- Revenue: $105M
- Bonds: $20M
- General Fund Cash: $13M

$ in Millions
## FY 20 Wastewater Budget
### Key Assumptions and Indicators

<table>
<thead>
<tr>
<th>Assumption/Indicator</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Customer Additions</td>
<td>550</td>
</tr>
<tr>
<td>Residential and Business Per Capita Use</td>
<td>1% decline</td>
</tr>
<tr>
<td>Interest Rate on New Debt (30 years)</td>
<td>4.00%</td>
</tr>
<tr>
<td>Debt Ratio (Target 65% or less)</td>
<td>60%</td>
</tr>
<tr>
<td>Debt Coverage (Target 1.50 or more)</td>
<td>2.03</td>
</tr>
<tr>
<td>Debt Ratings</td>
<td>AA+/Aa2</td>
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<tr>
<td>Ending General Fund Cash (Target $10M)</td>
<td>$10.4M</td>
</tr>
</tbody>
</table>
May 2019 Board Meeting: Official Action

- FY 20 budget appropriations
- FY 20 commitment appropriations
- $63M revenue bonds
  - $17M electric
  - $26M water
  - $20M wastewater