

**KUB**

# Green Invest Amendments New Solar Purchase and Pricing Change

November 19, 2020



**Resolution 1426**

# Original Green Invest Agreement

- First-of-its-kind agreement with TVA to purchase 212 MW of solar in March 2020
- Purchase includes solar output from two new installations
  - 177 MW – Ridgely, TN
  - 35 MW – Columbus, MS
- Represents 8% of KUB's system load or enough to serve 35,000 homes
- Solar scheduled to come on-line in fall 2022 (Columbus) and summer 2023 (Ridgely)
- Annual cost \$825,000; 20-year term

# Proposed Additional Solar Purchase

- 290 MW of new solar split among three installations
  - 200 MW – West Point, MS
  - 55 MW – Tullahoma, TN
  - 35 MW – Columbus, MS
- Represents 12% of KUB's system load or enough to serve 48,000 homes
- Solar scheduled to come on-line in fall 2022 (Columbus) and fall 2023 (Tullahoma and West Point)
- Annual cost \$806,000
- 20-year term

# Green Invest Pricing Structure Change

- Provides more favorable terms for purchase of solar and other renewable sources of generation
- Includes small annual fee to cover TVA administrative costs
- Results in 30% lower unit cost (\$/MW) allowing for greater investment in solar (290 MW vs 212 MW)
- Requires amendment to Green Invest Agreement

# KUB Committed to Renewable Power Sources

## Total KUB Green Invest Purchases

**502**

MW New Solar  
in the Valley

**1.1 Billion**

kWh  
per Year

**83,000**

Homes  
Served

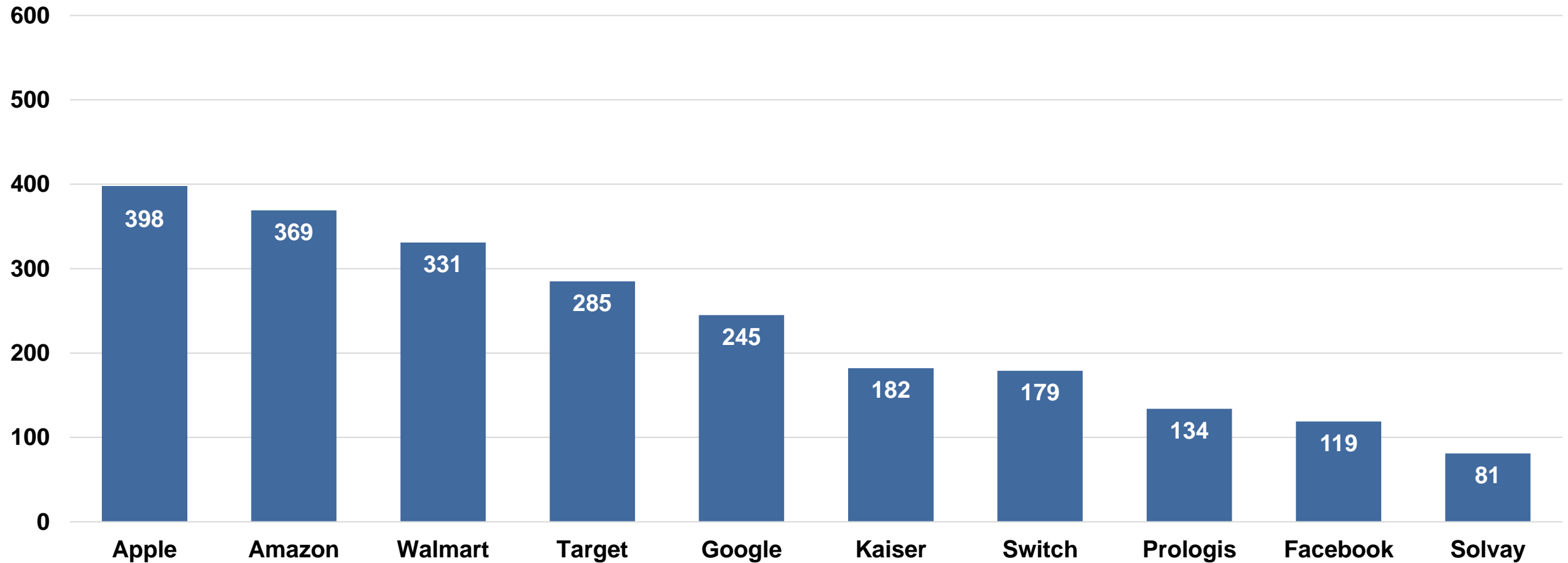
**20%**

KUB  
System Load

- Other renewable projects to come
  - Community solar project in development
  - Self generation up to 80 MW under power supply contract flexibility provision

# Top Commercial Solar Installations (2019)

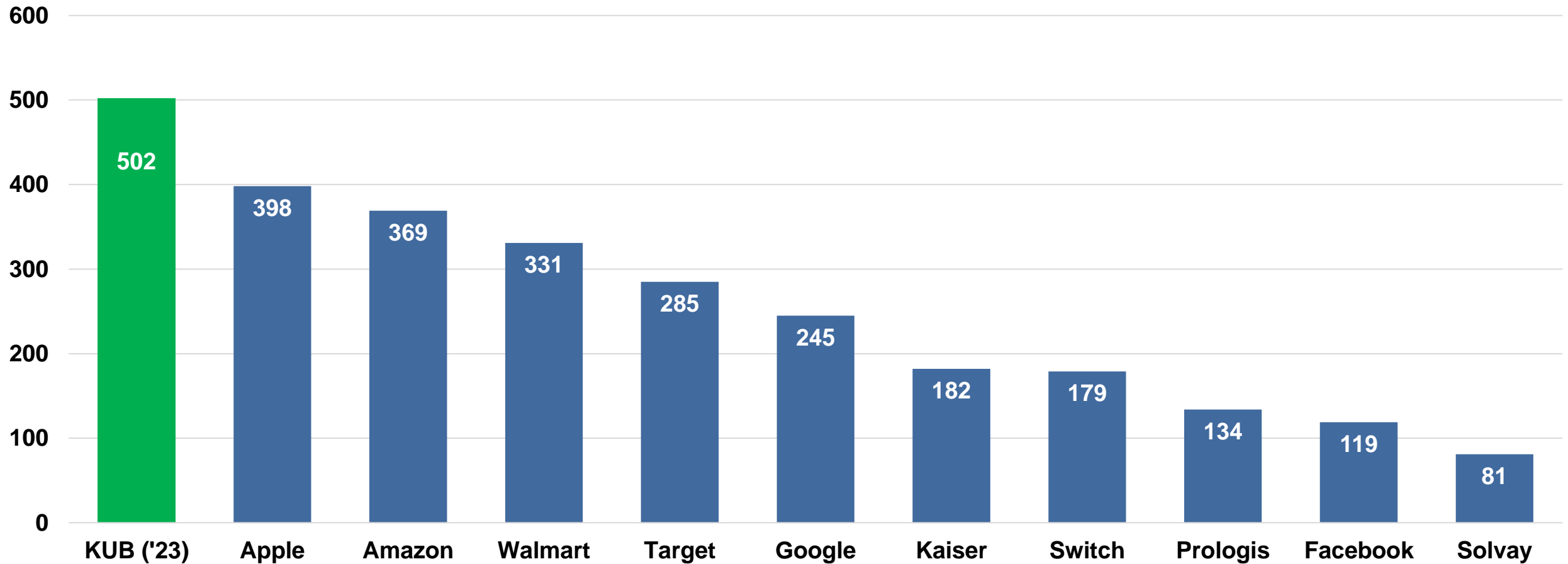
## Installed MW



Source: Solar Energy Industries Association (SEIA)

# KUB Compared With Top Commercial Solar Installations (2019)

Installed MW



Source: Solar Energy Industries Association (SEIA)



# Resolution 1426

- Authorizes President and CEO to execute Green Invest amendments for pricing structure change and 290 MW of new solar purchases

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# Bond Sale Results

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# Water and Wastewater Bonds Sold at Favorable Rates

- Fund utility system capital improvements
- Offerings awarded at 2.36% (W) and 2.41% (WW)
- \$7.4M debt service savings
- Bonds mature over 30 years
- Sold at premium, reducing bonds to \$36.5M
- High-quality ratings from Moody's and Standard & Poor's affirmed

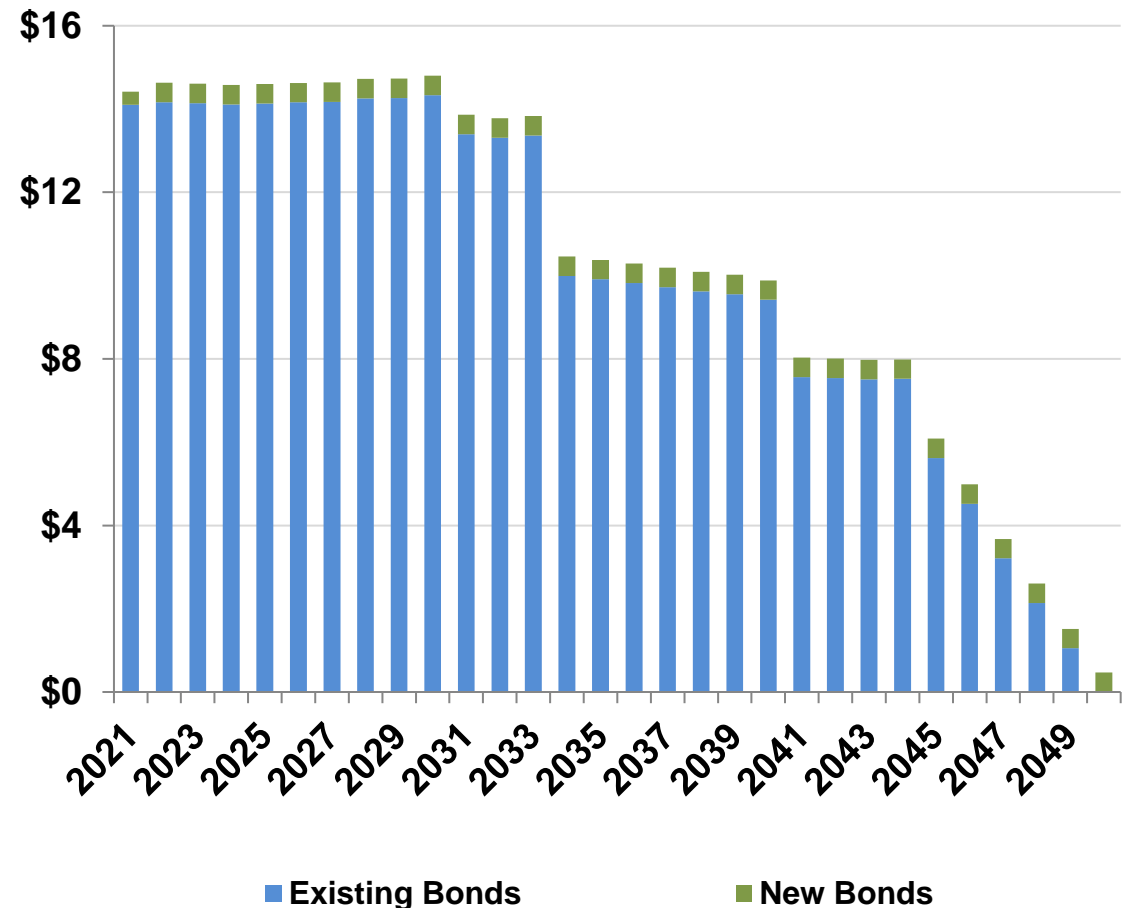
# Bids on Water Bonds

Bidder	True Interest Cost
<b>Morgan Stanley &amp; Co., LLC</b>	<b>2.359</b>
Piper Sandler & Co.	2.377
FHN Financial Capital Markets	2.378
Robert W. Baird & Co., Inc.	2.460
Wells Fargo Bank, National Association	2.519
Huntington Securities, Inc.	2.557

# Water Bond Profile

- \$214M in outstanding bonds
- \$93M in interest cost
- Principal paid in next 10 years: 40%
- Debt ratio: 51%
- Weighted interest cost: 3.47%

Water Debt Service – Millions (\$)



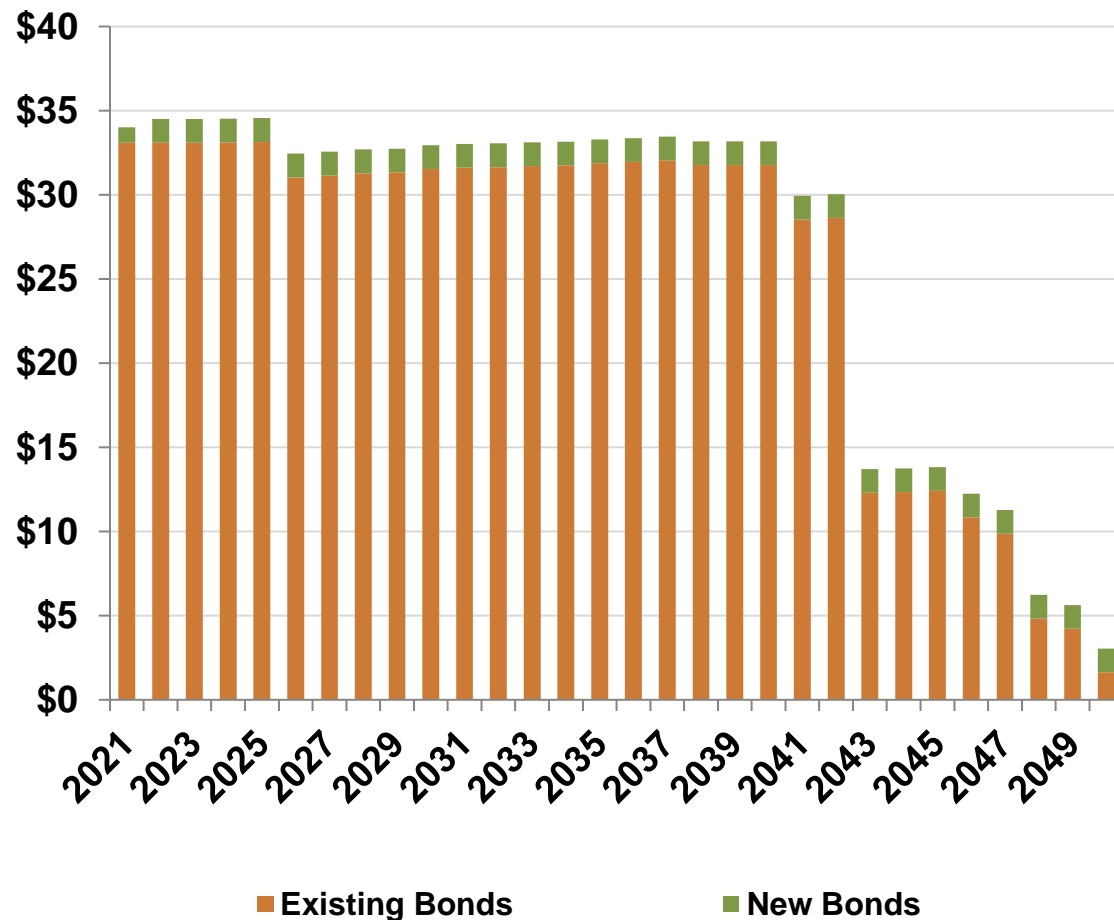
# Bids on Wastewater Bonds

Bidder	True Interest Cost
<b>Piper Sandler &amp; Co.</b>	<b>2.410</b>
Morgan Stanley & Co., LLC	2.423
FHN Financial Capital Markets	2.450
Robert W. Baird & Co., Inc.	2.466
Wells Fargo Bank, National Association	2.476
Huntington Securities, Inc.	2.508
Citigroup Global Markets Inc.	2.509

# Wastewater Bond Profile

- \$540M in outstanding bonds
- \$258M in interest cost
- Principal paid in next 10 years: 33%
- Debt ratio: 61%
- Weighted net interest cost: 3.53%

Wastewater Debt Service – Millions (\$)





# Professional Fees

<b>Cost</b>	<b>Professional Firm</b>	<b>Fee</b>
<b>Financial Advisor</b>	<b>Cumberland Securities</b>	<b>\$63,000</b>
<b>Bond Counsel</b>	<b>Bass, Berry &amp; Sims</b>	<b>\$45,000</b>
<b>Rating Agency</b>	<b>Moody's</b>	<b>\$40,000</b>
<b>Rating Agency</b>	<b>Standard &amp; Poor's</b>	<b>\$31,000</b>
<b>Paying Agent</b>	<b>Regions Bank</b>	<b>\$1,000</b>
		<b>\$180,000</b>
<b>Other Costs (Escrow, POS, OS, Advertising)</b>		<b>\$22,000</b>
		<b>\$202,000</b>

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# Broadband Update

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# What is Municipal Broadband?

## ■ Services

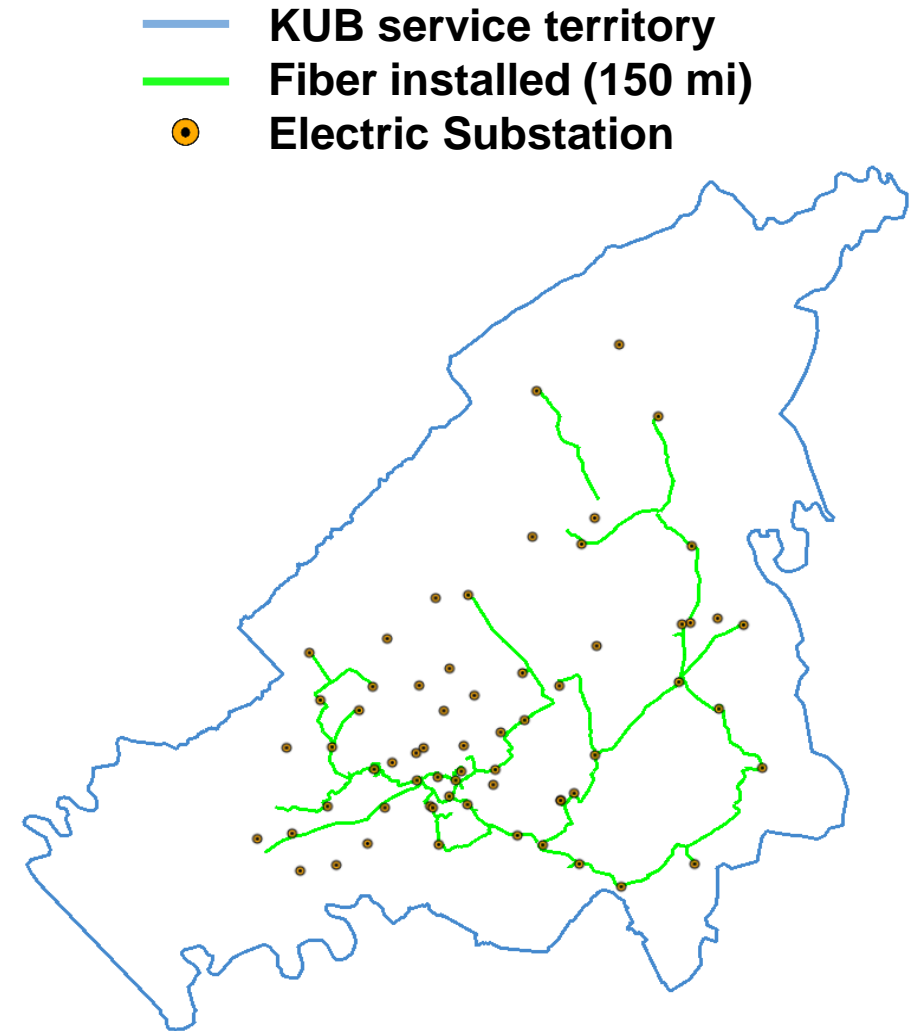
- High speed internet service
- TV packages
- Phone service

## ■ Municipal business model

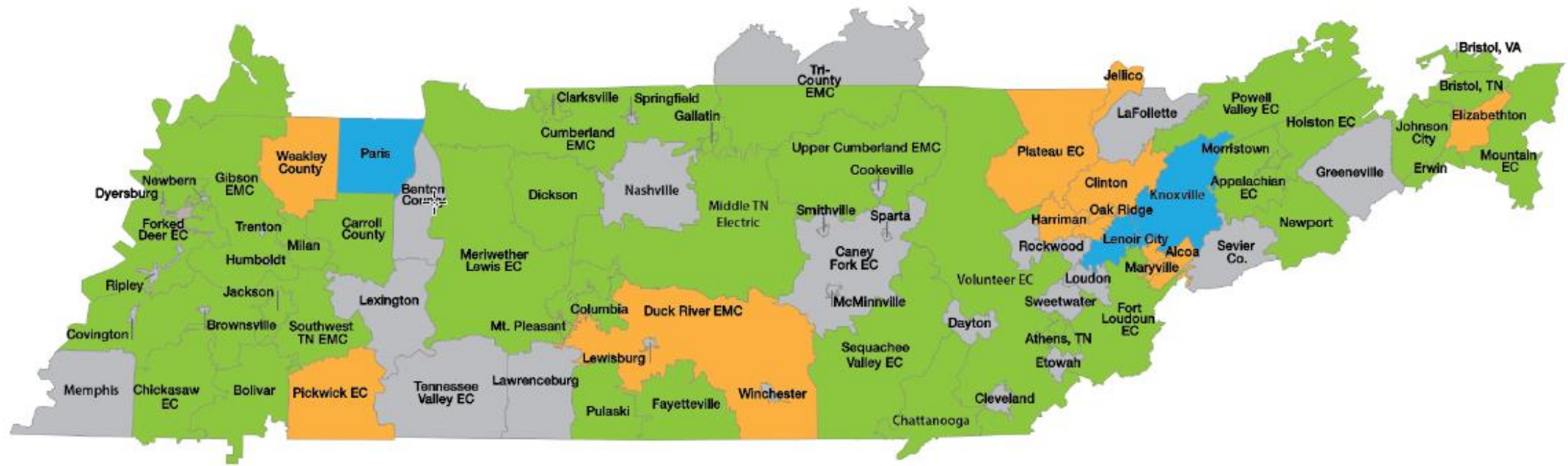
- Fiber to the home built on utility backbone
- Serves everyone
- Homegrown, local solution

# KUB's Position has Changed

- KUB has more experience in fiber
- Technology has been proven
- Broadband has become a utility
- Other utilities have been successful



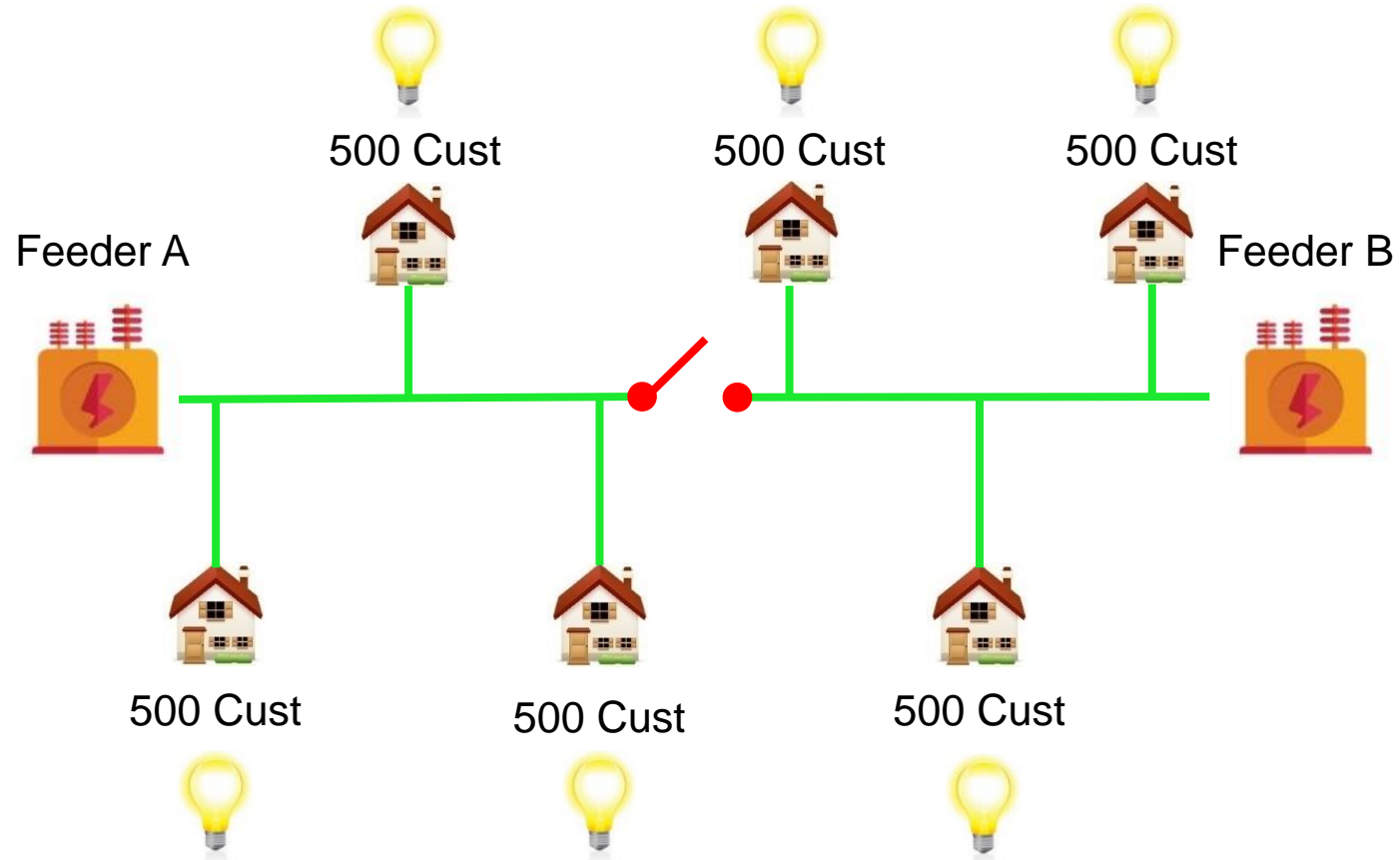
# TVA Distributors Providing Broadband



# Why are Distributors Doing This?

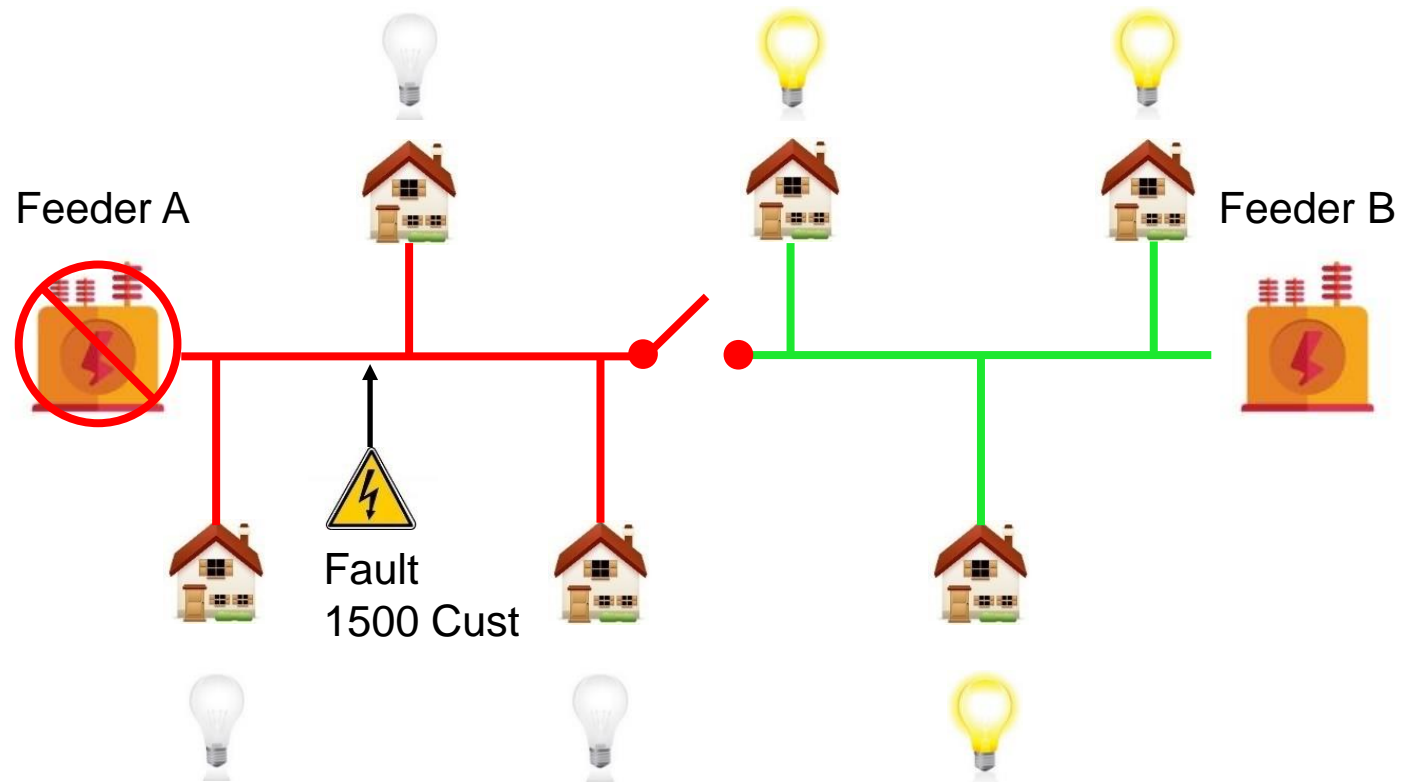
- Electric reliability
  - Fiber enables smart devices on electric system

# Example: Before Distribution Automation Normal Condition

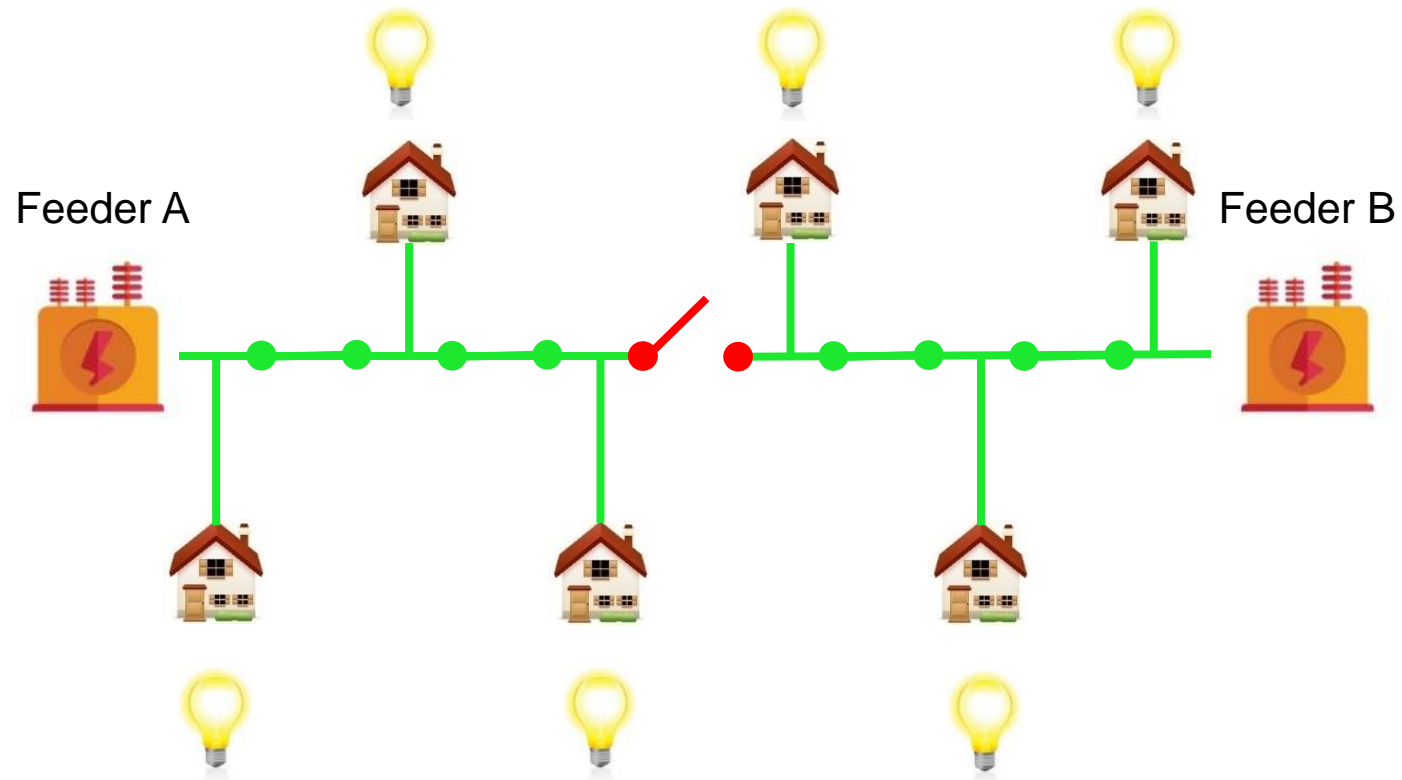




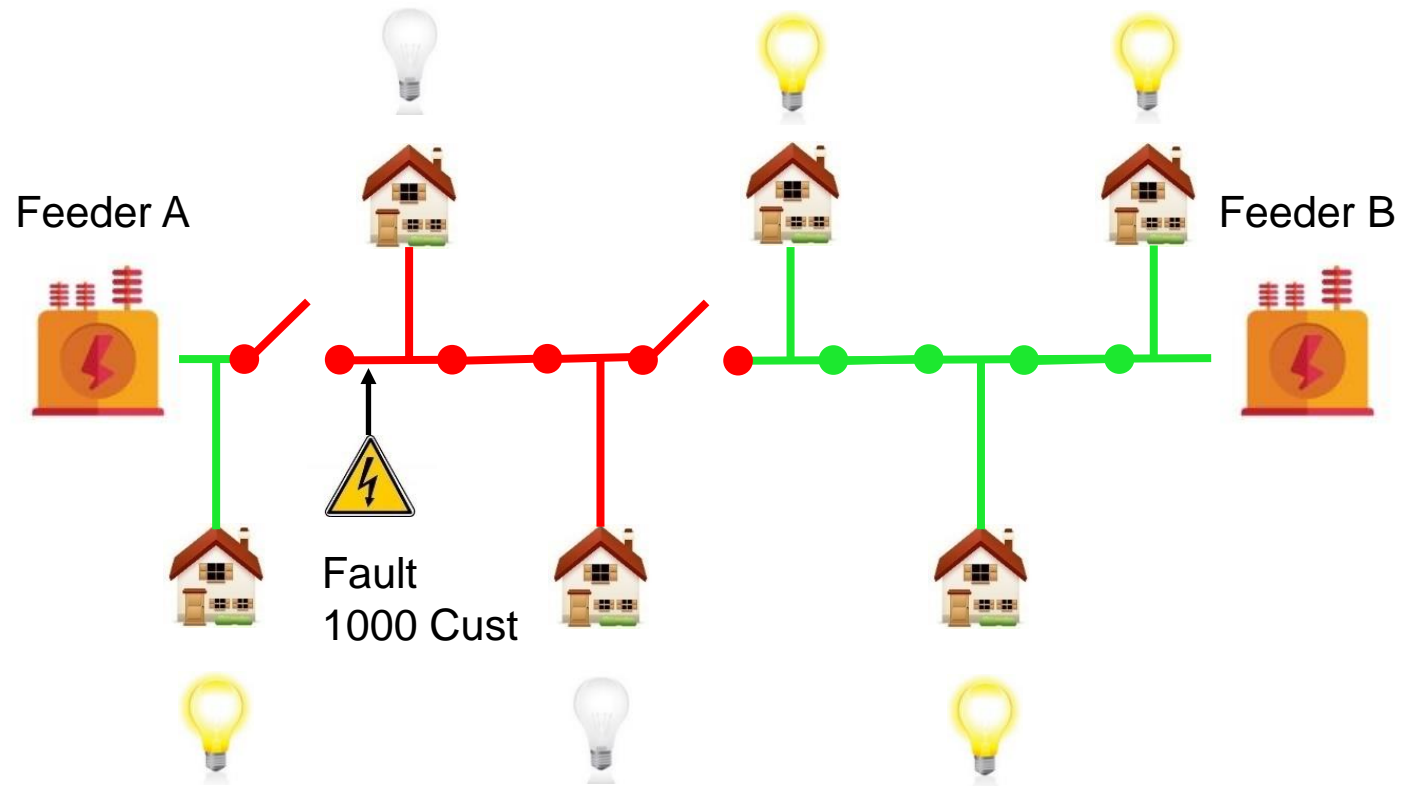
# Example: Before Distribution Automation Fault Occurs



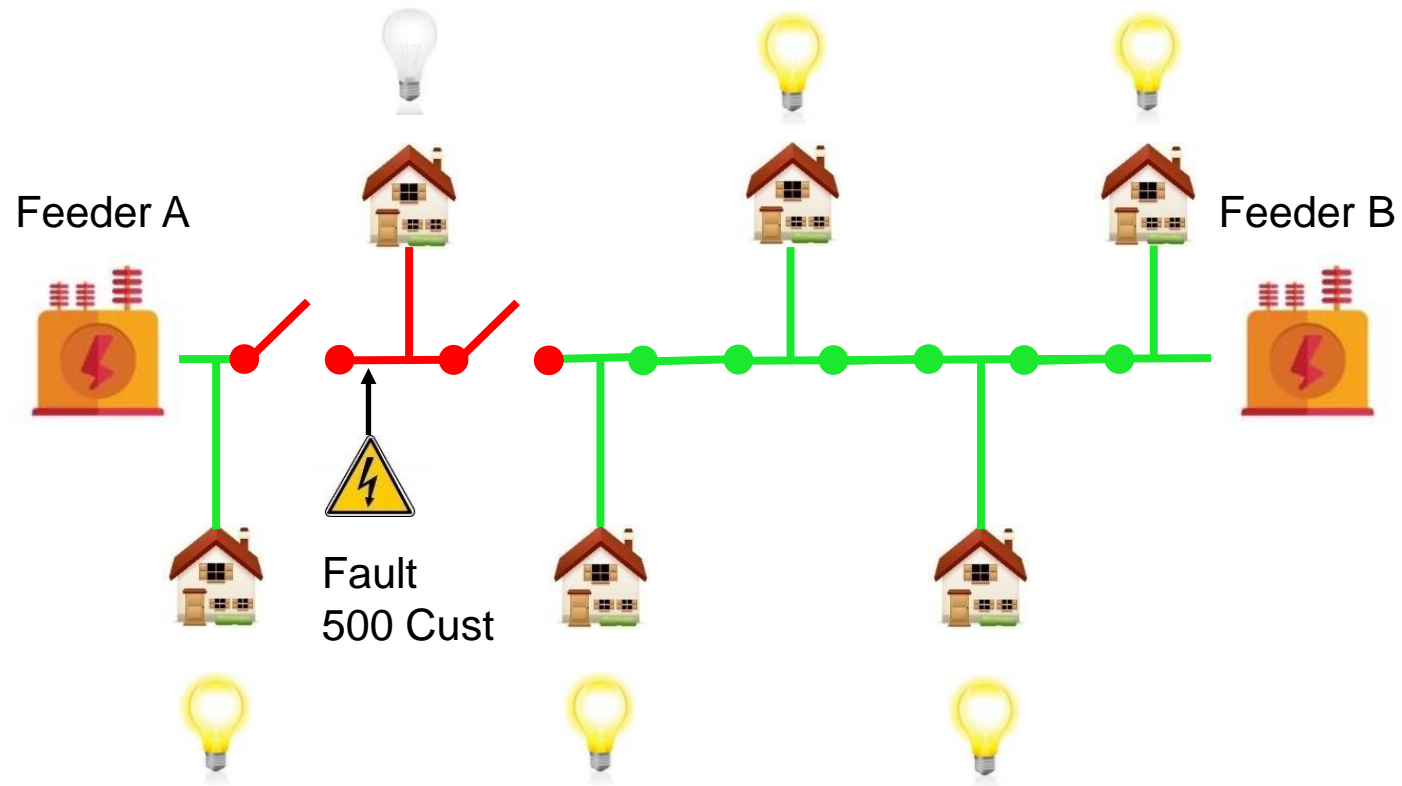
# Example: Recloser Devices Normal Condition



# Example: Recloser Devices Fault Occurs



# Example: Recloser Devices Reconfiguration Occurs



# Why are Distributors Doing This?

- Electric reliability
  - Fiber enables smart devices on electric system
- Environmental benefits
  - Conservation Voltage Reduction (system efficiency)
  - Demand Response
  - Distributed Energy Resources

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- Electric reliability
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- Environmental benefits
  - Conservation Voltage Reduction
  - Demand Response
  - Distributed Energy Resources
- Serves community needs not met by the private sector

# Underserved Communities

- E-Task Force shows that there are children who lack access to broadband in their homes
  - Not available or inferior quality
  - Not affordable
- Rural areas are underserved, or not served at all

# Broadband Approval Process

- Process established in State Law
- Formal Approvals
  - KUB Board
  - State of Tennessee Comptroller of the Treasury
  - TVA
  - City Council
- Required to have Open Forum for Customers



# What's Next

- Winter: Board updates, one-on-one conversations with key stakeholders
- Spring: Potential recommendation for board consideration
- Summer: Public input on plans
- Fall: Formal approval process

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# Recognition of Environmental Initiatives

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# KUB Alternative Fuels Fleet Receives Green Fleet Recognitions



# KUB Receives Tennessee Sustainable Transportation Award for EV Rebate Program



# TVA Recognizes KUB Customer for Environmental Impact

- O-N Minerals  
(Luttrell) Company
- Most Improved  
Carbon Emissions  
Category Winner



Tennessee Valley Authority

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