



# Board Meeting

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May 10, 2018  
Muscle Shoals, Alabama









# Board Meeting

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# John B. Waters

TVA Board of Directors  
1984-1993

Chairman of the Board  
1992-1993







# Board Meeting

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May 10, 2018  
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A travel guide to the places most respected and recommended by locals.

LOG IN  
MY TRIP IDEAS

# TENNESSEE RIVER VALLEY

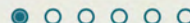
PLACES TO GO WHERE TO STAY THINGS TO DO

Trip Plans Regions Local Voices About



Immerse yourself in Nature's splendor

Cove Lake State Park on the Powell River arm of Norris Lake – Photograph by Peter Koczera



## Recommended Places







# Board Meeting

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# President's Report

BILL JOHNSON  
President and CEO



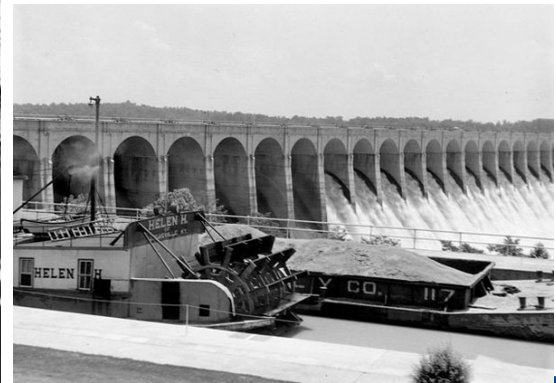


Wilson Dam | Muscle Shoals Alabama





Senator George Norris







Alabama's Renaissance City...  
Welcome to Florence, Alabama  
Florence Utilities...





# TVP

TENNESSEE VALLEY PUBLIC POWER ASSOCIATION



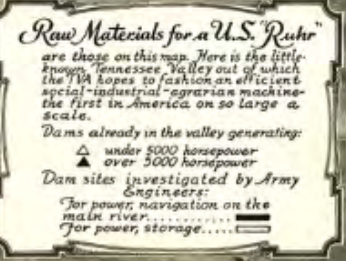
**Greg Williams**  
Chairman

# THANK YOU





1933 Fortune magazine writer  
describing TVA's unique mission







# Energy Sales

- Electricity that pays for region's power system and much more
  - Management of Tennessee River system
  - Environmental stewardship
  - Economic development
- Revenues fund all that TVA does



# Mission | Strategic Imperatives

## Energy

Delivering affordable, reliable power



## Environment

Caring for our region's natural resources

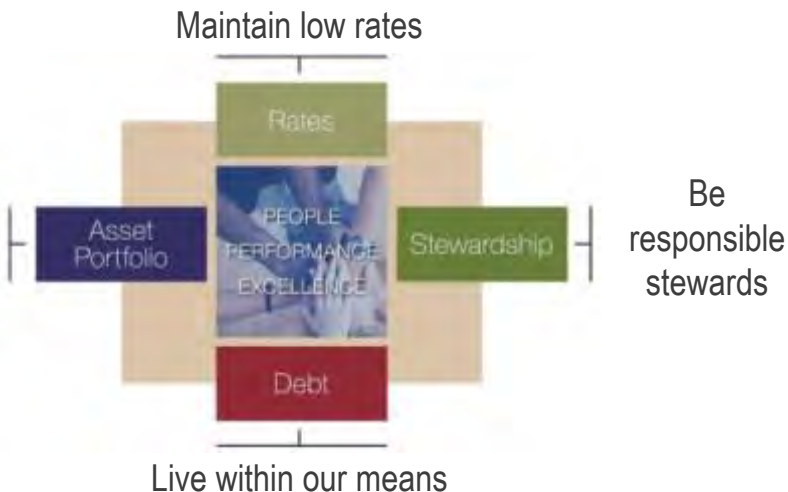


## Economic Development

Creating sustainable economic growth



Meet reliability expectations & provide a balanced portfolio



# Rates

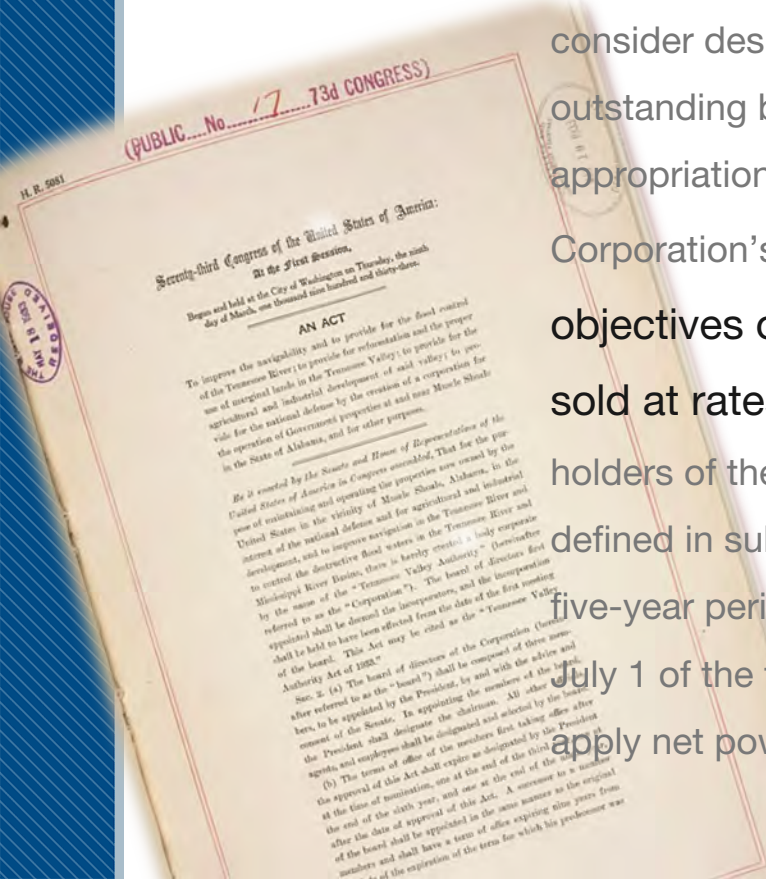
Our Plan Focuses on...

- Reducing costs
- Increasing operational effectiveness
- Diversifying generating fleet to cleaner and more flexible



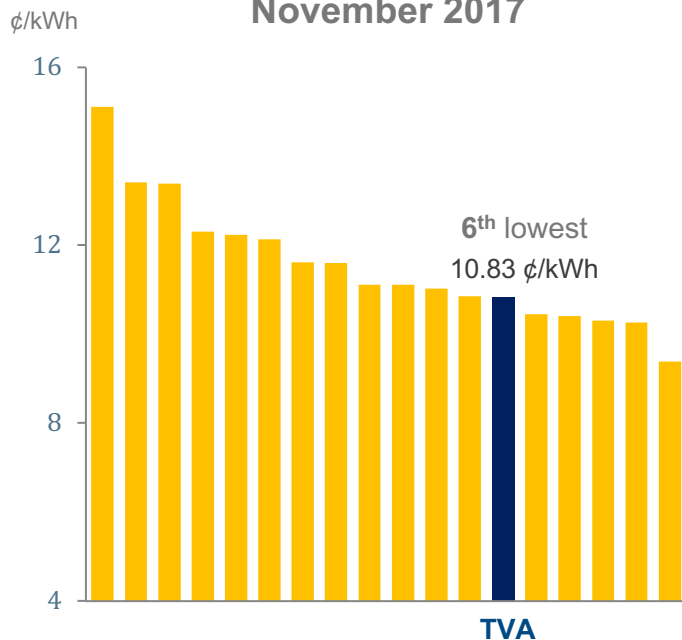
# TVA Act

consider desirable for investment in power system assets, retirement of outstanding bonds in advance of maturity, additional reduction of appropriation investment, and other purposes connected with the Corporation's power business having due regard for the **primary objectives of the Act**, including the objective that power shall be sold at rates as low as are feasible. In order to protect the investment of holders of the Corporation's securities and the appropriation investment as defined in subsection (e) hereof, the Corporation, during each successive five-year period beginning with the five-year period which commences on July 1 of the first full fiscal year after the effective date of this section, shall apply net power proceeds either in reduction



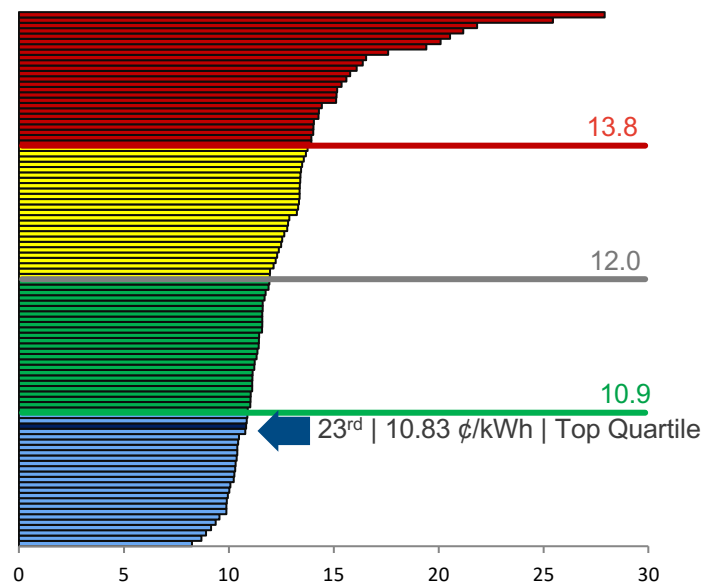
# Improving Residential Rate Competitiveness

Compared to Regional Peers  
November 2017



April 2013 – 9<sup>th</sup> lowest

Among Top 100 U.S. Utilities  
November 2017

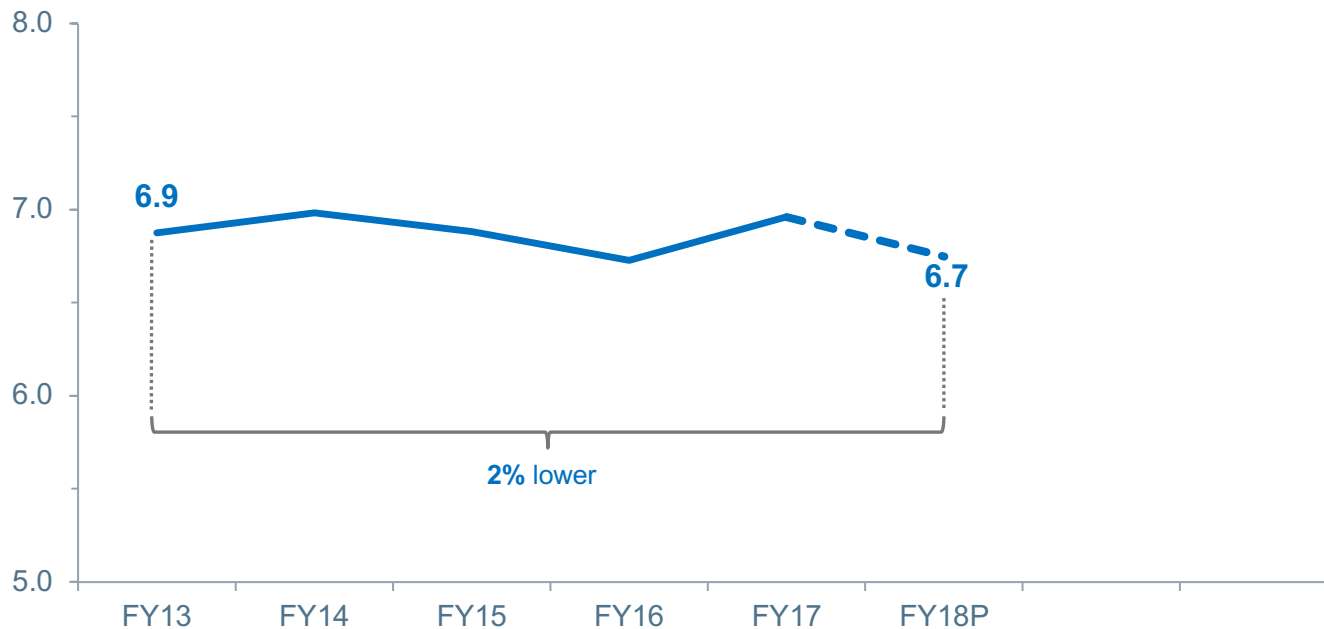


April 2013 – 33<sup>rd</sup> lowest – 4% Gap to Top Quartile



# Maintaining Low Rates - Wholesale

**Wholesale Rate** (¢/kWh)



# Pricing



FIXED



VARIABLE



# Pricing

The proposed change **WILL NOT  
PRODUCE** more revenue for TVA

# Energy | Environment | Economic Development

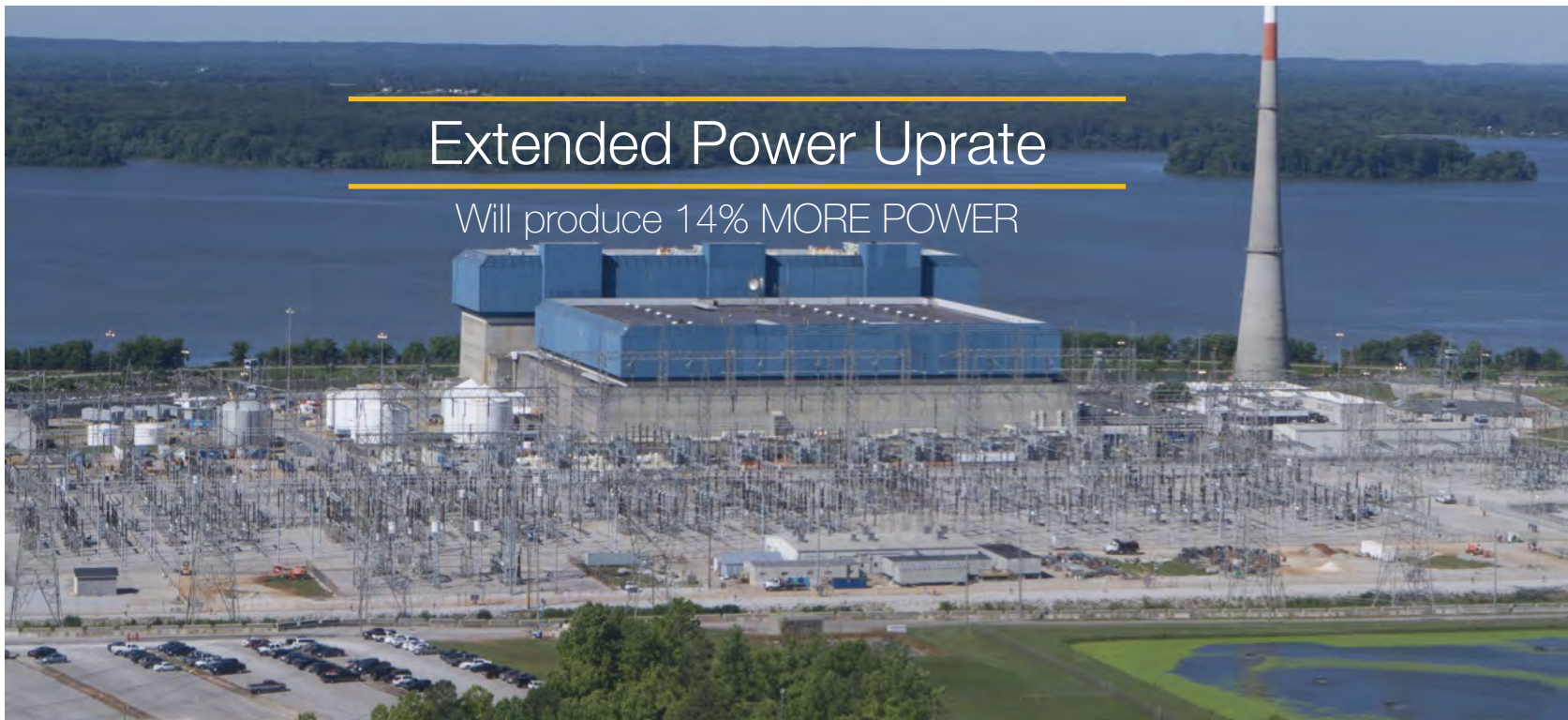




# Browns Ferry Nuclear Plant

## Extended Power Uprate

Will produce 14% MORE POWER



# Allen Plant



Combined  
Cycle Units



# Allen Fossil Plant



A.C. Cox  
SEPARATING FOSSIL  
PLANT FROM THE GRID

# Energy | **Environment** | Economic Development





# Dams



Guntersville



Wilson

# Flood Control





# Energy | Environment | Economic Development







# Economic Development Accomplishments

*First Six Months FY18*

**40,200**

New or Retained Jobs

**\$8.5 Billion**

Capital Investment











“The work of TVA will never be done...There will always be new places for us to go. For in the minds of men the world over, the initials TVA stand for progress, and the people of this area welcome progress.”

John F. Kennedy





# President's Report

BILL JOHNSON  
President and CEO





# Board Meeting

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Muscle Shoals, Alabama



A blurred background image showing several people in business attire (suits) sitting around a table, holding pens and looking at documents, suggesting a professional meeting or conference.

# Assistant Corporate Secretaries





# Board Meeting

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Muscle Shoals, Alabama





# Audit, Risk, and Regulation Committee







# People and Performance Committee





# Finance, Rates, and Portfolio Committee





# Financial Performance Update

JOHN THOMAS

Executive Vice President  
and Chief Financial Officer



# Q2 Fiscal Year 2018

## **Net Income: \$750M**

- \$363M more than budget and \$437M above last year

## **Operating Cash Flow of \$1.8B**

- \$488M favorable to budget and \$326M above last year

## **Total Financing Obligations (TFO) - \$118M less than budget**

- Increased cash balance held to fund \$1.0B bond maturity due April 1



# Q2 Summary Income Statement

**\$363M favorable due to operating revenue and lower expenses**

| \$ million                        | FYTD 2018       |                 |                         | FYTD 2017       |                          |
|-----------------------------------|-----------------|-----------------|-------------------------|-----------------|--------------------------|
|                                   | Actual          | Budget          | Variance<br>Fav/(Unfav) | Actual          | '18 v '17<br>Fav/(Unfav) |
| <b>Operating Revenue</b>          | <b>\$ 5,341</b> | <b>\$ 5,063</b> | <b>\$ 278</b>           | <b>\$ 5,093</b> | <b>\$ 248</b>            |
| <b>Fuel &amp; Purchased Power</b> | <b>1,463</b>    | <b>1,442</b>    | <b>(21)</b>             | <b>1,557</b>    | <b>94</b>                |
| <b>Total O&amp;M</b>              | <b>1,406</b>    | <b>1,442</b>    | <b>36</b>               | <b>1,440</b>    | <b>34</b>                |
| <b>Taxes, Depreciation, Other</b> | <b>1,086</b>    | <b>1,094</b>    | <b>8</b>                | <b>1,106</b>    | <b>20</b>                |
| <b>Interest</b>                   | <b>636</b>      | <b>698</b>      | <b>62</b>               | <b>677</b>      | <b>41</b>                |
| <b>Net Income (Loss)</b>          | <b>\$ 750</b>   | <b>\$ 387</b>   | <b>\$ 363</b>           | <b>\$ 313</b>   | <b>\$ 437</b>            |

# Q2 Summary Cash Flow Statement

TFOs were \$118M favorable to budget, reflecting \$189M of unfavorability FYTD 2018

| \$ million                                       | FYTD 2018        |                  |               | FYTD 2017        |                 |
|--|------------------|------------------|---------------|------------------|-----------------|
|  | Actual           | Budget           | Variance      | Actual           | '18 v '17       |
| Cash Flow from Operating Activities              | \$ 1,842         | \$ 1,354         | \$ 488        | \$ 1,516         | \$ 326          |
| Cash Flow used in Investing Activities           | (1,141)          | (1,366)          | 225           | (1,302)          | 161             |
| Cash Flow from Financing Activities              | 192              | 12               | 180           | (214)            | 406             |
| <b>Net Change in Cash &amp; Cash Equivalents</b> | <b>893</b>       | <b>-</b>         | <b>893</b>    | <b>-</b>         | <b>893</b>      |
| <b>Ending Cash &amp; Short-Term Investments</b>  | <b>1,193</b>     | <b>300</b>       | <b>893</b>    | <b>300</b>       | <b>893</b>      |
| <b>Ending Debt and Financing Obligations</b>     | <b>\$ 26,189</b> | <b>\$ 26,307</b> | <b>\$ 118</b> | <b>\$ 25,954</b> | <b>\$ (235)</b> |



# Q2 Summary (Results v. Plan)

**Higher Demand Sales** – cold winter drove favorable peak demand revenue

**Lower Expenses** – operating and interest

**Lower Debt Balance** – favorable cash flows resulting in less debt



# Finance, Rates, and Portfolio Committee







# Strategic Pricing Plan – 2018 Rate Change

JAY C. STOWE

Senior Vice President,  
Distributed Energy Resources

# Collaborative Process

Since November of 2016, TVA has worked in collaboration with Local Power Companies and Directly Served Customers on wholesale rate changes that will modernize TVA's pricing structure.



# Background

Today's pricing structure does not reflect the value of TVA's extensive, reliable power grid that serves all consumers across the region. Modernized pricing is needed to set pricing that is fair and more closely reflects the cost of providing power.

# Key Proposal Elements

TVA's 2018 rate change proposal will:

- Lower wholesale energy rates and introduce a fixed component – the Grid Access Charge
- Lower energy rates for some commercial customers to better reflect cost of service

This revenue neutral wholesale change will support greater bill stability, recognize the value provided by the grid, support economic growth and ensure fairness for customers across the Valley.



# Additional Modifications

- Update Hydro Debits and Credits
- Improve Total Monthly Fuel Costs
- Align Retail Rate Options with Wholesale
- Simplify Rates and Processes

# Recommendation

- Approve the implementation of a new wholesale rate structure to reduce the energy rate by ½ cent/kWh and introduce a Grid Access Charge of ½ cent/kWh
- Approve energy reduction to some commercial rates to better reflect cost of service
- Approve additional modifications as described



# Finance, Rates, and Portfolio Committee





A close-up photograph of a person's hands in a blue business suit. The person is holding a silver pen over a document, with their fingers positioned as if about to write. The background is slightly blurred, showing more of the suit and the document.

# Electric Vehicle Charging Rate

JAY C. STOWE

Senior Vice President,  
Distributed Energy Resources

# Background

## Local Power Company (LPC) Request

LPCs have requested a retail Electric Vehicle (EV) Rate for the sole purpose of charging electric vehicles.

## Proposal

TVA proposes to offer the EV Rate as a three-year pilot program. After two years TVA will perform an evaluation and make a recommendation to the TVA Board. The rate will be optional upon request on a Residential and Commercial basis for the sole purpose of charging individual-owned electric vehicles. Rates will be cost based and developed in conjunction with LPCs.

# Recommendation

- Approve the three-year pilot program for an electric vehicle charging rate offering for:
  - Residential – Electric Vehicle Residential Service (EVRS)
  - Commercial – Electric Vehicle General Service A Class (EVGSA):
    - EVGSA – Small (less than 50 kW)
    - EVGSA – Large (more than 50 kW, less than 5 MW)





# Finance, Rates, and Portfolio Committee



A close-up photograph of a person's hands in a business setting. The person is wearing a dark blue suit jacket and a light-colored shirt. They are holding a silver pen in their right hand, poised to sign a document. The background is slightly blurred, showing what appears to be a desk and some papers.

# Firm Transportation Agreements with Tennessee Gas Pipeline Company, LLC Delegation

DAVID SORRICK

Senior Vice President, Power Operations

# Purpose

- Request the Board delegate authority to the Chief Executive Officer (CEO) to enter into firm transportation (FT) service contracts with Tennessee Gas Pipeline Company, LLC (TGP) for:
  - 21,000 MMBtu of capacity to TVA's Magnolia and Caledonia CC plants for a 12-year term; and
  - a 7-year term extension of existing transportation agreements and options to extend for services to TVA's gas fired plants
- Request the Board delegate authority to the CEO to approve divestiture of the Johnsonville lateral pipeline with TGP



# Background

## New Transportation Services from Marcellus Shale on TGP and Renewal of Existing Services

- Marcellus Shale accounts for ~30% of gas produced in the U.S. and is expected to grow
- New and extended transportation services will help economically expand and diversify TVA's transportation portfolio

## Johnsonville Lateral Divestiture with TGP

- TVA currently owns and operates a pipeline lateral which connects TGP's pipeline to TVA's Johnsonville plant
- TVA is negotiating with TGP to divest the lateral asset while maintaining all commercial benefits

# Overall Benefits

- Acquiring new Marcellus FT capacity:
  - Access to low cost natural gas for TVA's fleet;
  - Securing long term FT at favorable rates; and,
  - Additional diversity for sourcing supply;
- Extending existing FT agreements with TGP:
  - Locking in favorable rates past current agreement term (7 Yrs.)
  - Flexibility to respond to TVA's evolving generation portfolio
- Lateral Gas Pipeline Divestiture
  - Avoid Operations and Maintenance Expenses (O&M)
  - Maintain commercial benefits of transportation services

# Recommendation

- Recommend the Board delegate authority to the CEO to approve:
  - Entering into new firm transportation contracts with TGP for service out of the Marcellus to TVA's plants on TGP's system; and
  - Extending existing agreements with TGP for service out of the Gulf Coast to TVA's plants.
  - Divesting of the Johnsonville lateral pipeline, associated equipment, and associated land or land rights to TGP on terms and conditions acceptable to the CEO and subject to applicable TVA standard processes and completion of all appropriate environmental reviews.





# Finance, Rates, and Portfolio Committee



A background image showing a close-up of two people in business attire. One person's hand is holding a silver pen, and another person's hand is holding a white document or tablet. The scene is set in a professional office environment.

# Firm Transportation Agreements with Texas Gas Transmission, LLC

DAVID SORRICK  
Senior Vice President,  
Power Operations

# Purpose

- Request Board approval to enter into a long term firm gas transportation agreement with Texas Gas Transmission, LLC (TGT) for up to 230,000 MMBtu of capacity in the winter for service to TVA's Southaven and Lagoon Creek CC plants for a 10-year term starting April 1, 2020.



# Background

- The current natural gas transportation agreements to TVA's Southaven plant via TGT and Lagoon Creek plant expire in the Spring of 2020.
- To ensure adequate transportation to TVA's Southaven and Lagoon Creek plants, Coal & Gas Services issued a request for proposal (RFP) for service after the current agreements expire in 2020.
- Based on the proposals received and subsequent negotiations, TGT was determined to be the lowest cost option to serve both Southaven and Lagoon Creek.

# Overall Benefits

- Securing Firm Transportation services vital to TVA's gas generating assets.
- Locking in favorable rates past current agreement term (10Yrs.)
- Increased flexibility to meet generation demand changes on TGT's system.
- Increased reliability of transport to TVA's gas generating assets on TGT's system.

# Recommendation

- Recommend the Board approve entering into a new firm transportation agreement with TGT for service to TVA's Southaven and Lagoon Creek plants on TGT's system.





# Finance, Rates, and Portfolio Committee





# External Relations Committee





A background image showing a close-up of two people in business attire. One person's hand is holding a silver pen, and the other's hand is holding a white tablet or document. The background is slightly blurred, focusing attention on the hands and the text overlay.

# Modified Land and Equipment Conveyance Delegations

MIKE SKAGGS

Executive Vice President  
Operations



# Purpose

Request the Board delegate:

- New authority to the Chief Executive Officer regarding conveyances of non-bulk electric system assets and natural gas lateral pipelines
- Modify an existing delegation regarding conveyances of equipment valued at \$4 million or less

Actions taken under these delegations would be consistent with the TVA Board's Land Policy

# Existing and Proposed Delegations

| Existing Delegations |               |
|----------------------|---------------|
| All Transactions     |               |
| Land and Equipment   | \$4 million   |
| Land only            | \$4 million   |
| Equipment only       | Not Addressed |

| Proposed Delegations                                  |              |
|---|--------------|
| Non-Bulk Electric System Assets and Pipeline Laterals |              |
| Land  | \$4 million  |
| Equipment   | \$25 million |
| All Other Transactions                                |              |
| Land and Equipment                                    | \$4 million  |
| Land only   | \$4 million  |
| Equipment only  | \$4 million  |

# Benefits of Proposed Delegations

## Strategic Transmission Asset Conveyances

- Sustain and reduce rates
- Improve reliability
- Provide more flexibility for local power companies

## Natural Gas Lateral Pipeline Conveyances

- Avoid maintenance expenses
- Enhance long-term reliability
- Eliminate insurance costs and liability concerns



# Recommendation

Delegate authority to the Chief Executive Officer regarding conveyances of non-bulk electric system assets and natural gas lateral pipelines

Modify delegation authority regarding conveyances of equipment valued at \$4 million or less



# External Relations Committee





# Nuclear Oversight Committee





# Board Meeting

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