

Our VISION



ONE OF THE NATION'S **LEADING** PROVIDERS OF LOW-COST
AND CLEANER ENERGY **BY 2020**



Low Rates



Cleaner Air



High Reliability



More Nuclear Generation



Responsibility



Greater Energy Efficiency

**Acting to meet the region's needs for the future,
while improving our core business today.**

Chairman's Welcome



Nuclear Safety Review



Key Points

TVA nuclear plants were not built where major earthquakes or tsunamis occur

TVA plants have significant design differences and have been retrofitted with safety measures to assure defense-in-depth

We're verifying that TVA plants will remain safe through simultaneous natural disasters (flood, earthquake and tornado)

We are monitoring the Japanese response, consulting with nuclear operators and incorporating lessons learned

We are working to assure that we're ready for the unexpected

TVA's nuclear plants remain safe

What Happened in Japan?

9.0 earthquake followed by a tsunami estimated up to 48 feet high

Three of six units were operating; all shut down normally

Diesel generators started and supplied power to safety systems

The diesels were lost when sea water flooded their electrical and fuel systems; backup batteries were soon exhausted

Fuel overheated when power was unavailable for safety cooling systems

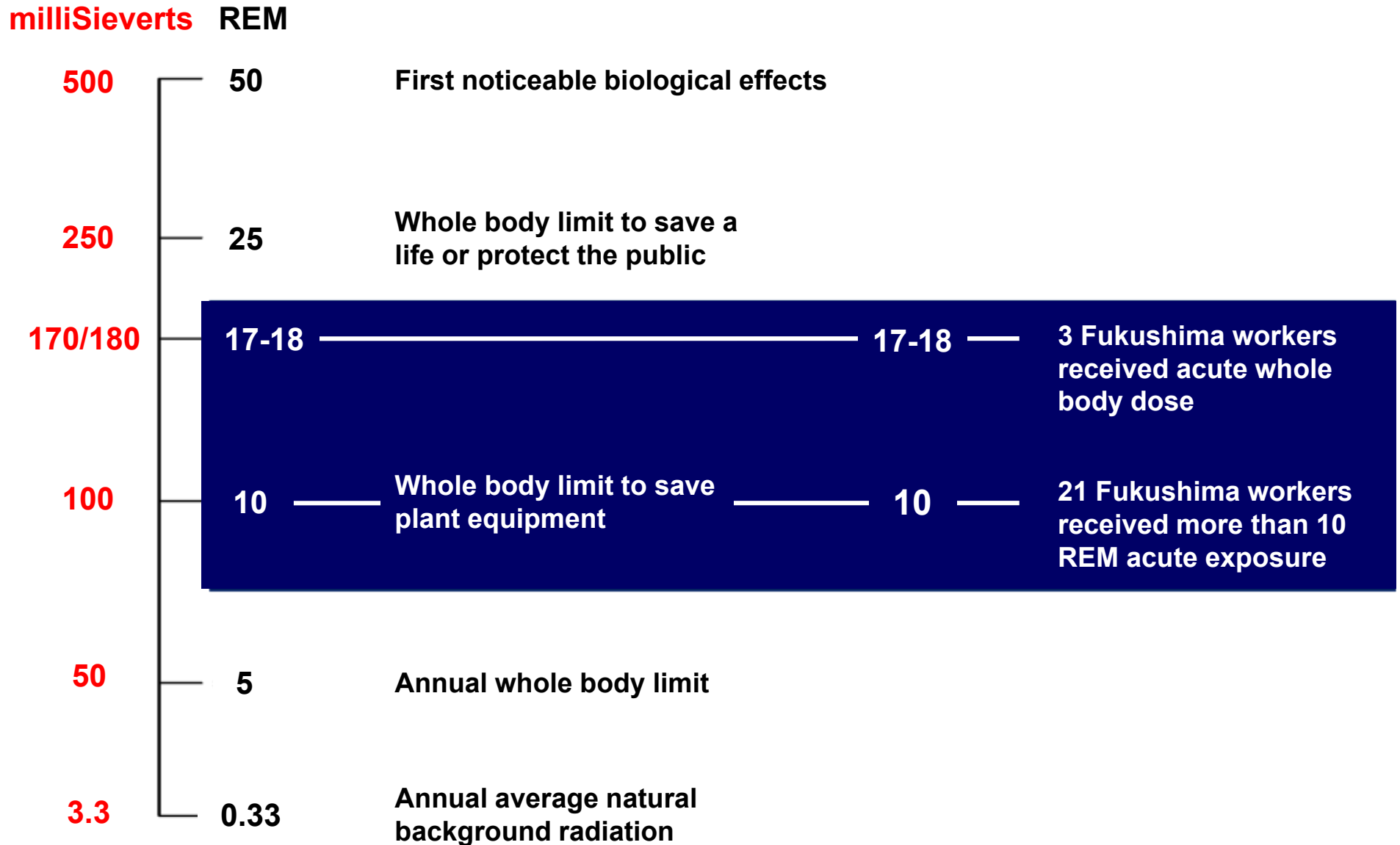
Hydrogen gas, from overheated fuel, was vented into units 1 and 3 containment buildings, where it ignited

Three weeks after the event, radioactive water found to be leaking into the ocean through a crack in a concrete enclosure; TEPCO says the leak has been halted



Fukushima Daiichi Plant

Exposures for Plant Workers



Key Differences – Browns Ferry

Eight diesel generators provide electricity to safety systems if grid connections are lost

Diesels and fuel tanks are housed in water-tight bunkers

Diesel electrical gear is above the maximum flood level

Redundant diesel and steam-powered pumps can provide emergency cooling water if the main diesels fail

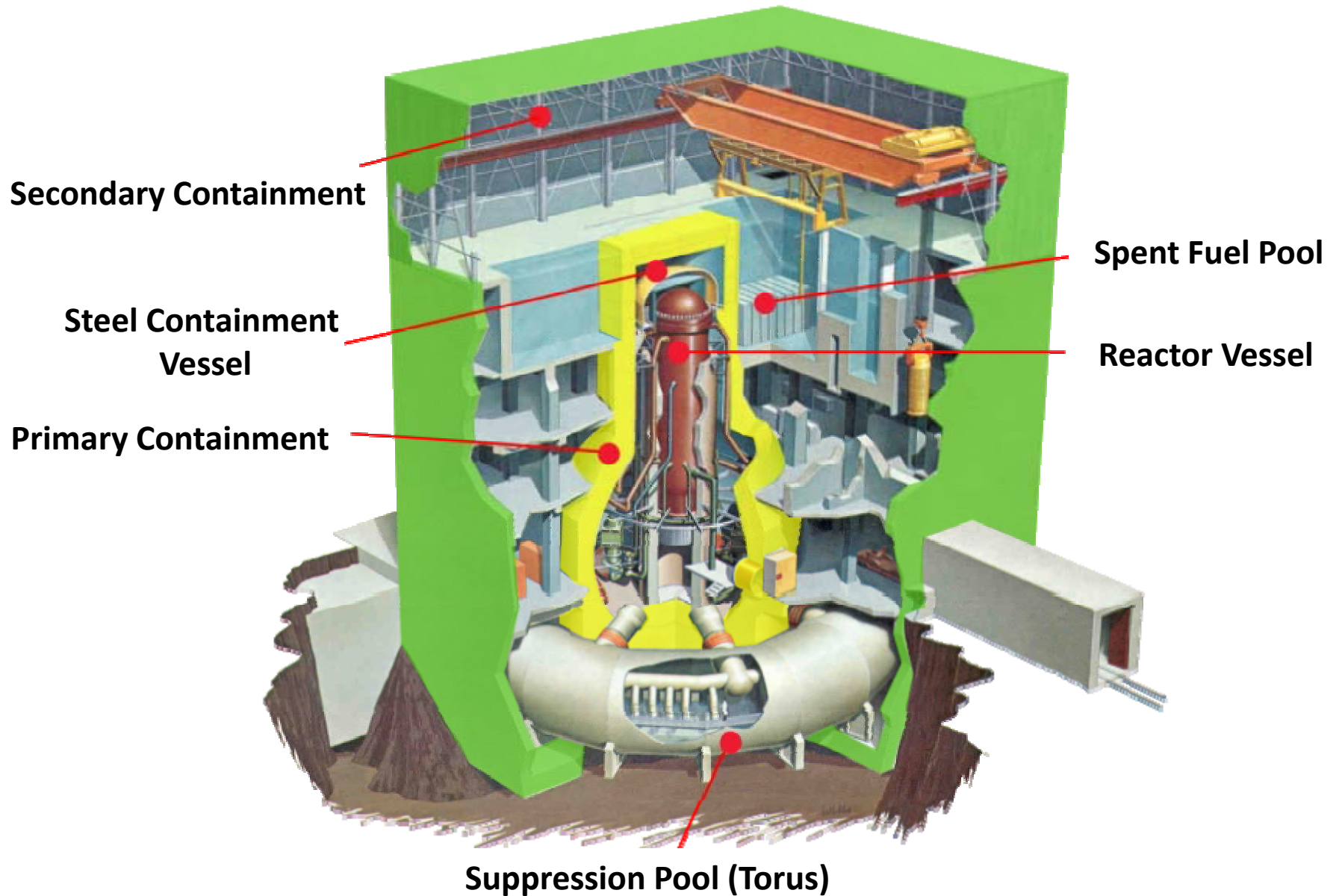
Hydrogen would be vented outside secondary containment

Other emergency gear for beyond design-basis events is positioned for immediate use

Designed for an earthquake impact at the site 10 times stronger than the worst impact ever recorded in the area



General Electric Boiling Water Reactor



Key Differences – Other TVA Plants

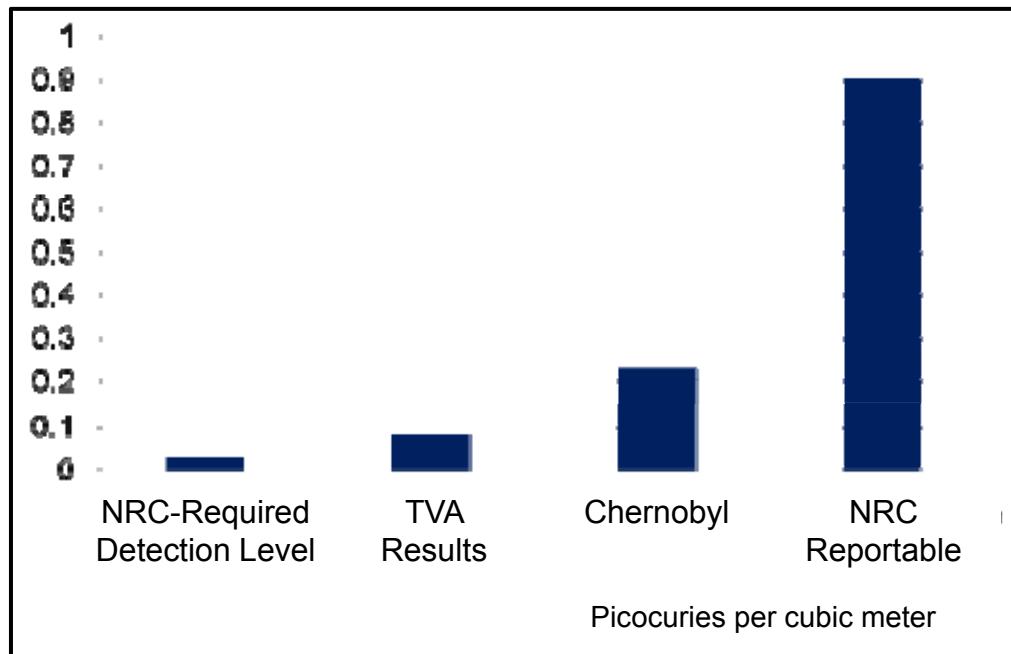
Sequoyah and Watts Bar are different designs

- Diesel generators for emergency power are built above the maximum flood level
- Diesel fuel and safety systems' electrical gear are above the maximum flood level
- Backup cooling pumps, powered by diesels and steam, can provide cooling water if main diesels fail
- Hydrogen would be vented outside secondary containment
- Other emergency gear for beyond design-basis events is positioned for immediate use

Environmental Monitoring in Our Area

U.S. nuclear plant air monitors have detected trace levels of iodine 131 that could be from Fukushima Daiichi

Iodine 131 is one by-product of the fission process in commercial reactors; it has a half-life of 8 days



Traces of iodine 131 were also detected by monitoring stations near Browns Ferry, Watts Bar and Sequoyah

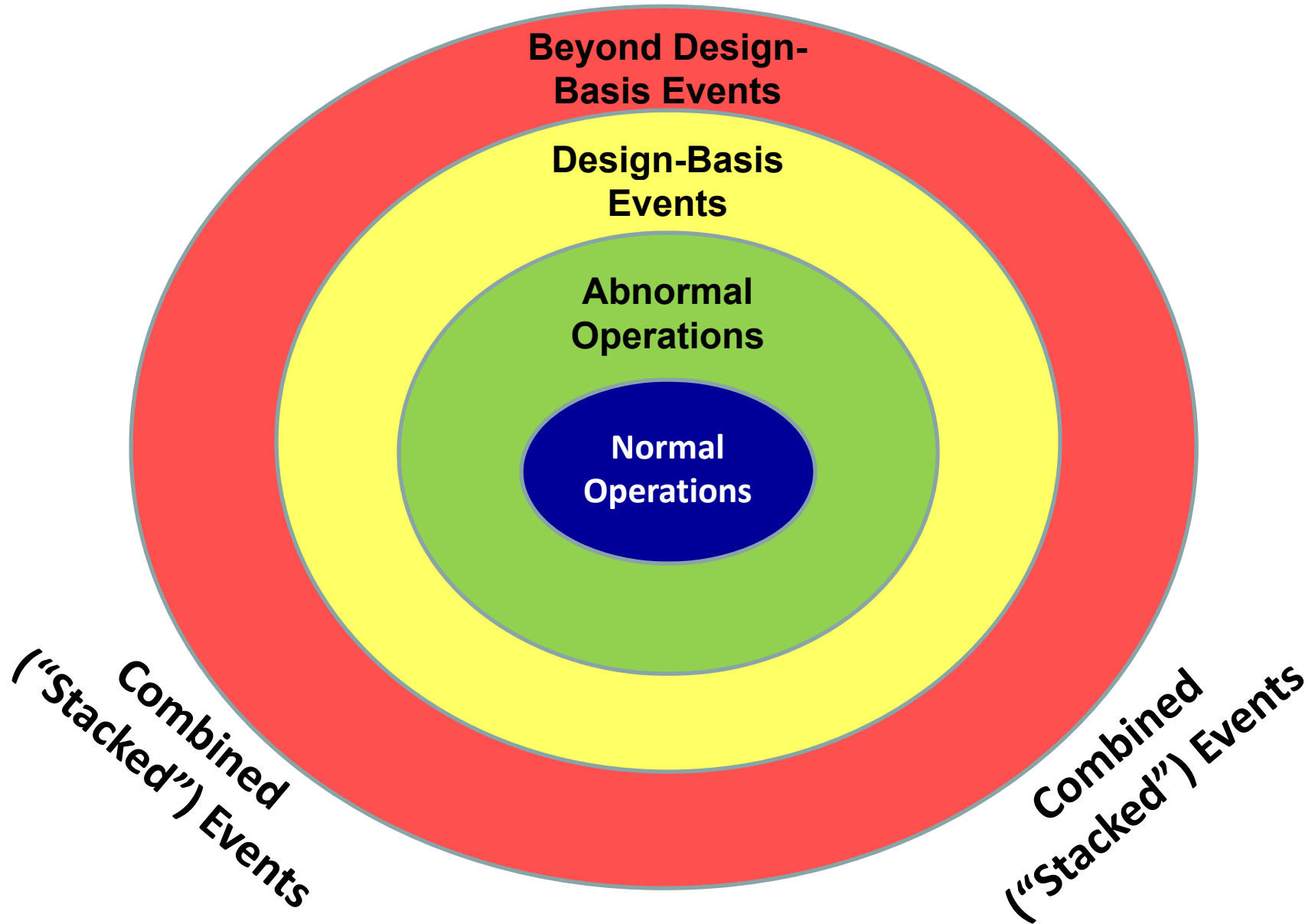
What is TVA Doing?

Established TVA
response team to:

- Understand events from Japanese accident
- Review readiness for natural or man-made disasters
- Identify possible vulnerabilities
- Provide short, intermediate, and long-term recommendations for TVA sites
- Communicate accurate and timely information



Taking Safety to the Next Level



Short-term Actions

Focused on adding defense in depth

Can be implemented in less than 90 days

Examples include

- Additional satellite phones for emergency responders when normal communications are damaged
- Small portable electric generators for lights, charging batteries and other vital equipment.



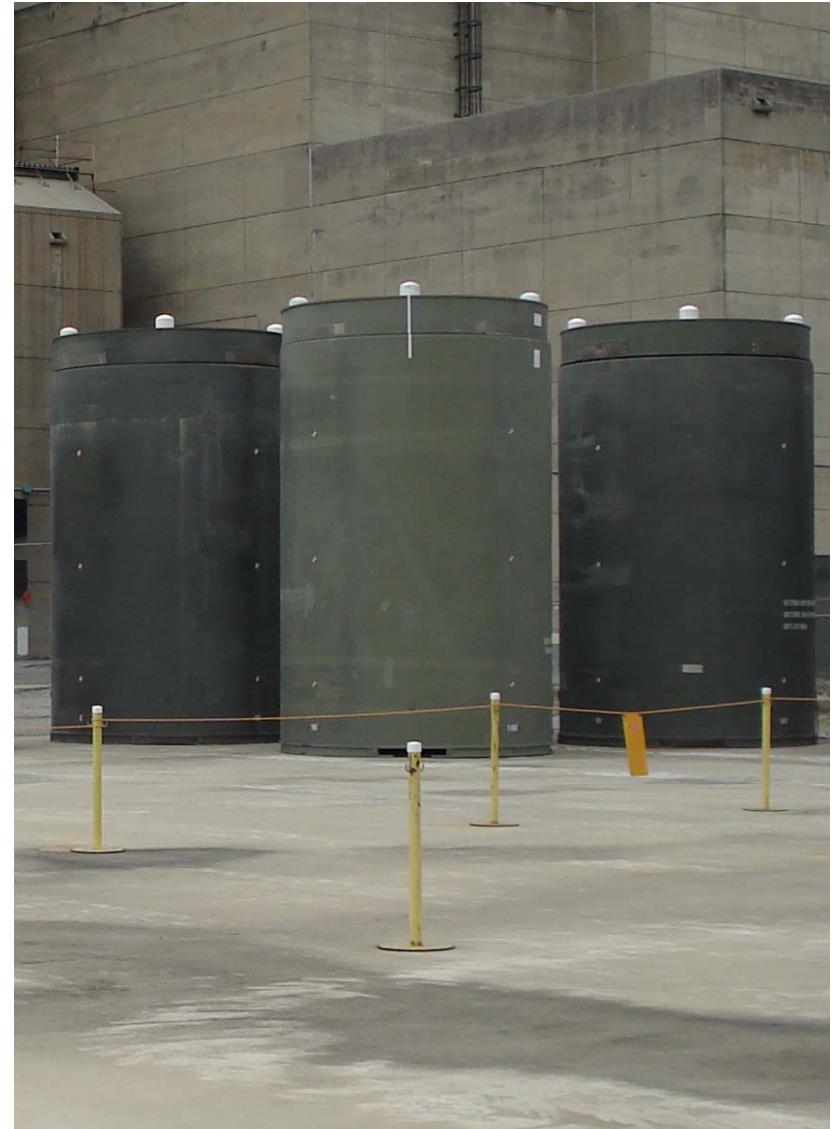
Intermediate Actions

Focused on adding defense in depth

Can be implemented within 12 months

Examples include

- Moving additional spent fuel from pools to dry-cask storage
- Adding hardened water supply pipes to spent fuel pools



Long-term Actions

Focused on adding defense in depth

Require more than 12 months to implement

Examples include

- Considering a fifth diesel generator at Sequoyah and Watts Bar
- Further evaluating switchyard seismic vulnerabilities



Watts Bar 2 and Bellefonte

Lessons learned will be incorporated into Watts Bar Unit 2 as construction proceeds

Evaluating further defense-in-depth improvements which would be designed into Bellefonte should TVA proceed with construction



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Minutes



President's Report



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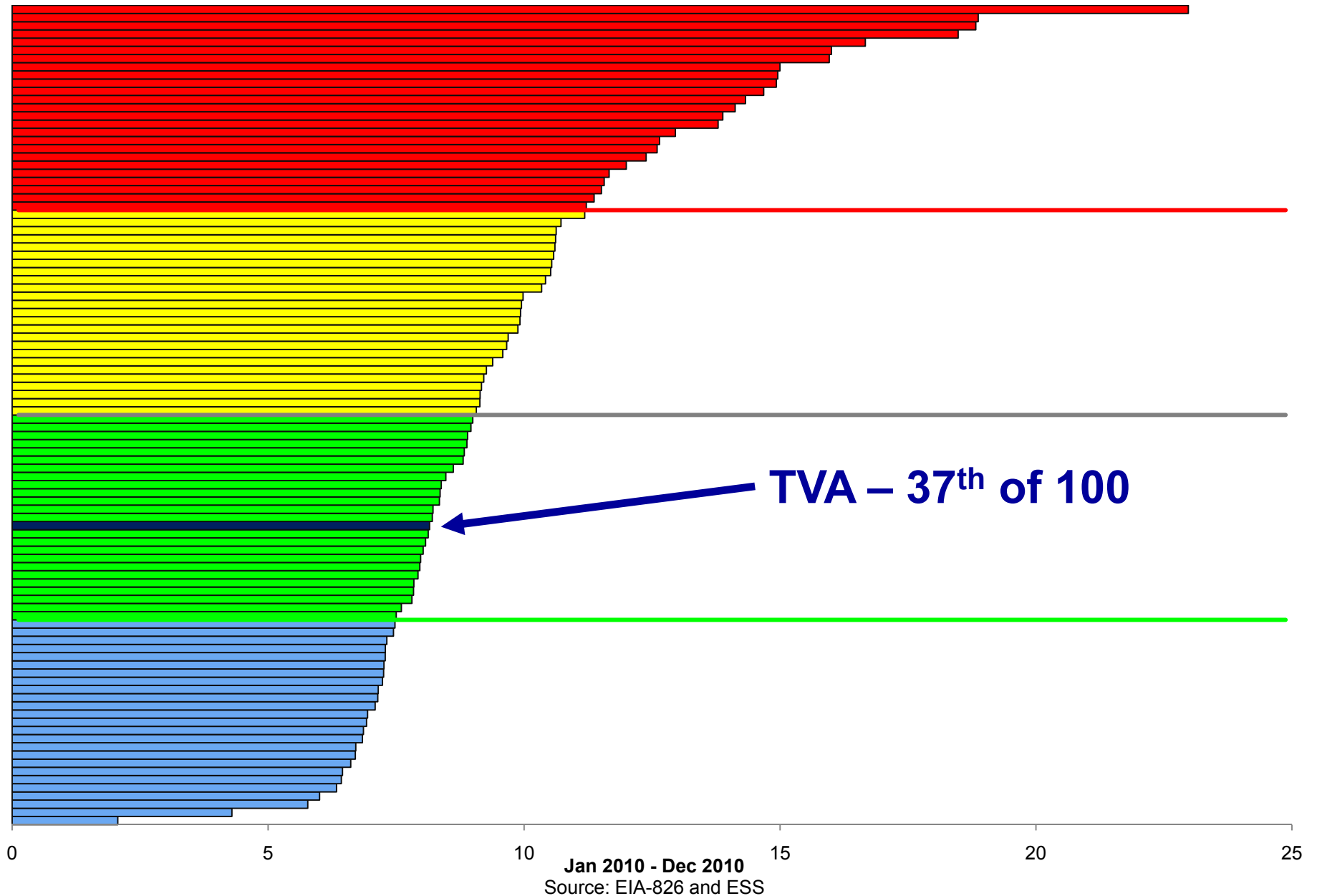


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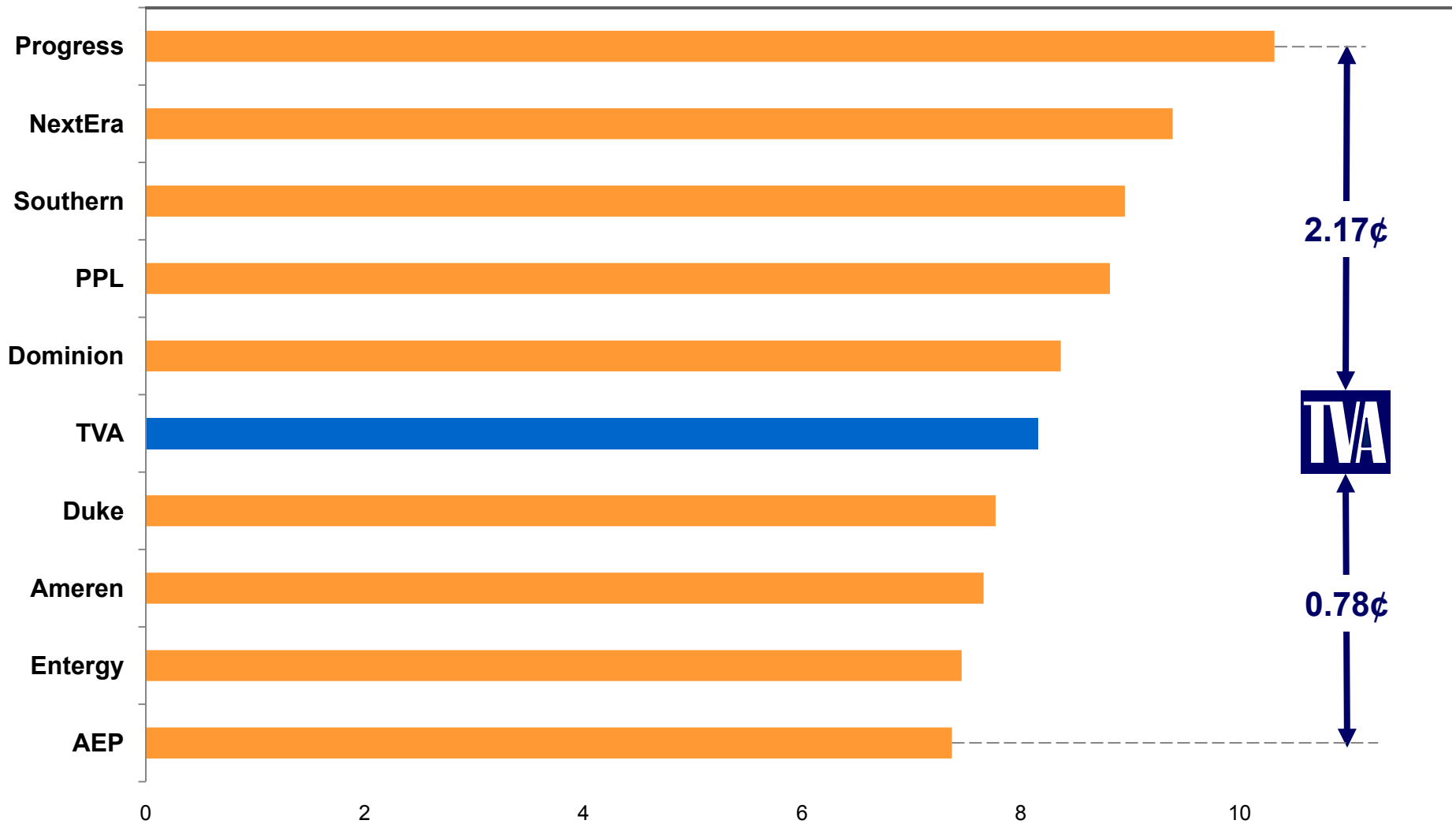
Low Rates

Top 100 Utilities' Retail Rates



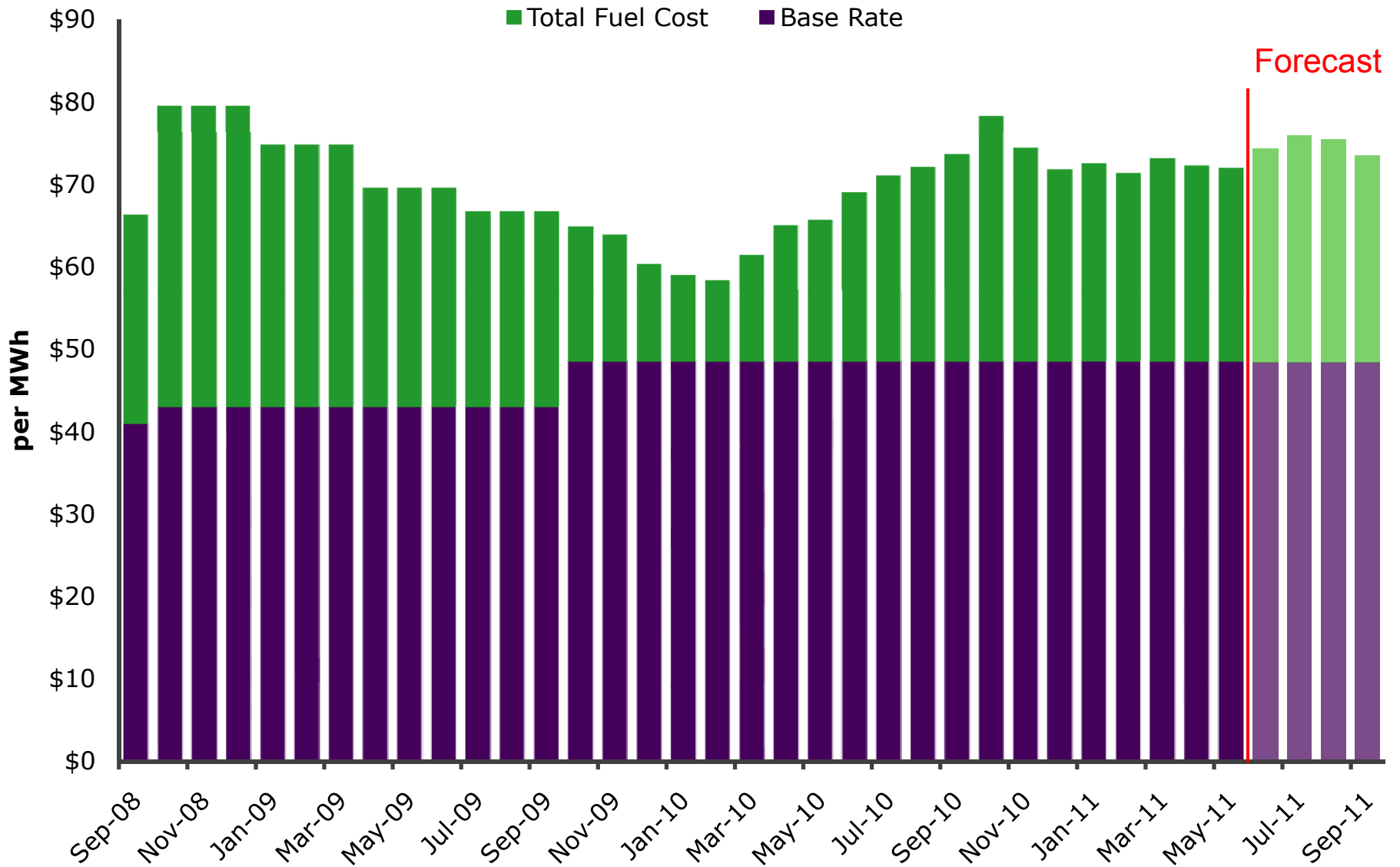
TVA vs. Regional Holding Companies

Retail Rates 12 Month Rolling Average (Cents/ kWh)
Jan 2010 - Dec 2010



Source: EIA-826 and ESS

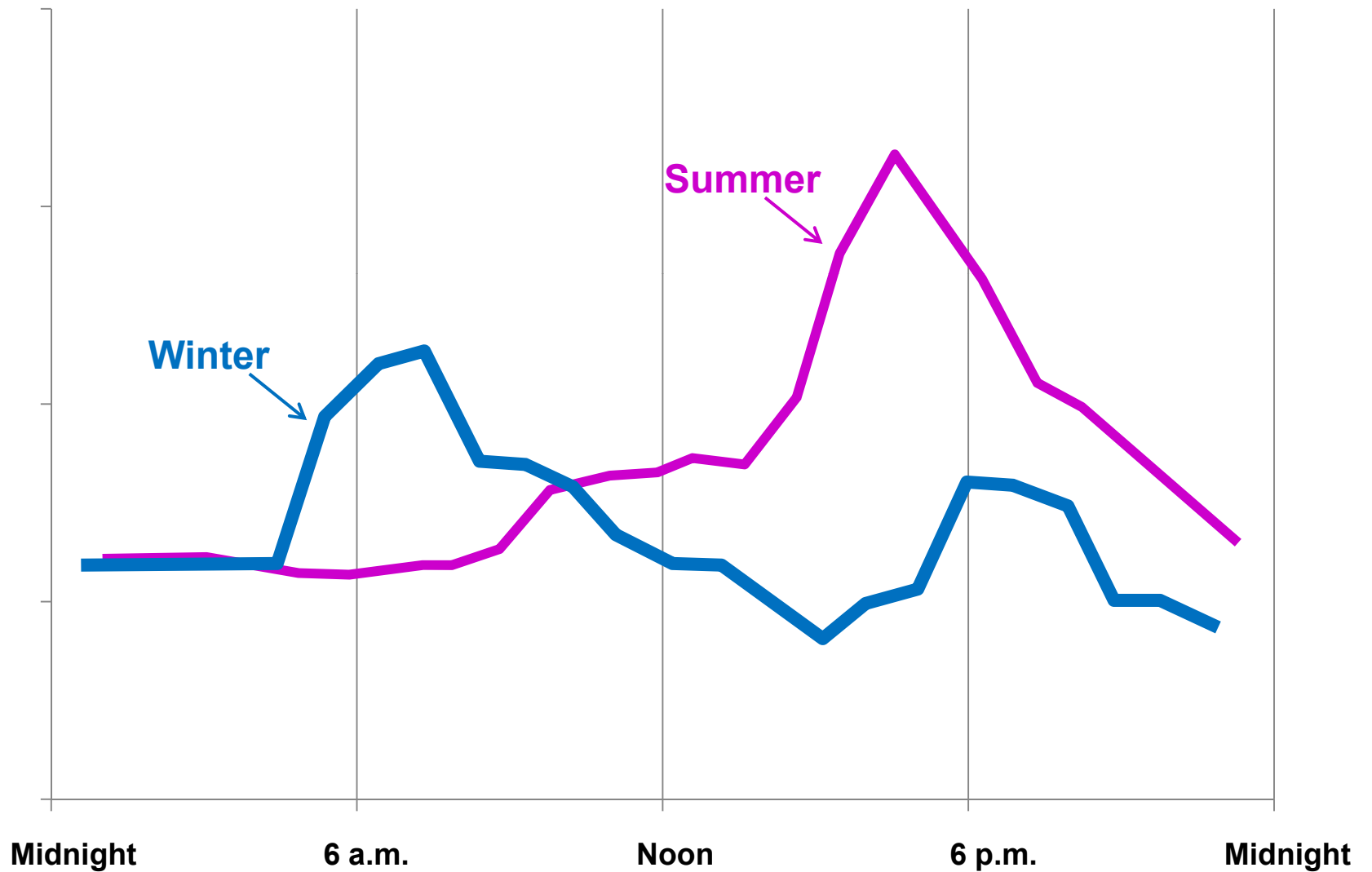
Firm Wholesale Rate



New Rate Structure

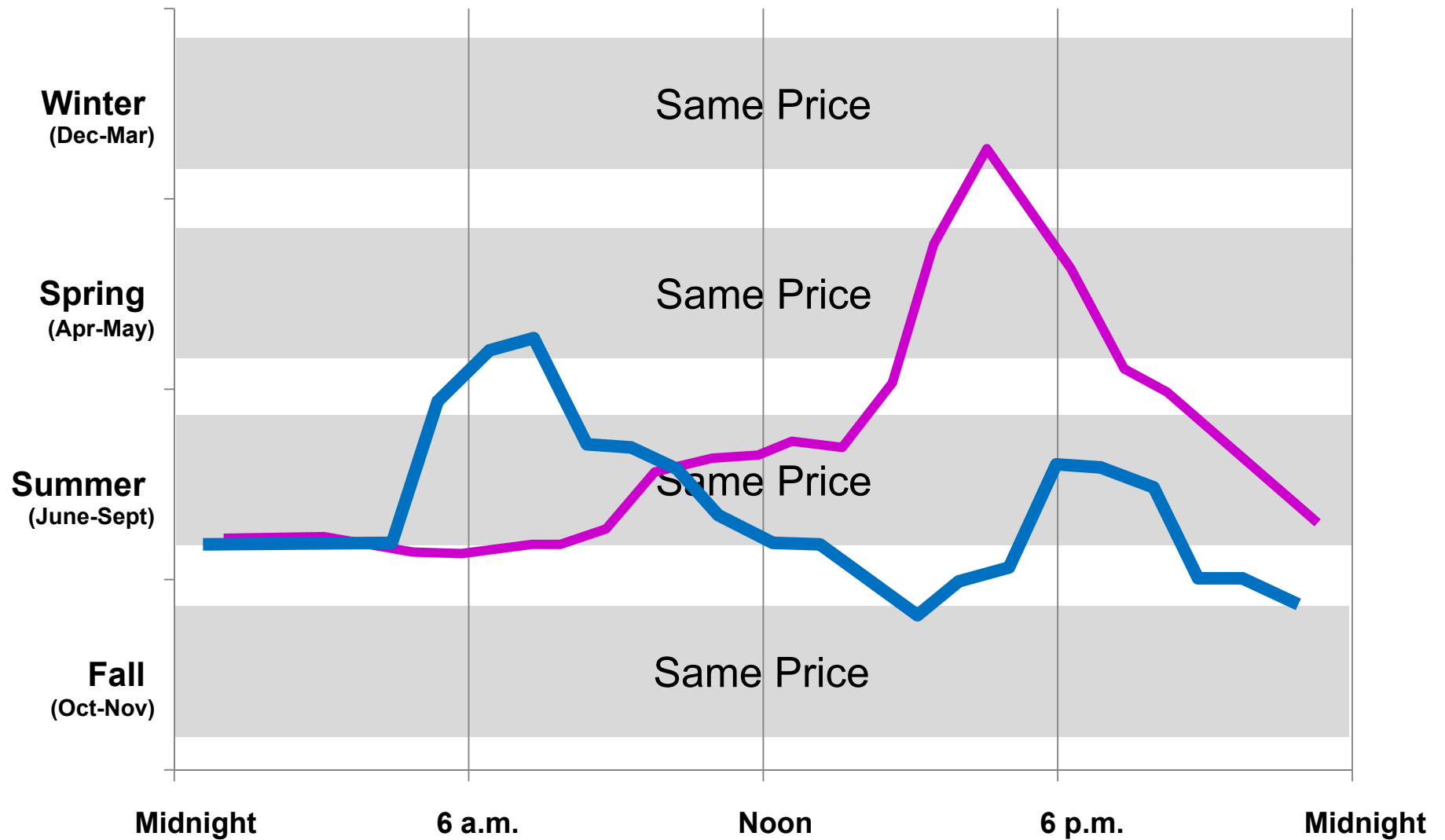
TVA's Production Costs

Highest on Summer Afternoons and Winter Mornings



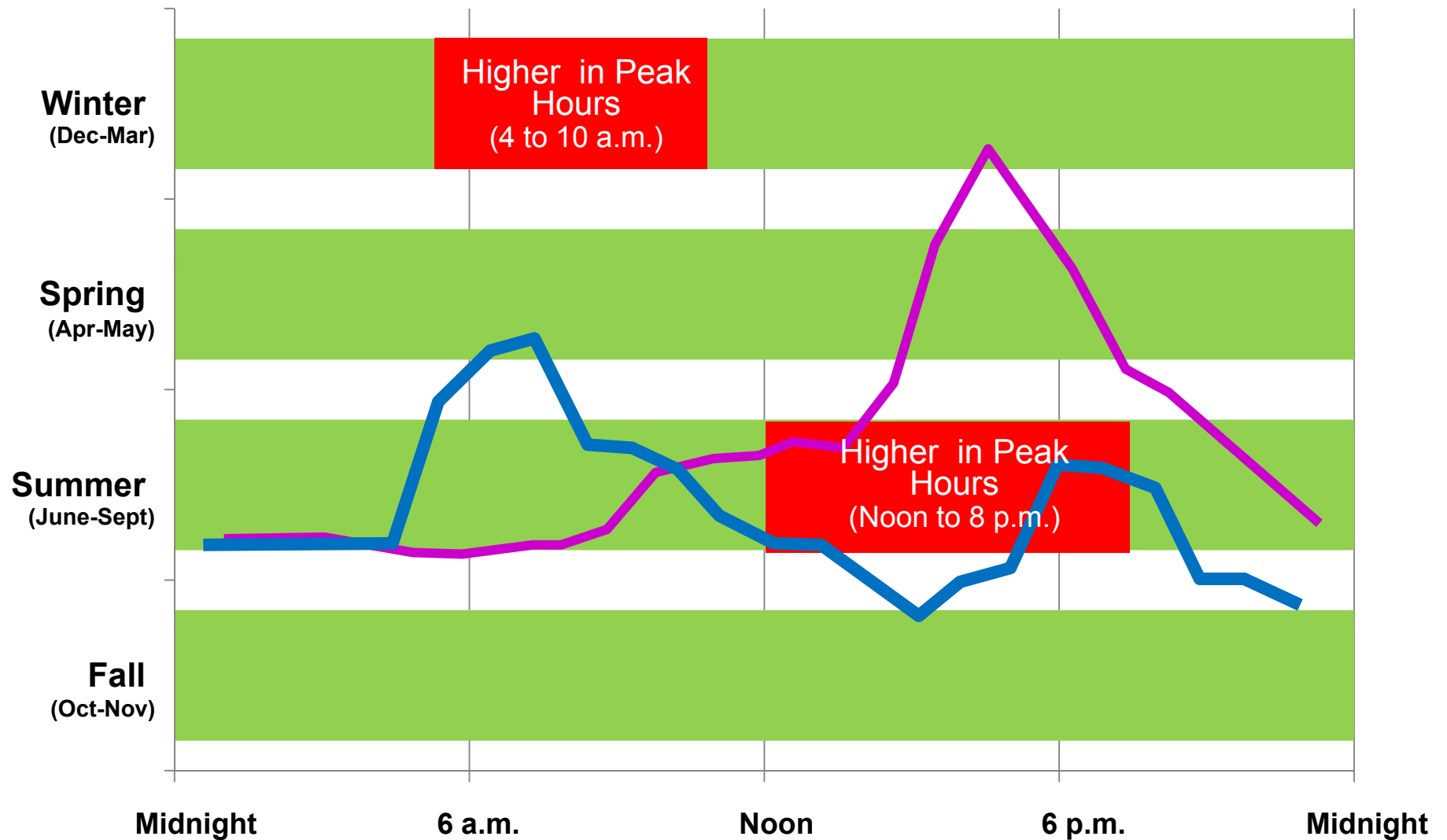
Former TVA Pricing Structure

No Price Change Regardless of Season



Seasonal Time-of-Use Pricing Structure

Higher at Seasonal Peak Hours; Lower at All Other Times



Dishwasher Example

... Slightly altering your behavior saves money

Estimated cost with FLAT rate = \$25/year



Washing off-peak = \$9/year

Savings = \$16/year

How to Lower Electric Bills

Set thermostats to 78° in summer;
68° in winter

Use cold water for laundry

Use fluorescent lighting

Wash clothes and dishes in the
evening

Unplug unused appliances

Take the home energy audit at
energyright.com



Our
VISION



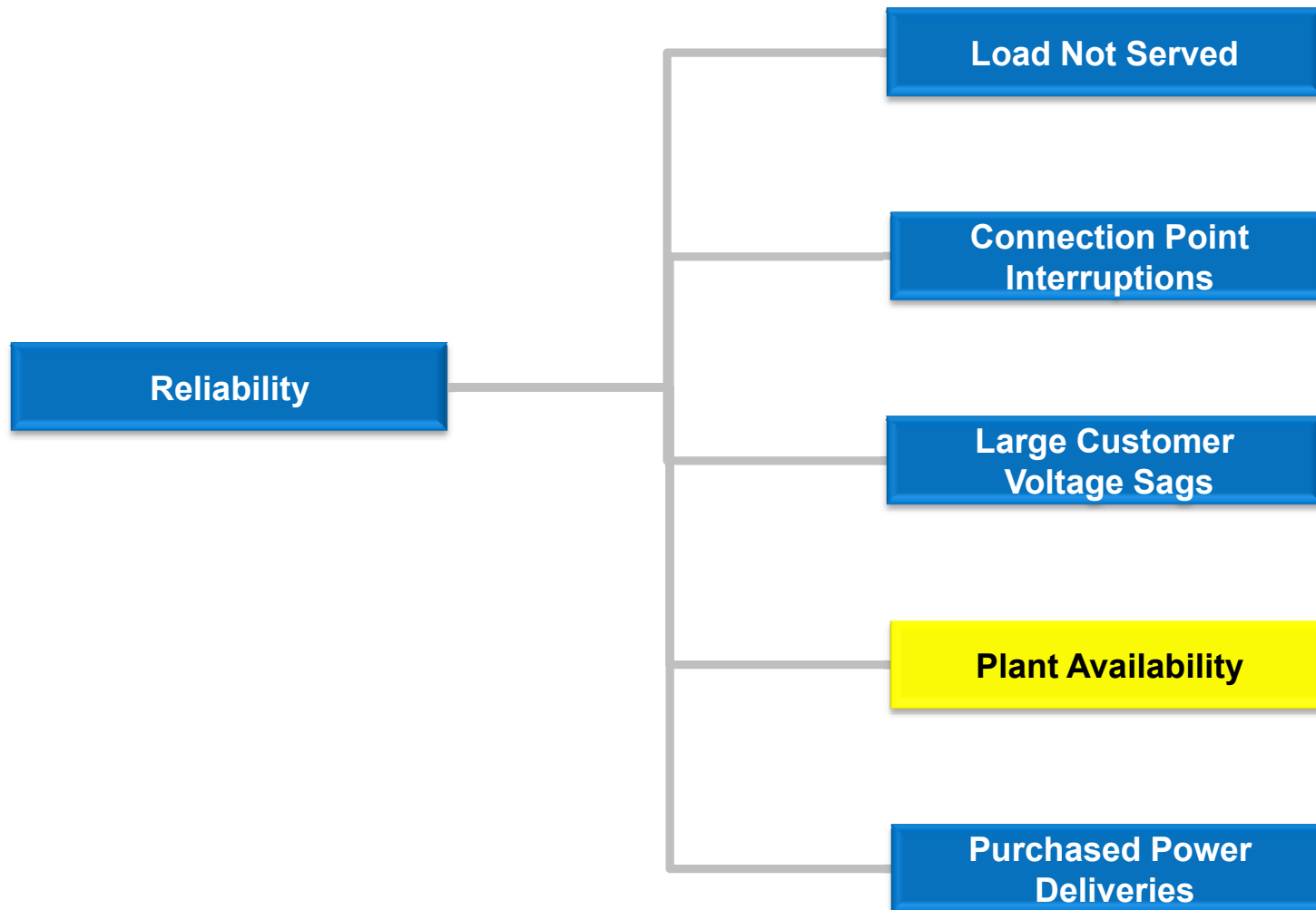
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High Reliability

Reliability Snapshot

Fiscal Year Through March



Plant Availability Scorecard

Browns Ferry

Bull Run

Gallatin

Shawnee

Watts Bar

Widows Creek

Allen

Caledonia

Colbert

John Sevier

Johnsonville

EXCEPTIONAL

GOOD

BELOW PLAN

POOR

Kingston

Cumberland
Lagoon Creek
Paradise
Sequoyah
Southaven

Storm Damage

Major storms, spawning eight tornados, hit the TVA region in February and March

Eleven transmission structures were damaged

Service to all TVA customers was restored within about 24 hours



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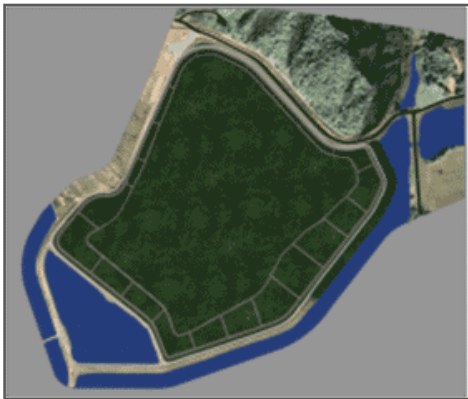
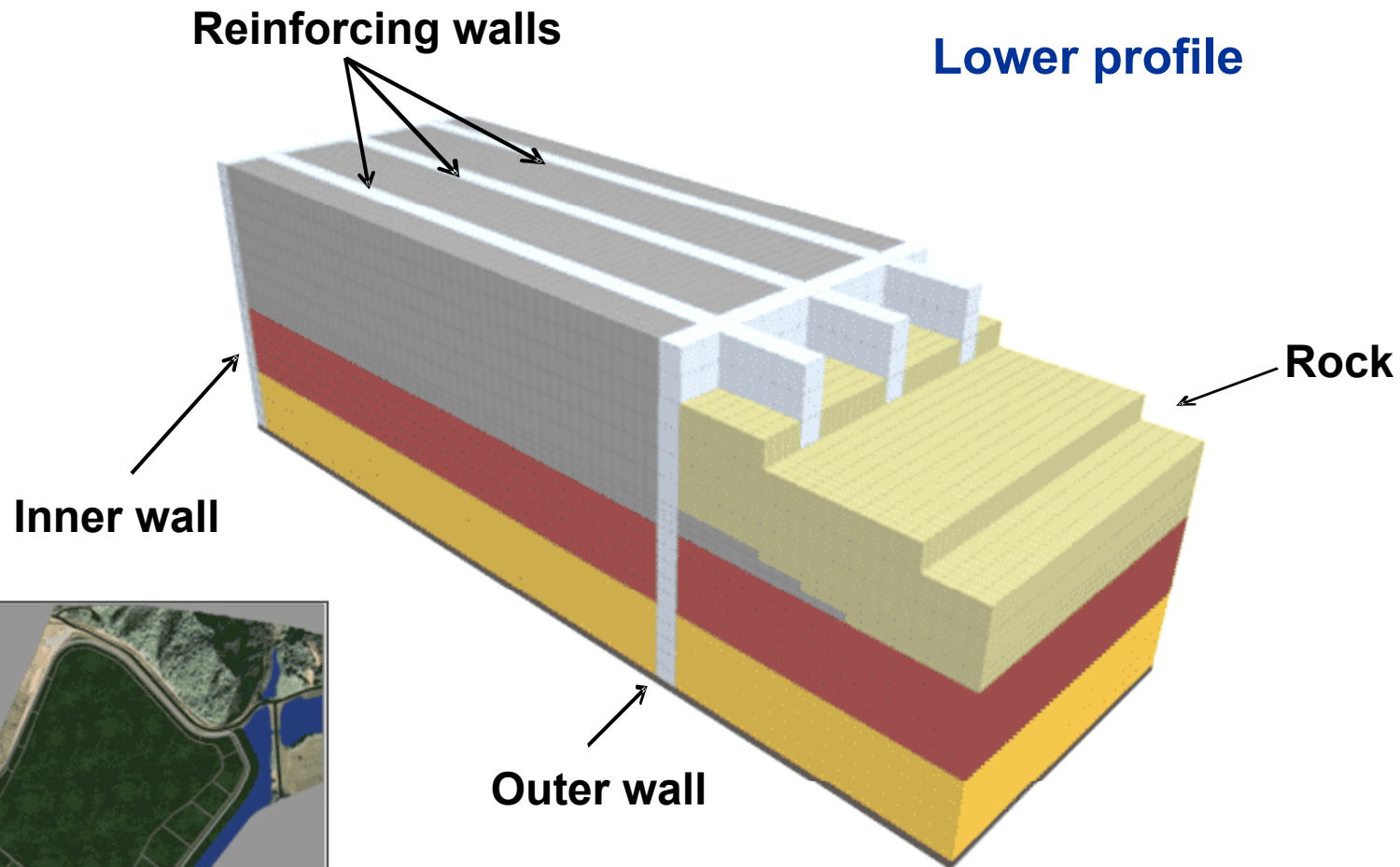
●▶



Responsibility

Safer Ash Containment at Kingston

Heavily reinforced walls
Set in bedrock
Lower profile

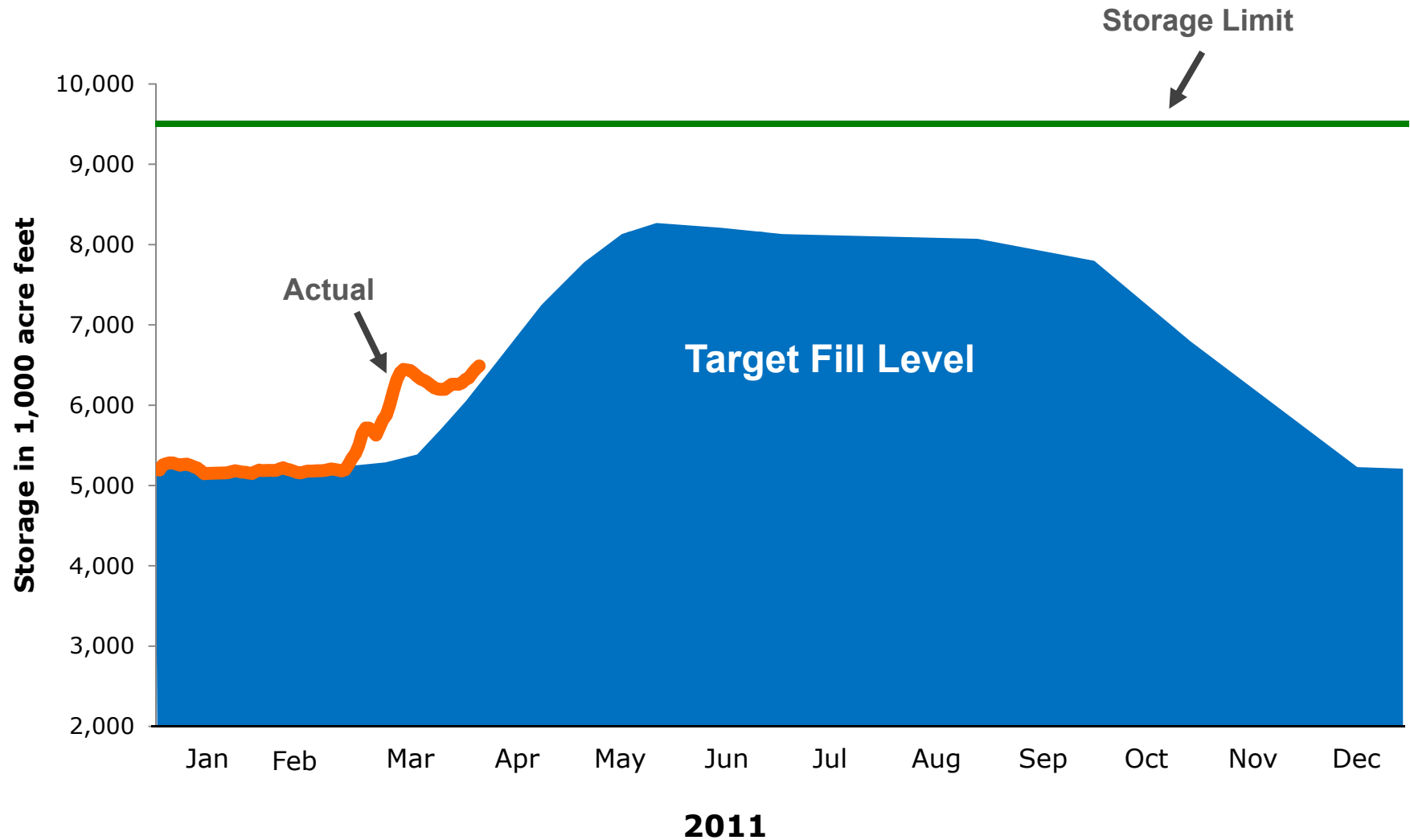


Seasonal Reservoir Operations



Managing the Spring Fill

Tributary System Storage



Natural Resource Plan



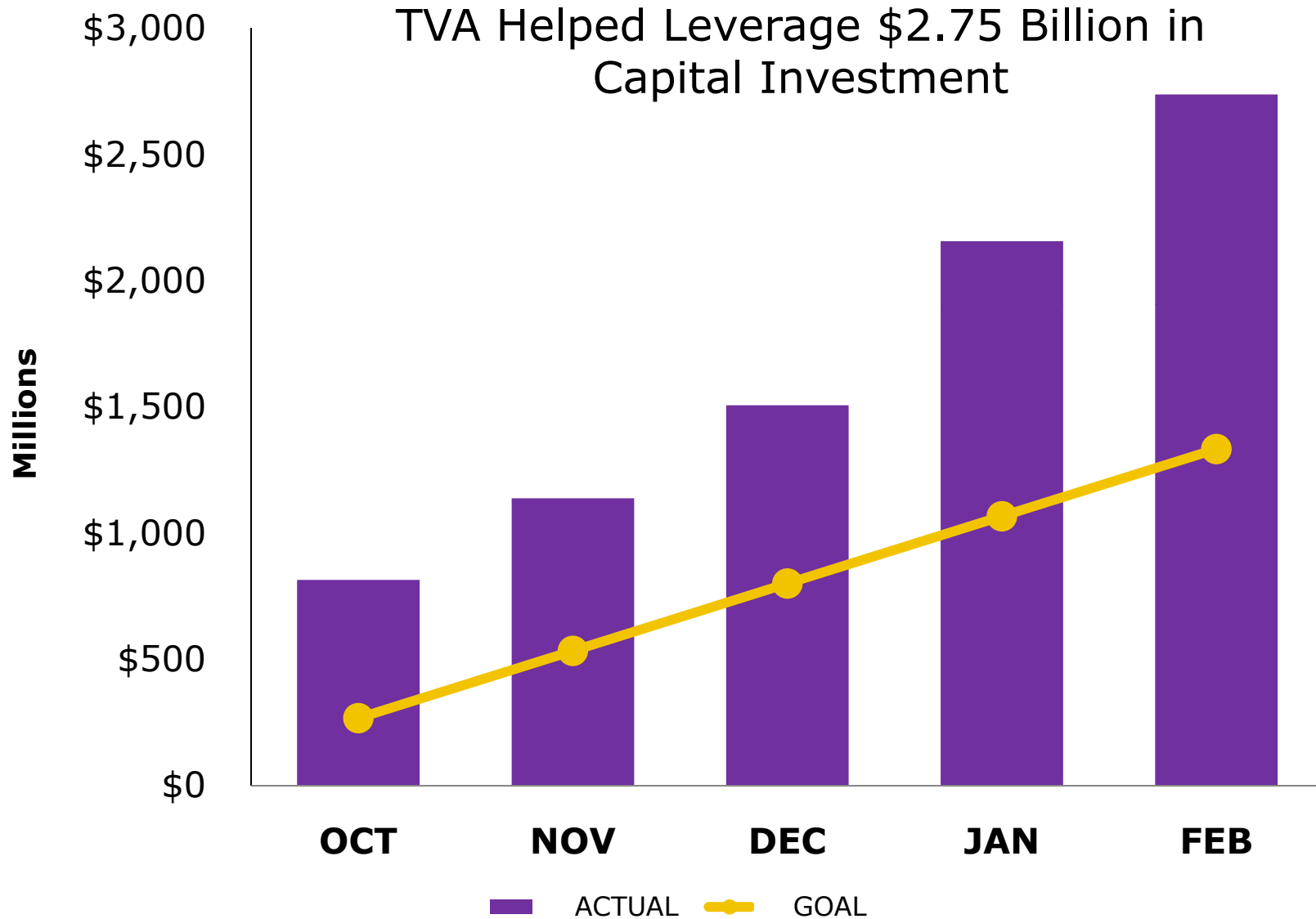
TVA manages:

- 293,000 acres of land
- 11,000 miles of shoreline
- Wildlife habitat
- Archeological sites
- Campgrounds and day-use areas

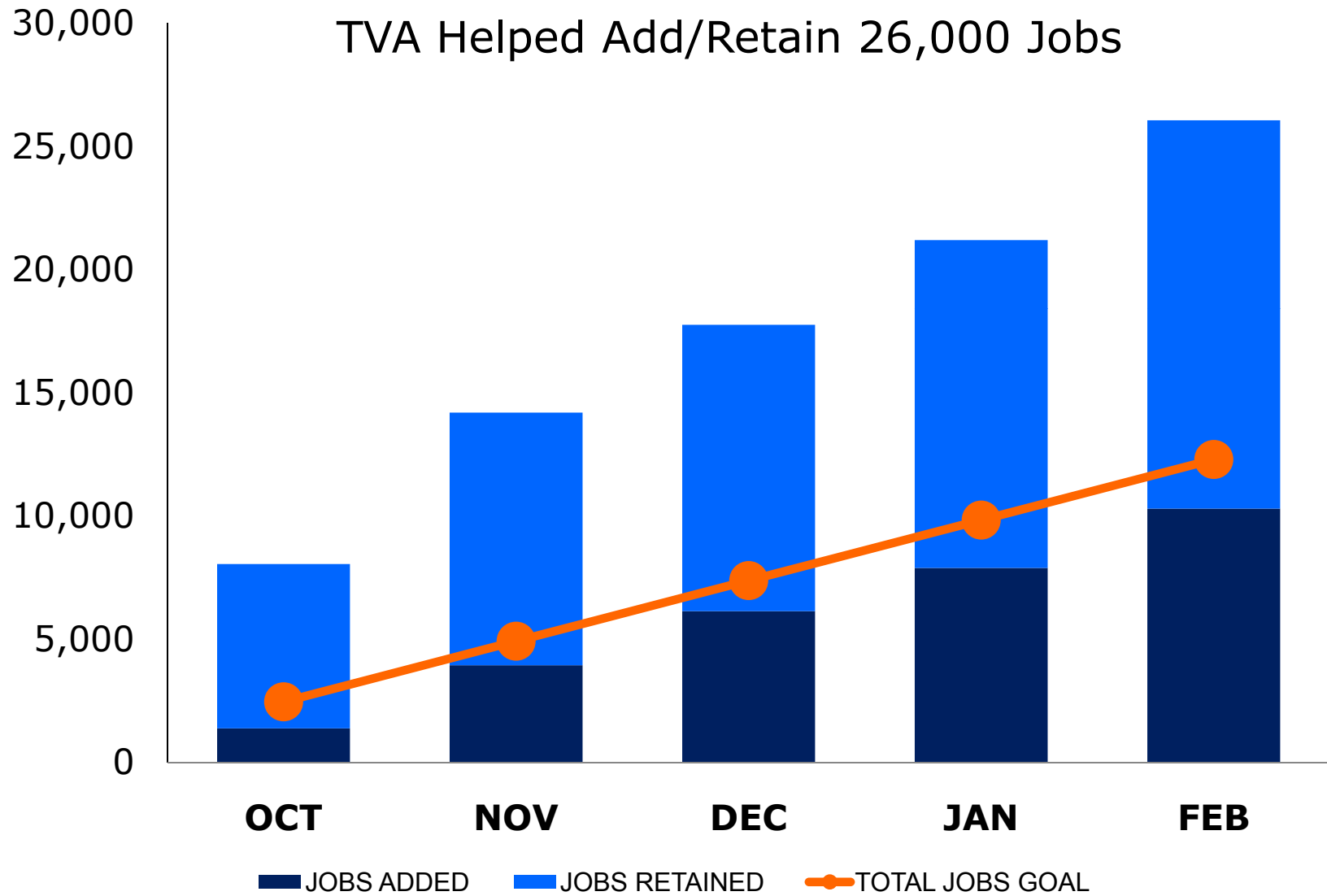
Draft plan has been issued

Public comments are
welcome

Economic Development



Economic Development



Recent Area Announcements

Volkswagen hired 1,500 employees in Chattanooga and plans to hire 500 more

Amazon is building two distribution centers in Hamilton and Bradley counties – a \$139 million investment with 1,400 new jobs

Wacker Chemie will increase capital investment in Bradley County by almost 50%, up to \$1.45 billion

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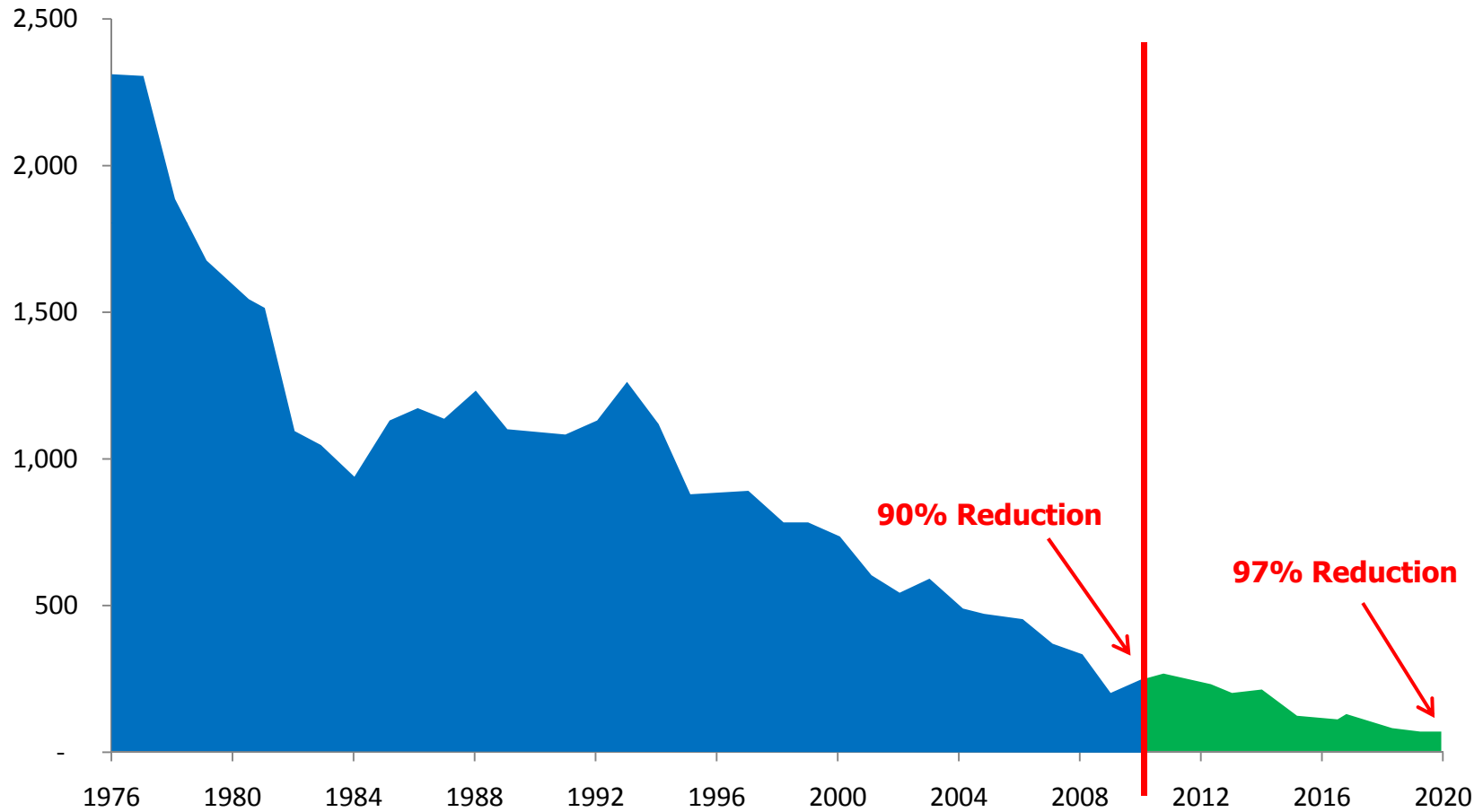


Cleaner Air

Cleaner Air

Sulfur Dioxide Reductions

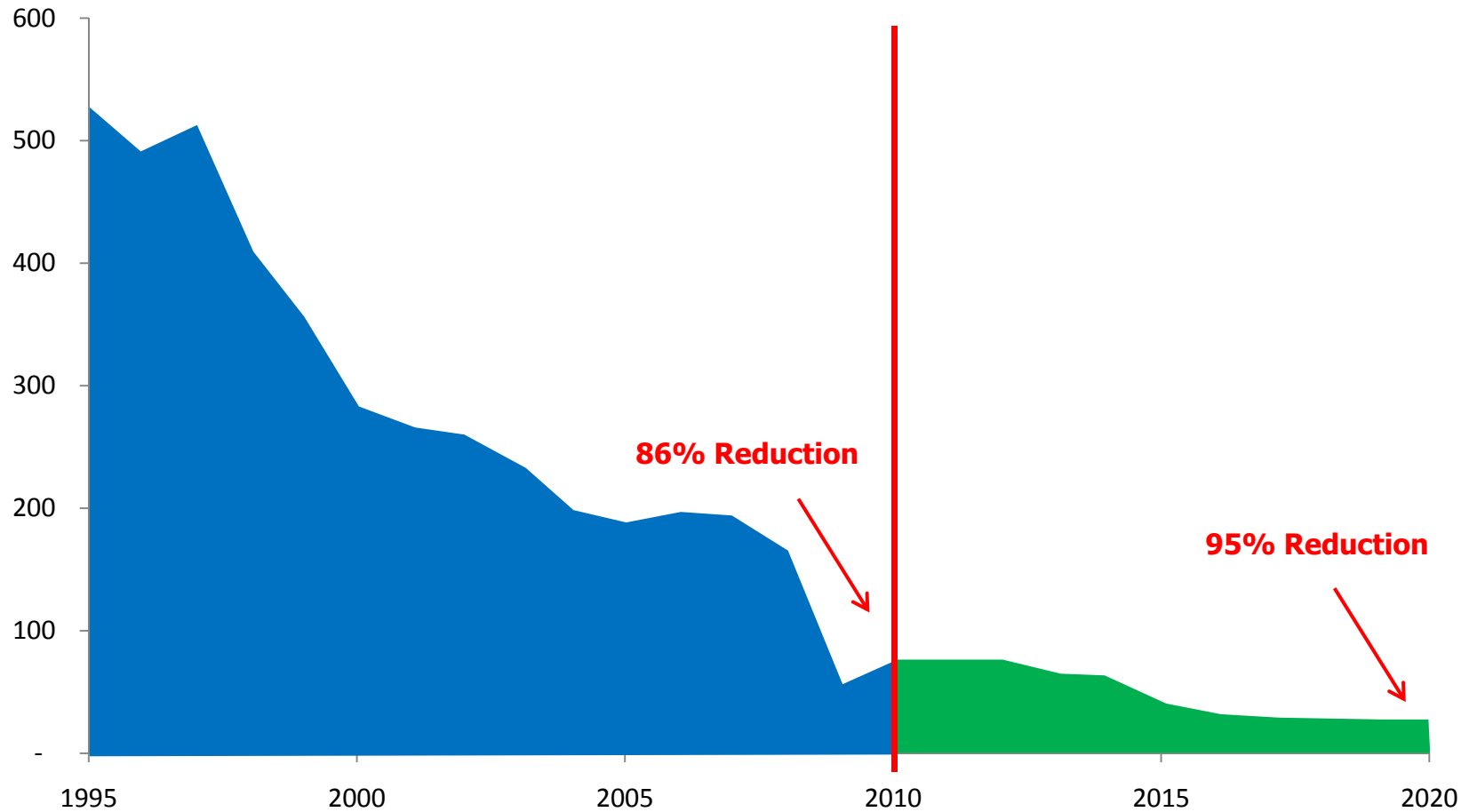
Thousands of Tons



Cleaner Air

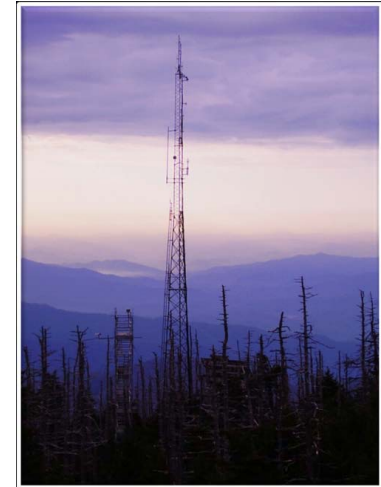
Nitrogen Oxide Reductions

Thousands of Tons



Smoky Mountain air quality improving

- 86% reduction in sulfur deposition
- 78% reduction in nitrogen deposition
- 17th year of collaboration with EPA



Data Collector, Clingmans Dome,
Great Smoky Mountains National Park
Photo courtesy Environmental
Protection Agency



Cloud collector. Photo Credit: MACTEC Engineering and Consulting, Inc. and Environmental Protection Agency

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More Nuclear Generation

Accurate and Timely Information



Our VISION



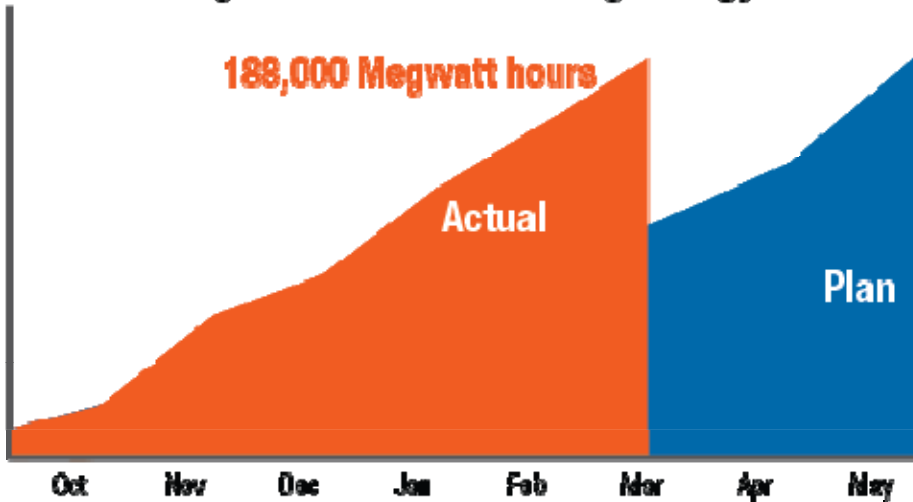
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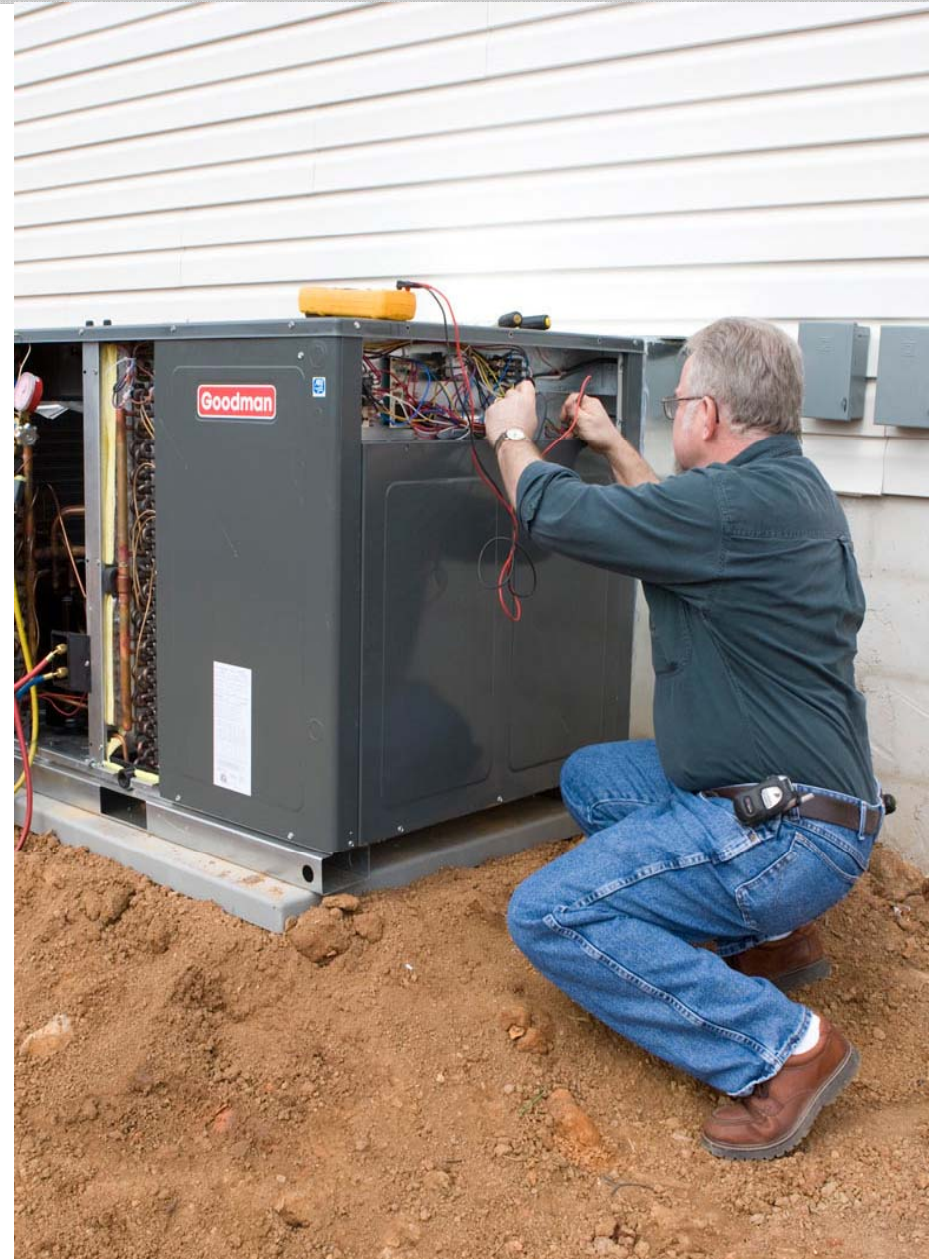
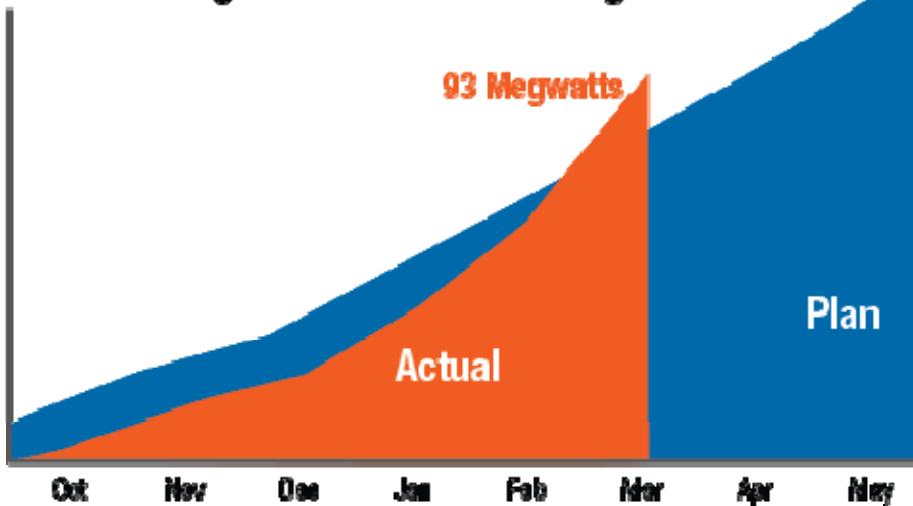
Greater Energy Efficiency

Energy Efficiency Update

Progress Toward Reducing Energy Use



Progress Toward Reducing Demand



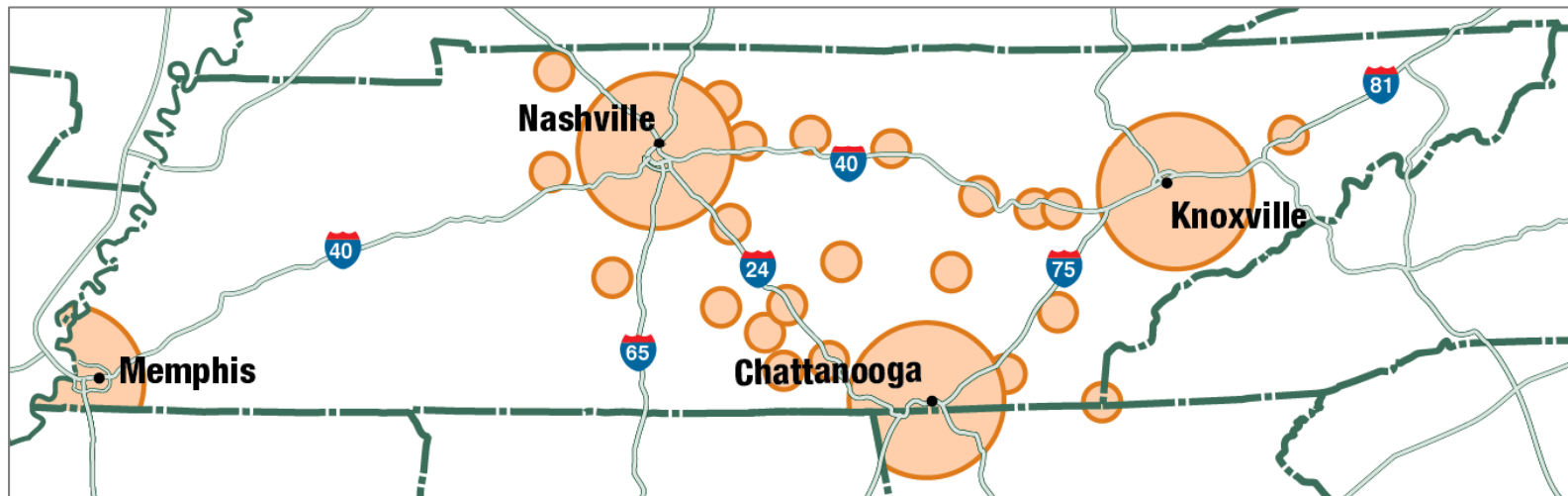
EV Project Planned in Tennessee

Tennessee, with publicly available stations, will have the largest electric vehicle charging network in the nation

Memphis has recently been added to the expanding electric vehicle network



ECOtality™ Planned Charging Infrastructure



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Financial Update

Performance Summary through March

	Performance Measures	v. Pln FYTD	Peers
Rates	Retail Rates		
	Non-Fuel O&M		
	Capital Expenditures		
	Net Cash Flow		

Reliability	Coal EAF		
	Nuclear EAF		
	Combined Cycle EAF		
	System Reliability: LNS		

Responsibility	Safety		
	Reportable Environmental Events		
	Customer Satisfaction		
	Organizational Effectiveness		

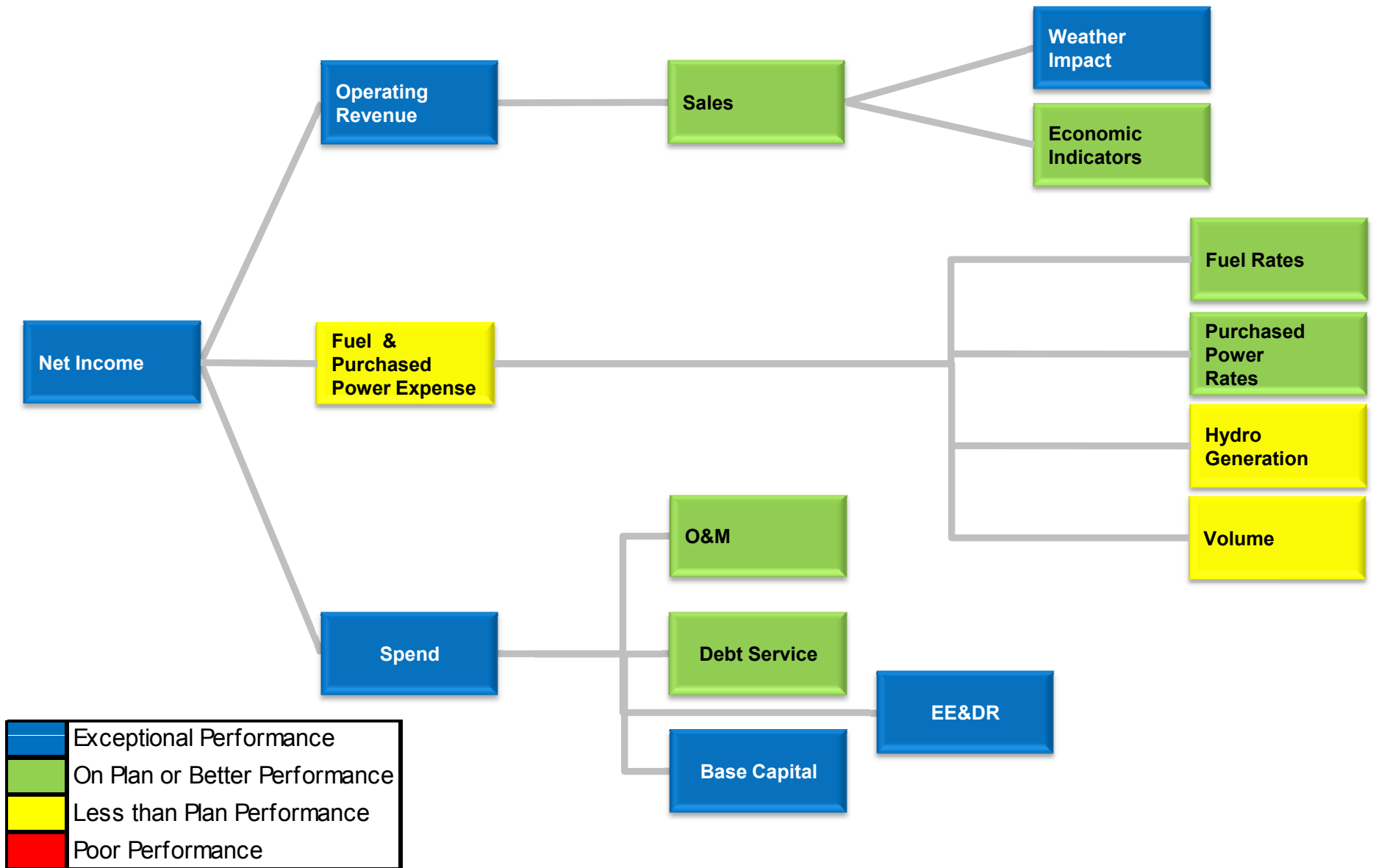
Summary Income Statement

March 2011 Fiscal Year to Date

(in millions)	YTD Actual	YTD Budget	Variance
Operating Revenue	\$ 5,796	\$ 5,615	\$ 181
Fuel & Purchased Power	2,126	2,063	(63)
O&M	1,684	1,726	42
Depreciation, Amortization	860	876	16
Tax Equivalents & Other	290	276	(14)
Operating Expenses	4,960	4,941	(19)
Operating Income	836	674	162
Other Income	19	9	10
Interest Expense	653	665	12
Net Income	\$ 202	\$ 18	\$ 184

'Preliminary YTD March Results – Unaudited'

Net Income Value Drivers



Summary Cash Flow Statement

March 2011 Fiscal Year to Date

Fiscal Year to Date <i>(Millions of Dollars)</i>	FYTD March 11		
	YTD Actual	YTD Ctl Bud	Variance
Beginning Cash and Short-term Investments	\$ 328	\$ 201	\$ 127
Cash Flow from Operating Activities	\$ 1,251	\$ 1,077	\$ 174
Cash Flow from Investing Activities	(1,178)	(1,615)	437
Cash Flow from Financing Activities	380	547	(167)
Net Change in Cash & Cash Equivalents	<u>\$ 453</u>	<u>\$ 9</u>	<u>\$ 444</u>
Ending Cash and Short-term Investments	<u>\$ 781</u>	<u>\$ 210</u>	<u>\$ 571</u>

FYTD Total Debt	\$ 24,275	\$ 24,491	\$ 216
------------------------	------------------	------------------	---------------

'Preliminary YTD March Results – Unaudited'

Summary

March 2011 Fiscal Year-to-Date

- Colder weather drove higher sales and fuel expense
- Overall net income for reinvestment greater than planned
- Favorable cash flow from timing of construction and base capital spending

Forecasted Fiscal Year 2011

- Uncertainty surrounding Japanese nuclear situation
- Economic uncertainty could increase revenue volatility
- Capital expenditures will normalize

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Chairman Selection



Integrated Resource Plan

TVA's Environmental and Energy Future

For Board Consideration

Accept the Integrated Resource Plan and authorize the Chief Executive Officer to use its recommended direction as a guide in energy resource planning and selection

Translating the TVA Vision to Action

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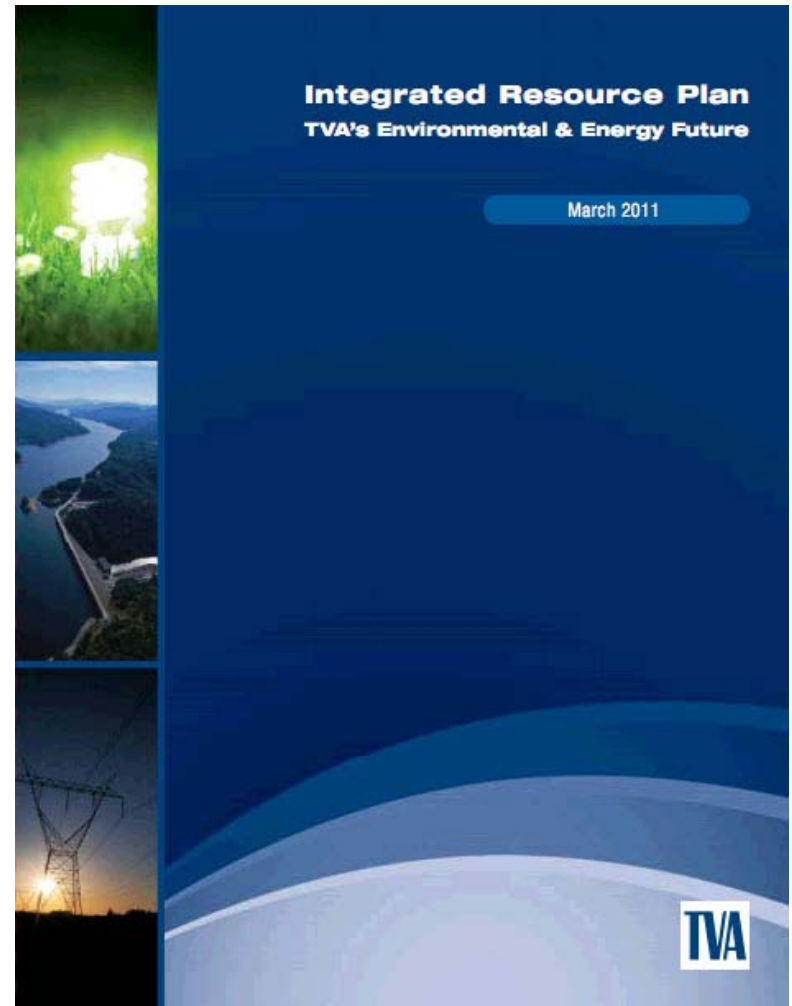
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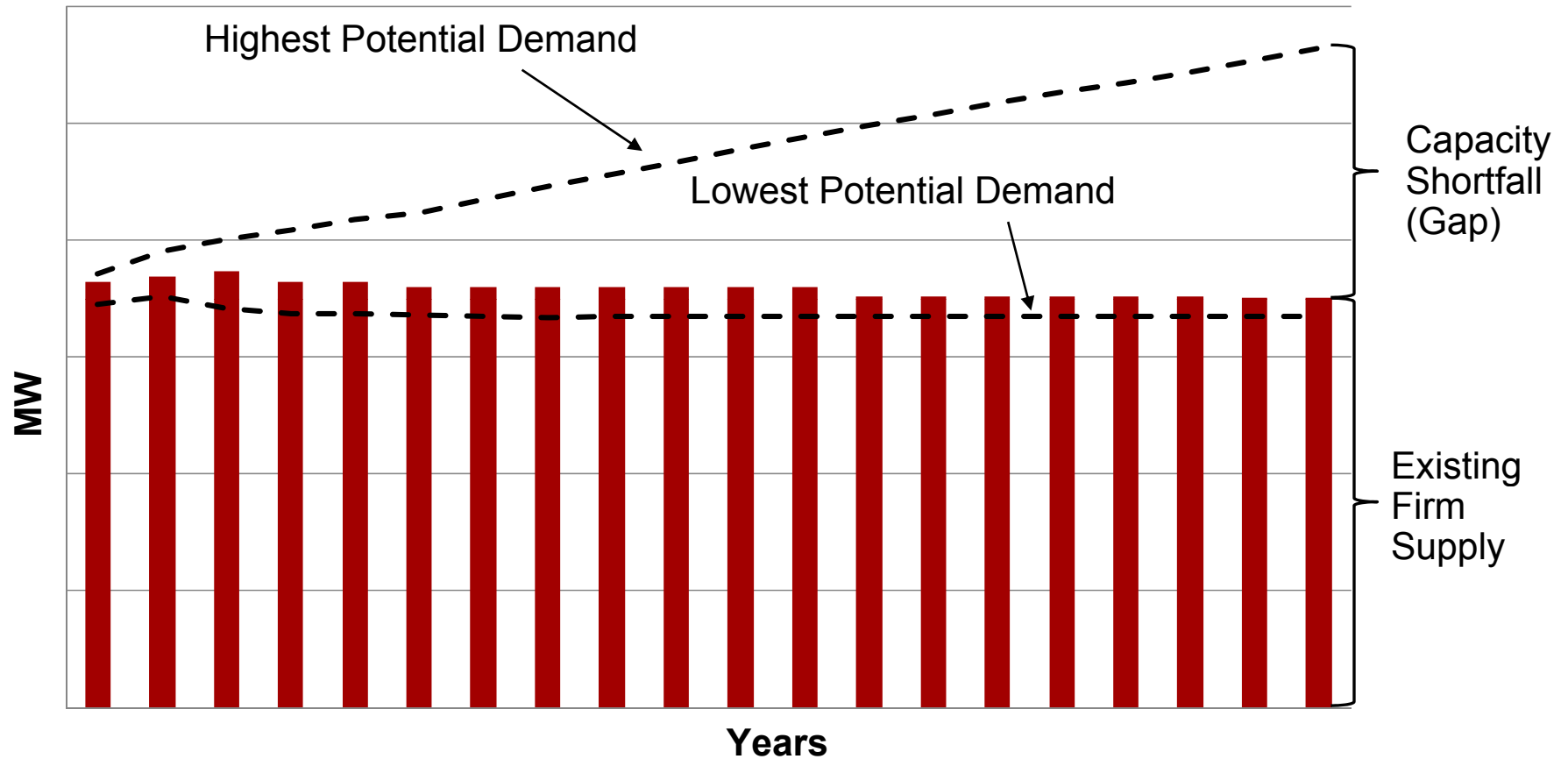
Integrated Resource Plan is Forward Looking

IRPs strive to:

- Guide power system planning
- Minimize costs to all stakeholders
- Allow flexible responses to change
- Minimize environmental impacts



Balances Supply and Demand



Identify the least-cost options to meet customer requirements

Provides Directional Guidance



- The IRP is a compass; not a GPS
- Recommends direction and ranges
- Does not prescribe specific assets or programs

Stakeholder Involvement

Forum for Public Input

- ◆ Public Scoping Meetings (Summer 2009)
- ◆ Stakeholder Review Group
- ◆ Quarterly Public Briefings
- ◆ Phone Survey (Summer 2010)
- ◆ Draft IRP Public Comment Period (Fall 2010)
- ◆ External Web Page (www.tva.gov/irp)



May 2009

*Input was
incorporated
throughout the
process*

April 2011

Structured Process

Strategies Considered

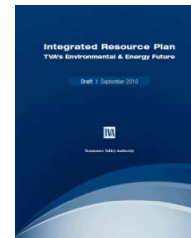


Scenario Analysis

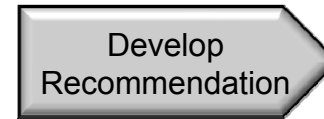
		Strategies				
		A	B	C	D	E
Scenarios	#1					
	#2					
	#3					
	#4					
	#5					
	#6					



Draft IRP



Recommended Planning Direction



Final IRP



- Evaluated strategies across possible futures (over 3,000 cases)
- Compiled analysis results, stakeholders input, and potential risks
- Recommended a broad Planning Direction

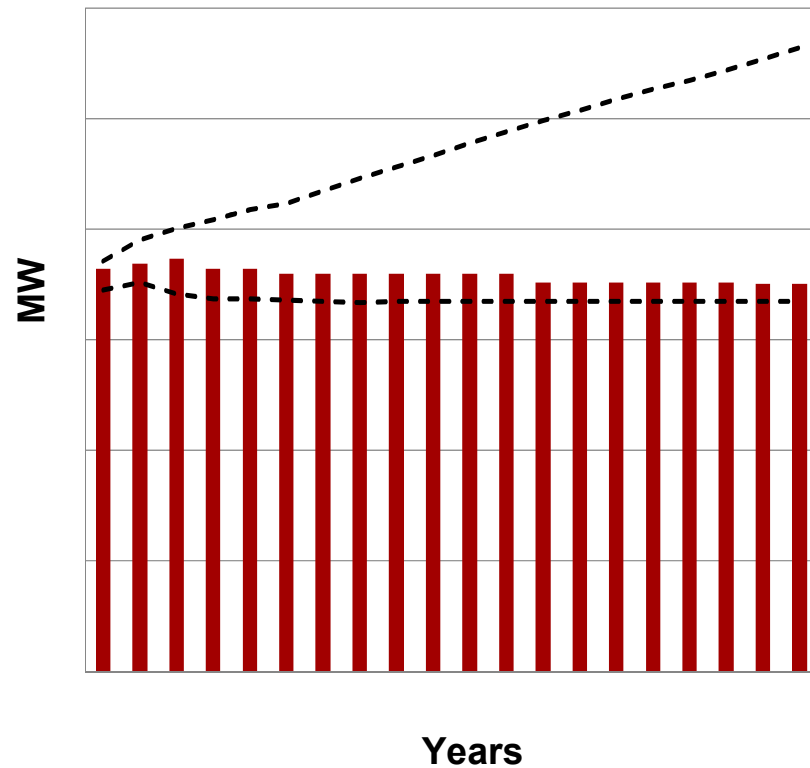
Establishes Recommended Planning Direction

Component	Recommendations	Guideline MW Range
Energy Efficiency / Demand Response	◆ Expand contribution of energy efficiency / demand response in the portfolio	3,600-5,100 (11,400-14,400 GWh)
Renewable additions	◆ Pursue cost effective renewable energy	1,500-2,500
Coal capacity idled	◆ Consider increasing amount of coal capacity idled	2,400-4,700
Energy storage	◆ Add pumped storage hydro capacity	850
Nuclear additions	◆ Increase contribution of nuclear generation	1,150-5,900
Coal additions	◆ Preserve option of generation with carbon capture	0-900
Natural gas additions	◆ Utilize natural gas as an intermediate supply source	900-9,300

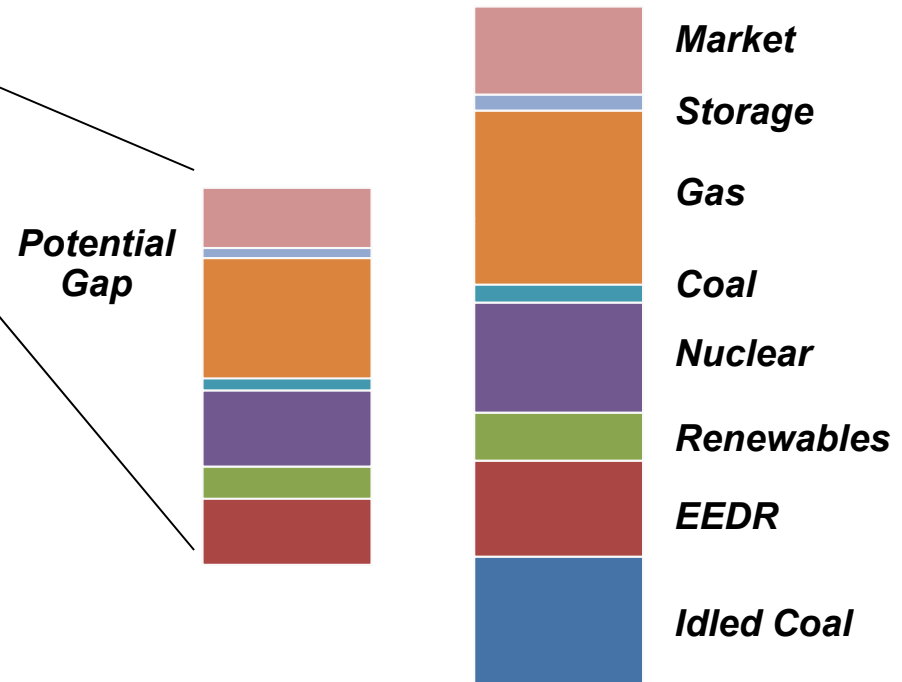
**Additional details about Recommended Planning Direction components are included in the IRP document*

Balances Supply and Demand

Supply and Demand



Portfolio Options



Portfolio options provide diversity and flexibility

Creates the Most Favorable Blend of Resources

Recommended planning direction has the lowest cost generation mix and plan risk

Recommended direction also balances emission reductions and cost

Achieves Objectives

- Preserves reliable, low-cost power
- Reduces environmental impacts and risk
- Increases flexibility in responding to change
- Incorporates multiple stakeholder perspectives
- Provides guidance for implementing TVA's Vision

TVA will begin the next IRP by 2015

Recommendation

Accept the Integrated Resource Plan and authorize the Chief Executive Officer to use its recommended direction as a guide in energy resource planning and selection



Environmental Future – Implementing Agreements

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Rates and Environmental Future

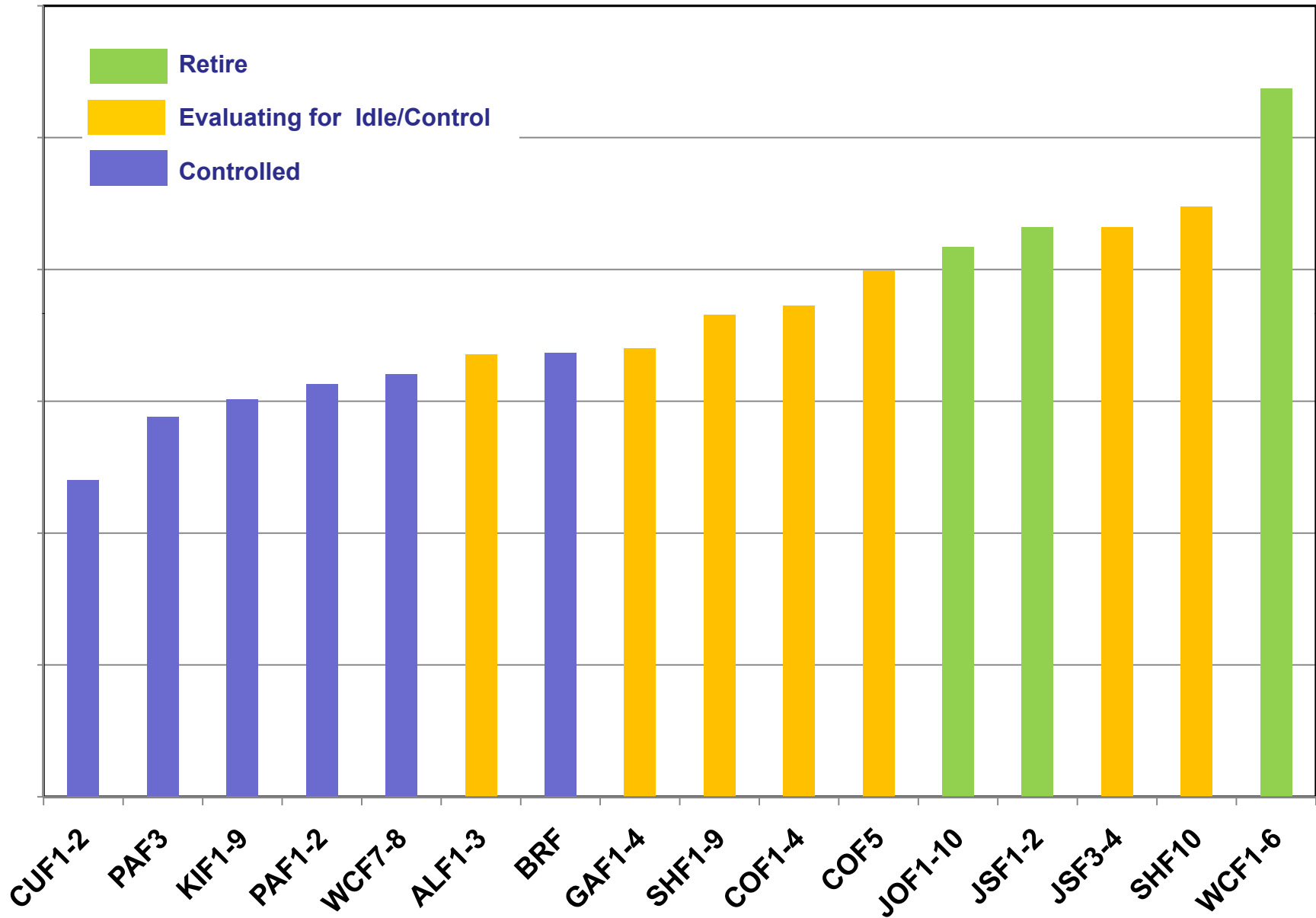


Aspiration

Be one of the lowest
cost power providers in
the region

Retirement of least economic plants

Cost by Unit Group



Reliability and Environmental Future

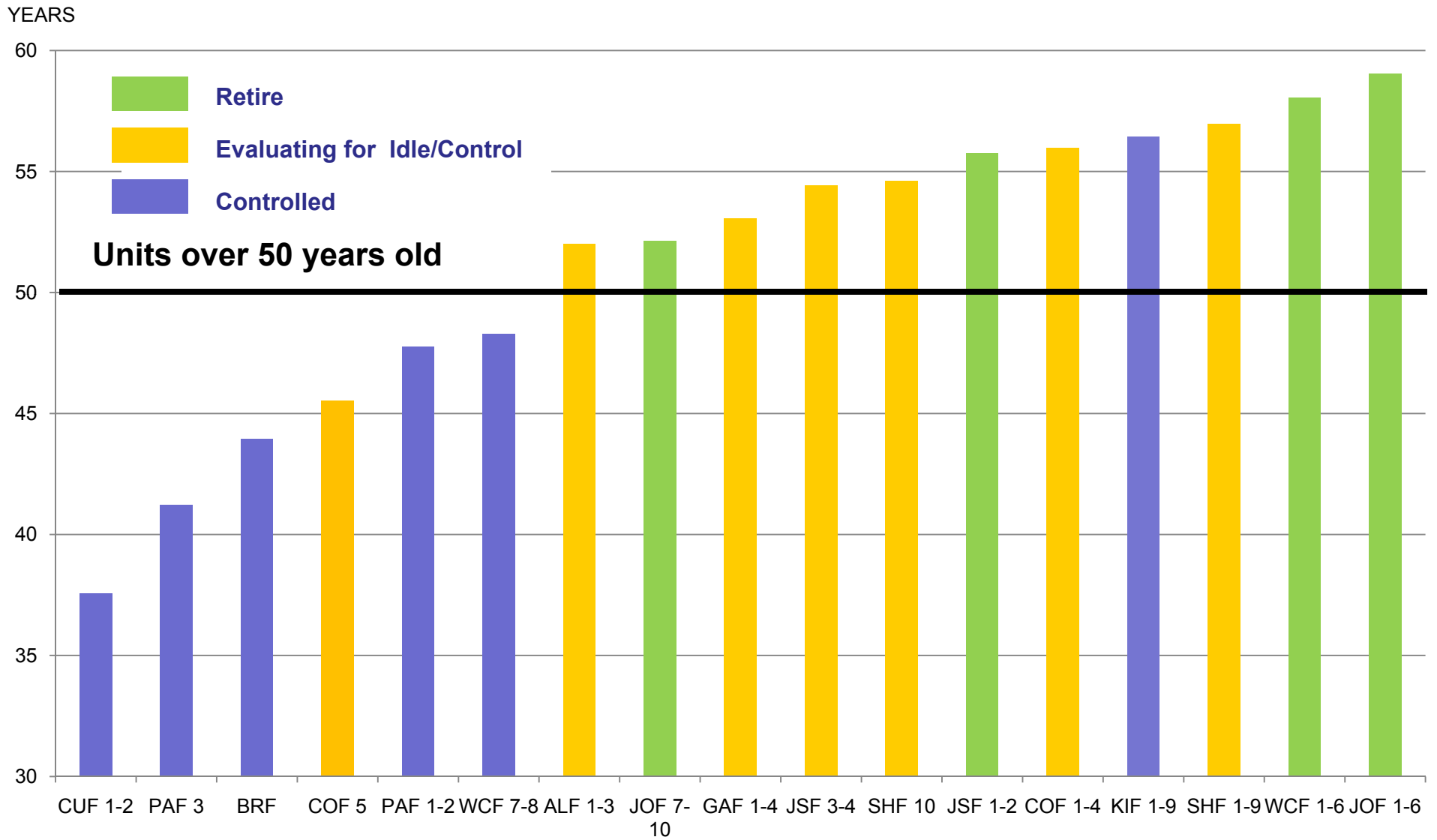


Aspiration

Be one of the nation's leaders in affordable customer reliability

Avoid additional investments in oldest plants while maintaining sufficient supply to meet the growing load

Average Age by Unit Group



Sufficient Supply in 2020 (MW)

2011 Firm Capacity	36,200
---------------------------	--------

Coal Retirements	-2700
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Expected Additions

Energy Efficiency	2900
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Nuclear	2800
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Gas	2000
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Estimated Total Capacity by 2020	41,200
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2020 Load and Reserves Forecast	40,150
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±5% on Load Requirements	42,150 -38,150
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Cleaner Air and Environmental Future

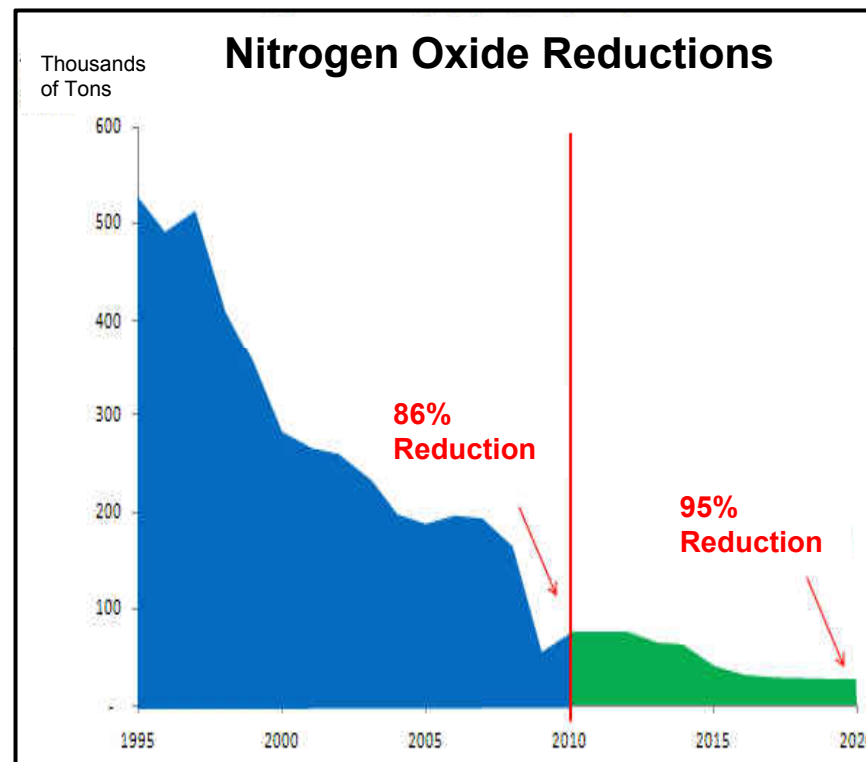
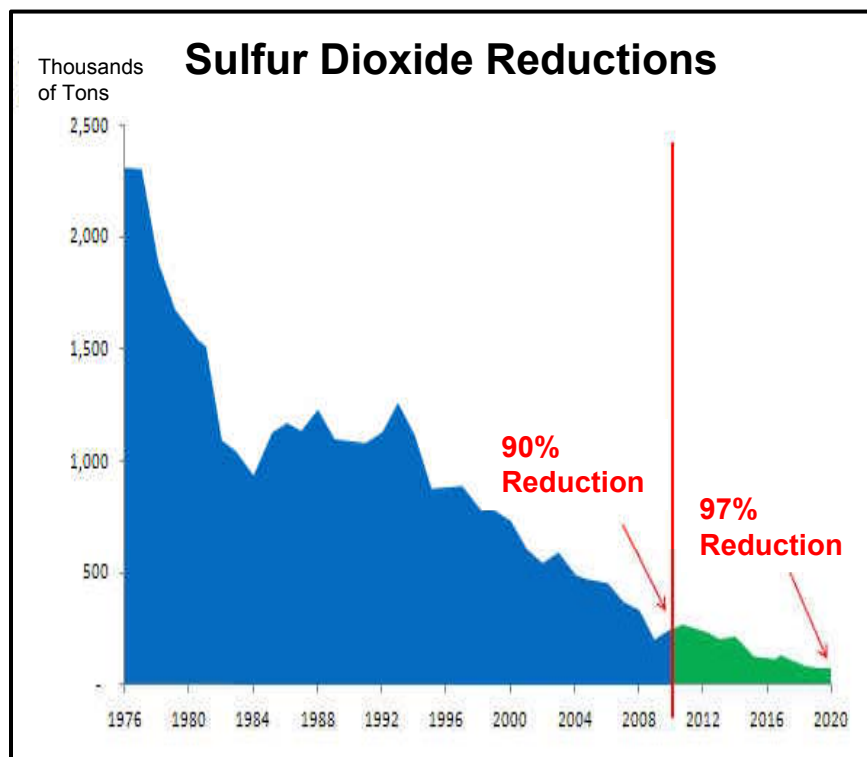


Aspiration

Lead the nation in
improving air quality

**Continue to reduce air emissions
through controls and retirement of
less economic coal plants**

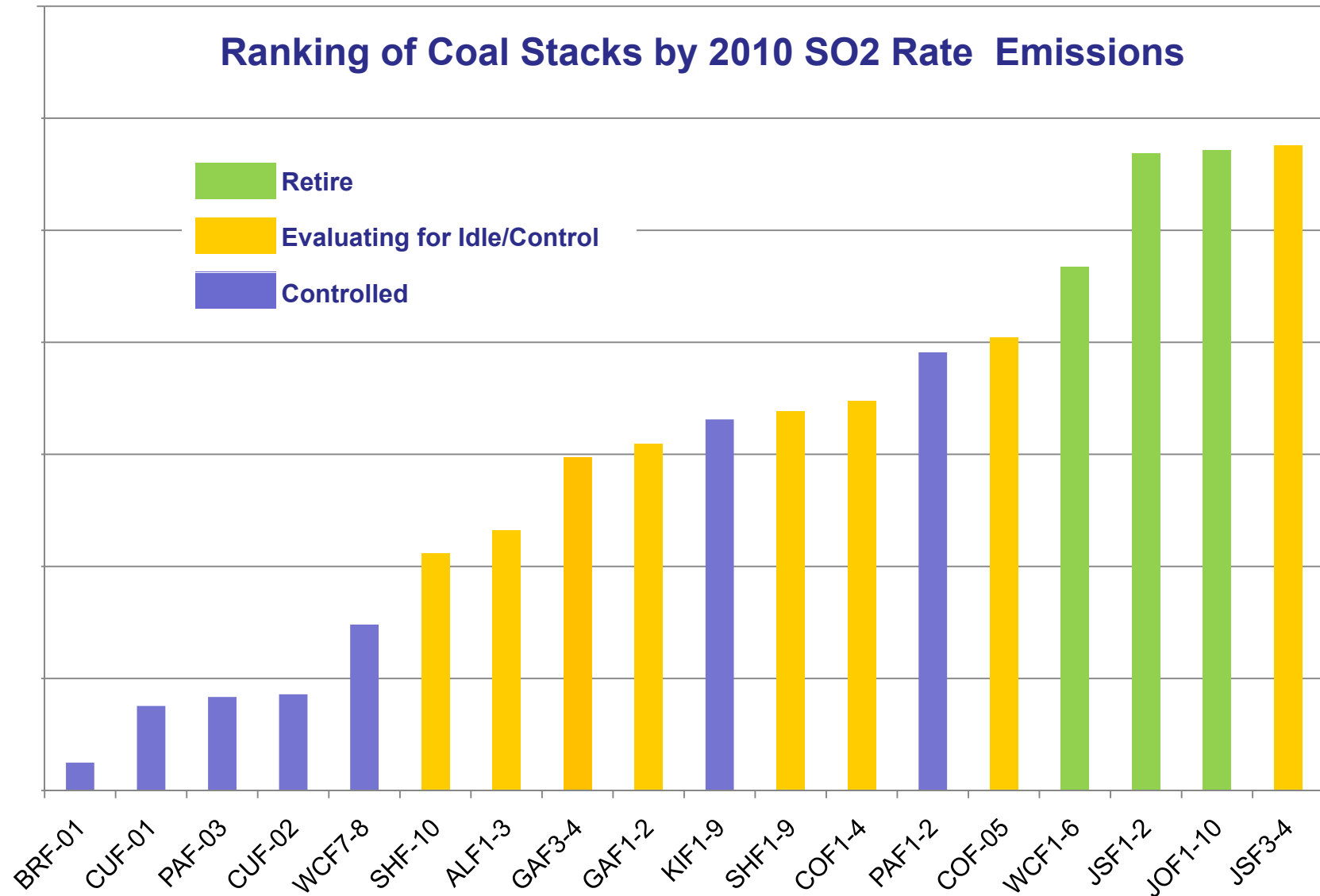
Continuing Reductions in Air Emissions



TVA reductions of SO₂ to 97% and NO_x to 95% below peak emissions levels by 2020

Further Reduce Air Emissions Coal Retirement

Least economic plants also have higher emissions rates



TVA's Environmental Future

- TVA's environmental future with our vision means:
 - Controlling and maintaining low-cost units
 - Retiring older costly units
 - Evaluate remaining units base on regulatory and economic environment
- EPA Negotiations align well with our environmental future direction



Implementing Agreements

Clear Air Direction Provides Opportunity

TVA has the opportunity to:

- Resolve long-standing disputes
- Obtain more certainty on future plant operations
- Reduce regulatory uncertainty for maintenance

TVA - EPA Discussions

- TVA initiated discussions with EPA
- Multiple parties involved:
 - EPA, States of Alabama, Kentucky, Tennessee and North Carolina, and Sierra Club, National Parks Conservation Association and Our Children's Earth Foundation
- A collaborative effort to reach an Agreement

Agreement Hard Spots

- Financing of cleaner energy replacement for retired plants
- Potential impact on employees and communities from plant retirements
- Any new regulations still apply to TVA
- \$10 million civil penalty

Agreement Highlights

- Increased assurance to continue to operate plants
- Retirement commitment is within the range of the IRP
- Provides flexibility in method to reduce emissions for remaining fleet
- Invests \$350M in Environmental Improvement Projects

The agreements support TVA's Vision to become one of the nation's leading providers of low-cost, cleaner energy by 2020.

Recommendation

Authorize the Chief Executive Officer to implement the proposed Clean Air agreements with EPA, the states and environmental groups

Nuclear Oversight



Audit, Risk, and Regulation





Board's Role as Regulator

Customer and External Relations



People and Performance



Finance, Rates, and Portfolio





Valley Investment Initiative Eligibility Pilot

For Board Consideration

Approval of a pilot program which would allow an existing customer with a non-conforming load to participate in the Valley Investment Initiative program

The customer must agree to:

- 1) provide instantaneous interruptibility
- 2) stagger demand on the TVA system

Background – Nonconforming load

TVA offers Valley Investment Initiative (VII) to encourage sustained investment and employment by industry

Customers with nonconforming loads are excluded from VII because of negative impacts on TVA system operations

Yet, they have positive economic impacts

Pilot will test use of VII to:

- Incent actions to mitigate impact on system operations
- While capturing economic benefits of job retention

Background – Pilot Program

Customer actions will be evaluated for effectiveness before the end of a two-year period

Appropriate action concerning continuation will be recommended

Pilot is not available to customers receiving Enhanced Growth Credit

Recommendation

Approval of a pilot program which would allow an existing customer with a non-conforming load to participate in the Valley Investment Initiative program.

The customer must agree to:

- 1) provide instantaneous interruptibility
- 2) stagger demand on the TVA system



Power Contracts



Transformer Contracts

For Board Consideration

Authorize CEO to approve up to three long-term blanket contracts for the supply of large and medium transformers, subject to an aggregate ceiling of no more than \$325 million and five-year duration

Background

New supply chain initiatives identified transformer sourcing as a potential savings opportunity

Expanding the supplier base will enable TVA to realize savings

Background

TVA issued a request for proposal to a global list of suppliers

14 suppliers responded

Based on an extensive evaluation process including total cost of ownership, supplier capabilities, quality, and Federal foreign trade regulations, three suppliers were recommended

Recommendation

Authorize CEO to approve up to three long-term blanket contracts for the supply of large and medium transformers, subject to an aggregate ceiling of no more than \$325 million and five-year duration



**Bellefonte Nuclear Plant –
Budget and Decision
Extension**



Coal Combustion Product Process Conversions

For Board Consideration

Approve two capital projects that will enable elimination of the bottom ash wet waste stream:

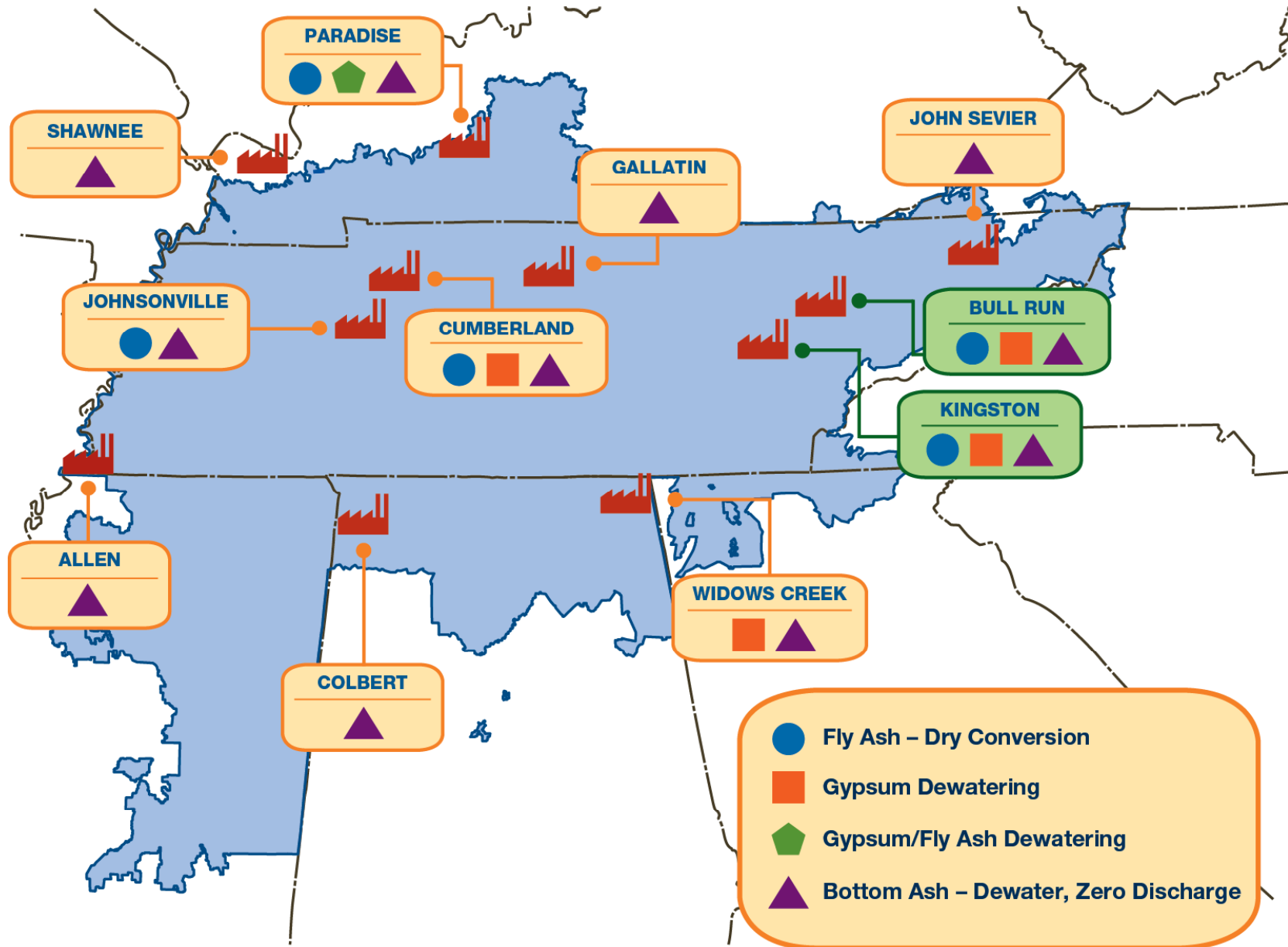
- 1) A bottom ash/gypsum dewatering facility at Bull Run Fossil Plant
- 2) A bottom ash dewatering facility at Kingston Fossil Plant

Background

TVA has established a master plan to close all wet ponds containing coal combustion residuals and convert to a dry ash handling process

Preliminary engineering was approved in October 2010 and is complete

Potential Conversions



Recommendation

Board approve a total budget of:

- \$93.3 million for the Bull Run Fossil Plant Project
- \$49 million for the Kingston Fossil Plant Project

Our VISION



ONE OF THE NATION'S **LEADING** PROVIDERS OF LOW-COST
AND CLEANER ENERGY **BY 2020**



Low Rates



Cleaner Air



High Reliability



More Nuclear Generation



Responsibility



Greater Energy Efficiency

**Acting to meet the region's needs for the future,
while improving our core business today.**