Operating an Electric System that is Multidirectional

Evolving Reality: Renewables, energy efficiency (EE), distributed generation, demand response (DR) managed by multiple entities

Capacity (kW) and Energy (kWh)

Load Management MegaWatts & MegaWatts

Supply Side

Demand Side

Image Source: EPRI

Challenges and Opportunities
Balancing Supply- and Demand-Side Resources

Optimal System Efficiency

Through

- Generation Supply
- Market Supply
- Rate Design
- Energy Efficiency
- Demand Response
- Grid Modernization
- Distributed Generation
- Economic Development

Levers TVA Must Optimize (and Balance)

Challenges and Opportunities
Load Forecasts have progressively been reduced as they have been revised and updated over the last several years.
reacting to declining demand

challenge: slow economic recovery and lower sales

sales (twh)

fy12 sales: 165 twh
fy20 sales: 168 twh

growth (cagr): less than 1%

sales do not return to fy08 levels until beyond 2020

challenges and opportunities
Ensuring National Rate Competitiveness

Average Effective Industrial Rate – Top 100 Utilities

12-Month Average Industrial Rate (¢ / kWh) of the Top 100 U.S. Utilities

- TVA EIA Results - USEC Excluded
- Top Quartile - 5.90
- Median - 6.40
- Bottom Quartile - 8.30

*Through December 2012, TVA is 32nd out of 100, Effective Rate: 5.85¢ (without USEC).

Hence, competitors rates fell more than TVA's in second half of 2012.

Note: TVA rate excludes USEC – Source: EIA 826 & ESS

Source: EIA
Addressing Impending Environmental Regulations

- Future rules are hard to predict
- Costly and difficult to comply
- Introduce uncertainty and risk into planning and future operations

Challenges and Opportunities