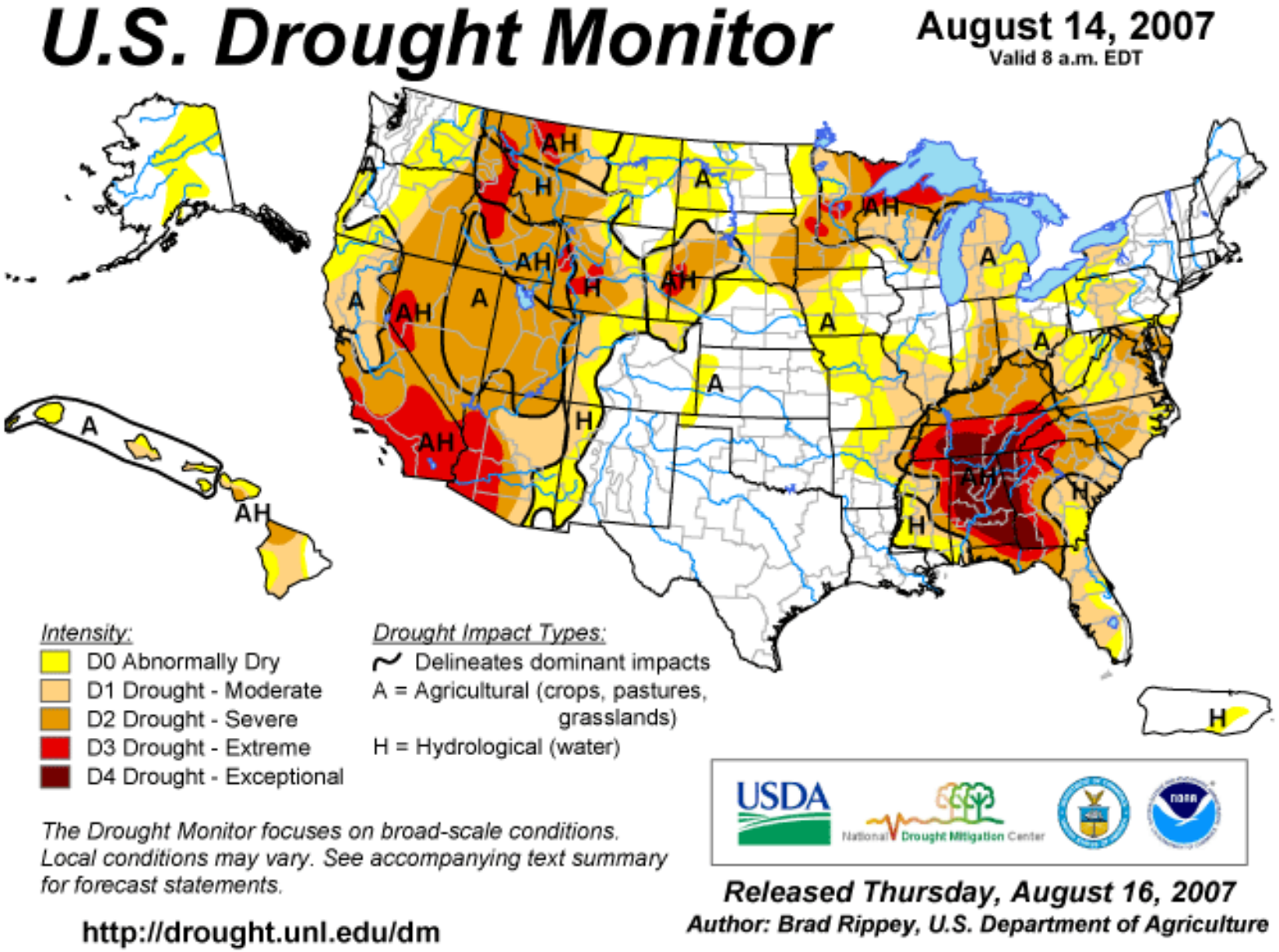
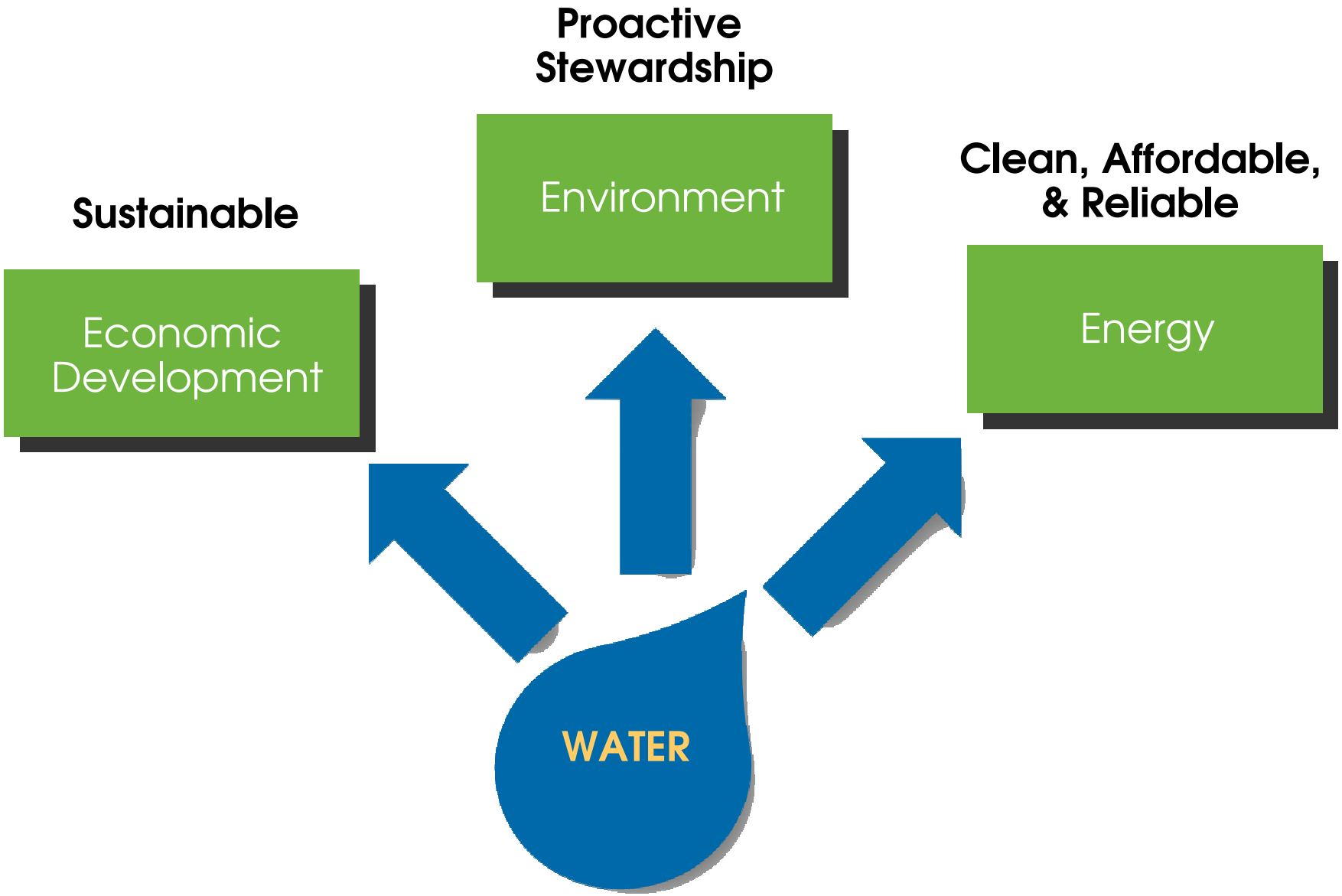
Water Use Efficiency

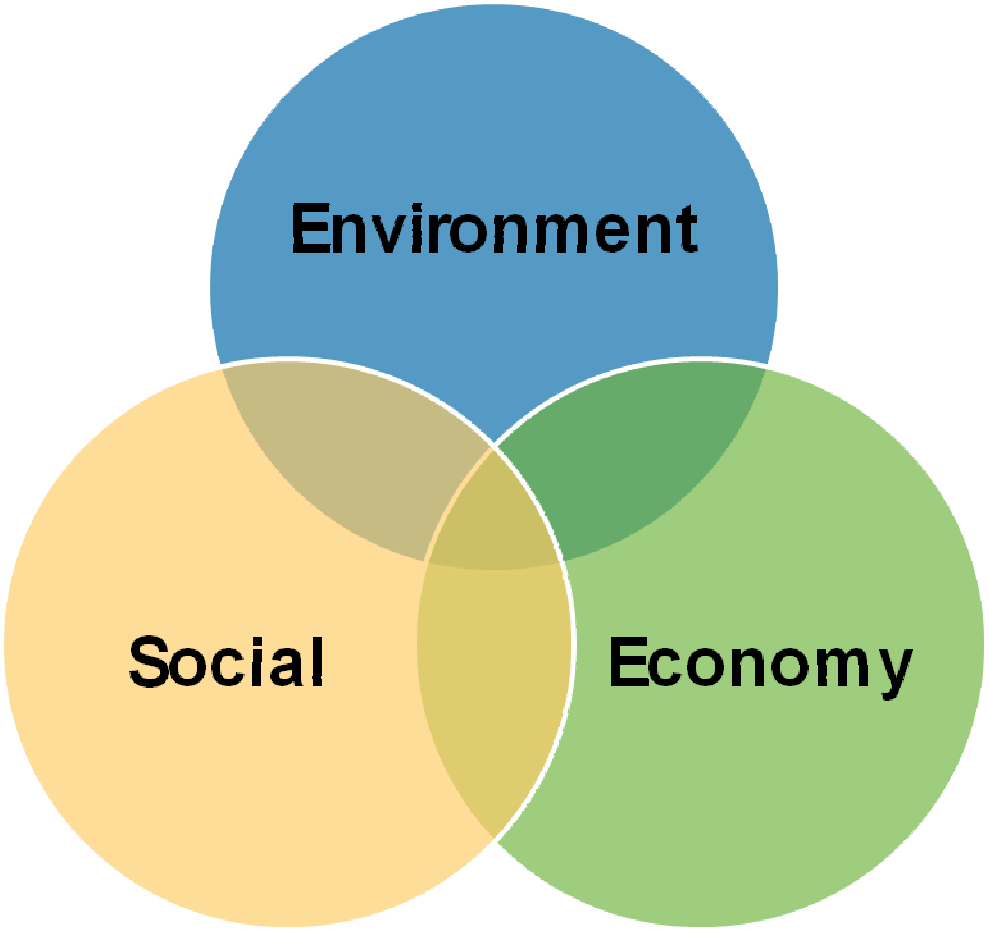
The Southeast Drought



TVA Areas of Responsibility



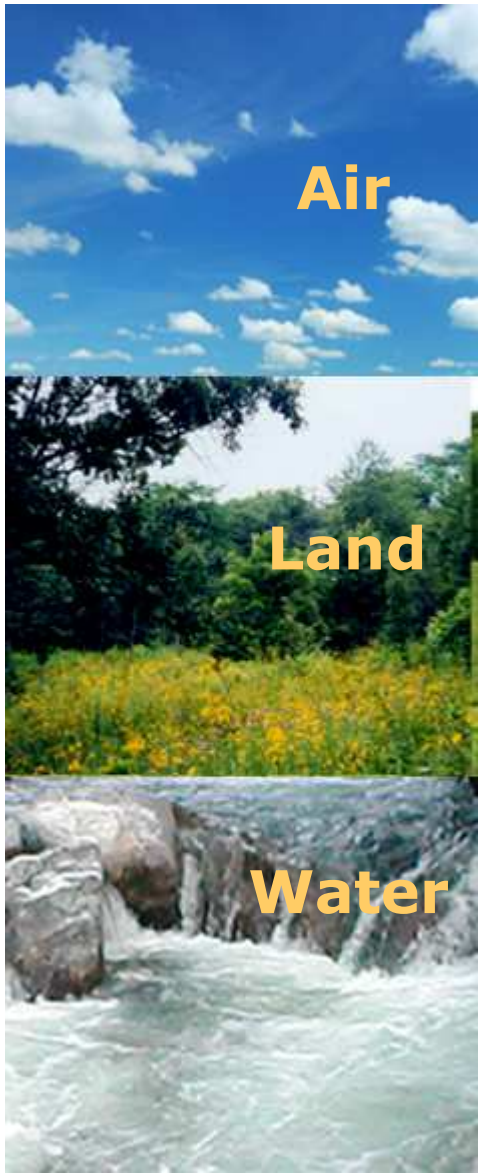
What is Sustainable Economic Development?



Sustainable Economic Development

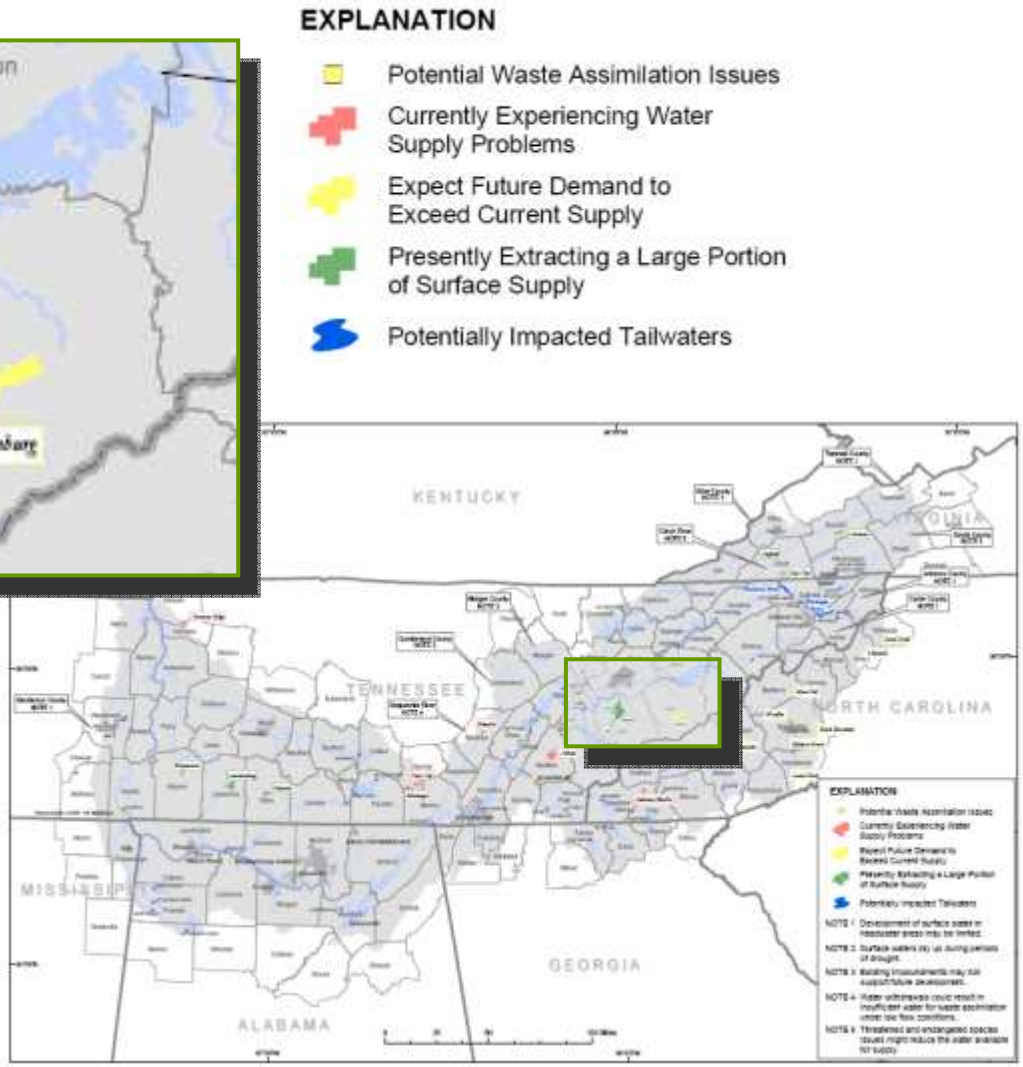
"Development that meets the needs of the present without compromising the ability of future generations to meet their own needs"

Bruntland Report



- Adequate water supplies are critical
- Increased water supply demand
- Plan for drought management

TVA Long Range Water Planning



TVA Water Supply Inventory and Needs Analysis Report

Available at:
http://www.tva.gov/river/watersupply/report.htm

Clean & Affordable Electricity

11 coal-fired plants

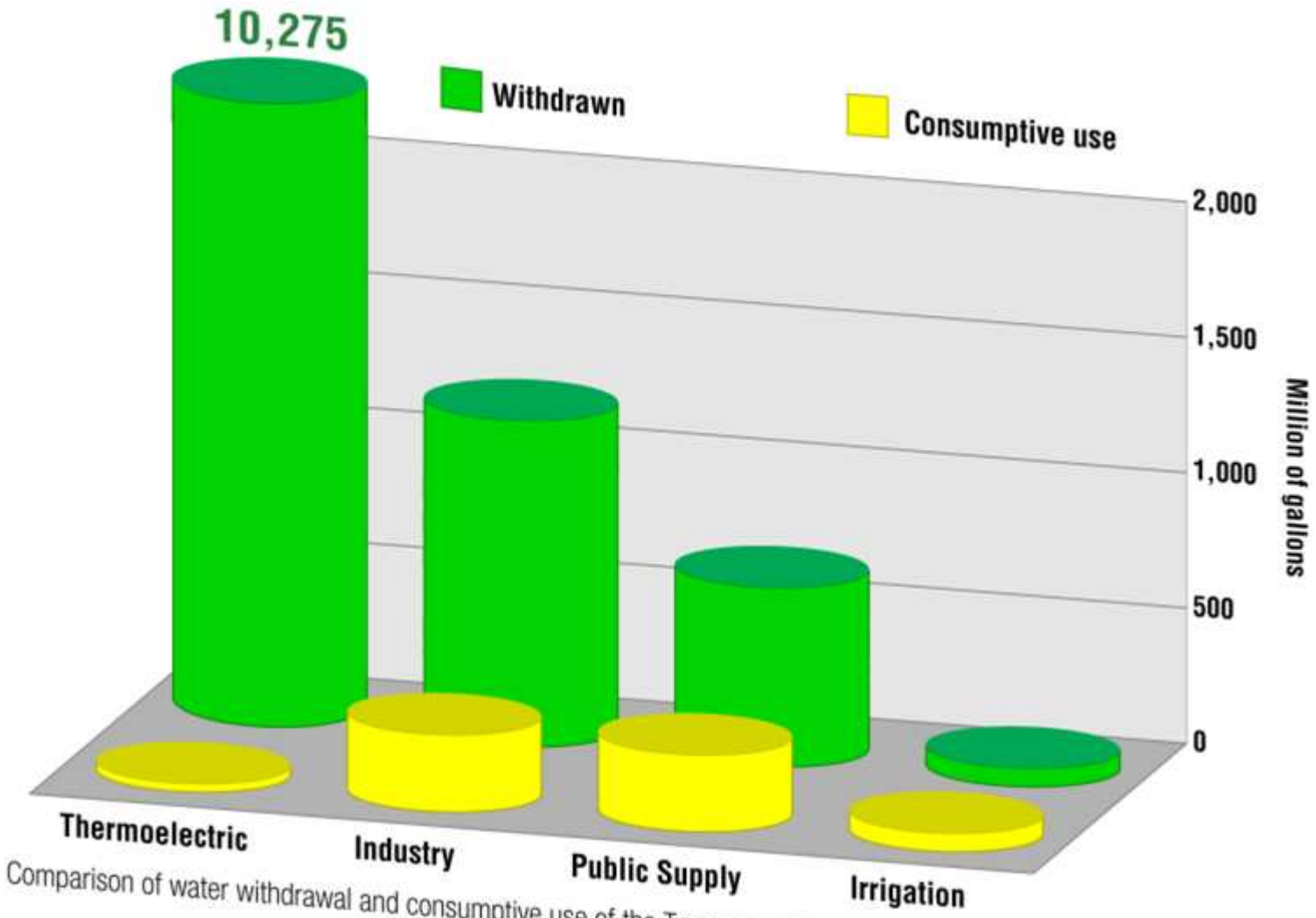
renewables

3 nuclear plants

8 combustion-turbine plants

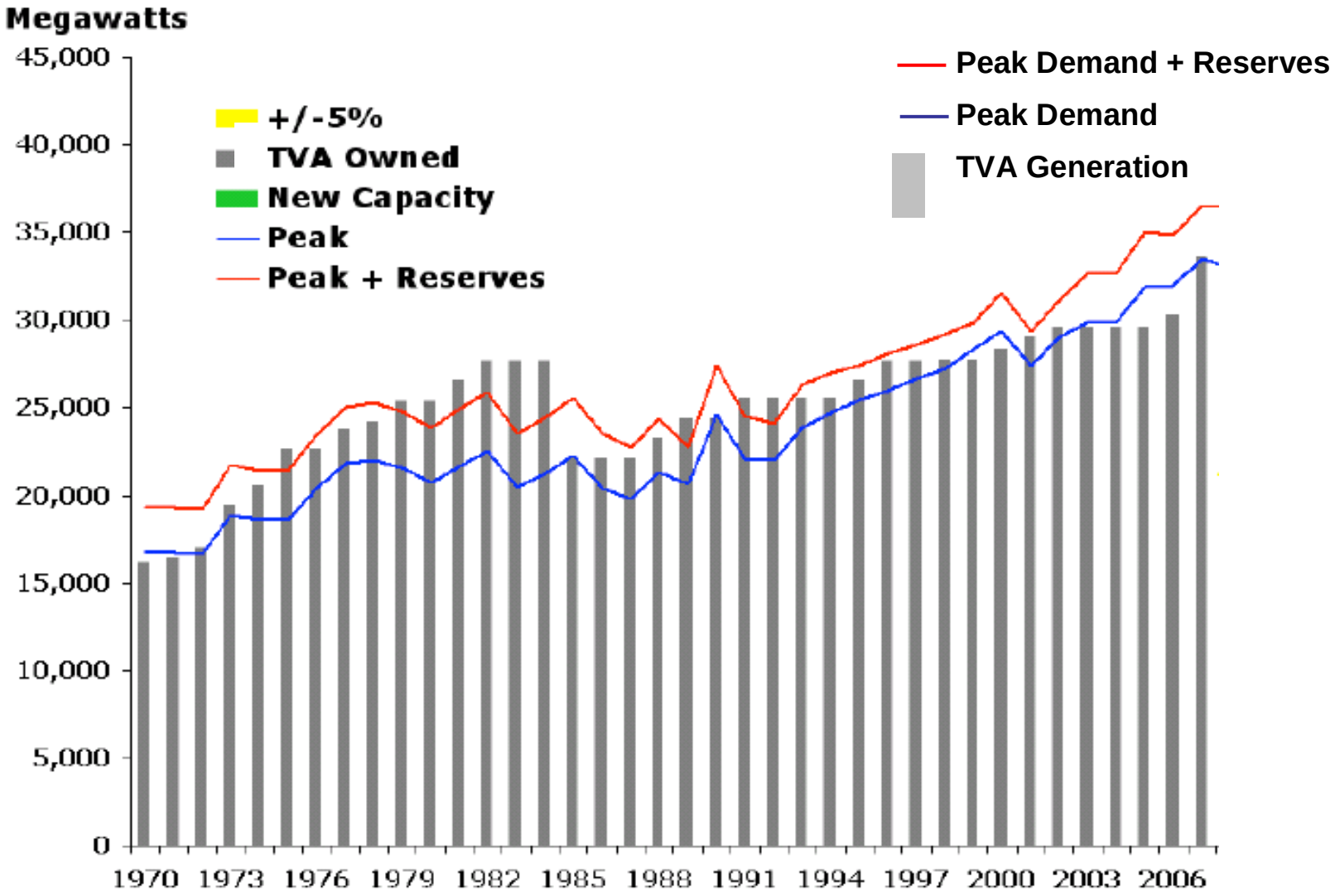
29 hydroelectric dams

Water Withdrawal and Consumption



Comparison of water withdrawal and consumptive use of the Tennessee River watershed in 2000.

Electricity Demand Continues to Grow



"Peak Demand Growing ~2.0%/year"

Proactive Environmental Stewardship

Climate change mitigation

Improvement of air quality

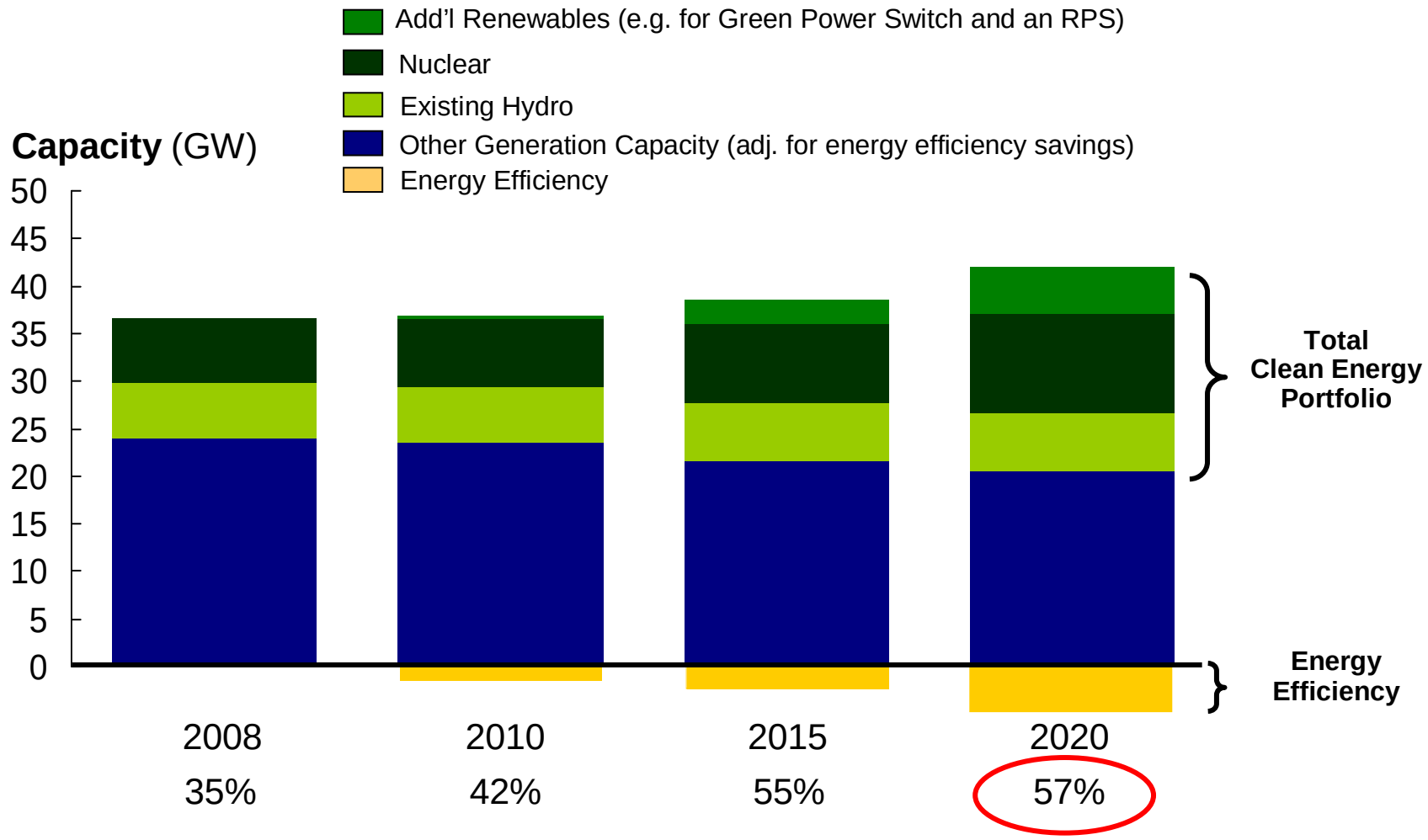
Protection and improvement of water resources

Waste minimization

Sustainable land use

Sound natural resource management

Renewable and Clean Energy Portfolio



"TVA's Portfolio >50% Renewable and Clean Energy"

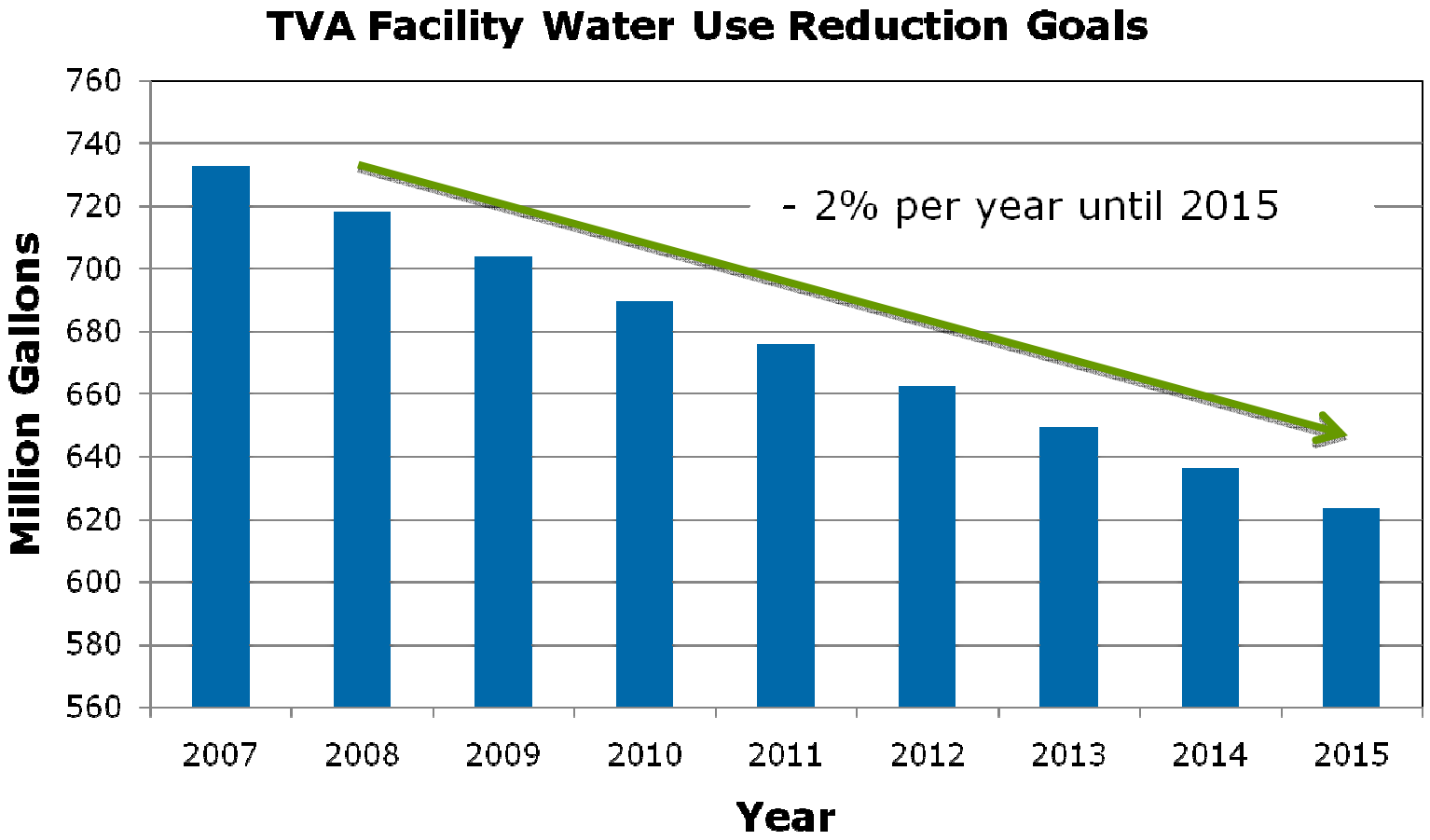
Water and Energy Connection

- One-third TVA power distributors are also water/sewer providers
- 3-4% total US electric load (water and wastewater services)
- $4+ billion US electricity cost
- Use more energy than pulp/paper and petroleum sectors combined

Water and Energy Connection

- Electricity used for 5 minutes running hot water = 14 hours burning 60-watt bulb
- 17% of energy use in homes is for heating water
- Electricity used for hot water heating > all lighting (residential)

TVA Water Use Reduction Efforts



Recent TVA Water/Energy Efficiency Efforts

- Process optimization studies
- Pumping system assessments
- Enhancing wastewater aeration efficiency

Recent TVA Water/Energy Efficiency Efforts

- Education
  - Live plays at elementary schools
  - Regional workshops for water utility professionals

Water/Energy Efficiency