



Tennessee Valley Authority

Clean Air Actions

Regional Clean Air Action Summit

Knoxville, Tennessee

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TVA's Current Clean Air Compliance Program

- Install NO_x control systems on 25 units by 2005 at a cost of approximately \$1.3 billion
- Install five additional SO₂ control systems on 12 units and switch to lower sulfur coal by 2010 at a cost of approximately \$1.5 billion



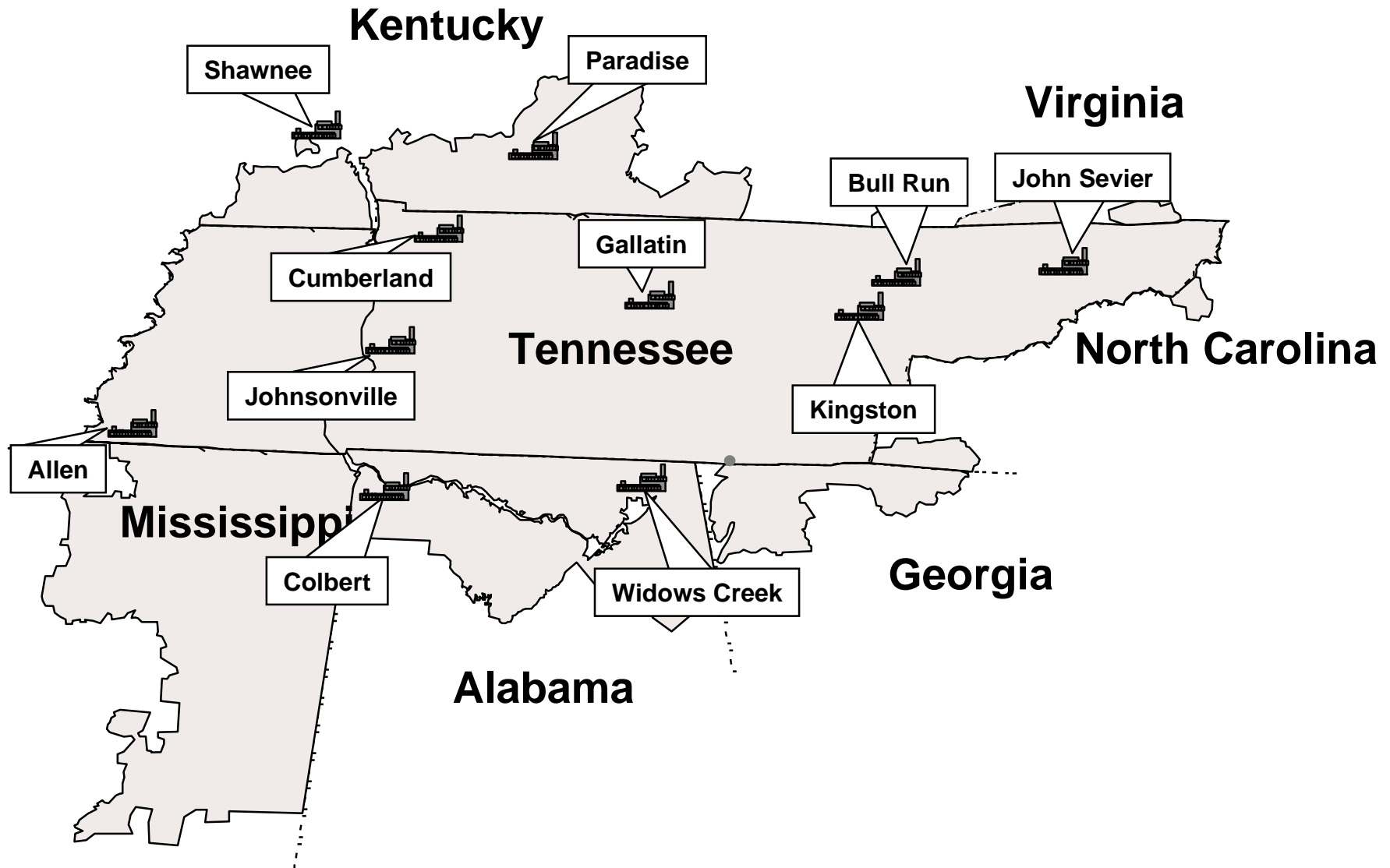
Clean Air Program Statistics

Committed Clean Air Program

- Prior to 1994: approximately \$2.0 billion capital spent
- 1994–2001: \$1.0 billion capital spent
- 2002–2010: \$2.6 billion capital will be spent
 - Spending averages approximately \$1 million per day
 - Emission reductions
 - SO₂ reduction of 272,000 tons per year
 - NO_x reduction of 57,000 tons per year
- Cumulative clean air spending – \$5.6 billion

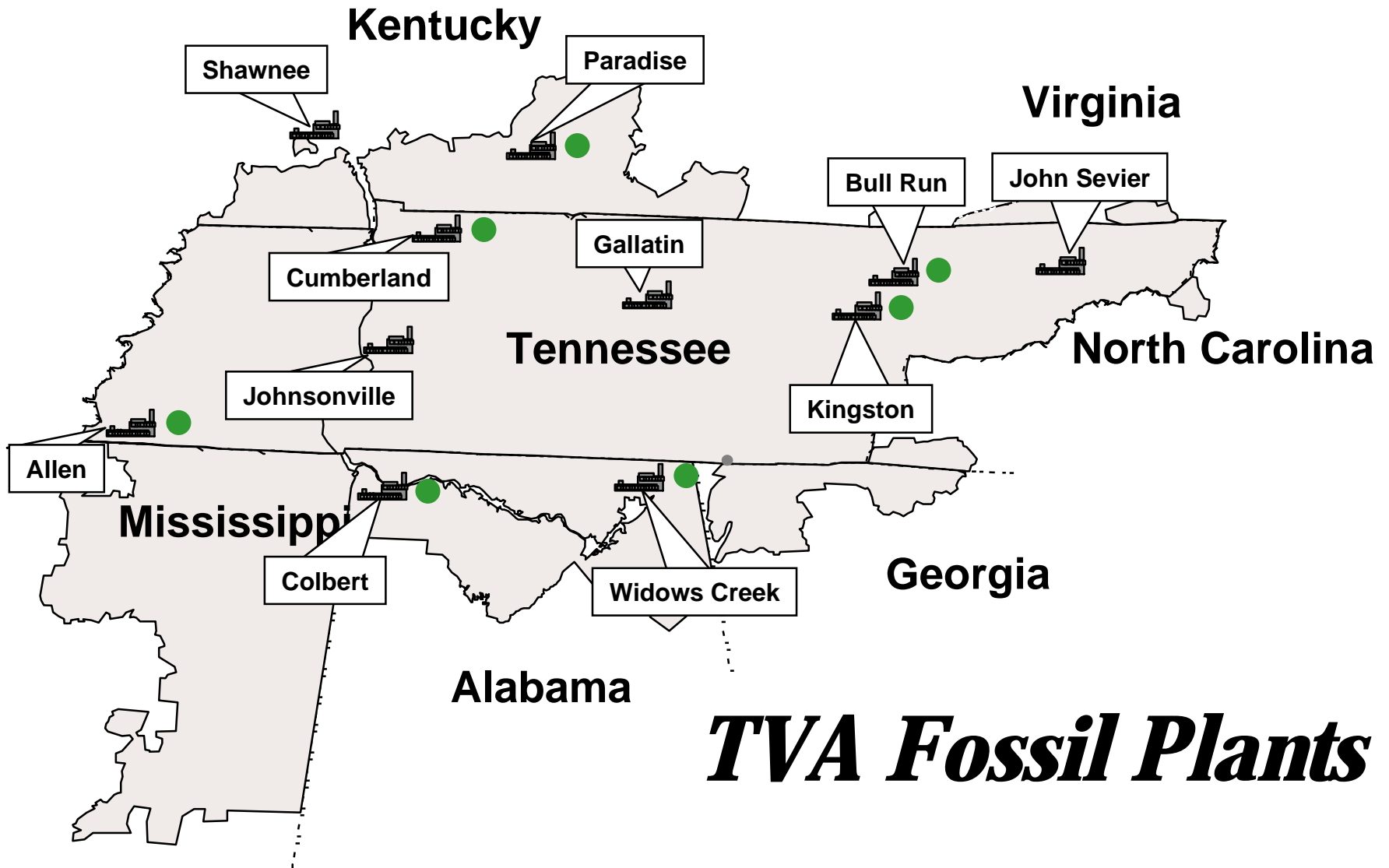


TVA Fossil Plants



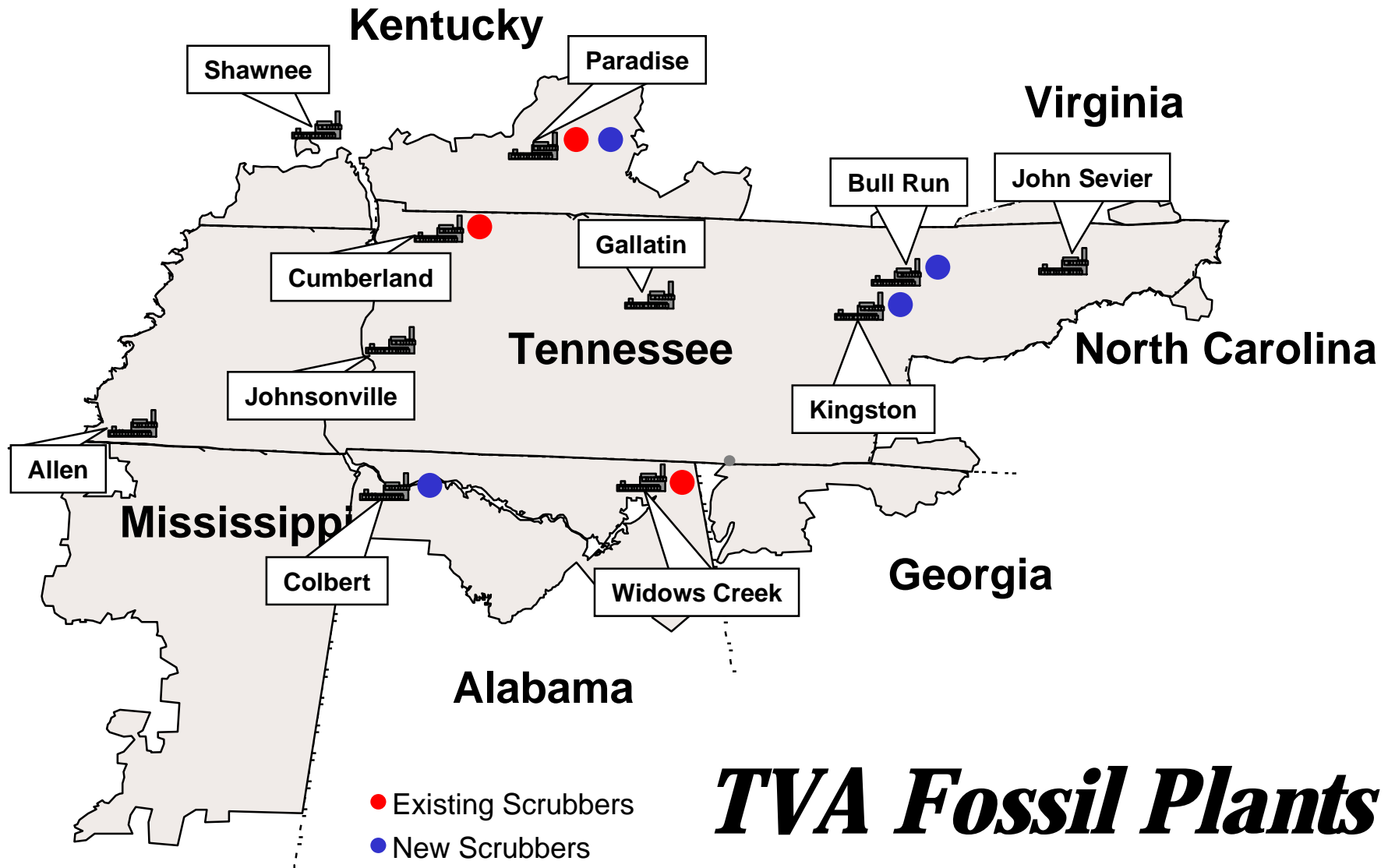


Where We Are Placing SCRs





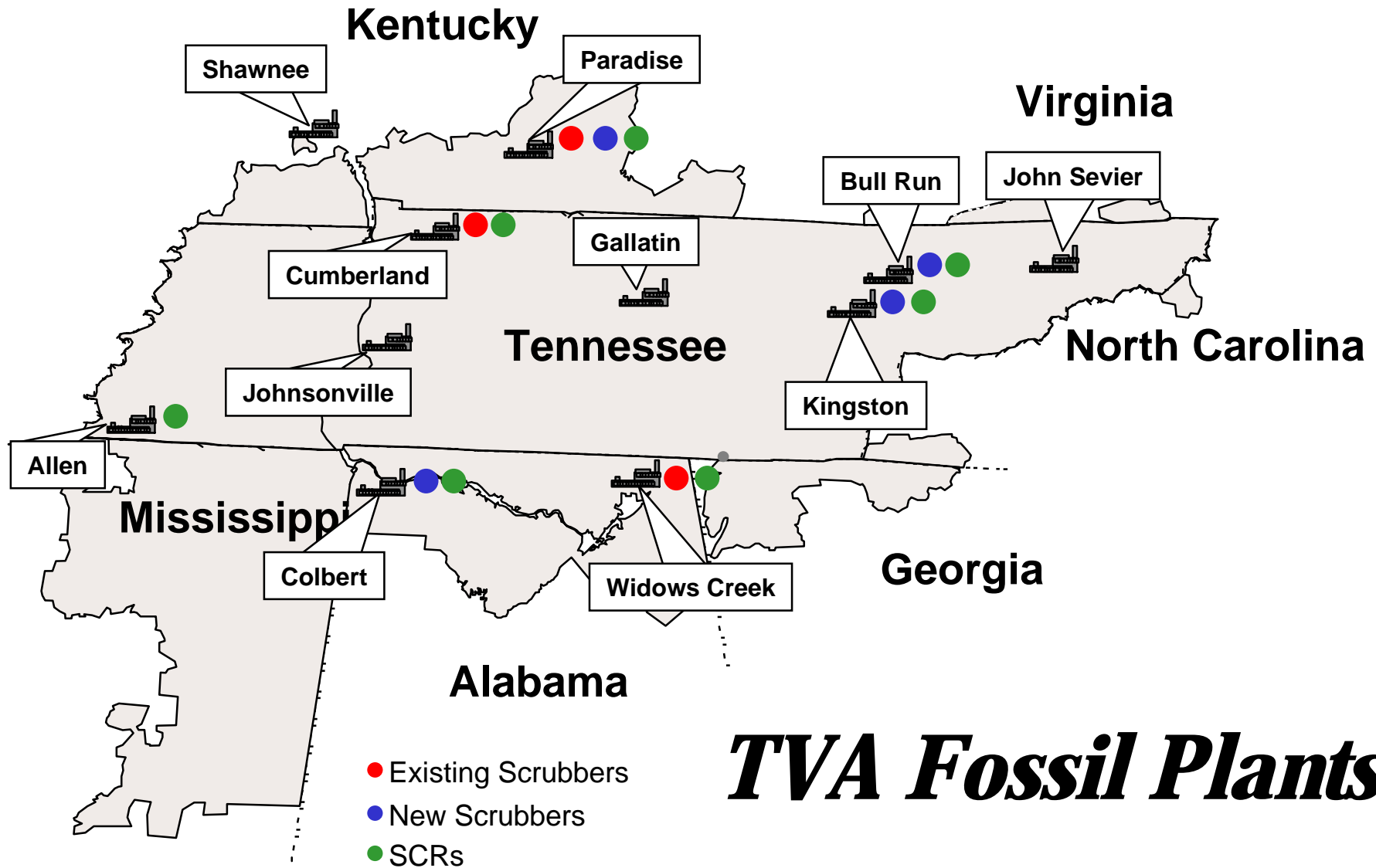
Where We Have Scrubbers and Will Build More Scrubbers



TVA Fossil Plants



Summary



TVA Fossil Plants



Paradise Unit 2 SCR - Elevation View





Cumberland Fossil Plant – Scrubber Installation

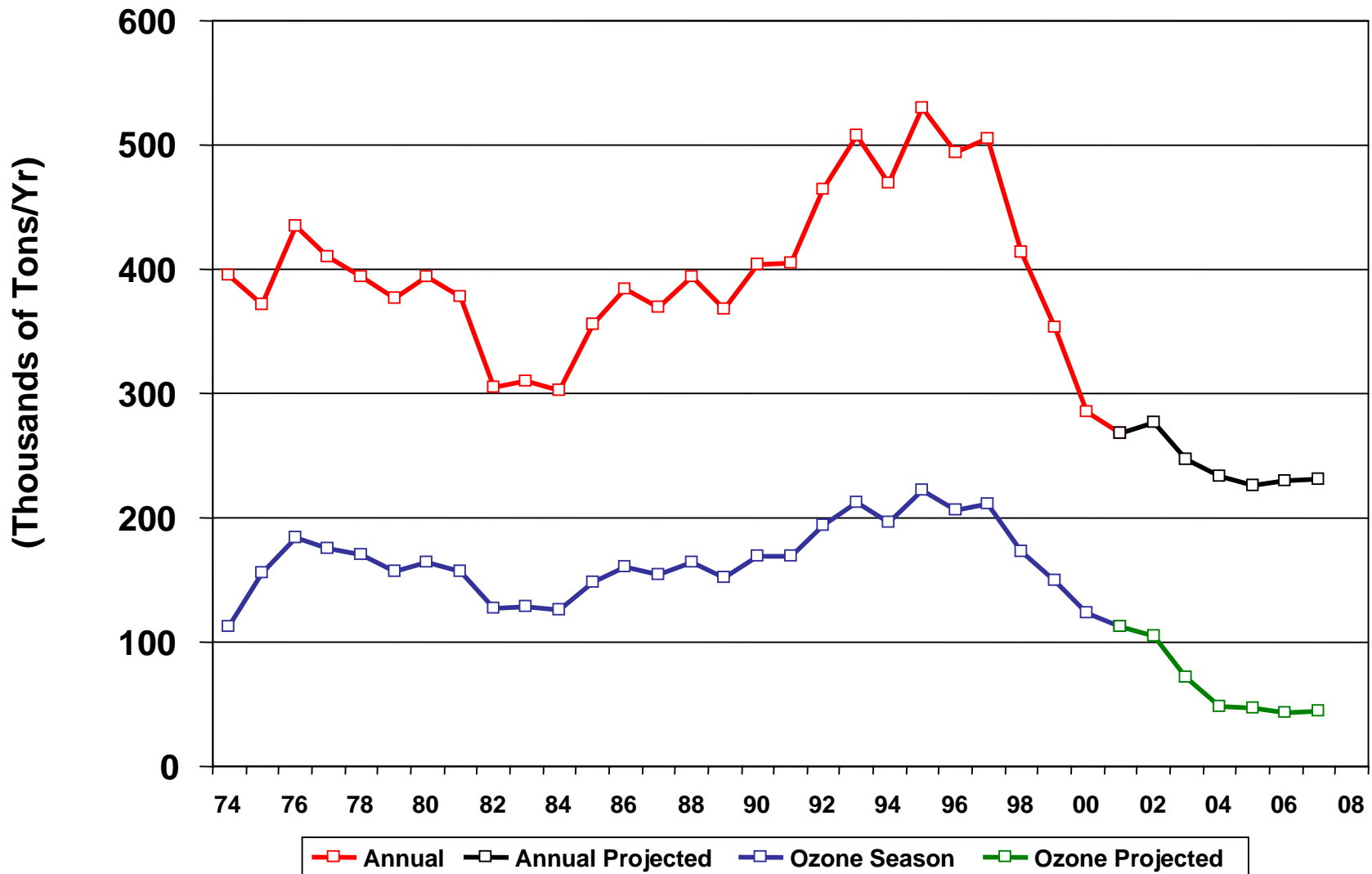


Original Plant !

! New Scrubber Addition with Limestone Receiving and New Chimneys

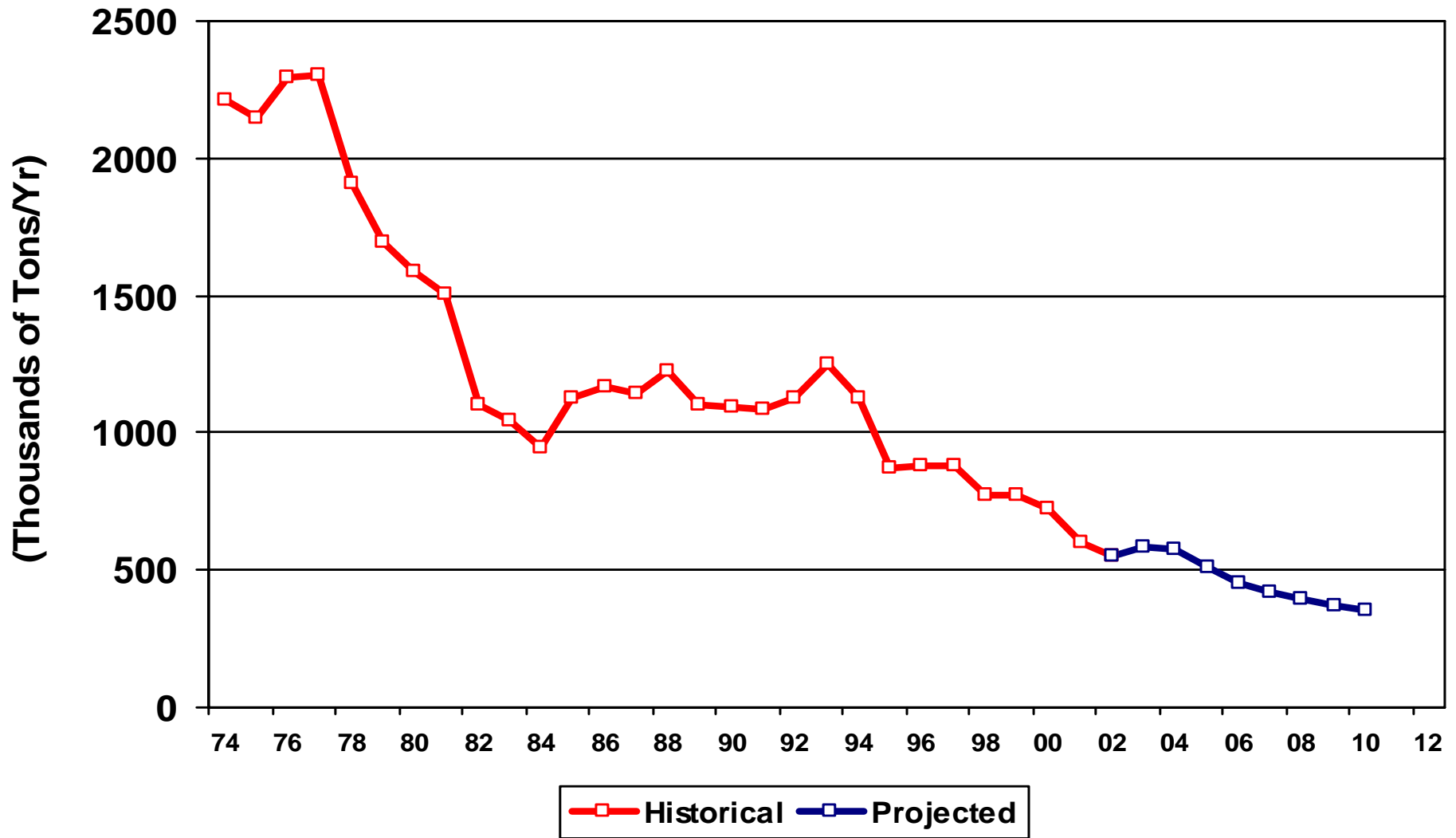


TVA Emissions of Nitrogen Oxides (NO_x)





TVA Emissions of Sulfur Dioxide (SO₂)





Progress in Air Quality

- Air quality in the Valley continues to improve
- TVA is undertaking one of the largest emission reduction programs in the nation
 - SO₂ emissions have already dropped by 76%. Five new scrubbers will further lower SO₂ emissions to an 85% decline since the peak in 1977
 - NO_x emissions have declined by 50%. SCRs and additional NO_x technology on 25 units will lower NO_x emissions to a 70-75% decline since the peak in 1995
- Many challenges remain and will require reductions from all sources in a national effort



Continued Progress

Investments in Clean Air- An aggressive schedule

Investments in Science

Designing Effective Control Strategies

Understanding Impacts of Emissions

Participation in Partnerships and Organizations

Nine Counties, One Vision

SAMI – Southern Appalachian Mountain Initiative

VISTAS – Visibility In States and Tribal Association in the Southeast

Great Smoky Mountains National Park

Air Quality Forecasting and many others