

Energy & Water in the West

Colorado Watershed Assembly
October 4, 2011

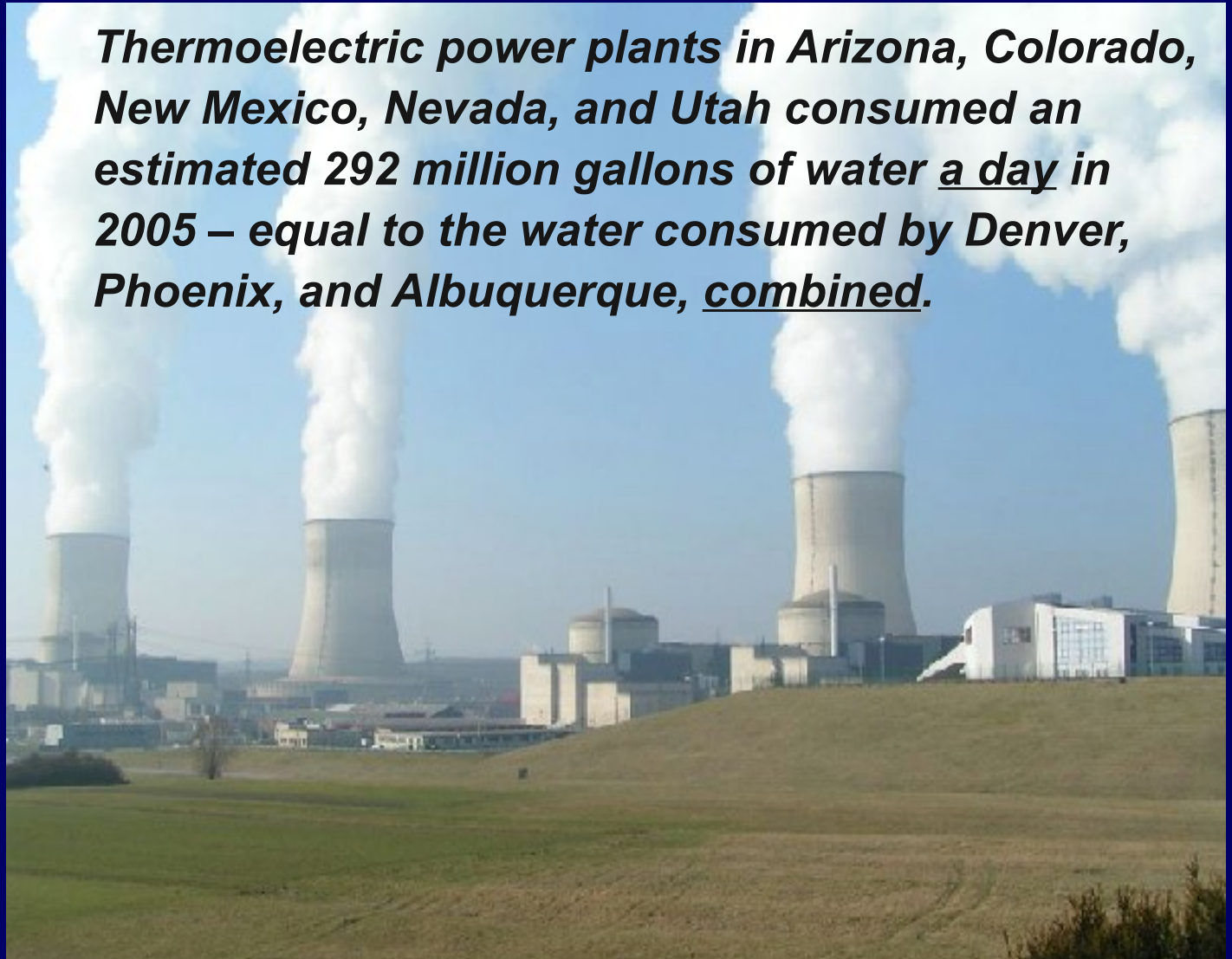
Stacy Tellinghuisen



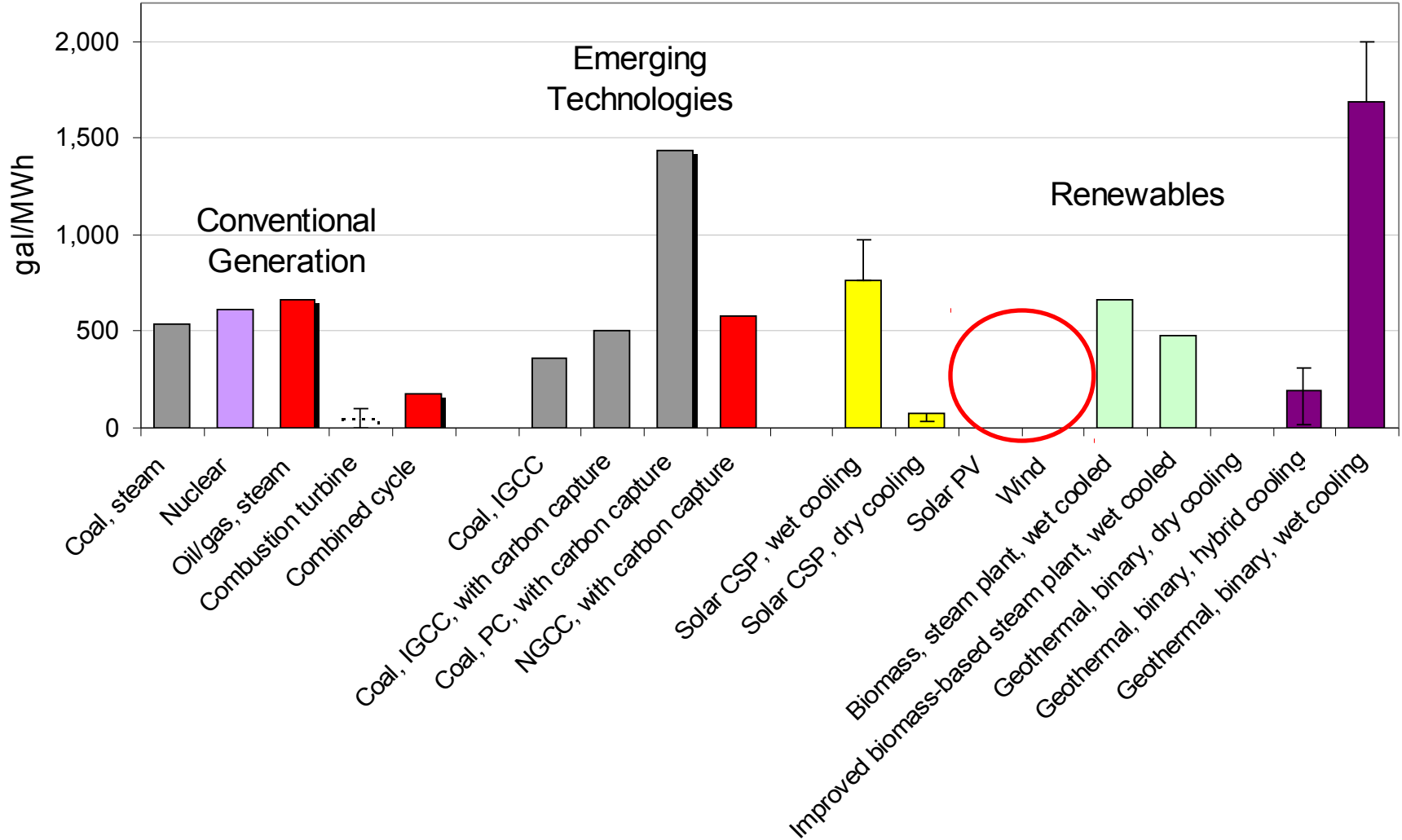
WESTERN RESOURCE
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Water Used for Energy

Thermoelectric power plants in Arizona, Colorado, New Mexico, Nevada, and Utah consumed an estimated 292 million gallons of water a day in 2005 – equal to the water consumed by Denver, Phoenix, and Albuquerque, combined.



Water Intensity of Electricity Generation



How Can Advocates Engage on Energy Policy?

Electric utilities' resource planning

Arizona and Colorado

New Mexico

Nevada

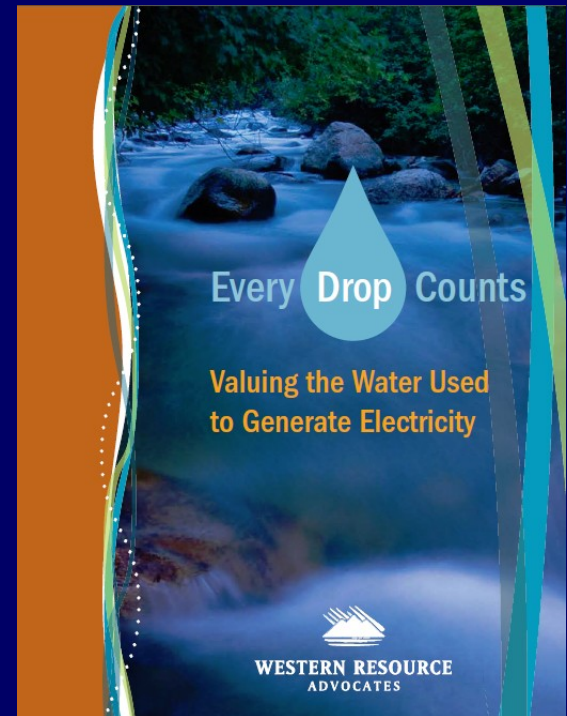
Utah

Other PUC hearings

Clean Air, Clean Jobs Act

Municipal utilities' planning

 Western Governors' Association

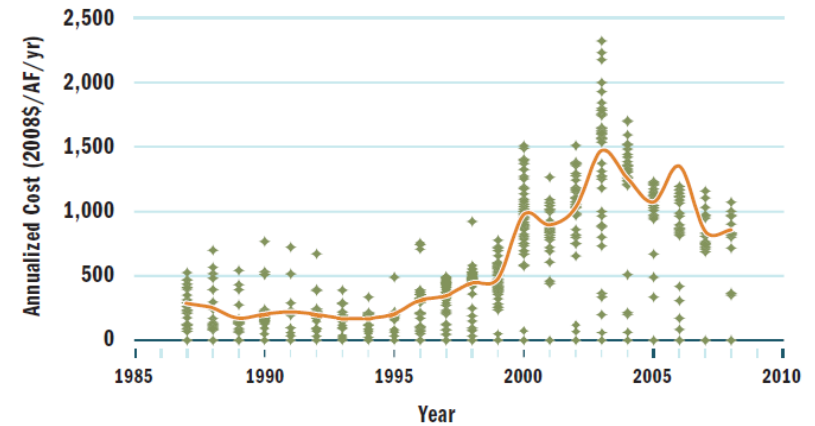


Messages

- *Scarcity*
- *Risk*
- *Cost/Value*



FIGURE ES 2 WATER SALES TO MUNICIPALITIES: COLORADO



— Average Price
◆ Individual Transactions



Colorado's Clean Air, Clean Jobs Act

Retire/repower/retrofit ~900 MW of coal plants on the Front Range (incl. Cherokee, Valmont, Arapahoe)

Value of water rights: \$86 million

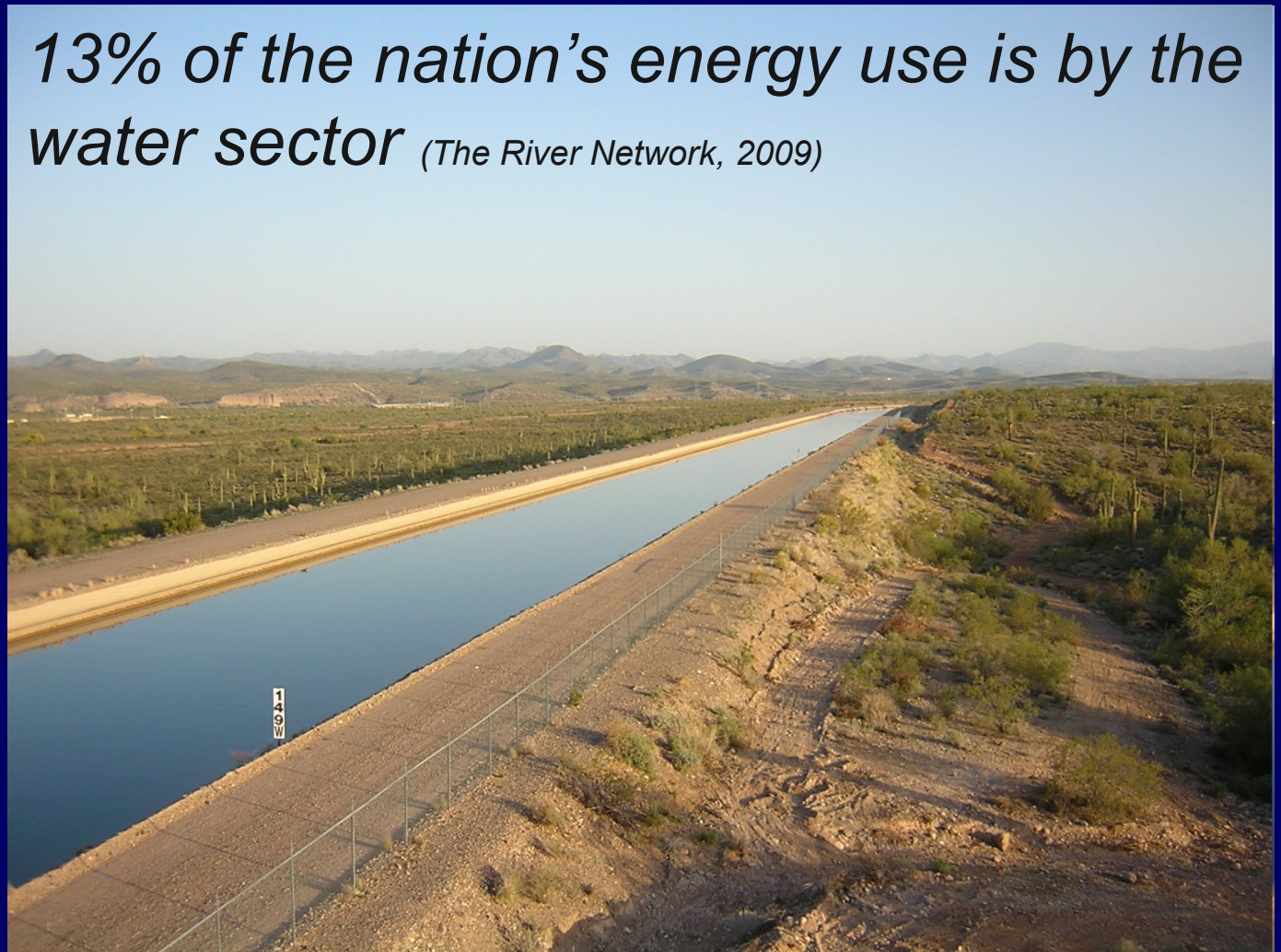
Timing: 2015 – 2022

Are there other opportunities
for energy decisions to benefit water?



Energy Used for Water

13% of the nation's energy use is by the water sector (The River Network, 2009)

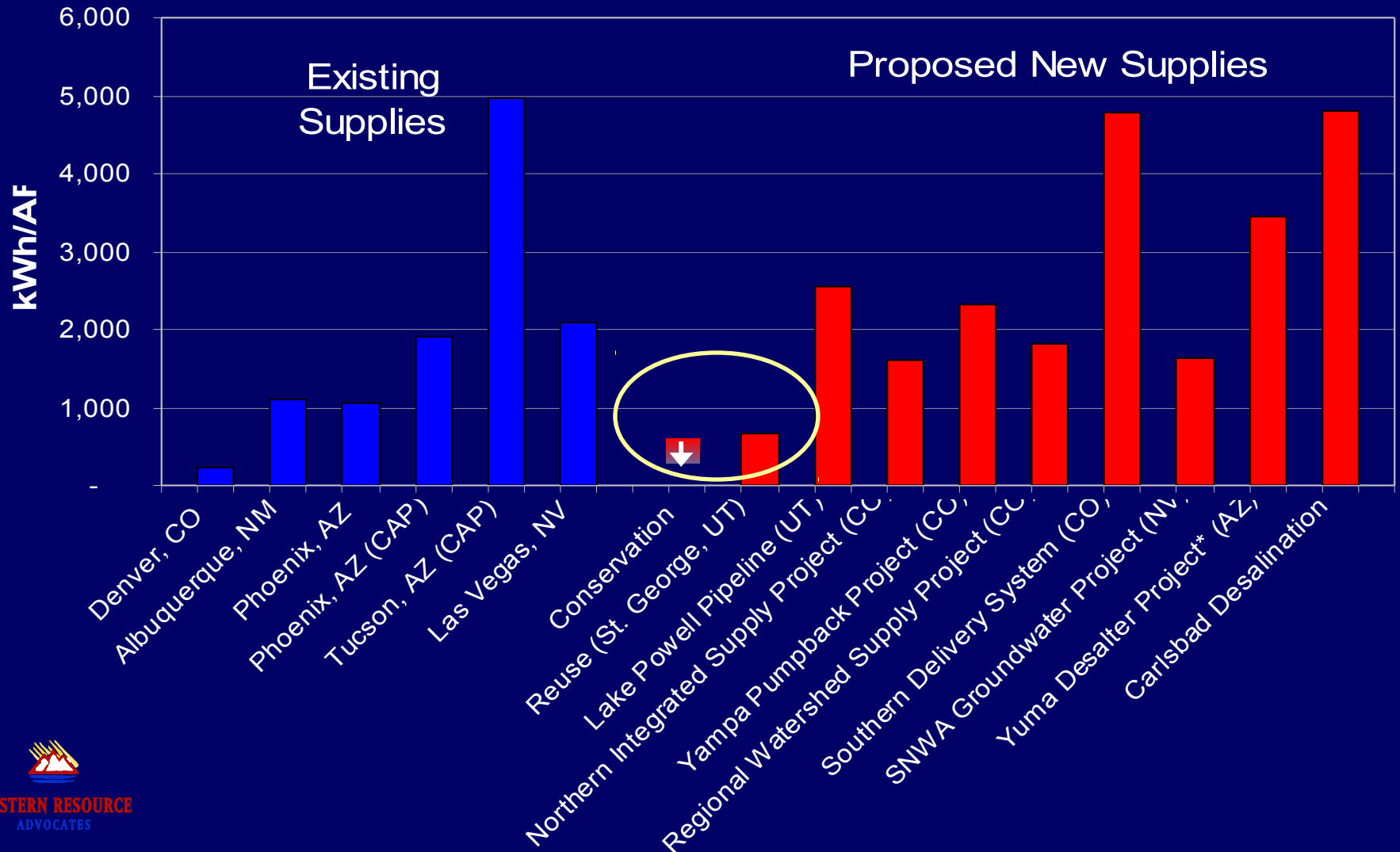


Proposed Water Supply Projects



Energy Intensity of Water

Energy Intensity of the West's Water Supplies



Water Conservation

Conservation Programs

SNWA's "cash for grass" program
saves

77,000 AF/yr

160,000 MWh/yr

86,300 tons CO₂/yr

Indoor conservation would save more
energy



Can utilities do more?



Key Recommendations

- ✓ Renewable energy
- ✓ Conservation & efficiency
- ✓ Recycled water
- ✓ Flexible leasing arrangements
- ✓ Value water and energy accurately



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