

Integrating Energy and Air Quality

Northwest Power and Conservation Council
Member Phil Rockefeller

Presentation to
National Association of Clean Air Agencies
October 1, 2012

Northwest Power & Conservation Council

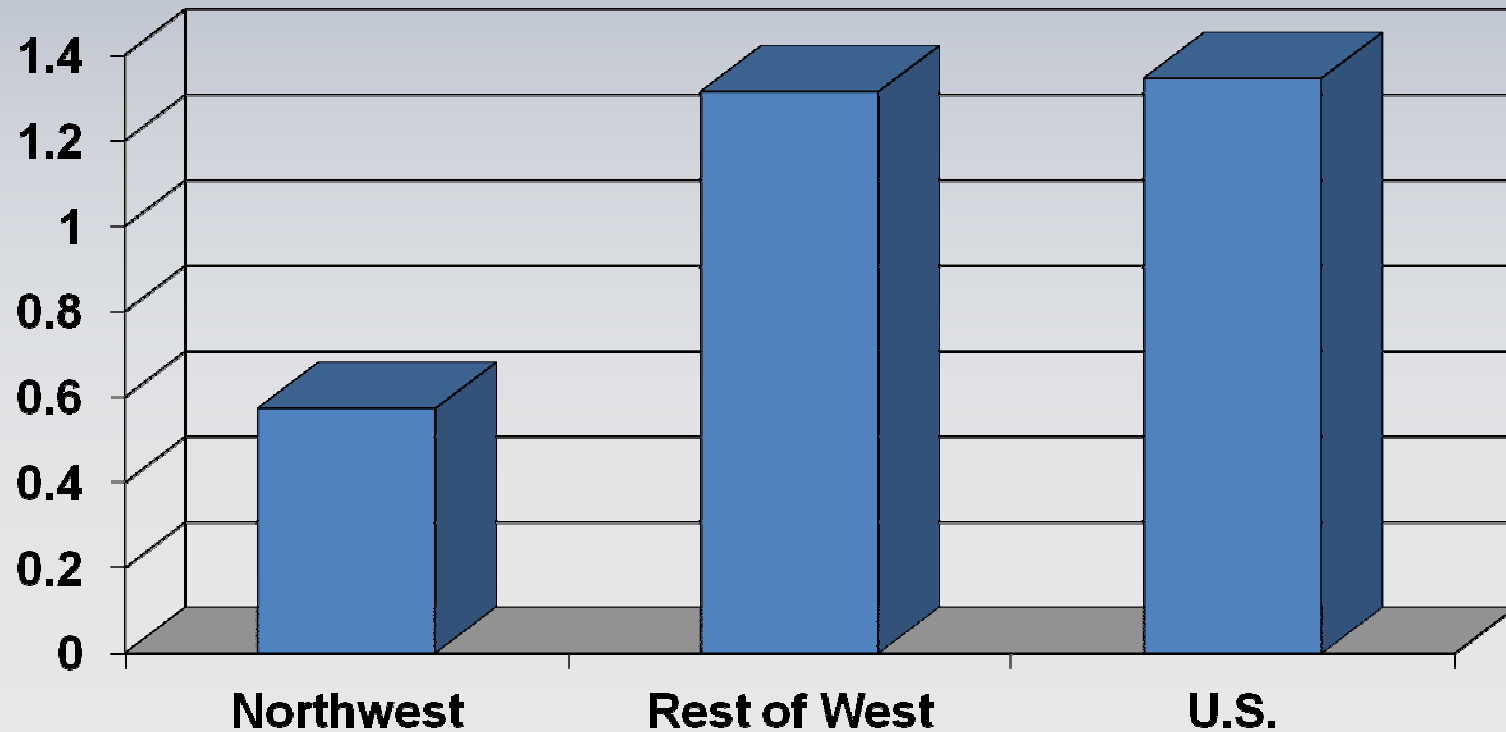
- Northwest Power Act of 1980
- Interstate Compact
 - 4 states, 8 members, appointed by Governor
- A unique agency charged by Congress to:
 - Develop a 20-year Northwest Power Plan
 - Develop a fish and wildlife program
 - Public outreach and accountability

Northwest Power Plan

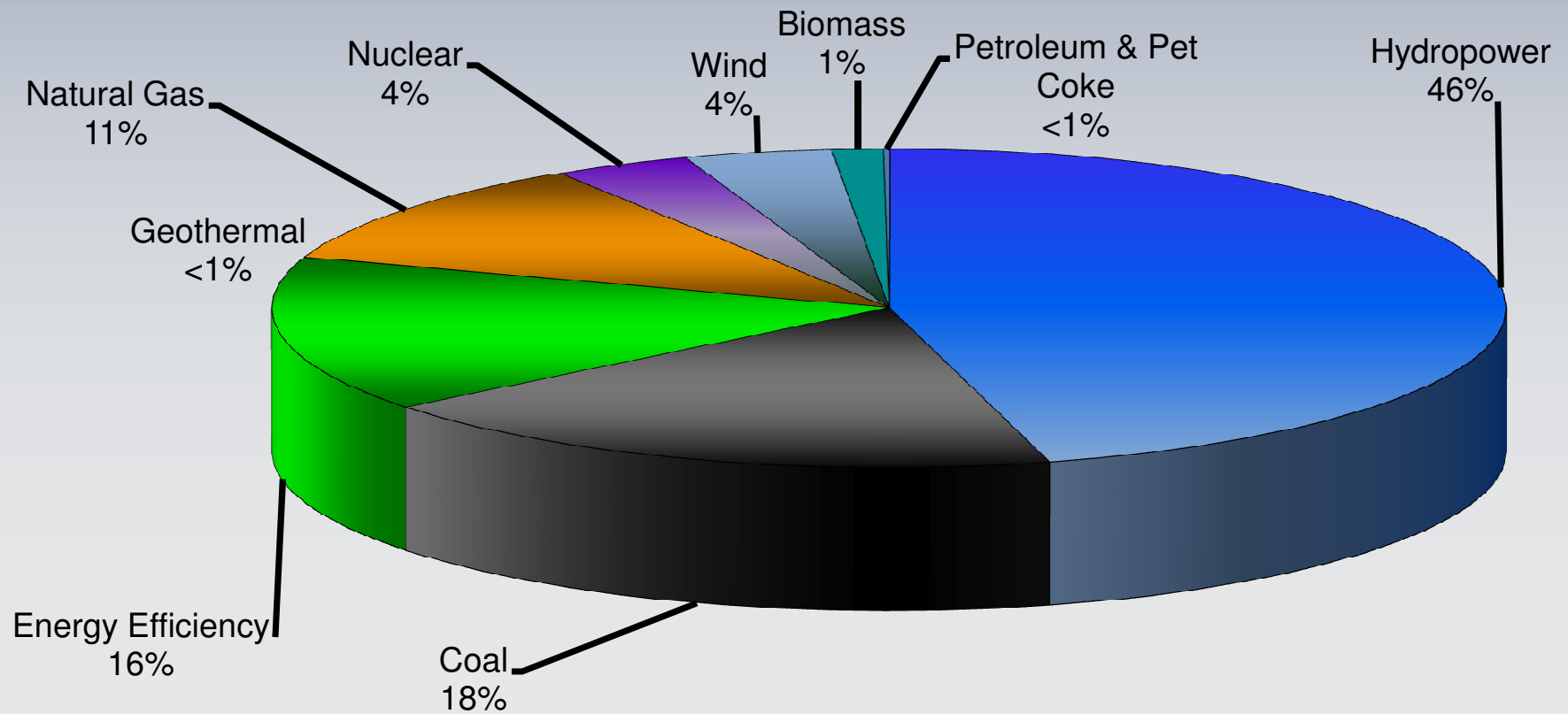
- Long-term regional power plan
- Updated every 5 years
- Electricity demand and price forecasts
- Identifies least-cost, least-risk resources
- Northwest Power Act decreed energy efficiency as the priority resource to meet future load growth and gave it a 10% cost advantage over other resources

NW Power System is Low-Carbon

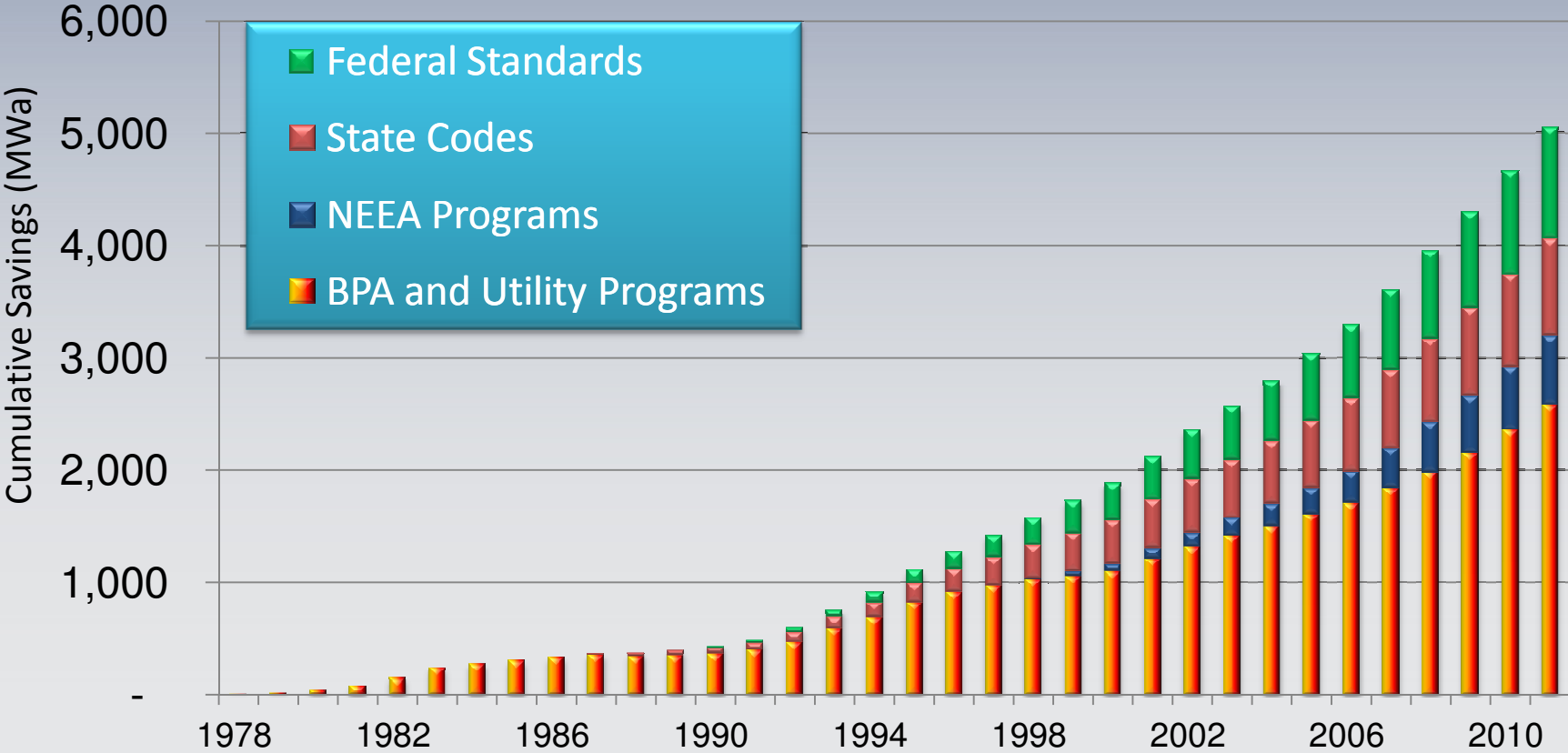
Pounds of CO2 Per kWh



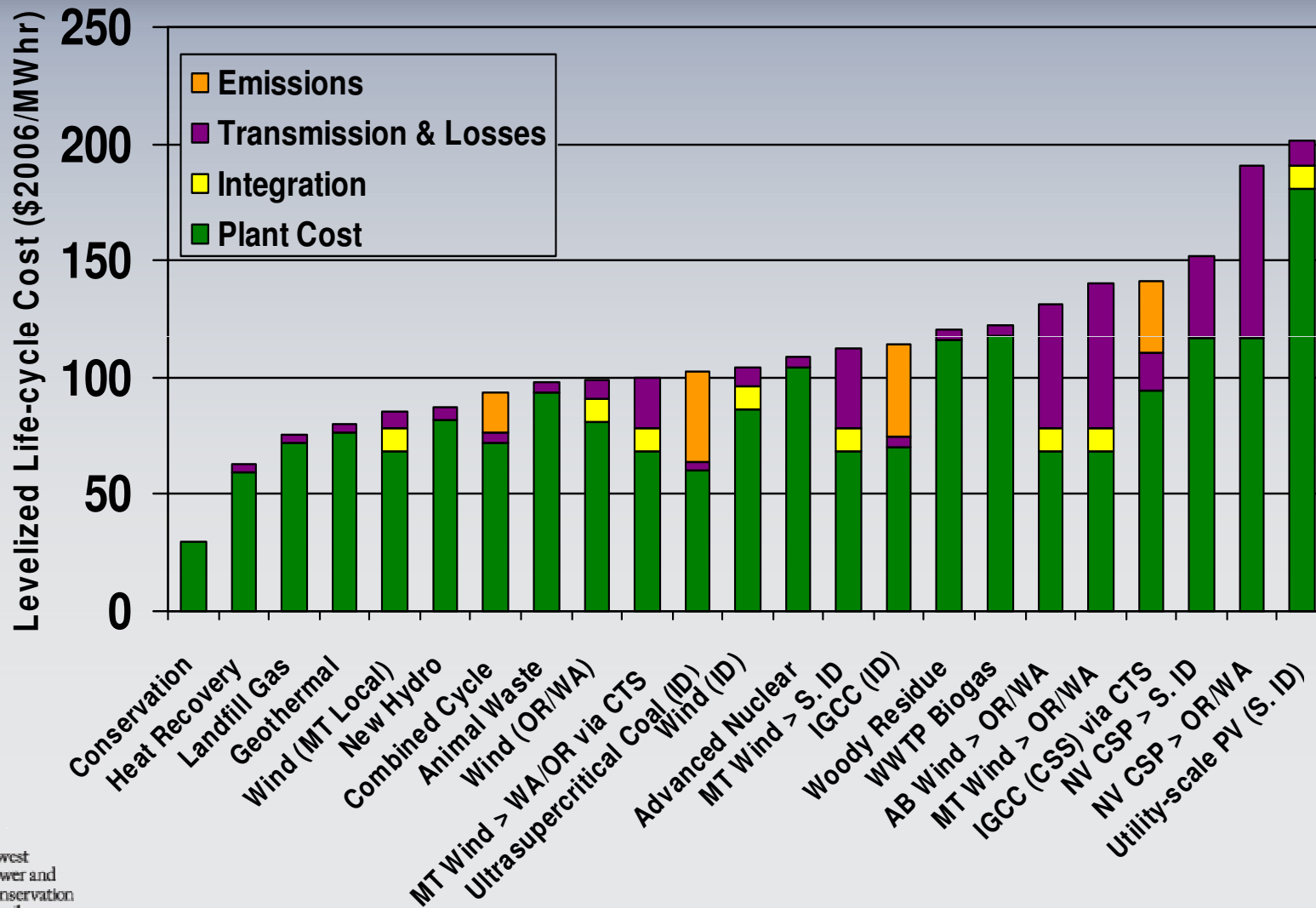
70% of NW Resources are Zero-Carbon



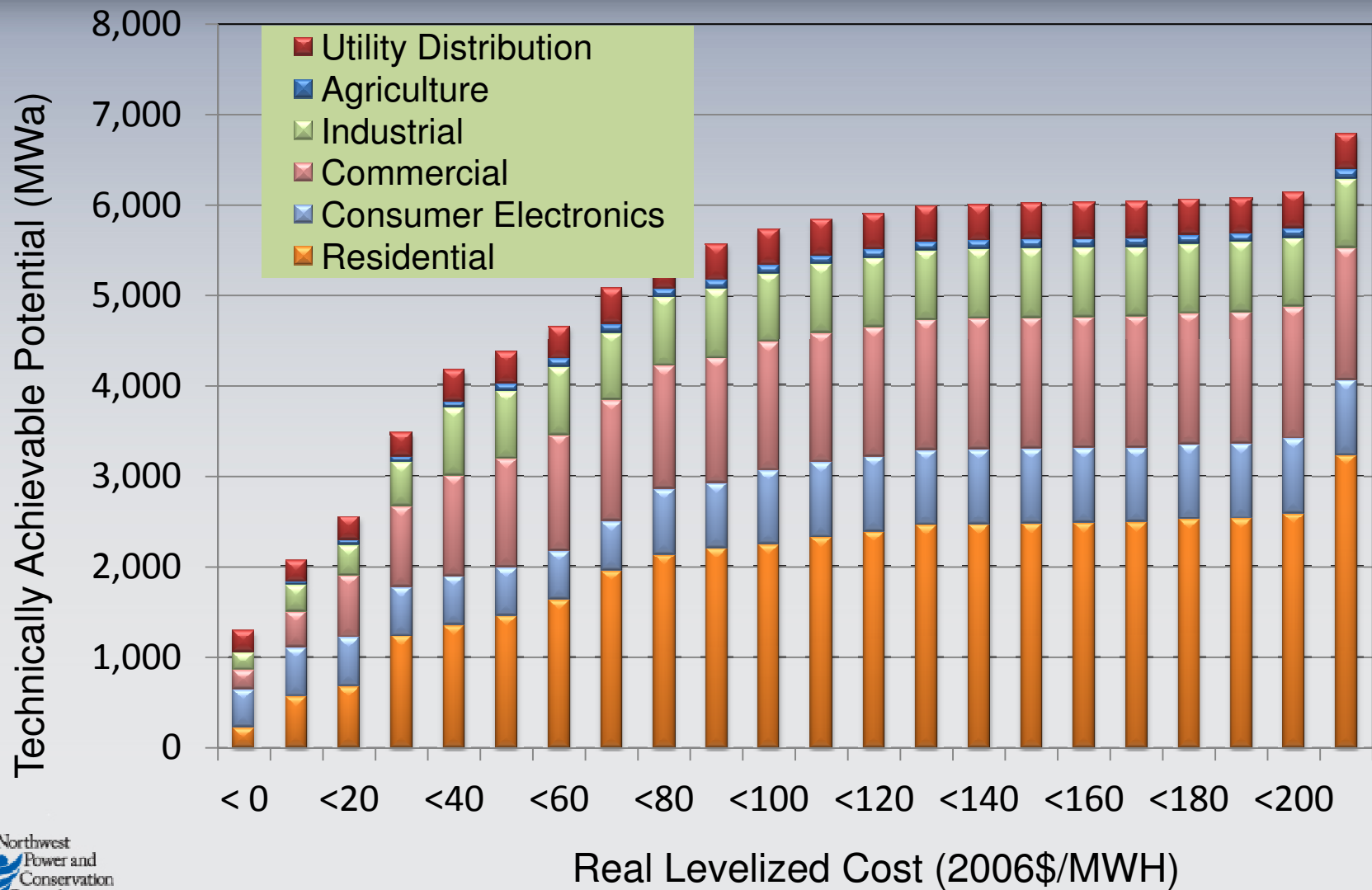
NW Has Been Investing in Energy Efficiency for Thirty Years



Energy Efficiency is the Least-Cost Resource



A Lot of Energy Efficiency is Still Available

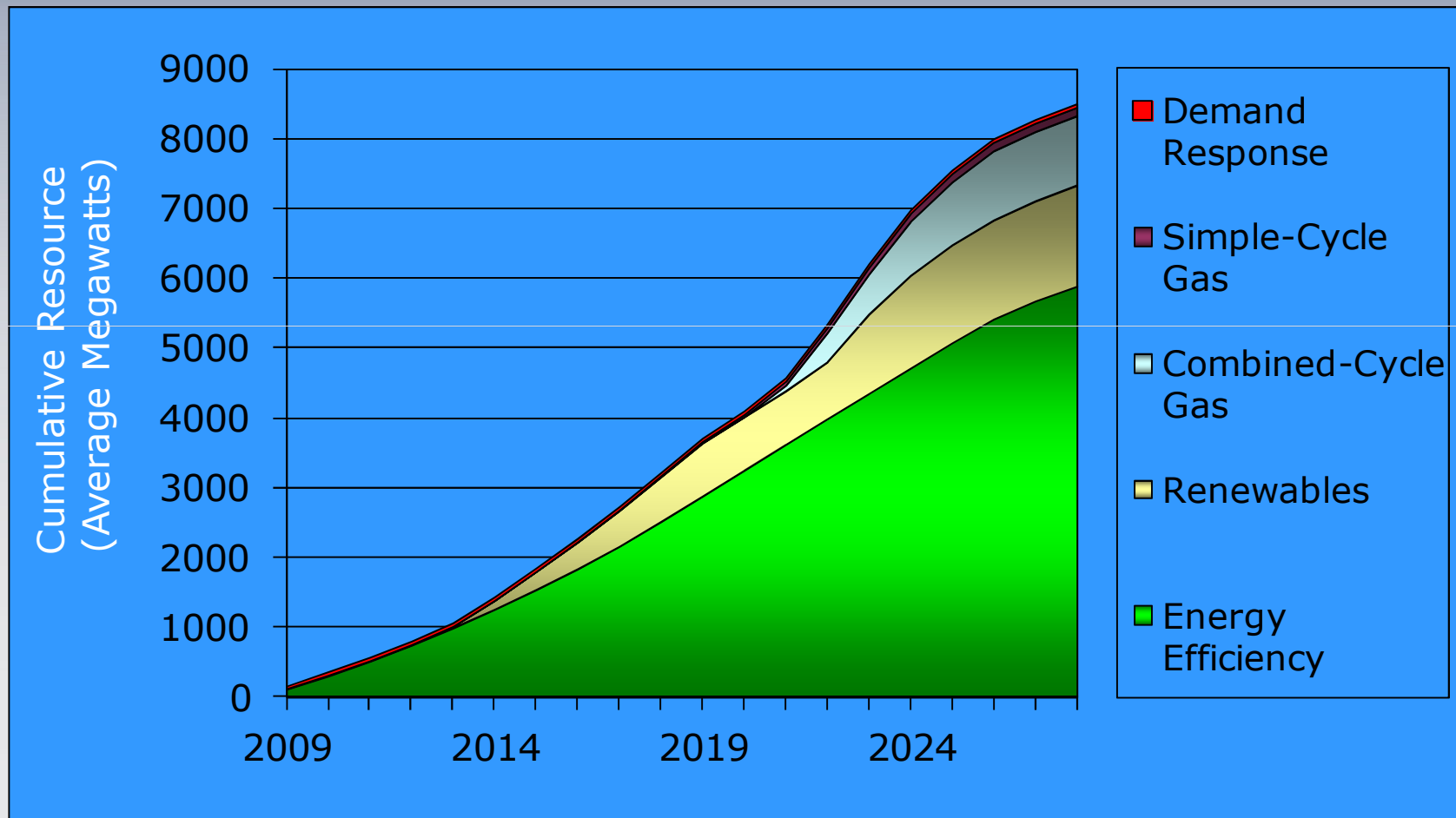


Sixth Northwest Power Plan

- Resource strategy:
 - Meet 85 % of growth in demand with energy efficiency
 - Integrate renewables to meet state RPS'
 - Be ready to add natural gas-fired generation as needs materialize

- Action plan (selected items):
 - Acquire 1,100 – 1,400 average megawatts of energy efficiency during 2010-2014
 - Increase supply and reduce demand for system flexibility
 - Assess and ensure resource adequacy

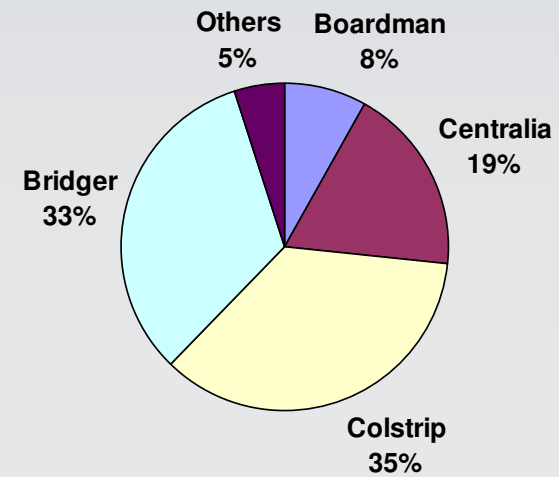
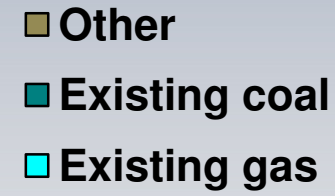
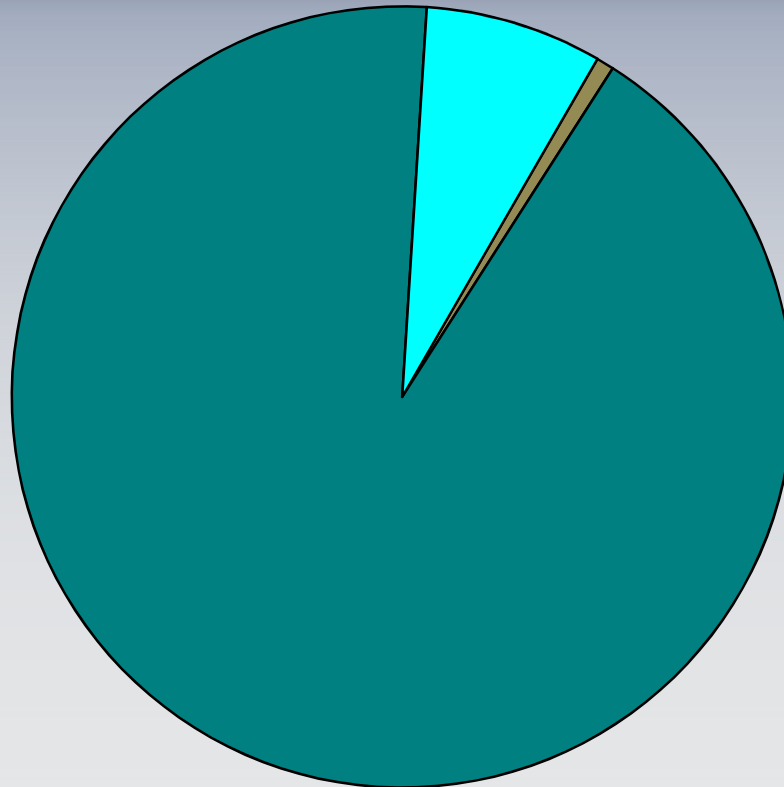
Resource Additions in the Sixth Northwest Power Plan



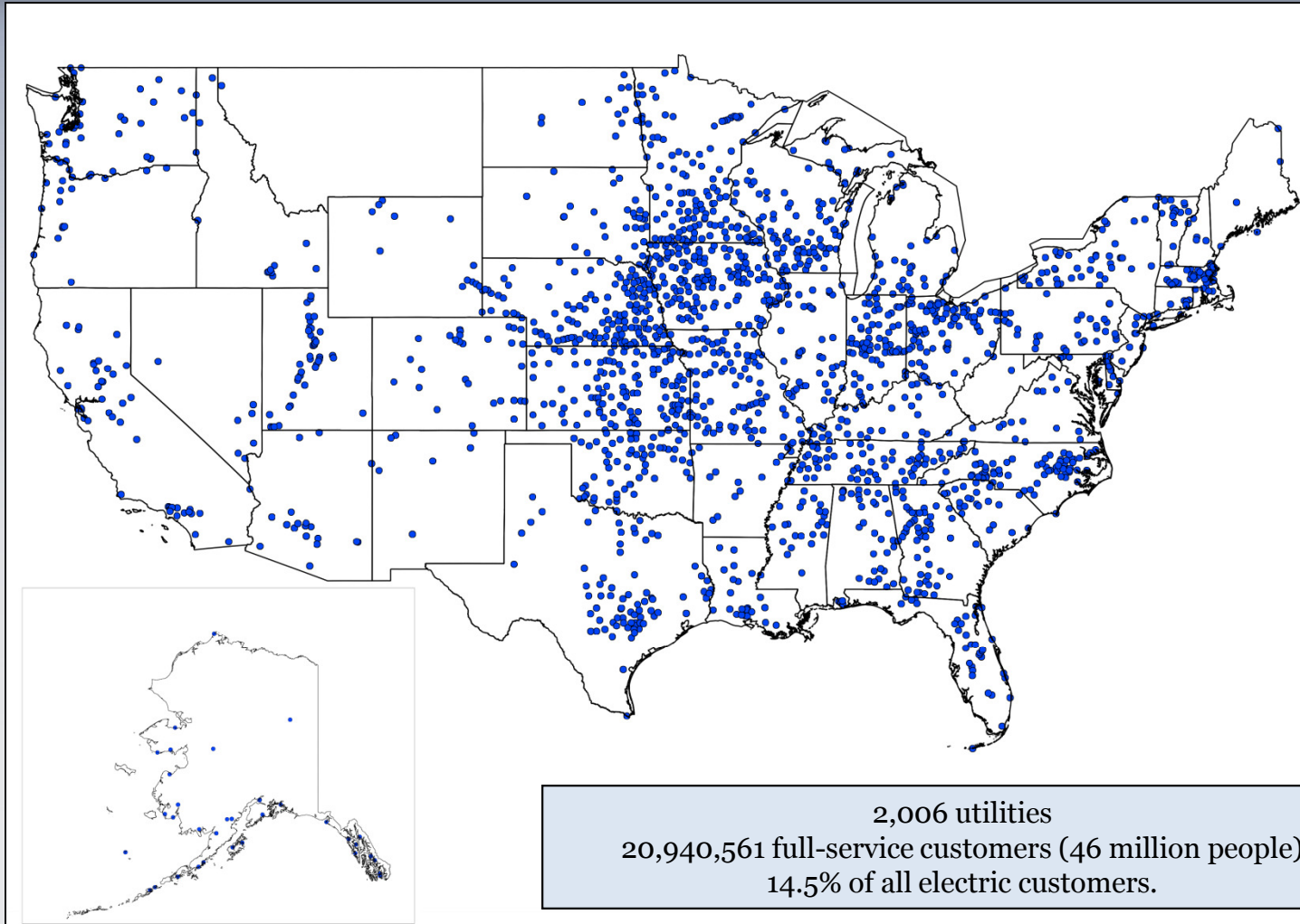
Regional Trends for Fossil-Fueled Generating Resources

- Retirements of coal plants
- Increasing reliance on natural gas-fired generation using combustion turbines
 - To balance wind variability
 - To meet utilities' resource needs, local constraints
- May result in net reduction in CO₂ emissions
 - Existing coal: ~2,100 lbs CO₂/megawatt-hour
 - New combined-cycle gas: ~800 lbs/megawatt-hour
 - New single-cycle gas: ~1,160 lbs/megawatt-hour

Existing Sources of CO2 Emissions



Public Power In the U.S.



Links

- Northwest Power and Conservation Council:
www.nwcouncil.org/
- Sixth Northwest Power Plan:
www.nwcouncil.org/energy/powerplan/6/default.htm
- Power Generation in the Northwest:
www.nwcouncil.org/maps/power/