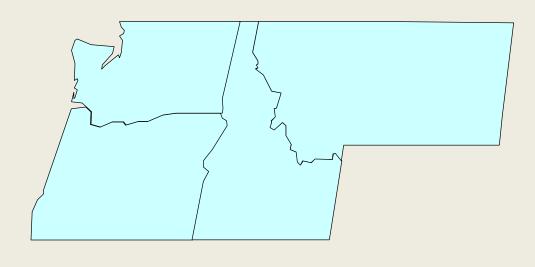


www.nwcouncil.org



# Northwest Power & Conservation Council



- Interstate Compact Agency 8 members, representing the governors of Idaho, Montana, Oregon & Washington
- Policy recommendations re: electric power and fish & wildlife recovery in Columbia River system
- Celebrating our 30<sup>th</sup> year in 2011



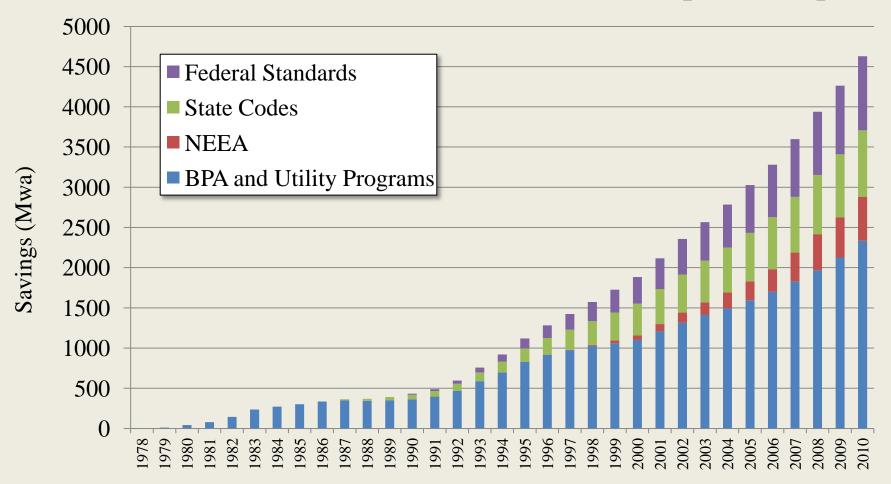
#### Power planning

- Council to develop a 20year forecast of demand and least cost resource strategy
- Efficiency defined as a resource
- Resource priorities specified:
  - Efficiency, renewables, cogeneration, other
- Public involvement





## **Cumulative Regional Conservation Achievements 1978-2010 (MWa)**





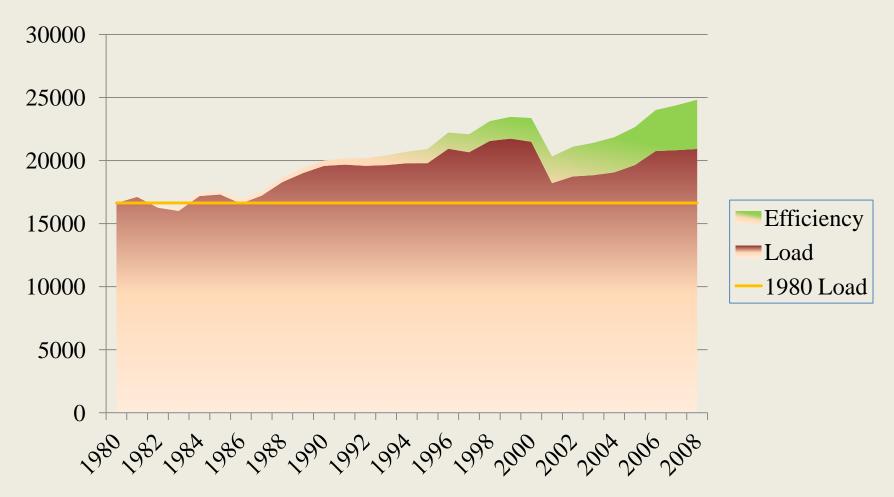
## Energy Efficiency Is The Region's Third Largest Resource



Saved The Equivalent of More Than Two Grand Coulee Dams

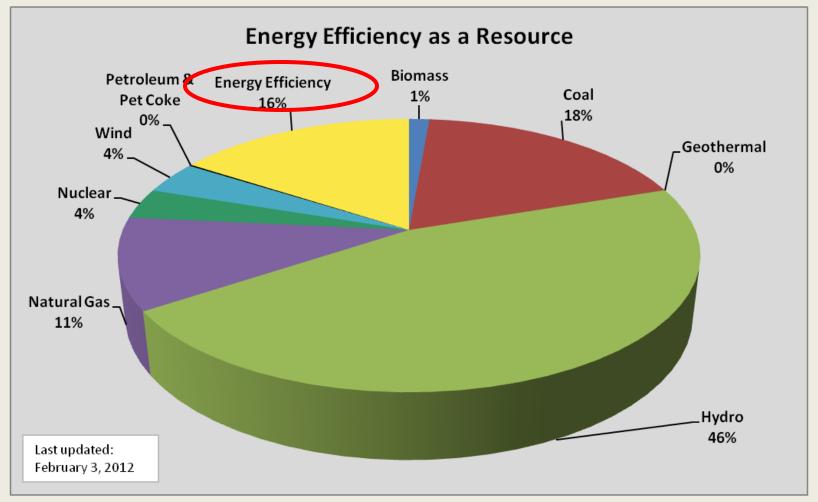


## Conservation met half of load growth over last 30 years



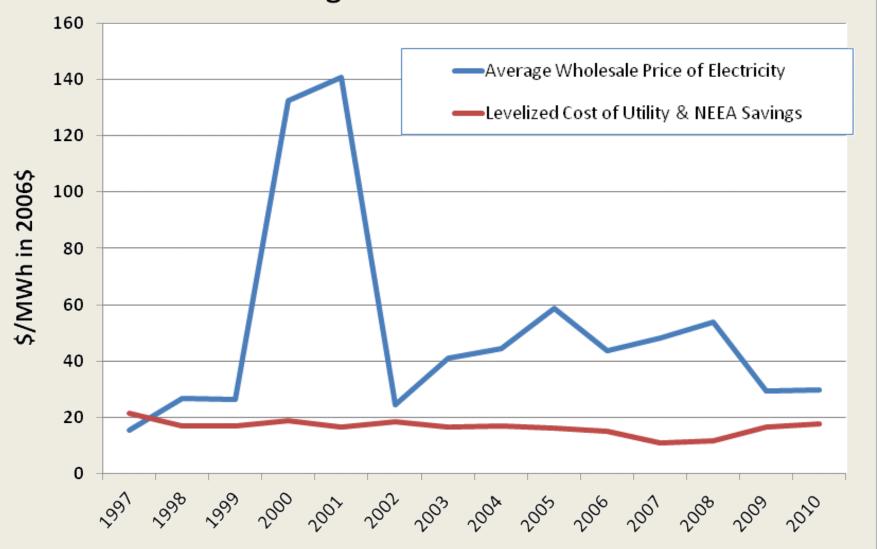


## Energy Efficiency Is The Region's Third Largest Resource



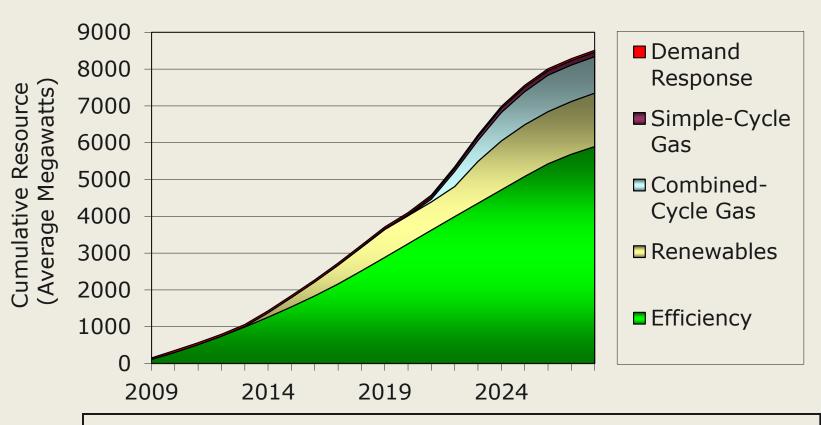


#### **Cost of Savings Versus Market Price of Power**





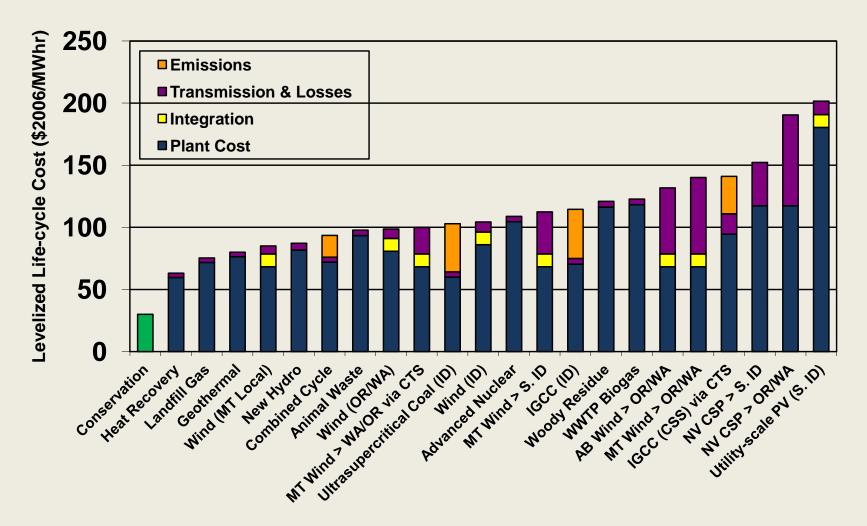
#### Sixth Plan Resource Portfolio\*



<sup>\*</sup>Expected Value Build Out. Actual build out schedule depends on future conditions

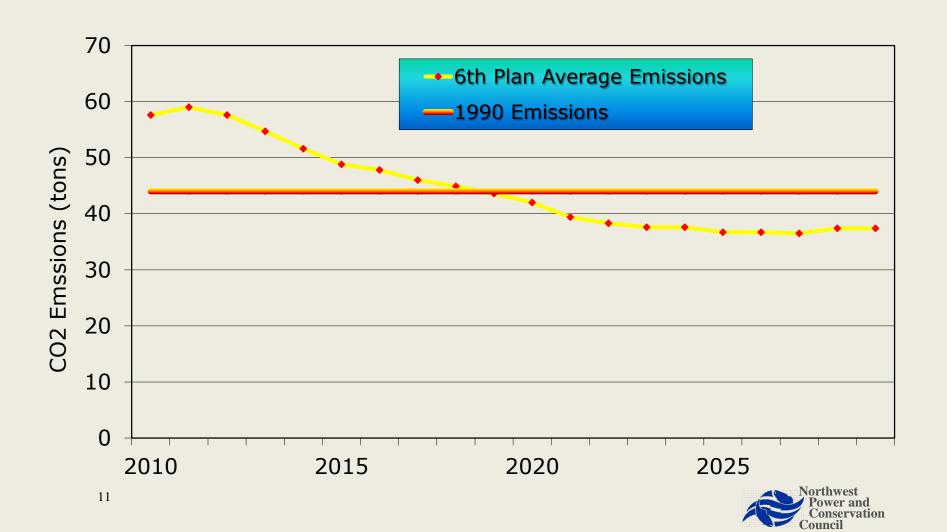


#### Resource Costs: Long Term

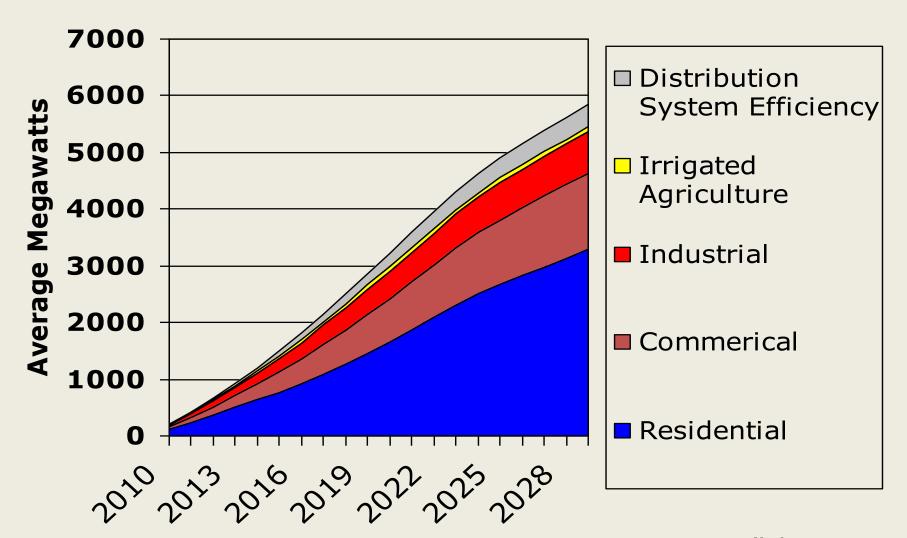




### Meeting The 6<sup>th</sup> Plan's Goals Drops Carbon Emissions 15% Below 1990 Levels by 2020



#### Conservation Potential by Year





#### **Increased Potential**

MWa Achievable End of	5th Plan	6th Plan
Period and <\$120/MWh	2005	2009
Consumer Electronics	155	800
Industrial	350	800
Distribution Efficiency	0	400
Residential	2119	2400
Commercial	1183	1400
Agriculture	93	100
Total	3902	5900



## Select New Measures in 6th Plan Conservation Assessment

New Measure or Practice	MWa by 2029	\$/MWh*
Residential Heat Pump Water Heaters	500	\$26
TVs & Set-Top Boxes	470	\$(5)
Computers & Monitors	360	\$60
Distribution Efficiency & Voltage Optimization	400	\$9
Industrial System Optimization Measures	200	\$16
Residential Ductless Heat Pumps	200	\$70
LED Street, Area, Facade & Parking Lighting	140	\$40
Computer Server Rooms	130	\$(2)
Dairy	10	\$2

<sup>\*</sup> Levelized Net Total Resource Cost in 2006\$ per MWh for Measures less than \$100/MWh includes Act Credit



#### Observations on Next Generation EE

- Human Factor Increasingly Prevalent
  - Higher cost & less reliable than widgets
  - Training, education, feedback, tools
- Codes & Standards to Capture Prescriptive
  - Up to half of 20-year potential, cheap but...
  - Takes programs to demonstrate feasibility
- New & Renewed Allies
  - Focus on supply chain development
  - Business decision makers, EE trade allies, government, social media, diverse approaches needed
- Not Everything Works as Expected
  - Impact evaluation & research are critical



#### More Information?

Council Website <u>www.nwcouncil.org</u>

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