

# Conservation's Role in Meeting Resource Needs in the Pacific Northwest 1980 - Present

Tom Eckman  
Manager, Conservation Resources  
Northwest Power Planning Council  
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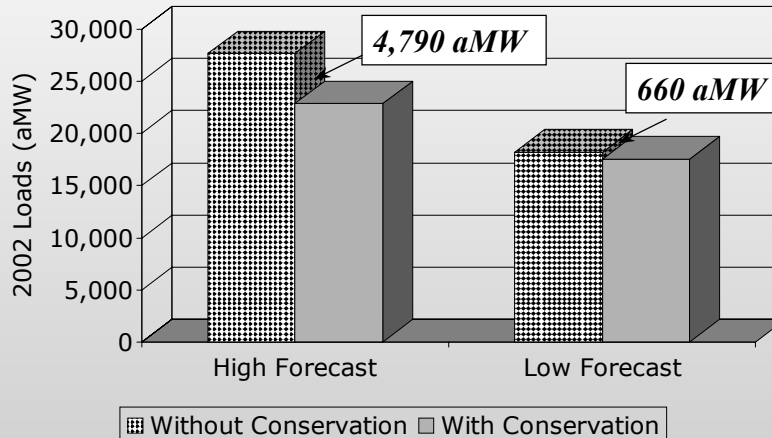
## "PNW Power Act"

- Federally Mandated "least cost planning"
- Longest Running "Integrated Resource Plan" in the Country
- Planner's Worst Nightmare: Our plan can now be compared to what really happened!

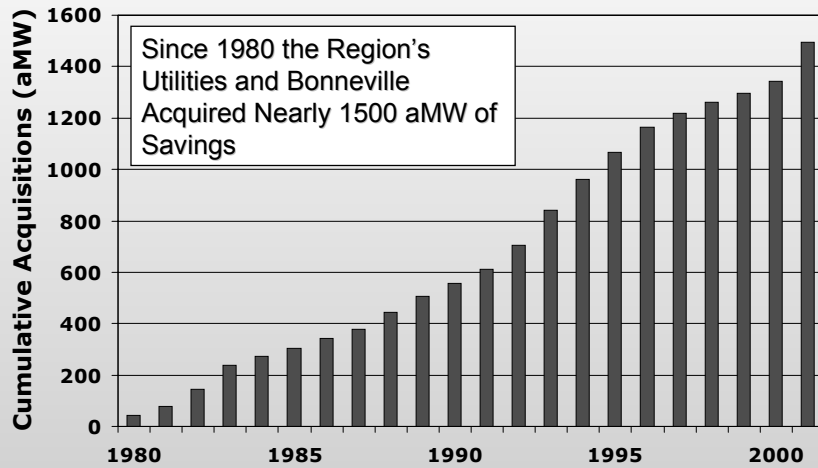
## Council's First Power Plan Was Adopted 20 Years Ago

- First Action Plan Relied on Conservation to Reduce Year 2002 Loads by Between 5 – 17%
  - Called upon Bonneville and Region's Utilities to Develop and Implement Wide Array of Conservation Programs
  - Called upon the State and Local Governments to Adopt More Energy Efficient Building Codes
  - Called upon the Federal Government to Adopt Energy Efficiency Standards for Appliances and New Manufactured Homes

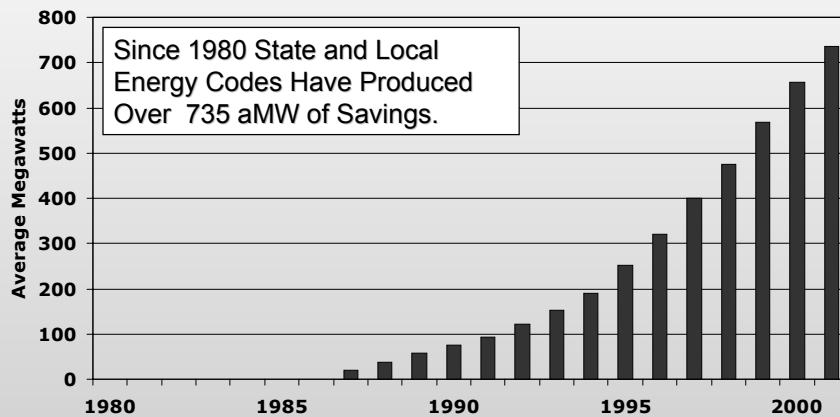
## 1983 Power Plan Conservation's Goals



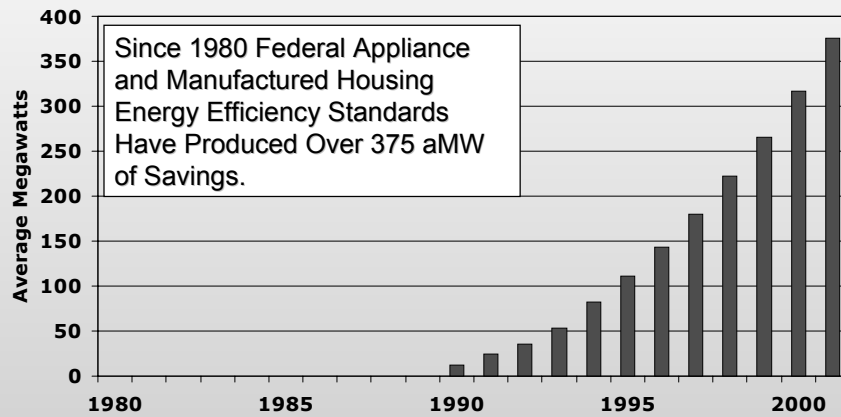
## 20 Years of Progress – Bonneville and Utility Accomplishments



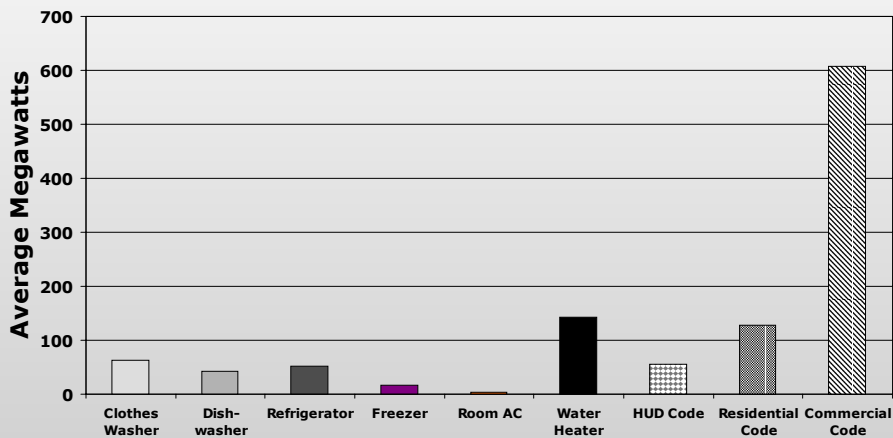
## 20 Years of Progress – State Energy Code Accomplishments



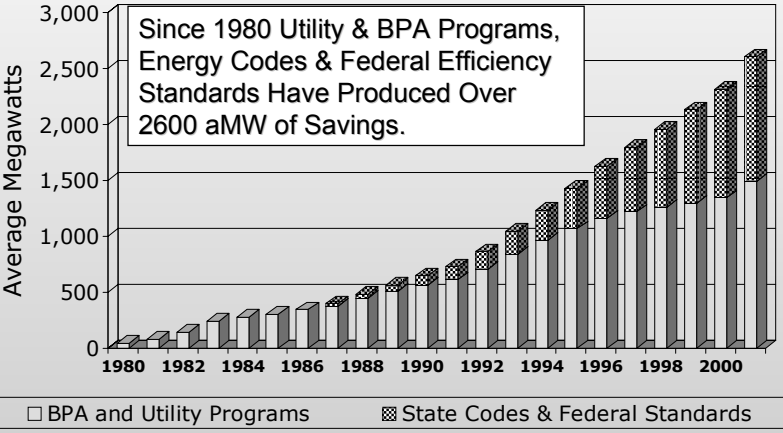
## 20 Years of Progress – Federal Energy Efficiency Standards Accomplishments



## PNW Savings from Codes and Efficiency Standards 1980-2001



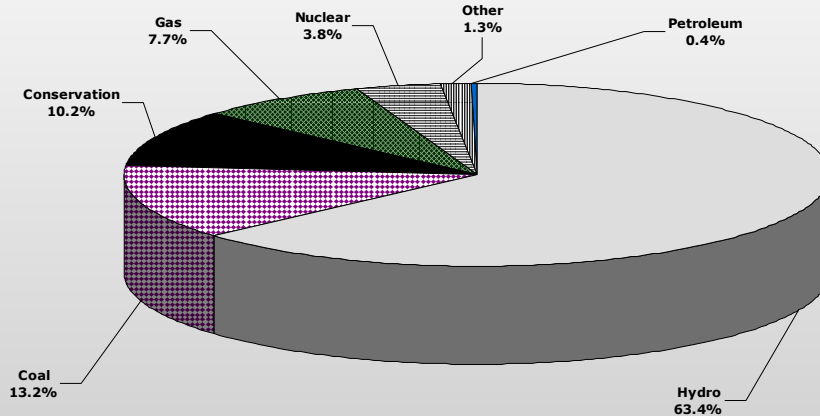
# 20 Years of Progress – Total PNW Conservation Savings



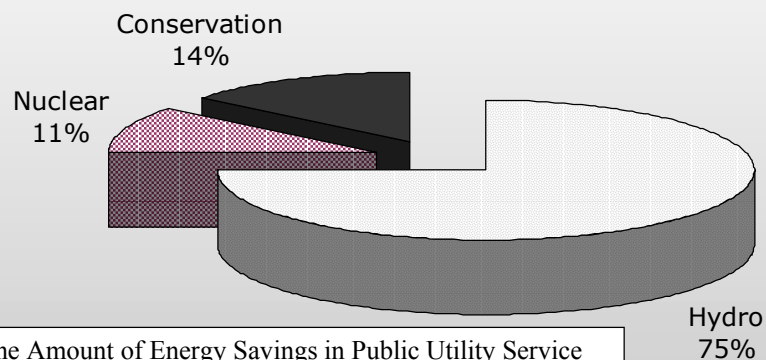
# Conservation Now Supplies Over 10% of the Region's Electricity Service Needs

	2000	2001
<b>PNW Electricity Sales</b>	20,600	18,450
<b>PNW Conservation</b>	2,315	2,600
<b>Total PNW Electricity Services</b>	22,915	21,050
<b>Share of Electricity Services Met by Conservation</b>	10%	12%

## Conservation Was The Northwest's Third Largest Source of Electricity Supply in 2000

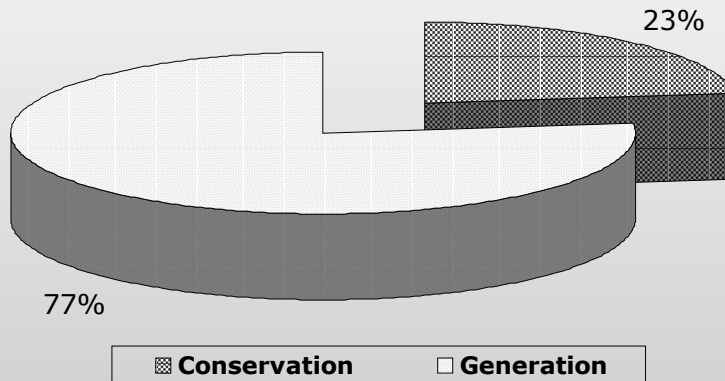


## Conservation Is Now The Second Largest Single Federal Power Firm Energy Resource

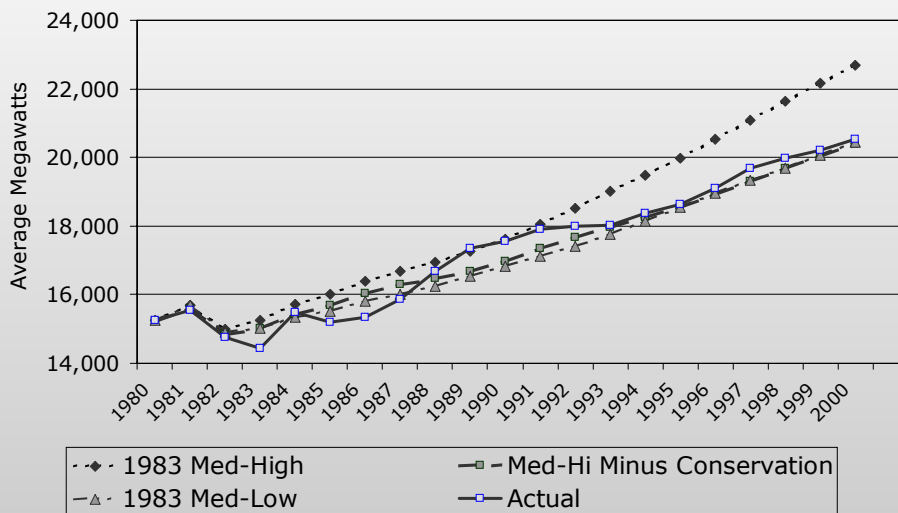


The Amount of Energy Savings in Public Utility Service Territories from Conservation Programs, Codes and Standards Is Equivalent to ***Three Times*** the Annual Firm Energy Output of Bonneville Dam

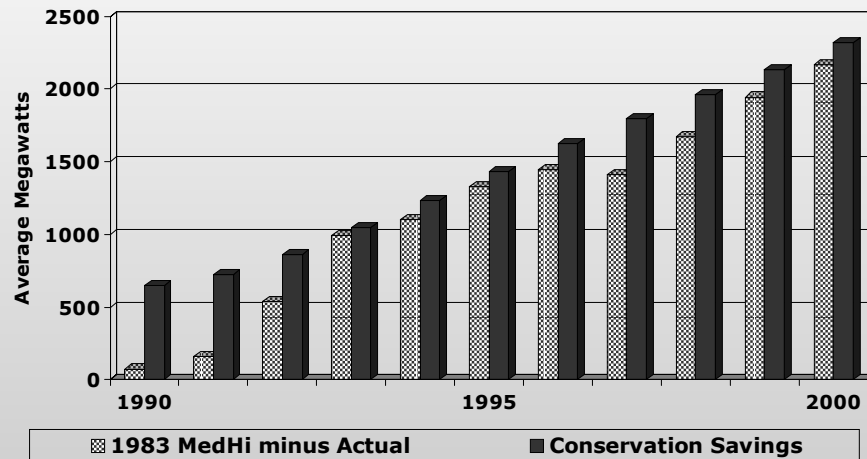
## Conservation Met Approximately 1/4 of the Regional Load Growth Between 1980 - 2002



## Conservation Significantly Reduced Projected PNW Electricity Sales



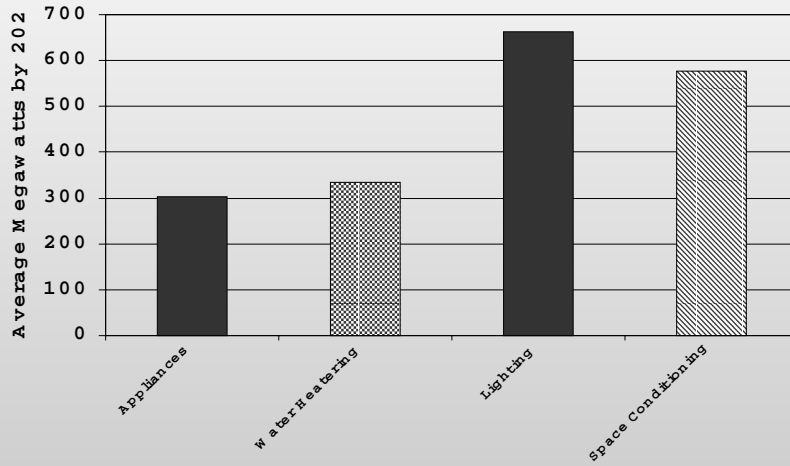
## Annual Conservation Savings Compared to Difference Between 1983 Mid-High Forecast and Actual Sales



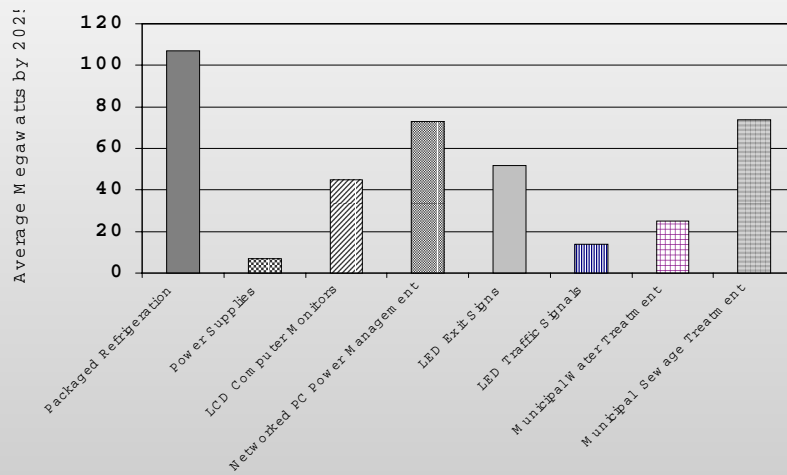
## The Fifth Plans Conservation Goals – There’s More Out There

- **New Technology provides additional opportunities for improving efficiency**
  - Best available clothes washers is 75% more efficient than federal standard that will not go into effect until 2007
- **Improve Installation and “Commissioning” practices can improve the efficiency of existing buildings and equipment**
  - The second largest potential for energy savings in the residential sector come from reducing “leaks” in home heating ducts

## Summary of Cost Effective Residential Sector Conservation Resource Potential by Major End Use



## Summary of Cost Effective Commercial Sector "Non-Building" Resource Potential



## And There's More

- Commercial Sector
  - Lighting
  - Heating, Ventilation & Air Conditioning
  - “Commissioning”
- Industrial
  - Motors
  - Lights
  - Processes
- Agriculture
  - Irrigation
  - Food Processing including Dairy Equipment

***Preliminary*** Analysis Indicates That Cost-Effective Conservation Potential Could Meet Just Over 12% of “Medium” Forecast PNW Loads in 2025

