

The Northwest Forecast – Energy Efficiency Dominates Resource Development

Tom Eckman

Manager, Conservation Resources
Northwest Power and Conservation Council

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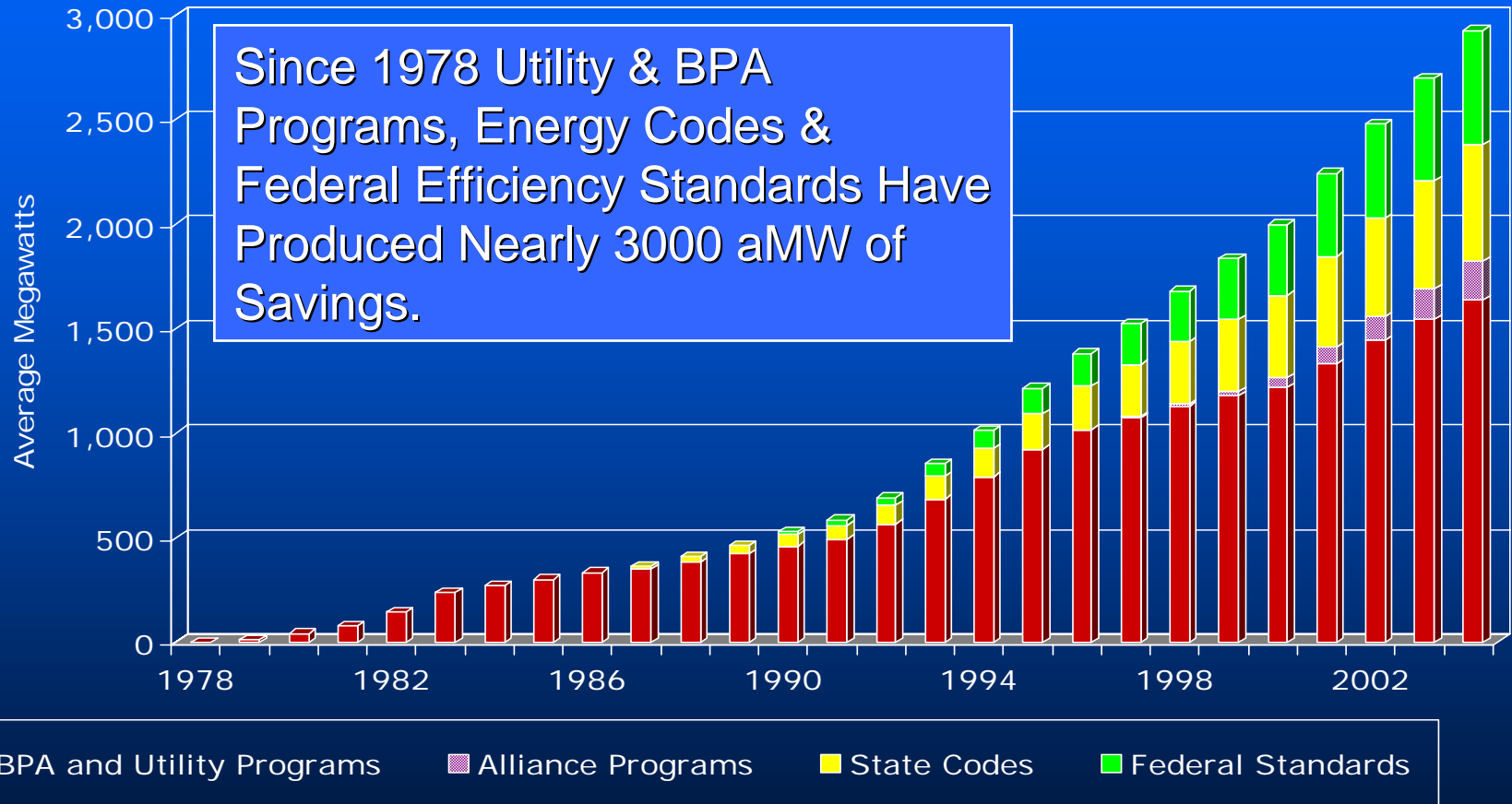
2005 ACEEE Energy Efficiency as a Resource Conference



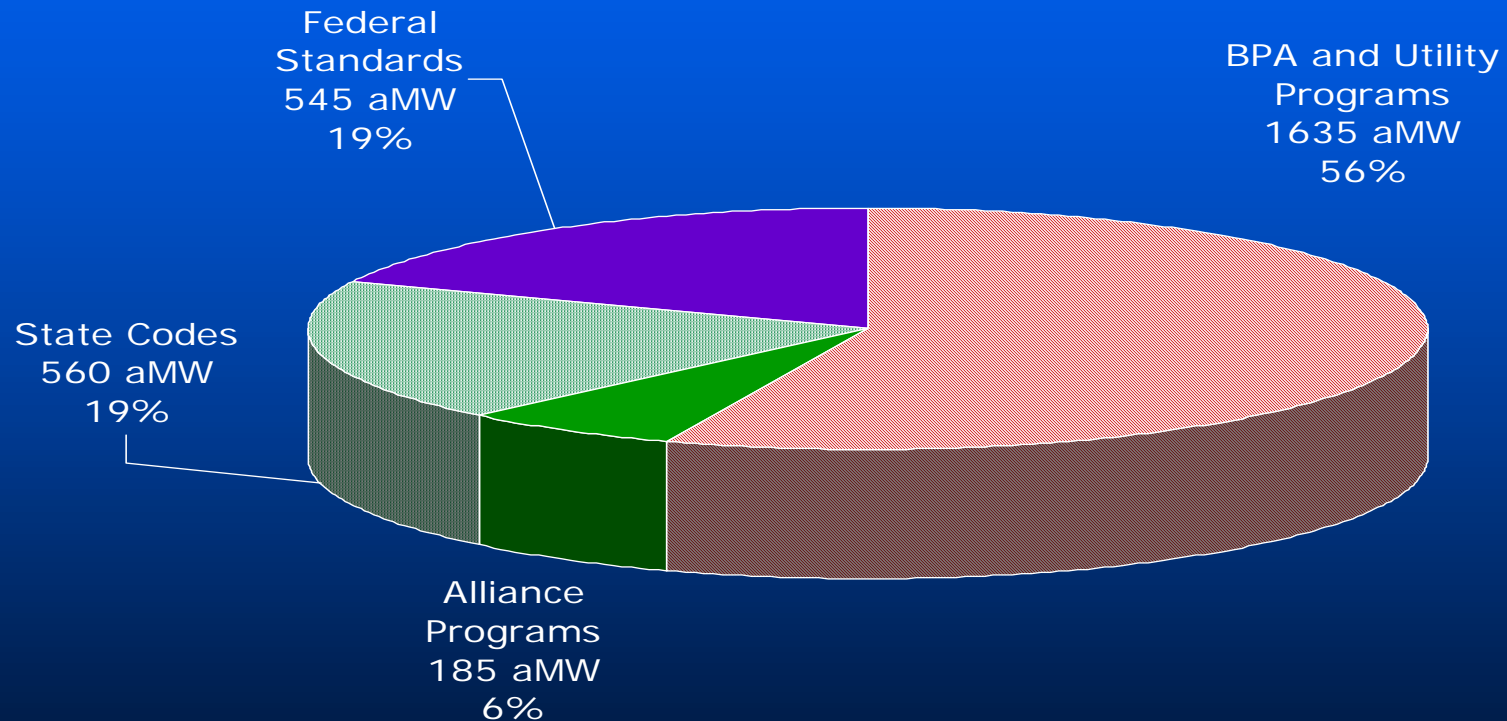
What You're About To Hear

- Efficiency and the Current Resource Mix
- Regional Efficiency Goals
 - 5th Northwest Power and Conservation Plan
 - Utility and SBC Administrator Plans
- What's Behind the Goals
- The Challenge Ahead

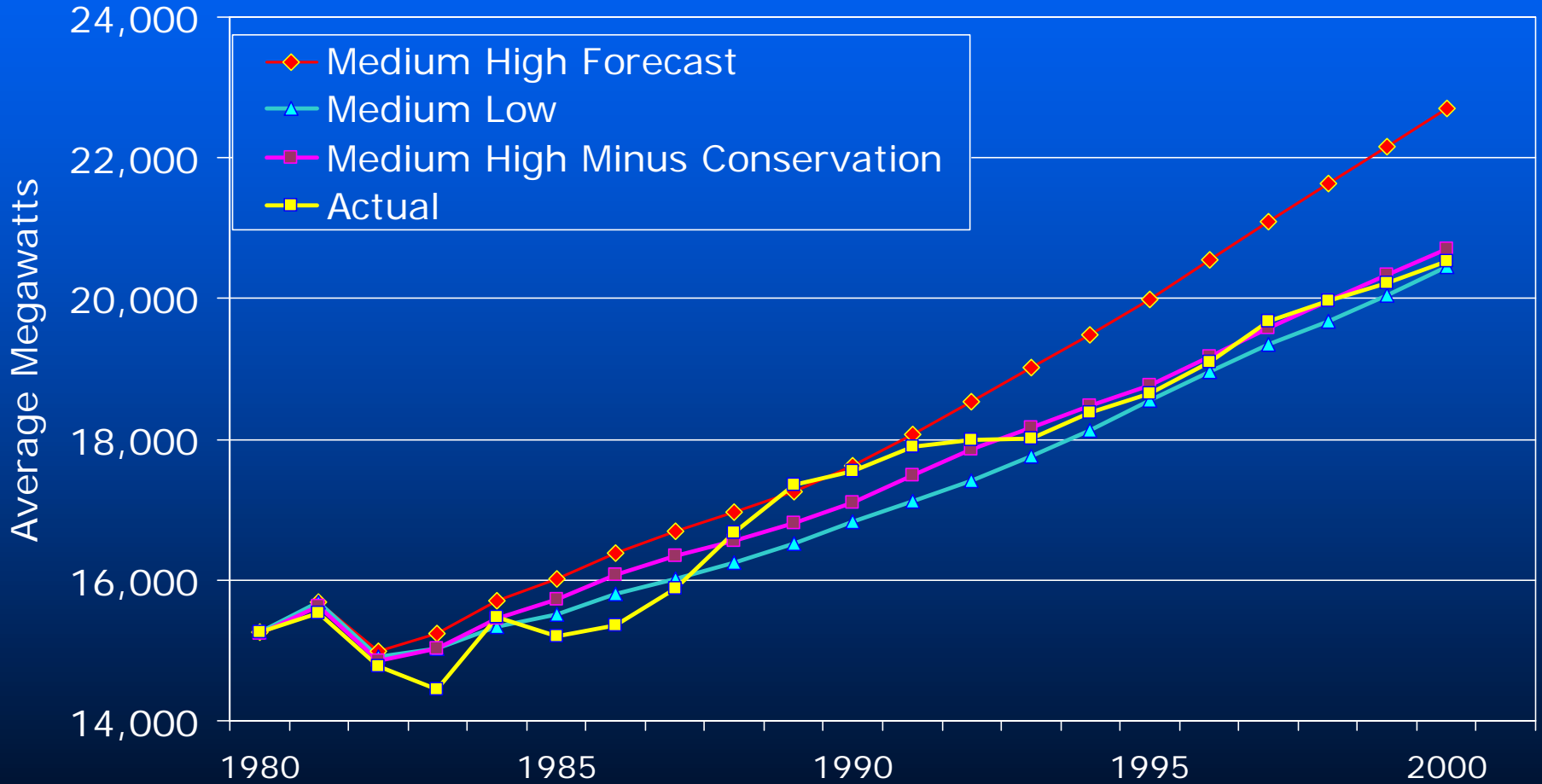
PNW Energy Efficiency Achievements 1978 - 2004



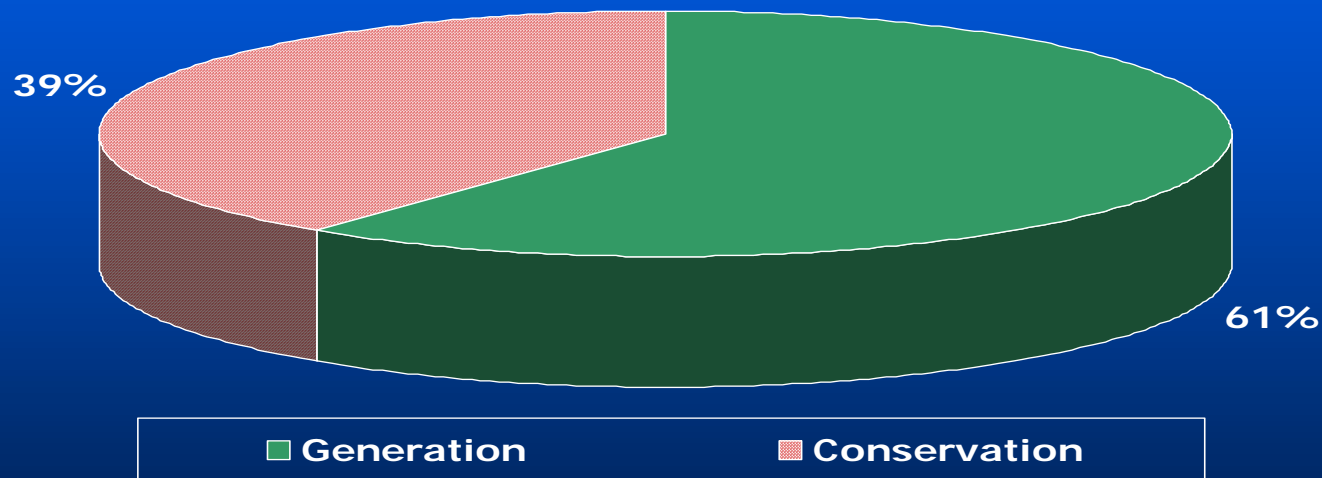
Cumulative 1978 - 2004 Efficiency Achievements by Source



Energy Efficiency Resources Significantly Reduced Projected PNW Electricity Sales

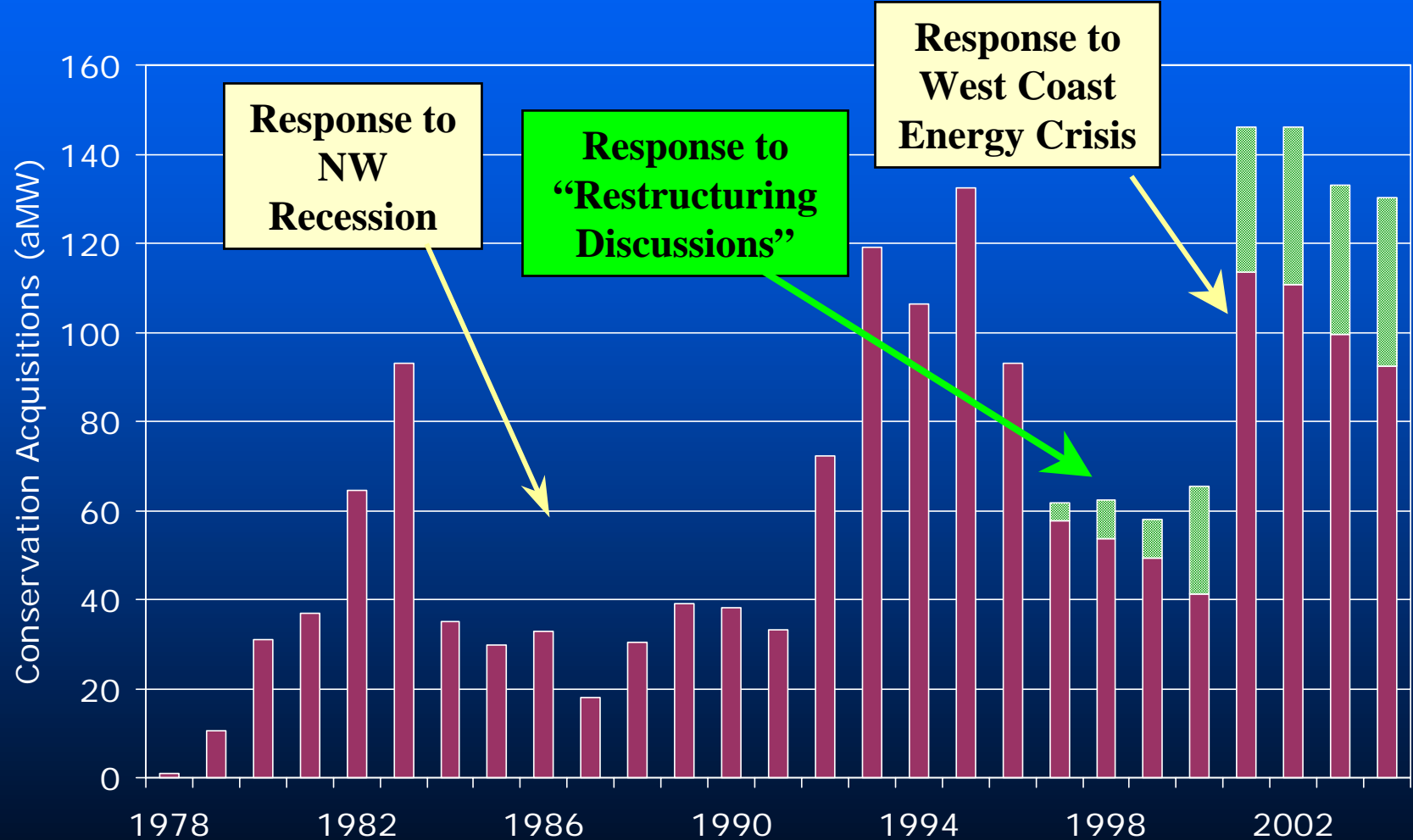


Energy Efficiency Met Nearly 40% of PNW Regional Firm Sales Growth Between 1980 - 2003



Regional Utility Conservation Acquisitions Have Also Helped Balance Loads & Resources

Creating Mr. Toad's Wild Ride for the PNW's Energy Efficiency Industry

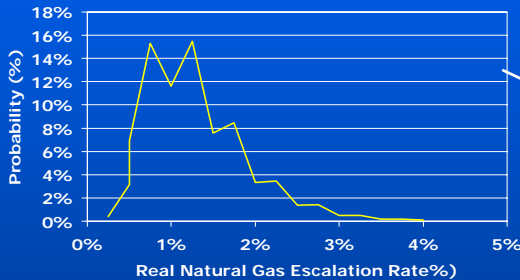
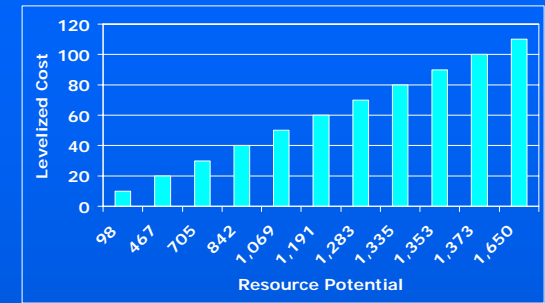
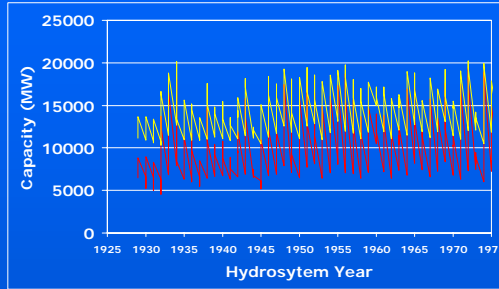
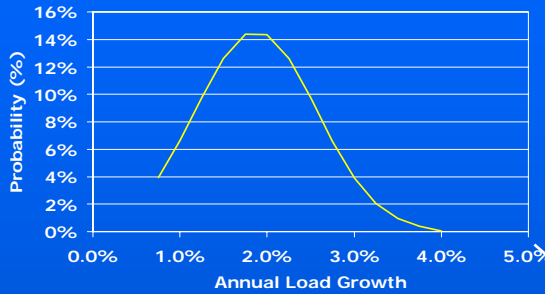


So What's 3000 aMW?

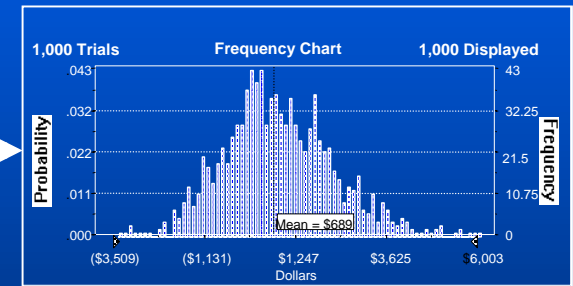
- It's enough electricity to serve the entire state of Idaho and all of Western Montana
- It's enough electricity to meet nearly 60% of Oregon total electricity use

So Much for the Past, What's Ahead

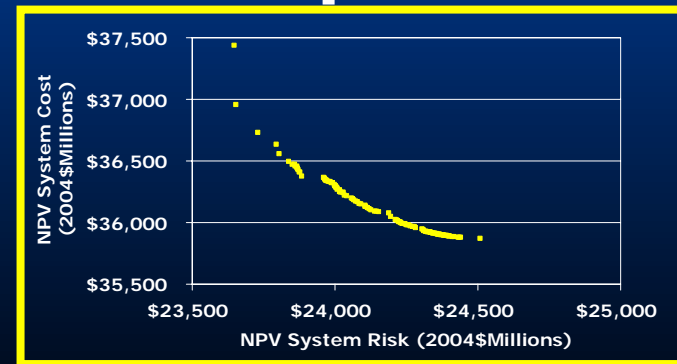
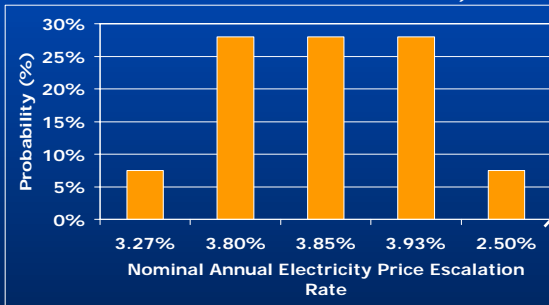
PNW Portfolio Planning – Scenario Analysis on Steroids



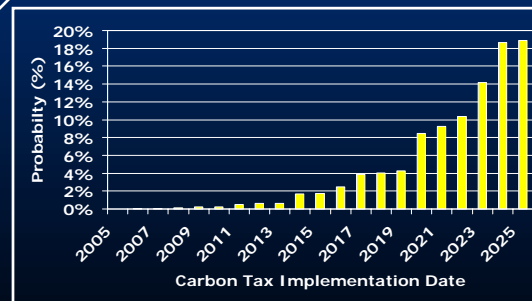
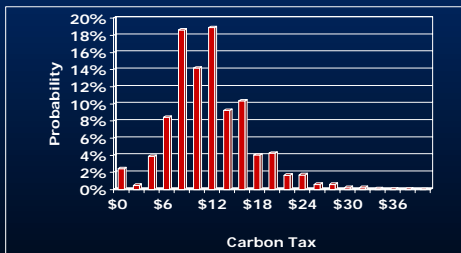
Portfolio Analysis Model



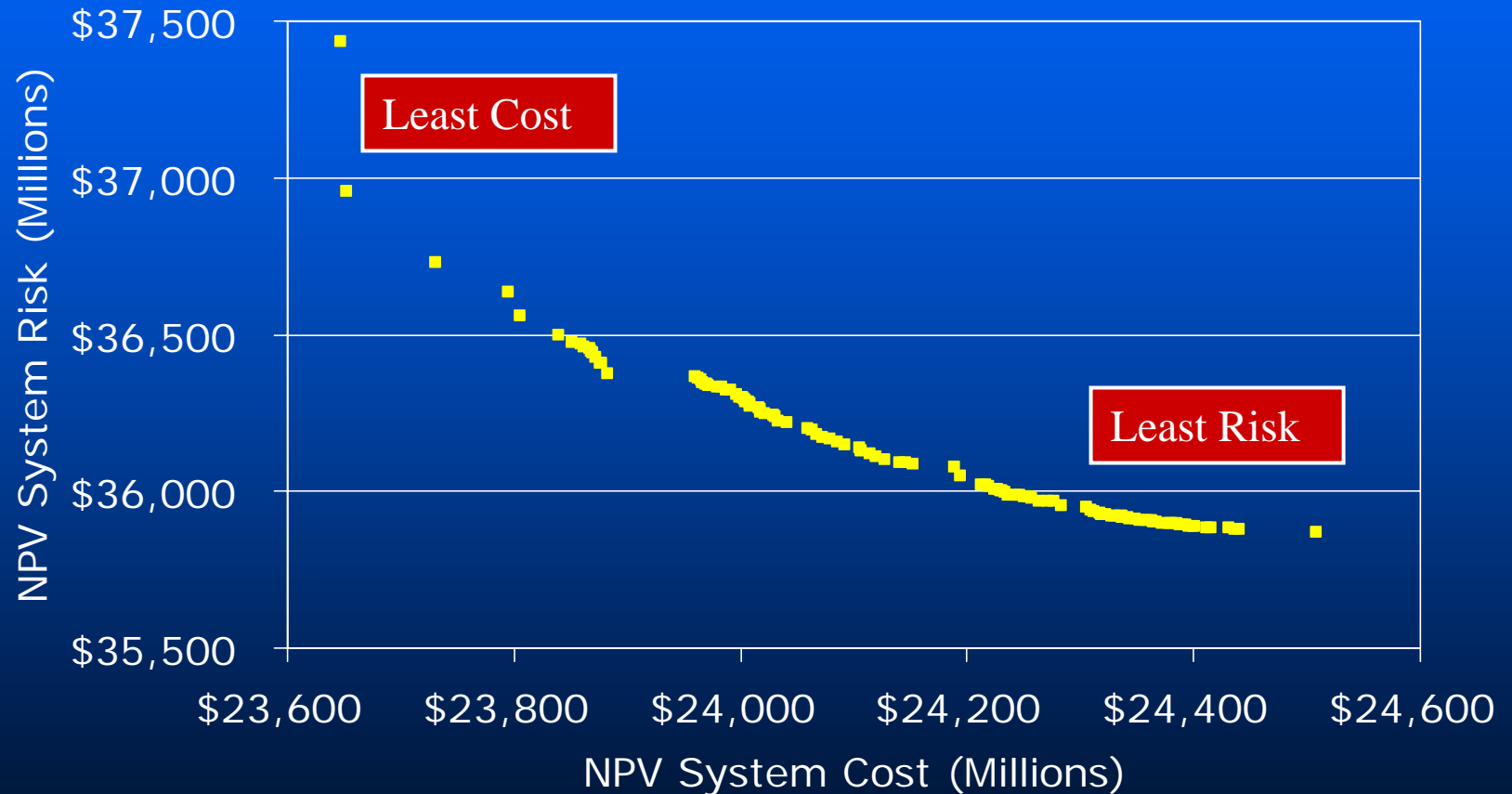
NPV System Cost



Efficient Frontier



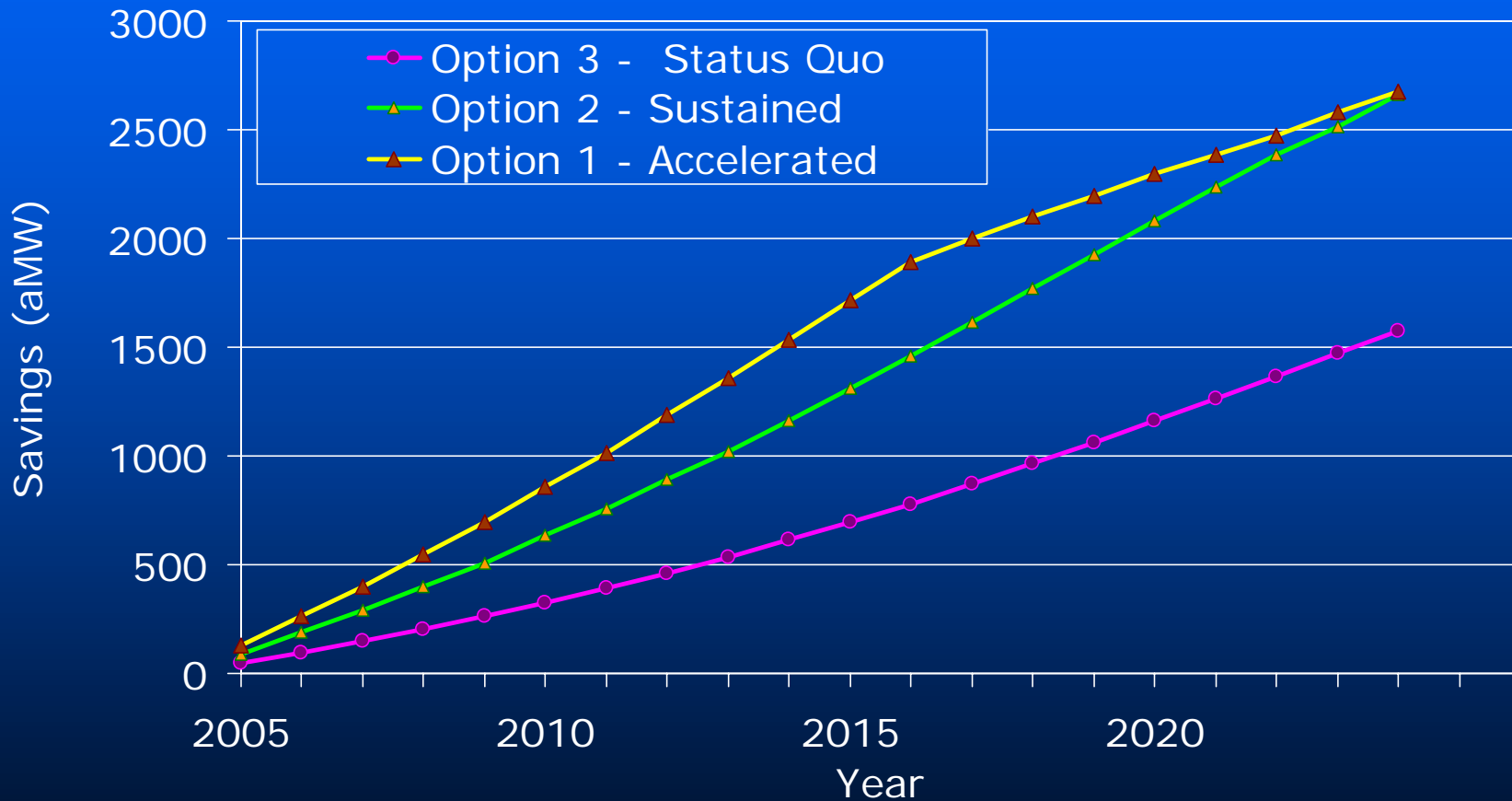
Plans Along the Efficient Frontier Permit Trade-Offs of Costs Against Risk



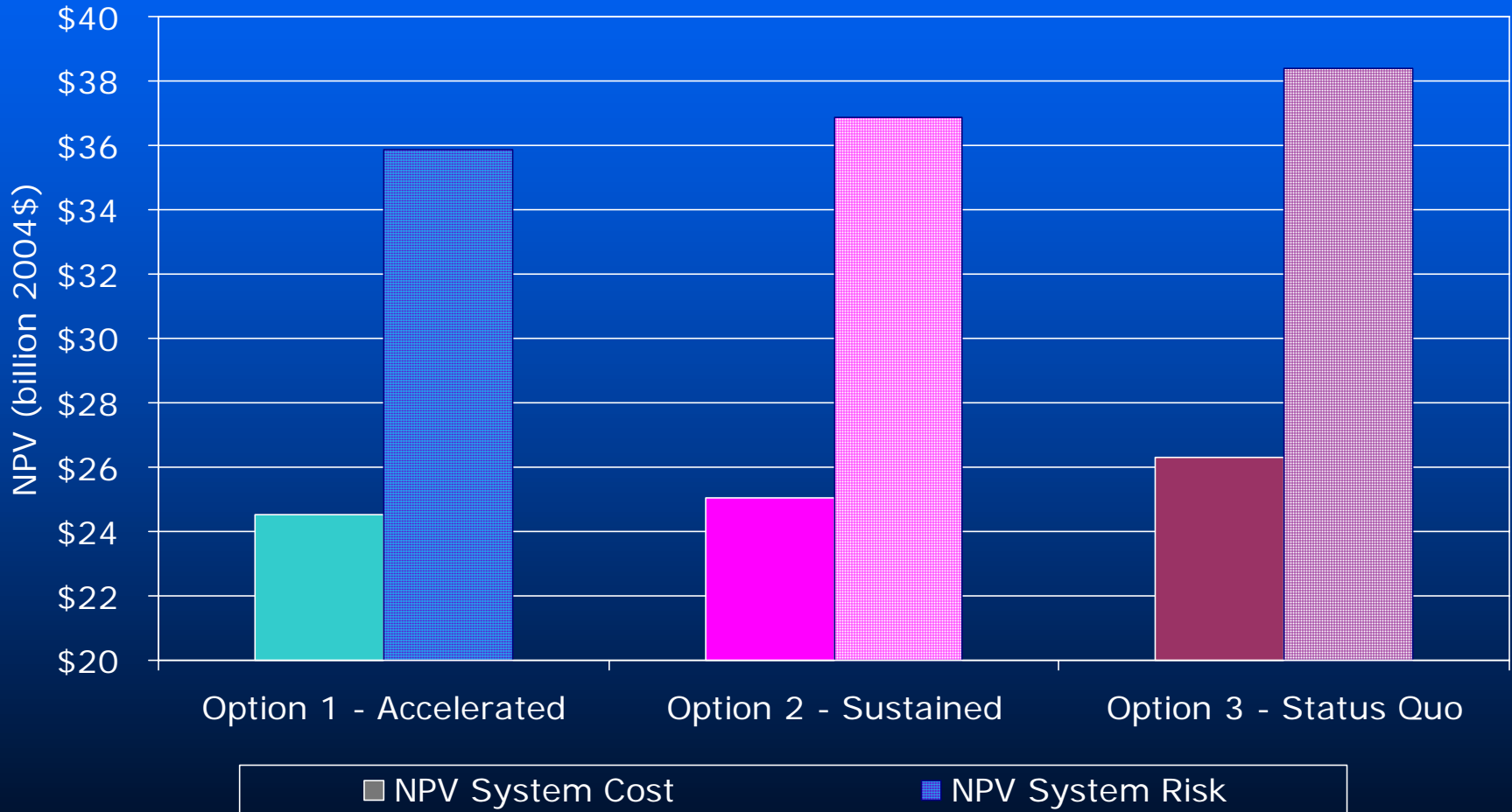
Three Conservation Options Tested

- **Option 1: Accelerated** – Similar to the “best performance” over the last 20 years
 - Non-lost opportunity limited to 120 aMW/year
 - Ramp-up lost-opportunity to 85% by 2017
- **Option 2: Sustained** - Similar to typical rates over last 20 years
 - Non-lost opportunity limited to 80 aMW/year
 - Ramp-up lost-opportunity to 85% by 2017
- **Option 3: Status Quo** - Similar to lowest rates over last 20 years
 - Non-lost opportunity limited to 40 aMW/year
 - Ramp-up lost-opportunity to 85% penetration by 2025

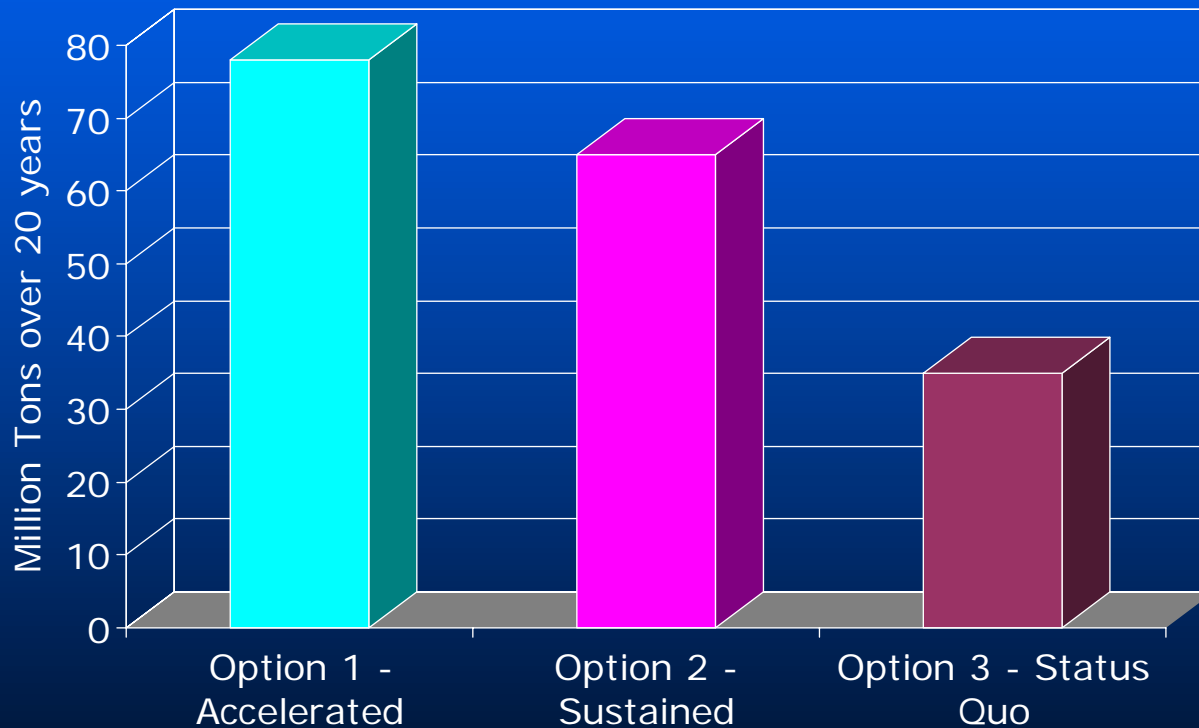
Average Annual Conservation Development for Alternative Levels of Deployment Tested



Accelerating Conservation Development Reduces Cost & Risk



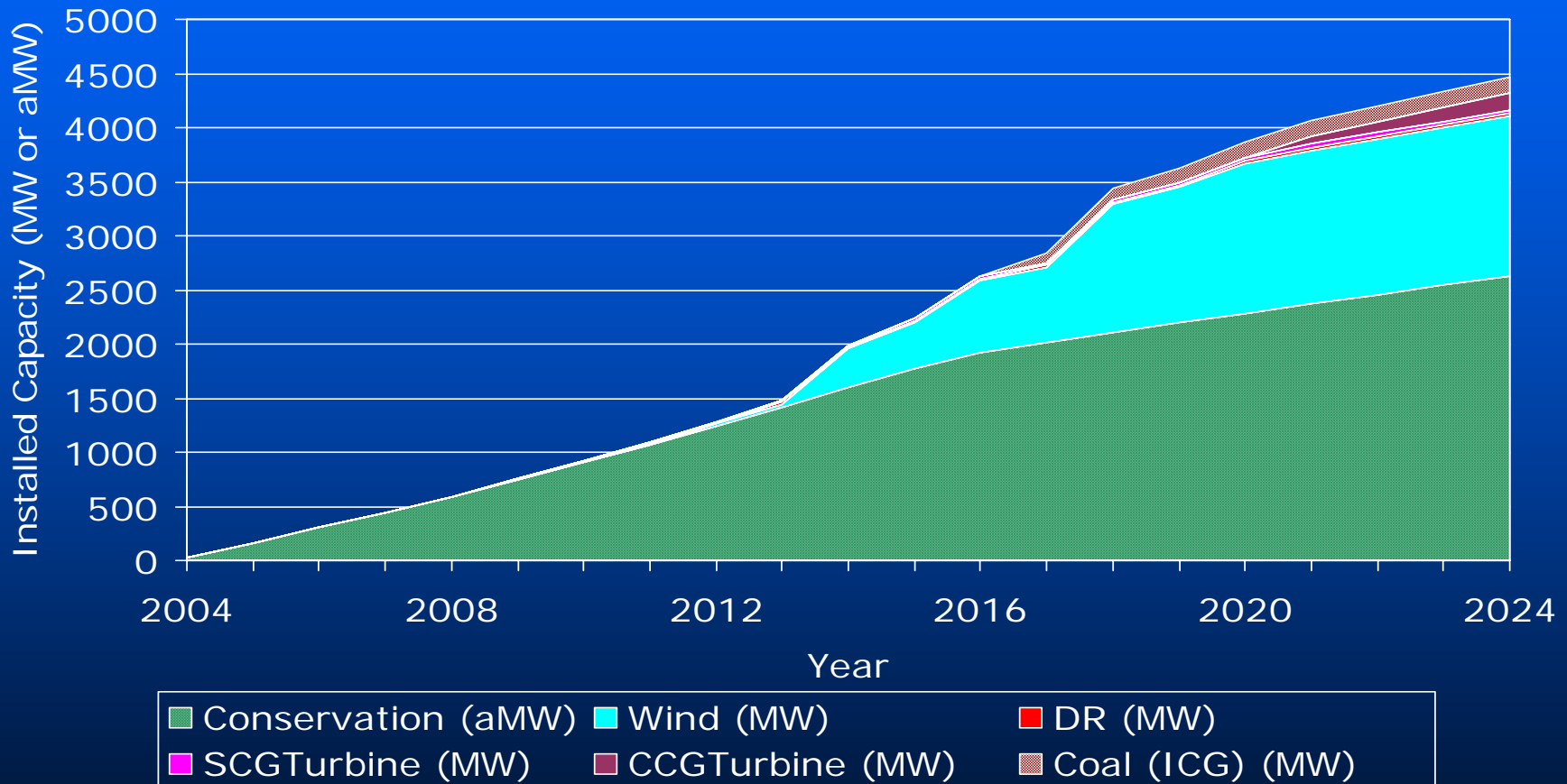
WECC Carbon Dioxide Emissions Reductions for Alternative Conservation Targets



Why Energy Efficiency Reduces NPV System Cost and Risk

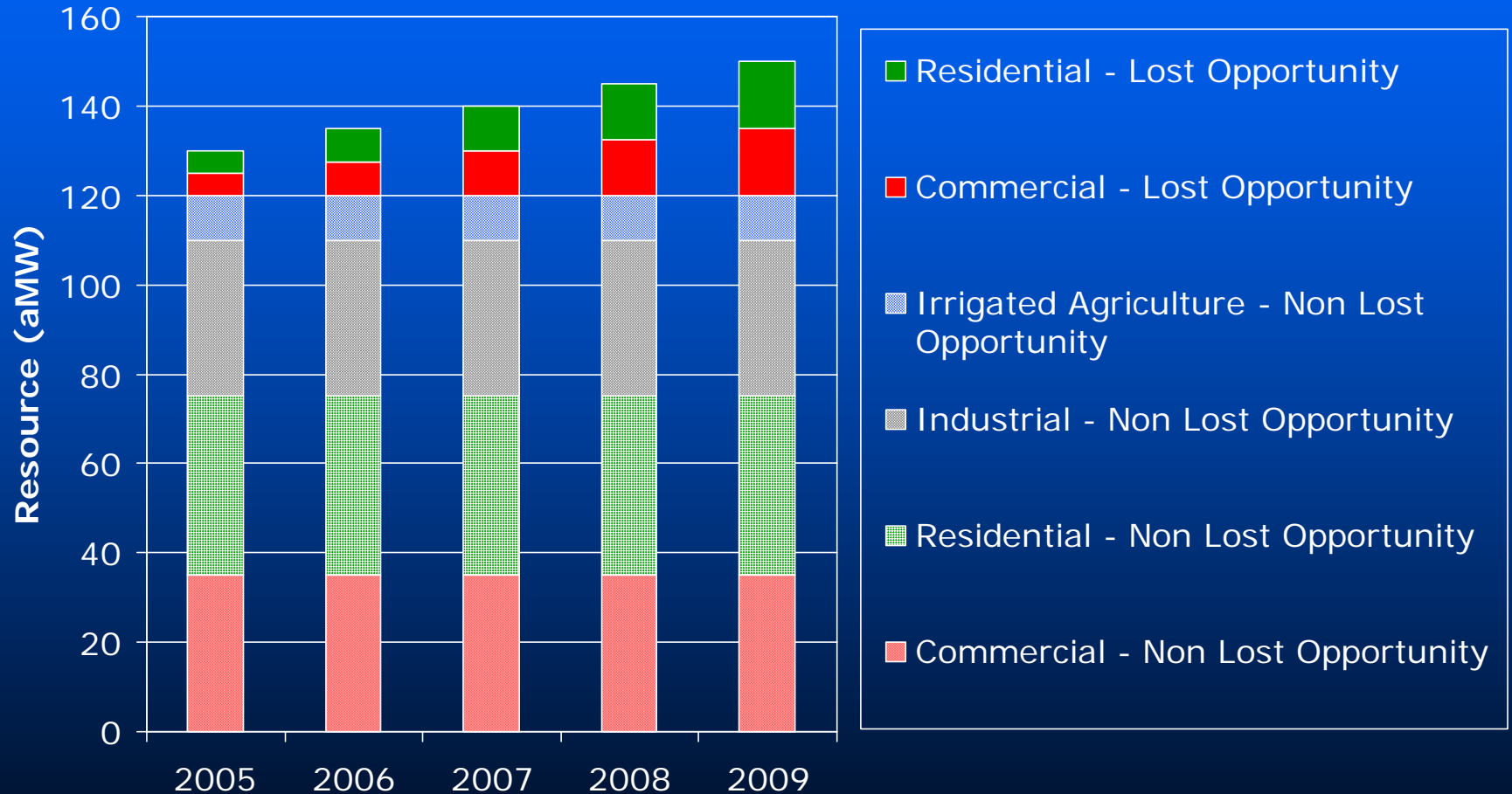
- It's A Cheap (avg. 2.4 cents/kWh TOTAL RESOURCE COST) Hedge Against Market Price Spikes
- It has value even when market prices are low
- It's Not Subject to Fuel Price Risk
- It's Not Subject to Carbon Control Risk
- It's Significant Enough In Size to Delay "build decisions" on generation

5th Plan Relies on Conservation and Renewable Resources to Meet Load Growth *



*Actual future conditions (gas prices, CO2 control, conservation accomplishments) will change resource development schedule

Near-Term Conservation Targets (2005-2009) = 700 aMW





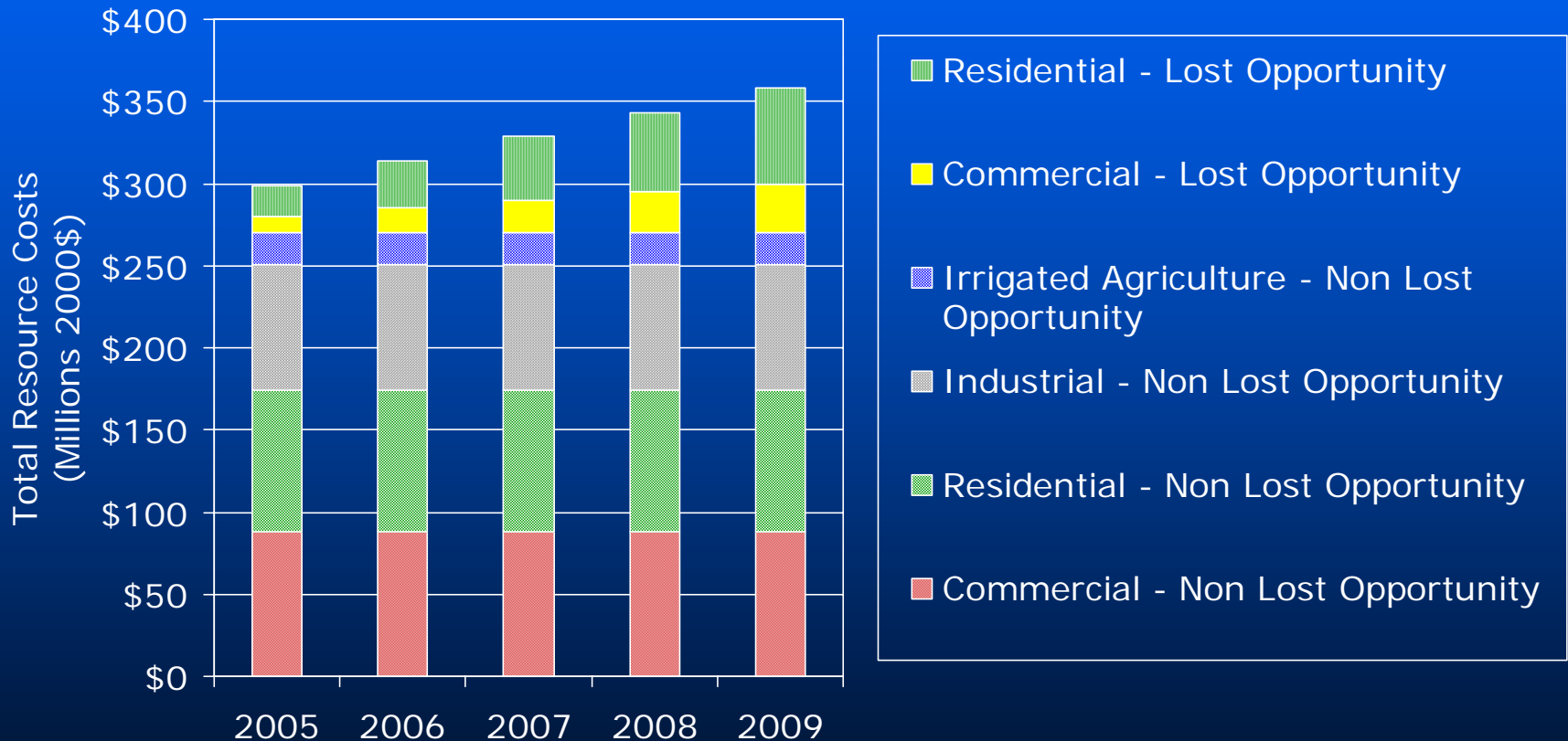
Plan

Conservation Action Items

- Ramp up “Lost Opportunity” conservation
 - » Goal => 85% penetration in 12 years
 - » 10 to 30 MWa/year 2005 through 2009
- Accelerate the acquisition of “Non-Lost Opportunity” resources
 - » Return to acquisition levels of early 1990’s
 - » Target 120 MWa/year next five years
- Employ a mix of mechanisms
 - » Local acquisition programs (utility, SBC Administrator & BPA programs)
 - » Regional acquisition programs and coordination
 - » Market transformation ventures

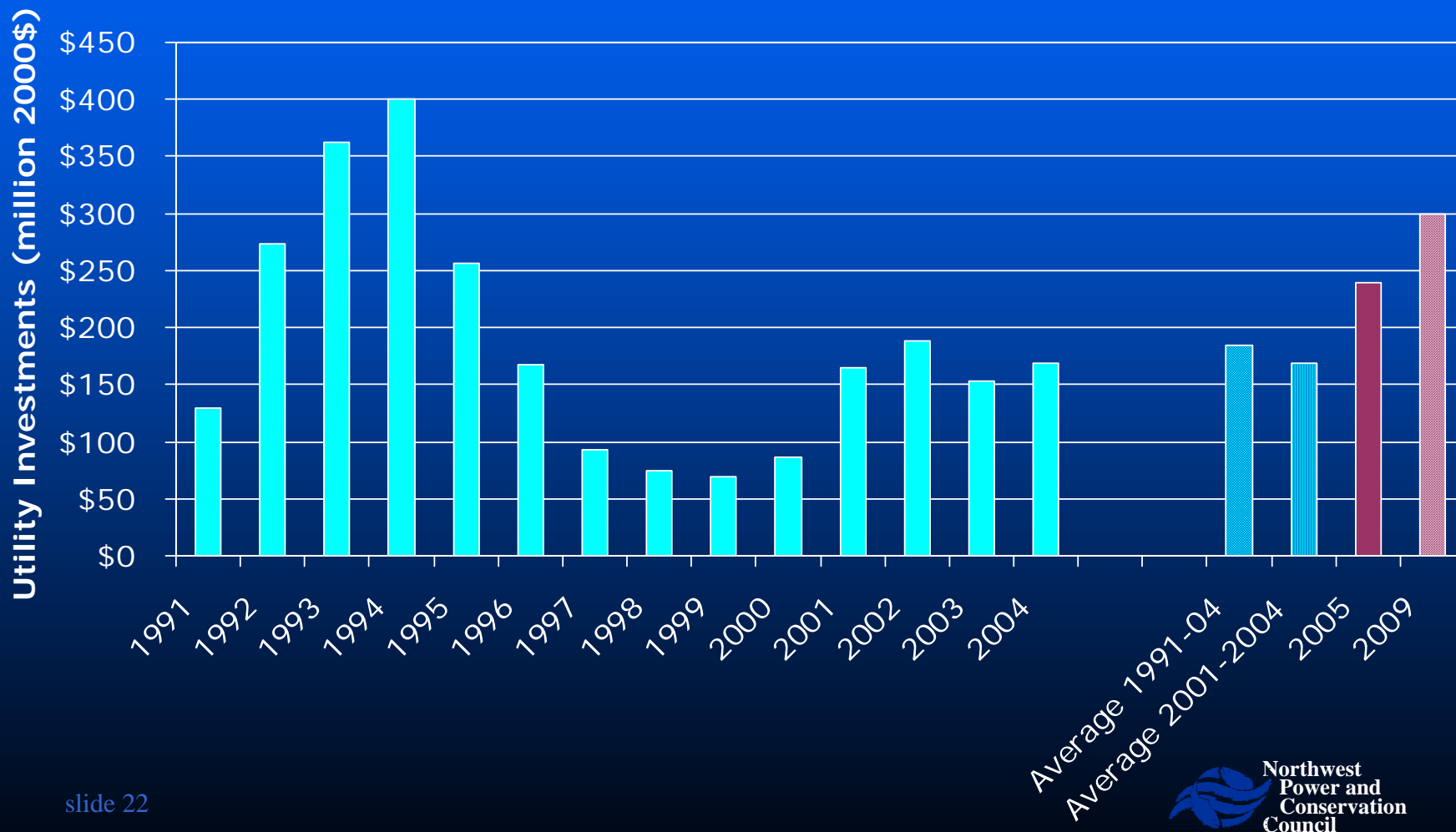
Implementation Challenges

The Total Resource Acquisition Cost* of 5th Plan's Conservation Targets 2005 – 2009 = \$1.64 billion



*Incremental capital costs to install measure plus program administration costs estimated at 20% of capital.

Meeting the Plan's Efficiency Targets Will Likely Require Increased Regional Investments

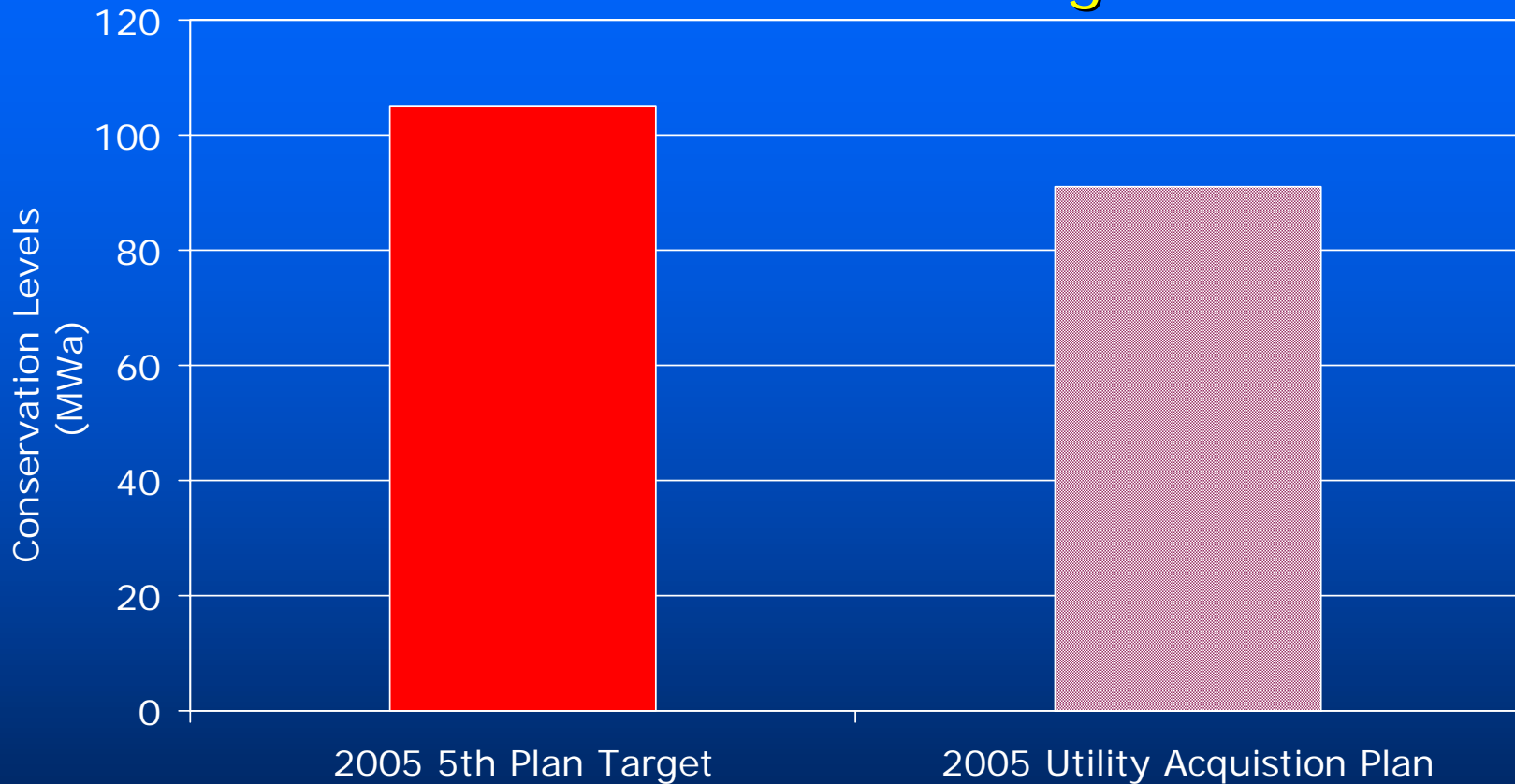


Although, The Share of Utility Revenues Required is Modest



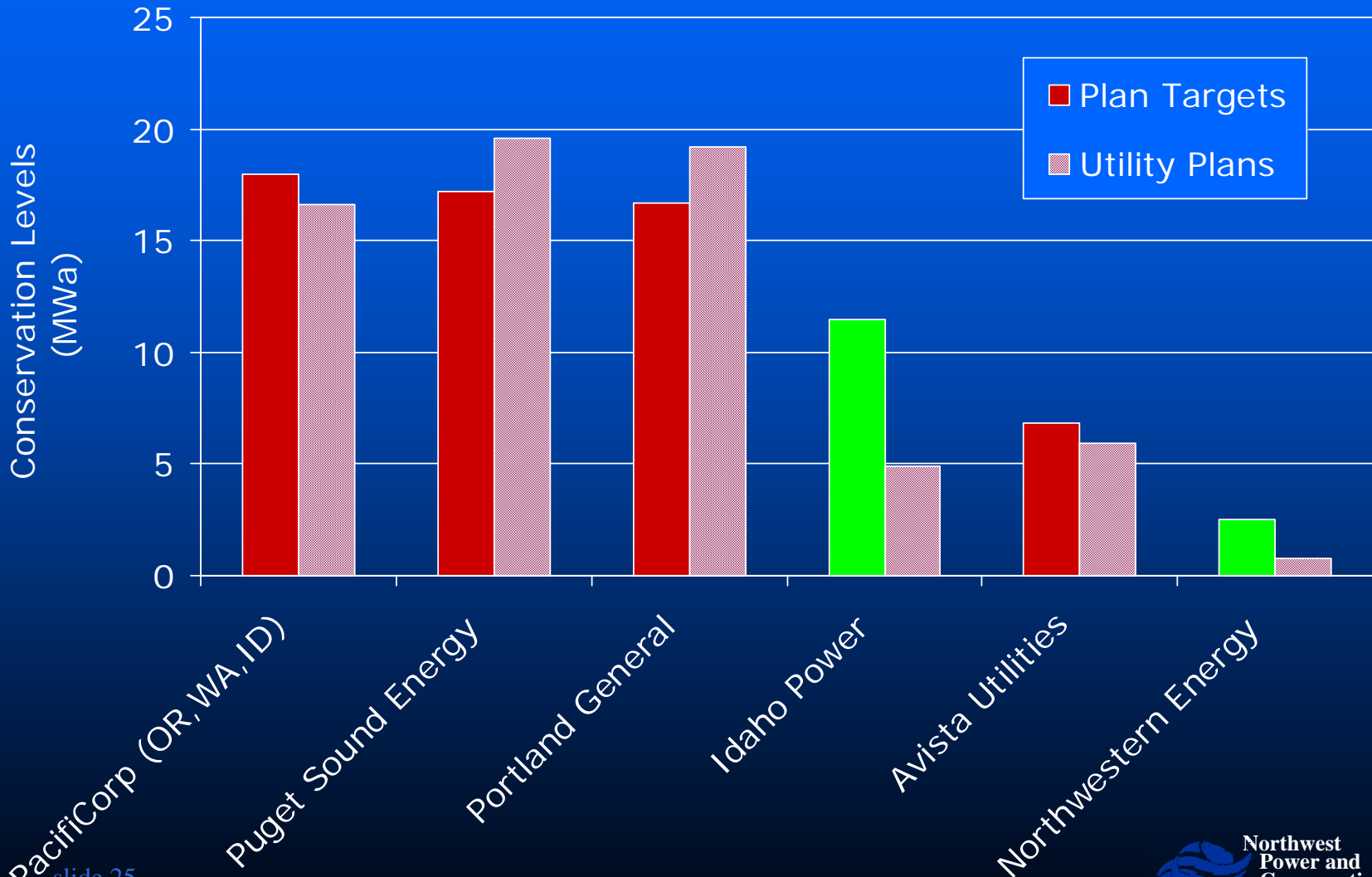
Regional Average Revenues/kWh will need to increase by \$0.000006/kWh

Utility* Efficiency Acquisition Plans for 2005 Are Close to 5th Plan Targets

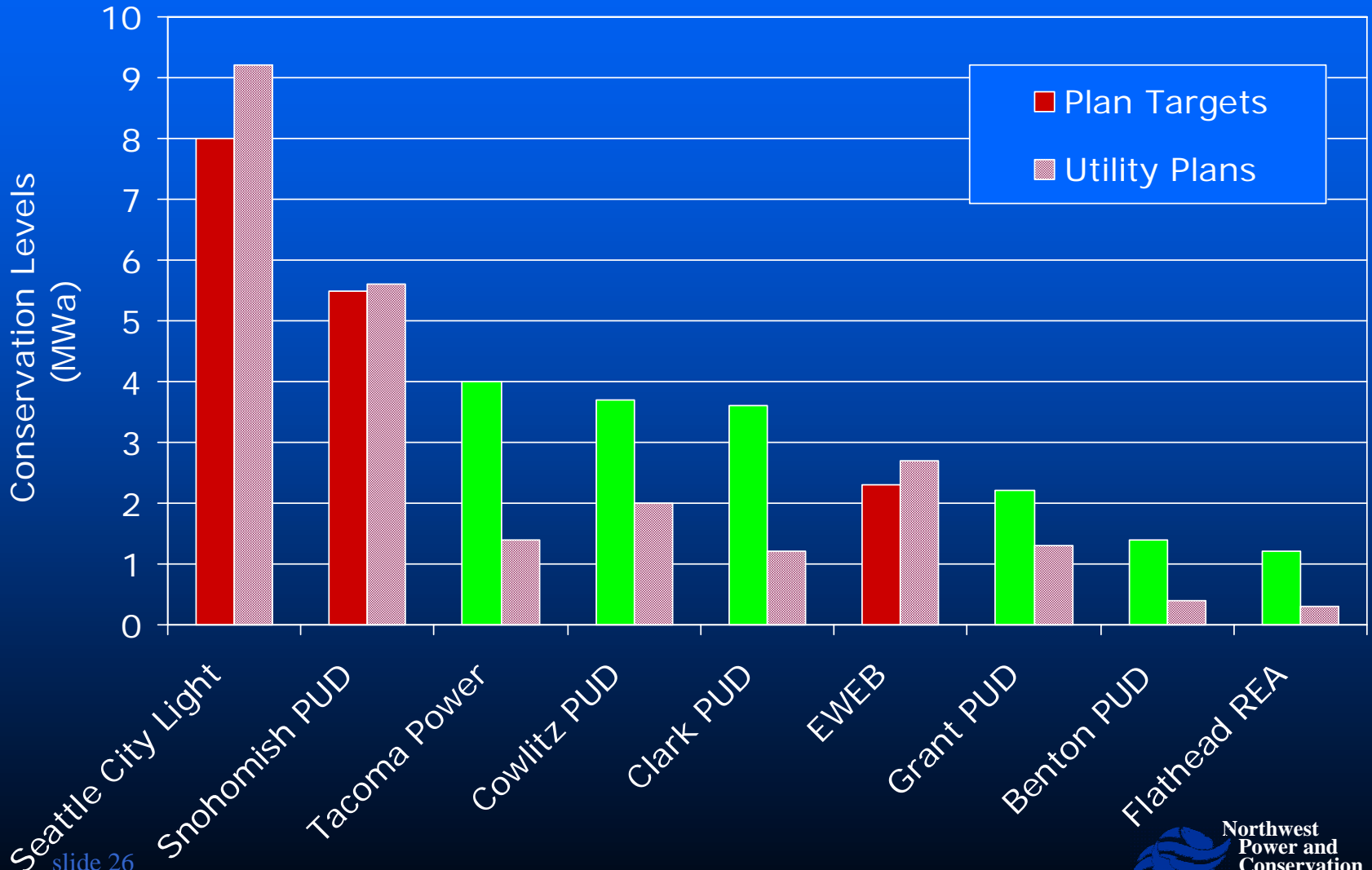


*Targets for 15 Largest PNW Utilities. These utilities represent approximately 80% of regional load.

Most IOU Efficiency Plans are Close to 5th Plan's Targets



However, Several Large Public Utility Efficiency Plans Are Well Below 5th Plan Targets



Summary – The PNW

- Council and Recent Utility IRPs (PSE, Avista, Northwestern, Snohomish PUD) all found that accelerating energy efficiency acquisitions reduces projected system cost and risk
- The Council's 5th Plan Target is Achievable . . . but some major utilities are “behind the curve”