Northwest Power and Conservation Council

August 30, 2012

MEMORANDUM

TO: Council Members

FROM: Tom Eckman, Manager, Conservation Resources
Gillian Charles, Energy Policy Analyst

SUBJECT: Report on 2011 Conservation Achievements

In 2011, once again the region's utilities exceeded the Sixth Power Plan's goal for energy efficiency achievements. In addition, the achievements were low cost, at or below what was shown in the Sixth Power Plan. At the September Council Meeting in Astoria, Council staff will present the detailed results of the 2011 regional conservation achievements and the projections for 2012-2014. The Council will issue a press release following the meeting to announce the good news.

The Sixth Power Plan's five year target for 2010-2014 is 1,200 average megawatts. The target for 2011 was 220 average megawatts. As a reminder, in 2010 the region acquired 254 average megawatts of conservation savings, far exceeding the Council's target of 200 average megawatts. The levelized cost of the 2010 savings were just under $18/MWH.

Every year the Council surveys the region's utilities, Bonneville Power Administration, and the Systems Benefit Charge Administrators for the previous year's conservation achievements and expenditures and projections for the current year. This year, the Council asked for <u>actual</u> achievements and expenditures for 2011 and <u>projected</u> achievements and expenditures for 2012. In addition, the Council, in coordination with PNUCC, asked for projected achievements and expenditures for 2013 and 2014 in order to estimate and gage the region's progress towards the Sixth Power Plan's five-year target (2010-2014) of 1,200 average megawatts.

The response from the survey was strong, with 92 utilities submitting reports for 2011 achievements (representing ~93% of the region's retail sales). The remaining share is obtained from data collected directly from Bonneville and NEEA. In response to the request for projections for 2012-2014, the number of utilities submitting reports fell from over 90 utilities

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representing over 90% of retail sales to less than 80 utilities representing just over 70% of retail sales. Most utilities indicated that their lower response rate was due to uncertainties regarding future budgets and an unwillingness to set forth expectations that they could not commit to meeting.

Staff wish to thank the respondents for submitting the survey information and to PNUCC for encouraging participation in this effort.

Progress Toward the 6th Plan's Regional Conservation Goals

2011 Achievements
2012 – 2014 Predictions

September 12, 2012

2011 Regional Conservation Achievement Report

- Annual Survey Conducted by RTF
- Requested Actual Conservation Savings and Expenditures for 2011
- At the request of PNUCC, also requested Projected Savings and Expenditures for 2012 – 2014 to compare against 6th Plan's targets
- Data was requested from all utilities, SBC Administrators, NEEA and Bonneville.

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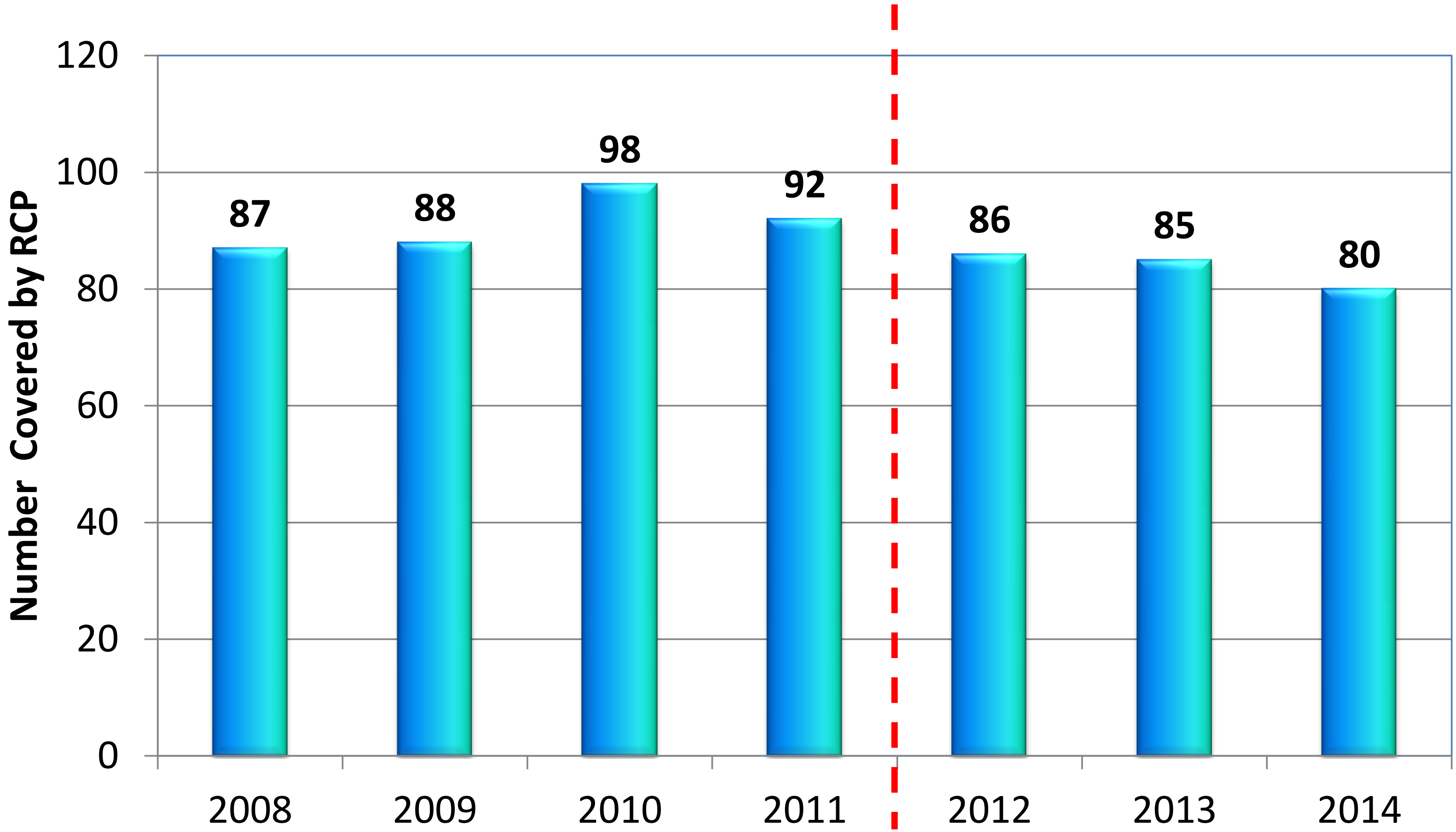
Utilities Filing Regional Conservation Progress (RCP) Reports*



*Includes Energy Trust of Oregon, and PNGC and IDEA that file on behalf of multiple utilities

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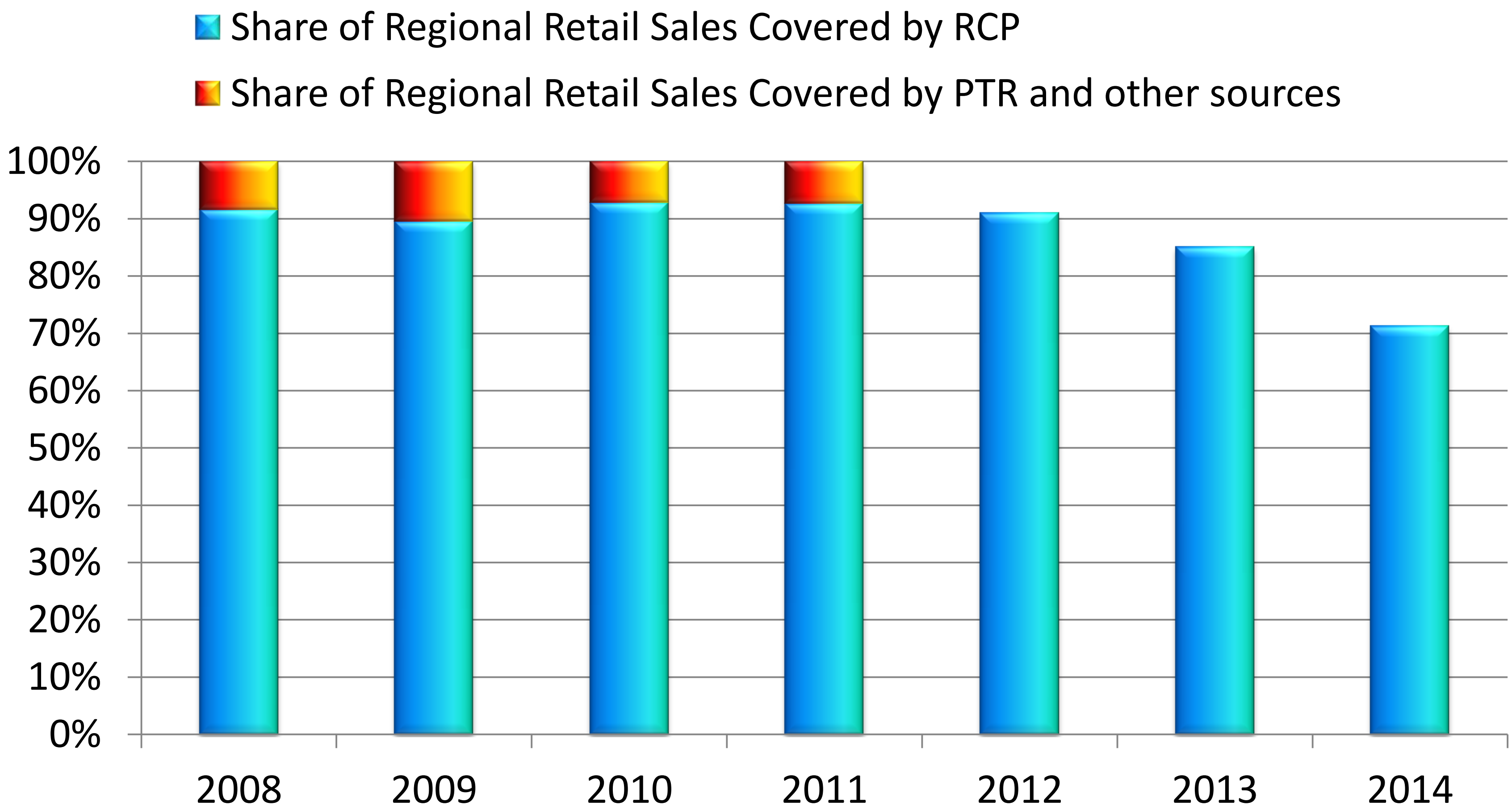
Share of Regional Retail Sales Covered by RCP and Other Sources*



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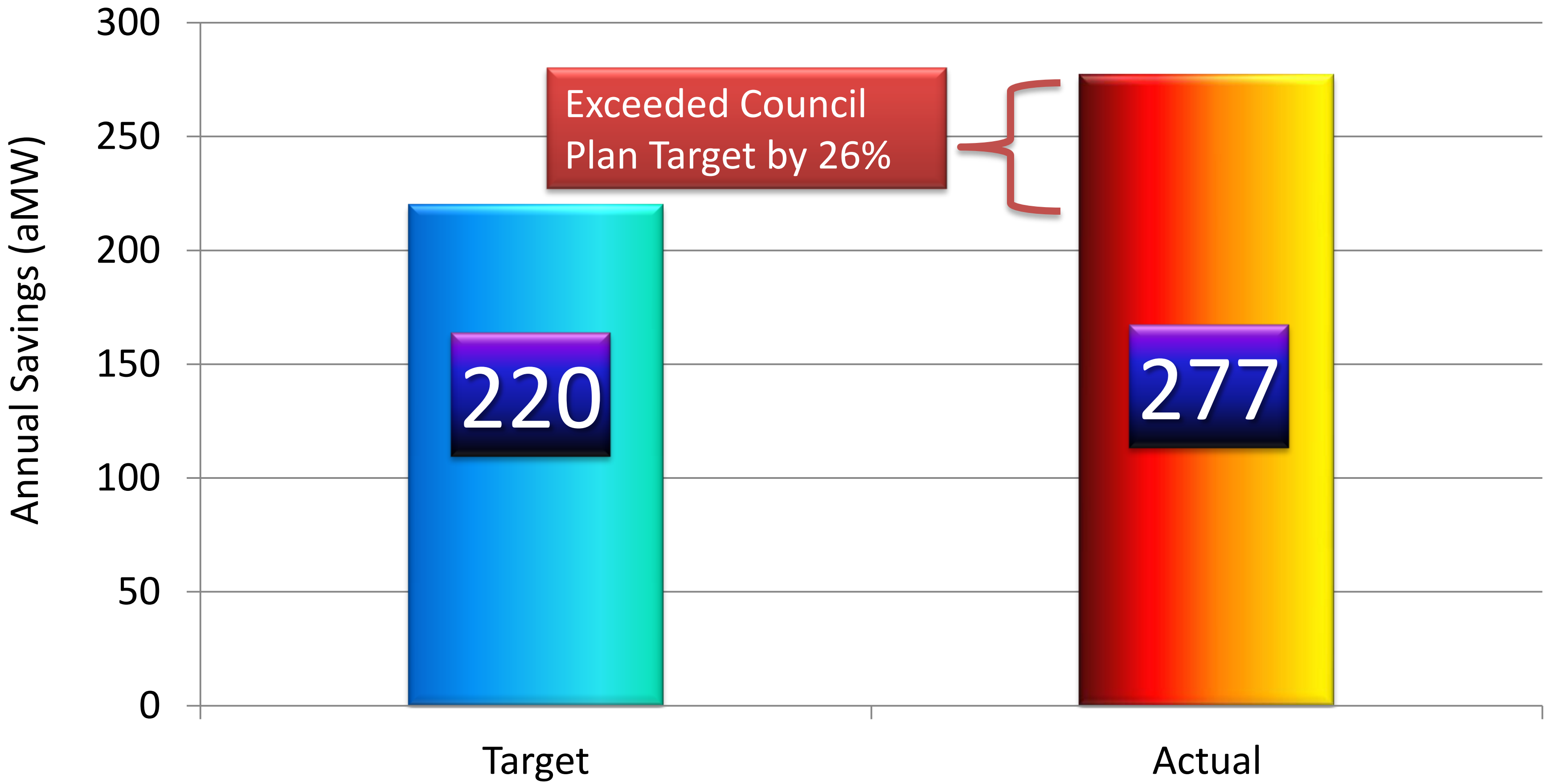
*The Council/RTF obtains data directly from NEEA and Bonneville for public utilities that do not file RCP reports and for programs Bonneville funds directly.

2011 Results: So Far, So Good

2011 Regional Accomplishments



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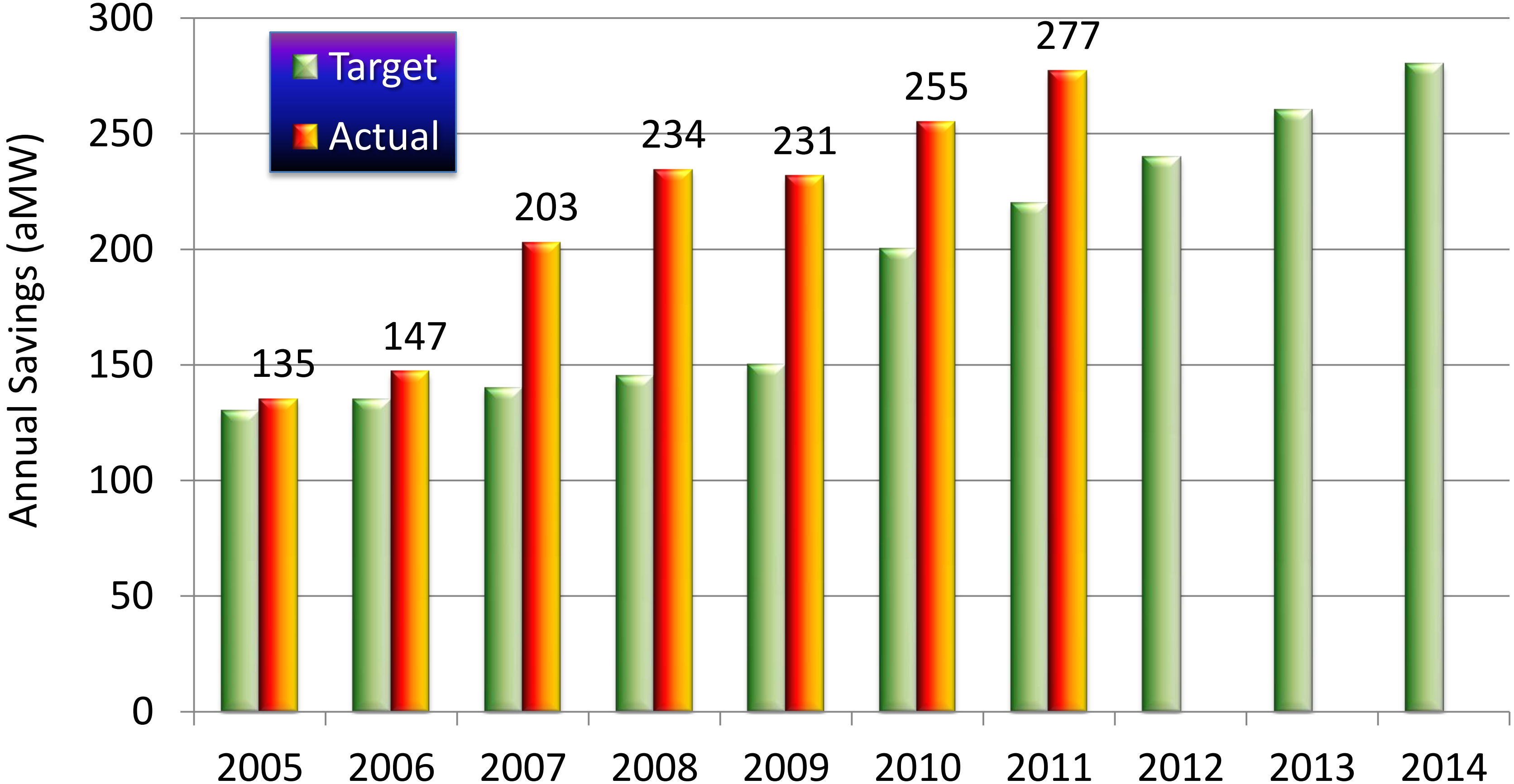
Accomplishments Have Exceeded Plan Targets Every Year Since 2005



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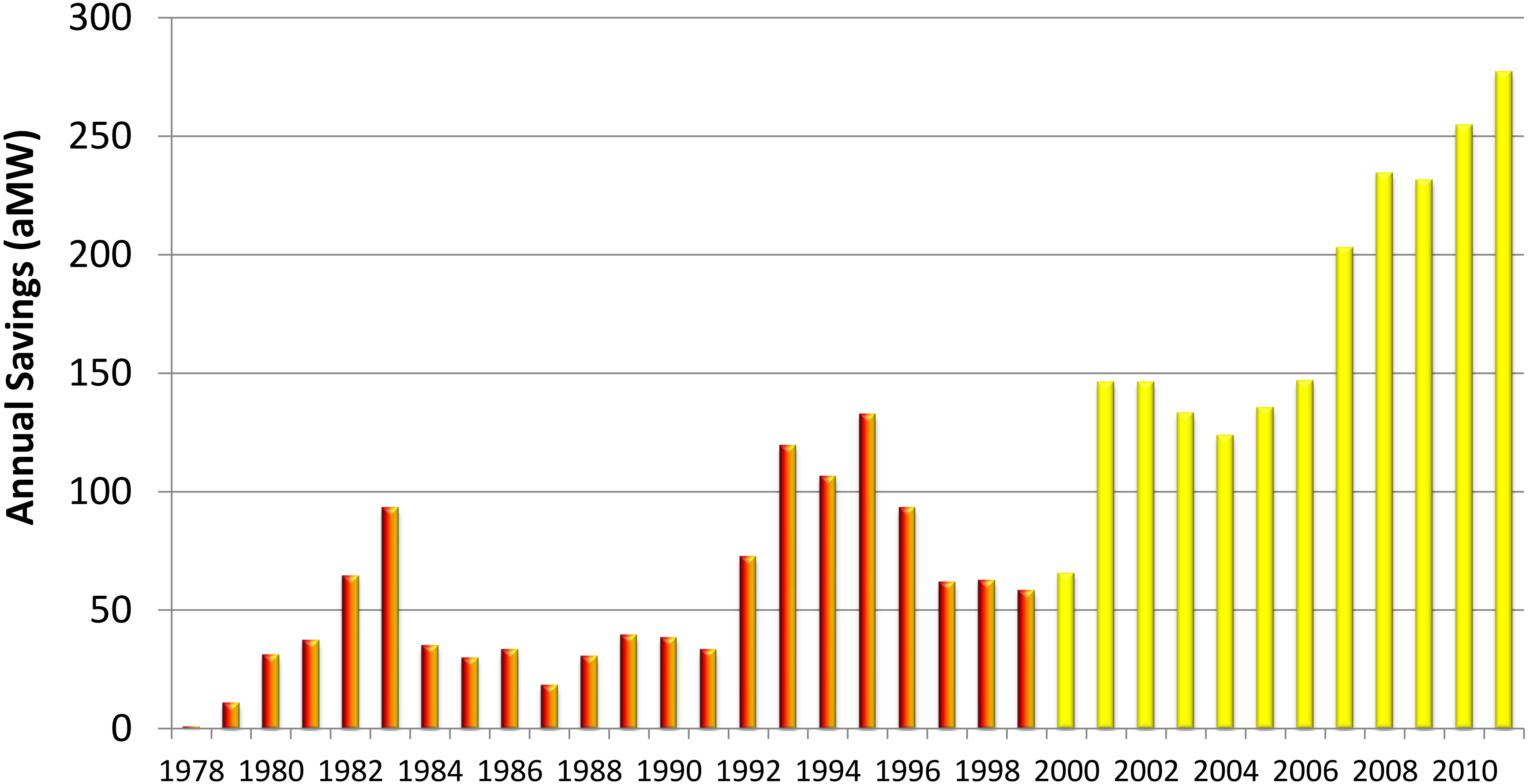
2000- 2011: Longest Sustained Period of PNW Utility Energy Efficiency Acquisitions in 30 Years



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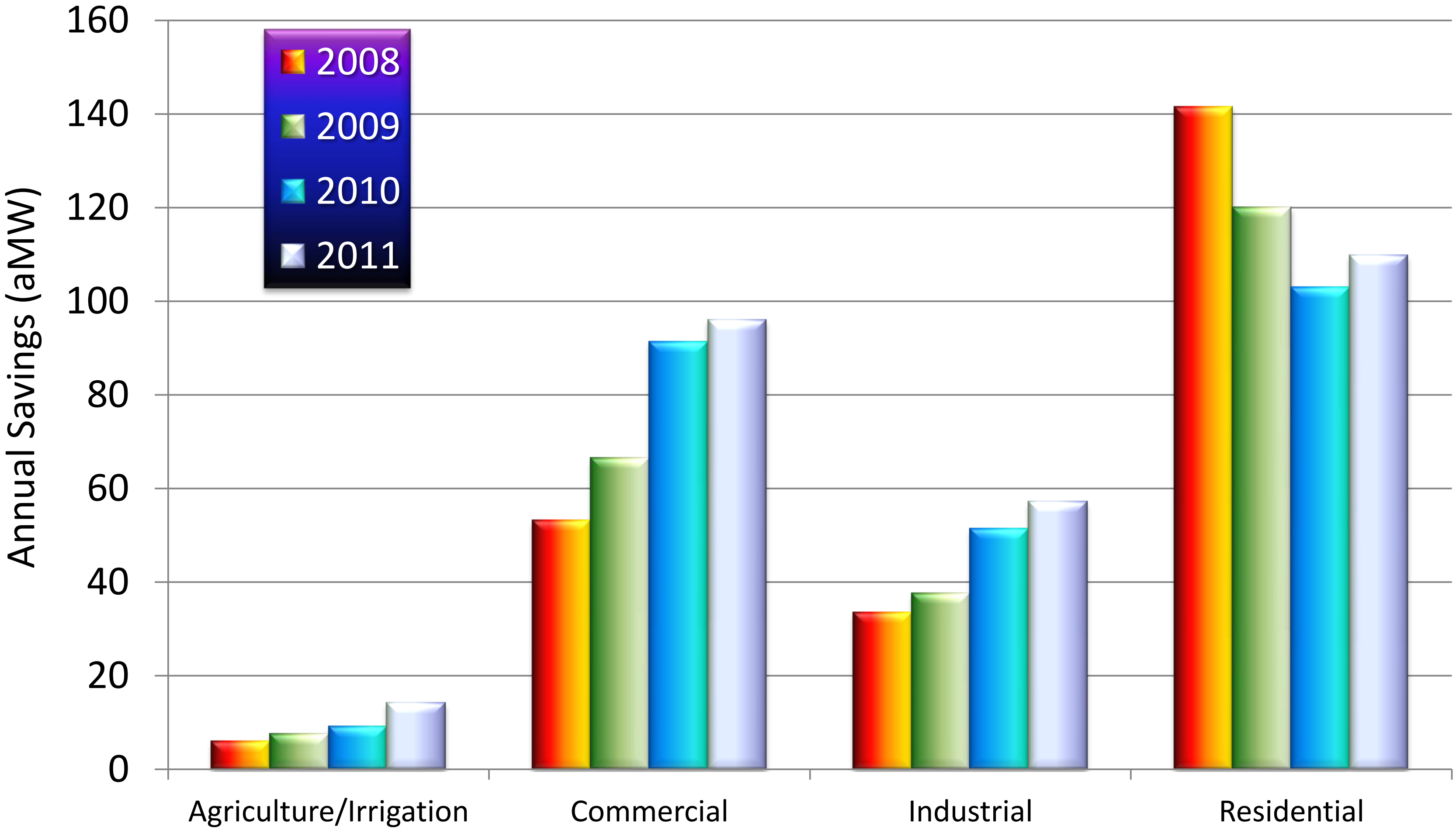
Commercial and Industrial Savings Continued to Grow the Most



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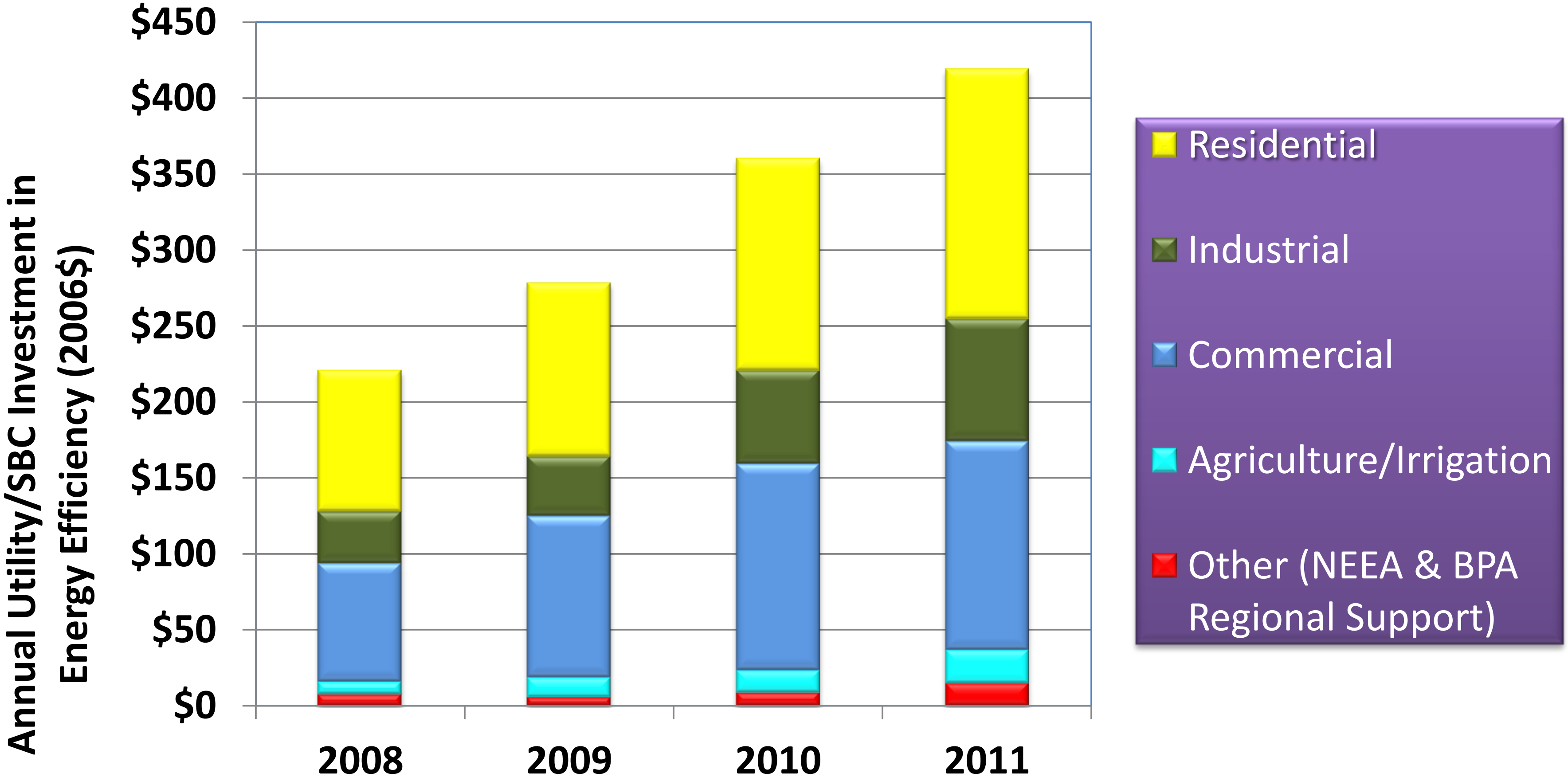
Total Utility/SBC Investments in Energy Efficiency in 2011 Were Over $420 million (2006$)



U.S. utility investment in efficiency in 2011 was just over $5.23 billion (2006$). Northwest investments represent about 8% of the total, but just under 5% of the U.S. population.

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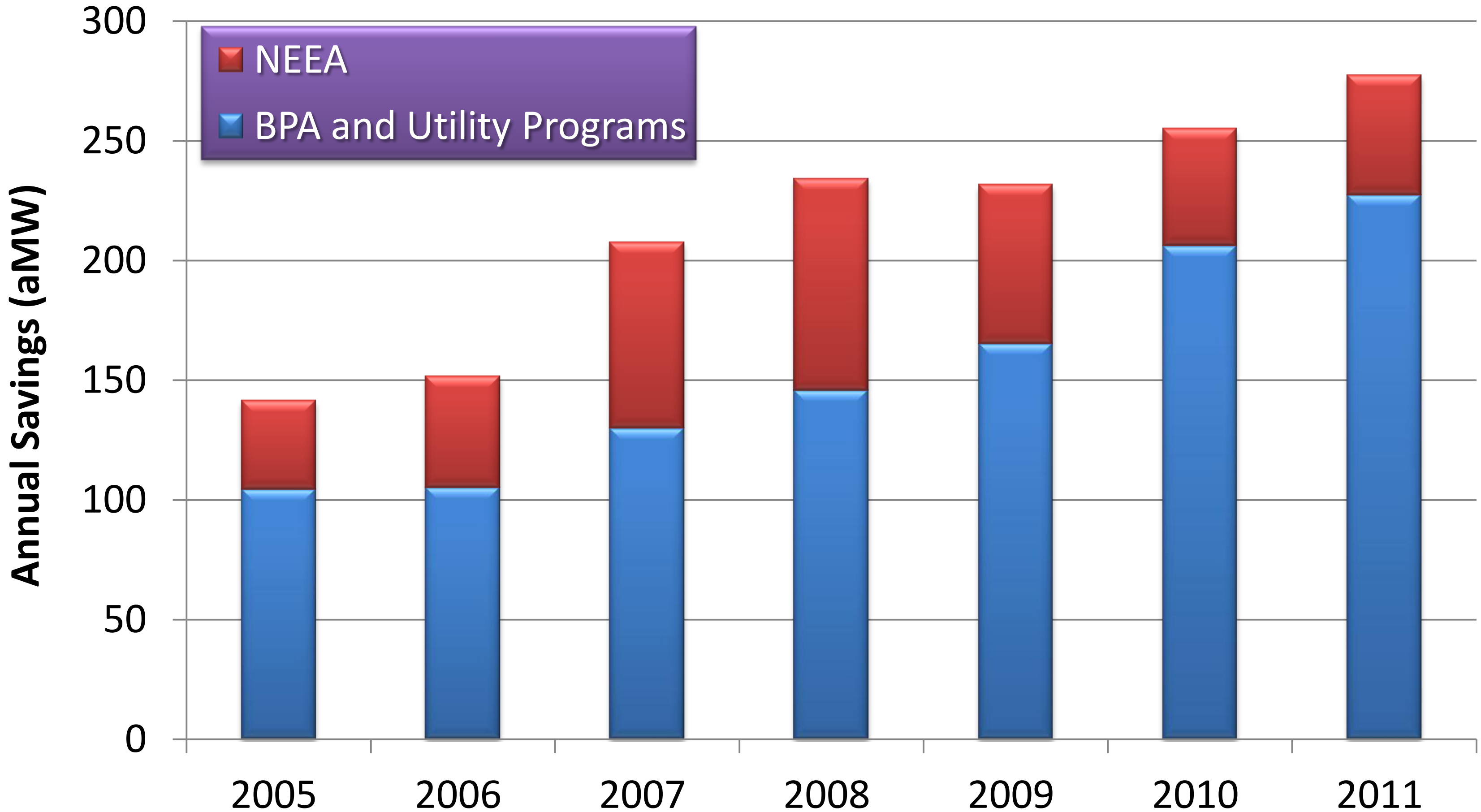
NEEA Continues to Contribute Significant Savings



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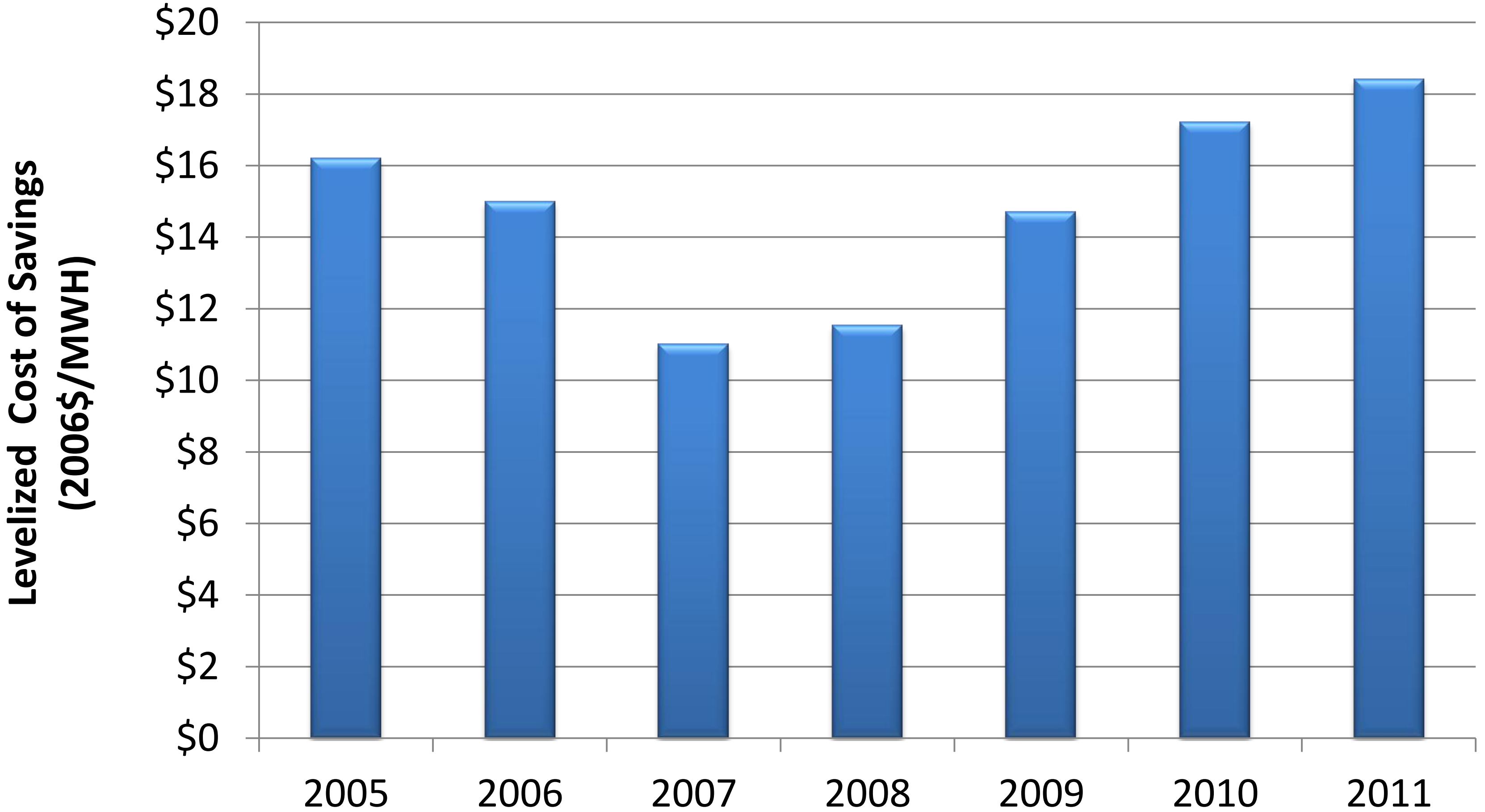
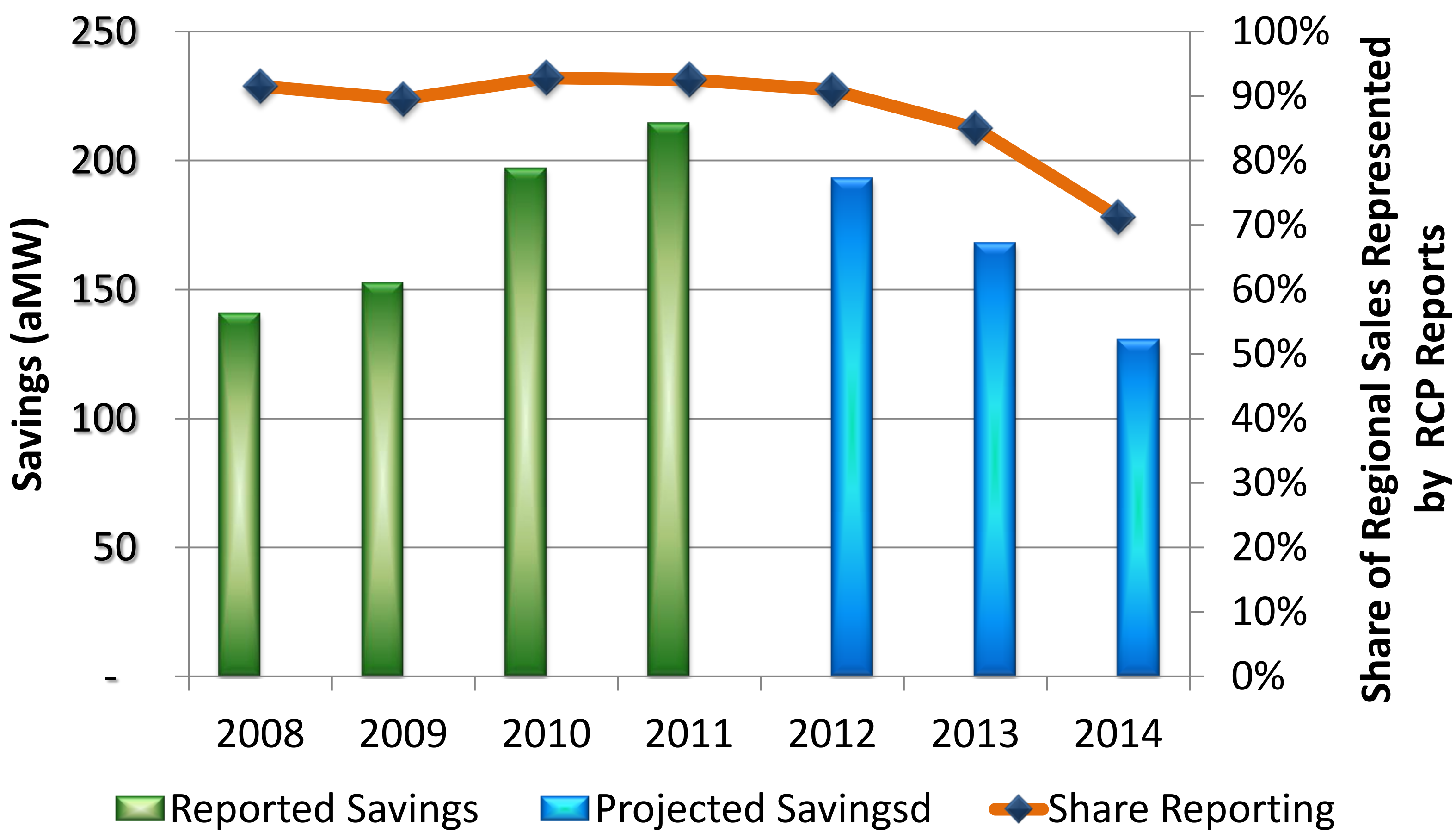
Average Utility Cost of Conservation, While Increasing Remains Low



Projections for 2012 – 2014 Savings by RCP Reporting Utilities*



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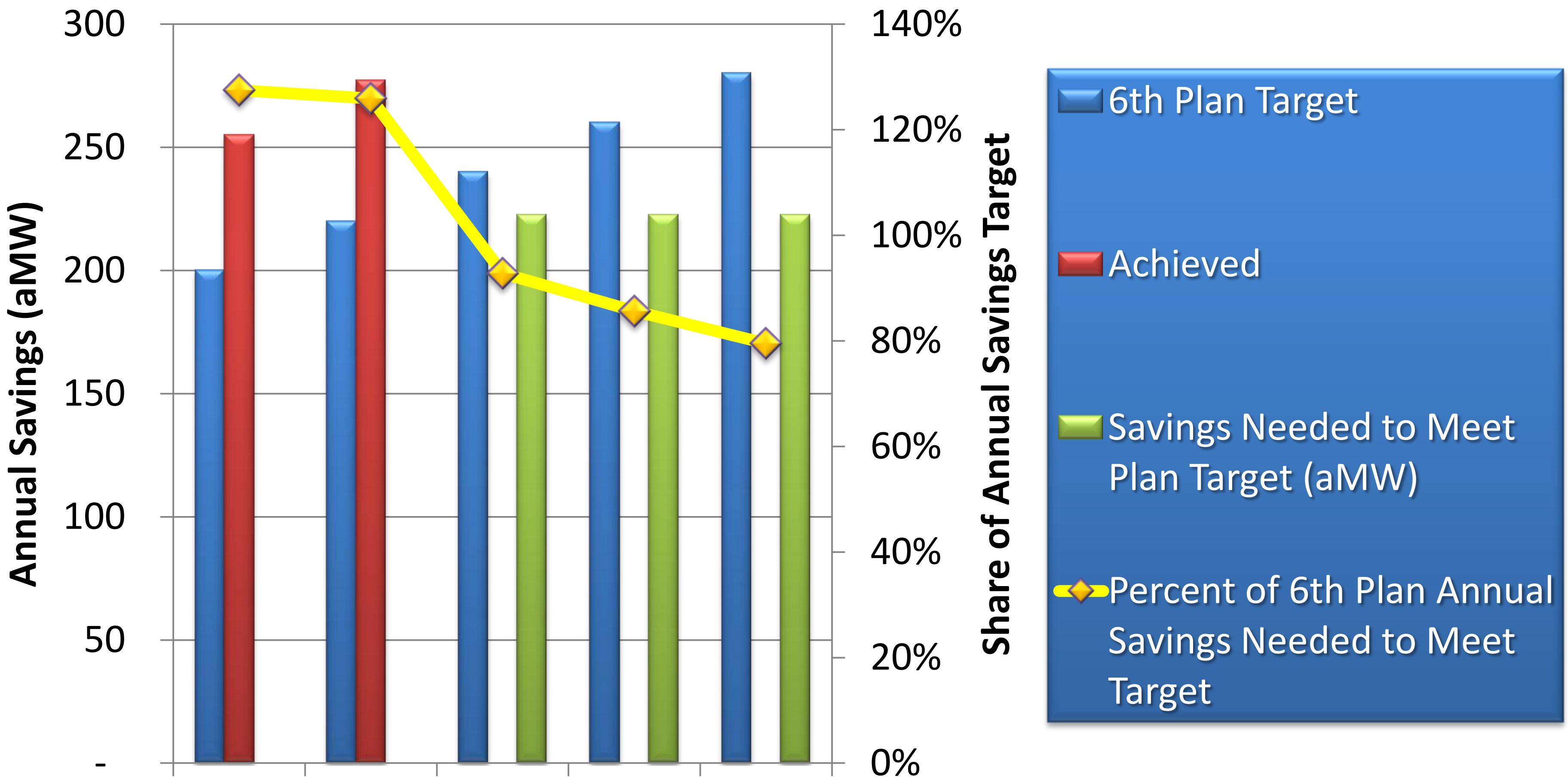
*Excludes savings from NEEA, BPA direct acquisitions and utilities not filing RCP Reports.

6th Plan's Target of 1200 aMW Can Be Met If 2012-2014 Savings Average 225 aMW/yr*



*This is roughly 85% of the Plan's Annual Targets for 2012 -2014

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Projections for 2012: Close to 2011

Forecast savings for IOUs approximately 10% below 2011 levels Forecast savings for POUs roughly at 2011 levels*

	2011 Reported Savings	2012 Projections
Savings for all Utilities/SBC Providing Projections for 2012 (86 utilities representing 91% of Regional Retail Sales)	212	193
% of 2011 Savings		91%
IOUs (Avista, ETO, IPC, NW, PacifiCorp & PSE)	133	116
% of 2011 Savings		87%
Publics Only (Includes 80 utilities)	79	77
% of 2011 Savings		97%

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*Assumes non-RCP reporting POUs sustain similar level of savings.

Projections for 2013: 15% Below 2011

Forecast savings for IOUs approximately 10 -13% below 2011 levels
Forecast savings for POUs 20% below 2011 levels*

	2011 Reported Savings	2013 Projections
Savings for all Utilities/SBC Providing Projections for 2013 (84 utilities representing 85% of Regional Retail Sales)	198	168
% of 2011 Savings		85%
IOUs (Avista, ETO, IPC, NW, PacifiCorp & PSE)	133	115
% of 2011 Savings		87%
Publics Only (Includes 78 utilities, but not Seattle)	65	52
% of 2011 Savings		81%

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*Assumes non-RCP reporting POUs sustain similar level of savings.

Projections for 2014: Also15% Below 2011

Forecast savings for IOUs approximately 15% below 2011 levels
Forecast savings for POUs 20% below 2011 levels*

	2011 Reported Savings	**2014 Projections**
Savings for all Utilities/SBC Providing Projections for 2014 (79 utilities representing 71% of Regional Retail Sales)	157	130
% of 2011 Savings		83%
IOUs (Avista, ETO, IPC, NW, PacifiCorp, but not PSE)	93	79
% of 2011 Savings		85%
Publics Only (Includes 74 utilities, but not Seattle)	64	51
% of 2011 Savings		80%

*Assumes non-RCP reporting POUs sustain similar level of savings.

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Summary: It Looks "Doable"
But Low Response Rate Makes Projections Highly Uncertain

	2011 Reported Savings	2012 Projections	2013 Projections	2014 Projections
Savings for all Utilities/SBC Providing Projections for 2012 - 2014 (79 utilities representing 71% of Regional Retail Sales)	157	135	129	130
% of 2011 Savings		86%	82%	83%
IOUs (Avista, ETO, IPC, NW, PacifiCorp, but not PSE)	93	77	78	79
% of 2011 Savings		83%	83%	85%
Publics Only (Includes 74 utilities, but not Seattle)	64	57	52	51
% of 2011 Savings		90%	80%	80%

*Assumes non-RCP reporting POUs sustain similar level of savings.

PNW Challenges

- Bonneville "overspent" its FY2011 budget by 33% ($40 million)
  - Good news: Savings were more than 1/3 higher
  - Bad news: lean 2013 -2014 budgets place more reliance on public utility cost sharing
- West Coast wholesale market surplus (created in part by RPS), combined with low natural gas prices
  - Good news: short run wholesale electricity market prices are low
  - Bad news: Retail prices are increasing (to pay for RPS) and low market prices will increase pressure on conservation budgets
- ARRA funding and federal and Oregon energy tax credits ending or significantly reduced, likely to result in increased need for utility/SBC funding to sustain savings level
  - PECI laid off ~ 15% of staff after ARRA funded projects ended
- Minor skirmishes and/or distractions
  - OR: "fuel wars" over EE incentives for heat pumps and proposed "PURPA for EE"
  - ID: IPUC focused on NEEA "benefits to Idaho ratepayers"
  - MT: Rural utilities need BPA/NEEA/RTF support to identify and pursue efficiency opportunities
  - WA: Larger public utilities want more independence from Bonneville

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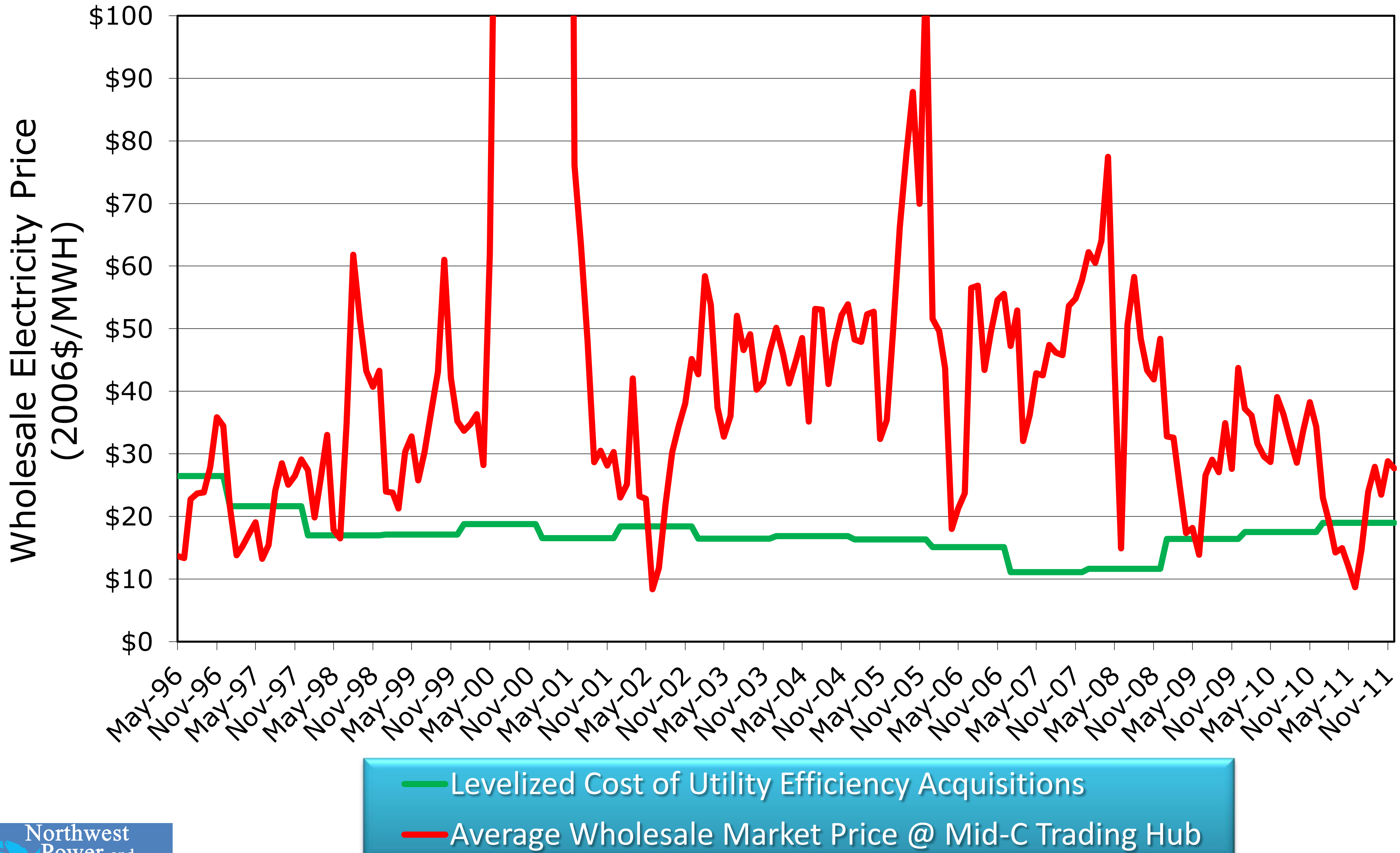
Average Cost of Utility Acquired Savings Has Been Lower and Less Volatile Than Wholesale Market Electricity Prices



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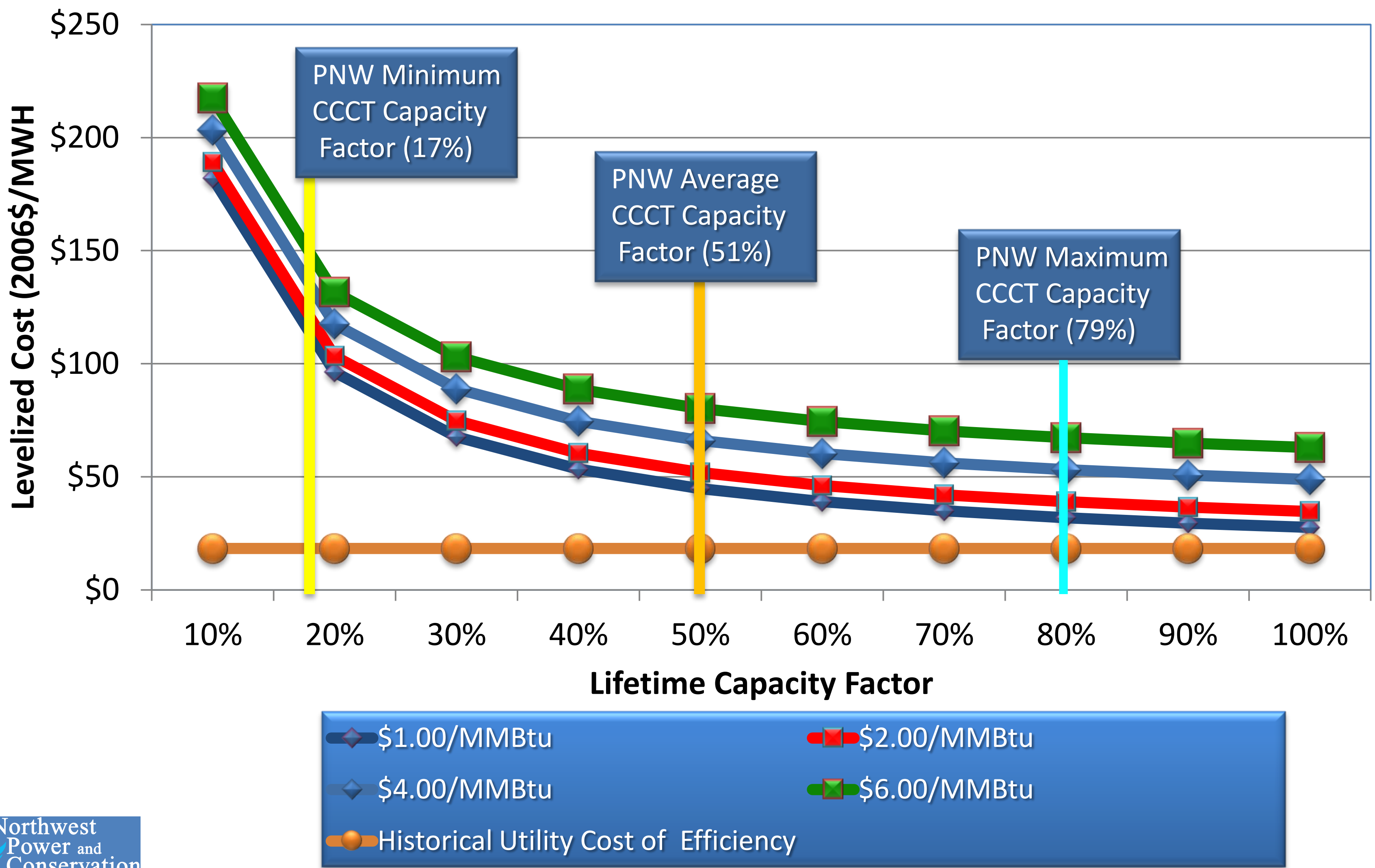
Levelized Cost of Combined Cycle Combustion Turbine at Alternative Natural Gas Prices and Lifetime Capacity Factors Compared to Utility Cost of Conservation



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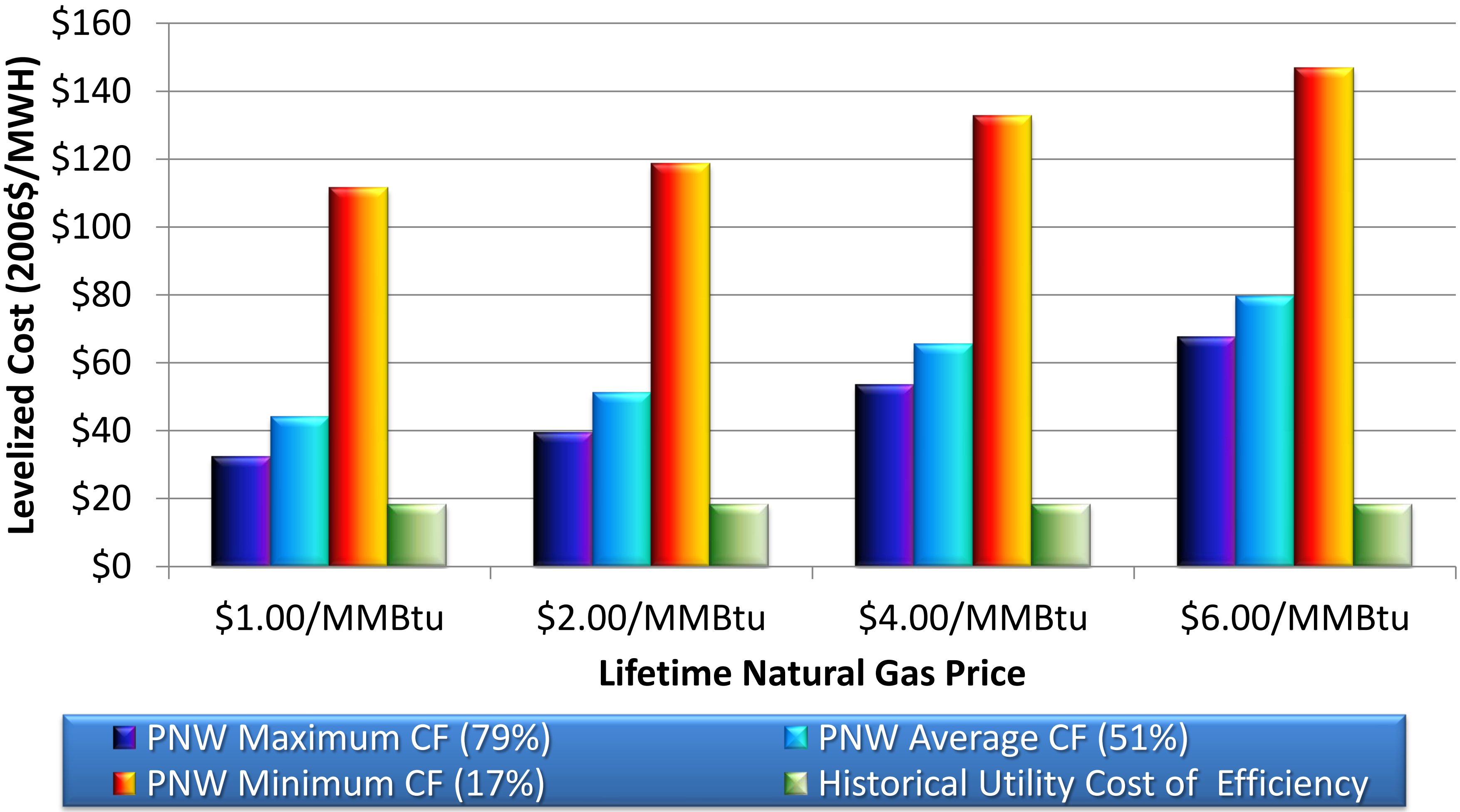

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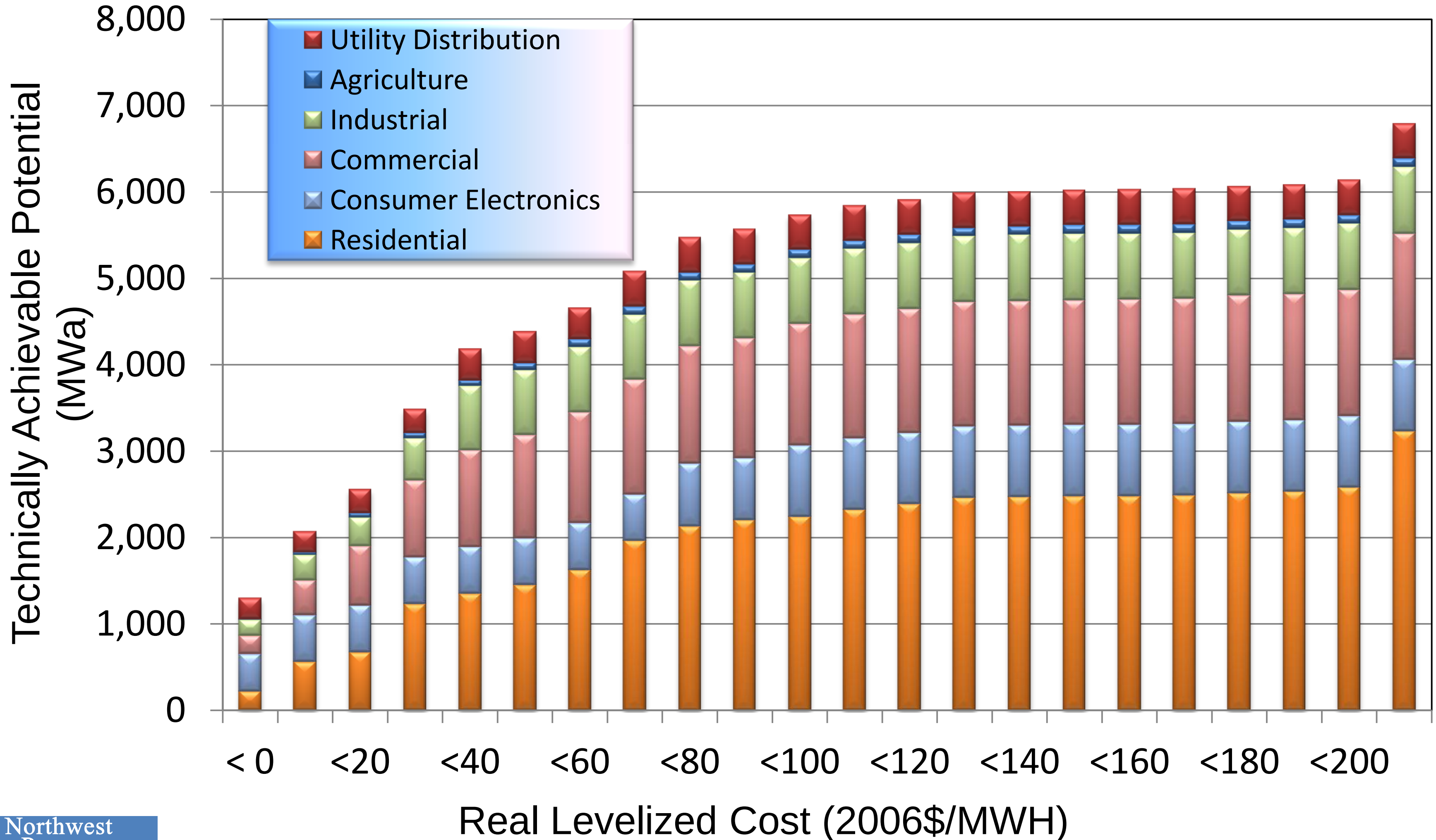
PNW Efficiency "Supply Curve" Technically Achievable Potential by 2030



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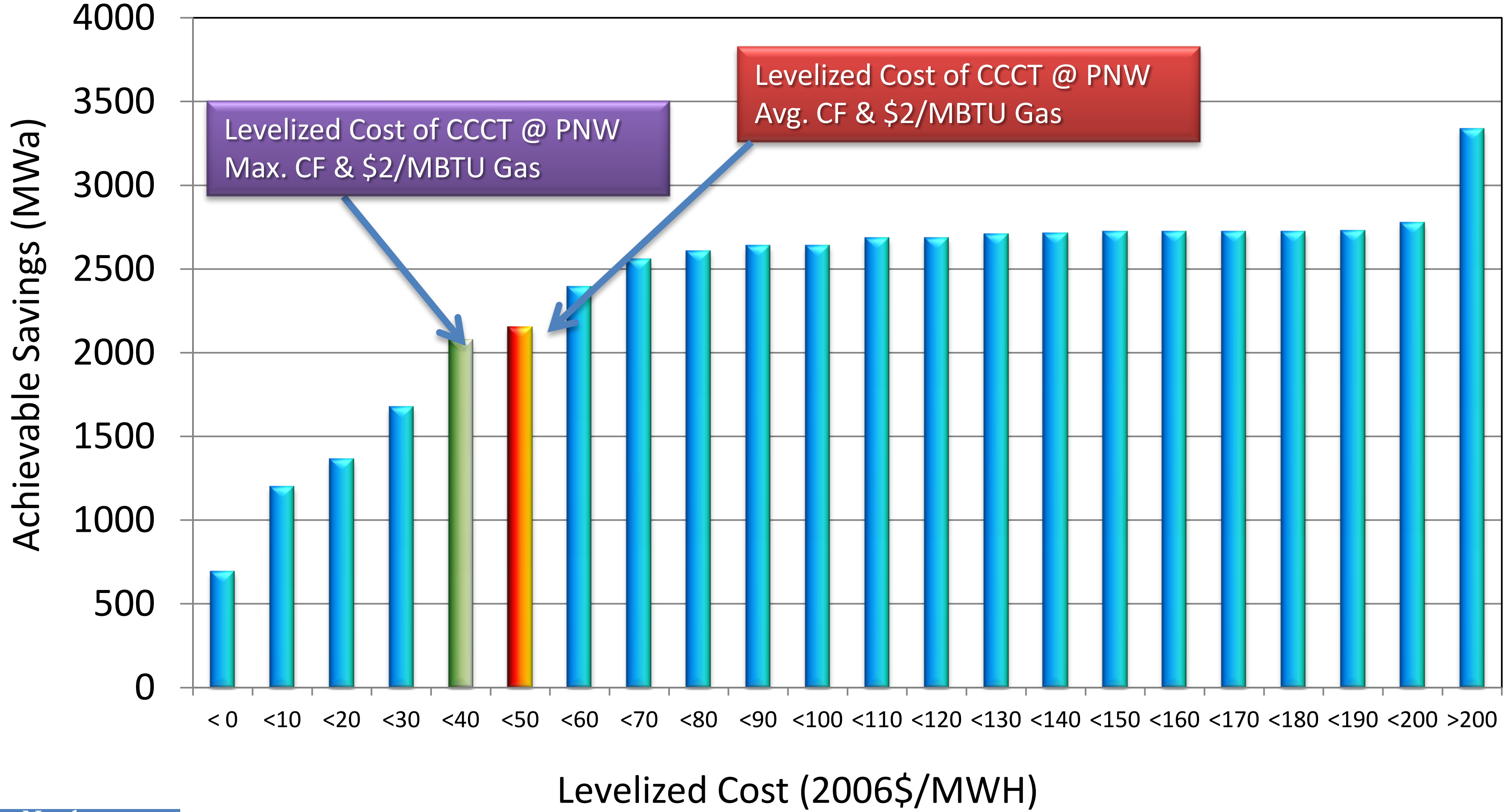
Over 2000 MWa of Achievable Retrofit Potential Exist <$40 MWH



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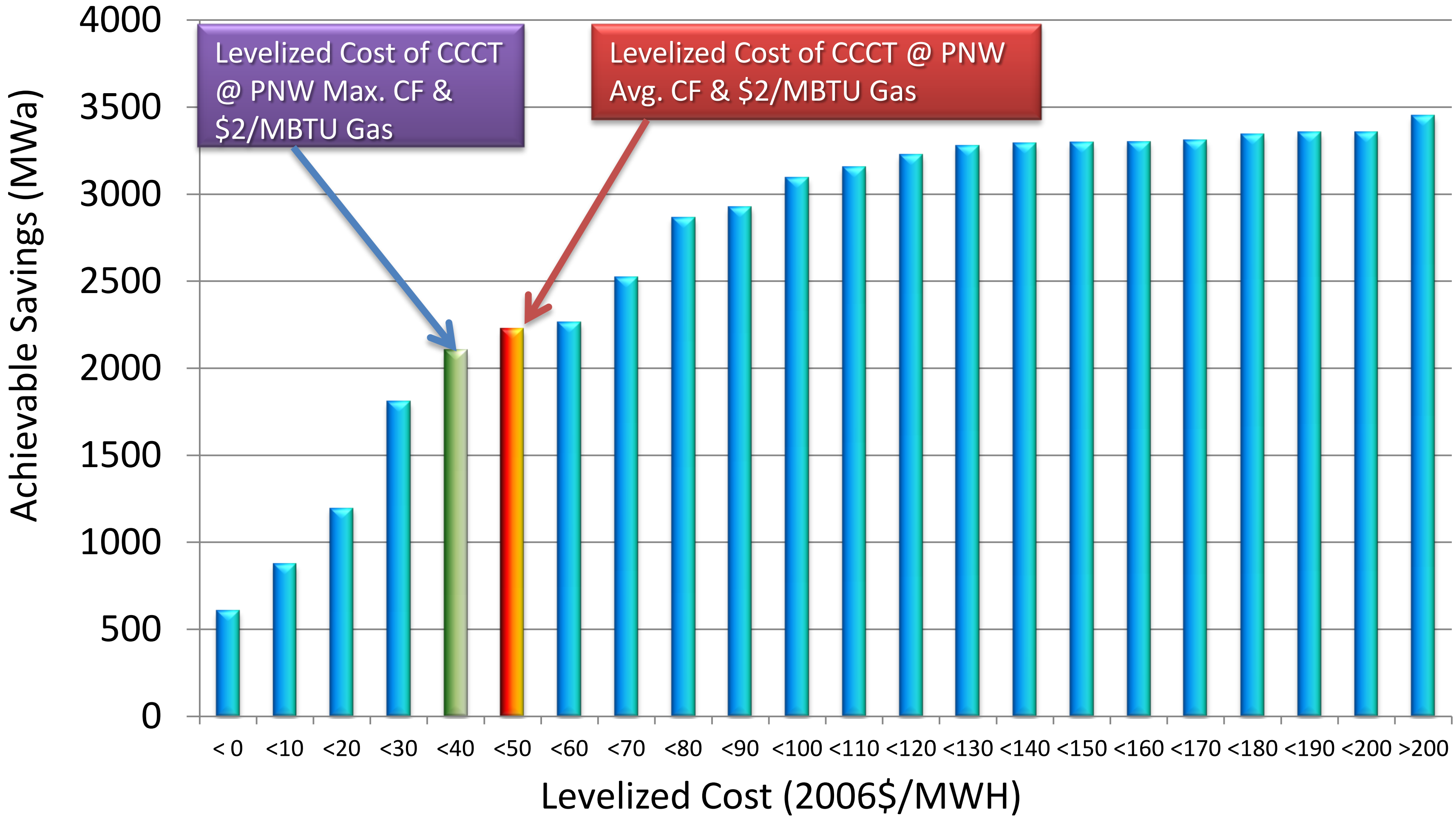
Over 2000 MWa of Achievable Lost-Opportunity Potential* Exist at Cost Below <$40 MWH



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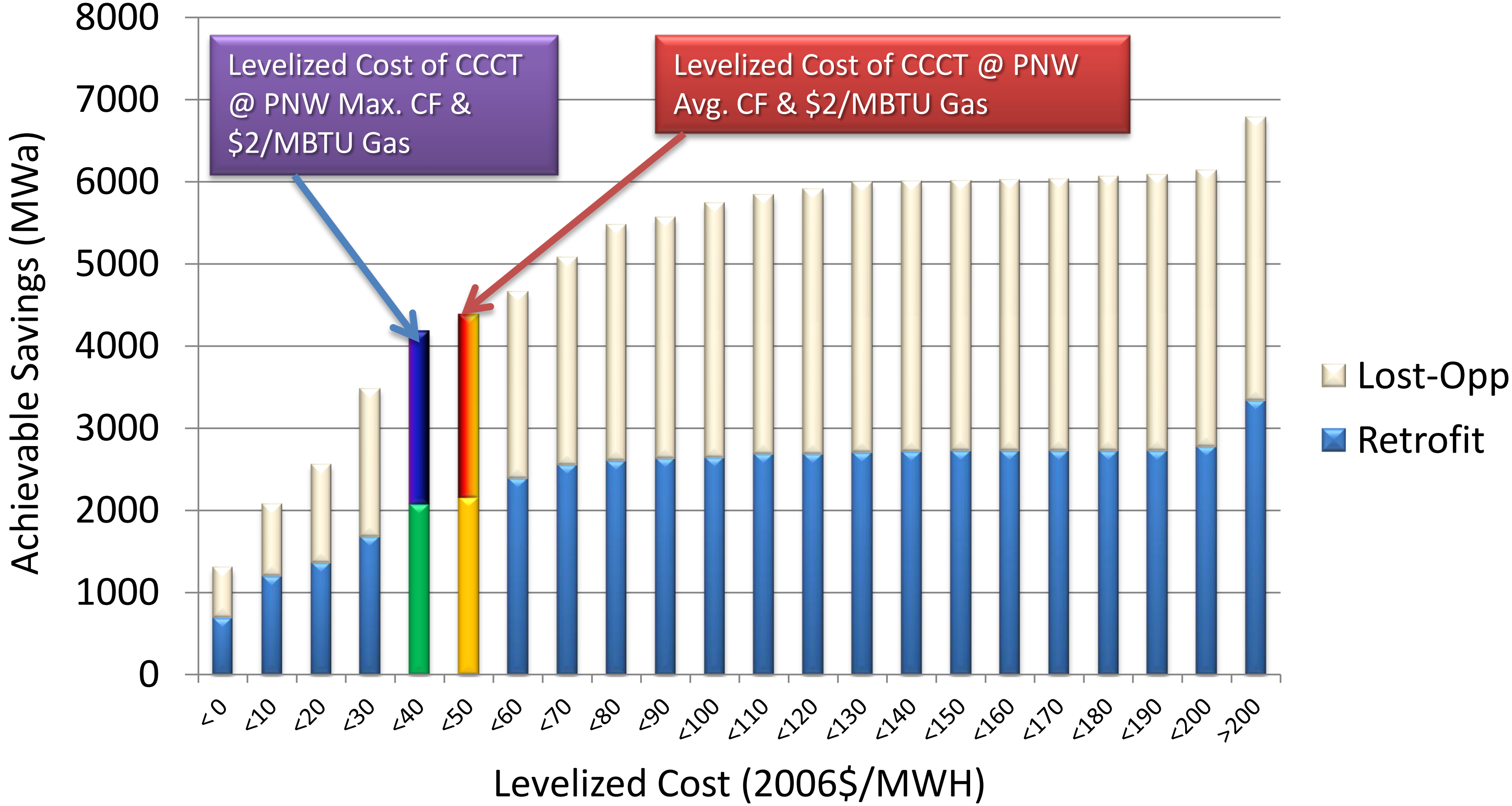
*Cumulative Available Potential by 2030

Over 4000 MWa of Achievable Potential* Exist at Cost Below <$40 MWH



*Lost-Opportunity Potential is Cumulative Amount Available Potential by 2030

Regional Utility/SBC Energy Efficiency Investments Per Person Are Slightly More Than Double the US Average

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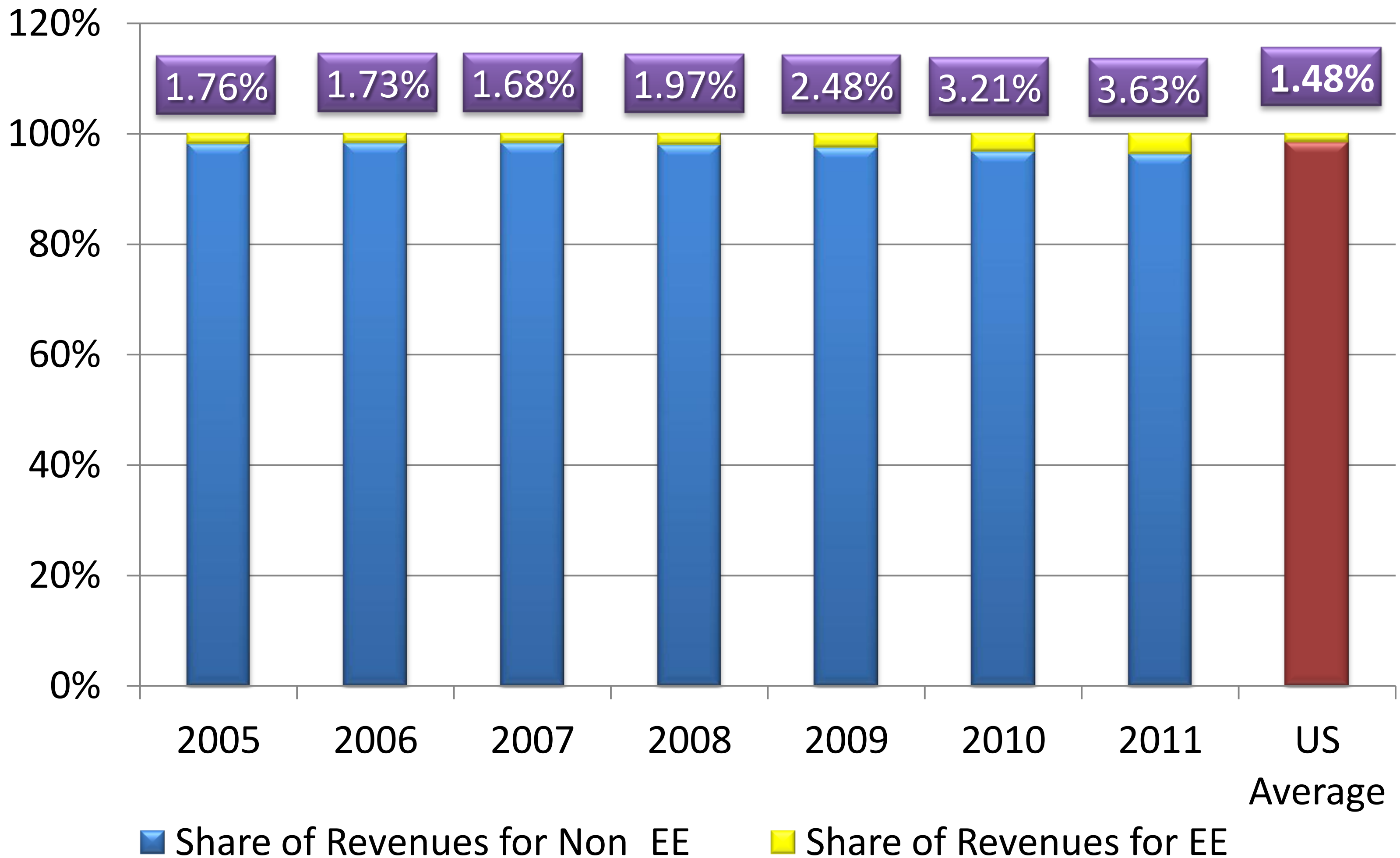
Share of Regional Retail Electric Revenue Invested in Energy Efficiency



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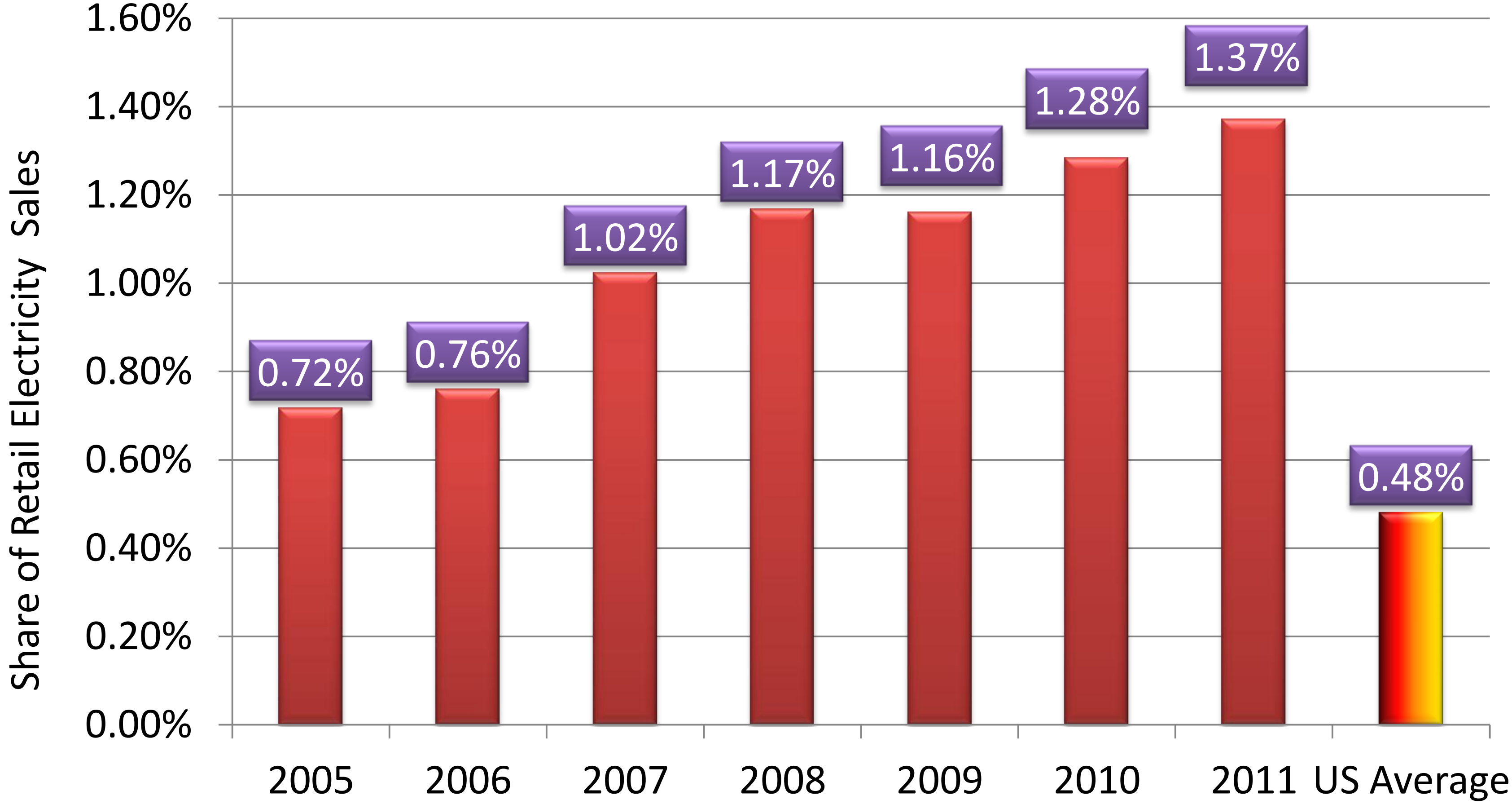
Utility/SBC-Funded Savings Equaled Just Under 1.4% of Regional Electricity Sales in 2011 Almost Three Times the US Average



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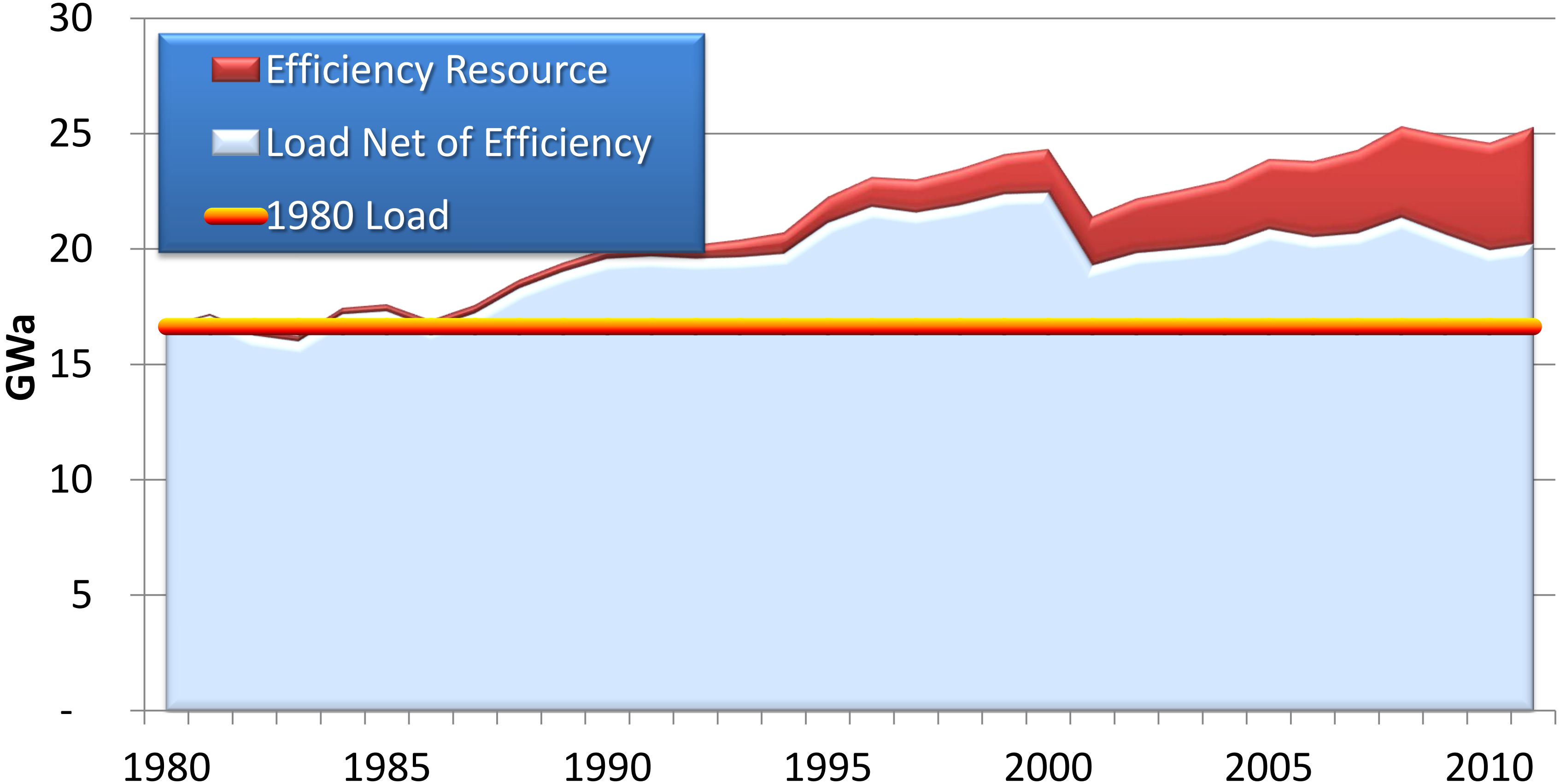
Efficiency Has Met Over 50% of PNW Load Growth Since 1980



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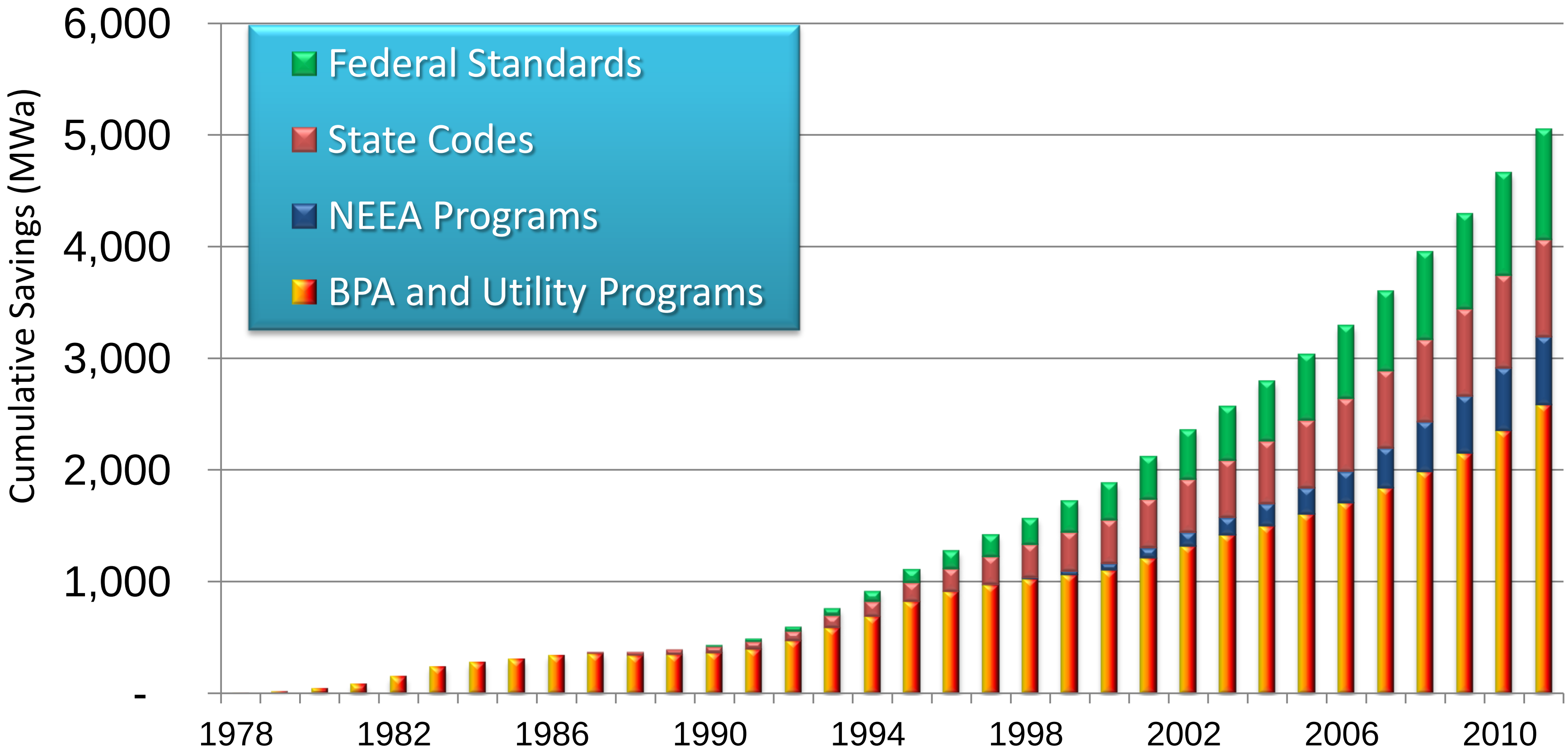
Since 1978 Utility & BPA Programs, Energy Codes & Federal Efficiency Standards Have Produced Over 5000 MWa of Savings



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So What's 5000 MWa?

- It's enough electricity to serve the nearly ***entire state of Oregon***

- It saved the region's consumers nearly *$3.1 billion* in 2011

- It lowered 2011 PNW carbon emissions by an estimated *19.8 million* MTE.

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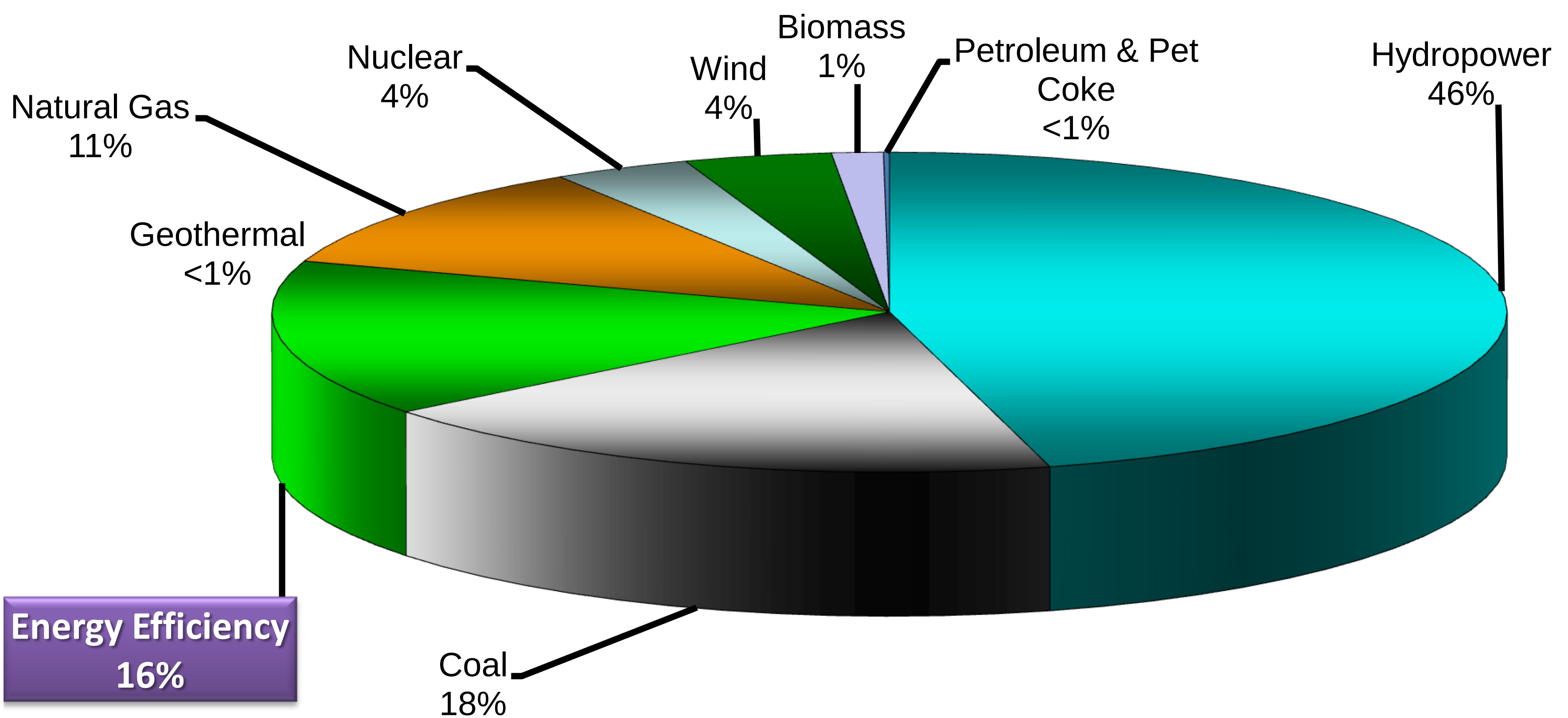
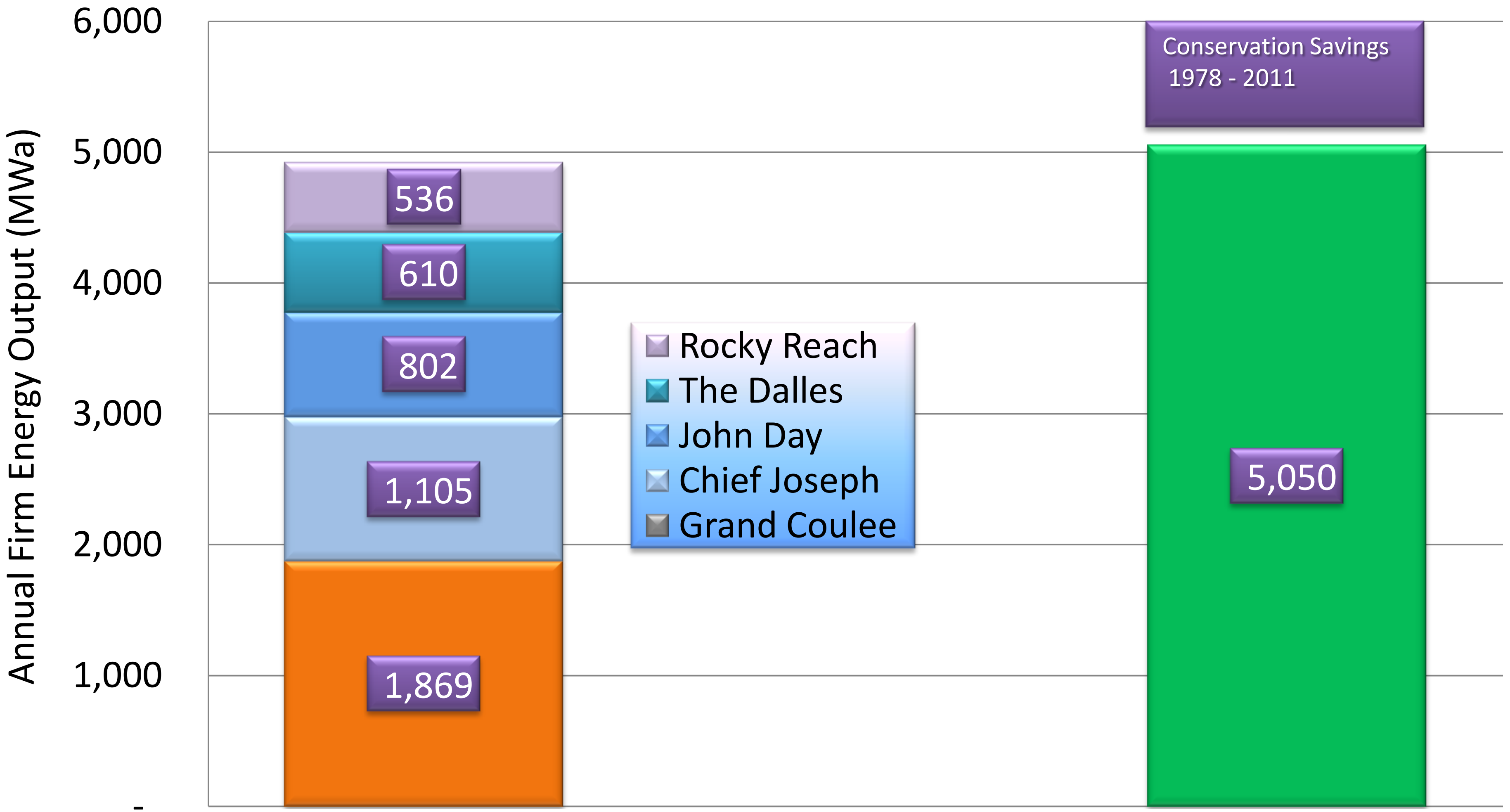
Energy Efficiency is Now the Region's Third-Largest Resource



Based on Estimate of 2010 Actual Resource Dispatch/Contribution

Energy Efficiency Savings from 1978 – 2011 Exceed the Annual Firm Energy Output of the Five Largest Hydro Projects in the Region



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