2013 Electric Integrated Resource Plan

January 9, 2013

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Avista's Electric Integrated Resource Plan

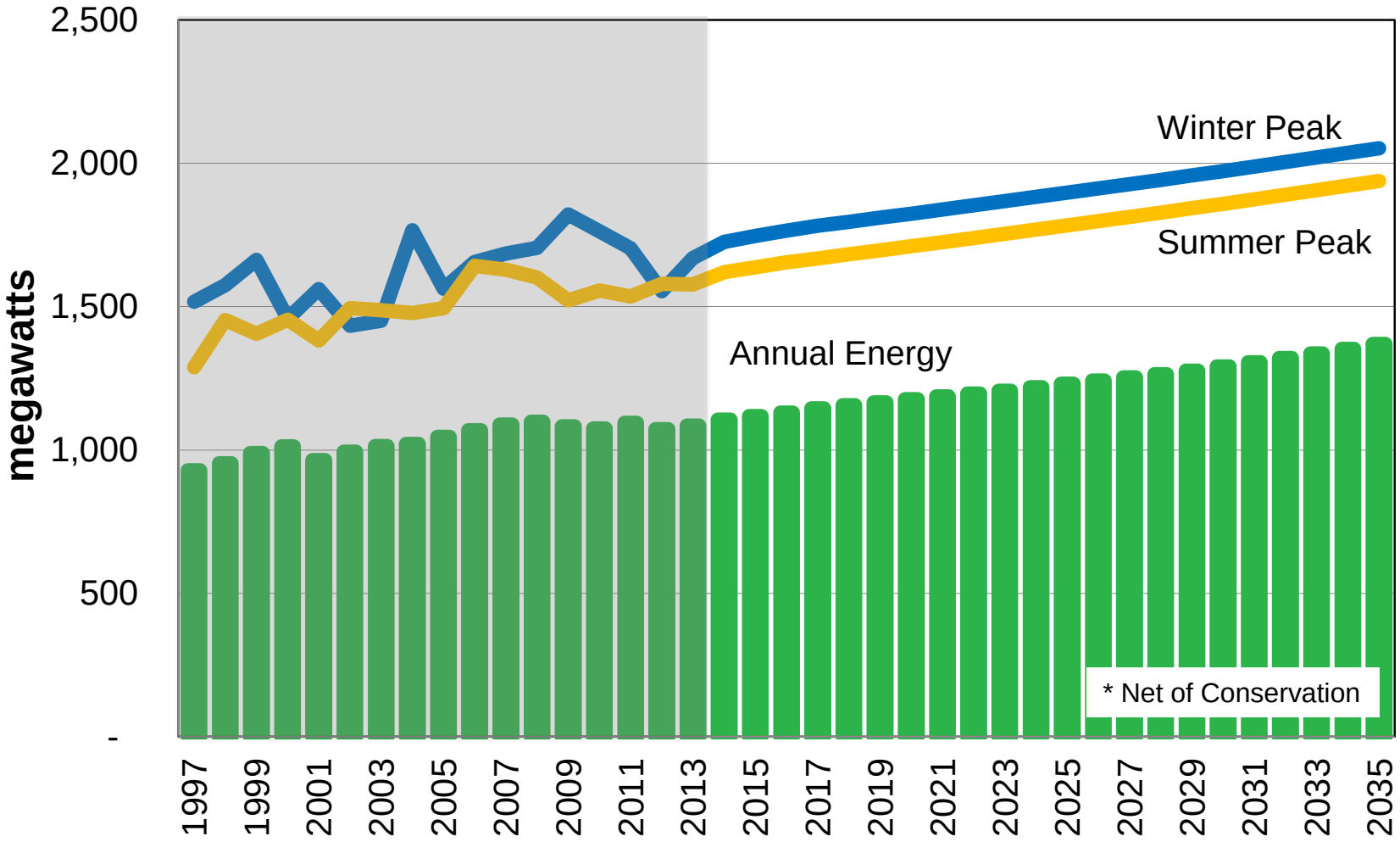
Key components

- A Cross-Functional Effort
  - Power Supply, Gas Supply, Engineering, DSM, T&D, Rates…
- A Collaborative Public Process
  - 121 individuals from 45 organizations invited: Commission staff, academia, NW Power Council, government agencies, legislators, consultants, peer utilities, resource developers, non-government organizations (NGOs), Avista staff, vendors
- A 20-Year Power Supply Business Plan
  - Load obligations
  - Generation portfolio
  - Market conditions
  - Options for meeting deficiencies (or surpluses)
  - Identifies recommended path to the future
- A Biennial Regulatory Filing
  - August 31 submittals to Idaho and Washington commissions
  - All historical plans going back to 1989 are on the Avista website:

http://www.avistautilities.com/inside/resources/irp/electric/Pages/default.aspx

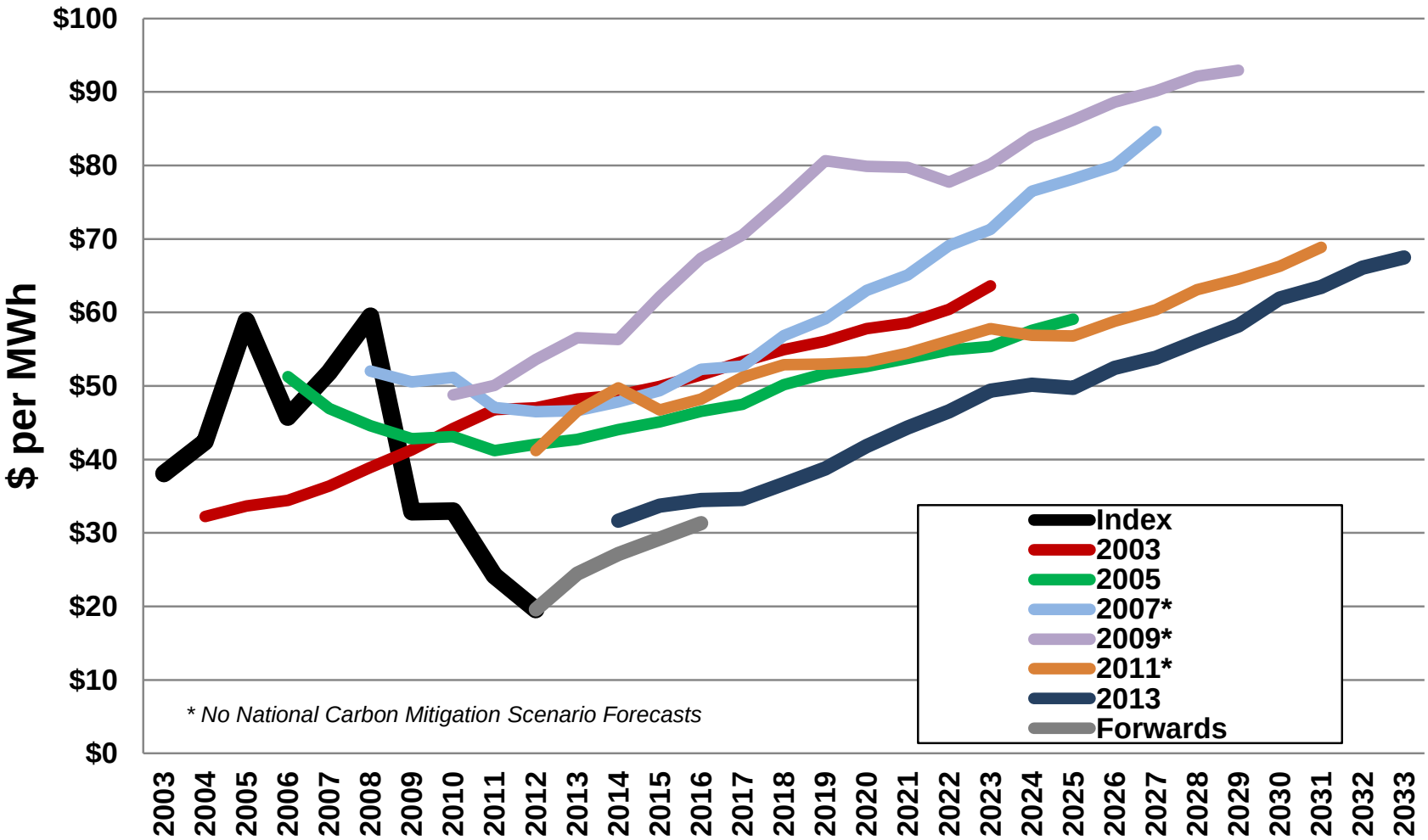
Moderating Load Growth (1% AARG) Forecast *

Down from ~1.4% in 2011 and 2009 IRPs



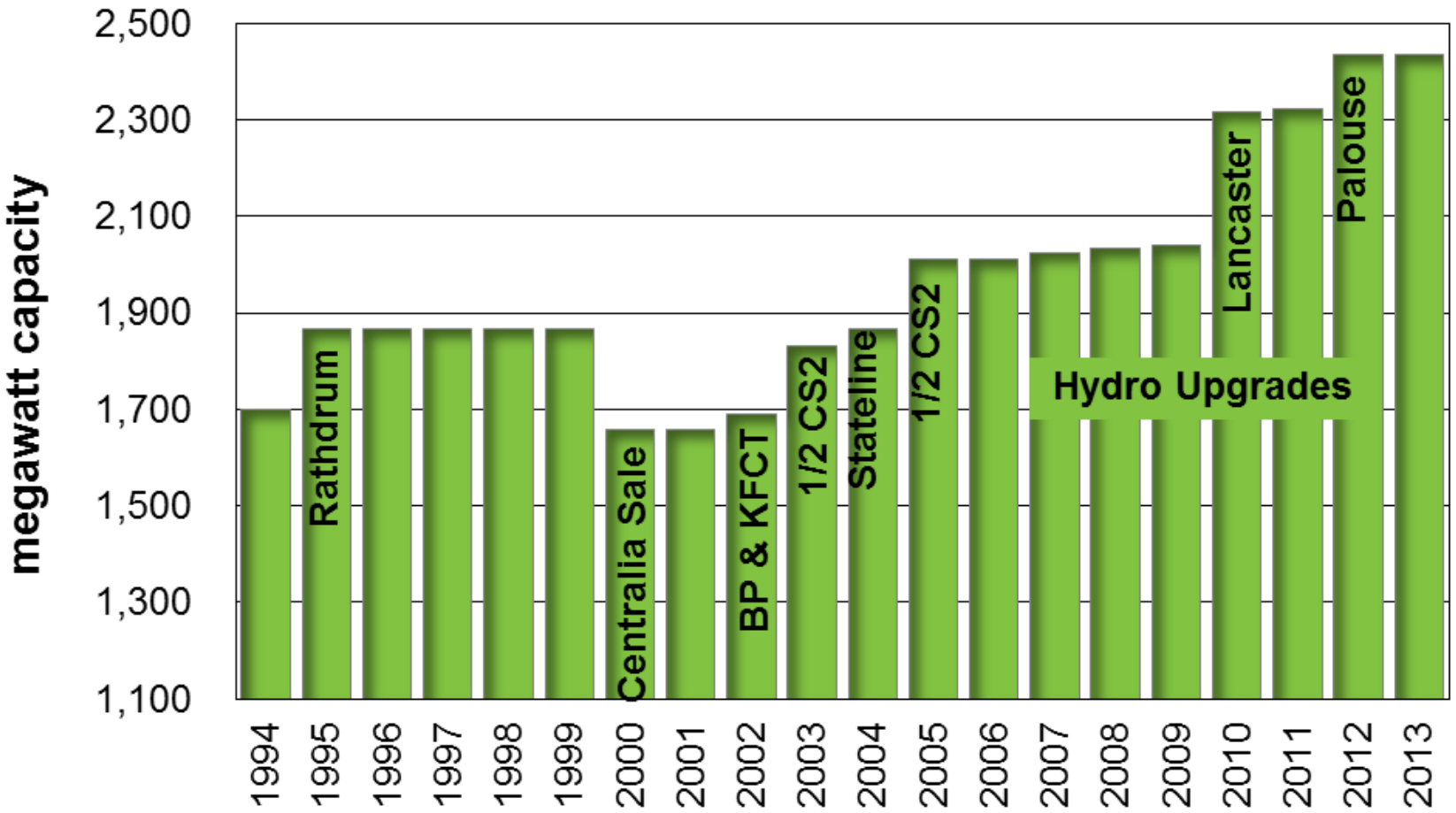
Historical IRP Electricity Forecast Variation

Caused mainly by volatile natural gas price projections



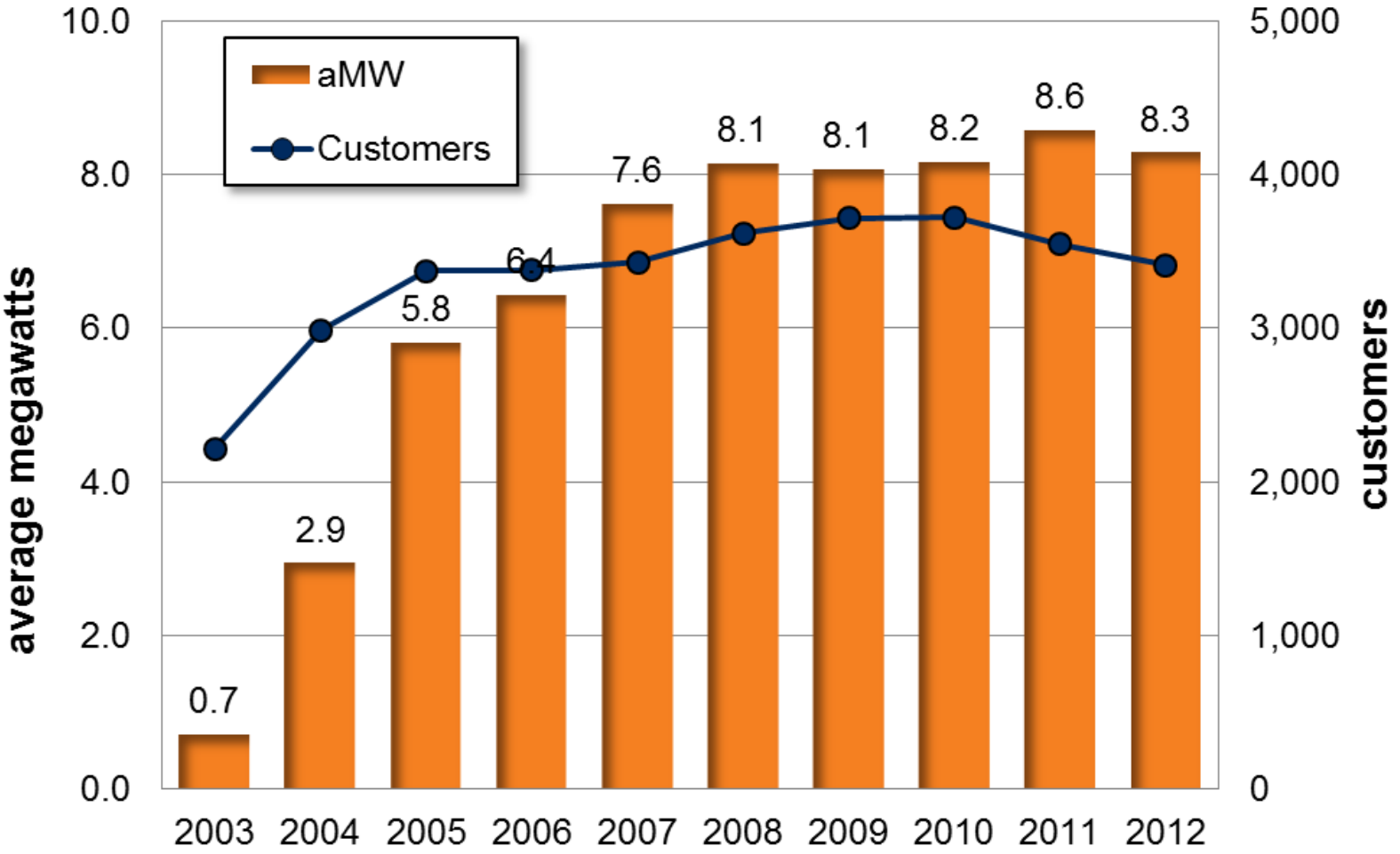
Avista 20-Year Generation Acquisition History

Net 800 MW: 1,000 MW new resources; 200 MW coal plant sale



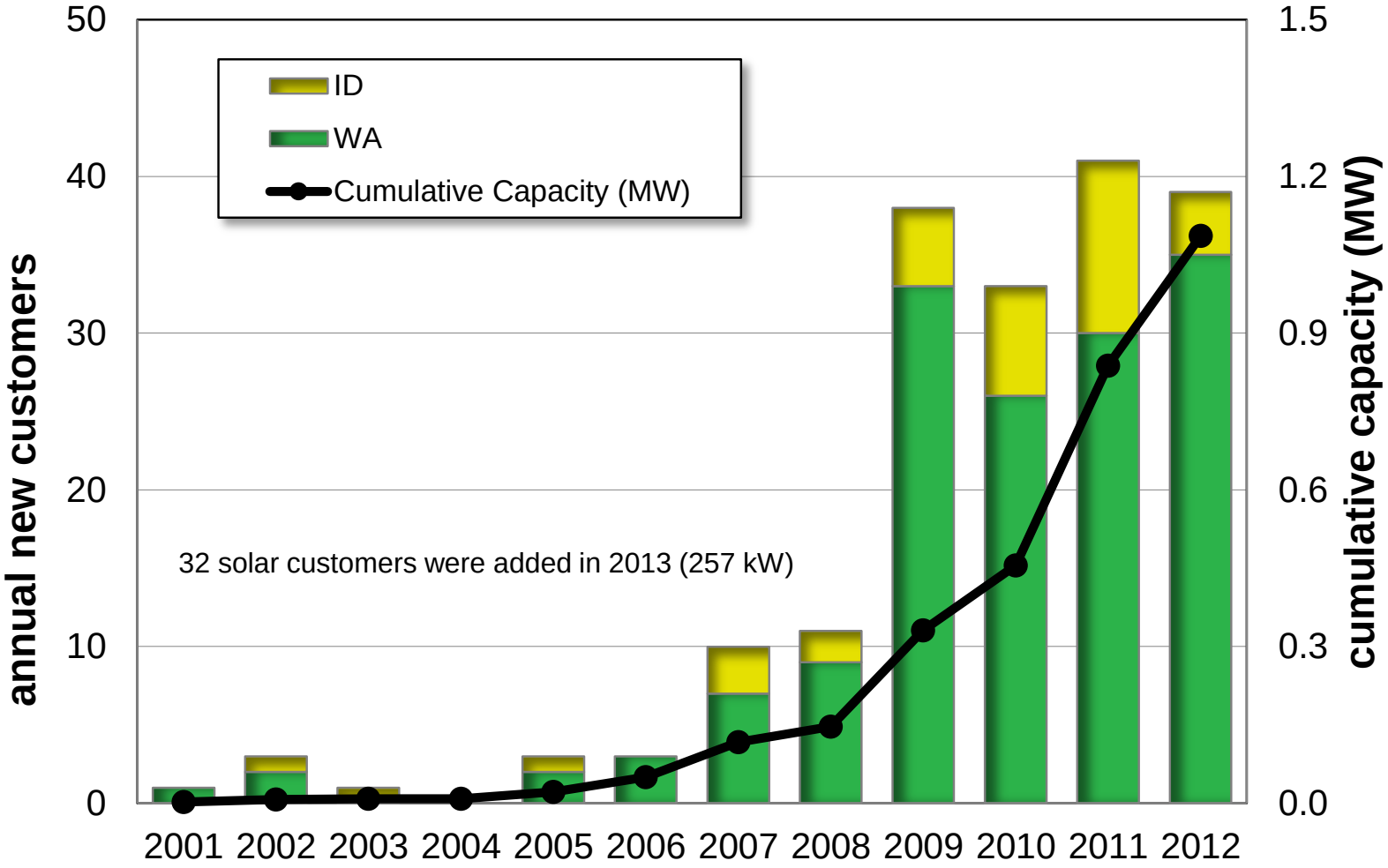
Customer Participation in Buck-A-Block

Participation has declined in recent years



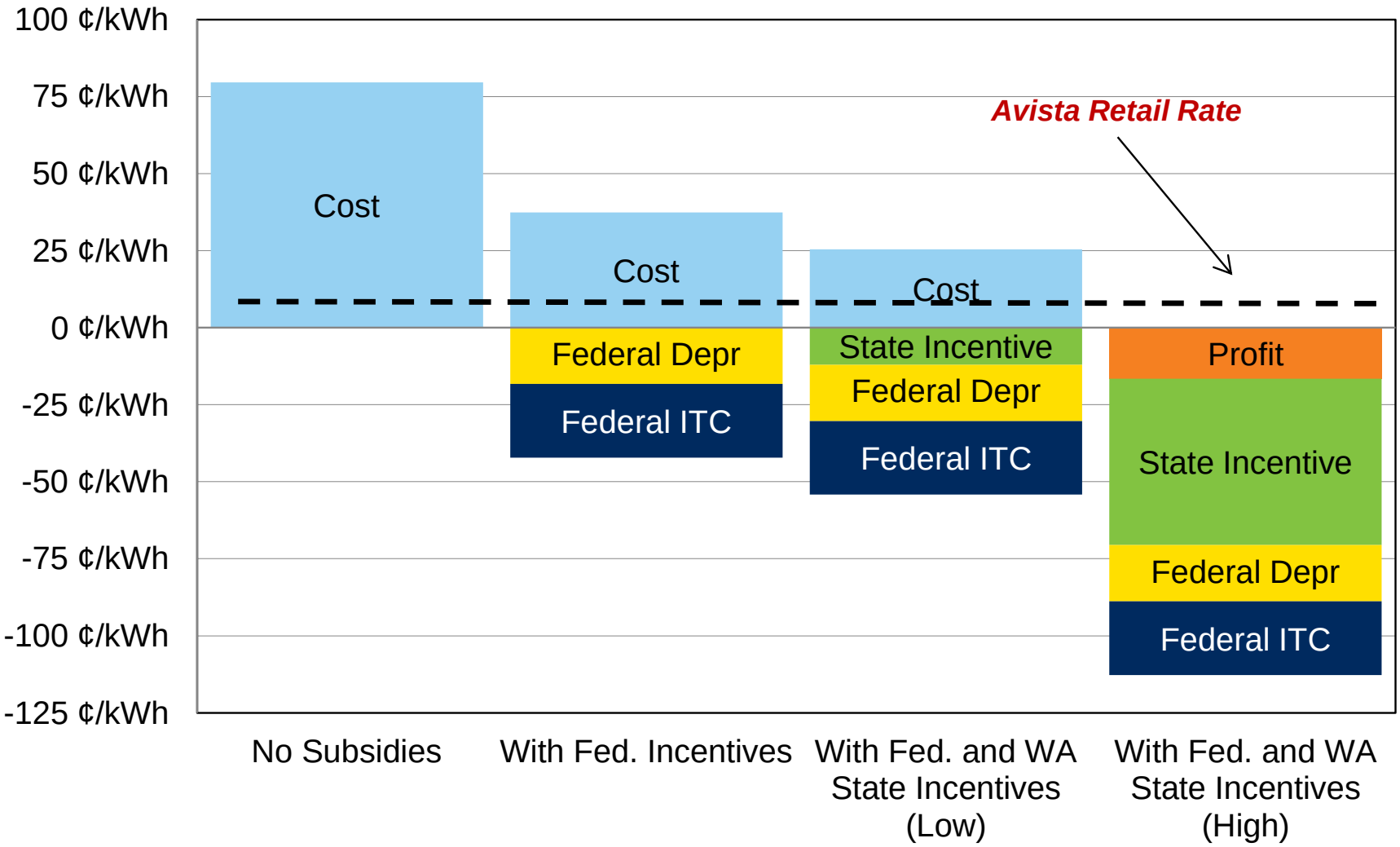
Net Metering Has Grown Rapidly

Driven in part by lower solar costs, and state and federal subsidies



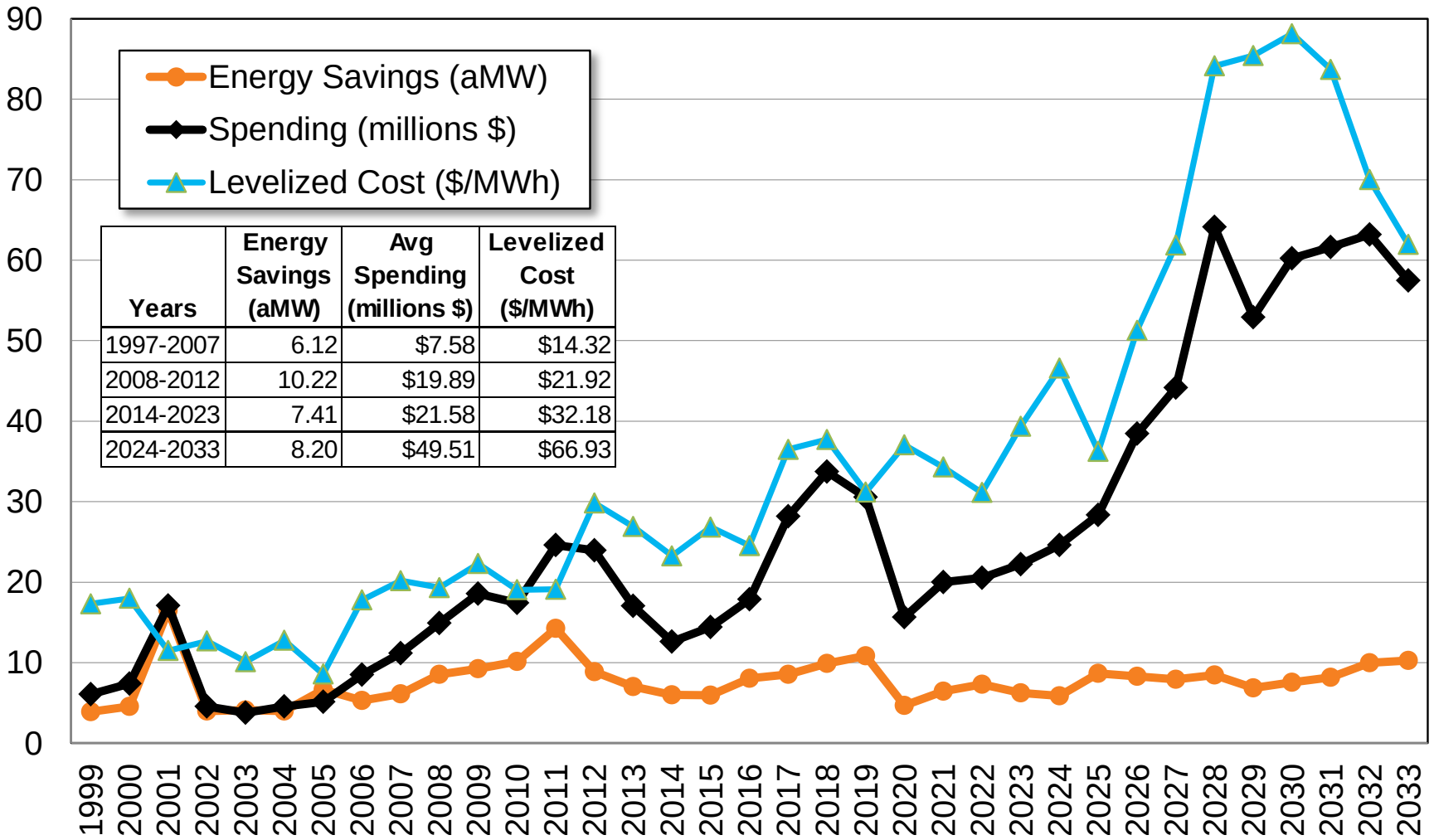
Impacts of State and Federal Renewable Policy

Buy-down of costs is significant



Conservation: Program Costs Forecast to Rise

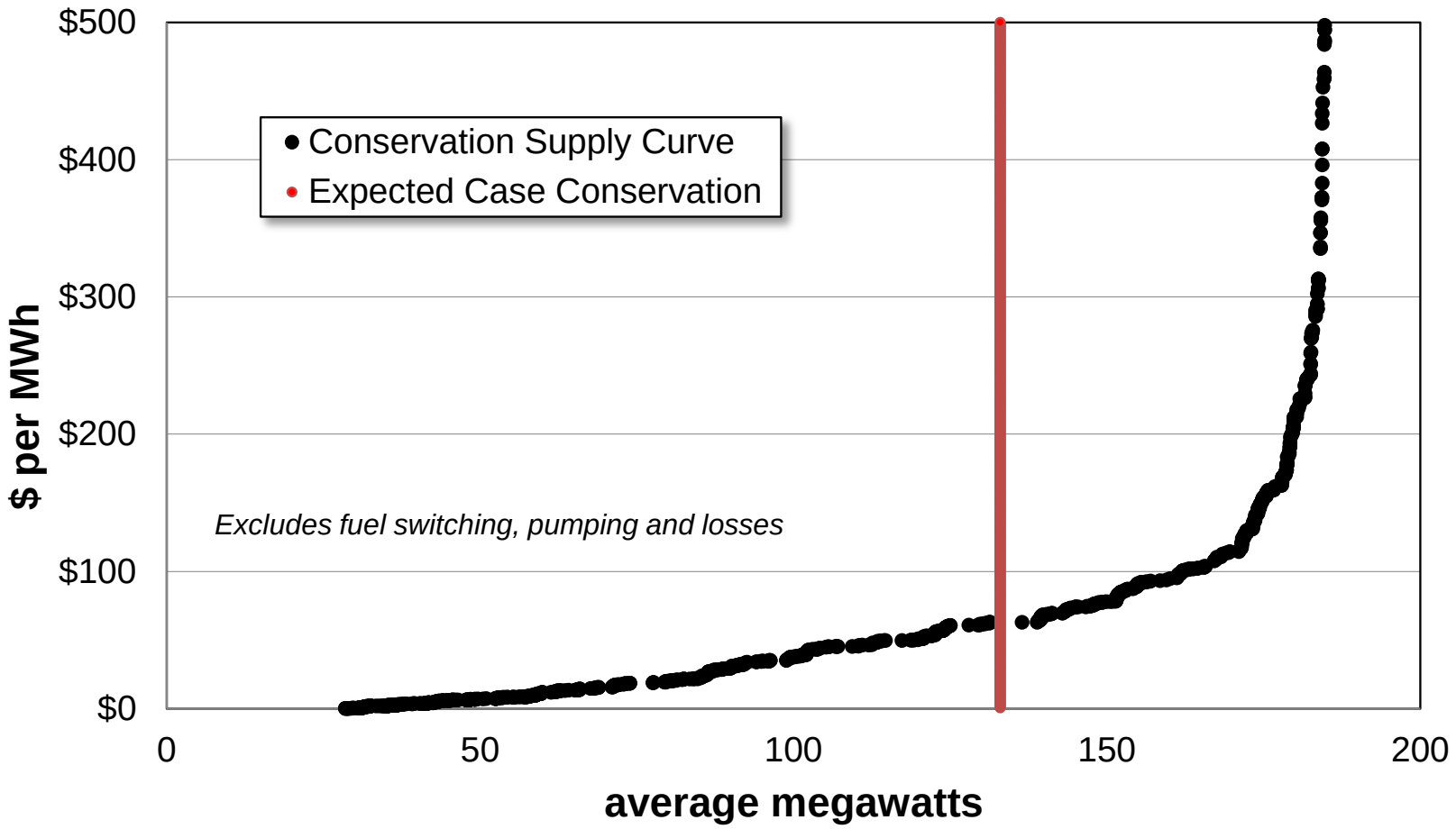
Low hanging fruit is gone, but still cost effective



Years	Energy Savings (aMW)	Avg Spending (millions $)	Levelized Cost ($/MWh)
1997-2007	6.12	$7.58	$14.32
2008-2012	10.22	$19.89	$21.92
2014-2023	7.41	$21.58	$32.18
2024-2033	8.20	$49.51	$66.93

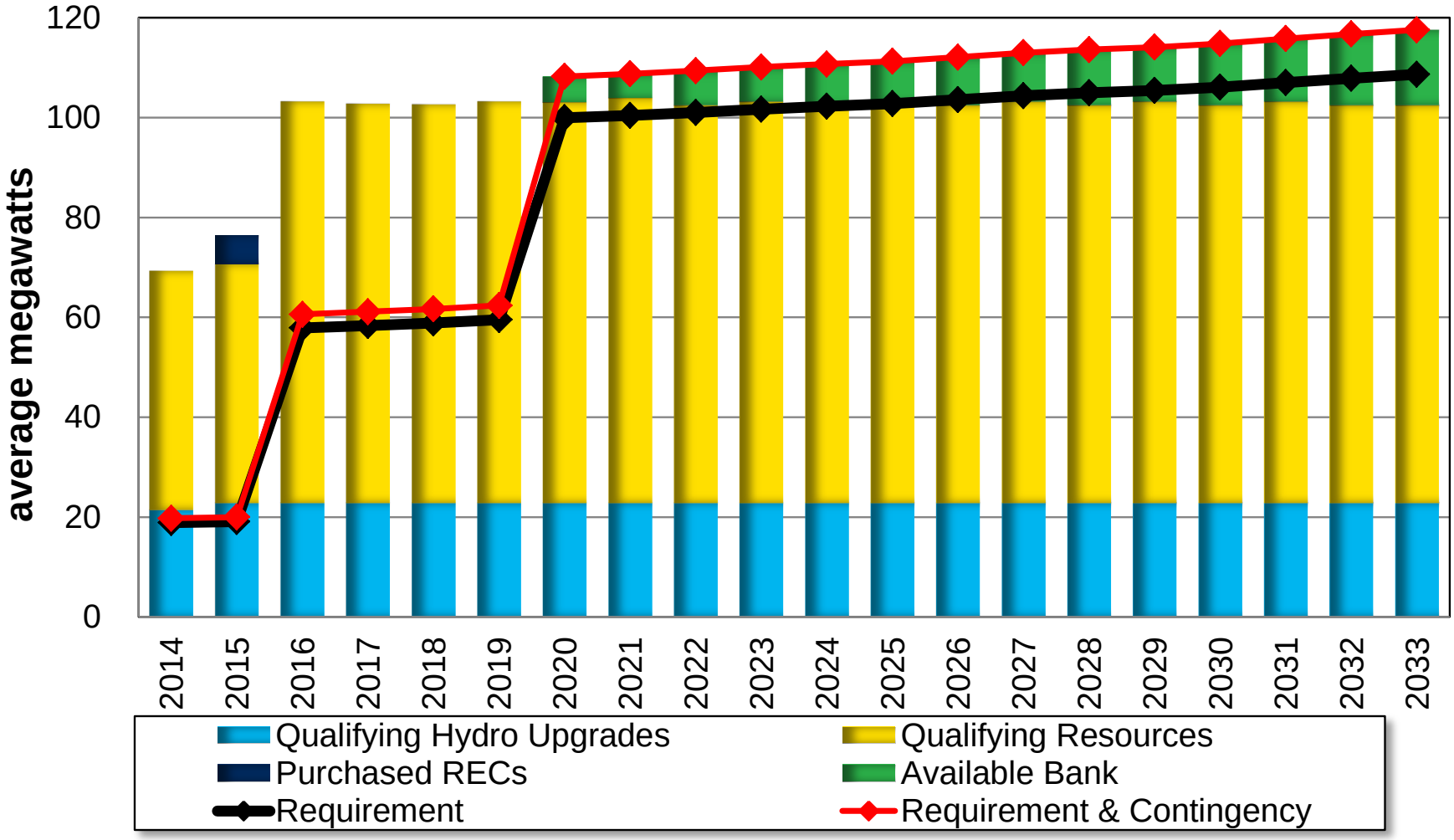
Cumulative Conservation Supply Curve

IRP picks up the majority of potential



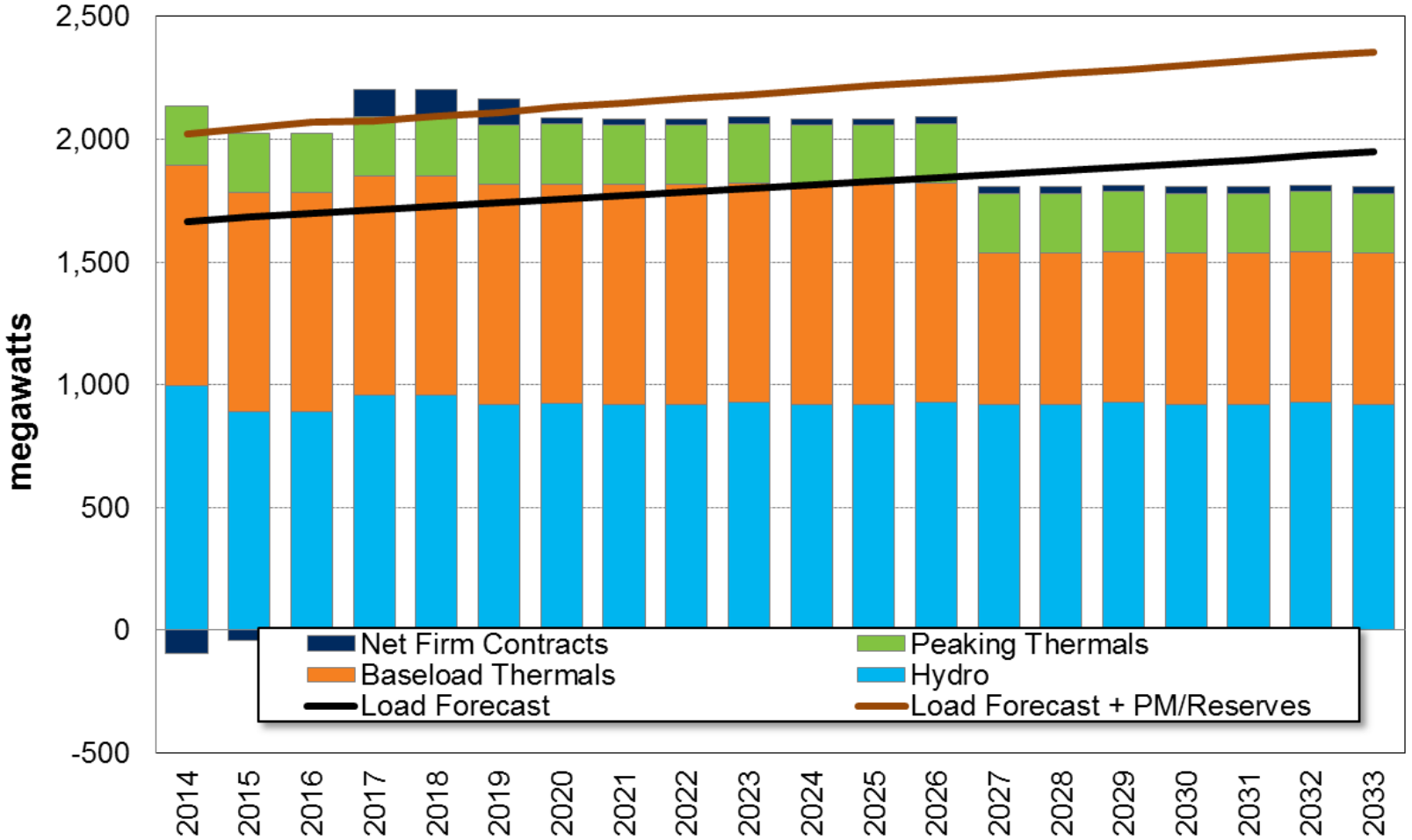
Avista WA-Qualifying Renewable Acquisitions

No new needs over IRP study horizon



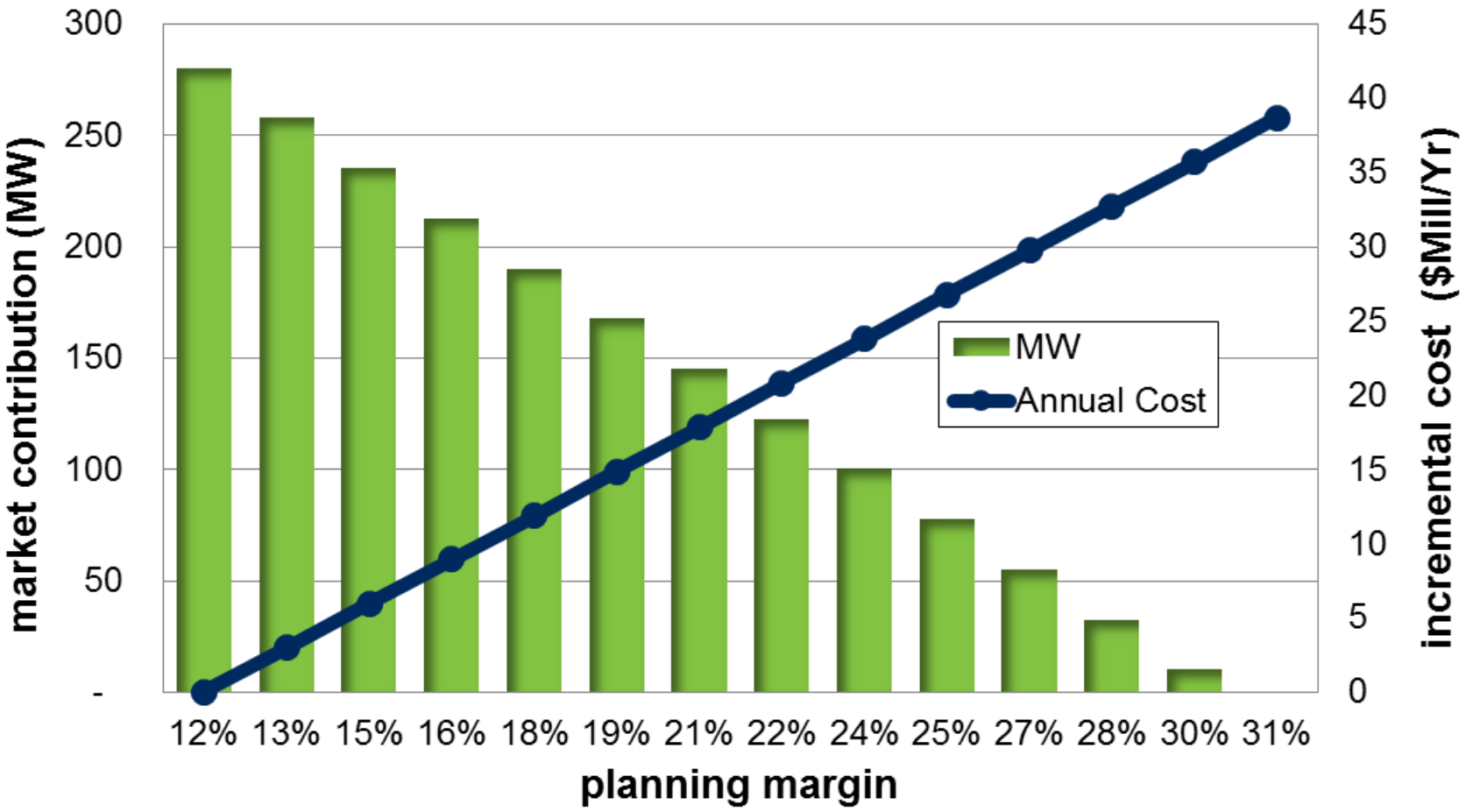
Winter Peaks Drive Future Deficits

Projected smaller summer and energy shortages met by winter builds



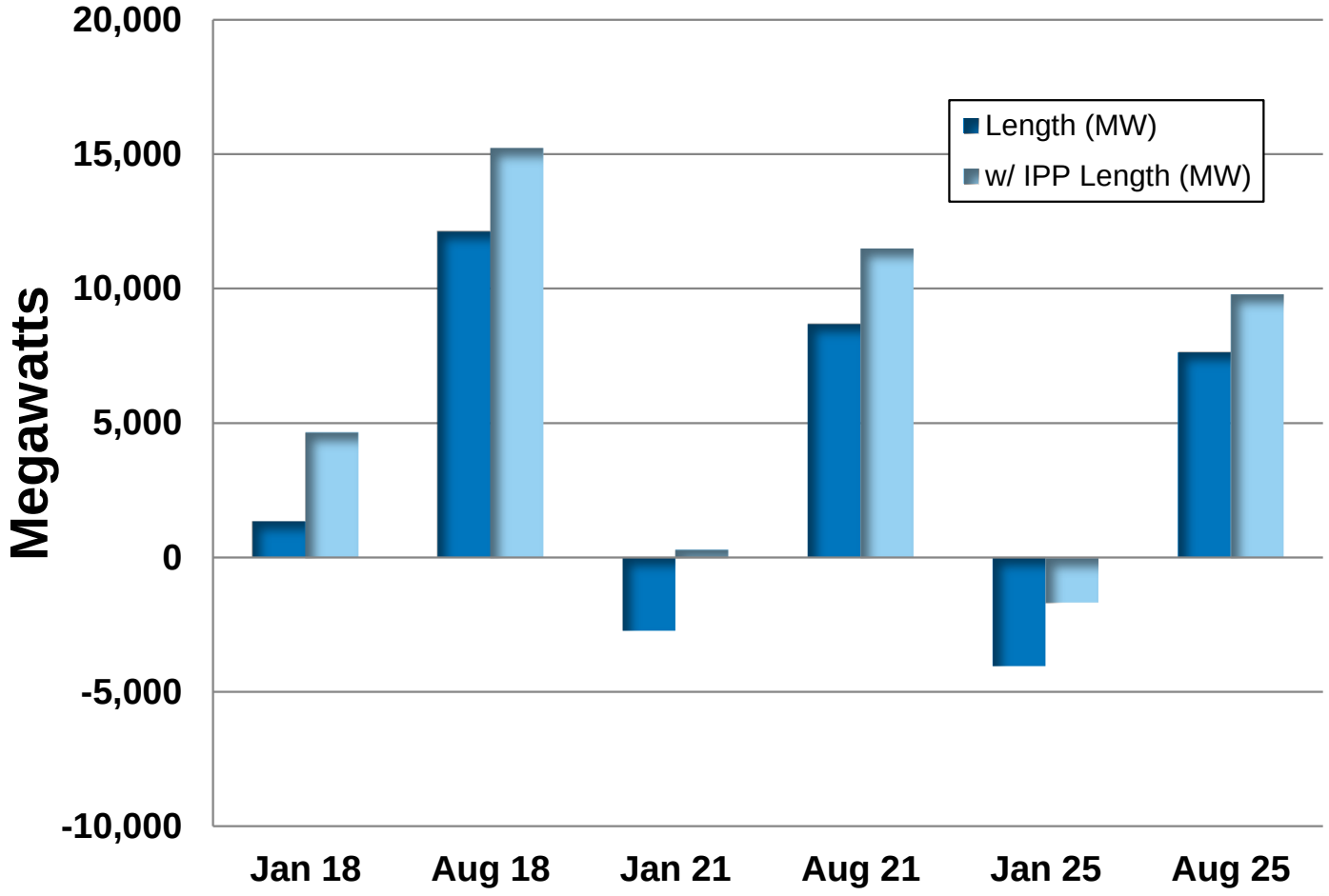
Meeting Reliability Criteria is Expensive

The cost of new builds, combined with an overall market surplus, supports relying on the market for a portion of needs



Regional Sustained Peak L&R

Absent new resources, region will be deficit before the next decade



2013 IRP Preferred Resource Strategy

Like our peers, acquisition is dominated by natural gas and conservation

2013 Resource Strategy

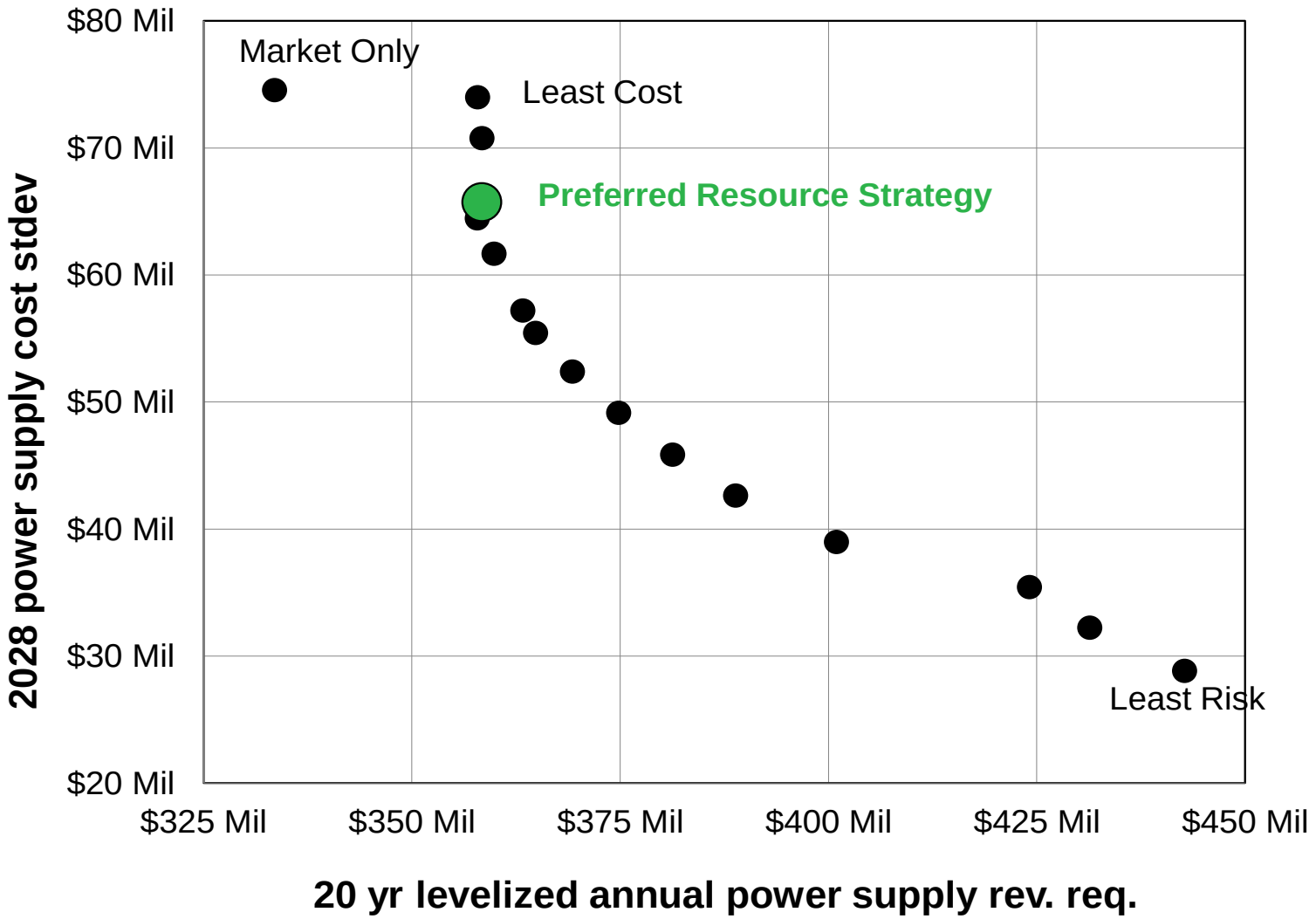
Resource	By the End of Year	Nameplate (MW)	Energy (aMW)
Simple Cycle CT	2019	83	76
Simple Cycle CT	2023	83	76
Combined Cycle CT	2026	270	248
Simple Cycle CT	2027	83	76
Rathdrum CT Upgrade	2028	6	5
Simple Cycle CT	2032	50	46
Total		**575**	**529**
Efficiency Improvements	**By the End of Year**	**Peak Reduction**	**Energy (aMW)**
Energy Efficiency	2014-2033	221	164
Demand Response	2022-2027	19	0
Distribution Efficiencies	2014-2017	<1	<1
Total		**240**	**164**

Resource Strategy Capital Investment ($millions)

Year	Investment	Year	Investment
2014	0.0	2024	91.6
2015	0.0	2025	0.0
2016	0.0	2026	0.0
2017	0.0	2027	421.7
2018	0.0	2028	97.0
2019	0.0	2029	2.4
2020	85.8	2030	0.0
2021	0.0	2031	0.0
2022	0.0	2032	0.0
2023	0.0	2033	83.6
2014-23 Total	**85.8**	**2024-33 Totals**	**696.2**

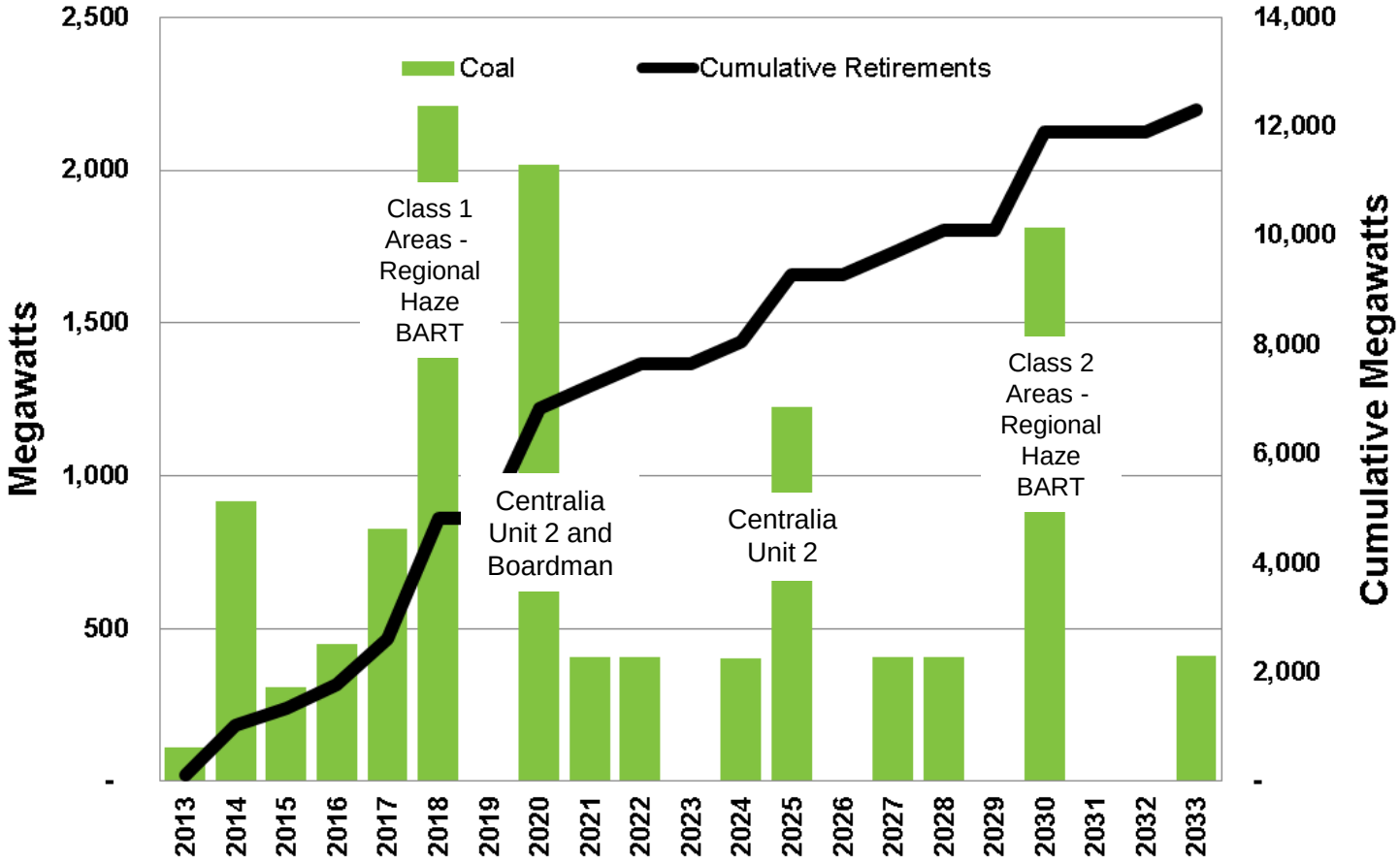
The Efficient Frontier

With renewable obligations met, planning toward lower-cost end of range



Avista-Modeled WECC Coal Retirements

82 of 148 units (55%) retired by 2033



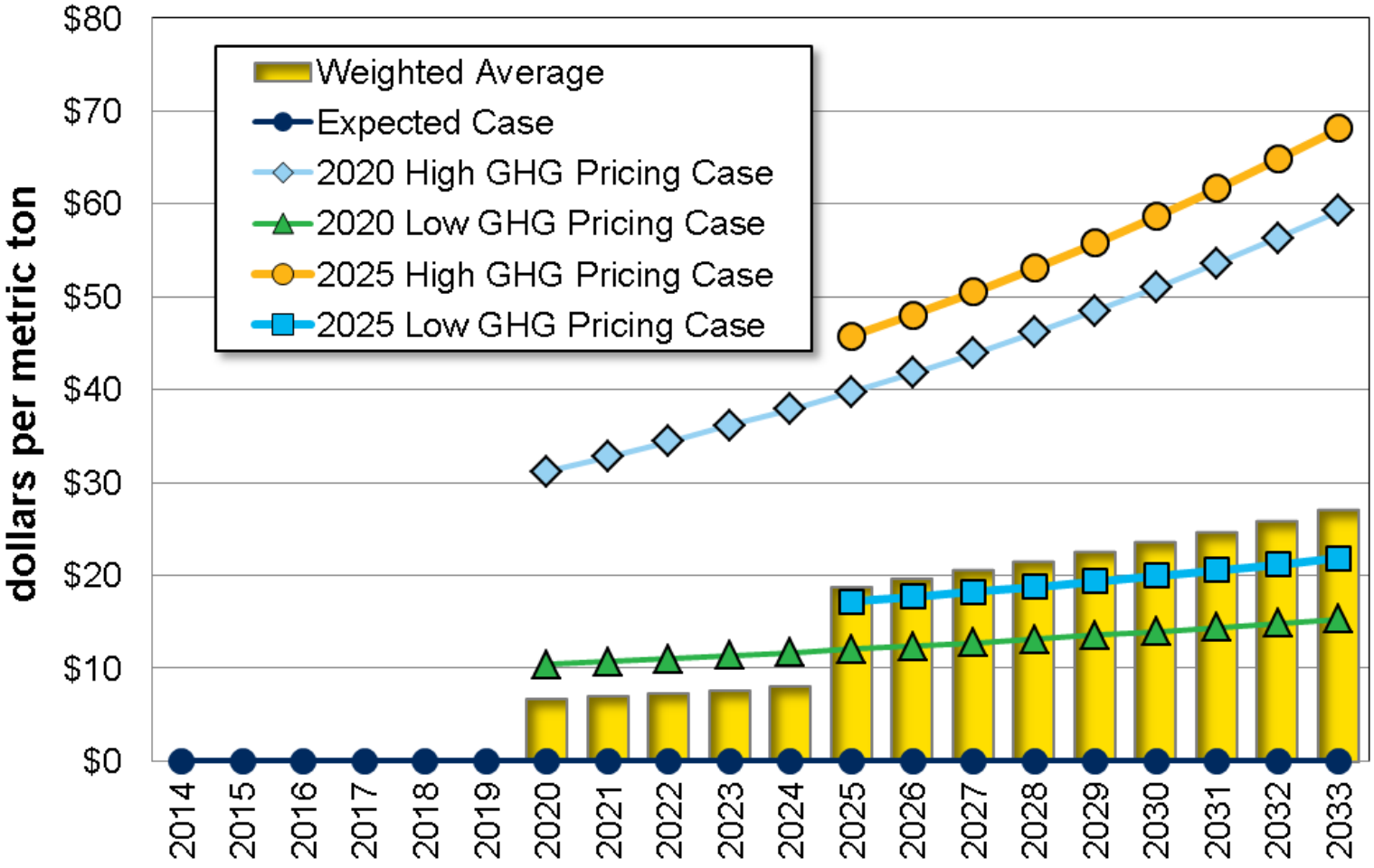
Colstrip Scenario Analysis

Per WUTC Requests

- Avista Owns 15% of Units 3 and 4
- Avista Has No Ownership or Interest In Units 1 or 2
- Scenario 1 – Impact on Avista's Portfolio Absent Colstrip
  - Assumes 2017 retirement
  - Does not consider potential for sale (revenue) or shut down (cost)
- Scenario 2 – Impact of New EPA Standards
  - Units 3 & 4 are modestly affected, and standards likely won't force shutdown
  - Existing system is adequate to meet new mercury air toxic standards (MATS)
  - New coal ash rules are not expected to require new investments
  - Existing systems expected to meet new effluent discharge guidelines
  - Regional Haze Program (NO_X controls) may affect Avista
    - Likely requires new selective catalytic reduction (SCR)
    - Assumed cost of $700 million ($105 million Avista share) in 2026+ timeframe

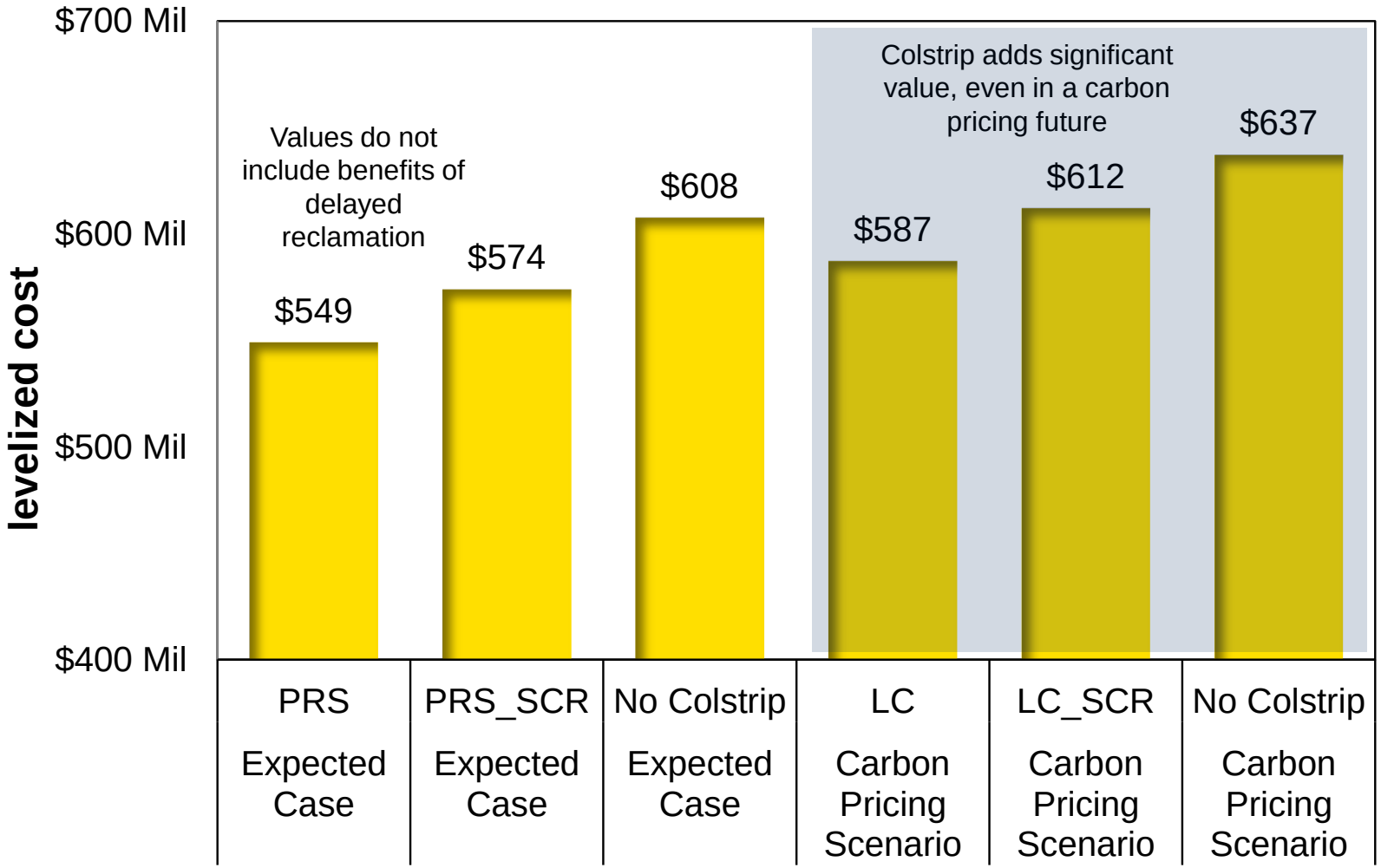
Carbon Dioxide Emissions Forecasts

Today's low emissions profile makes a downward trajectory difficult



Value of Colstrip to Avista Portfolio

Significant benefit, even with much more restrictive controls



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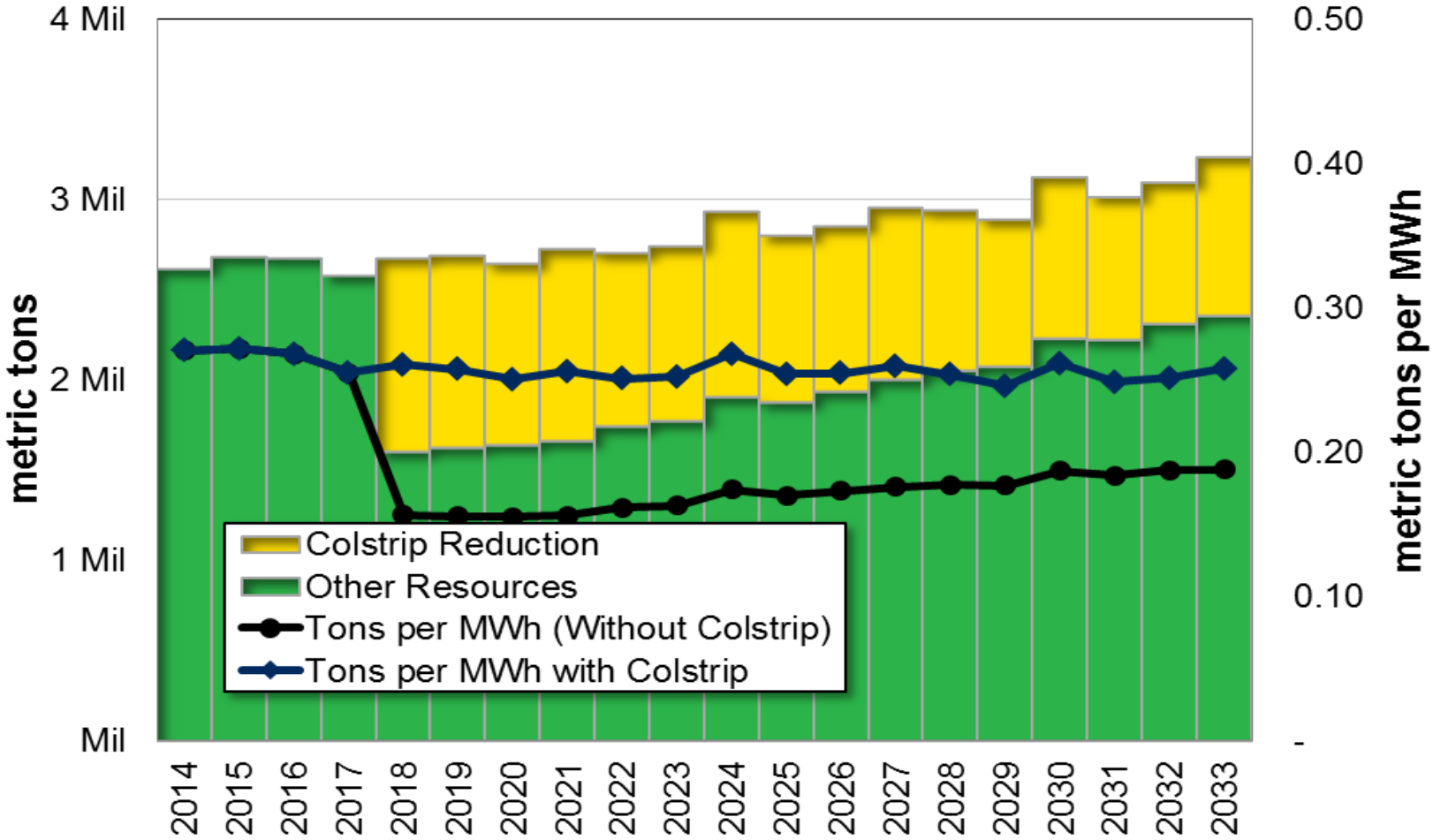
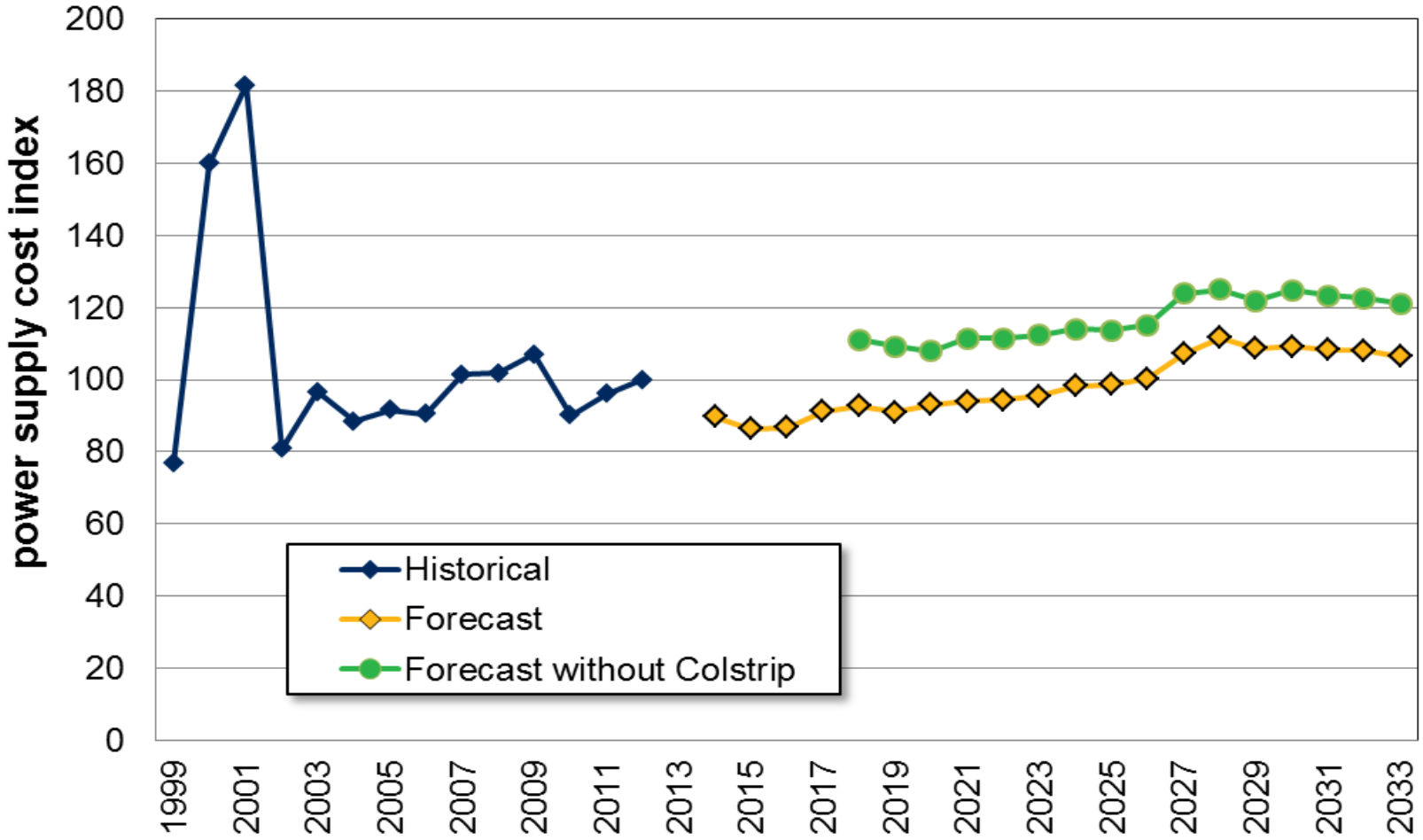


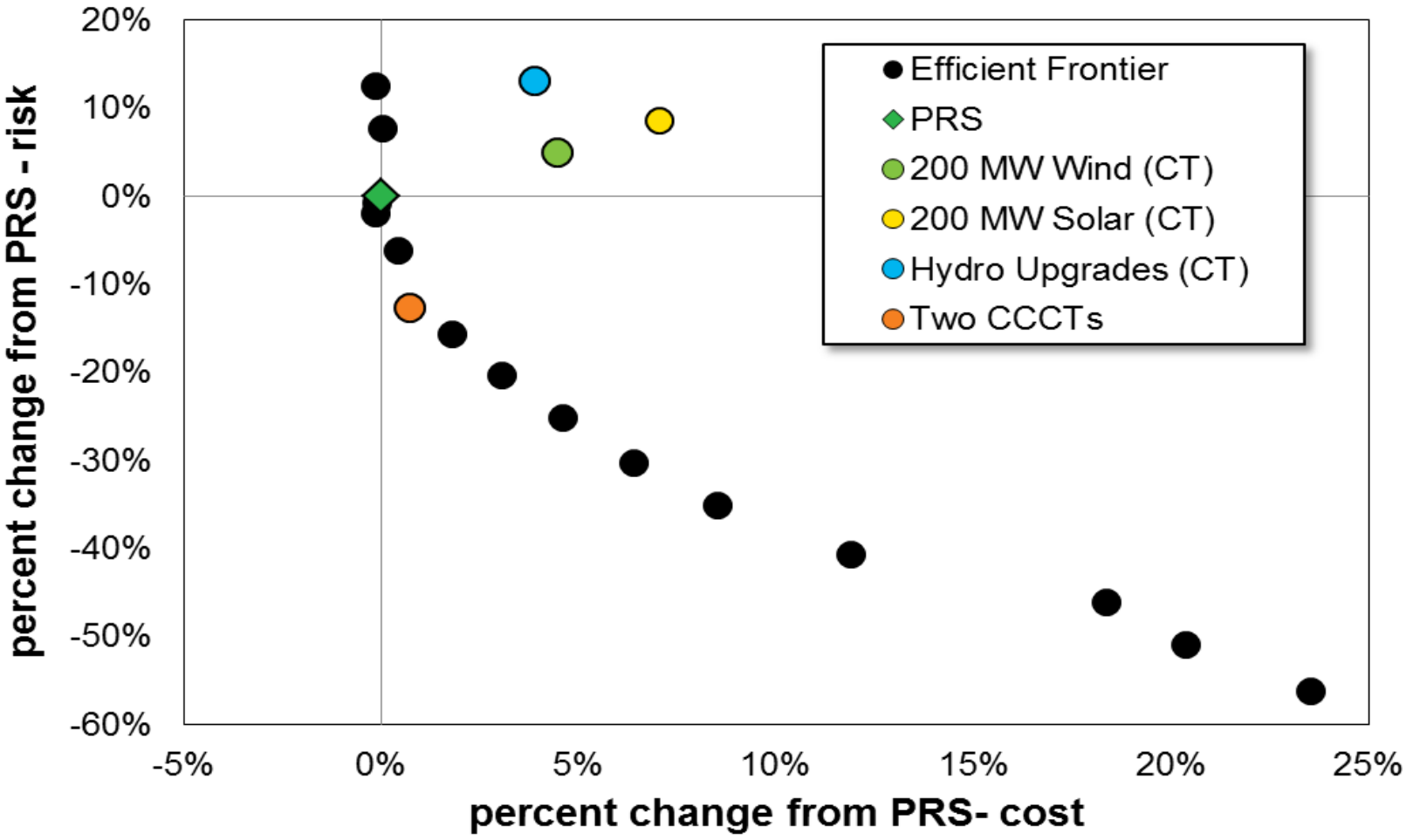
Power Supply Costs With and Without Colstrip

~15% Increase in Power Supply Cost To Replace Colstrip



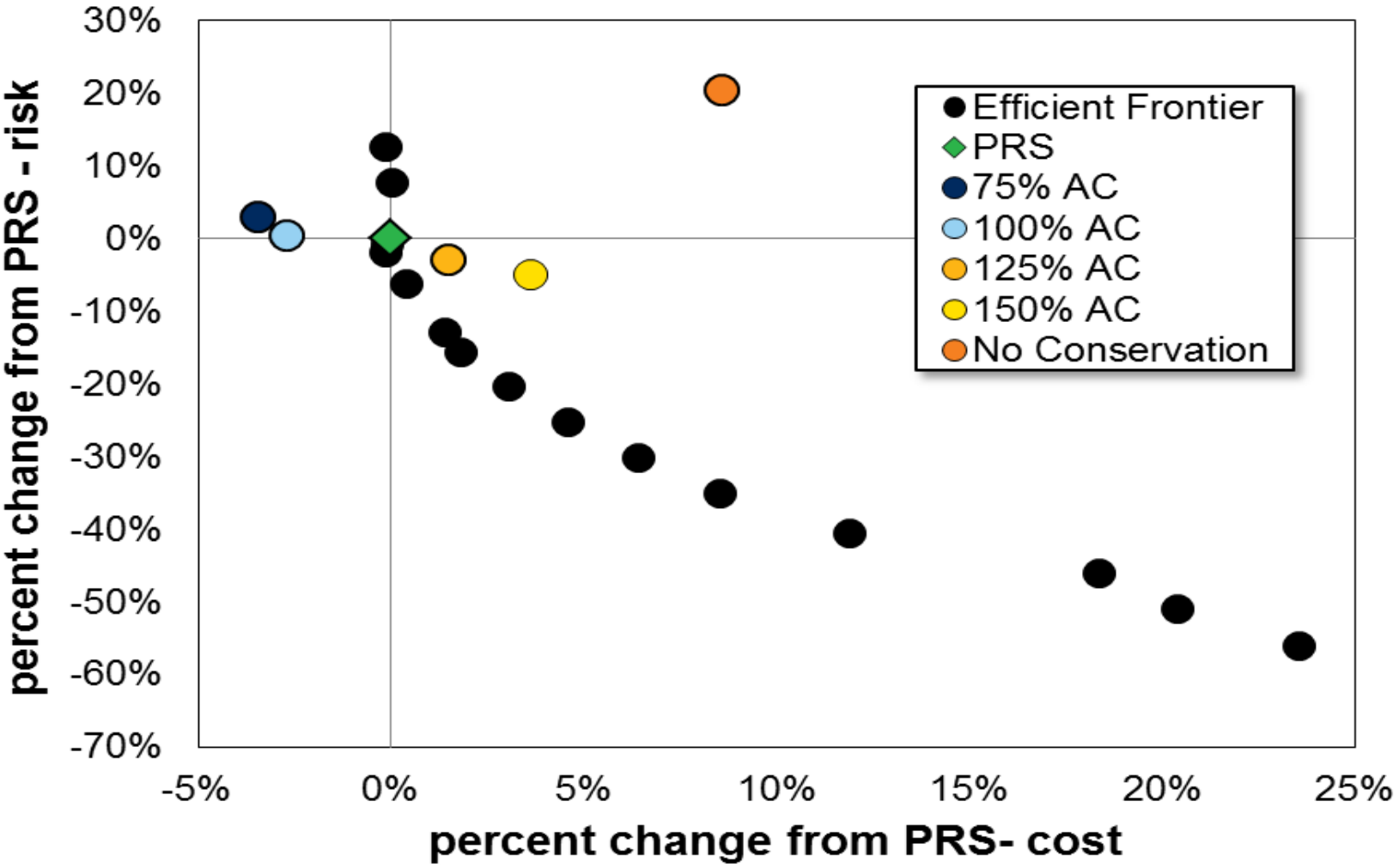
Additional Renewables Are Not Efficient

They Require Back-Up CTs For Winter Capacity



Impacts of NPCC 10% Conservation Premium

Does not lower risk in preferred plan, but does increase cost



Tipping Point Analyses

- "Disruptive Change is Around the Corner"
  - Or is it?
- Tipping Point Analyses Quantify Likelihood of Disruption
- The Results, Relative to Preferred Resource Strategy
  - Solar Capital Costs Must Drop 88%
  - Nuclear capital costs must drop 70%
  - Sequestered capital coal costs must drop 87%
  - Energy efficiency mutes variation in future need
    - Lower or higher load growth trajectories impact new building construction
    - Nearly 90% of savings is from existing building stock
    - Lower load growth (i.e., new buildings) mutes forecasted EE benefit from new buildings
    - And higher load growth is mitigated by higher-than-forecasted levels of new buildings

Thank You.