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Washington

July 25, 2011

MEMORANDUM

TO: Council Members

FROM: Terry Morlan

SUBJECT: Presentation from Northwest Energy Efficiency Alliance

Claire Fulenwider, Executive Director of the Northwest Energy Efficiency Alliance (NEEA), will brief the Council on NEEA's accomplishments in the past year. NEEA is an important organization for achieving efficiency savings in the region. In 2009 NEEA was responsible for over 20 percent of the estimated savings in that year, and also likely contributed to the ability of utilities to achieve the rest of the savings.

In addition, NEEA works closely with the Council staff in identifying efficiency technologies and strategies for achieving savings. NEEA staff is active in the RTF, utility efficiency programs, and Council advisory committees. Likewise Council members and staff are involved in NEEA's Board and various committees. NEEA is one of the Council's key partners in developing cost-effective efficiency savings and meeting the regional conservation targets.

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Maximizing Energy Efficiency

NWPCC

Claire Fulenwider, Executive Director

August 9, 2011, Spokane

NORTHWEST ENERGY EFFICIENCY ALLIANCE

NEEA's Unique Value



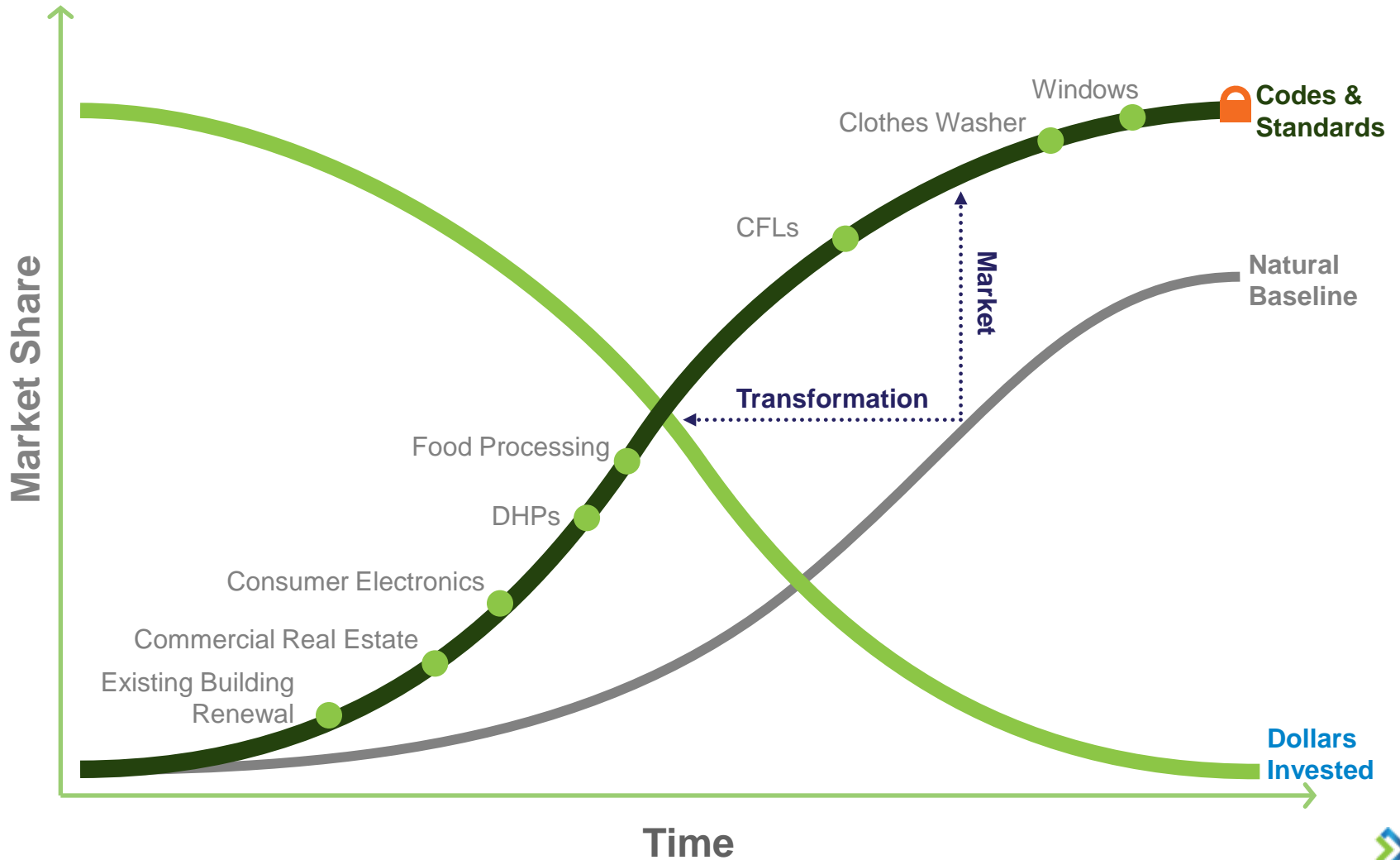
Fills the energy efficiency pipeline, championing innovation, driving emerging technologies

Accelerates market adoption of energy-efficient products, services and practices

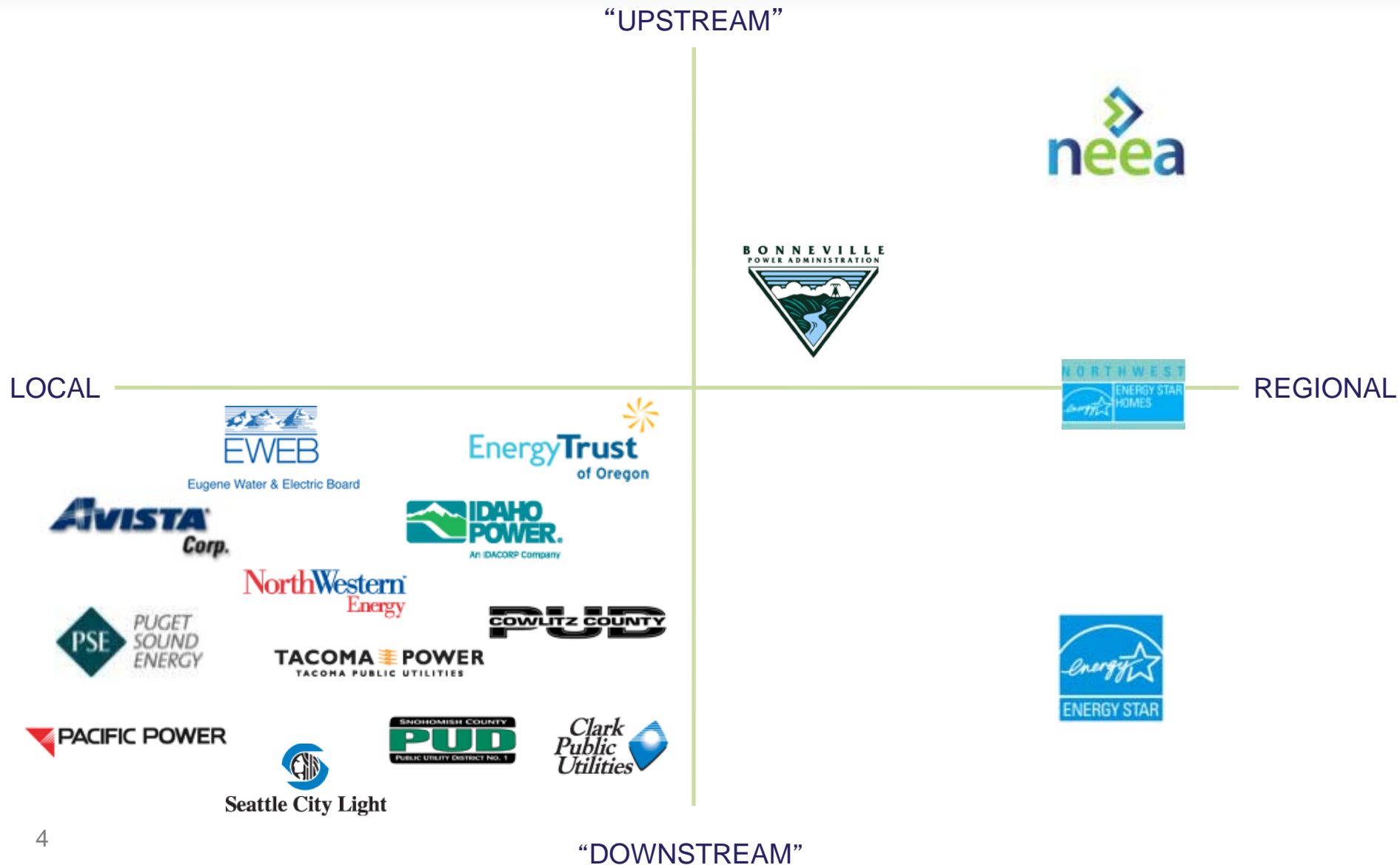
Leverages regional advantage through shared resources, economies of scale, reduced risk

Helping the region capture efficiency better, faster, cheaper.

How We Work

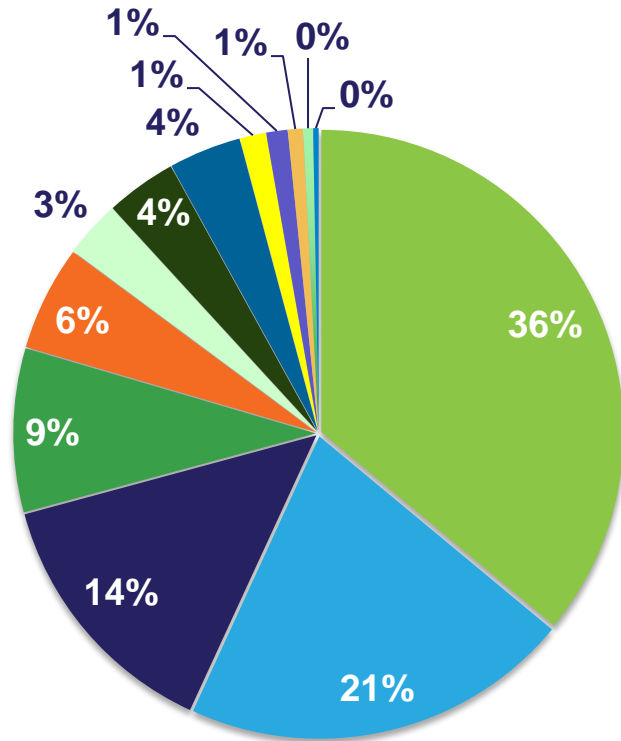


NEEA's Role in Regional Partnership



NEEA Funding

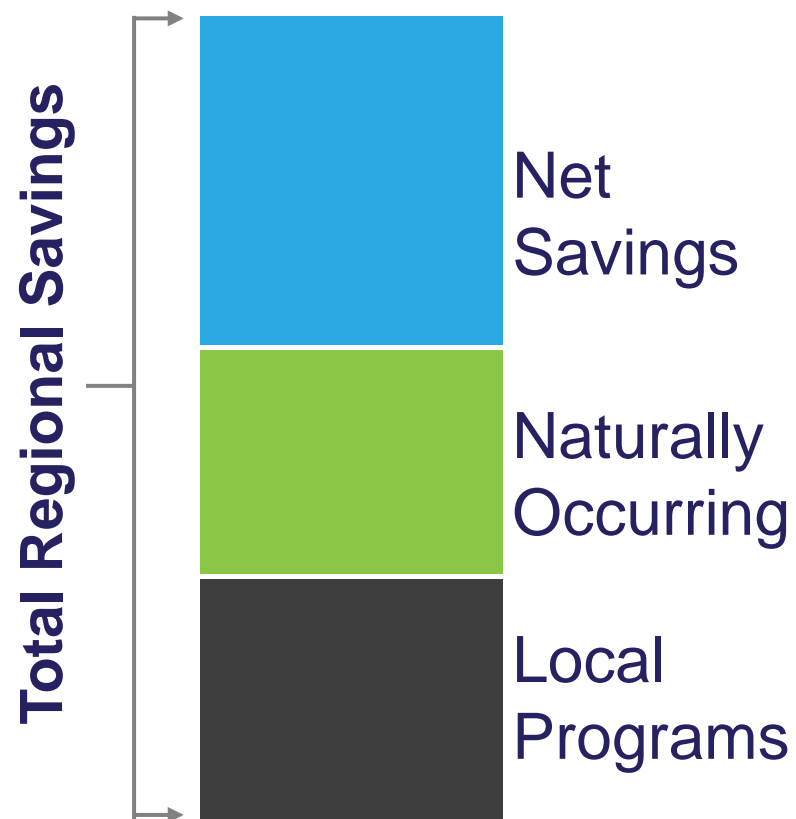
2010-2014 Funding Share



Funder	2010-2014 Total Funding	Average Annual Funding
Bonneville Power Administration	\$68,051,200	\$13,610,240
Energy Trust of Oregon	\$39,356,800	\$7,871,360
Puget Sound Energy	\$26,303,200	\$5,260,640
Idaho Power	\$16,522,800	\$3,304,560
Avista Utilities	\$10,603,600	\$2,120,720
PacifiCorp – Pacific Power (WA)	\$5,740,155	\$1,148,031
Seattle City Light	\$7,134,400	\$1,426,880
NorthWestern Energy	\$7,310,800	\$1,462,160
Clark County PUD	\$2,646,000	\$529,200
Tacoma Power	\$2,156,000	\$431,200
Snohomish PUD	\$1,509,200	\$301,840
Eugene Water & Electric	\$994,200	\$198,840
Cowlitz County PUD	\$548,800	\$109,760
Total	\$188,877,155	\$37,775,431

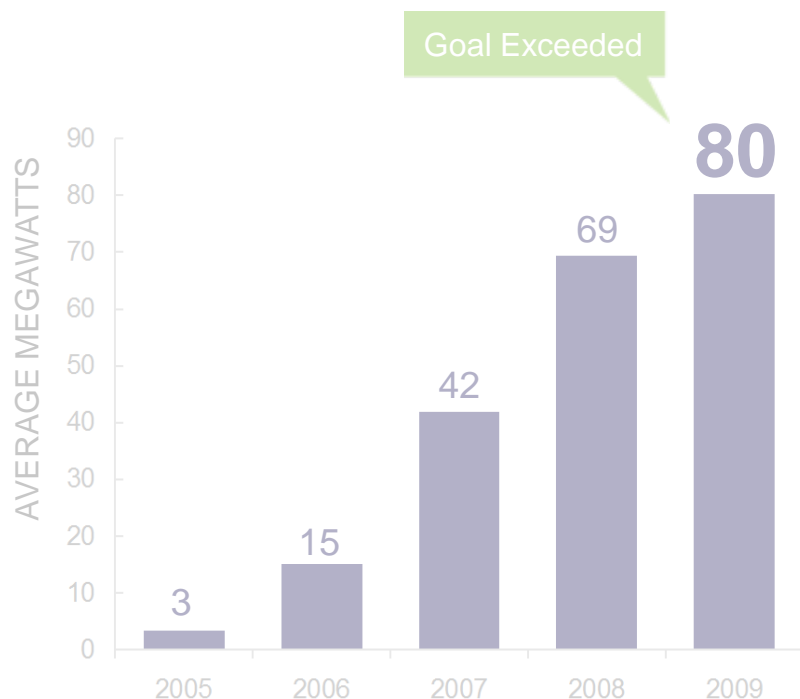
Reporting Energy Savings

$$\text{Net Market Savings} = \text{Total Regional} - \text{Naturally Occurring (Baseline)} - \text{Local Programs}$$

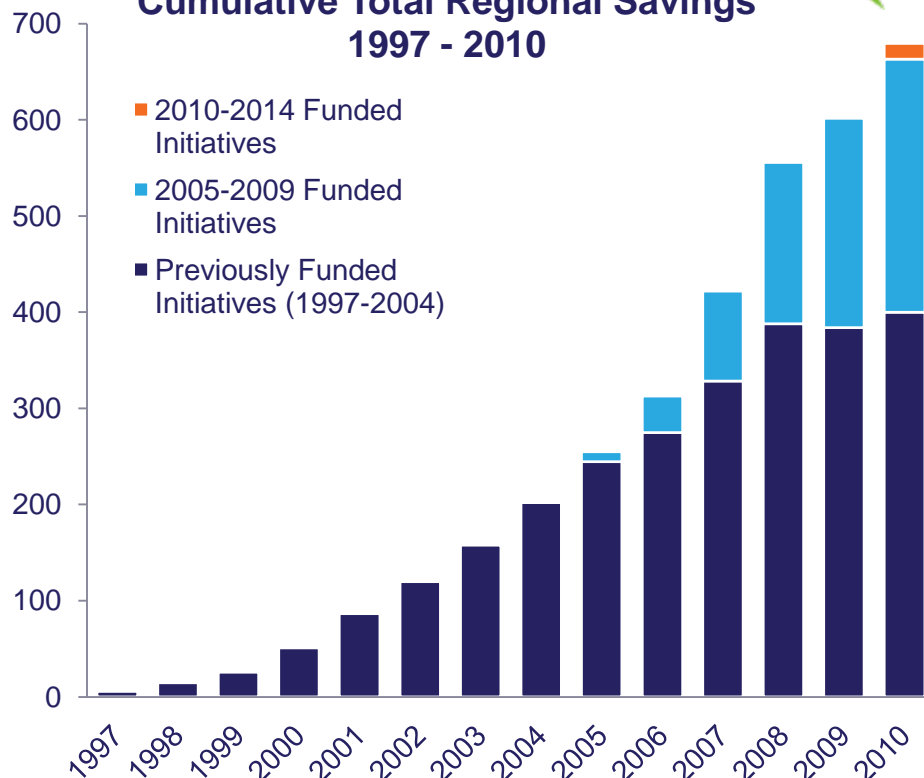


Recent Savings Achievements

Cumulative Net Market Effects: 2005-2009



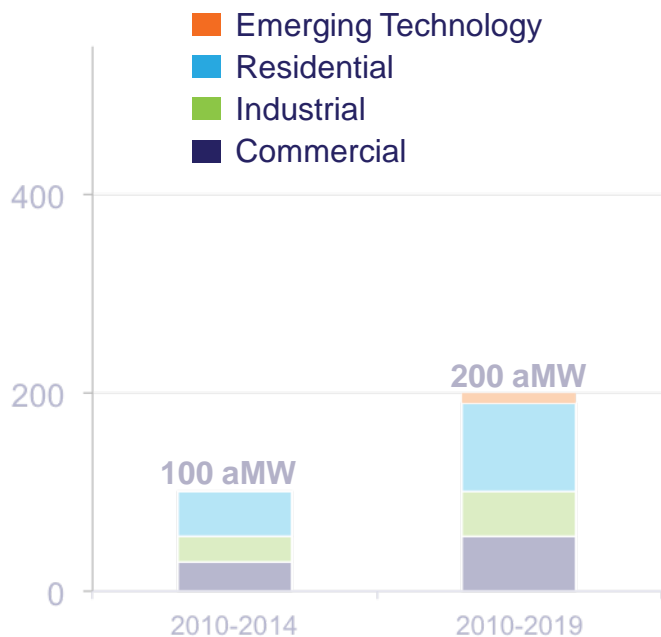
Cumulative Total Regional Savings 1997 - 2010



Net-levelized cost of 1.7 cents/kWh (all societal costs)*

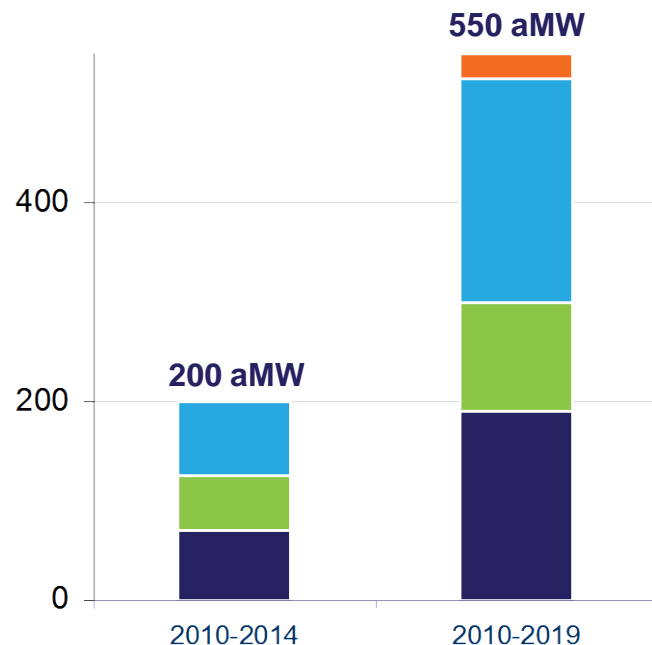
Savings Goals

Net Market Effects



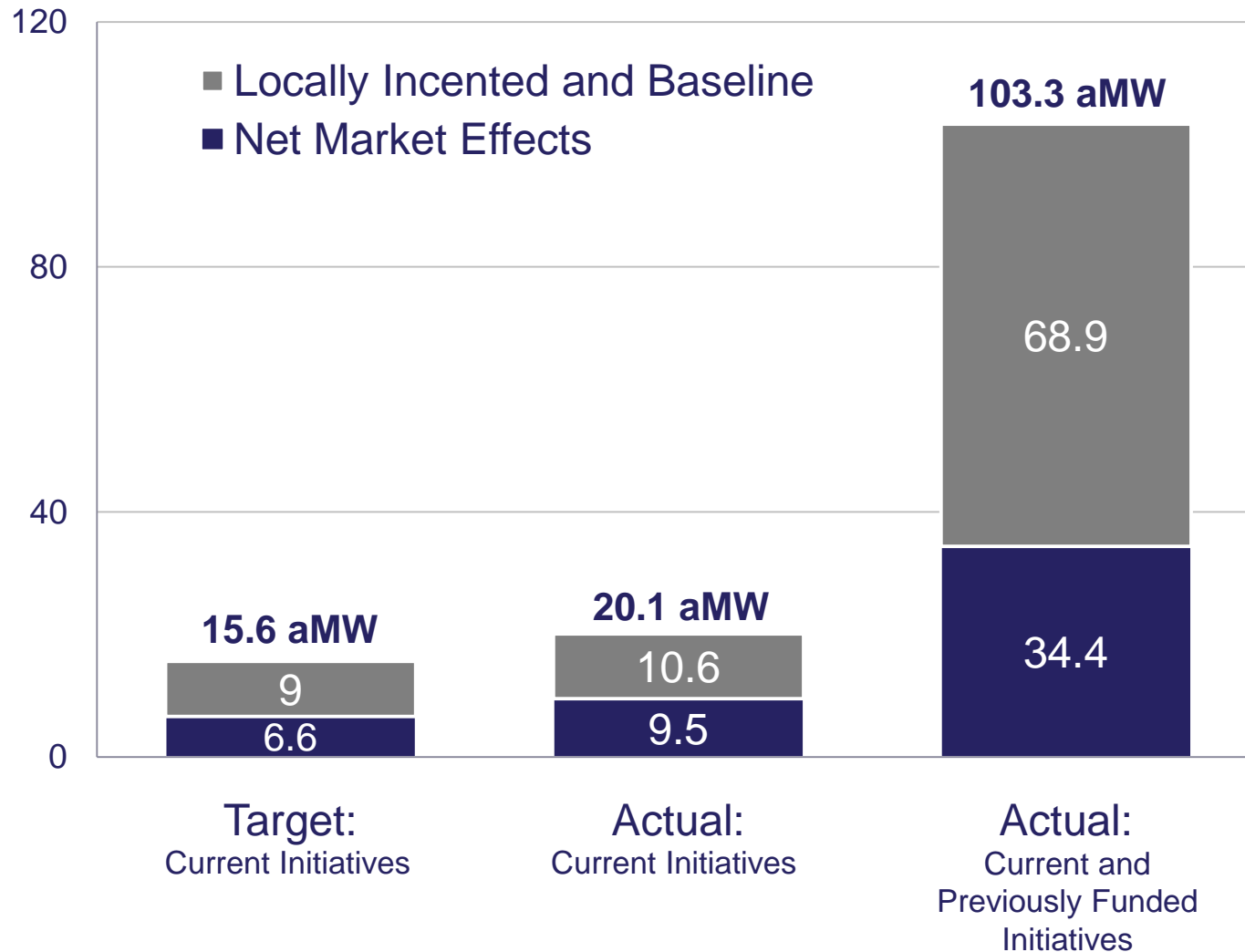
Net Market Effects – associated with market change and not counted as baseline or local incentives

Total Regional Savings



Total Regional Savings – associated with all market change

2010 Total Regional Savings (aMW)



Current Initiatives



Residential

- Efficient Homes
- Televisions
- Desktop PCs
- Heat Pump Water Heaters
- Ductless Heat Pumps



Industrial

- Small/Medium Businesses
- Food Processors



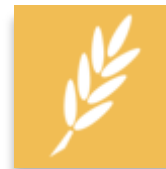
Codes & Standards

- Other Commercial Codes
- Other Commercial Standards
- Other Residential Standards
- Other Residential Codes



Commercial

- Commercial Lighting Solutions
- Existing Building Renewal
- Commercial Real Estate
- Healthcare
- Business IT



Agriculture



Emerging Technology

- Heat Pump Water Heaters
- High Performance Windows
- Green Pumps
- Solid State Lighting



Partner Services

- ConduitNW.org
- Efficiency Connections Northwest
- Other Regional Resources

Solid State Lighting



Adding control systems to public lighting sources and improving outdoor illumination standards

Planned Research and Pilots

- 150 aMW annual savings potential
- Leverage existing research
- Test performance and cost-effectiveness of LED lighting with network control systems
- Provide tech support to IES

Televisions

Residential



NEEA and utility partners motivate retailers to carry and sell the most efficient televisions

Key Initiative Strategies

- Partner with California and Nevada utilities
- Provide incentives to retailers
- Foster retailer relationships
- Provide retailer training
- Regional/local messaging: *Energy Forward* (most efficient)
- Support local and federal standards initiatives. Energy Star and “most efficient”



Ductless Heat Pumps

Residential



NEEA works to accelerate the adoption of ductless heat pumps in electric heat homes

Key Initiative Strategies

- Broaden manufacturer relationships
- Provide contractor education
- Refine quality assurance process
- Increase DHP presence in retailers
- Raise consumer awareness
- Explore loan programs to help consumers overcome cost barrier
- Buy 100 MW @ % cents/kWh?

Food Processors

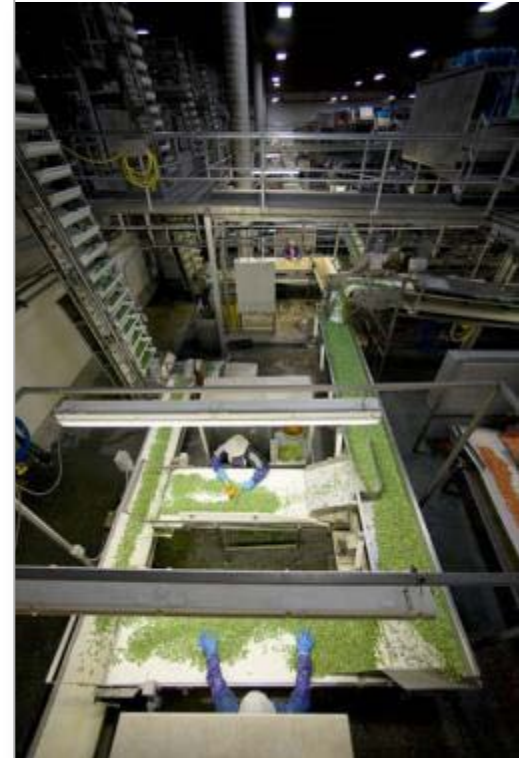
Industrial



NEEA focuses on creating and configuring a strategic energy management solution for Northwest food processors

Key Initiative Strategies

- Leverage Northwest Food Processors Association to mobilize members and other groups to reach energy efficiency goals
- Provide Strategic Energy Management (SEM) tools and education
- Promote and encourage adoption of SEM
- Demonstrate value of Continuous Energy Improvement
- Promote value of ISO 50001



Existing Building Renewal

Commercial



NEEA will provide resources to owners and tenants who do energy renovations

Key Initiative Strategies

- Develop roadmap for owners that simplifies renovation process
- Provide integrated technical packages that result in 35% increase in efficiency
- Enable early market adoption through pilot demonstrations, analysis and tools
- Disseminate solutions through training and marketing

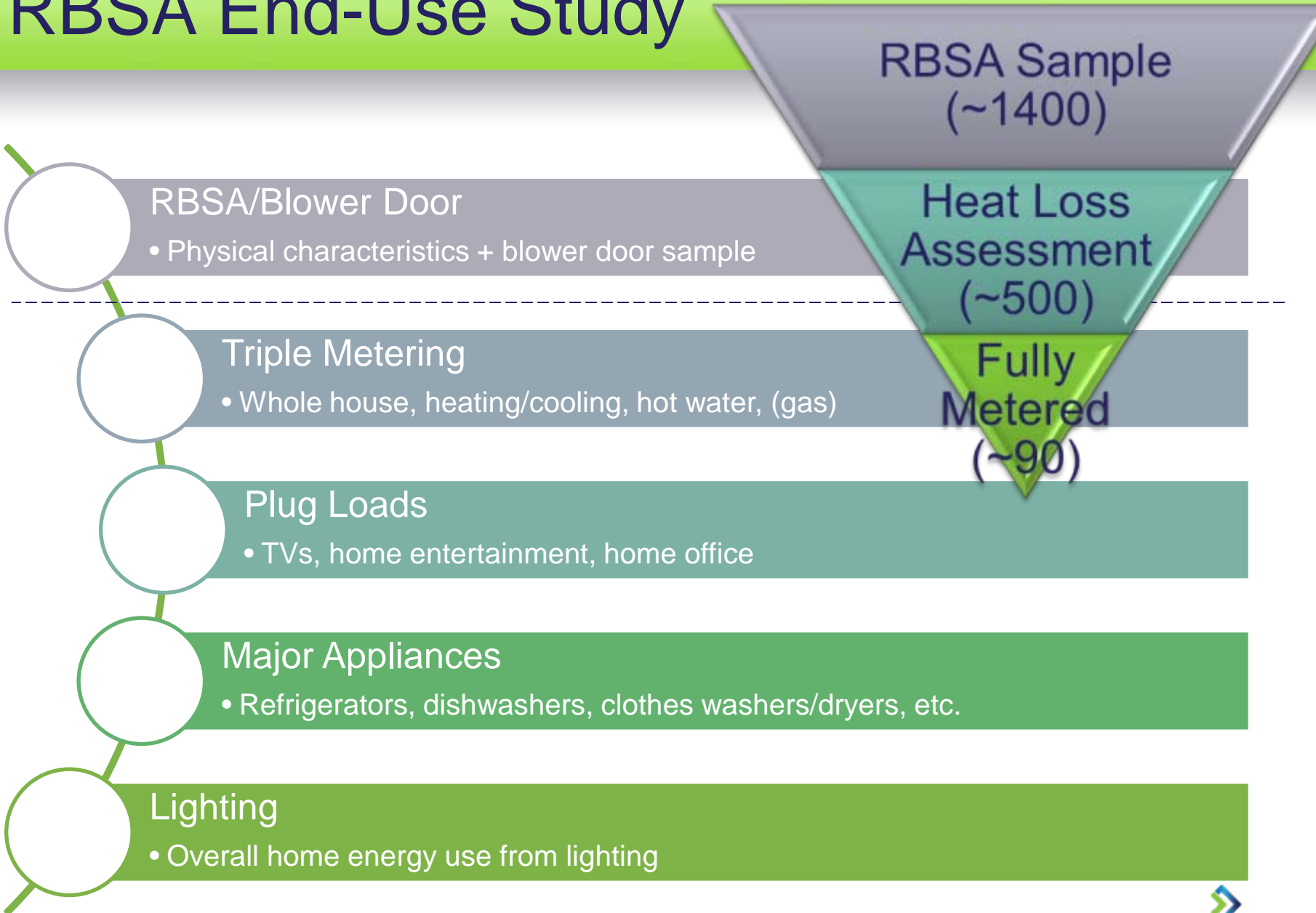
Emerging Tech: First Northern Climate HPWH

AirGenerate ATI66 Features:

- Exhaust ducting to get rid of cold air
- Automatic defrost for low temperature operation
- Tested at 30F with COP of 1.89;
- Can be installed anywhere in NW (Garage, Basements, indoors) regardless of climate (Seattle to Bozeman)
- NEEA played critical role in product definition through Northern Climate Specification



RBSA End-Use Study



NW Regional Testbed

DOE-funded regional “testbed”: proving grounds for new EE products, services, and practices.

- RBSA Metering Study is the foundation for the Regional Testbed
- PNNL/DOE providing over \$480k in 2011 for Metering Study
- Additional PNNL/DOE funding for long term Testbed design/setup
- First Test Product: Non-Intrusive Load Monitoring for Energy Management

Challenges



Opportunities are tougher,
more complicated, costlier

Regulators think locally first,
not regionally

IOUs are focused on cost
recovery and local benefit

Regional needs vary

Focus on our own region can
result in missed opportunities

Questions & Comments

Filling the
Energy
Efficiency
Pipeline

Accelerating
Market
Adoption

Delivering
Regional
Advantage



Thank You!

Claire Fulenwider, Executive Director

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