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Oregon

**Henry Lorenzen**  
Oregon

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Idaho

**James A. Yost**  
Idaho



**Pat Smith**  
Montana

**Jennifer Anders**  
Montana

**Tom Karier**  
Washington

**Phil Rockefeller**  
Washington

March 5, 2013

## MEMORANDUM

**TO:** Council Members

**FROM:** Charlie Grist

**SUBJECT:** Briefing on Regional Energy Efficiency Implementation

This briefing will begin with a short overview by staff of the energy efficiency implementation network in the Pacific Northwest. The presentation will touch on key regional actors, their roles and responsibilities. Over the course of next few months, we plan briefings from several of the key organizations on how implementation is accomplished. Following the overview, the executive directors of two Portland-based organizations in the efficiency implementation network will brief the Council on their organizations.

Susan Stratton is executive director of the Northwest Energy Efficiency Alliance (NEEA). The region uses NEEA to implement efficiency through market transformation activities. NEEA's work incorporates a range of voluntary market interventions from the introduction of new and emerging technologies to improving the availability of efficient products on store shelves. It also transforms markets through promoting changes in building energy codes and appliance and equipment standards.

Margie Harris is executive director of Energy Trust of Oregon. Energy Trust is a non-profit organization created to implement energy efficiency and renewable resources in Oregon under a stable funding and consistent funding paradigm. Energy Trust designs and runs efficiency programs for customers of Portland General Electric, Pacific Power, NW Natural and Cascade Natural Gas.

Attached you will find a presentation on the Northwest Energy Efficiency Implementation Network, Bios for Susan Stratton and Margie Harris as well as the NEEA and Energy Trust presentations.

## **Biographies of Susan Stratton, NEEA, and Margie Harris, Energy Trust of Oregon**

March 5, 2013

### **Susan E. Stratton**

Susan E. Stratton is the Executive Director of the Northwest Energy Efficiency Alliance (NEEA) whose purpose is to accelerate energy efficiency in the Northwest. Susan serves as the primary liaison between NEEA, its regional funders and other supporting organizations and governments.

Susan has more than 30 years of leadership experience in energy policy, utility regulation, economics, and professional education programs. Prior to joining NEEA, Susan was Executive Director of the Energy Center of Wisconsin. She has served in leadership roles in the Wisconsin Public Benefits program, the Public Service Commission of Wisconsin, the Public Utility Institute of Wisconsin, the Midwest Energy Efficiency Alliance, and for the STAC program partnership between the US DOE, ASERTTI and NASEO.

Susan served on Wisconsin's Task Force on Climate Change as well as the Task Force on Energy Efficiency and Renewables, and worked with the Midwestern Governors Association to identify policies and strategies that support the Energy Security and Climate Stewardship Platform and the Industrial Initiative for the Midwest. She led the Indiana Utility Regulatory Commission's effort to implement a state-wide demand-side management program.

As past chair of the EPRI Public Advisory Committee on Energy Efficiency and Smart Grid, Susan worked with EPRI research teams on energy efficiency and smart grid issues. Susan was also chair of the Association of State Energy Research and Technology Transfer Institutions.

Susan holds Masters Degrees from the University of Wisconsin at Madison and from Virginia Commonwealth University, and a Bachelors of Arts in Economics from Le Moyne College in Syracuse, New York. In her spare time, you'll find Susan on her bike, on the tennis court or baking bread.

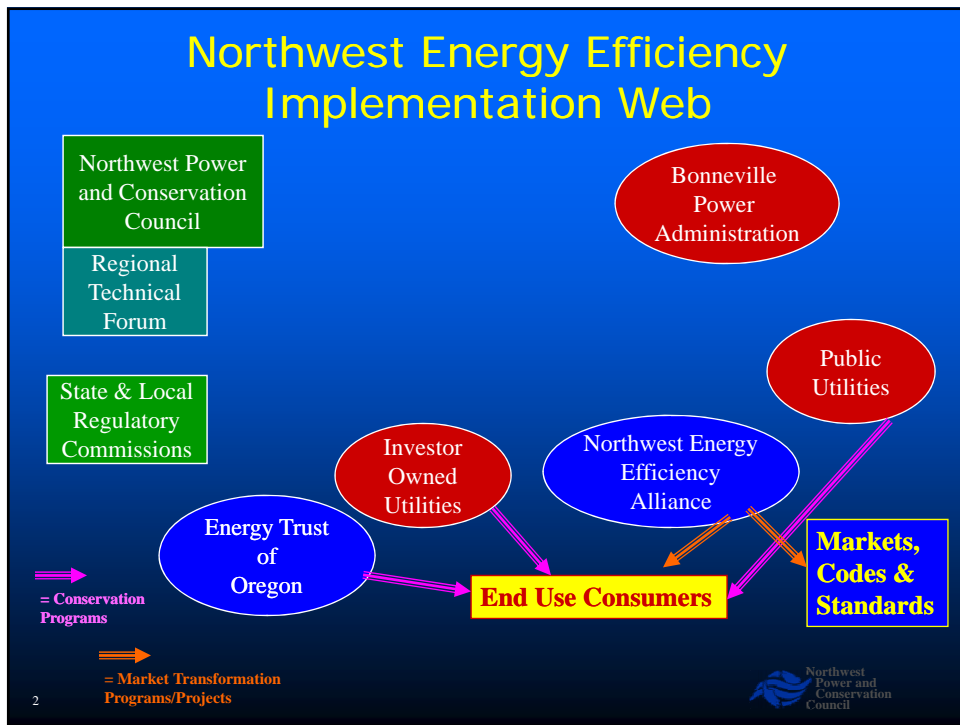
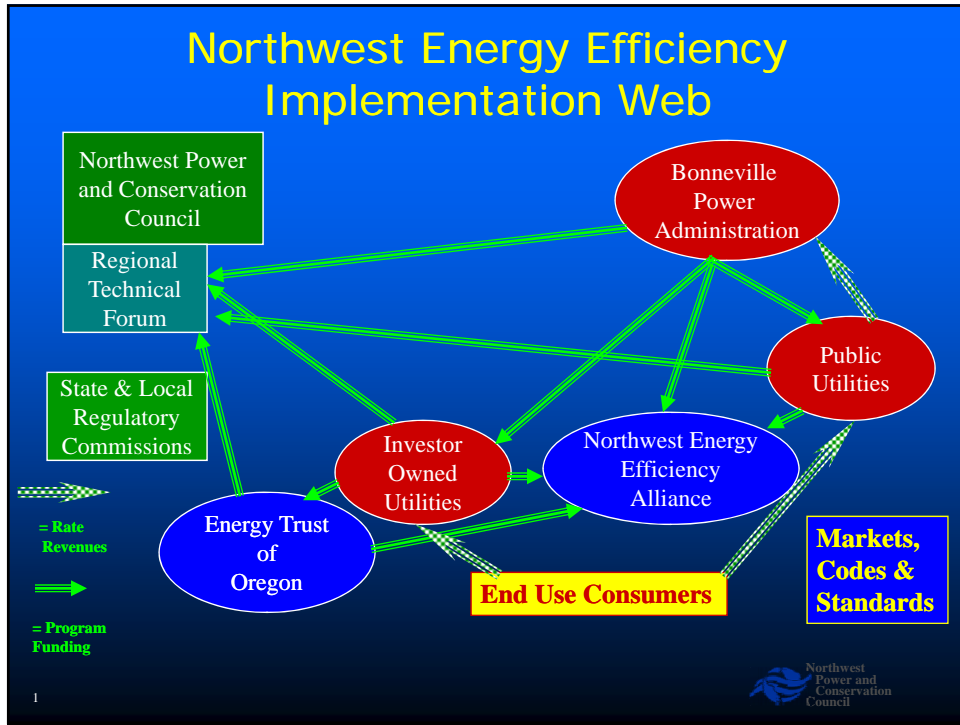
Margie Harris

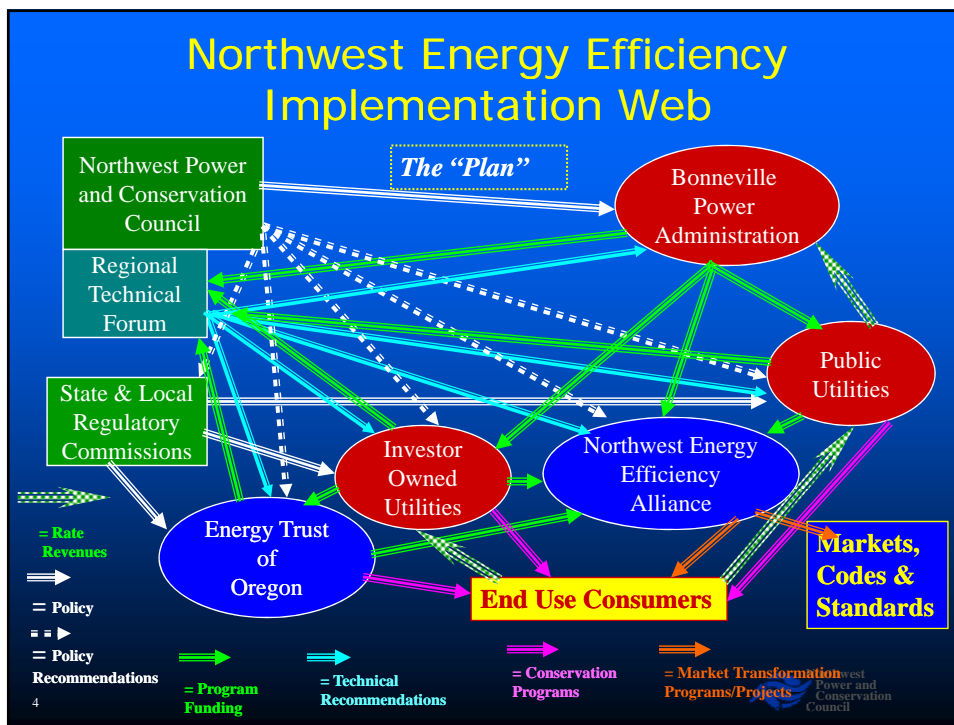
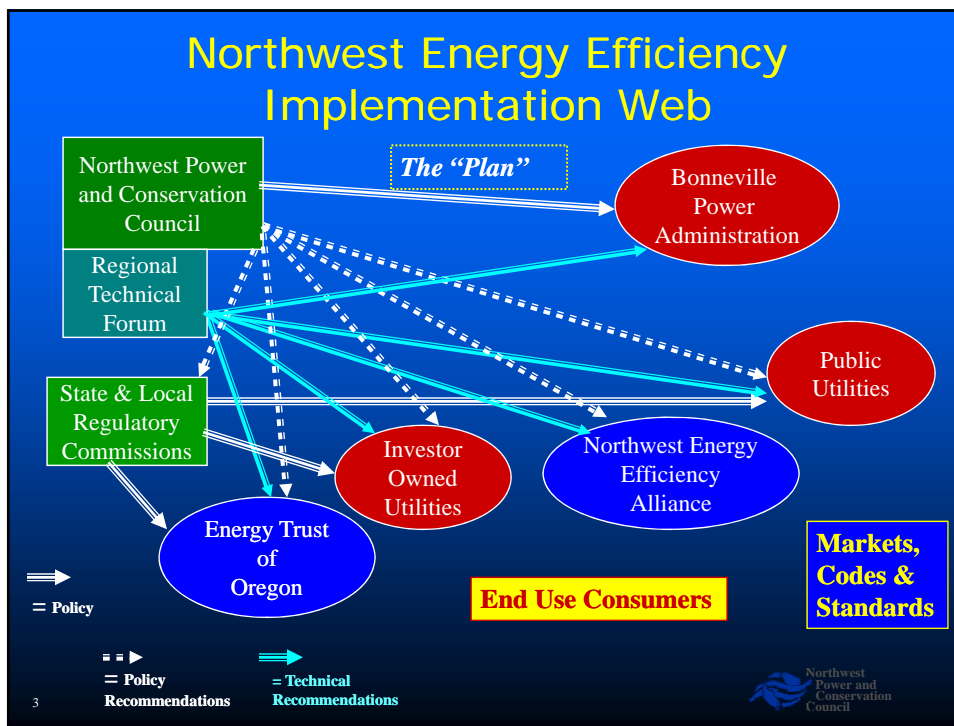
Margie began work in November 2001 as the first permanent staff member hired by Energy Trust of Oregon. Margie serves as vice chair and executive committee member of the Northwest Energy Efficiency Alliance; executive committee member of the Northwest Energy Efficiency Task Force; member of the Oregon Green Jobs Council appointed by Governor Kulongoski, and board and executive committee member of Clean Energy Works Oregon. Margie was awarded the Portland Business Journal Women of Influence: Woman Executive of the Year (nonprofit) Award in 2011.

Margie helped craft Oregon's first energy conservation legislation and programs while working at the Oregon Department of Energy in the 1970s. Subsequently, she was the marketing and outreach director promoting renewable energy at one of four regional solar energy centers established by then-President Carter.

As assistant to former Portland Commissioner Mike Lindberg, Margie was instrumental in establishing the City of Portland's first energy policies and programs, including the formation of Portland Energy Conservation, Inc. Prior to joining Energy Trust, Margie was a management consultant with Arthur Young & Company, finance and administration director for Portland Parks and Recreation and executive director of marketing and customer service at TriMet.

A graduate of the University of Michigan with a B.S. in Natural Resources, Margie spends her limited recreational time singing in a local band, gardening, cooking and kayaking in pursuit of whales. She is the proud mother of twin daughters who share her commitment to preserving the natural world.







## NEEA and Northwest Power Conservation Council

Susan E. Stratton, NEEA Executive Director  
March 13, 2013

NORTHWEST ENERGY EFFICIENCY ALLIANCE

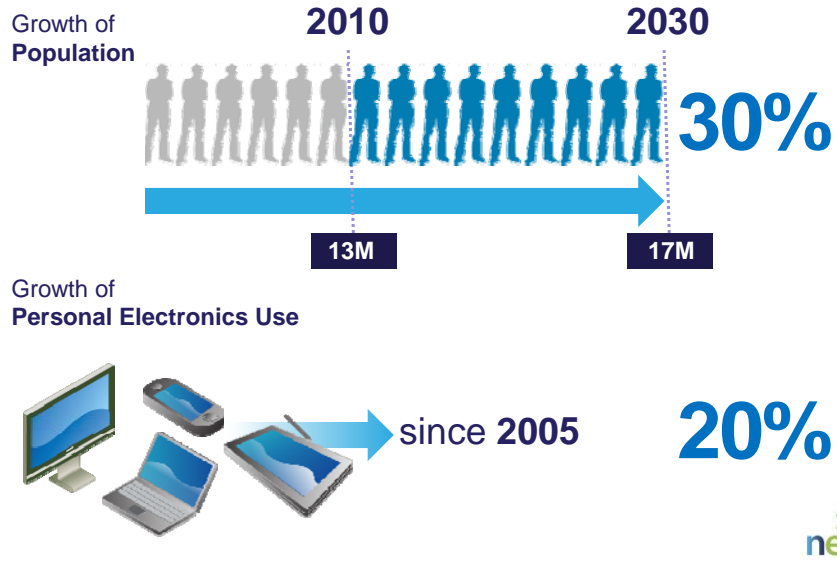
## Today's Talk



- Market Transformation and EE
- NEEA Governance and Funding
- NEEA Success Stories
- Emerging Technologies
- NEEA and the NWPC
- Outlook and Issues



## Why Energy Efficiency



## Efficiency Can Meet Future Energy Growth

**85%**

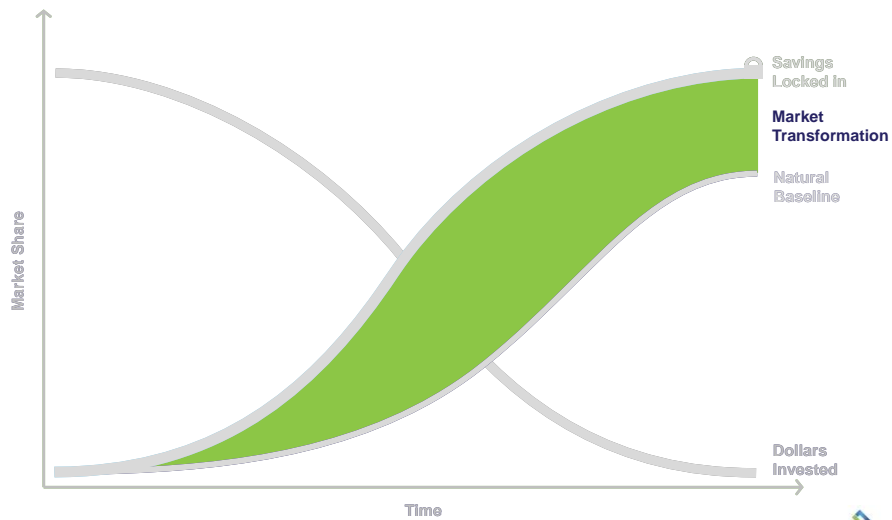
## Efficiency through Market Transformation

*“Market Transformation is the strategic process of intervening in a market to create lasting change.”*

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## Accelerating Market Adoption



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## Our Strategic Partners and Funders



Accelerating energy efficiency in partnership with Northwest utilities




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## NEEA Board Leadership


<b>Chair</b>	<b>Vice Chair</b>	<b>Secretary</b>	<b>Treasurer</b>	
				
<b>Jim West</b> Assistant GM Snohomish County PUD	<b>Deb Young</b> Program Consultant NorthWestern Energy	<b>Bruce Folsom</b> Director of Energy Efficiency Avista	<b>Ed Brost</b> GM Franklin PUD	<b>Margie Harris</b> Executive Director Energy Trust of Oregon
				
<b>Jim Baggs</b> Power Supply and Environmental Affairs Seattle City Light	<b>Greg Delwiche</b> Senior VP of Power Services Bonneville Power Administration	<b>Kathy Hadley</b> ED - Montana National Center for Appropriate Technology	<b>Kim Drury</b> Senior Policy Associate NW Energy Coalition	<b>Gregg Carrington</b> Managing Director of Energy Resources Chelan PUD
				
<b>Bob Stolarski</b> Director, Customer Energy Management Puget Sound Energy	<b>Pat Egan</b> VP, Customer and Community Affairs Pacific Power	<b>Theresa Drake</b> Sr. Manager, Customer Relations and Energy Efficiency Idaho Power	<b>Lisa Schwartz</b> Director, Oregon Department Of Energy	<b>Roger Gray, GM</b> Eugene Water & Electric Board
				
				<b>Ted Coates</b> Superintendent/COO Tacoma Power

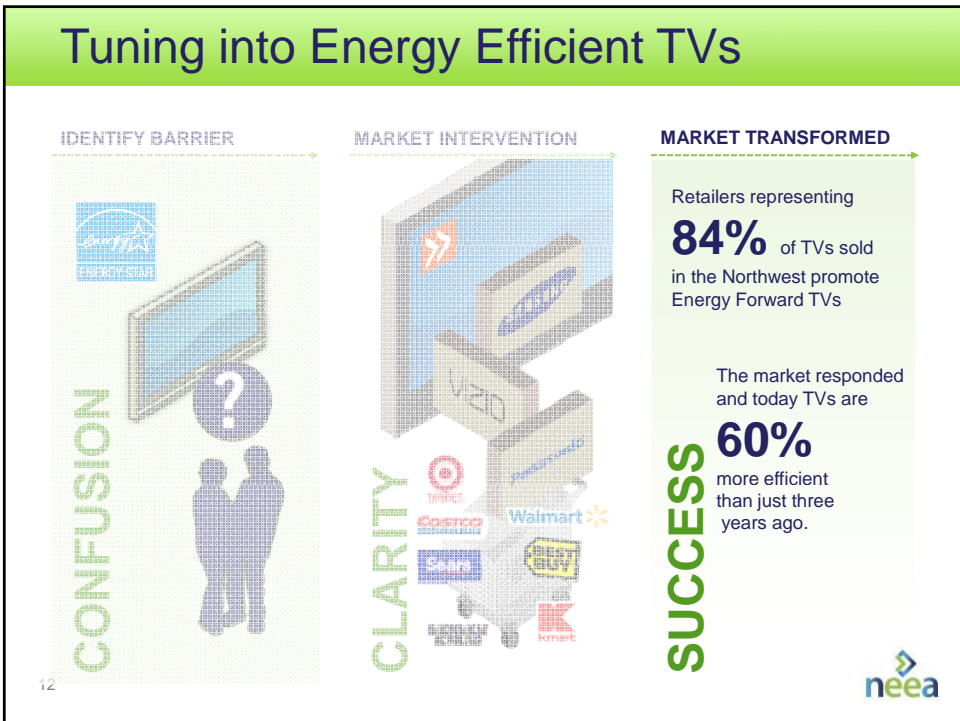
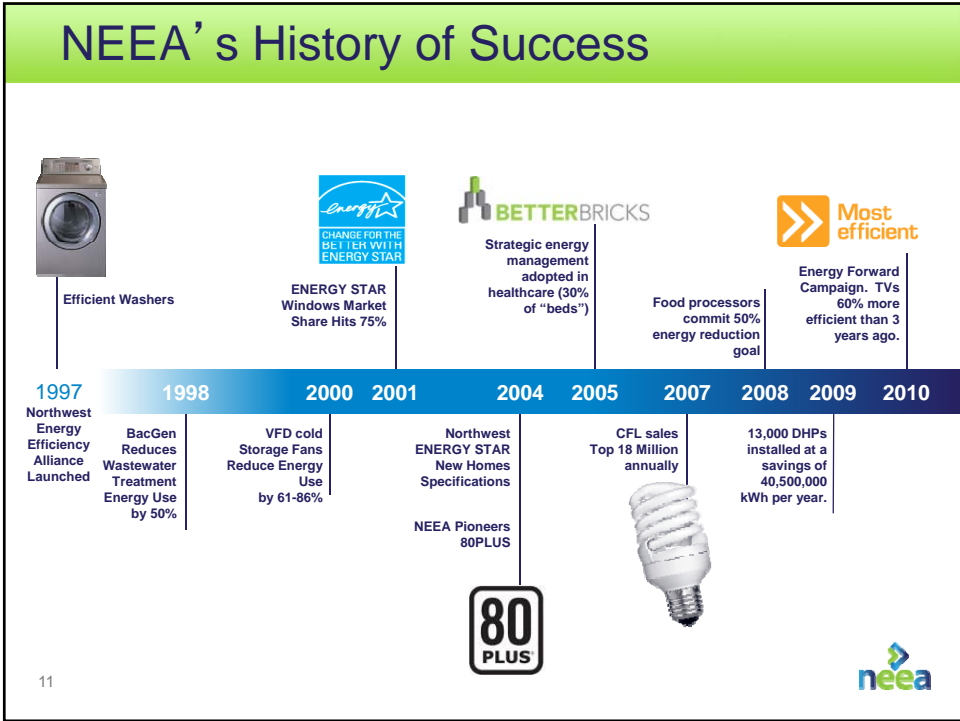
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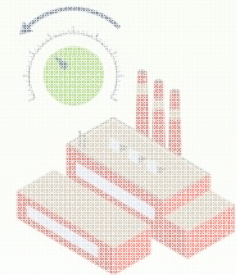


## Changing Manufacturers' Behavior

IDENTIFY BARRIER



MARKET INTERVENTION




MARKET TRANSFORMED

CONFUSION

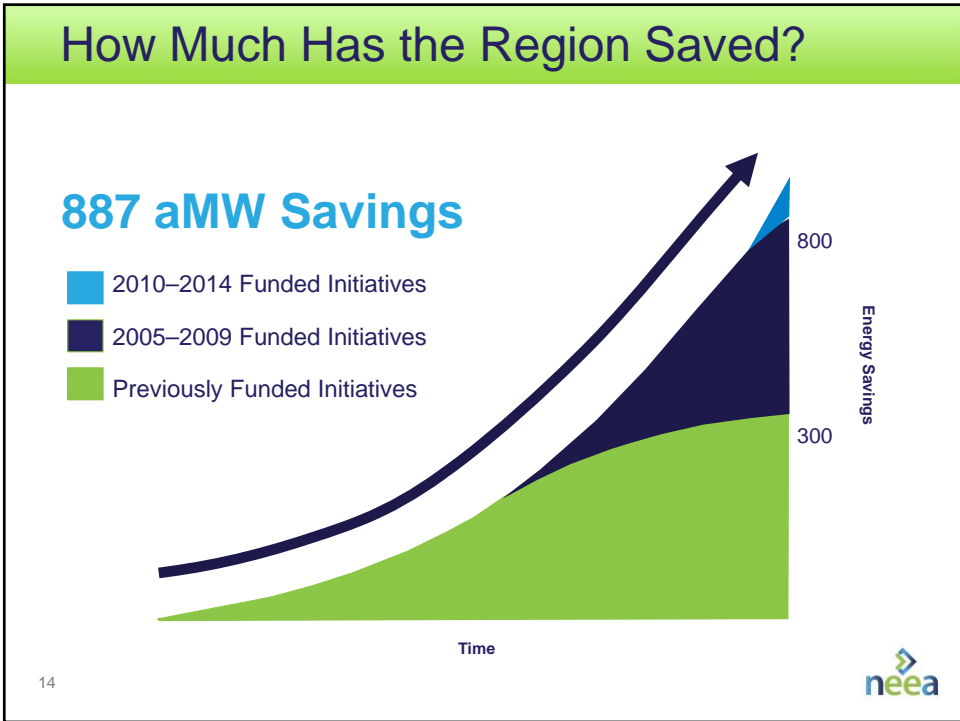
CLARITY

The NWFPA set an industry-wide goal to reduce energy intensity by **25% in 10** years and 50% in 20 years.

More than **15%** of large Northwest food processors are implementing SEM.



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## Today's Talk

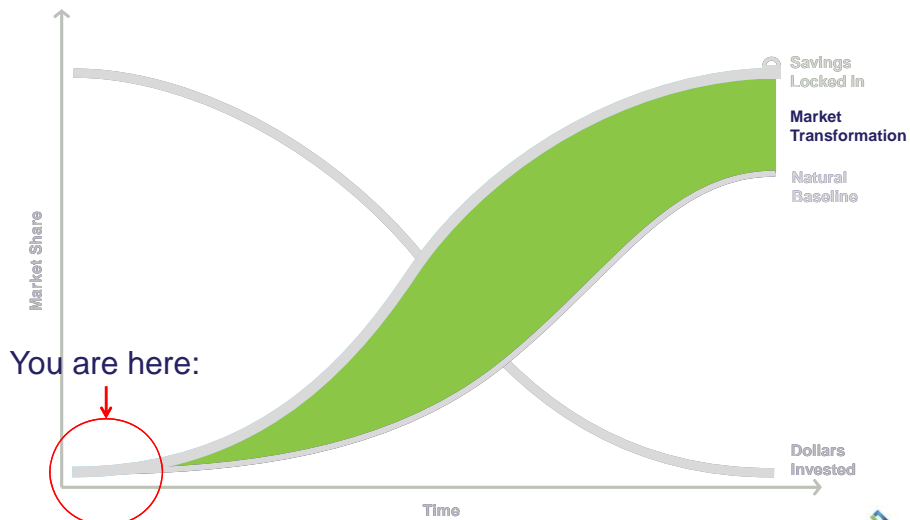


- Market Transformation and EE
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- NEEA and the NWPC
- Outlook and Issues

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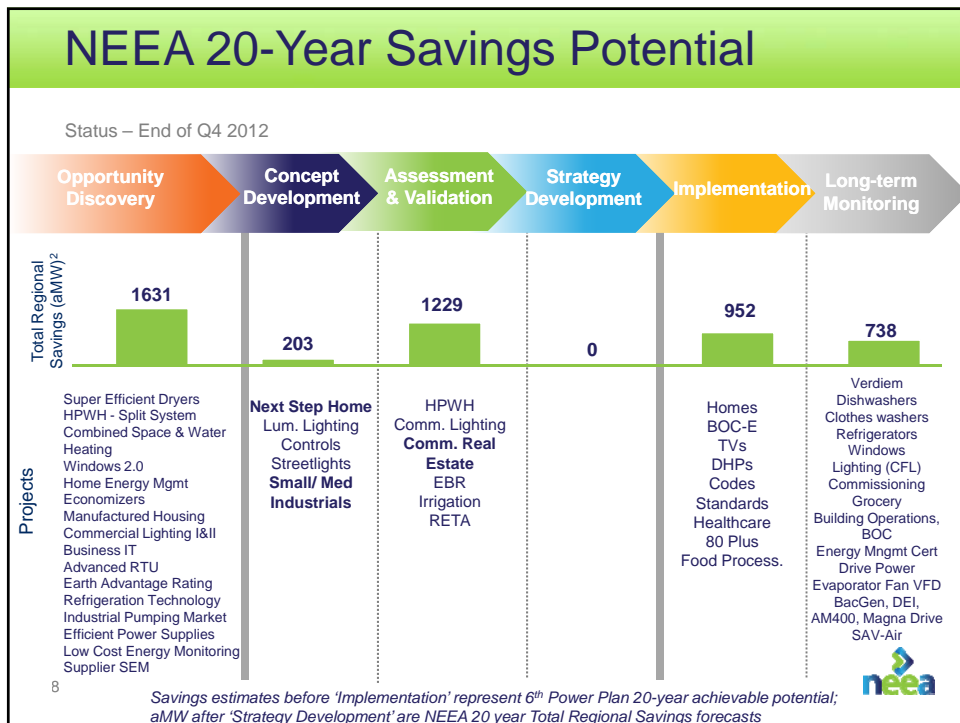
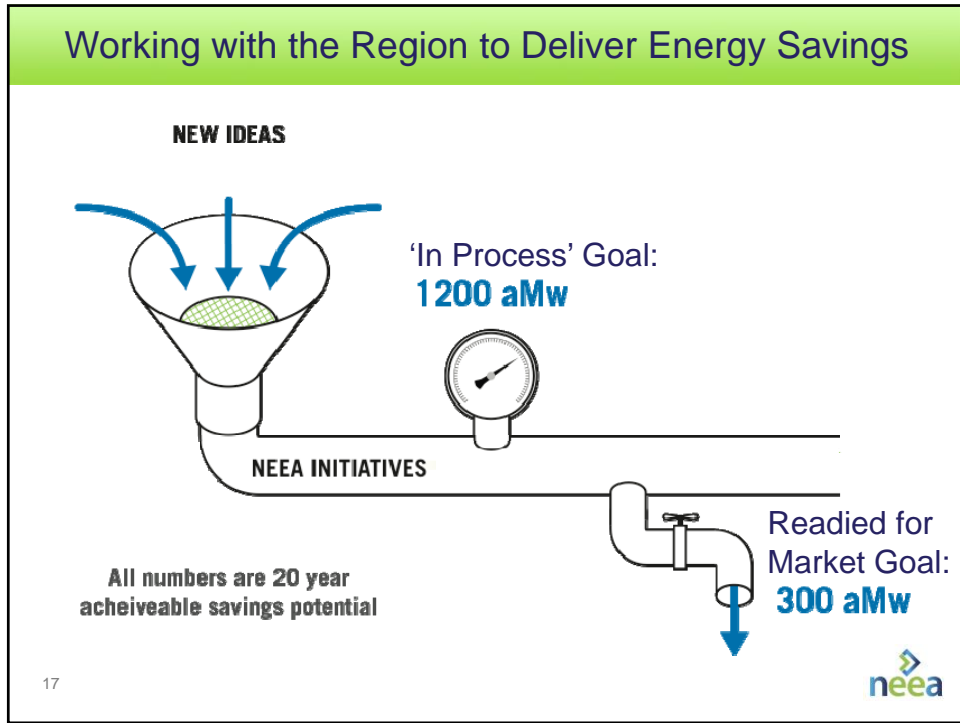


## Filling the Pipeline with Emerging Technologies



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## Emerging Technologies – A look Ahead 2013

Four Technologies with significant savings impacts for 2015 and beyond:



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## NEEA and the NWPCC

Collaboration and coordination critical to achieve goals

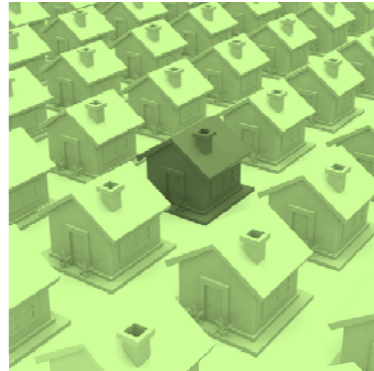
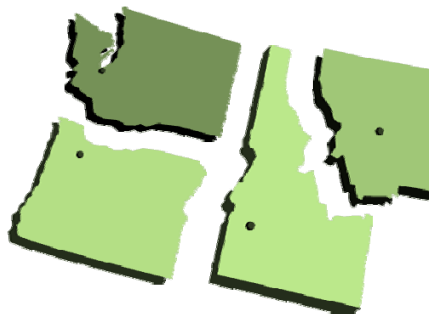
Working with Power Council will achieve greater results



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## Residential Building Stock Assessment



**GOAL:** Provide regional organizations and utilities with baseline information for conservation planning, program design, and evaluation.

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## Commercial and Industrial Research Studies



### Commercial Building Stock Assessment:

- A Database to help Commercial EE program design
- Building stock information on 200 variables such as: Occupancy, heat-fuel type, lighting fixtures, HVAC equipment, etc.

### Industrial Facility Stock Assessment

- The first region-wide study to assess the energy-use characteristics of industrial facilities throughout the NW

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## Outlook and Issues

- 5-Year Strategic Planning
- Defining the portfolio of future opportunities
- Valuing energy efficiency as a resource for energy and peak



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## Questions & Comments

Filling the  
Energy  
Efficiency  
Pipeline

Accelerating  
Market  
Adoption

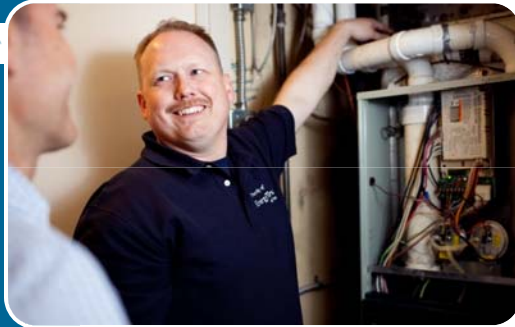
Delivering  
Regional  
Advantage



Thank You!

Susan E. Stratton, Executive Director  
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503-688-5401

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## Energy Trust of Oregon Program Innovation & Delivery

Northwest Power and Conservation Council  
March 13, 2013



## Introducing Energy Trust of Oregon

- An independent nonprofit organization
- Purpose to invest in energy efficiency and provide access to renewable energy
- Services for 1.5 million customers of PGE, Pacific Power, NW Natural and Cascade Natural Gas in Oregon, and 70,000 customers of NW Natural in Washington
  
- Funded by a 3% public purpose charge for electric utility customers and separate utility tariffs approved by the OPUC
- Annual budget of ~\$170 million, the majority of which is for electric efficiency





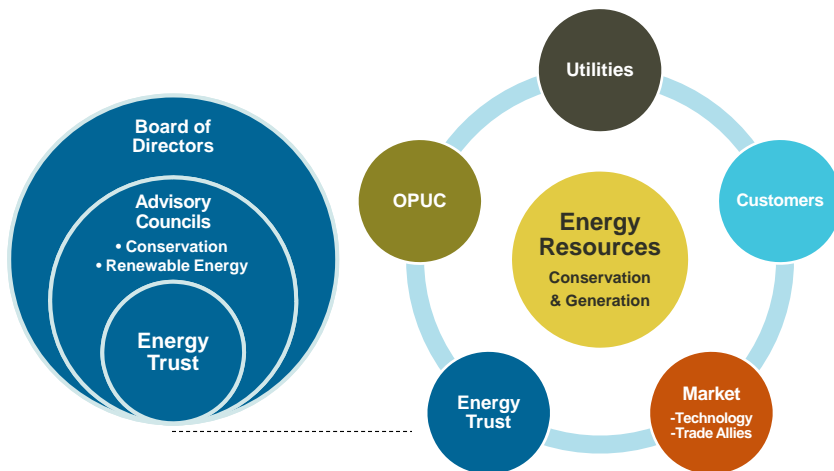
## Stable, Dedicated Funding to:

- Acquire all cost-effective energy efficiency
  - Link to utility integrated resource plans
  - Electric efficiency
  - Natural gas efficiency
- Pay up to 100% of the above-market cost for new renewable energy projects less than 20 MW
  - Solar, Small/Community Wind, Hydropower, Biopower, Geothermal
  - Diversifying future resource mix
- Invest in market transformation activities, including new building codes and product standards through NEEA

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## An Independent, Nonprofit Organization



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## What We Provide

1. Information – What can I do to save energy and use renewable energy in my home or business?
2. Expertise – What technical assistance and objective advice can I get?
3. Dollars – What financial incentives, rebates and loans are available?



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## We've Built an Efficiency Power Plant

- Saved and generated 426 average megawatts
  - Enough to power 320,000 average homes for a year
  - Equivalent to enough energy to power all the homes in Lane, Linn, Polk and Marion counties
- Saved 23.2 million annual therms of natural gas
  - Enough to heat 45,700 average homes for a year
  - Enough energy to heat half the homes in Deschutes County, OR
- 438,000 residential, commercial, public sector, industrial and agricultural sites served
- Kept nearly seven million tons of carbon dioxide out of the atmosphere
  - Equivalent to removing 1.2 million cars from Oregon roads for a year



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2002-2011 Results

## ✧ And Delivered Lasting Economic Benefits

- Direct benefit of \$1 billion saved on participant energy bills
- Independent study shows \$2.1 billion added to Oregon economy
  - \$630 million in wages
  - \$120 million in small business income
  - Employment equivalent to 1,800 jobs lasting 10 years
- Network of more than 1,500 contractors and 900 program allies
- Ratepayers avoid \$1.57 billion in costs for equivalent amount of energy

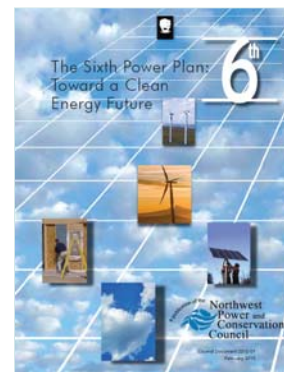


2002-2011 Results

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## ✧ Sixth Power Plan and Energy Trust

- A highly valued, influential and critical reference
- Provides a welcome and needed perspective
- Influences and benefits utility Integrated Resource Planning
- Provides inputs to Energy Trust benefit/cost analysis for electric efficiency measures





## Regional Technical Forum

- The RTF is an important peer group and sounding board for savings analysts throughout the Pacific Northwest
- Energy Trust provides annual RTF funding and serves as a member of the RTF and the RTF policy committee
- Energy Trust relies upon the RTF as the primary source for savings and costs, measure lives and estimates of load shapes for electric efficiency measures
- The RTF also coordinates and funds crucial regional research that otherwise would be too time-consuming on an individual basis



## Northwest Energy Efficiency Alliance Role

- Fund long-term electric efficiency investments in regional market transformation activities
- 7.5% of our budget and 7% of our electric savings
- Board and advisory committee representation
- Transformed markets and Energy Trust
  - CFLs
  - Strategic Energy Management
  - Ductless heat pumps
  - Heat pump water heaters
  - Highly efficient televisions
  - Emerging technologies





## Homeowners/Renters

Services, incentives and assistance for residential customers, home builders and single-family renters. Leverages contractors, local businesses and trade groups.

- Existing Homes
- New Homes & Products
  
- ✓ Home Energy Review
- ✓ Contractor training and referrals
- ✓ Equipment, weatherization and solar incentives
- ✓ Appliance rebates and recycling
- ✓ EPST™, energy performance score
- ✓ Opower/behavior change



**418,000 Households Served**

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## Commercial Customers

Services, incentives and assistance for commercial customers, public and private institutions, and multifamily properties.

- Existing Buildings
- New Buildings
  
- ✓ Small and large multifamily
- ✓ Energy modeling, design and technical assistance
- ✓ Building efficiency, equipment commissioning and solar incentives
- ✓ Strategic Energy Management and operations and maintenance
- ✓ Path to Net Zero



**13,000 Sites Served**

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## Industrial and Agricultural Customers

Technical assistance, incentives and employee training for existing and new industrial and agricultural processes and facilities.

- Production Efficiency
- ✓ Existing and new facilities
- ✓ Tailored, technical assistance
- ✓ Scoping studies and analyses, including renewable energy
- ✓ Customized solutions
- ✓ Strategic Energy Management
  - Industrial Energy Initiatives
  - 90 x 90



**2,700 Sites Served**

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## Renewable Energy

Development assistance and incentives to secure smaller-scale renewable energy resources.

- Programs for:
- Solar
  - Biopower
  - Wind
  - Hydropower
  - Geothermal
- ✓ Focus on small projects under 20 MW



**More than 3,800 systems**



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## Proven Clean Energy Platform

- Mission driven
- Stable funding
- Innovative program design and delivery
- Comprehensive services
- Objectivity
- Partnership and leverage
- Low administrative costs
- Accountability and transparency
- Evaluation commitment



EnergyTrust  
of Oregon

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## Challenges of the Model

- Not state-wide
- Limited options for oil, propane or wood heated customers
- Legislative mandates vs. flexibility
- Different funding sources and accountabilities
  - Limitations on engaging large customers
- Single vs. dual fuel utilities
- Coordination time and resources
- Complexity

EnergyTrust  
of Oregon



## Innovations and Opportunities



- Small commercial and industrial
- Multi-family housing
- Moderate and low income residential customers
- Public and non-profit organizations
- Behavior change
- Deep retrofits
- Financing
- Emerging technologies
- Geographic representation and cultural diversity



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## Thank You

Margie Harris  
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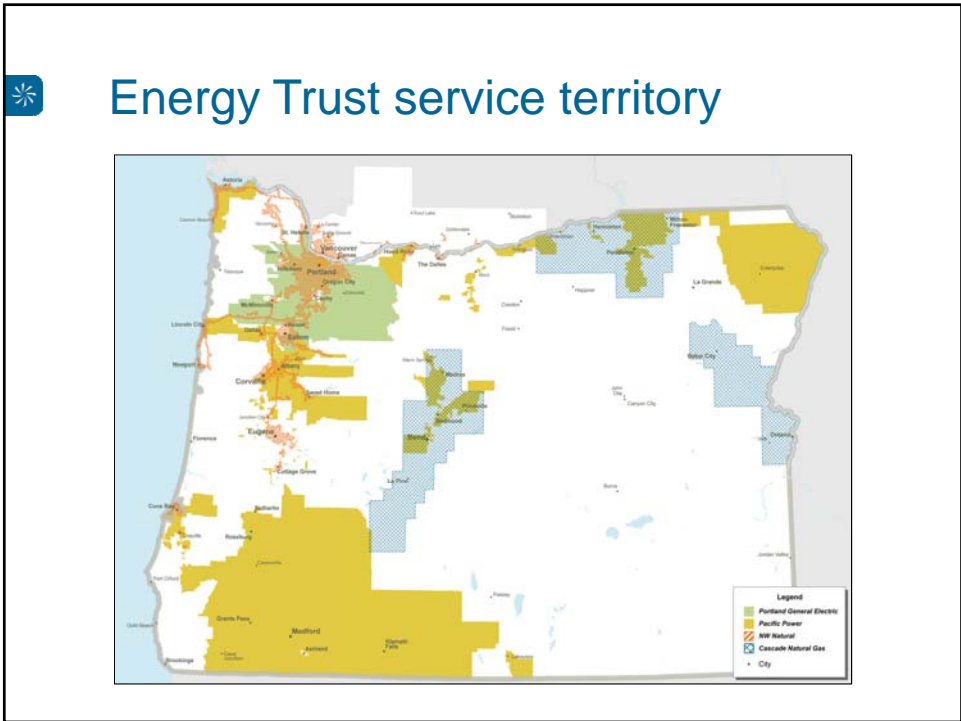


*Energy Trust of Oregon is an independent nonprofit organization dedicated to helping utility customers benefit from saving energy and tapping renewable resources.*

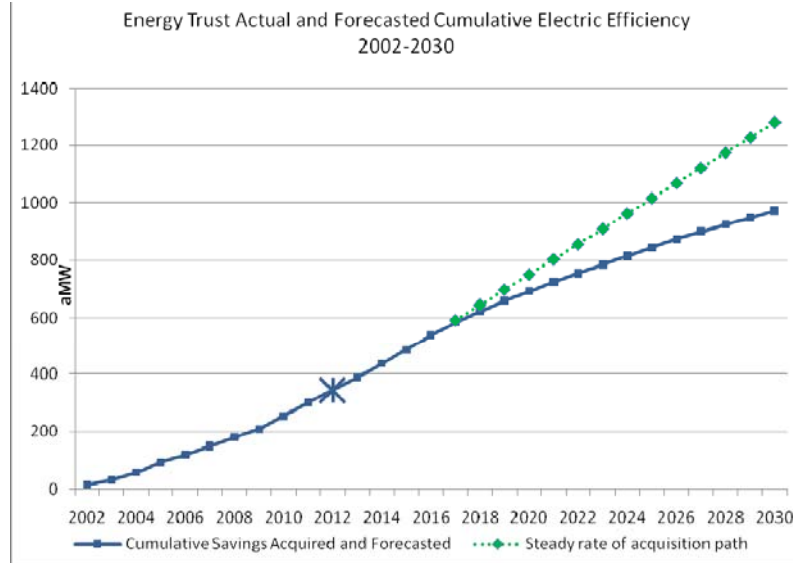


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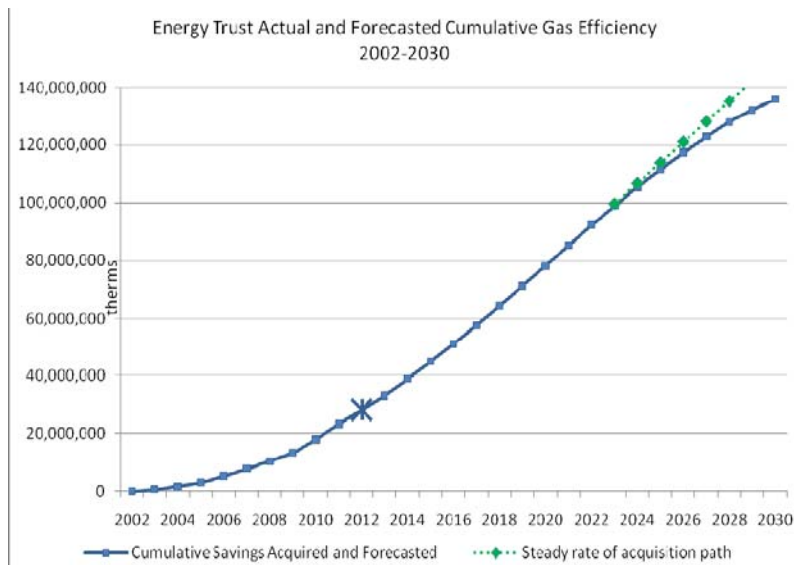
Back up slides



## Electric Savings Trajectory



## Gas Savings Trajectory





## What Challenges Lie Ahead?

