



# Measuring Impacts and Persistence of O&M and Energy Management Behavior Change in the Industrial Sector - the NEEA Experience

June 4, 2009

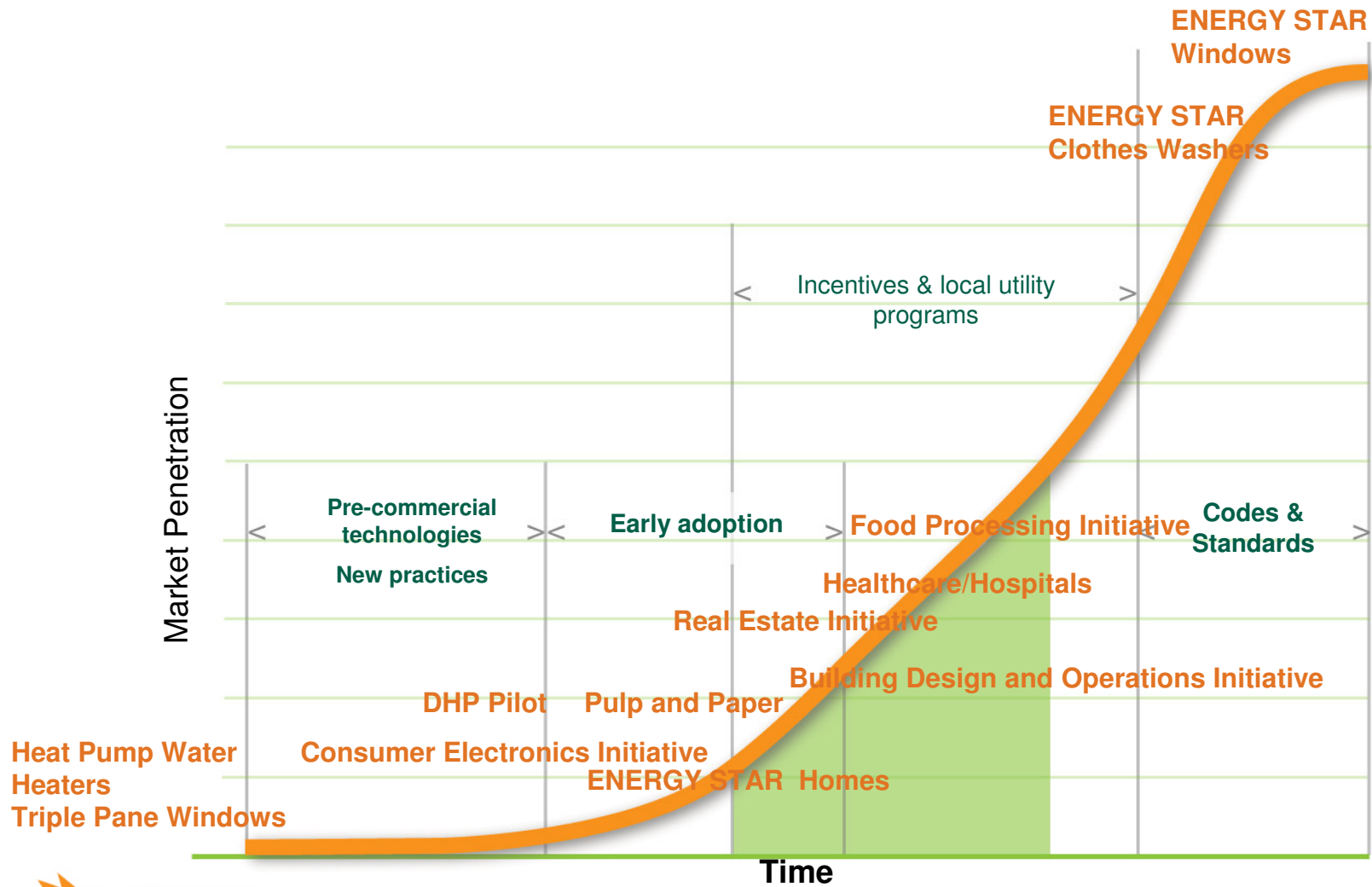
# We Refined Our Vision and Mission



**Vision:** Energy efficiency is a cornerstone of a vibrant sustainable Northwest.

**Mission:** Mobilize the Northwest to become increasingly energy efficient for a sustainable future.

# Continuum of Transformation



# Measured Impacts

	Validated Electric Savings (aMW)			
	O&M	Incented Capital	Un-incented Capital	Electric Total
Food Processing				
2006	0.15	0.49	0	<b>0.64</b>
2007	0.21	0.01	0.27	<b>0.50</b>
2008	0.44	1.06	0.02	<b>1.52</b>
<b>Total</b>	<b>0.81</b>	<b>1.57</b>	<b>0.29</b>	<b>2.66</b>
Pulp & Paper				
2006	0.01	0	0	<b>0.01</b>
2007	0.04	0.11	0.01	<b>0.17</b>
2008	0.55	0.09	0.57	<b>1.21</b>
<b>Total</b>	<b>0.60</b>	<b>0.20</b>	<b>0.58</b>	<b>1.39</b>
<b>Grand Total</b>	<b>1.41</b>	<b>1.77</b>	<b>0.87</b>	<b>4.04</b>

# Outline

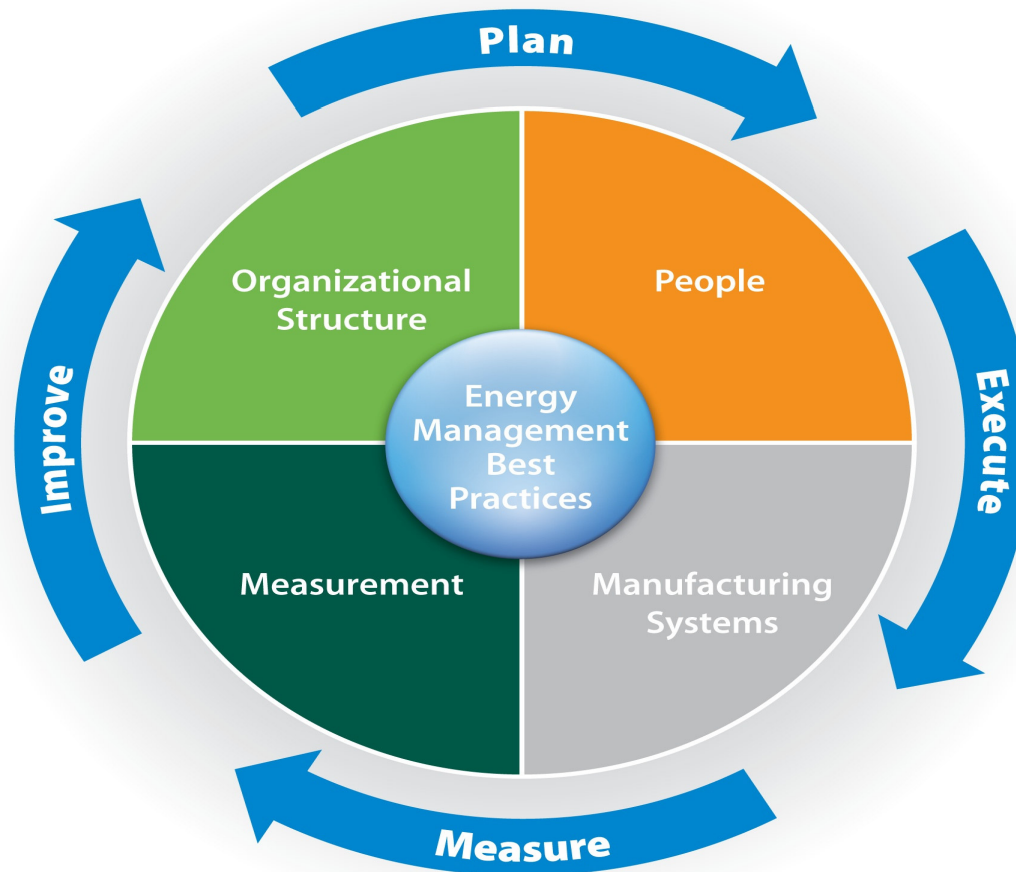
- What is NEEA's Industrial Initiative?
- How do we measure energy savings?
- What is the persistence of the energy savings?

# NEEA's Industrial Initiative

- Market Transformation through energy management
  - 2004 - NEEA plans and charters initiative
  - 2005 - Start of activities (training and “channel management”)
  - 2006 - Industrial Mentored Training (training with “channel management)
  - 2007 - Continuous Energy Improvement
  - 2008 - Executive-level commitment
  - 2009 - Planning NEEA's exit from food processing

# Continuous Energy Improvement

## Continuous Energy Improvement A Strategic Process for Industry



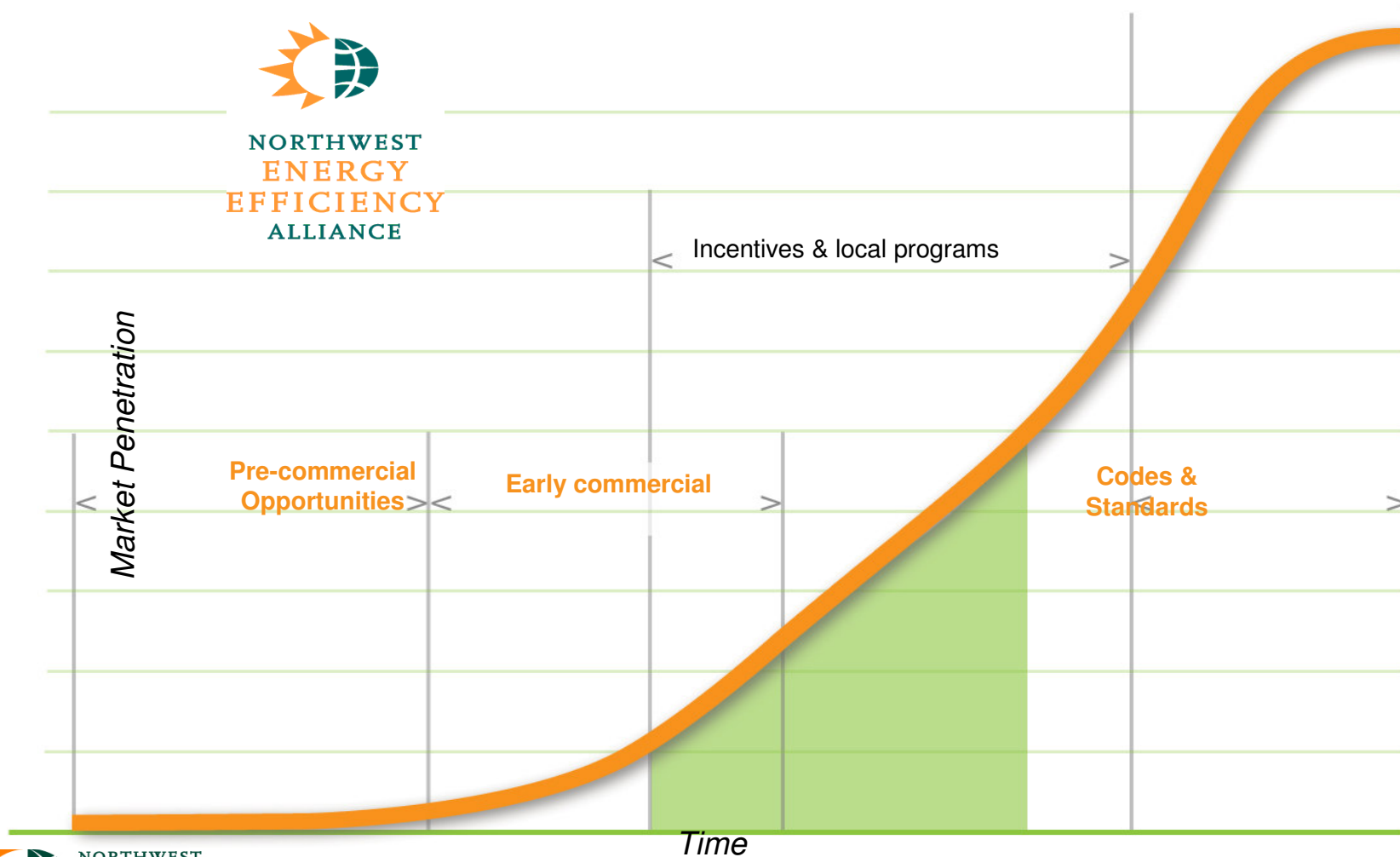
# Measurement

- 2006/2007 - web surveys of training participants followed by site visits
  - Low impact for conventional training
  - High impact for Industrial Mentored Training
- 2008/2009 - thoroughly tracked measures in each of the 32 facilities that participated in NEEA's CEI combined with subsequent telephone surveys and site visits
  - Systemic change in management in 20 of 32 sites
  - Still under review

# Persistence

- Are we there yet?

# Market Transformation - A Complimentary Role



# Q&A

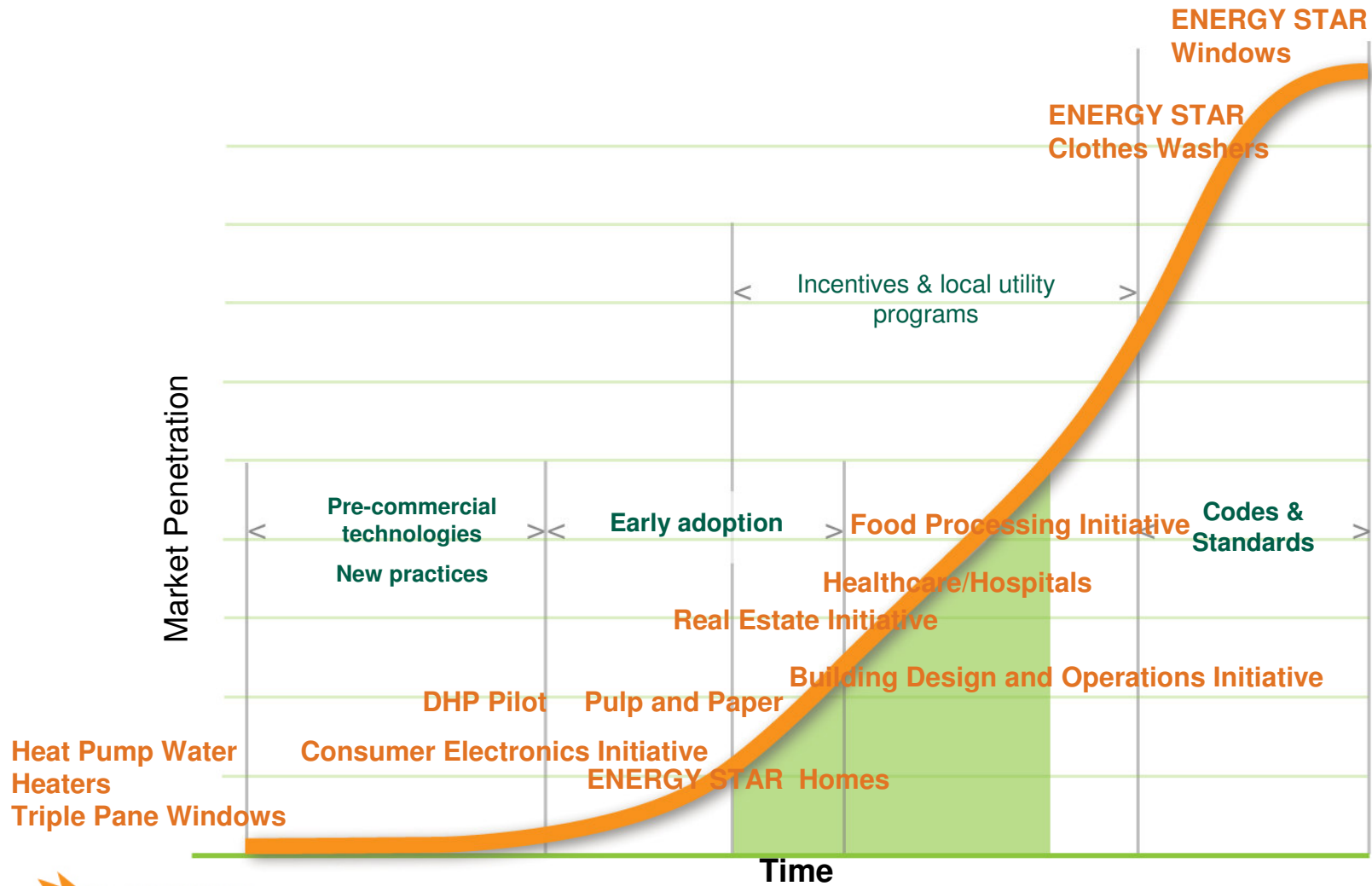
# O&M as understood by manufacturers

- **Operations** - the process by which we make things
- **Maintenance** - the process by which prevent the breakdown of the other process

## O&M as understood by NEEA (circa 2004)

- **O&M:** behaviors that prevent energy efficient technologies from reaching their full potential

# Continuum of Transformation



# Energy Efficiency Blasphemy?

- Is energy best understood as a waste stream?