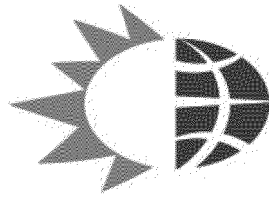


Attachment 1

NASUCA Presentation



**NORTHWEST
ENERGY EFFICIENCY
ALLIANCE**

Market Transformation in Energy Efficiency: A Northwest Perspective



Jeff Harris
Director, Emerging
Technologies

**Presentation to the 2010 mid-year NASUCA Conference
June 14, 2010
San Francisco, CA**

About NEEA

ffi Non-profit corporation; est. 1996 in Portland, OR

ffi Funded by electric utilities in MT, ID, OR & WA

ffi Governed by representative Board; public and private utilities, state governments, public interest groups; oversight by State utility Commissions

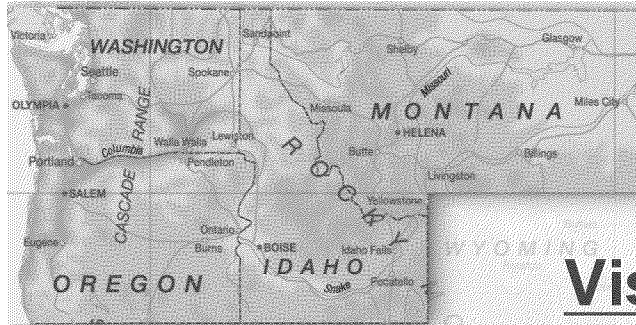
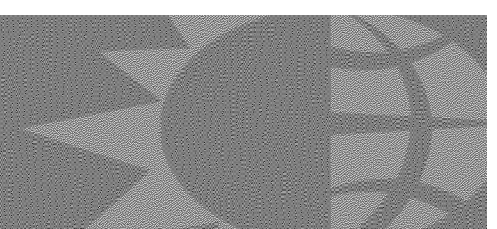
ffi Five-year funding commitment from 14 direct funders

ffi Total funding 2010 ~ \$30 million

ffi 50 employees



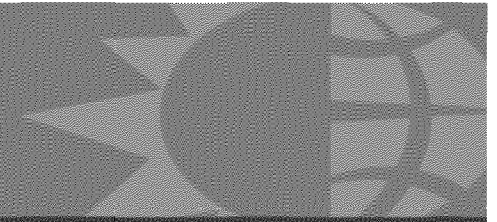
Vision and Mission



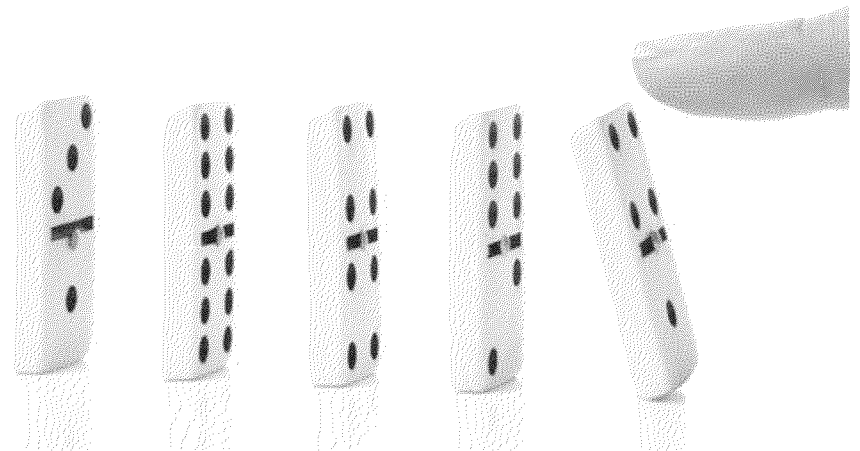
Vision: Energy efficiency is a cornerstone of a vibrant sustainable Northwest.

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

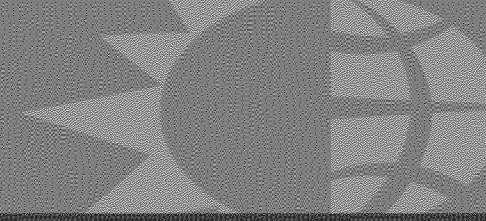
NEEA's Unique Value



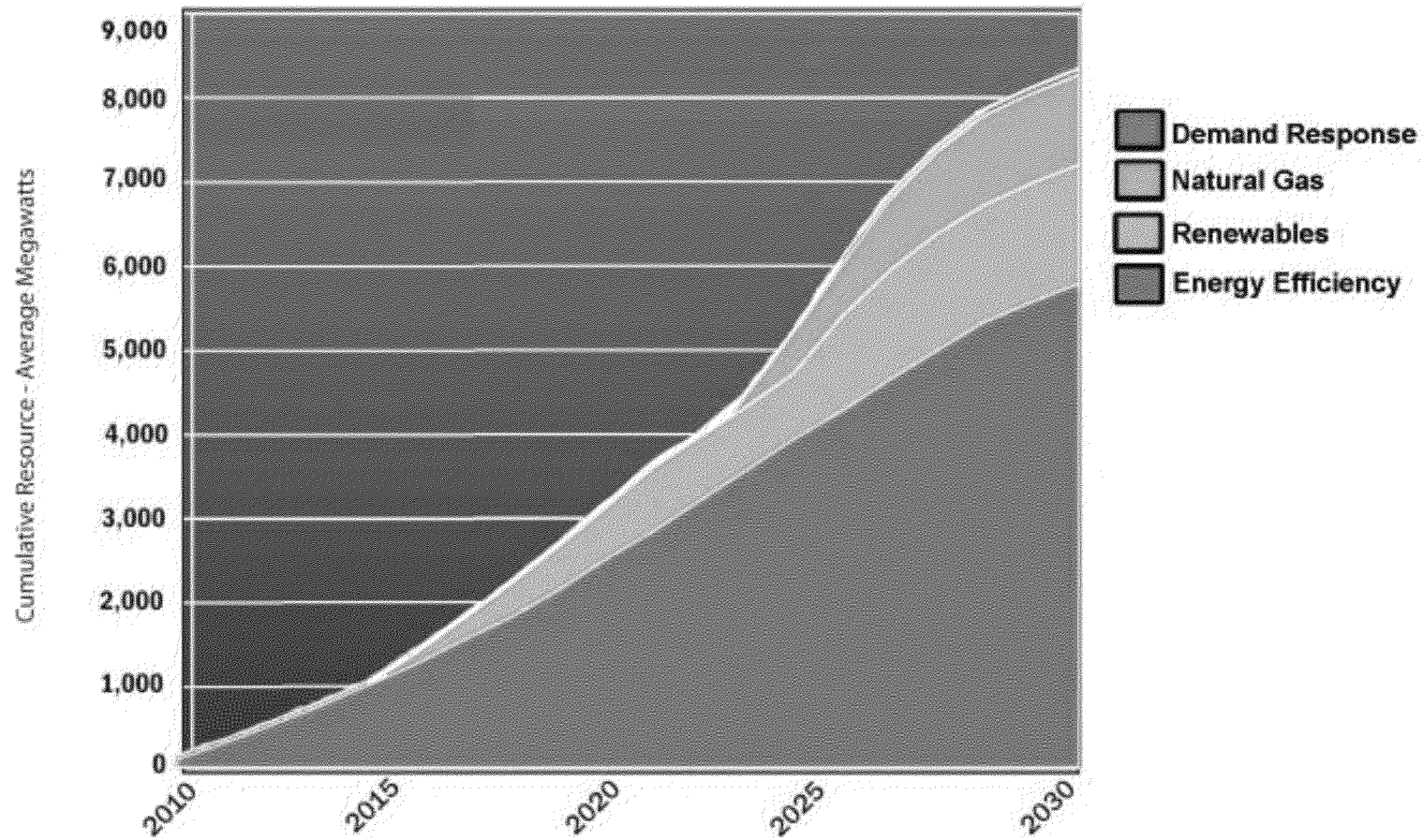
- ffi Fill pipeline of emerging technologies
- ffi Deliver regional leverage with “upstream” market actors
- ffi Realize economies of scale
- ffi “Lock in” savings through codes and standards
- ffi Expand regional market capability
- ffi Avoid resource duplication
- ffi Mitigate risk



NW Power Future:

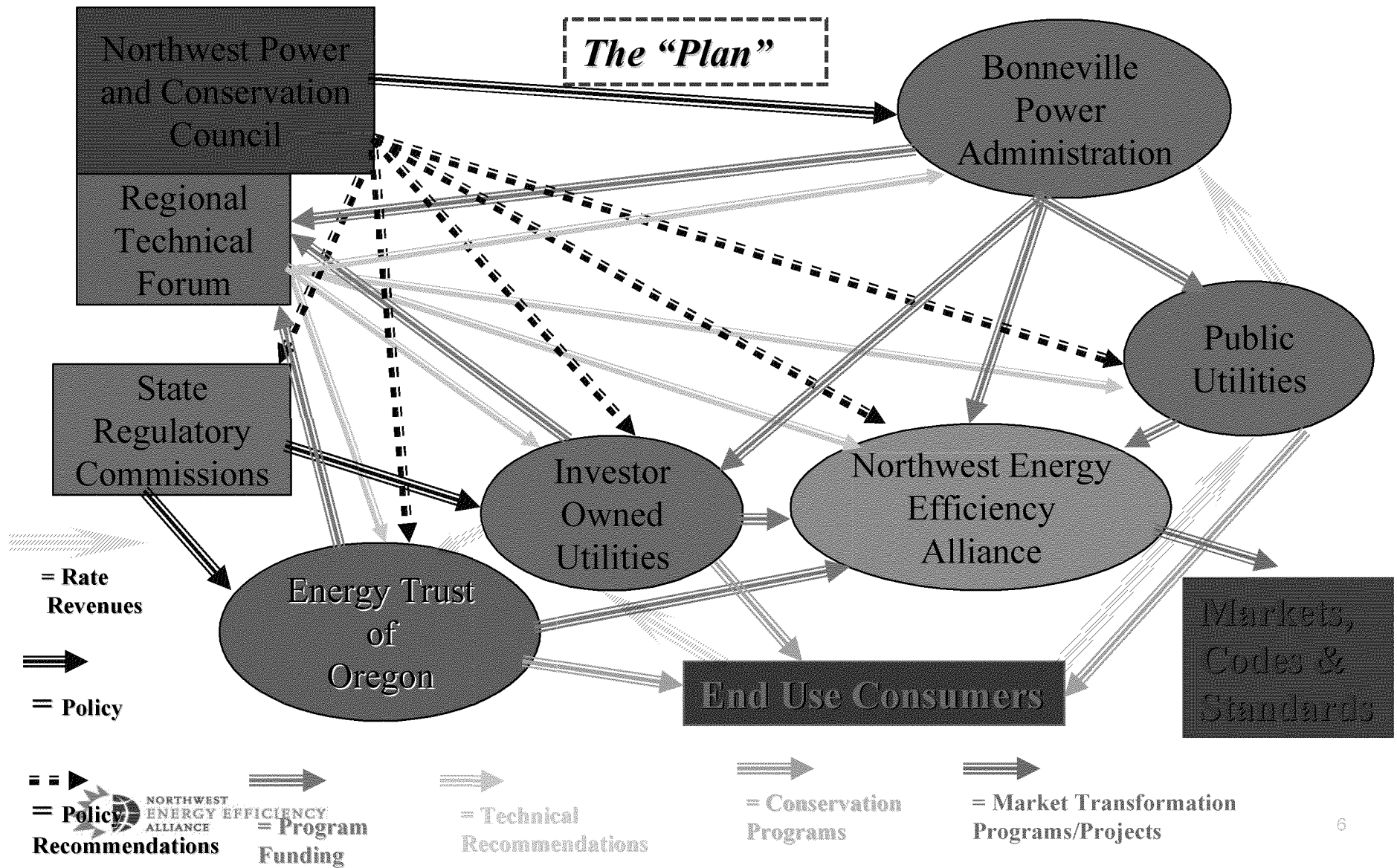


Sixth Power Plan Resource Portfolio*



 **Bottom line: All new load growth met with efficiency and renewables**

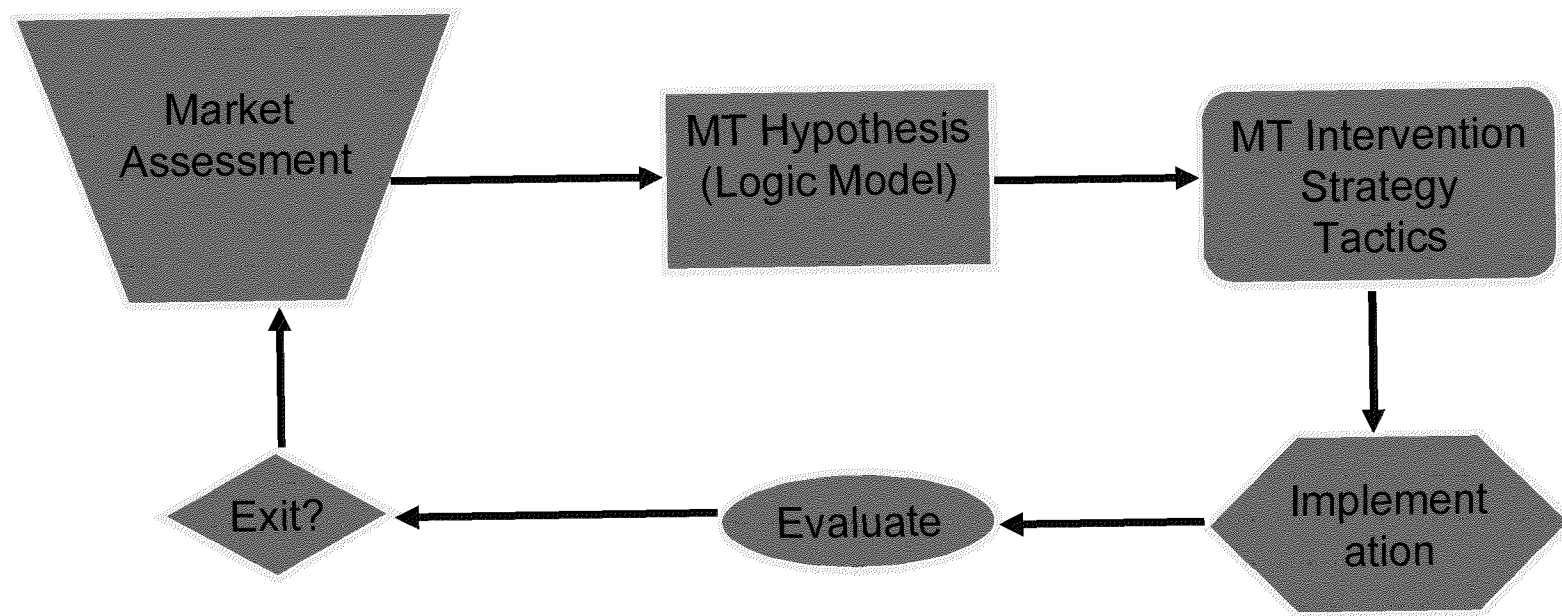
Annual Northwest Energy Efficiency Investment



NEEA Definition of Market Transformation

“Market Transformation is the strategic process of intervening in a market to create lasting change in market behavior by removing identified barriers or exploiting opportunities to accelerate the adoption of all cost-effective energy efficiency as a matter of standard practice.”

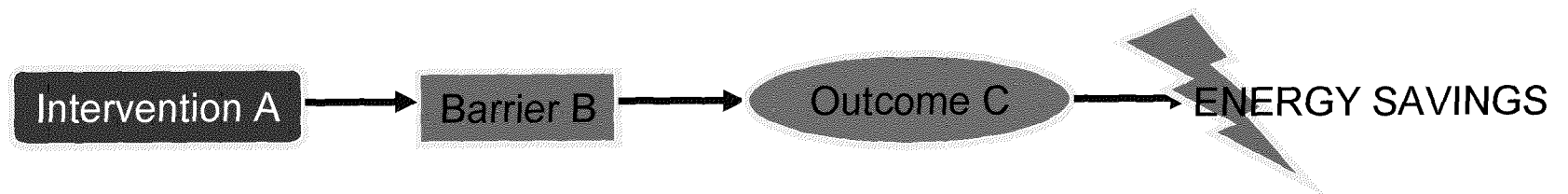
MT is a Process....



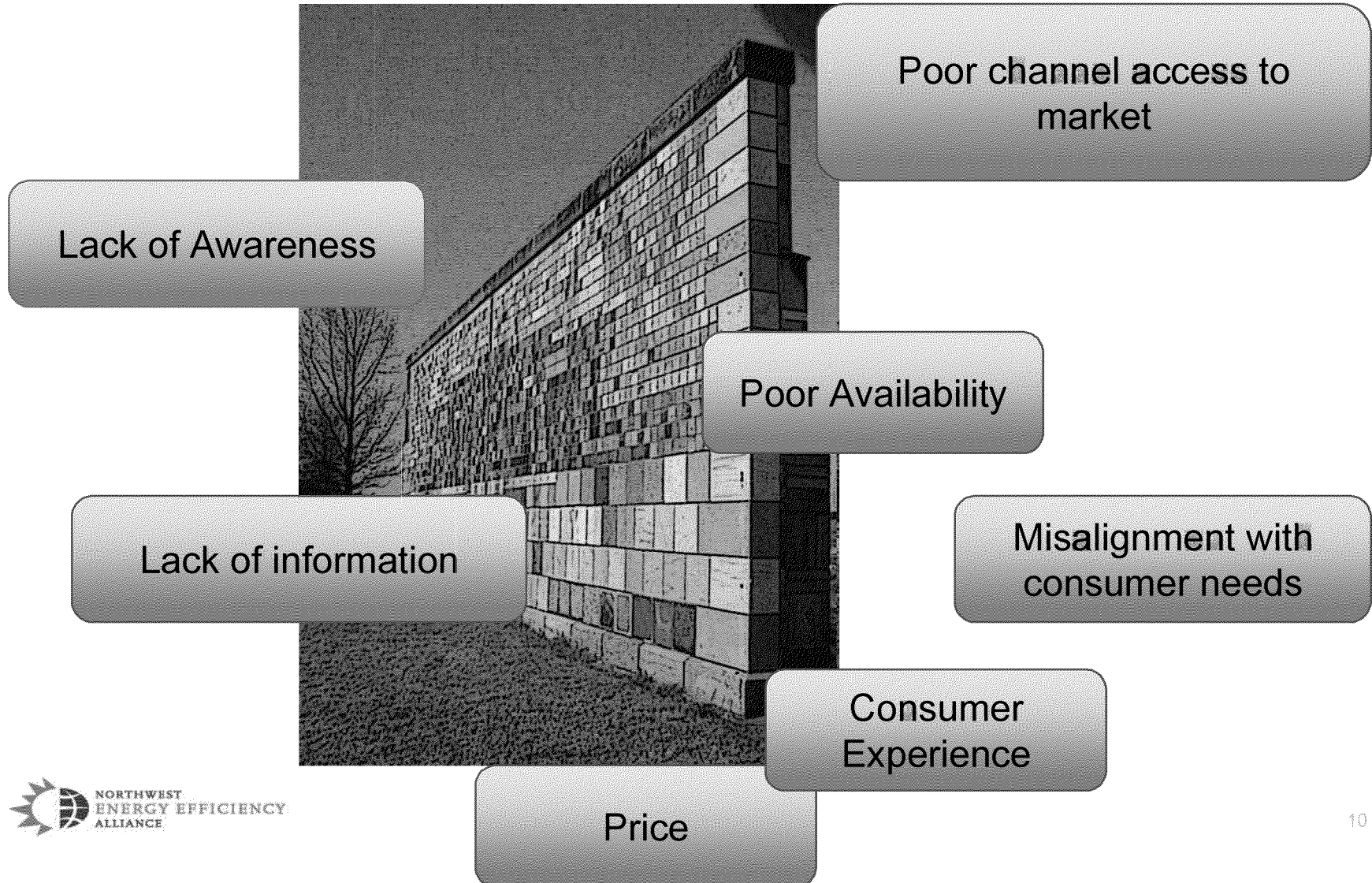
Market Transformation: Strategy Development

ffi The Logic Model:

ffi For each market barrier or opportunity:



Common Market Barriers



Market Transformation Strategies



Provide credible information

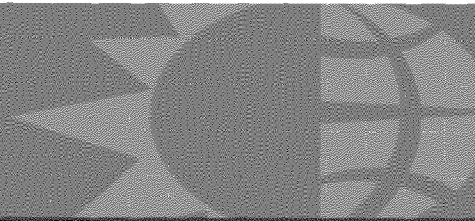
Align EE with Consumer Needs

Develop relationships that help influence energy codes and standards

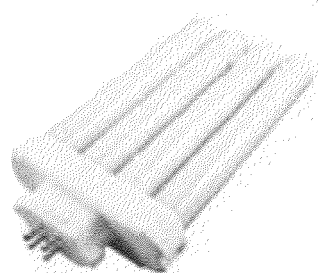
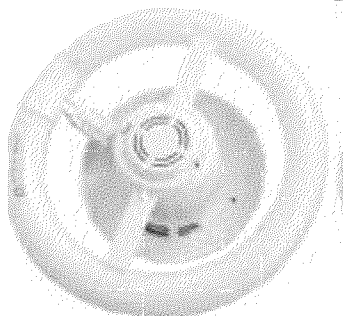
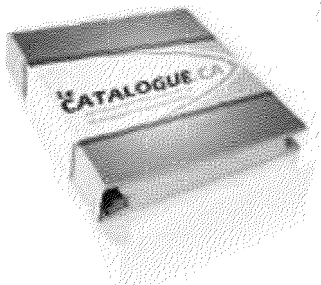
Build market knowledge and experience

Create strategic partnerships

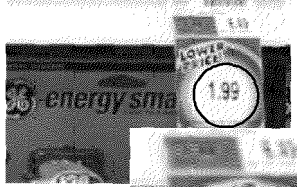
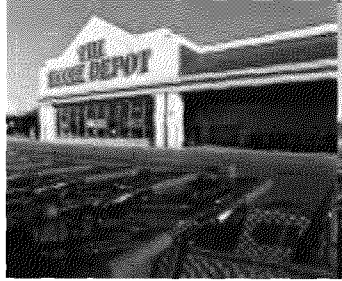
Market Transformation in CFLs



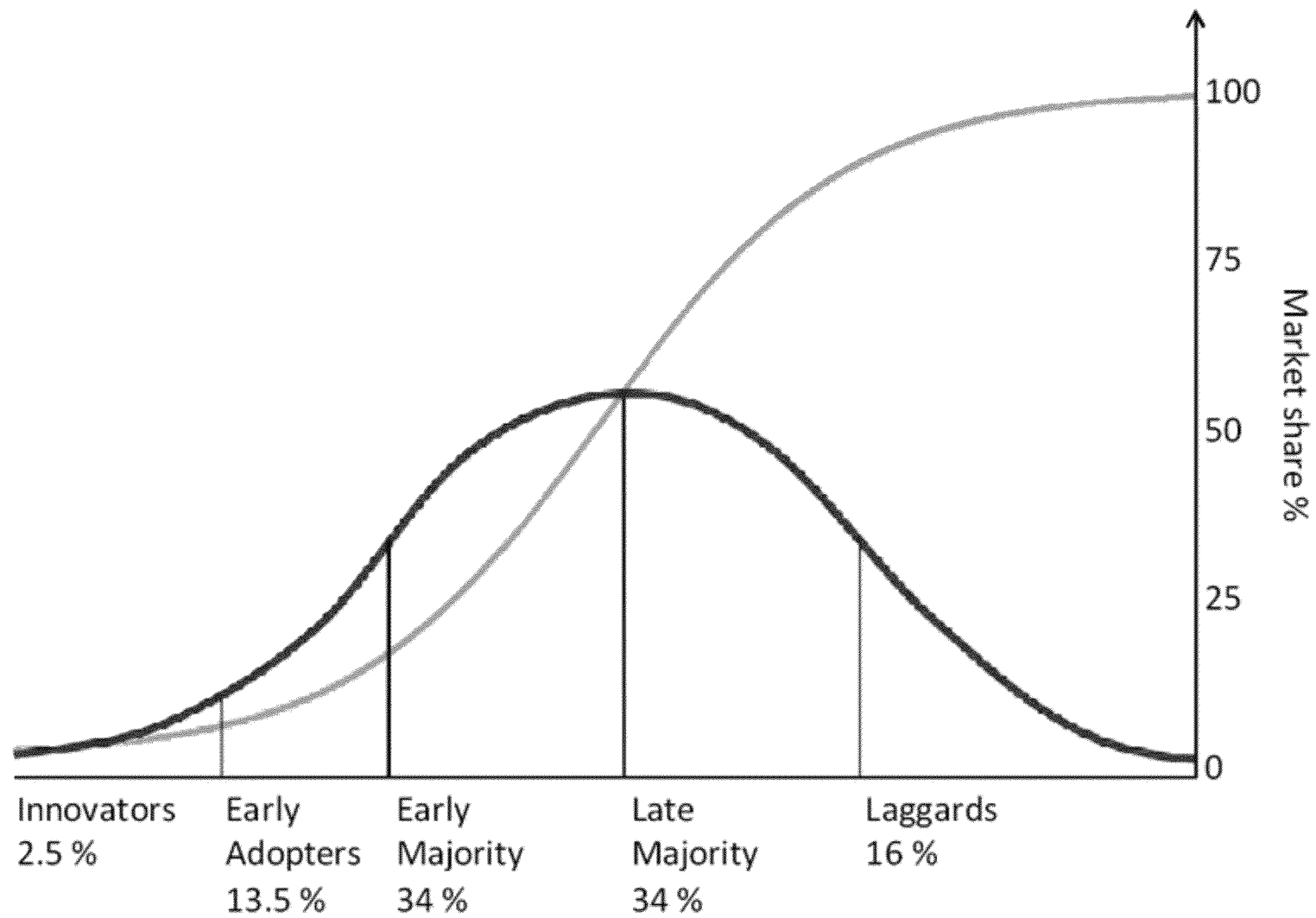
From this:



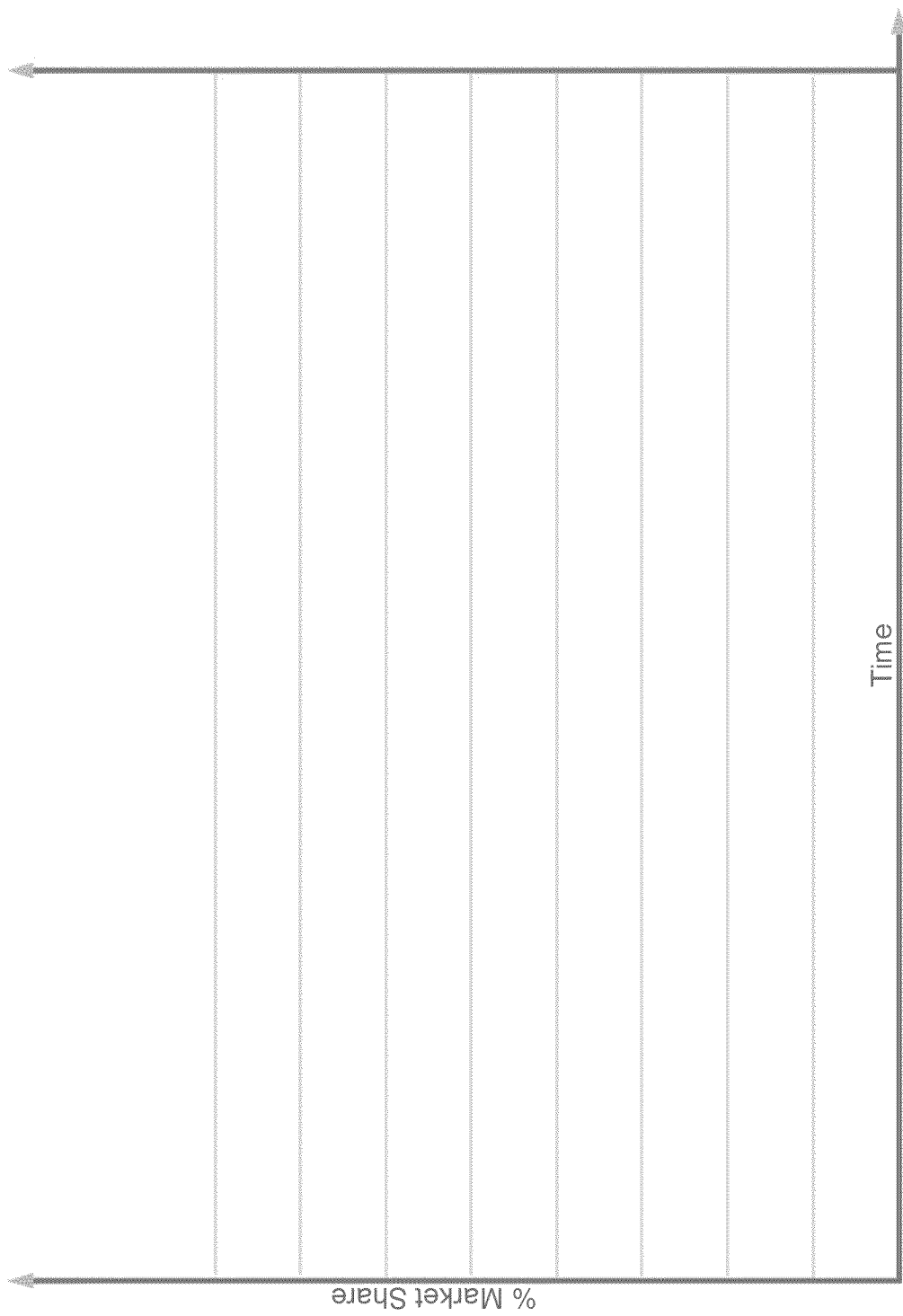
To this:



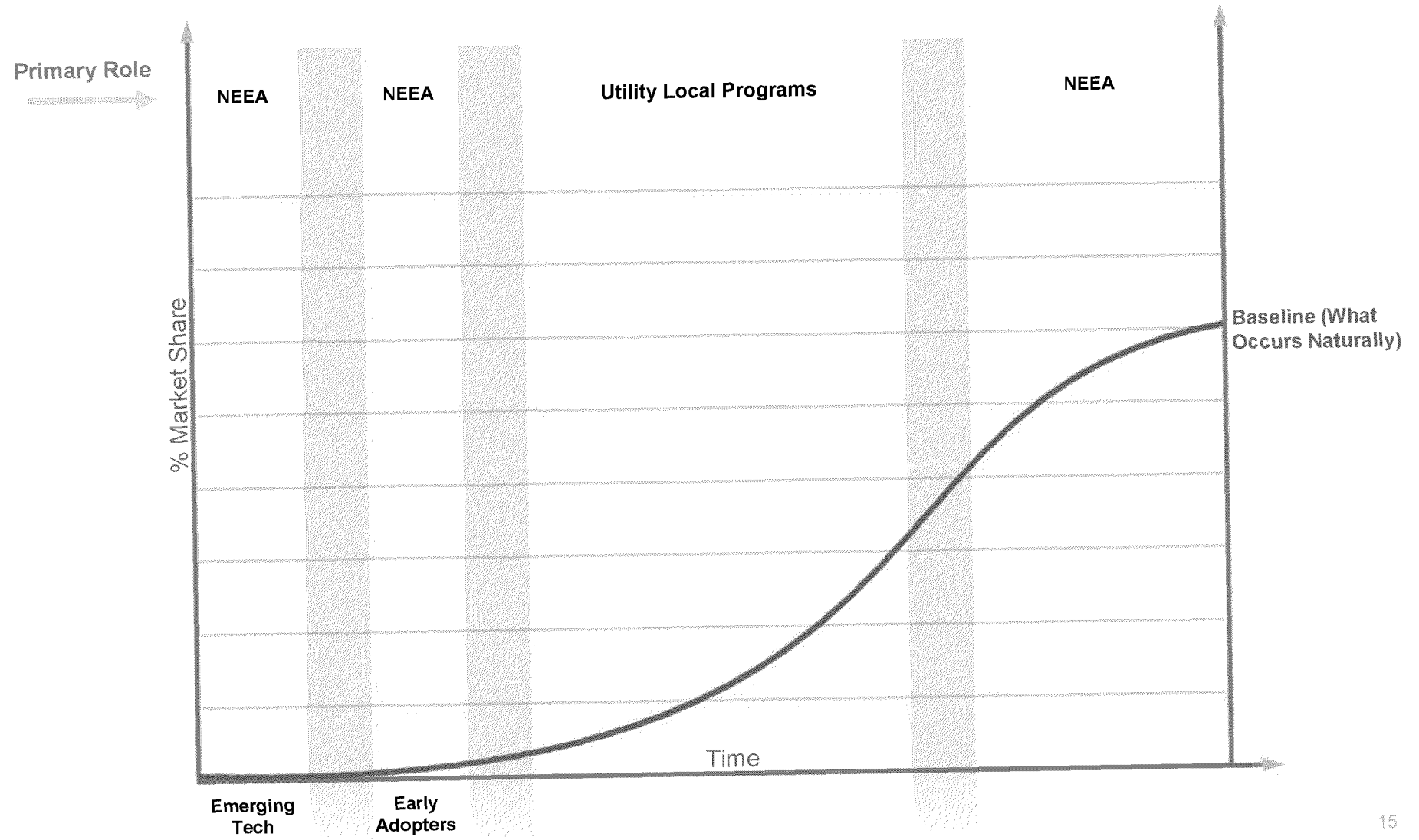
Diffusion of innovation Theory



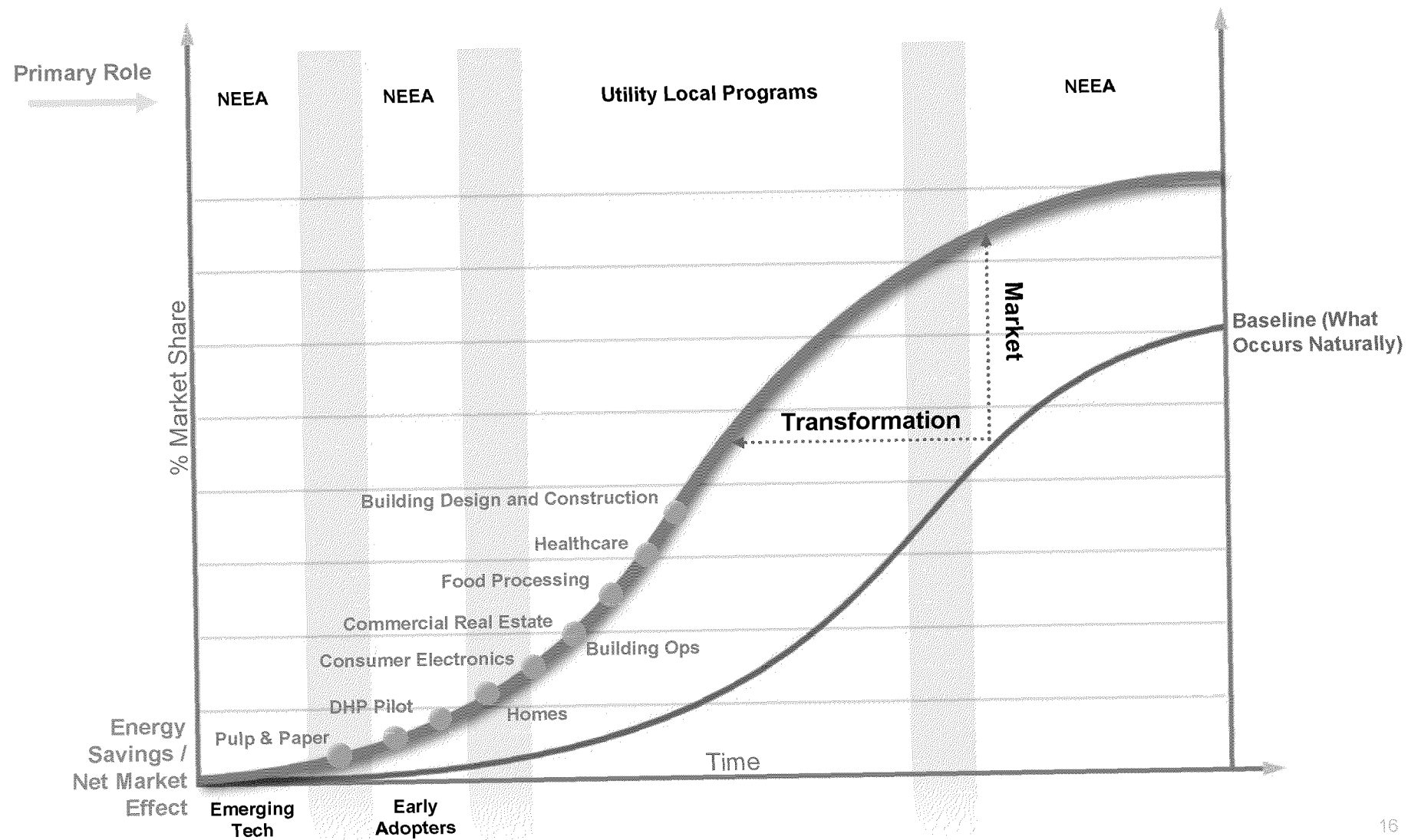
Diffusion Curve



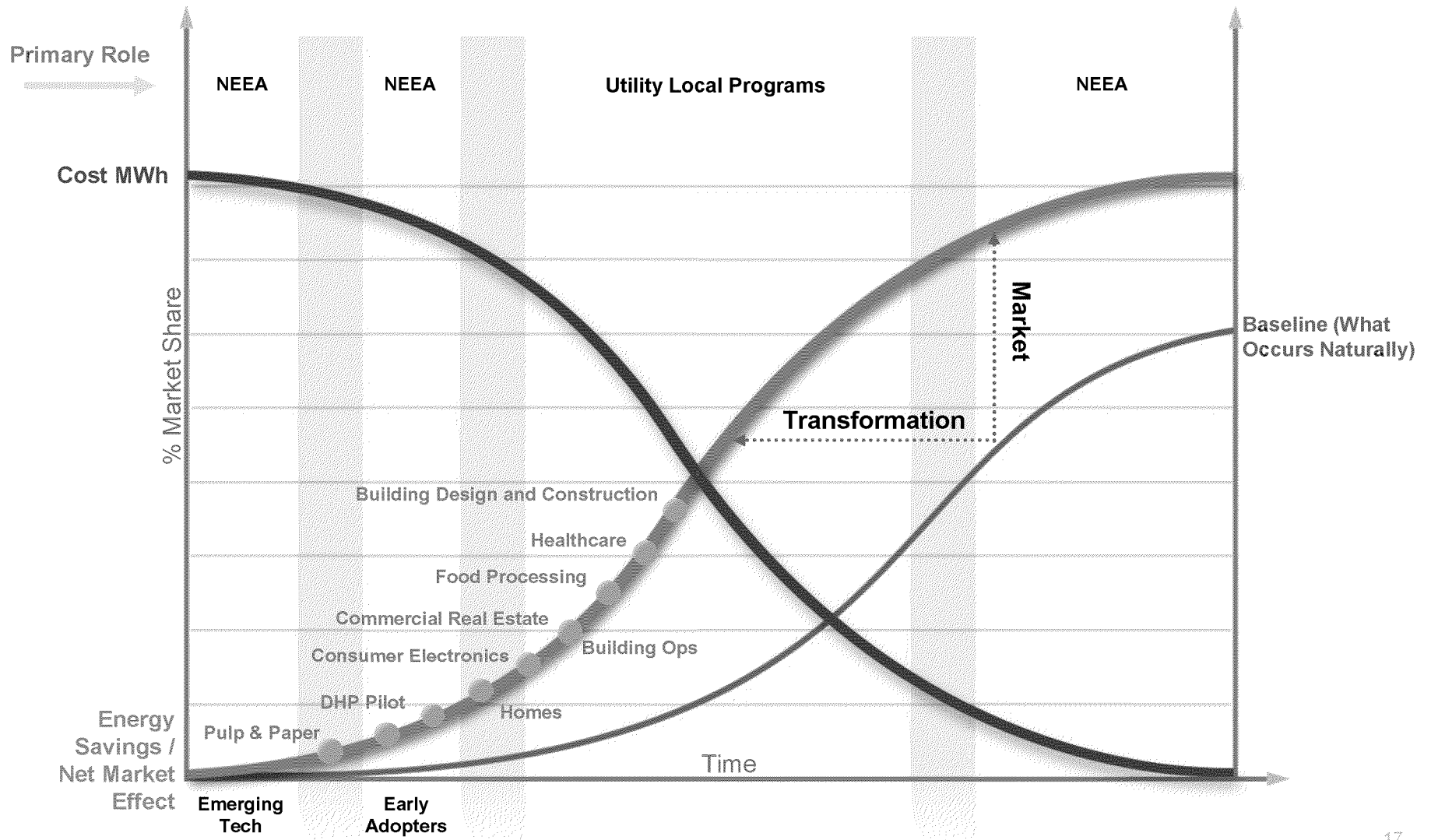
Diffusion Curve



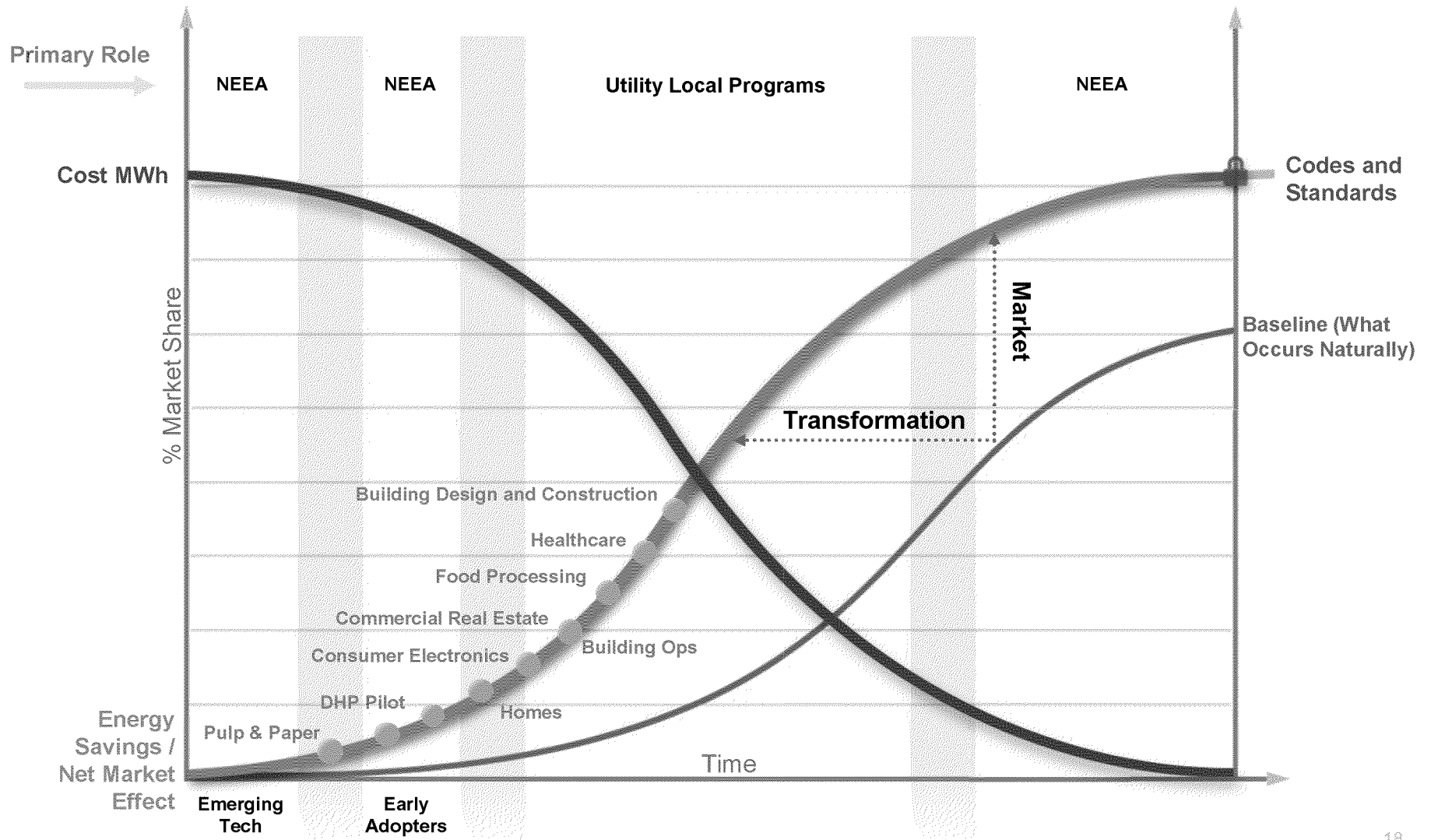
Diffusion Curve



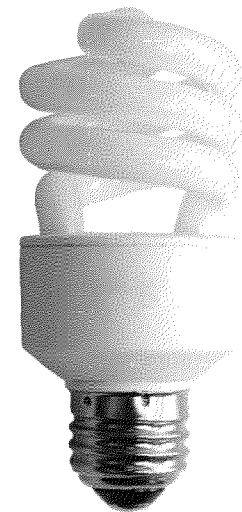
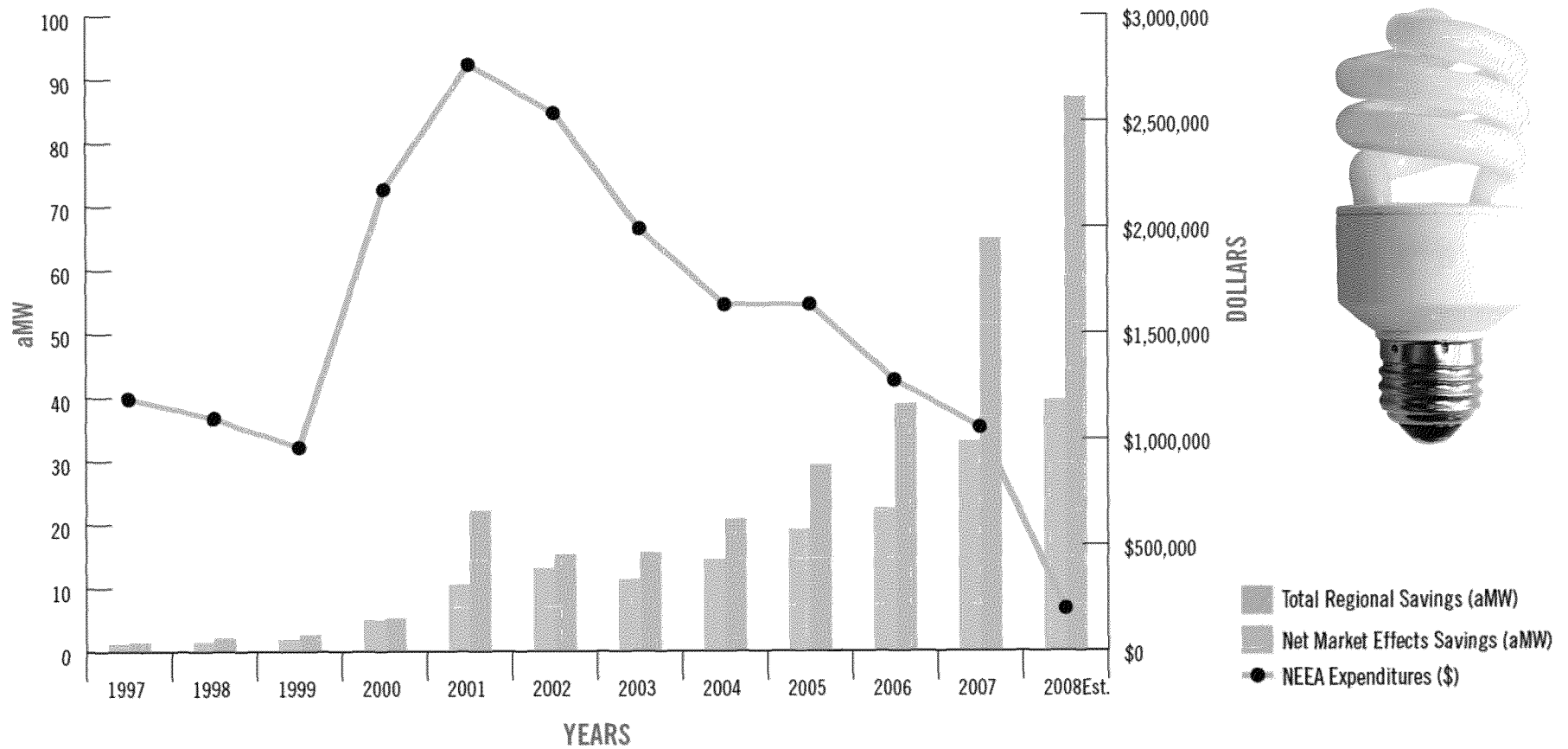
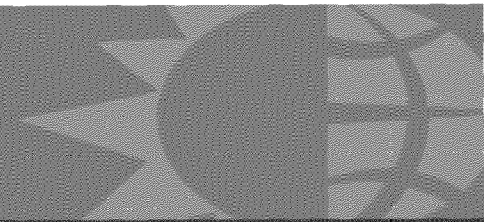
Diffusion Curve



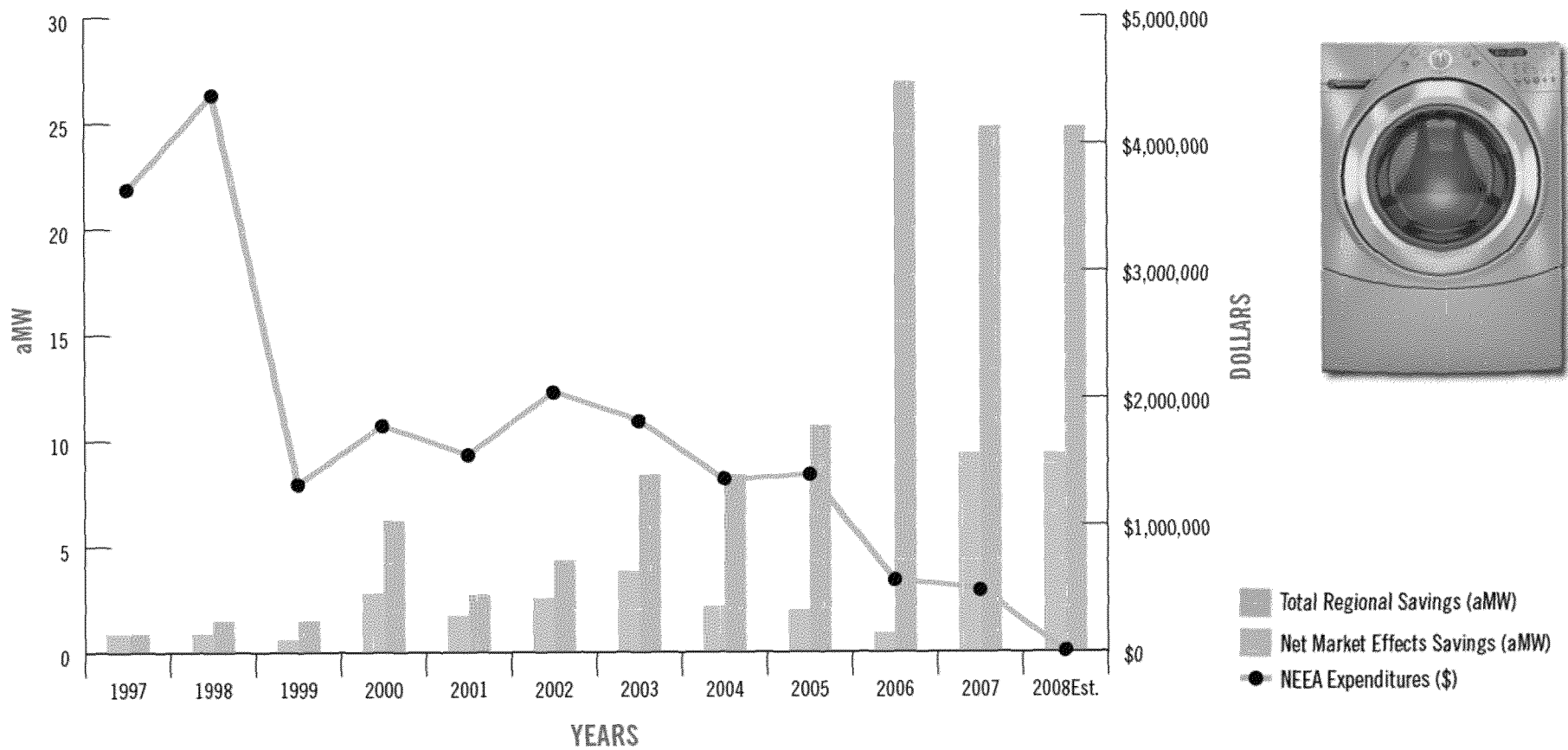
Diffusion Curve



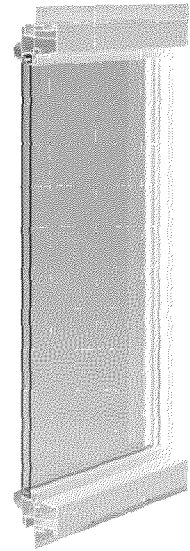
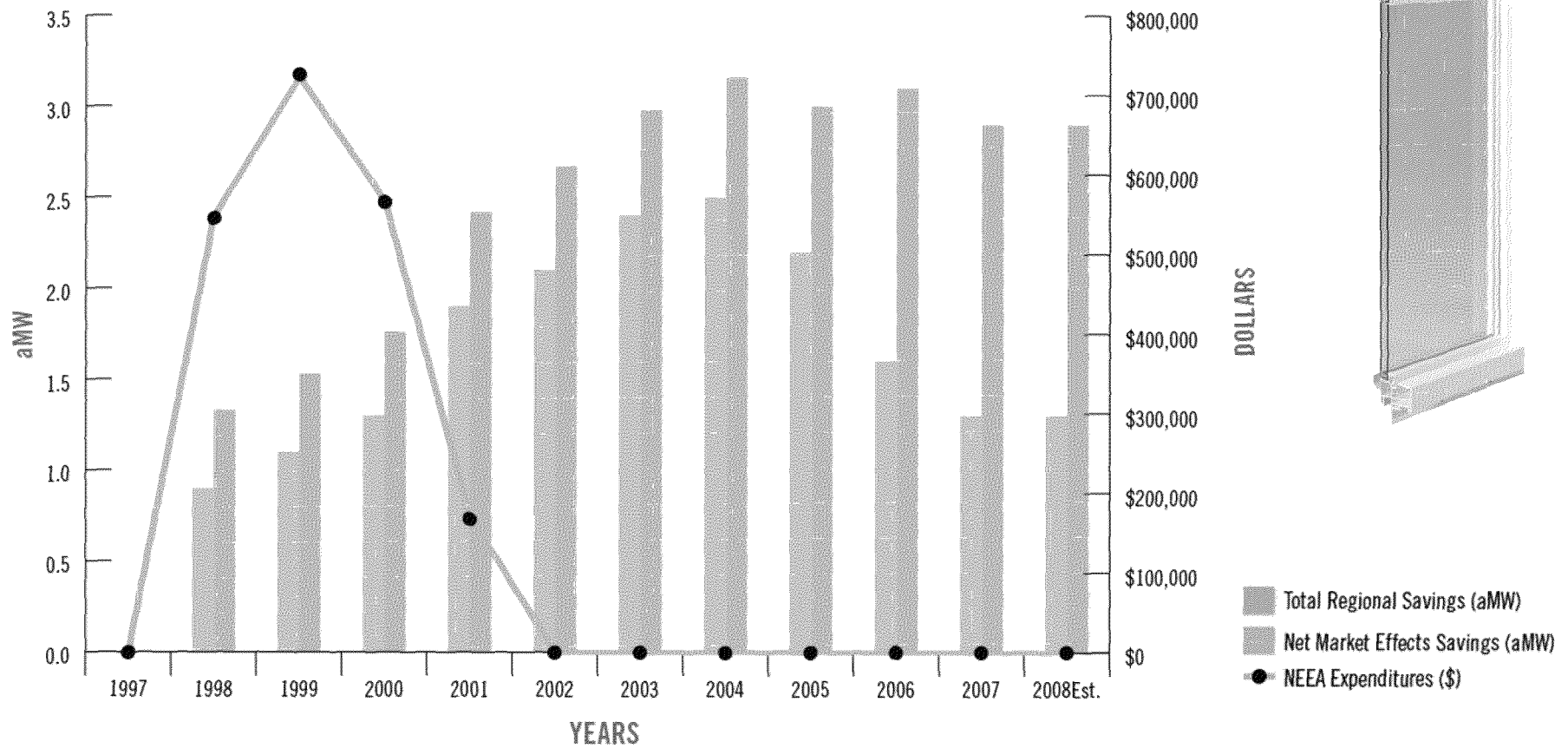
Market Transformation Success: CFLs



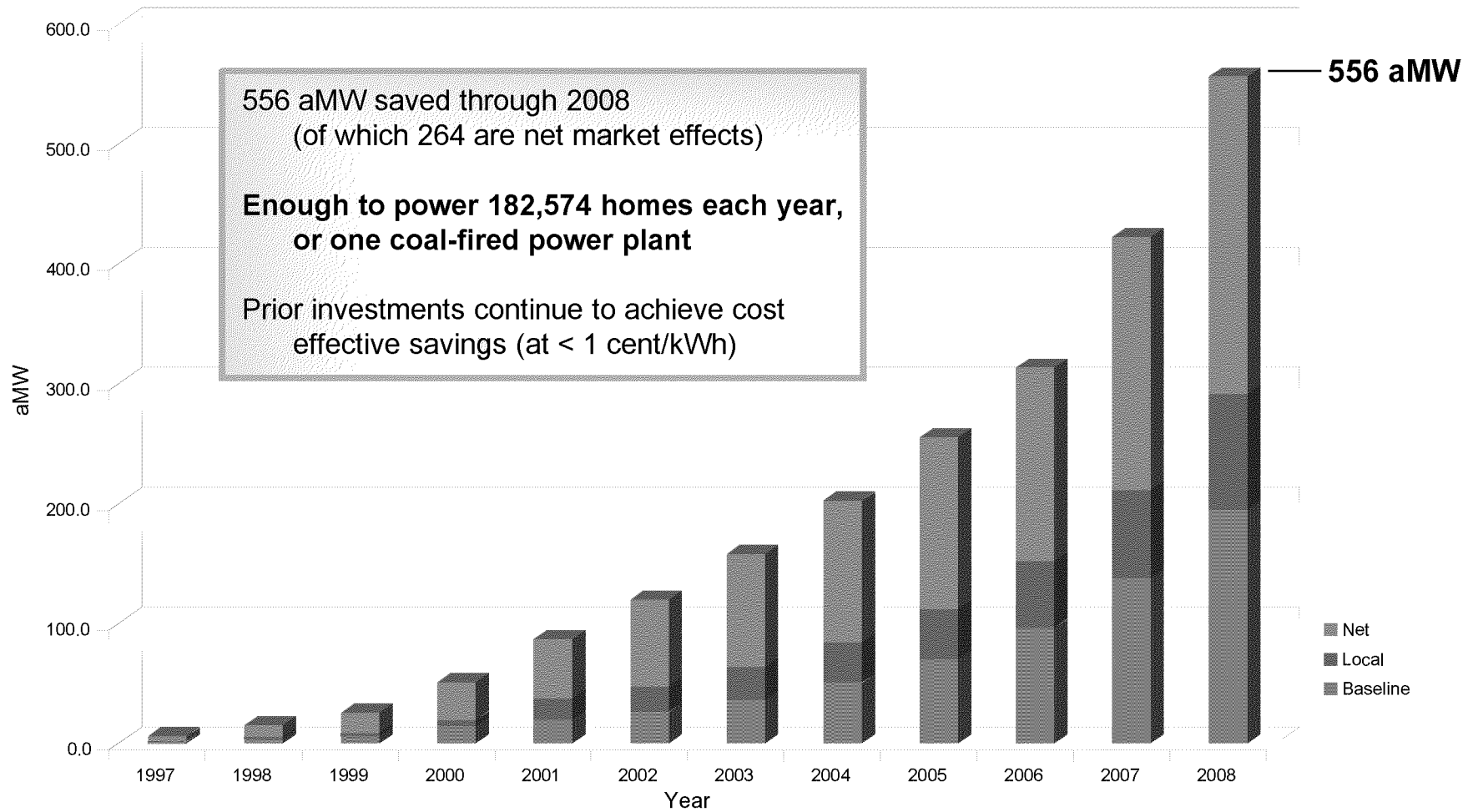
Market Transformation Success: Clothes Washers



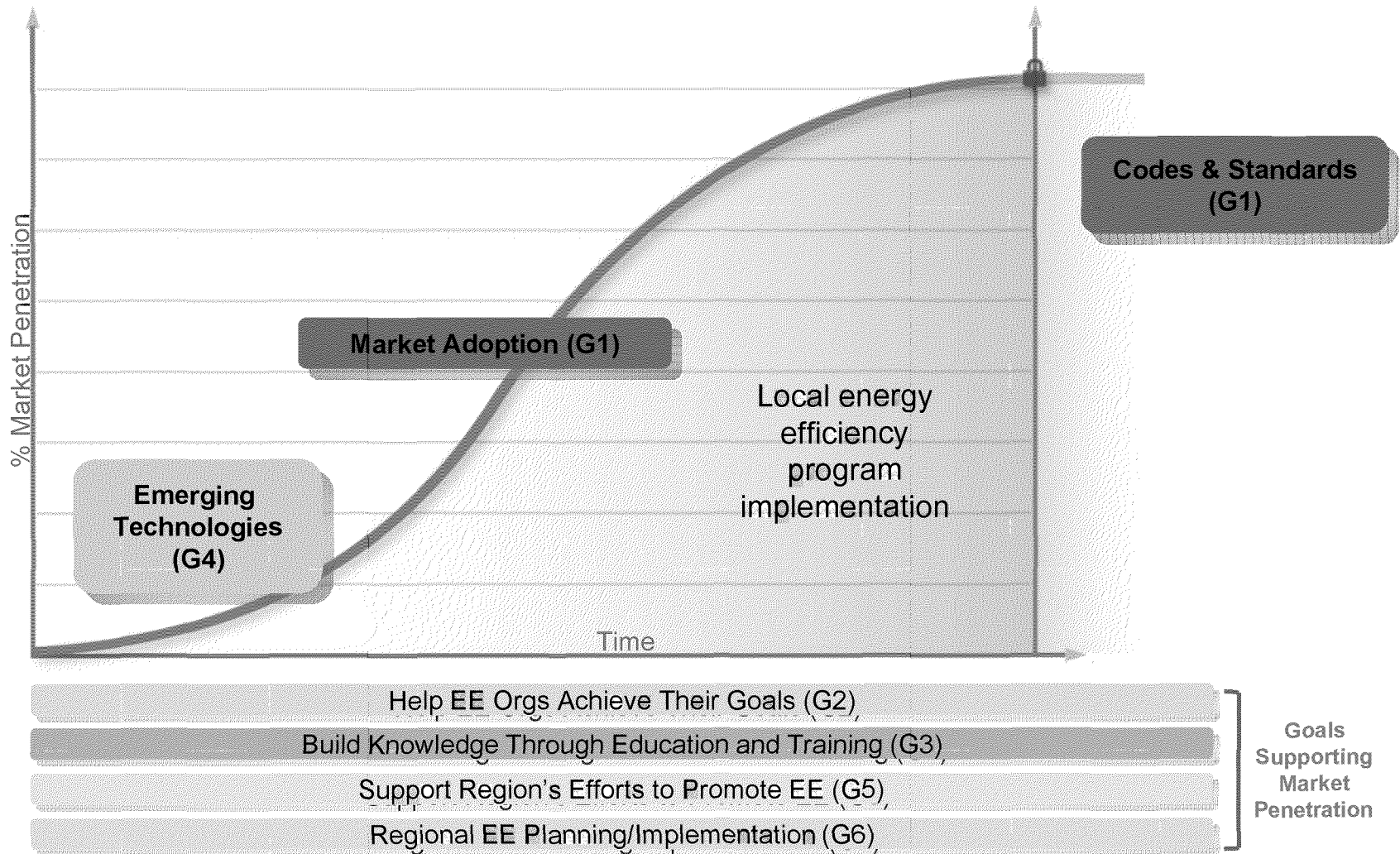
Market Transformation Success: Windows



Market Transformation Results: Overall Significant Savings



Market Transformation Support Structures



M&V Challenges

ffi Short term energy savings versus long-term market change

ffi Metrics for market progress

ffi Interim milestones

ffi Data needs require market participation

ffi Definition of Macro metrics; energy intensity versus absolute energy reduction

Market Transformation Metrics: Consumer Products Examples

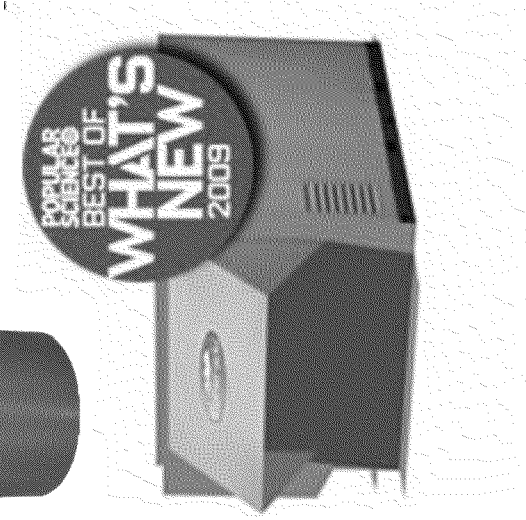
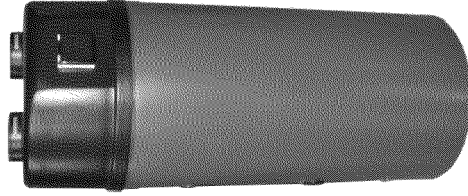
Interim Metrics

- ffi Shelf-space (availability)
- ffi Number of products (competition)
- ffi Channel distribution (availability, competition)
- ffi Consumer attitudes, intention to buy, reasons for not buying, etc.
- ffi Price

Macro Metrics:

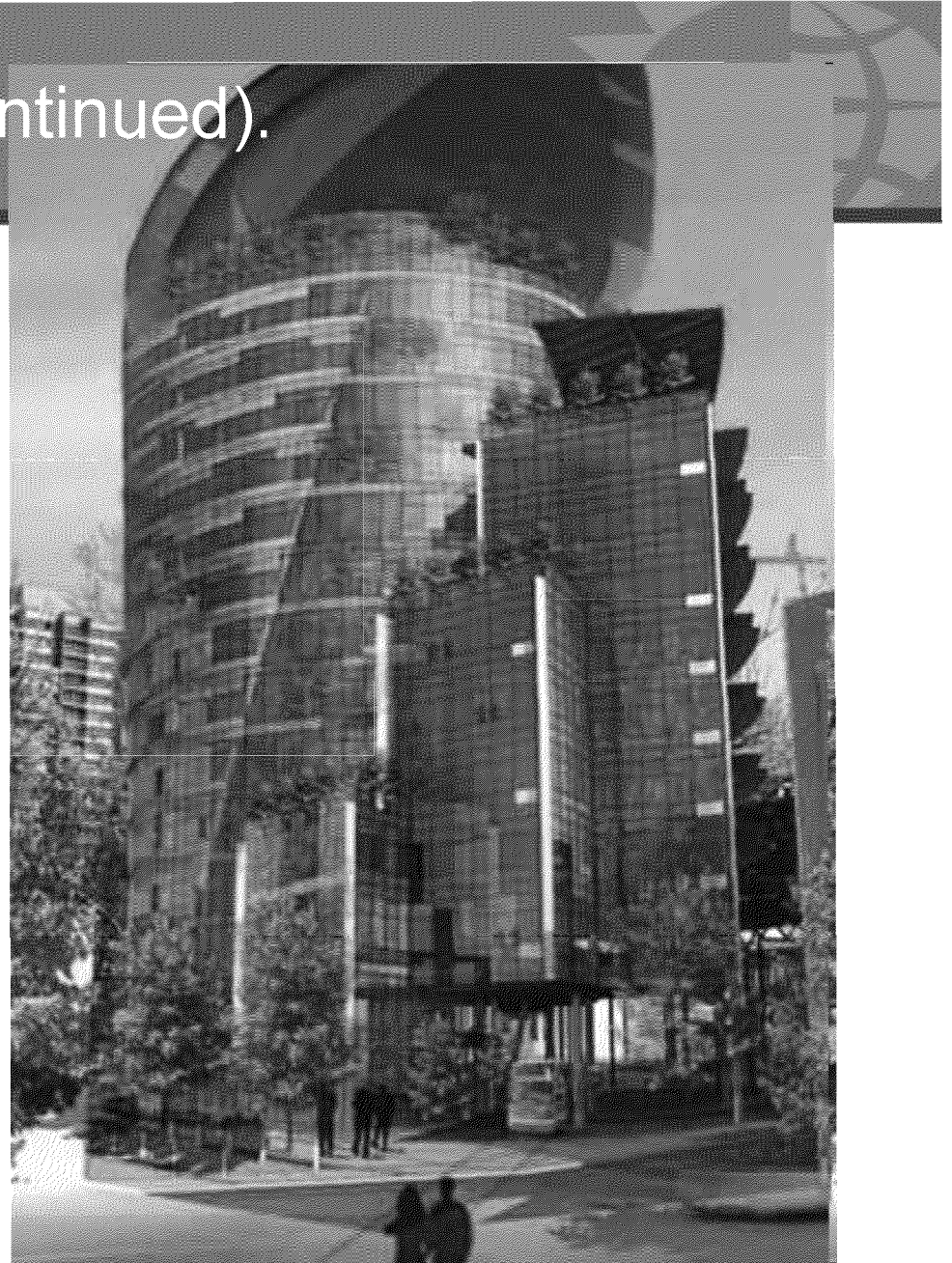
- ffi Market share (share of all functional equivalents sold)
- ffi Change in Code or Standard
- ffi Energy Intensity (kWh/unit or kWh/home for end-use)

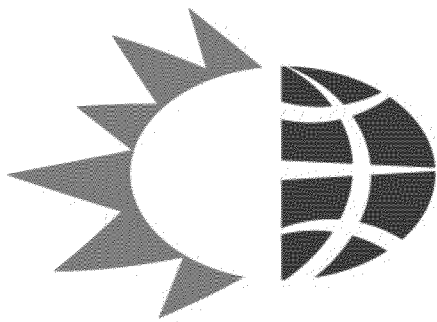
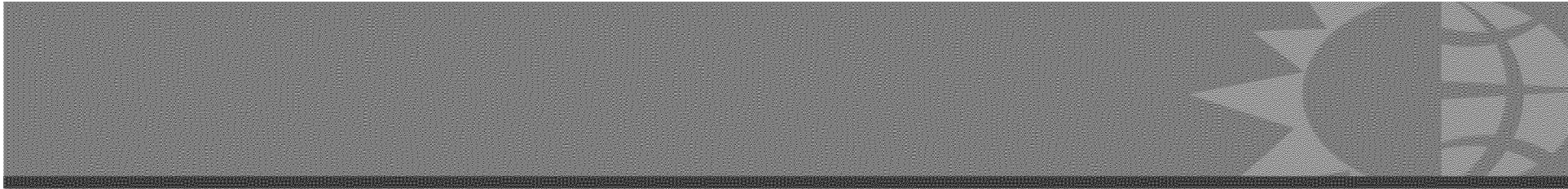
Why you should care: Why is market transformation important for the future?



Why you should care (continued).

Net-zero buildings will require highly integrated energy efficiency systems and coordination between market actors to deliver buildings that actually perform at a level that is unprecedented; to do otherwise will be very expensive.....

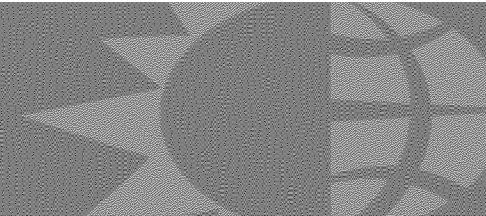




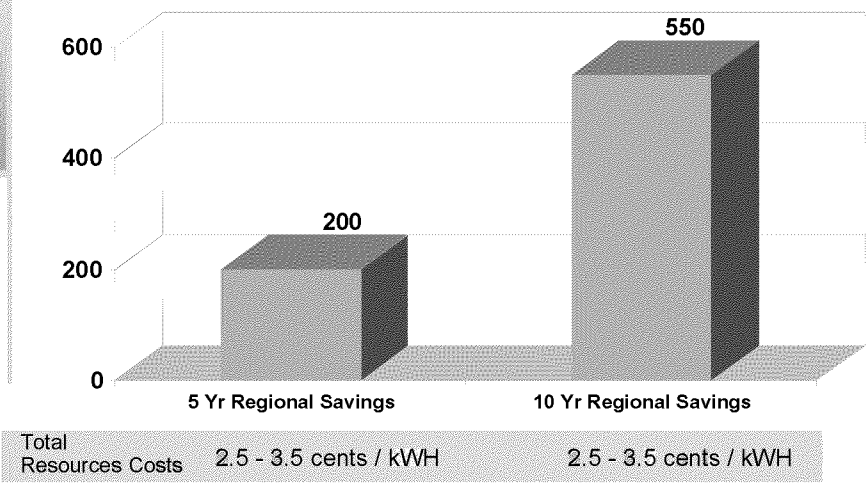
NORTHWEST
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Thank You

2010-2014 aMW Savings Targets

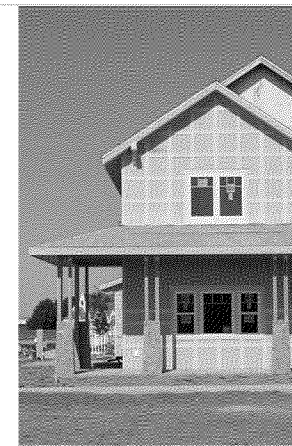
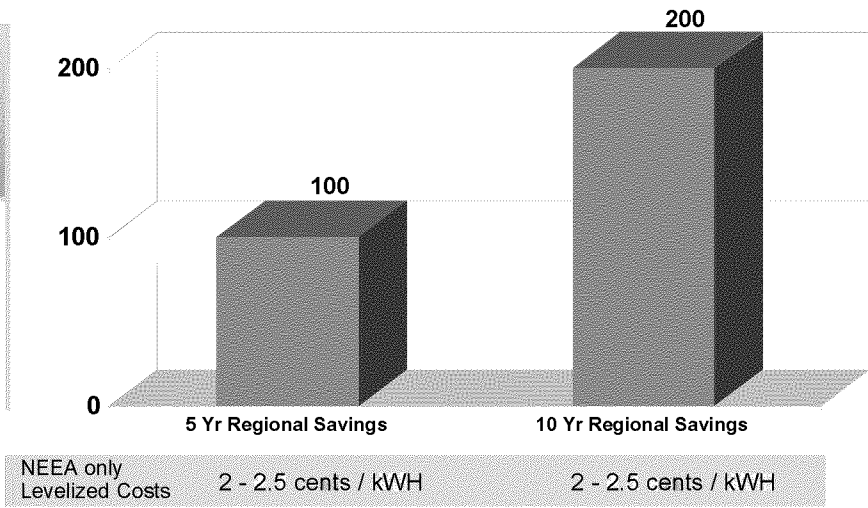


Estimated 5 and 10 Year Total Regional Savings

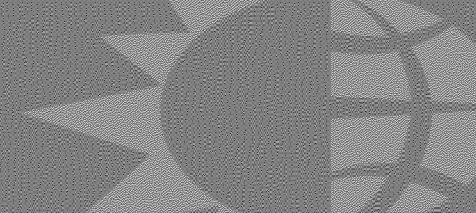


100 aMW is enough to power **69,000 homes** each year

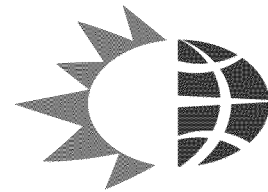
Estimated 5 and 10 Year Net Market Effects



How NEEA Works



INDUSTRIAL



**NORTHWEST
ENERGY
EFFICIENCY
ALLIANCE**



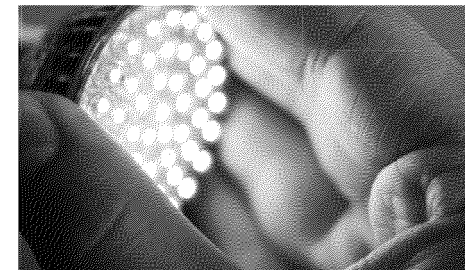
PARTNER SERVICES



COMMERCIAL



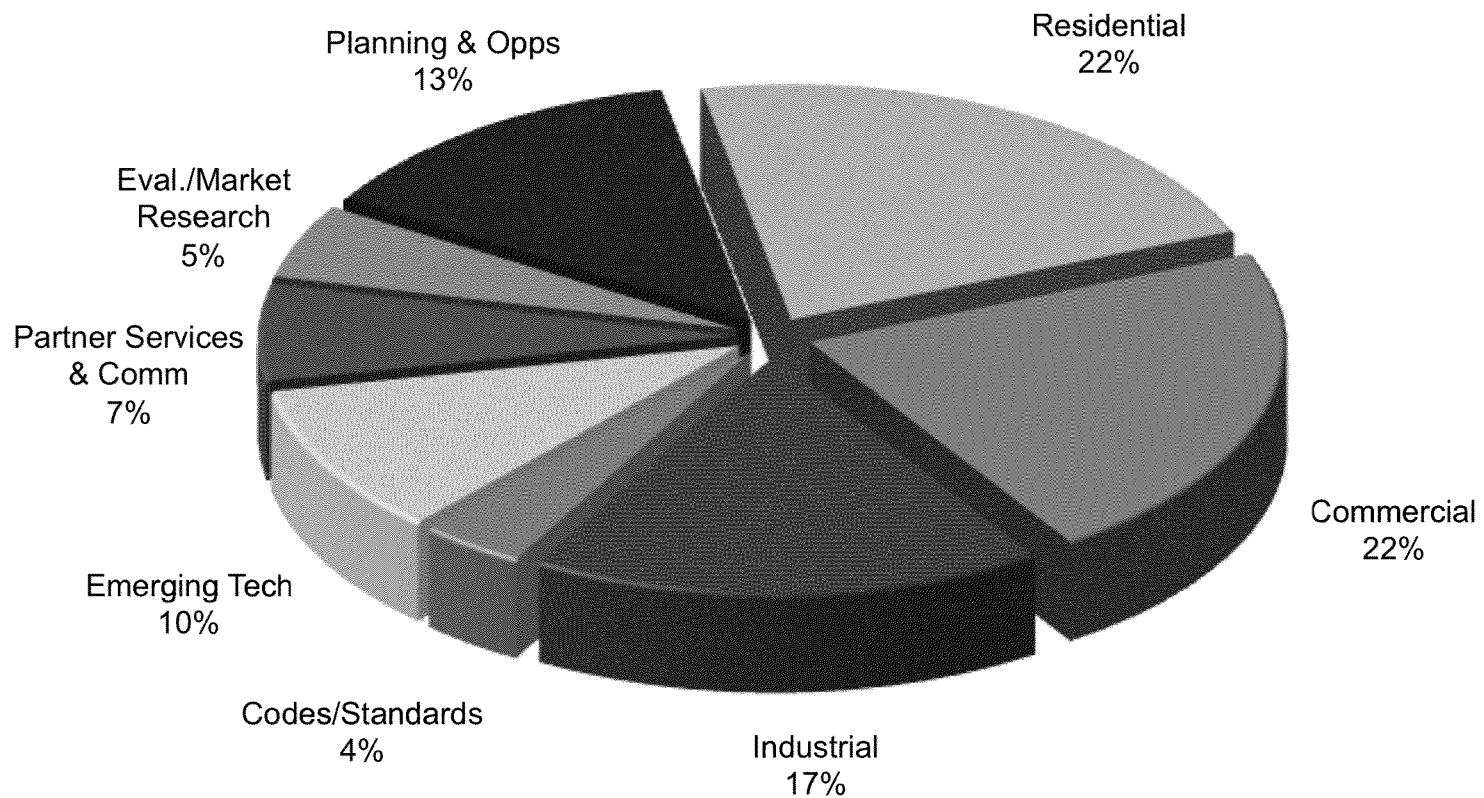
RESIDENTIAL



EMERGING TECH



Estimated Budget Allocation: 2010-2014



Residential



Support and maintain a regional upstream delivery platforms for energy-efficient products and services

Key Initiatives:

- ffi New Construction – reduce market barriers, influence voluntary programs/labels and set the stage for code upgrades
- ffi Consumer Electronics – initial focus on flat-screen TVs
- ffi Ductless Heat Pumps – pilot demonstrating energy savings potential
- ffi Lighting – Continued focus on CFL purchase research
- ffi TopTen USA – highlighting the most energy-efficient products

Commercial



Simultaneously build demand for and supply of energy efficient products and services in select markets.

Key Initiatives:

- ffi Hospitals/Healthcare & Real Estate – Helping organizations use Strategic Energy Management to become more energy efficient
- ffi Building Market Skills/Capacity – provide resources, training and tools to design and building operations communities
- ffi 80 PLUS – encourage and track growth of energy-efficient power supplies for computers

Industrial

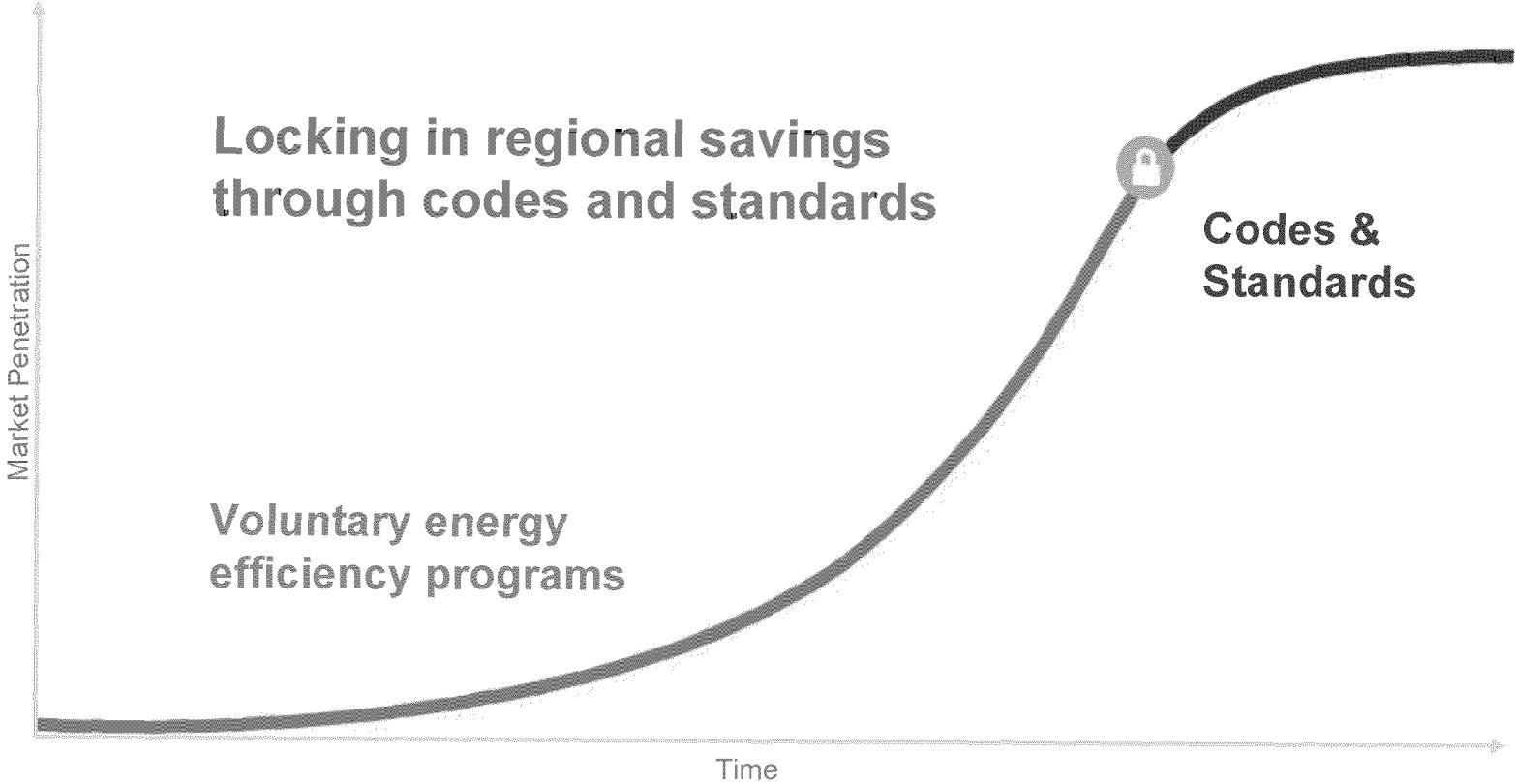
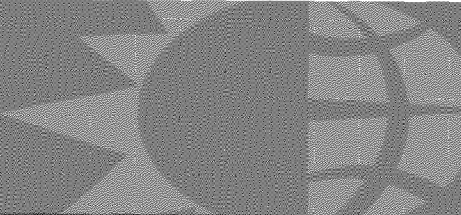


Work to set industry-wide goals, encourage individual organizations to adopt Strategic Energy Management and coordinate regionally.

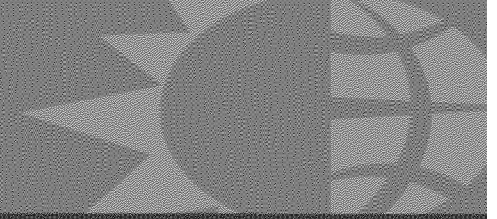
Key Initiatives:

- ffi Collaborative Energy Strategies -- working on an industry-wide approach with the food processing industry to setting goals and increasing efficiency
- ffi Strategic Energy Management – Support companies in integrating energy management into their company cultures
- ffi Regional Coordination – partnerships with stakeholders that help develop market ready offerings

Codes and Standards



Emerging Technologies

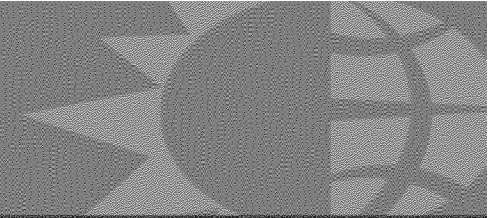


Provide a mechanism for the region to invest in emerging technologies in a way that minimizes risks to any one funder and maximizes potential benefits.

Upcoming Initiatives:

- ffi Residential Heat Pump Water Heaters
- ffi Regional Advisory Committee
- ffi Net Market Effect: 0 aMW by 2014; 5aMW by 2019
- ffi Portfolio Target: 300 aMW Total Regional by 2030

Partner Services



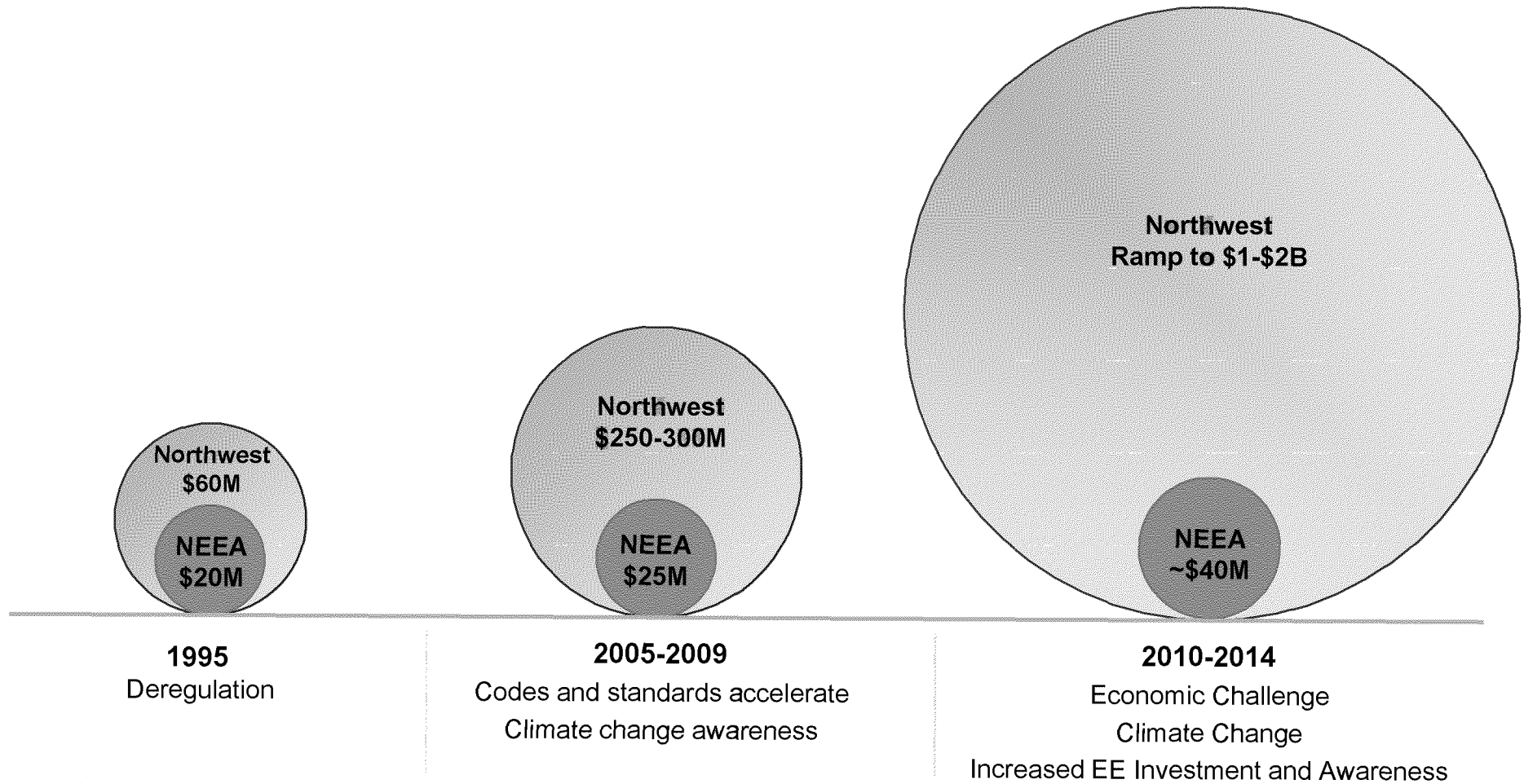
Support the region's efforts to promote energy efficiency through market research, collaboration and information sharing.

Upcoming Initiatives:

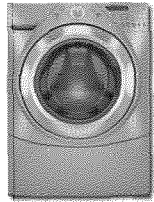
- ffi Develop a website/ information services portal
- ffi Create promote online forum/collaboration tools
- ffi Hire and deploy a circuit rider
- ffi Coordinate regional conference/ events
- ffi Coordinate training/ workshops



Annual Northwest Energy Efficiency Investment



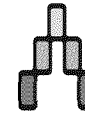
Market Transformation Accomplishments



1997: Efficient washers.
50% market share today
- highest in the nation.



2001: Market share
for ENERGY STAR
windows hits 75%.



BETTERBRICKS
Bottom line thinking on energy.

2005: BetterBricks
healthcare focus –
today 30% of
region's beds have
adopted a SEMP.

2008:
NW Food
processing
industry
commits to
50% reduction
goal

1990

1996: NEEA
Launched

1998: BacGen
reduces
wastewater
treatment energy
use by up to
50%.

2000: VFD
cold storage
fans reduce
energy use
by 61-86%.

2002: 80 PLUS.
computer power
supplies could save
NW 8.5 million kWh
annually.



2004:
Northwest
ENERGY
STAR new
homes spec
– 15% more
efficient than
code.

2007:
CFL sales top
18 million



2009:
Ductless heat
pump pilot
begins

Today



About NEEA



Funding

- ffi ~\$192M from 2010-2014 (doubling)
 - ffi Bonneville Power Administration (on behalf of ~130 publics)
 - ffi Public (Direct Publics): 6
 - ffi IOUs: 5
 - ffi Energy Trust of Oregon
- ## Board Oversight and Supporters
- ffi State governments
 - ffi Energy industry representatives
 - ffi Public interest groups

Team:

- ffi Deep bench of expertise
- ffi 42 full-time staff
- ffi National and local partners
- ffi Extensive contractor base

Results

- ffi 1997-2008 – 264 aMW netted
- ffi Enough to power cities of Spokane and Tacoma each year

Mission

- ffi Mobilize the Northwest to become increasingly energy efficient for a sustainable future