MT Segments & Technologies

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Market Segments & Technologies

- Transformation Model
- Markets & Segmentation
- Characteristics
- Market Actors
- Leverage Points
- MT approaches
- Technologies
Market Transformation Process

1. Identify Opportunities and Leverage Points
2. Identify the Barriers
3. 3rd Party Evaluation
4. Develop & Implement Strategic Market Interventions
5. Identify Opportunities and Leverage Points
6. 3rd Party Evaluation
7. Identify the Barriers
8. Develop & Implement Strategic Market Interventions

(neea logo)
Why segment?

- Simply organizes a market into smaller components with certain common characteristics.
- Leads to more efficient and effective strategies of market approach.
  - Products
  - Communication
  - Research
  - Differentiation
Markets

- Traditional ee market segmentation
  - Residential
  - Commercial
  - Industrial
  - Agriculture
  - Other Thoughts
    - Combinations and Sub segments
    - Non Traditional Segmentation
    - Hazards
2010 - 2014 NEEA Budget by Sector

- Residential: 45%
- Commercial: 33%
- Indy/Ag: 16%
- Codes & Stds: 6%

2010 - 2014 NEEA Budget by Focus Area

- Built Environment: 31%
- Consumer: 38%
- Strategic Energy Management: 25%
- Codes & Stds: 6%
Regional Challenges

- Diversity
- Density
- Climate
- Industrial Base
- Economics
- Politics
- Attitudes
Residential Market Characteristics

- **Diverse**
  - Geography
    - Climate
    - Interests
  - Rural | Non Rural
  - Economic
- **Consumer – focused**
- **Retail supply channels**
- **Mass marketing**
- **Single purchases**
Residential Market Actors

- Consumers
- Low-Income Sector
- Builders
- Retailers
- Manufacturers
- Distributors
- Installers
- Third-party verifiers (ENERGY STAR)
Leverage points

- Product Branding (ENERGY STAR®)
- Third-party performance assurance
- Upstream Incentives
- Combined Incentives
- Marketing messages
Strategies

- Consumer branding
- Create demand through education
- Increase supply through supply chain
- Target providers (builders)
- Increase QA (certification, 3rd party)
Technologies

- Whole house approaches
- Lighting
- Appliances
- Heating and cooling
- Envelope measures
- Consumer electronics
- Ductwork, infiltration
- Feedback
Ductless Heat Pumps

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

Market Conditions
- High presence of inefficient electric resistance heat.
- Middle income consumers
- Proven DHP technology (extra USA)
- Lower use in colder climates
- Zero market presence
Ductless Heat Pumps

Identified Barriers

- Product not perfect for climate
- No product in market
- No consumer knowledge
- No distribution, retail or support
- Expensive
Ductless Heat Pumps

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
Ductless Heat Pumps

Market Results

- 4000+ units installed first year.
- Very high satisfaction by consumers, utilities and other market actors.
- 20 year impact anticipated at 150 aMW for region.
Commercial Market

- **Characteristics**
  - Complex market
  - Multiple transactions
  - Risk aversion
  - Specifications, standards

- **Barriers**
  - Owner awareness
  - Embedded practices
  - Skill sets of suppliers
  - Split incentives
  - Capital costs
Commercial Market Actors

- Building Owners
- Building Operators
- Service Providers
- Architects, Designers and Engineers
- Specifiers (equip. sizing)
- Third-party confirmers (energy modeling)
- Utilities, public-benefits providers
Leverage points

• Recognition
• Incentives
• Market leader action/differentiation
• Financial (value, costs)
• State and local codes & standards
• Risk aversion/reduction
Strategies

- Value proposition in market terms
- Influence the few to convince the many
- Certification
- Education & training
- Target service providers
- Risk reduction
- Codes & standards
- Target mid-stream providers
- Manufacturers
Technologies - Commercial

- Lighting
- Advanced HVAC
- Advanced Controls
- Windows
- Design Practices
- Building Operations
- Building Management Practices
NEEA targets Northwest commercial office buildings to build capacity for the creation and implementation of sustainability strategic plans among market actors.

Key Initiative Barriers
- Market Demand
- Market Supply
- Lack of Value Proposition
Commercial Real Estate

Key Initiative Strategies

- “Coaching” with Northwest firms and leaders
- Ally with influential groups
- Develop sustainability strategies
- Conduct market competitions, education, research and other “knowledge transfer” efforts to diffuse best practices and case studies
Key Initiative Results

- 200 buildings participating in Kilowatt Crackdown
- Most significant portfolio owners engaged.
- Supported through BOMA
- 20 year anticipated energy savings of 109 aMW.
Industrial Market

- **Characteristics**
  - Diversity
    - High Load Installations
    - Many Small Operators
  - Politically Influential
  - Capital Limited
  - Priorities

- **Barriers**
  - Return on Investment
  - Attention
  - Communication
  - Conflicting Local Programs
Industrial Market Strategies

- Reference groups
- Target market leaders
- Strategic Energy Manager
- Associate with TQM or Lean Programs
- ISO 50001
- Technology advancement
- Incentives
- Training
Industrial Market Technologies

- Compressed Air
- Motors
- Lighting
- Refrigeration
- Strategic Energy Management
- Advanced Controls
Northwest Food Processing

Market Barriers
- 2nd largest Northwest energy consumer
- Companies unsure how to tackle energy use
- Lack of understanding of EE business value

Market Intervention
- Partnered with Northwest Food Processors Association
- Leveraged relationship with U.S. DOE
- Introduced industry to CEI

Regional Results
- 130 aMW saved by 2015
- 20% processors implementing energy management in two years
- Set industry-wide goal to reduce energy intensity by 25% in 10 years and 50% in 20 years
Key Points

- Segmentation
- Regional Challenges
- Barriers and Strategies
- Technologies
- Behaviors