Northeast Energy Efficiency Partnerships

Influencing a Regional Dialogue: Interim Analysis and Findings on Impacting the BCE Market

TUESDAY, JUNE 18TH, 2013

11:00am-12:15pm

#summit13

2013 NORTHEAST ENERGY EFFICIENCY SUMMIT

June 18 - 19, 2013

Springfield Sheraton Hotel - Springfield, MA

Accelerating Innovation in Efficiency

AGENDA

11:00 a.m.	Review high level BCE research findings and barriers
11:30 a.m.	Break into groups to discuss BCE barriers for the Northeast and Mid-Atlantic regions Consolidate feedback from and discuss outcomes of group discussion
12:15 p.m.	Food

WHAT ARE WE TRYING TO DO?

- **Goal:** Keep the Northeast Mid-Atlantic region an energy efficiency leader by reducing the average per household/building energy use from BCEs, focusing on *accelerating market adoption* of high efficiency electronics and the *efficient use* of those electronics as key paths to achieve program and state energy efficiency goals.
  - Spur innovation to inform state public policies and provide guidance to program administrators
  - Influence the production, promotion, and sale of BCEs
  - Build multi-state support and consensus for strategy adoption and implementation

BCE Products

- The Strategy Report and today's Summit discuss the following BCE Products:
  - TVs
  - Desktop Computers
  - Computer Monitors
  - Laptops & Thin Clients
  - Set-Top-Boxes
  - Game Consoles
  - Home Theater (AV Equipment)
  - Home Office & Imaging Devices
  - Tablets, Smartphones, & Phablets
  - Advanced Power Strips

DISCUSSION GROUPS

Teal Group
Claire Miziolek

Yellow Group
Mark Michalski

CADMUS

Green Group
Allison Bard

Research Findings

BCE Market Forecast

- U.S. sales predicted to grow 4.5% in 2013
- Industry revenue predicted to reach $215.8 billion in 2013

- Smartphones, tablets, laptops, and network-enabled TVs represented 47% of revenue (2012)
- Annual sales is forecasted to increase by at least 50% by 2016
  - Smart phones, tablets, sound bars, network-enabled digital media players (Roku, Apple), IPTV STBs, OLED TVs

BCE Market Snapshot

Top 5 – Global Manufacturers

Apple
Dell
Hewlett Packard
Samsung
Sony

Top 5 – U.S. Retailers

Best Buy
Walmart
Amazon.com
Apple Retail Stores
Target

Top 5 Internet Retailers*

Amazon.com
Dell
NewEgg.com
HP
Buy.com

Top 5 – U.S. Service Providers

Comcast
DirecTV
Dish Network
Time Warner
Verizon

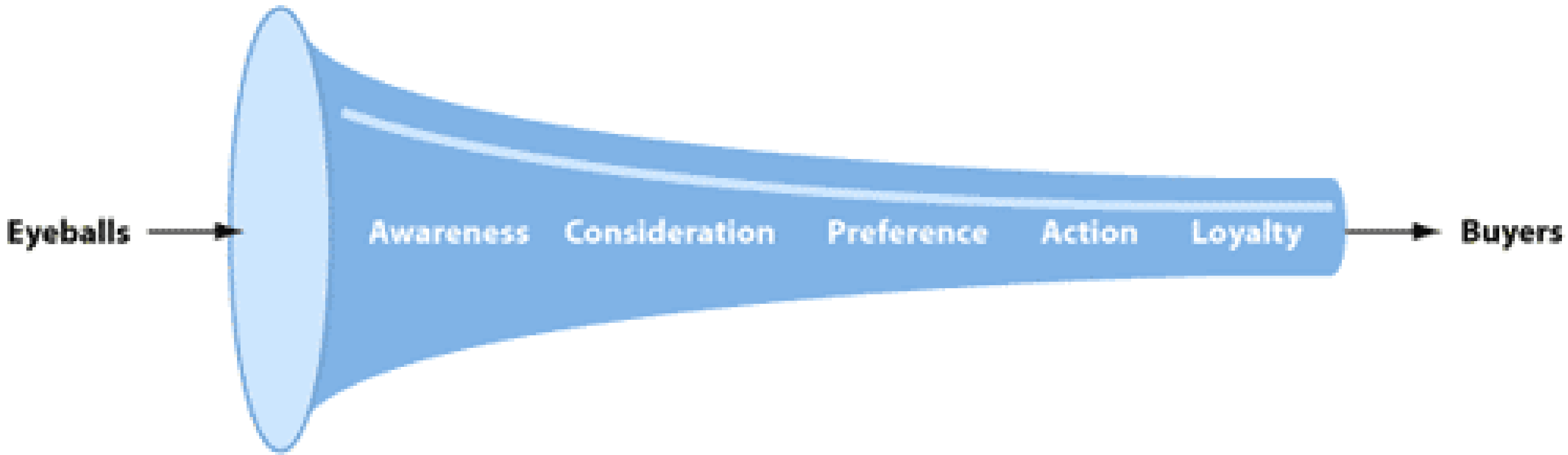
Top 3 – Regional Retailers

PC Richards & Son
J&R Music and Computer World
Abe's of Maine

Top U.S. BCE Retailers based on sales
Source: 2012 TWICE REPORT
Source: 2013 Research and Markets Competitive Analysis

Traditional Path to Purchase

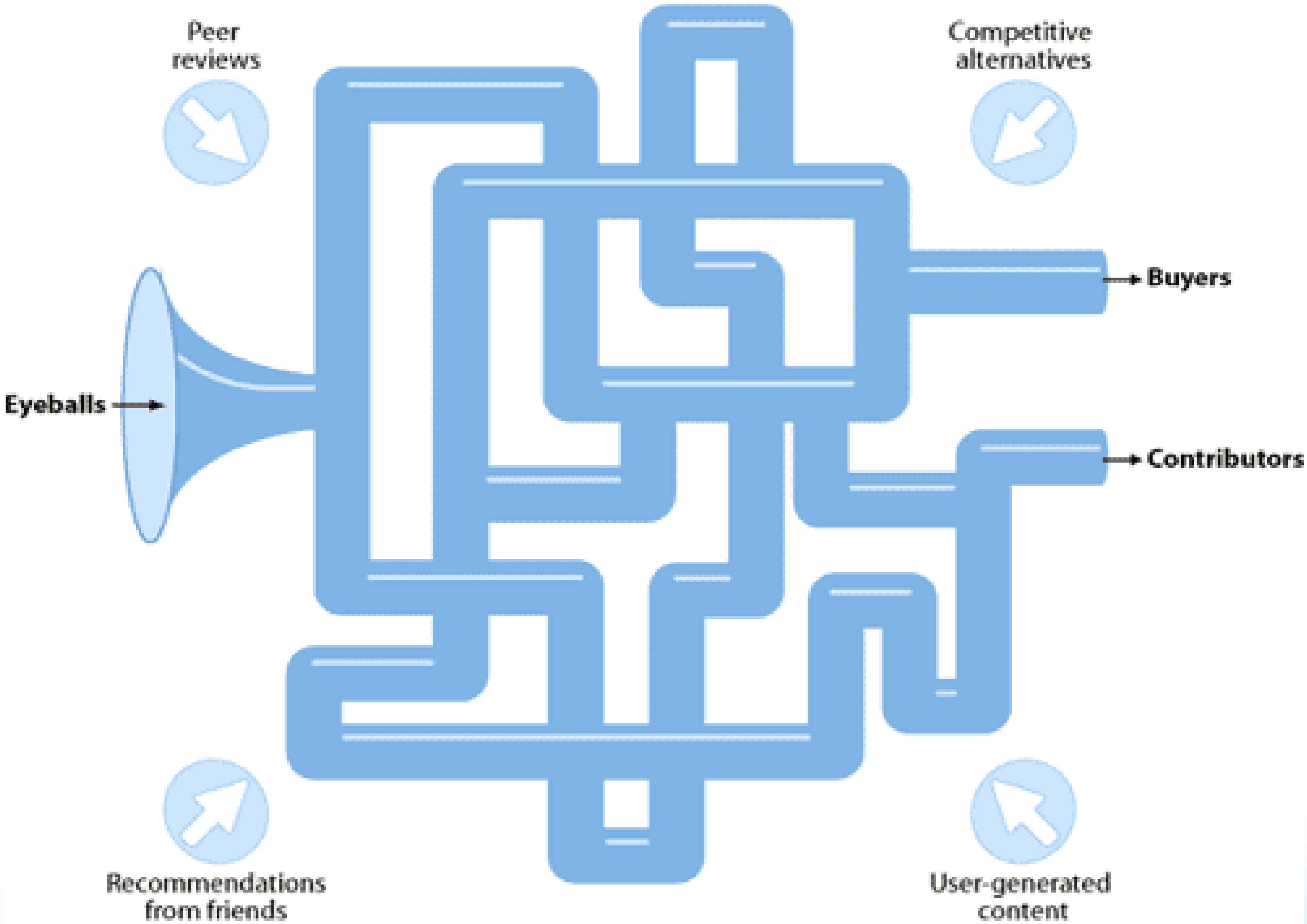
The Traditional Marketing Funnel



Forrester Research, 2007

Path to Purchase for BCE products

A complex, customer decision-making journey



Forrester Research, 2007

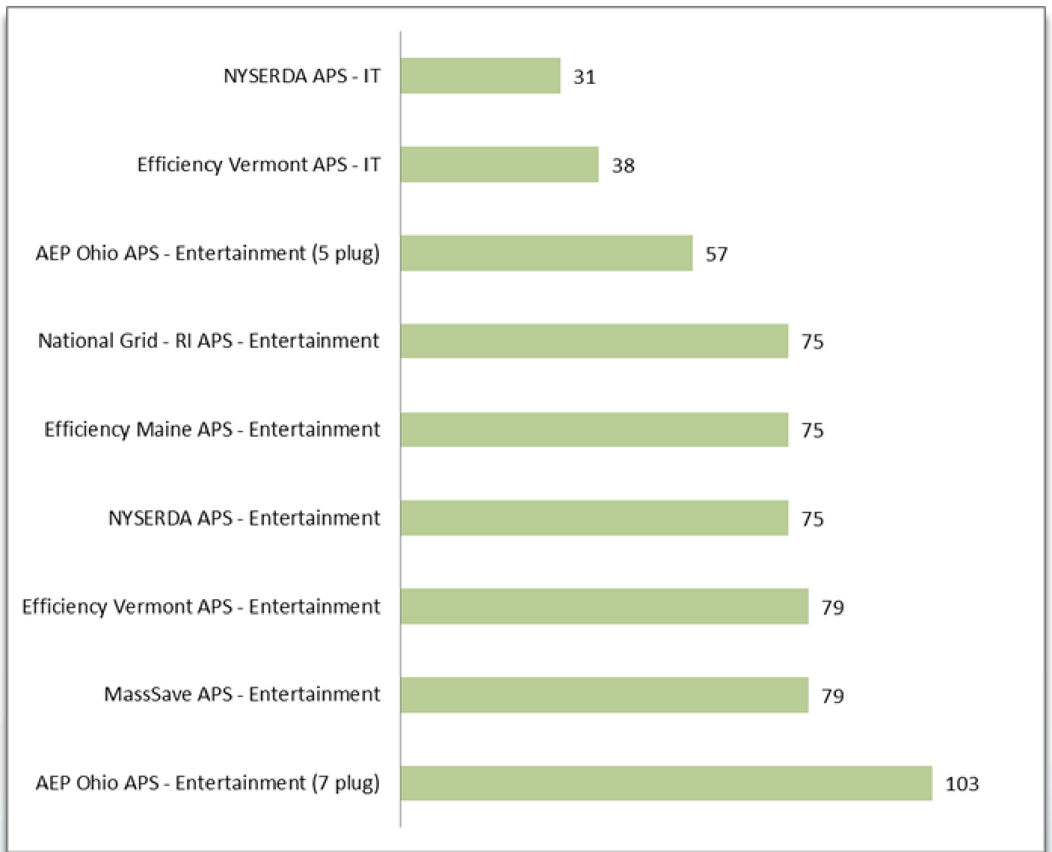
Low Hanging Fruit has been Picked

- Televisions, desktop computers, and computer monitors are becoming more challenging to support
- Efficiency gain opportunity for STBs and gaming consoles

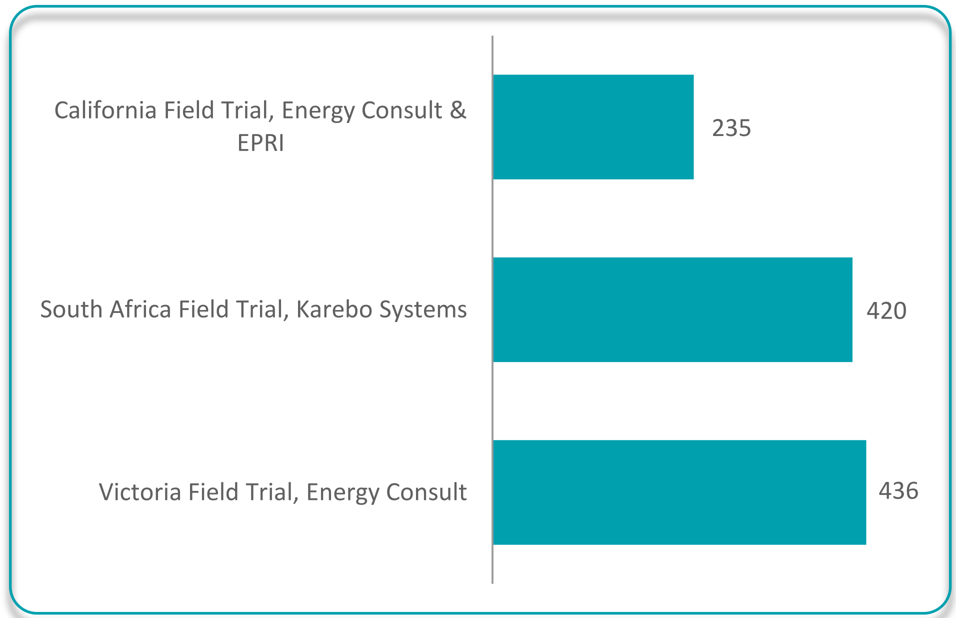
Current Generation Console	Wii U	XBOX ONE	PS4
Efficient?	✓	X	X
Last Generation Console	Wii	XBOX 360	PS3 PlayStation 3
Sales split of three major last generation game consoles	40%	31%	28%

Inefficiency Has Many Faces

- Opportunity to mitigate active power consumption, as well as passive standby consumption with APS for BCE products that are older and not ENERGY STAR-certified (e.g., gaming consoles, AV products)



Passive Standby Annual Energy Savings



Active Power Annual Energy Savings

Various TRMs from Massachusetts, Ohio, Rhode Island, Vermont
NYSERDA APS Report, 2011
Energy Consult, 2012
Karebo Systems, 2013

Think Outside the "Box"

- Rethinking use of traditional BCE products such as STBs, televisions, and computers

Old School Idea

672.4 kWh TEC
$114 per year
(@ $0.17/kWh)

New School Thought

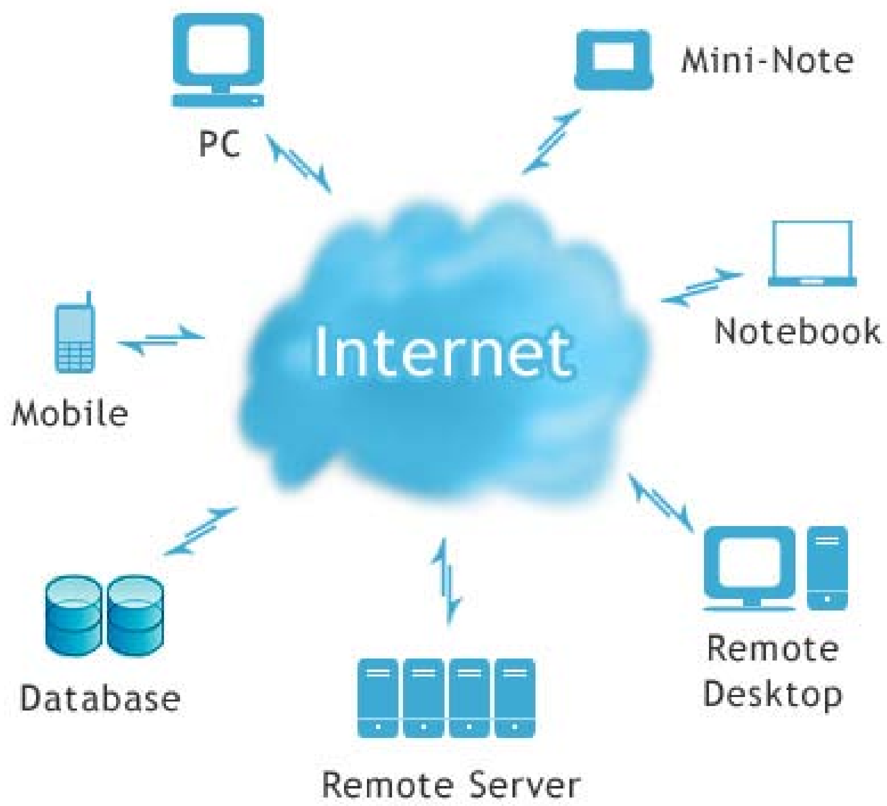
71.58 kWh TEC
$12 per year
(@ $0.17/kWh)

Trade-offs:
Access to content

Two Major Trends

Data Access

- Changing the way we work, live, and consume energy



Connectivity

- What is "Smart??"
- Smart BCE Devices are increasing (e.g., 48% own tablets, 66% smartphones)
- The emergence of the "connected home" has foreshadowed the increased importance of TV, tablet, and smartphone

BCE Programs Findings

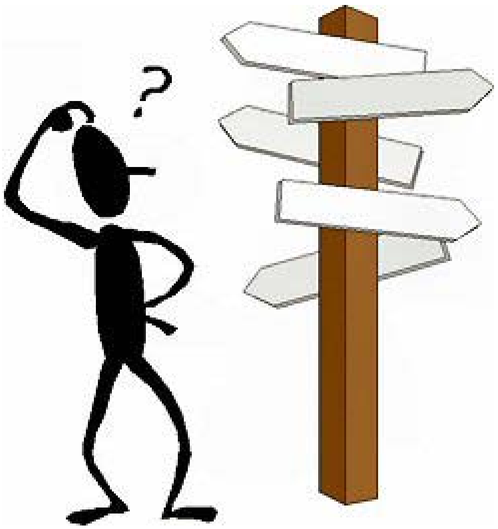
32 entities supported BCE Programs in 2011
17 entities support BCE Programs currently

32% decrease in support in two years

- Potential program enhancements could include:
  - Expand focus beyond traditional electronics
  - Address plug load
  - Incentivize new ways of accessing content
  - Consider early-retirement of obsolete electronics
  - Encourage adoption of load disaggregation technologies
  - Partner with R&D to bring new EE products to market

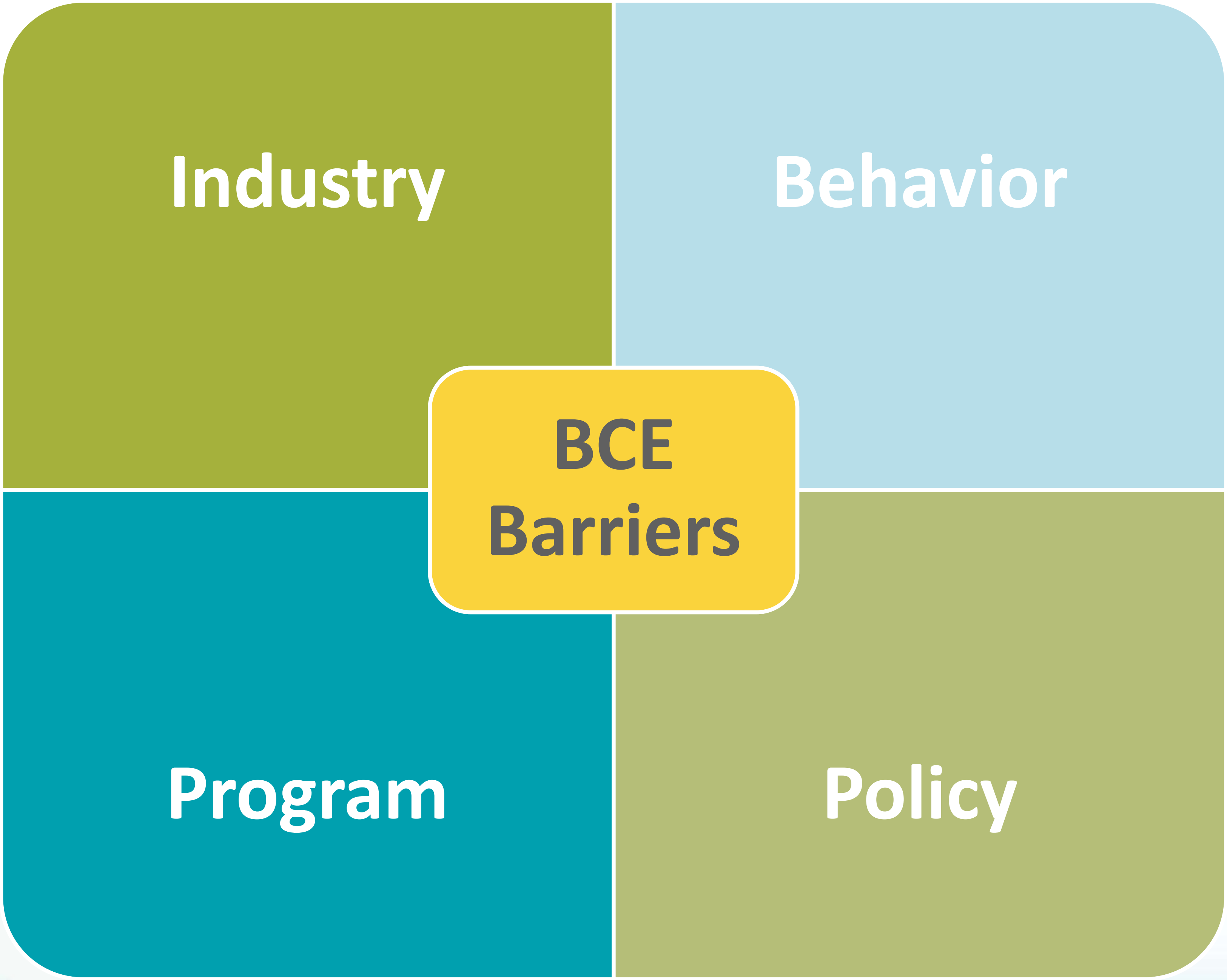
Program support information is taken from analysis completed using CEE program guides

All Quiet on the Policy Front



- Multiple labels and certifications are both complementary and duplicative
  - Coordination is necessary to avoid confusion
- Limited regulation of BCE products
  - STBs, external power supplies, battery chargers and televisions are most regulated
- Potential for emerging performance standards
  - CT and NY looking at TVs and AV products
- Voluntary agreements could replace/augment regulation
  - E.g. DOE voluntary agreement on STBs with service providers and NCTA

Identification of Barriers


Industry
Behavior
BCE
Barriers
Program
Policy

Industry Barriers

- Effects of rapid technological advancement and short product life cycle
- Industry focus on functionality
- Impact of limited number of manufacturers for many product categories
- Impact of converging products
- Limited national program administrator collaboration
- Lack of motivation to engage interested energy efficiency stakeholders and advocates (i.e., service providers)

Behavior Barriers

- Lack of awareness about BCE products energy savings opportunity
- Energy efficiency is a low consumer priority
- Complexity in purchase process

Program Barriers

- Diminishing energy savings
- Uncertainty of savings for behavior-related opportunities
- Program attribution
- Increase in integrated devices
- Challenge of promoting multiple certifications and specifications
- Limited consumer benefit with respect to price

Policy Barriers

- Feasibility of making an impact due to product life cycle
- Challenge regulating global industry

Group Discussion

Discussion Questions

1. What other barriers exist?

2. Are these barriers applicable to the Northeast and Mid-Atlantic? Are their regional differences that should be noted within the regional or individual states?

3. How could these barriers be addressed through available levers of marketing, program design, and policy?

4. What are additional potential paths forward to overcome barriers?

THANK YOU!

LUNCH 12:15-1:15 PM