

Set-Top Box Incentive Programs: The "Slippery Frog" or A "Subliminal Fog"?

CalPlug Set-Top Box Workshop
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Agenda



- Plug Load Program Drivers
- Set-Top Box Market Drivers
- Incentive Program Considerations
- Ongoing Utility Activities
- Energy Management Opportunities
- Next Steps



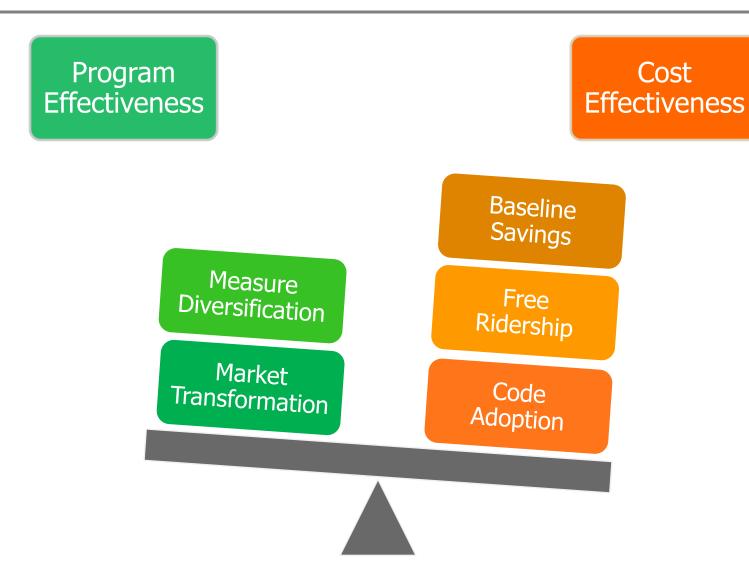












Set-Top Box Market Drivers



ENERGY STAR Program

- Version 3 effective September 1, 2011 upgrade to more efficient STBs
- Version 4.1 effective TBD 2013 upgrade to "deep sleep"

Industry Innovation

- By end of 2013, at least 90% of new STB deployments will meet ENERGY STAR 3.0 for top six U.S. cable providers (representing 85% of U.S. Cable customers)
- In 2014, CableLabs® will field test "deep sleep" capabilities (5-10 watts)
- Presently, 90%+ of DIRECTV STBs meet ENERGY STAR 3.0

Voluntary Agreement

- Agreement for adaptability in exchange for data and focus on whole home and U.S. consumption
- Modeled after European Union voluntary agreement with greater data transparency
- Target signature date was October 1, 2012

Title 20 Standards

- Phase I CASE Proposal for ENERGY STAR 3.0 as mandatory code
- Potential to become code by end of 2014 to early 2015

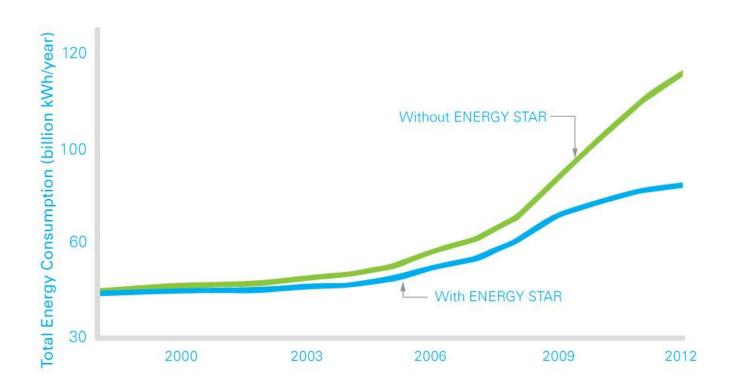
DOE Regulation

Earliest compliance date by possibly 2018 or 2019

Voluntary Incentive Programs



ENERGY STAR Impact - Televisions



TV sales and sizes have increased dramatically in the U.S. over the past 20 years—40 million are projected to ship in 2012, with an average screen size of 50 inches. With ENERGY STAR, electricity use for TVs in the U.S. is 36 billion kWh per year less than it might have been.

Pay-TV/Set-Top Box Milestones



1928 Broadcast TV Launched



1948 Cable TV (CATV) Launched in AK. OR & PA to enhance poor OTA reception



1950s TVs are largely a family leisure activity: broadcast TV still dominant



HBO

1972 **HBO** launches premium pay TV content 1977 - 1979 SelecTV and OnTV launched





1994 DirecTV launched



1996 Digital Grand Alliance launched **HDTV**



2006

AppleTV

launched

2010 iPad launches. starts second screens





1920s

1940s

1950s

1960s

1960s

TV and satellite

broadcast

become a key

element of the

Vietnam War

1970s

1980s

1987

Echostar applies

for license as a

Direct Broadcast

Satellite (DBS)

business: first

satellite launched

In 1995 ECHOSTAR

2000s

2010s

2009

RVU Alliance and

Smart TVs create.

potential for STB/TV

integration

Future

1990s



1999 Tivo launched. begins DVR fascination



Cloud-based content available anywhere, anytime, any place

Future

1962 Cable top 850,000 subscribers. FCC freezes growth of cable systems in major markets



1978 Television Receive Only allows reception in homes

BOXEE

2012 Boxee announces unlimited cloud storage

Sources: Various, Wikipedia, NCTA

Incentive Program Considerations



Coordination with Title 20

- Potential coinciding launch timing by early 2015
- Potential for baseline savings shift

Baseline Savings Uncertainty

Pilot needed to collect baseline data for work paper development

Delivery Strategy

Regulatory challenges to midstream approach

Attribution Risks

- Demonstration of program influence on procurement plans
 - Large service providers typically buy on a national scale
 - · Large service providers influence STB and system design
- ENERGY STAR 50% procurement commitment influences baseline
- Cable commitment influences baseline

Cost Effectiveness Risks

Limited visibility into incremental cost of efficient STBs

Ongoing Utility Activities



Codes and Standards Activities

- Title 20 CASE Proposals
- Voluntary Agreement and Federal Standards Support



SCE STB Proposed Pilot for 2013-2014



- OpenADR enabled PCTs
- SmartConnect[™] enabled STBs as IHDs



- Statewide IOU PLA Program Coordination
- CEE STB Working Group
- UCI CalPlug STB Research



















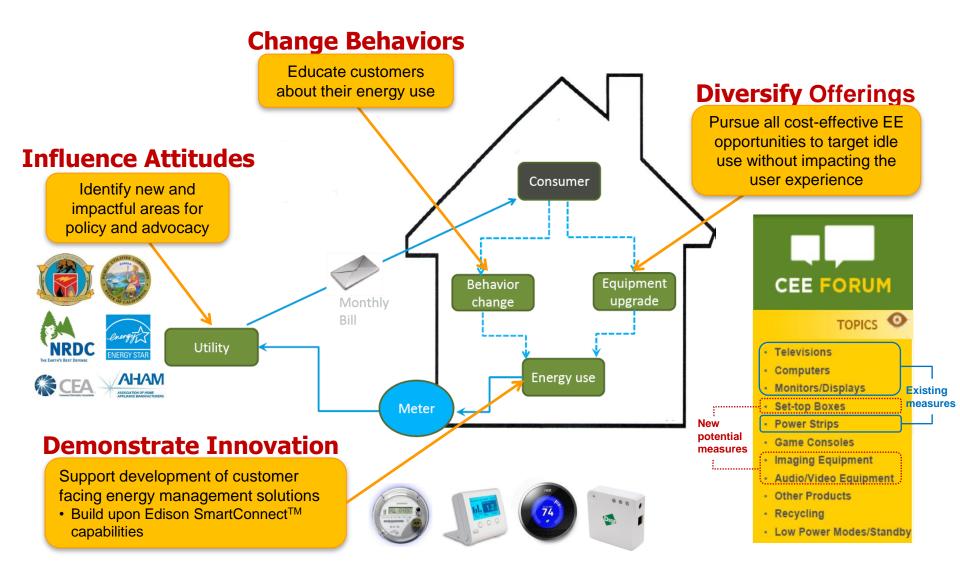








Energy Management Opportunities



Set-Top Box Intervention Opportunities



Upgrade to ENERGY STAR 3.0

Improve efficiencies

- Early retirement
- Replacement on Burnout
- Recycling

Offer add-on services

Offer energy management solutions (smart strips, TV brightness adjustment, PC power management) Replace standalone DVRs with multi-room DVRs

Reduce aggregate consumption



Upgrade to ENERGY STAR 4.1

Attack idle use

- Upstream incentives
- Midstream incentives

Educate users

Co-market EE/DR program opportunities & awareness

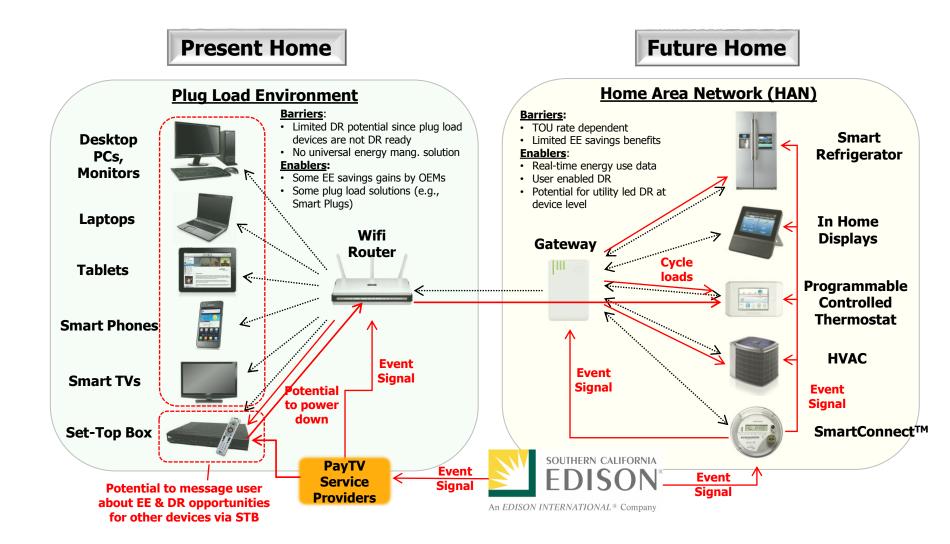
Innovate market

Use STBs as a bridge to Demand Response solutions

STBs represent a new channel opportunity beyond incremental energy savings

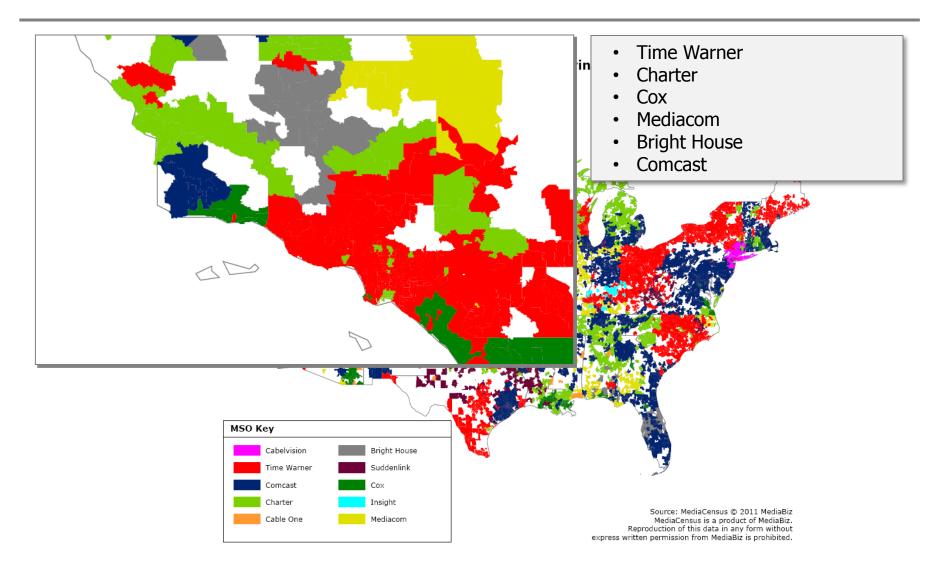


Ex: Energy Management Opportunities





Top Cable Providers in SCE Territory



Next Steps



1. Engage pay-TV service providers now to explore pilot opportunities in 2013

- Explore data collection needs for work paper and program development
- Identify baseline savings potential for ENERGY STAR Version 3.0
 - Accelerated replacement or replacement on burnout, whichever is most cost effective
 - Determine if a mainstream EE program can be cost effective
- Explore additional opportunities where feasible
 - Add-on services for advanced power strip direct installation, TV brightness adjustments
 - Multi-room DVRs, add-on services and Version 4.1 STB research
 - Upstream opportunities with manufacturers

2. Continue ongoing coordination with stakeholders

- Identify common barriers, research needed, and opportunities
- Develop collaborative timelines to balance incentive and codes and standards
- Encourage further industry innovation and ENERGY STAR progression

Thank-You





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