



total energy and sustainability management

STB MARKET AND METRICS

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February 1st, 2012



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Agenda

- Market Overview
- Efficiency Metrics and Goals
- EU and Canadian Policy

Set-top box 101

- Major service providers (SP)
 - Influence set-top box (STB), headend and overall system requirements
 - Own deployed STBs and control installation, configuration, software updates, repair, refurbishment, retirement and resale
 - Have limited choice of equipment manufacturers
- Typical consumers can choose between one cable, two satellite, perhaps one Telco and a variety of internet-based video service providers
- The customer pays the electric bill, not the service provider – often \$2 per month per STB
- Primary STB distribution model:



Source: Ecos Consulting interviews with industry stakeholders.

Service Providers

Table 3.5.1 Major Pay-TV Service Providers (2011)

Service Provider	Segment	Pay-TV Subscribers
Comcast	Cable	22,525,000
DirecTV	Satellite	19,433,000
Dish Network	Satellite	14,056,000
Time Warner Cable	Cable	12,235,000
Cox Communications	Cable	4,838,000
Charter Communications	Cable	4,413,000
Verizon (FiOS) Communications	Cable [†]	3,848,000
AT&T	IPTV	3,407,000
Cablevision Systems	Cable	3,284,000
Bright House Networks	Cable	2,139,000

[†] Verizon FiOS provides TV on a fiber optic backbone, using cable network technology inside the home. AT&T U-Verse uses IPTV technology to deliver content via high speed DSL.

*Source: National Cable Telecommunications Association.*⁶

Manufacturers

Table 3.4.1 Major Pay-TV STB Manufacturers (2010)

Company	Market Share	Cable	Satellite	IPTV
Motorola	35%	x		x
Cisco	18%	x		x
Pace	18%	x	x	
EchoStar	12%		x	
Other	18%		N/A	

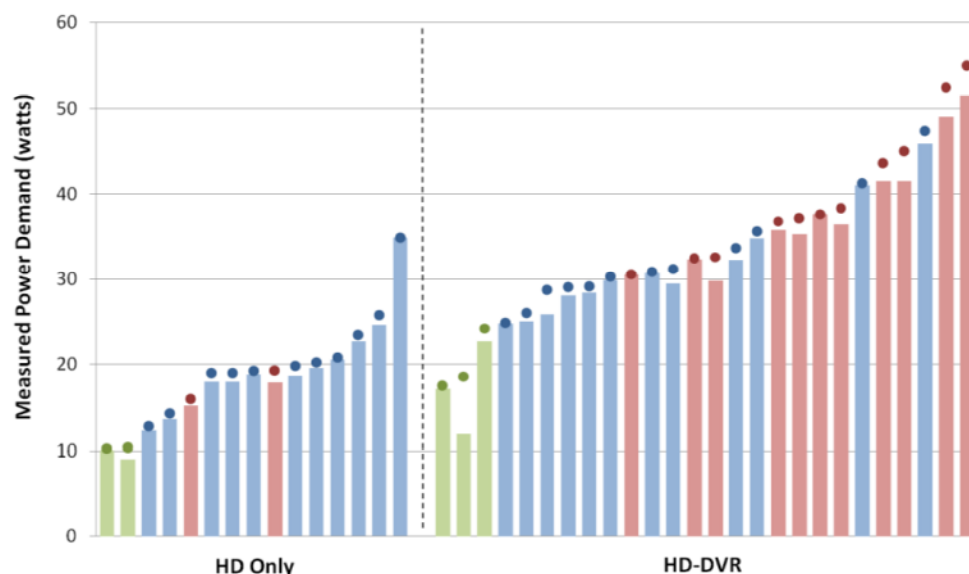
Note: These market shares are for U.S. STBs only.

Source: IMS Research.⁵

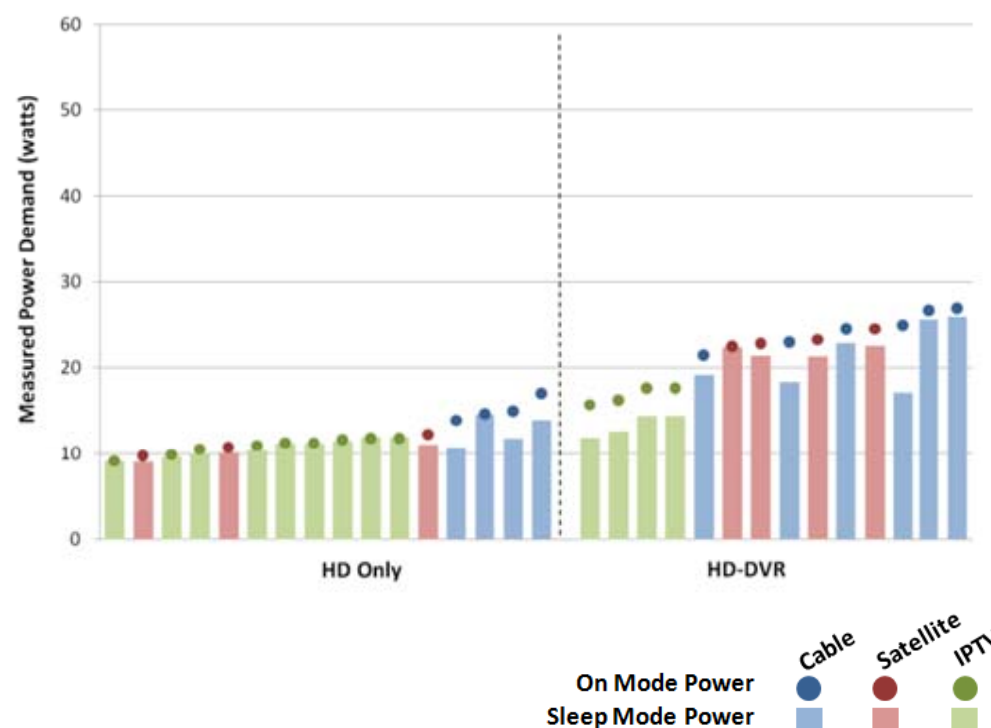
Comparison of 2010 NRDC Test Data and 2011 ENERGY STAR Qualified STBs



NRDC'S 2010 SURVEY OF ENERGY CONSUMED BY U.S. SET-TOP BOXES



ENERGY STAR OCTOBER 2011 QPL



Early 2010 Newer Stock

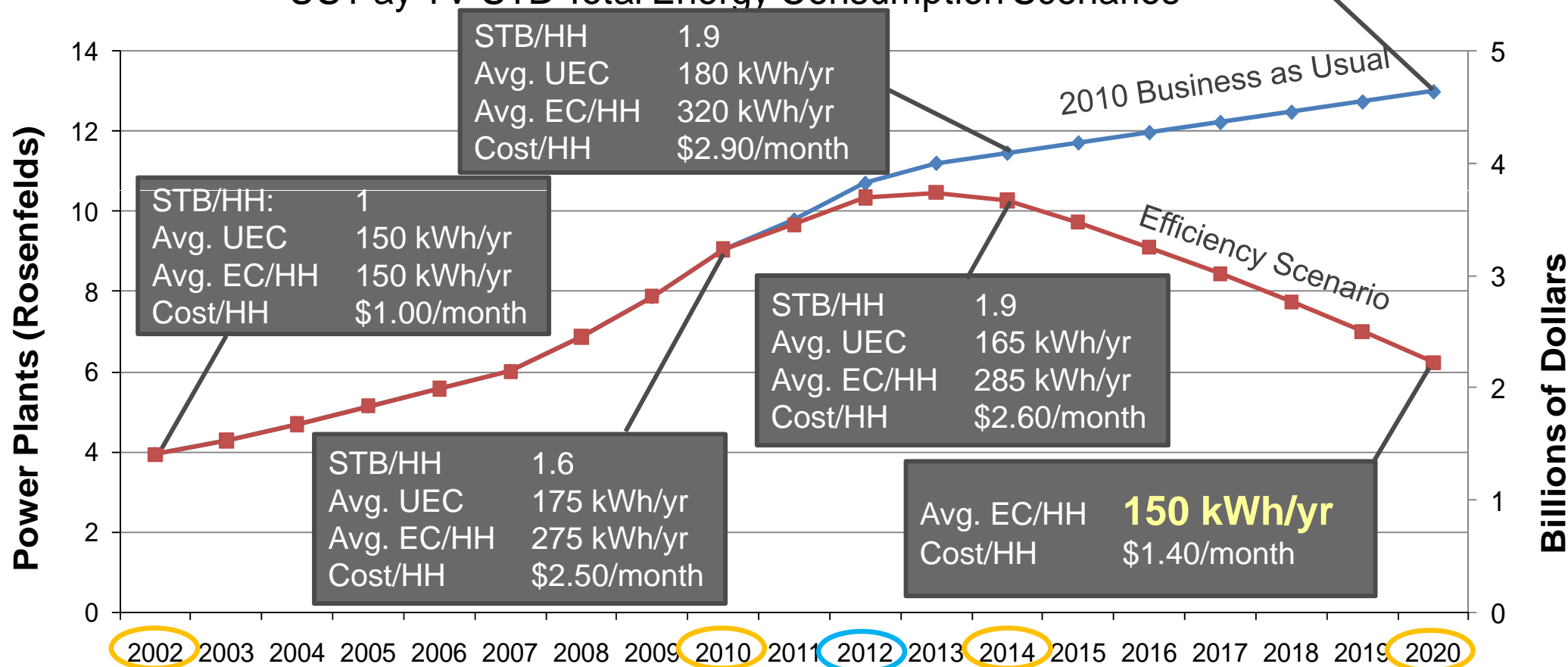
Late 2011 ENERGY STAR v3 Qualified STBs

Efficiency Scenario



Avg. EC/HH **315 kWh/yr**
Cost/HH \$2.90/month

US Pay TV STB Total Energy Consumption Scenarios



Does not include cable DTAs. Business as Usual maps preliminary projections from NRDC 2010 forward. The Efficiency Scenario plots ENERGY STAR V3.0 adoption from 25% in 2011 to 100% in 2014 followed by a linear reduction in Energy Consumption per Subscription Household (EC/HH) to 150 kWh/yr in 2020. UEC = Unit Energy Consumption.

Feasibility of 150 kWh/yr/HH

- American households watch 5 hours per day
- DVR penetration is about 40%
- DVR Households watch about 1 hr per day of DVR playback

	On			Instant-wake Sleep			Delayed-wake Sleep			TEC
	Watts	Hours	kWh/yr	Watts	Hours	kWh/yr	Watts	Hours	kWh/yr	kWh/yr
HD-DVR	25	9	82	4	15	22				104
HD-Client	7	3	8	2	21	15				23
HD-Client	7	3	8	2	21	15				23
Total			98			53				150

Thank You!

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