

ENERGY STAR® for Set-Top Boxes



Specification Update and Proposed Strategy

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Initial Goals for Revising Tier 2



- More robust specification
 - Increased number of partners/products
- Increased energy, carbon, and monetary savings
- Create a Sleep Mode for set-top boxes
- Increase retail presence for set-top boxes
- Ensure specification is technically feasible and cost-effective
- Focus on high-end cable and satellite models



Findings



- Introducing Sleep Mode would likely require complete redesign of service provider networks
 - Would need support from MSOs
 - Resource intensive endeavor
- Key technical issues include:
 - Continual updating of electronic program guides
 - Channel map updating
 - New security keys
- Very little variation in power consumption of set-top boxes
 - Amongst different manufacturers and between existing operating modes
 - Average power consumption, across modes and manufacturers, is about 20 watts
- To effectively address set-top boxes need:
 - Strategy to engage MSOs
 - Technological advances to allow set-top boxes to enter Sleep Mode without losing any functionality

Strategy Under Consideration



- Suspend current ENERGY STAR specification for set-top boxes
 - Lack of power consumption differentiation amongst products from various manufacturers
 - Very limited savings potential unless service provider networks completely redesigned
 - Lack of participation in the program
- Focus on developing a specification for digital converters *only*

Why Only Digital Converters?



- Network issues not a problem
 - Sleep mode is feasible
- Great interest in these products from international energy-efficiency community
 - At May 2004 IEA workshop, it was agreed to take coordinated and accelerated actions to improve the efficiency of these low-functionality set-top boxes
- High projected sales if FCC rulings regarding broadcast conversion take effect in 2007, as expected
 - California Energy Commission already examining possible standards on these products