

# Opportunities and Challenges with Set-Top Boxes

ACEEE National Symposium on Market Transformation

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- Background
- Program design & influence by market actors
- Program sponsors & benefits of utility collaboration
- Early successes and challenges

- Electronics are identified as a growing area of the overall household energy use
  - 11-13% of household energy use
  - Average home has 25 electronics products



BC Hydro Conservation Potential Review (CPR) identifies savings from all electrical efficiency technologies or measures

Major categories of electronics create significant energy savings potential, between 33 to 46 GWH/yr by 2016

- More than 60% of savings potential from addressing standby losses in television peripherals

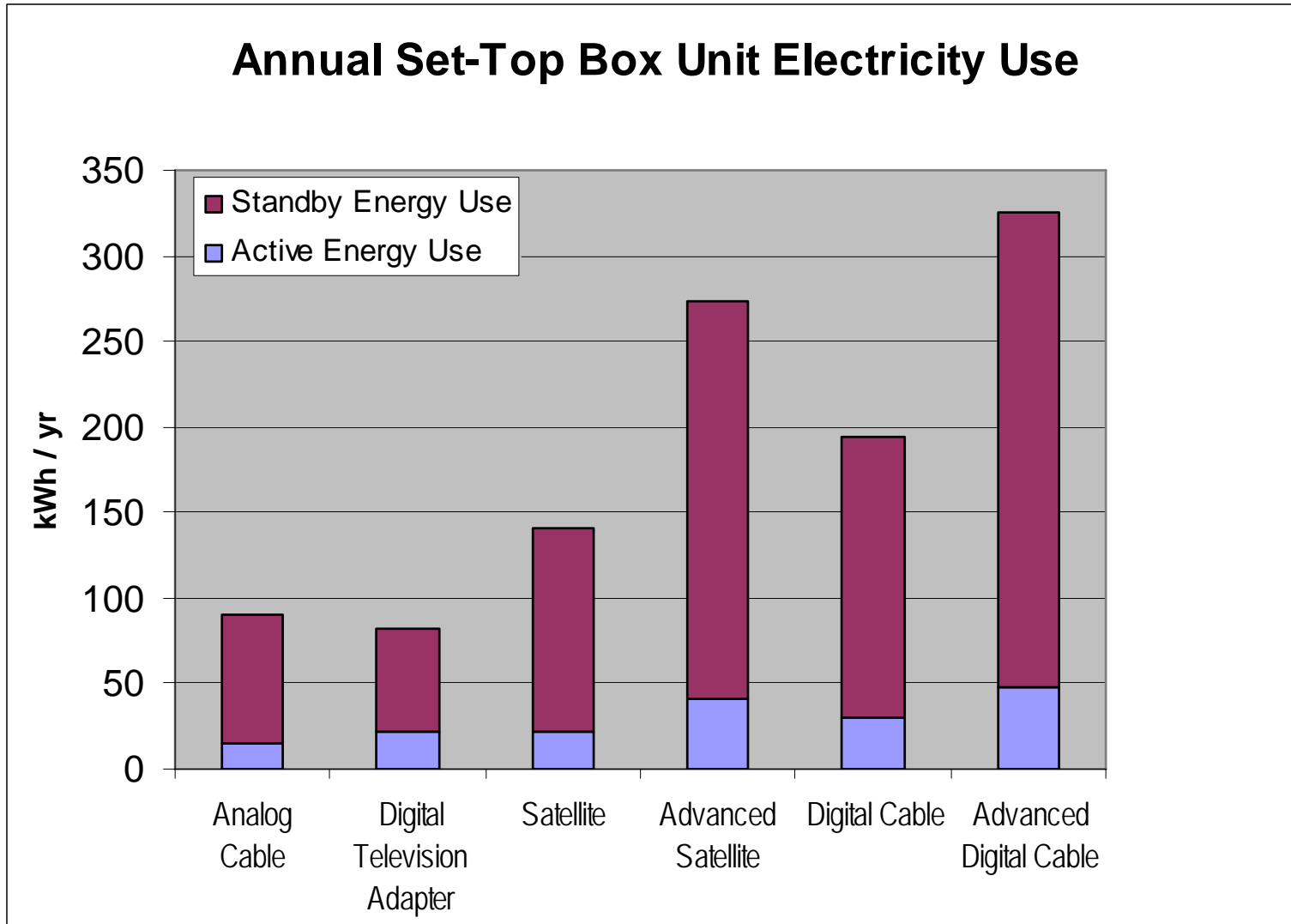
# Set-top Box = BIG energy consumer **BChydro**

- Set-top box is a device that allows cable and satellite signals to be viewed on a television
- Large consumers of standby losses



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Source: Technology and Market Profile: Consumer Electronics, Marbek Resources Consultants, 2006

- In January 2009, ENERGY STAR announced specifications for:
  - Set-top box
  - Service provider

Potential energy savings:

Set-top Box	ENERGY STAR	Non-ENERGY STAR
High definition cable with DVR	165 kWh/yr	325 kWh/yr

- Understand the market actors
- How to impact the market: downstream, midstream or upstream

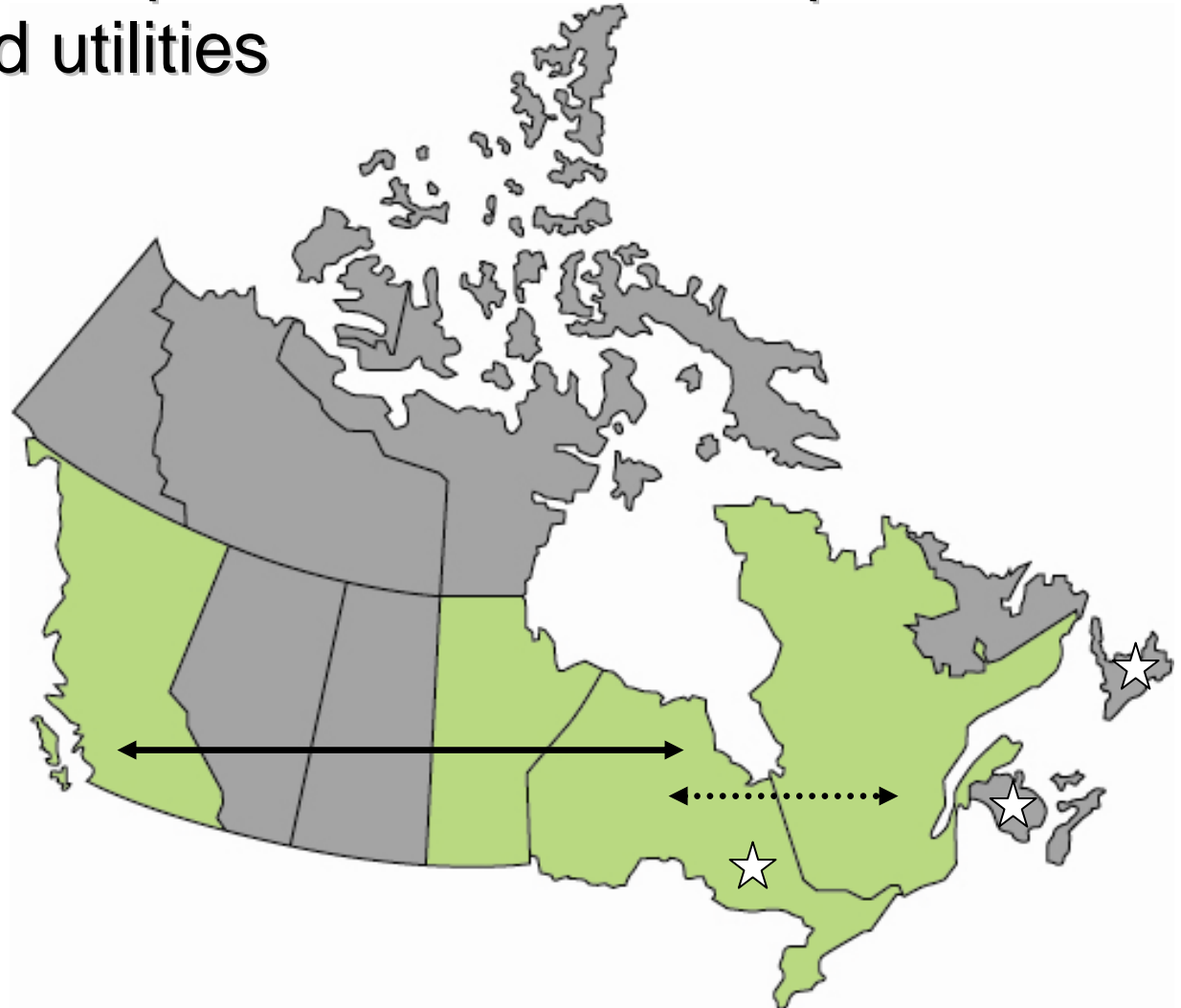
- **Customers**

- Limited choice of service providers
- Limited choice of hardware
- Rent or purchase hardware
  - Rentals are replaced more frequent, upgrade functionality
  - Purchasers tend to keep product longer and move unit to another TV in the home

- **Manufacturers**
  - New product models every 2-3 years
  - Some new product meets ENERGY STAR specification
  - Design set-top box to meet needs of service providers
- **Service providers**
  - Long term relationship with manufacturer for supply of set-top boxes
  - Problematic to switch suppliers
  - Sell or rent units to customers

- Service provider decides what is stocked and sold or rented to their subscribers
- Direct efforts at the channel to result in the biggest market impact = service provider

- Service areas for providers cover multiple provinces and utilities





Natural Resources  
Canada

Ressources naturelles  
Canada

- Large scale effort will advance market transformation
- Fewer points of contact
- Strengthen influence on and ability to negotiate with service provider

- Utilities are benefiting from the shared learning
- Cable service provider decisions will influence the market
  - Satellite and internet protocol providers will follow
- Utility collaboration will boost participation

- Information sharing
- Longer than expected to enter the set-top box market
- Legislation and opportunity

- Review Feasibility Assessment report
- Discuss program options including implementation and recruitment

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