

# Program Planning & Design

## One Approach: A California Utility Program Model for Consumer and Business Electronics

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*Workshop on Energy Star<sup>®</sup> Electronics Program Design  
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***Pacific Gas and  
Electric Company™***

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# Outline

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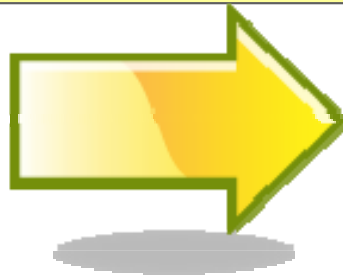
- Building a program in your territory
  - Why electronics?
- Leveraging your position with other utilities
  - PG&E experience
  - Benefits of collaboration



# Electronics Market is Growing Rapidly

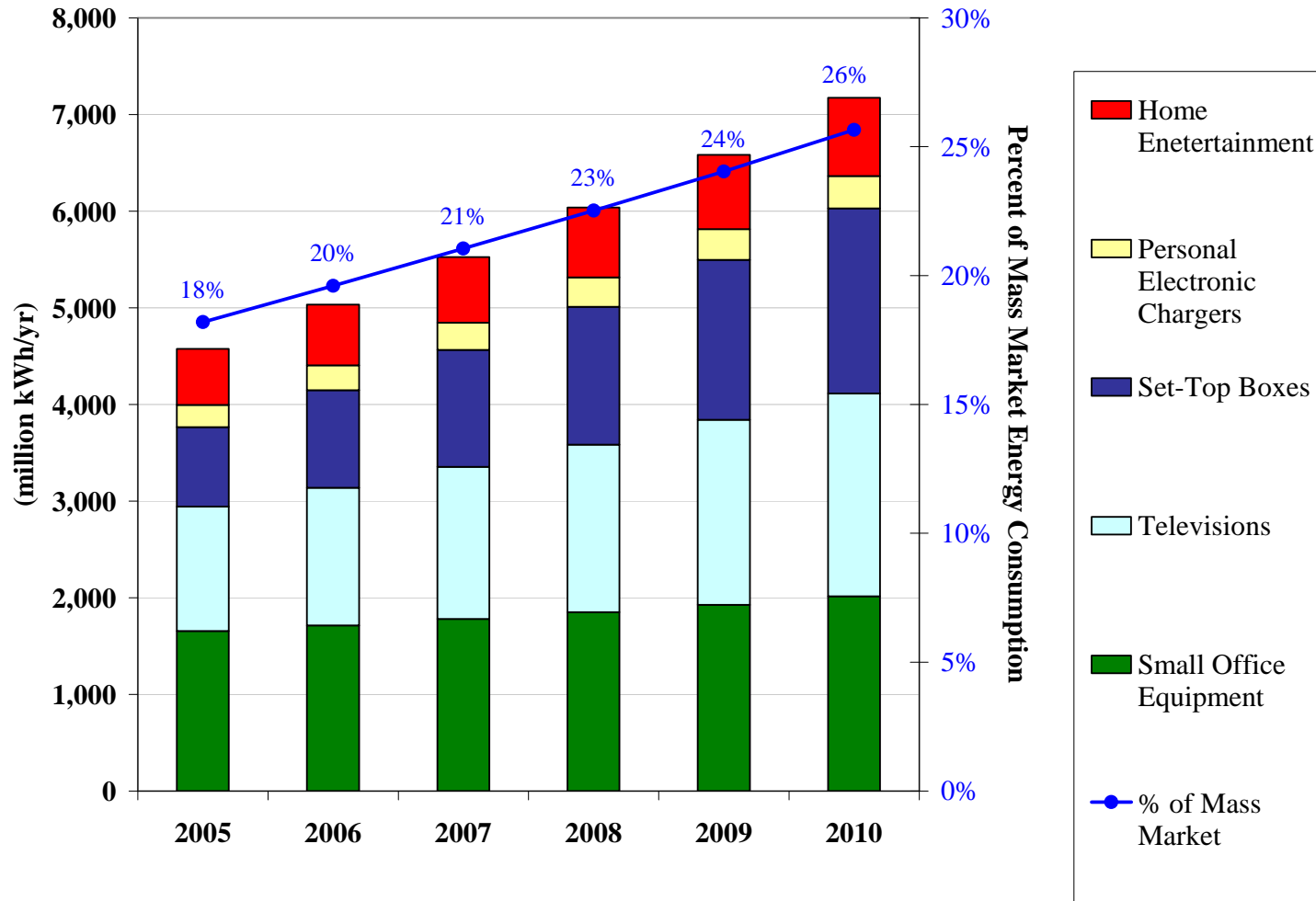
Electronics has become a major part of the global economy in our lifetime.

- Average US household now owns 25 consumer electronics products
  - Installed base of billions of electronic devices in the home and the office
- Technological advances lead to rapidly changing features and low prices



# Electronics Growth Reflected in Growth in Electricity Use

## PG&E Mass Market Customers



# Wide Variety of Electronics Available

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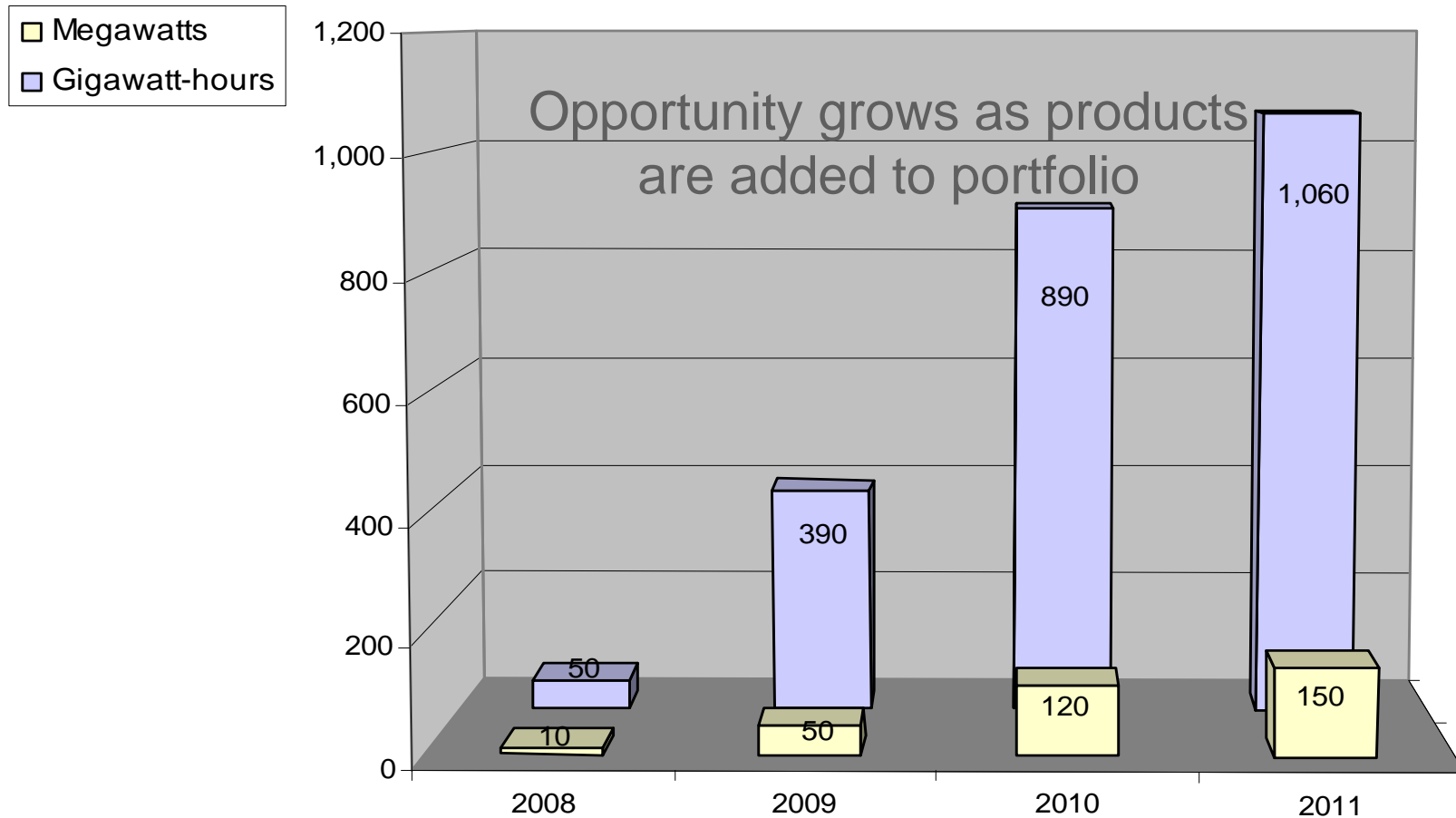
## Thousands of different products in many categories

- Video, audio, game console, computer and telecommunication products for the home
- Computer hardware, imaging, video, and telecommunication products for businesses

## Consumers choose from a number of sales channels

- Retail stores serve mass market consumers
- Direct purchase from manufacturers, wholesalers or value-added resellers to businesses
- Sales through online channels increasing rapidly

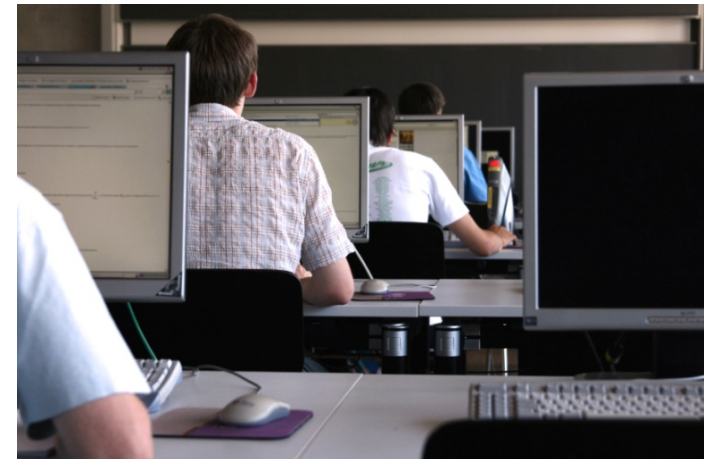
# Major Categories of Electronics Create Significant Energy Savings Potential in PG&E's Territory



Total potential savings (*all products sales are most energy efficient products*) from major categories of business and consumer electronics including televisions, desktop computers, monitors, set top boxes, and other home and business electronics.

# Early Programs in California Addressed Small Segments of Market with More Traditional Models

- **80 Plus & ENERGY STAR® efficient desktop PCs and servers** – manufacturer program by Ecos Consulting
- **ENERGY STAR + 25% efficient LCD monitors** – retail program with Energy Solutions
- **Network PC Power Management Software** – by vendors – up to \$15/PC purchaser rebate





# Addressing the Large-Scale Efficiency Opportunity in the Electronics Market

- Achieving large portion of the potential energy savings in electronics faces a number of challenges, including
  - Dynamic nature of the electronics technology
  - Wide variety of end-uses
  - Relatively low energy consumption of each unit
  - High volume sales – millions of TVs and computers in PG&E territory alone
- Traditional “downstream” utility models for energy efficiency program less effective for electronics than for major appliances
- Electronics program strategies take into account the needs of the market as well as the needs of the utility

# Electronics Programs Require Different Strategies

## Understanding the electronics market and its players points to an “upstream” model

- Unit energy savings potential for electronics is relatively small and unlikely to motivate most buyers’ decisions

- Dollar savings per unit for electronics are small (less than \$10 per year) compared to price of electronics (e.g. \$400 - \$2,000 for a computer)
- Small unit energy savings only justify small end-user rebates, which provide limited incentive and result in significant breakage

- The impact of channel actions on customer buying behavior is more important than consumer rebates

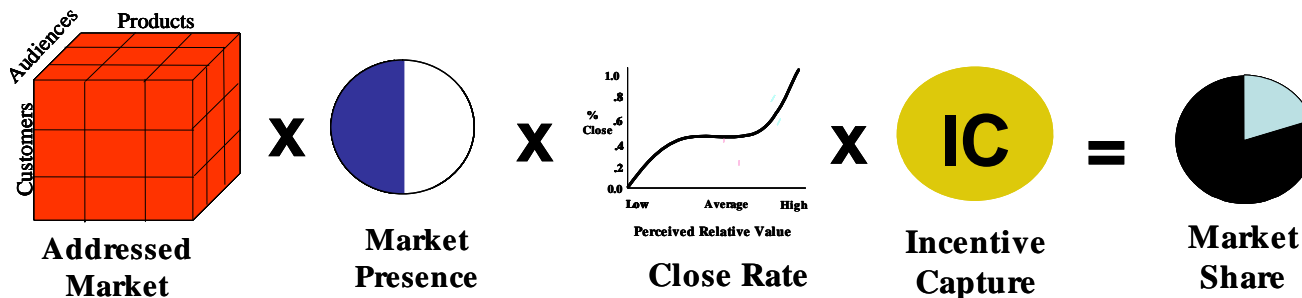
- Manufacturers and the retailers’ buying organizations decide what is stocked and sold
- Financial incentive to channel may have significant impact on product line profitability

# Strategic Objective of Electronics Program is to Maximize “Market Share”

Savings Opportunity in PG&E territory is more than 2,000 GWhr for the 2009 to 2011 program

To achieve a targeted market share of 15 to 25% of the opportunity

- Create addressed market with product portfolio of sufficient scope
- Impact market presence by engaging channel partners with significant shares of the market
- Influence close rates – how often customers choose the energy efficient option – with marketing and education



# Upstream Programs Have a High Impact on Market Share

**Manufacturer**

- Motivate manufacturers to provide an EE product
- Motivate manufacturers to price EE products more competitively

**Medium Impact**

**Channel**

- Motivate a higher percentage of channels to sell the EE offering
- Motivate stores to participate in the EE program
- Impact the percent of products in a category that are EE
- Impact close rate through store level education
- Impact close rate through financial incentives

**High Impact**

**End User**

- Motivate end-user purchases of EE products through financial incentives and education

**Low Impact**

# Strategy Drives Program Design

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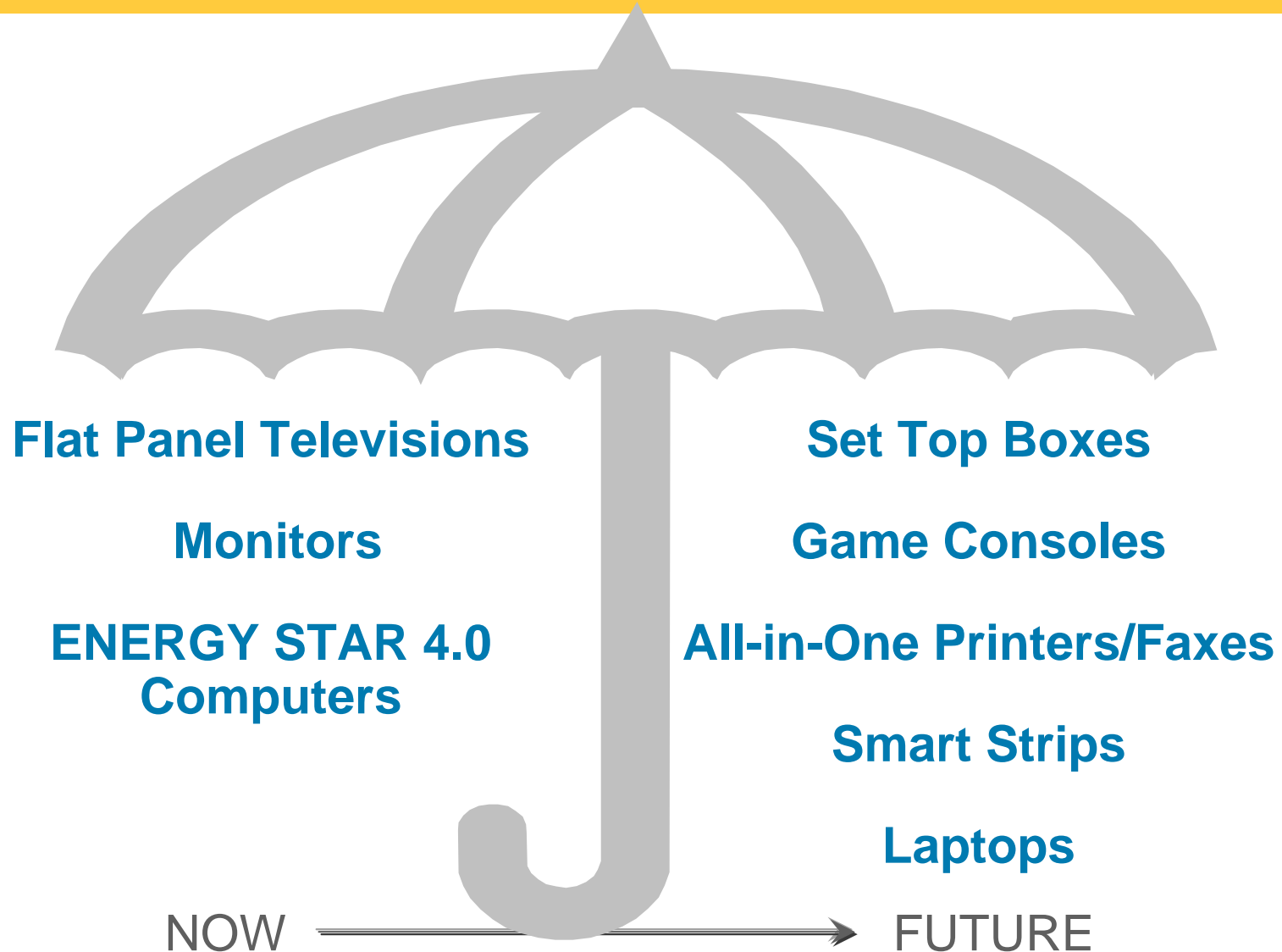
- Electronics program needs to be designed to create value for partners as well as end-users and utilities
  - Increase benefits
  - Decrease costs
- EM&V must meet regulatory requirements and channel partner needs.
- Program design, planning and implementation must take into account retail and manufacturing partner needs

# Key Elements of Program Design

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- Target Markets
- Energy efficiency measures – electronic products
- Incentive levels
- Partner requirements and contracts
- Evaluation, Measurement and Verification (EM&V)
- Marketing
- Support organization

# Program Includes a Portfolio of Electronic Products for Consumer and Business Markets



# PG&E Program Design Experience

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- Scope of opportunity defined during 2006 and 2007 by Emerging Technologies group
- Strategy created late 2007
- Well-defined product development process (CLIP) followed to develop and launch program
  - Identify and validate measures
  - Develop program elements
  - Build teams
    - Development team
    - Execution team
  - Engage partners through account development
  - Project management



# PG&E Team Members

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- Technical experts
  - Develop work papers documenting energy saving benefits of measures
- Account developers
  - Establish relationships with partners
- Legal
  - Structure mutually acceptable participation agreements
- Evaluation, Measurement and Verification (EM&V)
  - Consider EM&V from the start of the effort
- Marketing
  - Cooperative efforts with partners

# EM&V Influences All Elements of Program Design

- Documentation of per unit energy savings for energy-efficient electronics prior to launch of new measure
- Data collection and reporting needs for EM&V in an “upstream” model
  - Channels need to maintain customer confidentiality with sales data
  - Tracking of sales at zip code level amenable to partners and there is regulatory precedence
  - Out-of-territory and/or prior year sales data as benchmarks
  - Most partners have data systems in place to satisfy measurement requirements
- Participation agreements contain data and reporting requirements
- Attribution studies at channels verify program impact; investigating the necessity of end-user attribution

# Importance of Account Development

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- Account development sells the concept of a utility electronics program to potential partners
  - Establishes relationship with decision makers and the basis for ongoing account management
  - Identifies partner needs
  - Confirms appropriateness of measures and incentive levels
  - Communicates EM&V requirements
  - Develops mutually acceptable contractual conditions
  - Initiates coordination of marketing activities
  - Provides mechanism for attribution through documentation of account development activities; evidence of how and why channels changed behavior as result of program

# Account Development Activities Uncovered

## Common Needs of Channel Partners

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- Programs need to be national to provide appropriate scale and scope
- Reasons to participate are image as well as economic
  - Supports green initiatives
- Participation should not unreasonably increase partner costs or time commitments
  - Buyers and product managers have limited time to participate in any programs that are not their core jobs
- Program implementation and administration needs to be consistent with their business models and planning cycles
  - Retailers and manufacturers planning varies by company and product line
- One size does not fit all: program needs to be flexible to adapt to different business models of partners

# Currently In Conversations With...

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# Program Acceptance is Widespread

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- Major computer manufacturers interested in broad adoption
- Major retailers are changing product offerings to accommodate program
- OEMs and retailers are willing to share sales and other data for program evaluation

# Program Impact!

## Efforts to date generating positive response.....

“Good news in support of this program I have picked up our first ENERGY STAR desktop. ...the program is leading to some real changes.”

Computer Buyer - national retailer

“We made a decision to move forward with an engineering change on our LCD TVs for changing to an “eco” panel from a different panel fabricator. A significant factor in making this decision was our desire to ensure this size of television is compliant with the California Utility program.”

VP / GM - national retailer

# Program Design and Execution Strengthened by Other Partnerships

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- Coordination with ENERGY STAR, CEE, and CEC and for sound energy efficiency criteria for voluntary programs
- ENERGY STAR brand valued by retailers and manufacturers and well-recognized by consumers
- ENERGY STAR interested in co-branding with utilities



# Near-term Program Objectives

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1. Launch business computing pilot in October
2. Launch retail channel pilot for computers, monitors and televisions in November
3. Broaden program channels and products in early 2009
4. Assess pilot and launch program in mid-2009

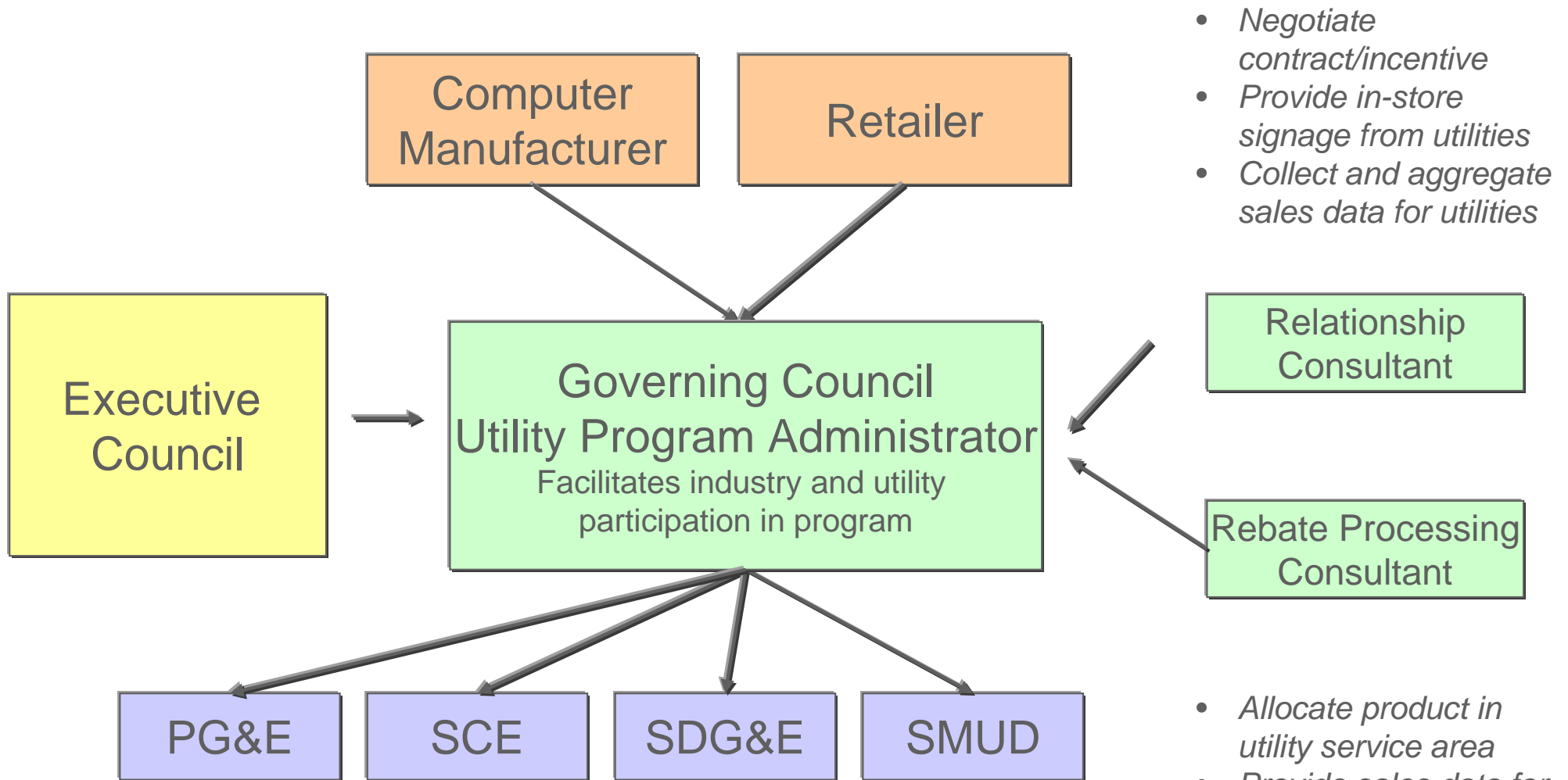
# Program Basics

- Contracting directly with major manufacturers and retailers to deliver upstream/midstream incentives for energy-efficient consumer electronics

Product	Incentive
Flat screen televisions exceeding ENERGY STAR specifications by 15 percent	\$20 per unit
Computer monitors exceeding ENERGY STAR specifications by 25 percent	\$7.50 per unit
ENERGY STAR 4.0 desktop computers	\$8.35 per unit

- Provide education to end-use customers through in-store signage and other marketing vehicles

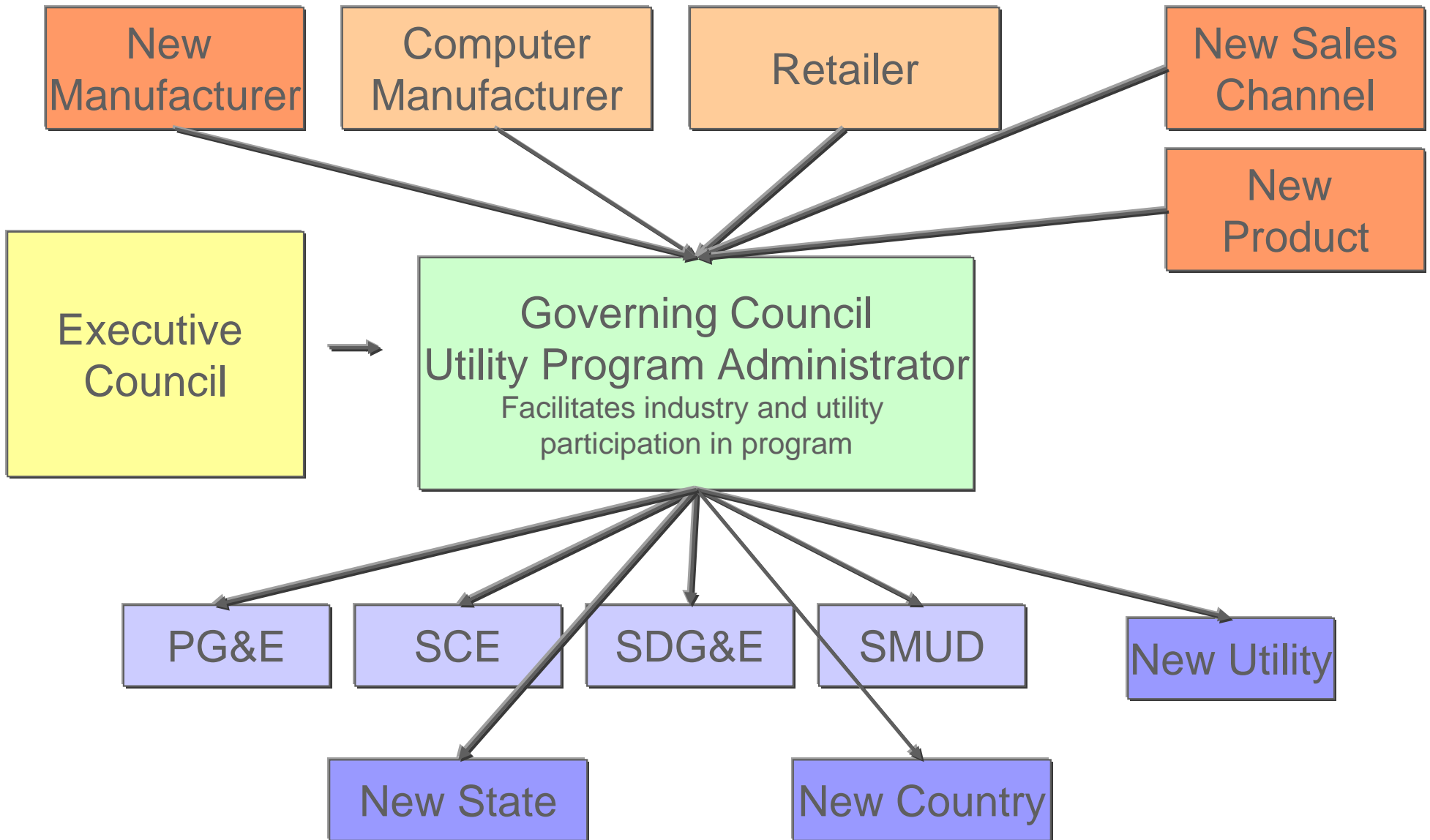
# Program Structure



- *Negotiate contract/incentive*
- *Provide in-store signage from utilities*
- *Collect and aggregate sales data for utilities*

- *Allocate product in utility service area*
- *Provide sales data for incentive payment by utility*
- *Ensure in-store signage is displayed*

# Program Structure: Plug and Play



# Benefits of Utility Collaboration

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- Collaborators can optimize their efforts
  - Fewer points of contact
  - More unified programs across utilities
  - Economies of scale
- Utilities can increase benefit to cost ratios
  - Shared learning reduces costs
  - Consistent programs boost participation by partners and increase sales

# Lessons Learned

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- Entering into this space may take longer than you expect - make sure you have your engineering, measurement and evaluation, marketing, sourcing and law all on board before making external commitments to industry
- Difficult to create contract that requires retailers to utilize incentive dollars for product marketing
- Difficult to plan program before ENERGY STAR specification is released
  - Manufacturers are reluctant to share information before specification is released

# This program is unprecedented!

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- Integration of regions, products, channels, marketing and users
- Easy for both industry and utilities to participate
- National manufacturers and retailers are already on board and taking action
- Large scale effort will truly advance the national market

## For more information...

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