

# Integrated Demand Side Management (IDSM) & Demand Response



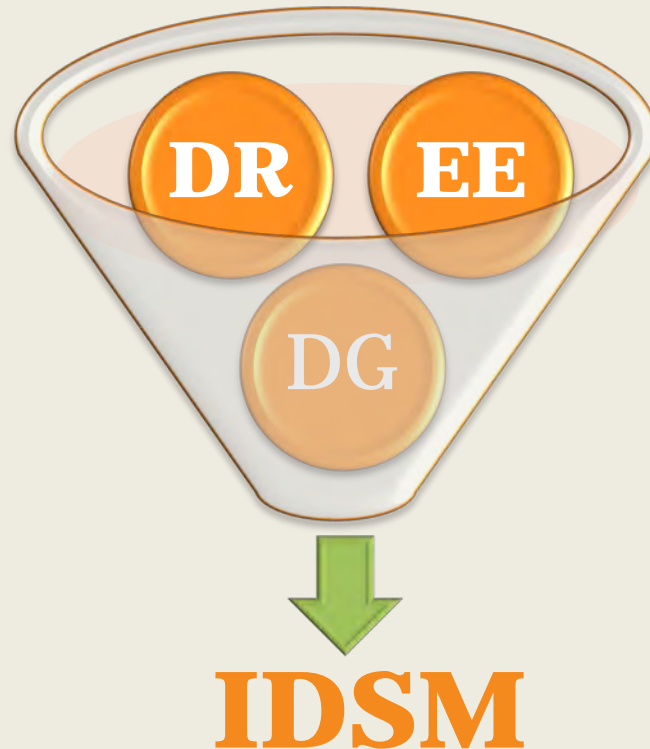
**NOVEMBER 7, 2013**

**PRESENTED BY HOLLY MERRIHEW**

# Integrated Demand Side Management (IDSMS)

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- IDSMS provides opportunities to better integrate energy efficiency (EE), demand response (DR), and distributed generation (DG) opportunities



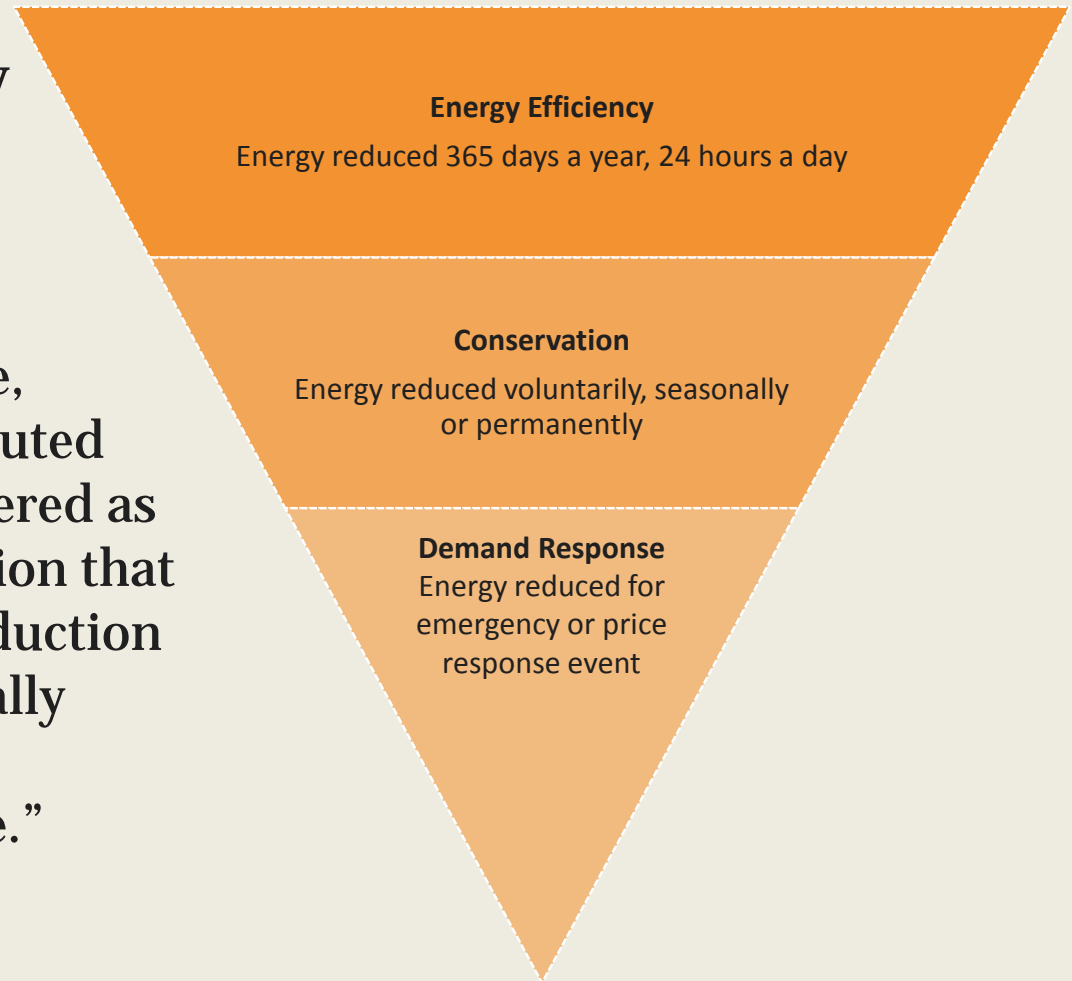
# A CPUC Strategic Plan Directive

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## The California Long Term Energy Efficiency Strategic Plan

“Energy efficiency, energy conservation, demand response, advanced metering, and distributed generation technologies are offered as elements of an integrated solution that supports energy and carbon reduction goals immediately, and eventually water and other resource conservation goals in the future.”

\*[www.CaliforniaEnergyEfficiency.com](http://www.CaliforniaEnergyEfficiency.com), September, 2008



# IDSMS TODAY

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- Commission approved \$23 million for SCE to conduct IDSMS activities in 2013/2014
- A portion will go to fund IDSMS activities within our Government & Institutional Partnership Program
  - Cities
  - Counties
- Remaining will fund other IDSMS programs and pilots

# Our Focus for 2013/2014

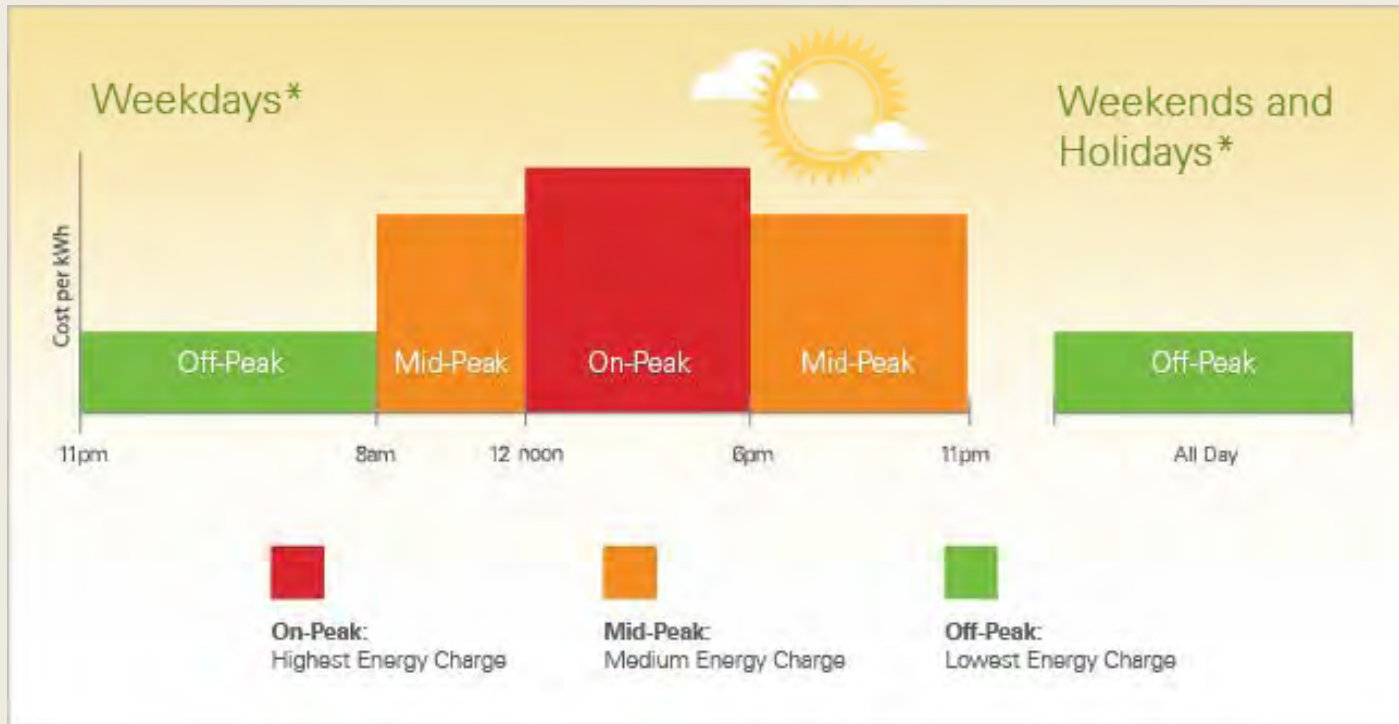
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- **Raise the level of DR and EE awareness and engagement by our customers**
- **Deliver integrated and coordinated DR and EE services and solutions that are specific to our Partners**
- **Build customers' DR resources and skills by providing education and enhanced marketing**

# Time of Use and Demand Response?

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- DR rewards customers for reducing their energy usage during periods of peak demand
  - Typically between noon and 6 p.m.



There are three different Time-of-Use periods:

- On-Peak: Highest Energy Cost
- Mid-Peak: Medium Energy Cost
- Off-Peak: Lowest Energy Cost

# How Does Demand Response Benefit Me?

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- DR participants help keep electricity service costs down while decreasing the impact on the environment by minimizing the need for costly new generation and high voltage transmission lines
- In return DR programs offer:
  - Reduced Energy Bills
  - Bill Credits
  - Equipment Incentives



# Methods of Demand Response

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## Manual

- Requires person to turn off equipment
- Cumbersome and response time is slow

## Semi-Automated

- Person initiates pre-programmed control strategy
- Less cumbersome and more reliable

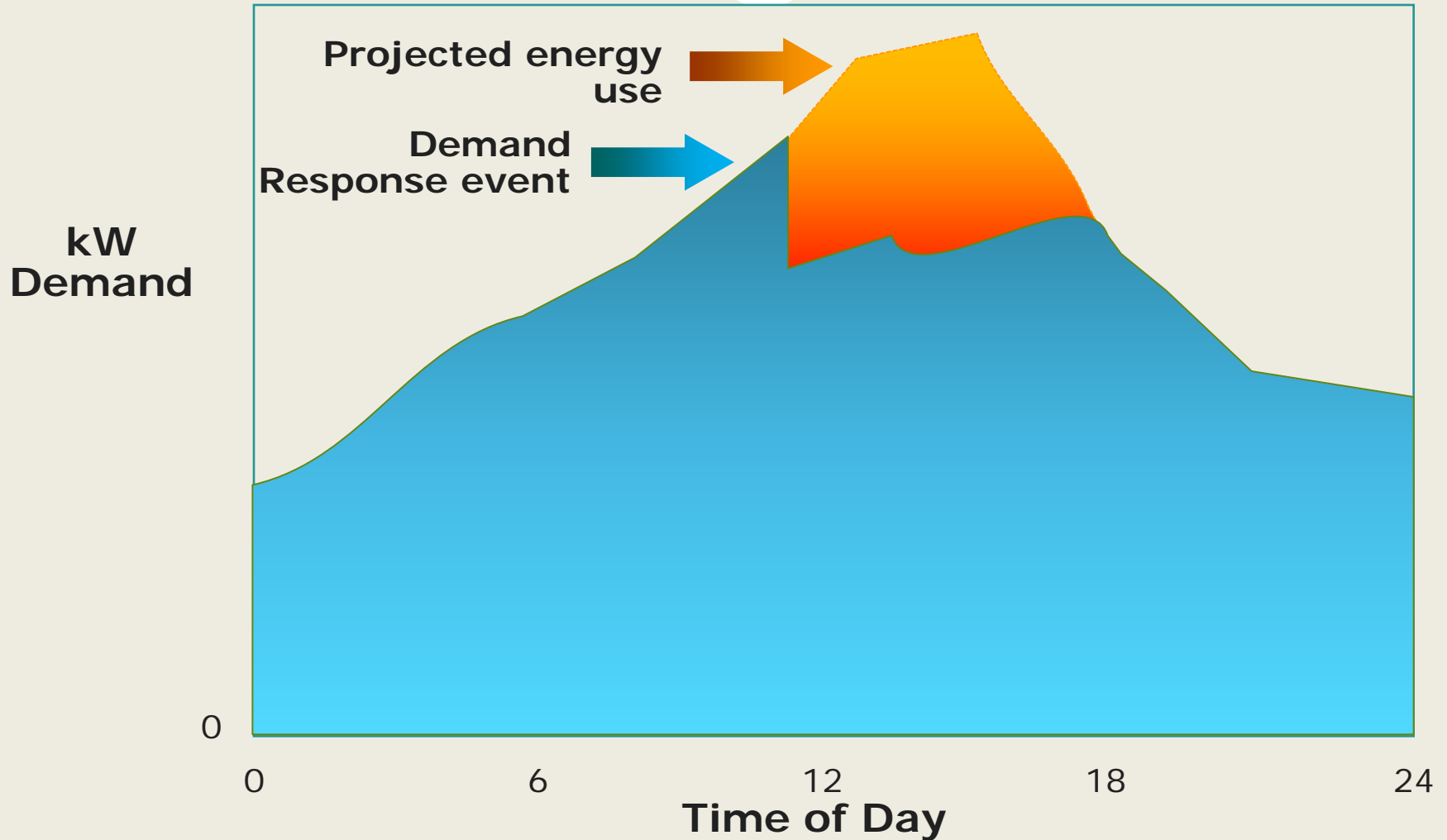
## Automated Auto-DR

- Utility sends signal to Energy Management System (EMS) directly
- Response time and load reduction is almost immediate



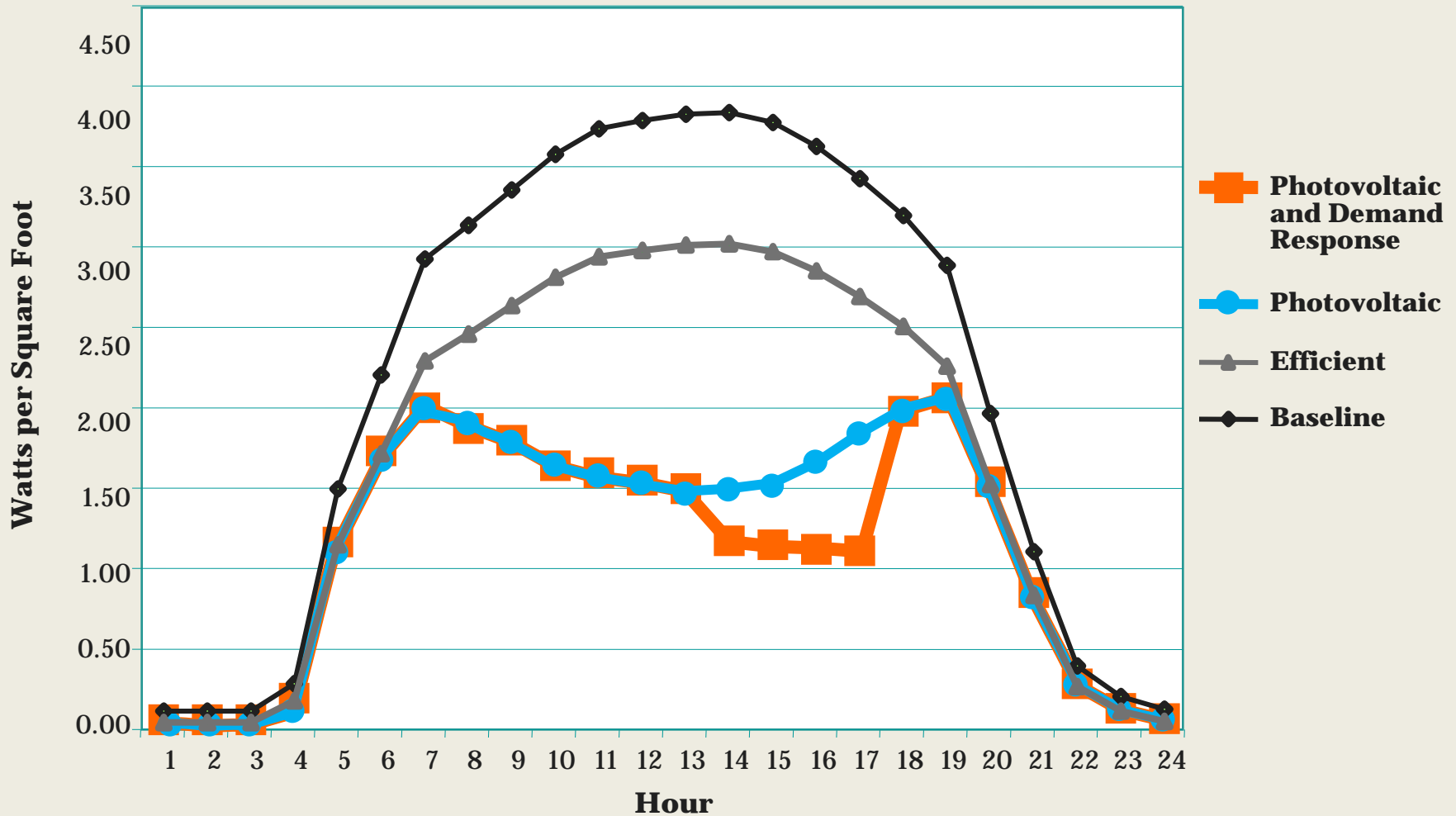
# What Does DR Look Like?

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# IDSMS Approach to Reducing Load

Combined Commercial Cooling and Lighting Loadshape with Efficiency, Photovoltaic, and Demand Response



# SCE's Demand Response Program Portfolio

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- Summer Advantage Incentive Program (SAI)
- Demand Bidding Program (DBP)
- Aggregator Managed Portfolio (AMP)
- Summer Discount Plan (SDP)
- Real Time Pricing (RTP)
- Capacity Bidding Program (CBP)
- Agricultural Pumping Incentive (API)

# Common DR Strategies

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- Reduce lighting by dimming or utilize bi-level lighting
- Reduce non-essential lighting where safe (hallway and ornamental)
- Print off-peak or network to one printer
- Turn-off vending machines
- Shut down redundant elevators
- Turn off all unnecessary equipment (fountains)

# Common DR Strategies

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- Raise thermostat settings (example 76 to 78)
- Air-conditioning
  - Pre-cooling
  - Load cycling
  - Temperature reset
  - Chilled Water Reset
  - Variable Speed Drive

# To Learn More

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**Learn More About SCE's Demand Response Programs:**

[www.sce.com/drp](http://www.sce.com/drp)

**Enroll to Receive Flex Alerts:**

<http://www.flexalert.org/>