



# Integrating Demand Side Management





# The Energy Action Plan (EAP)

## Policy Goals:

- Meet California's energy growth needs while optimizing energy efficiency & conservation.
- Decrease per capita energy use & reduce toxic & greenhouse gas emissions

## “Loading Order” for Energy Resources:

1. Energy Efficiency
2. Demand Response
3. Renewable Generation
4. Cleanest Available Fossil Generation

EAP II adds climate change, RD&D, & transportation to the strategies





# What are Demand Side Programs?

- Energy Efficiency Programs
- Demand Response Programs
- Distributed Generation Programs

Demand side programs are energy management programs designed to reduce energy use on the customer's side of the meter





# Why Integrate Demand Side Programs?

- Avoid lost opportunities
- Achieve market transformation
  - Big Bold Programmatic Initiatives
    - All new residential construction in California will be zero net energy by 2020
    - All new commercial construction in California will be zero net energy by 2030
- Access efficiencies in delivery systems
- Access additional energy efficiency and demand side load reductions.





# Which DSM Program Elements Should Be Integrated?

- Program Marketing
- Program Funding
- Program Administration
- Program Incentives
- Program Delivery
- Program Training
- Program Evaluation





# Areas for Integrating Demand Side Program Elements

- Marketing, packaging & delivery (ex: outreach)
- Operational improvements (ex: integrated audits)
- Optimization (ex: Inclusion of integration enabling equipment such as Smart Meters)
- RD&D
- New partnerships, players, & approaches





## *Ca EE Strategic Plan- Vision (2008):* **Integrated Demand Side Management (IDSM)**

**“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”**

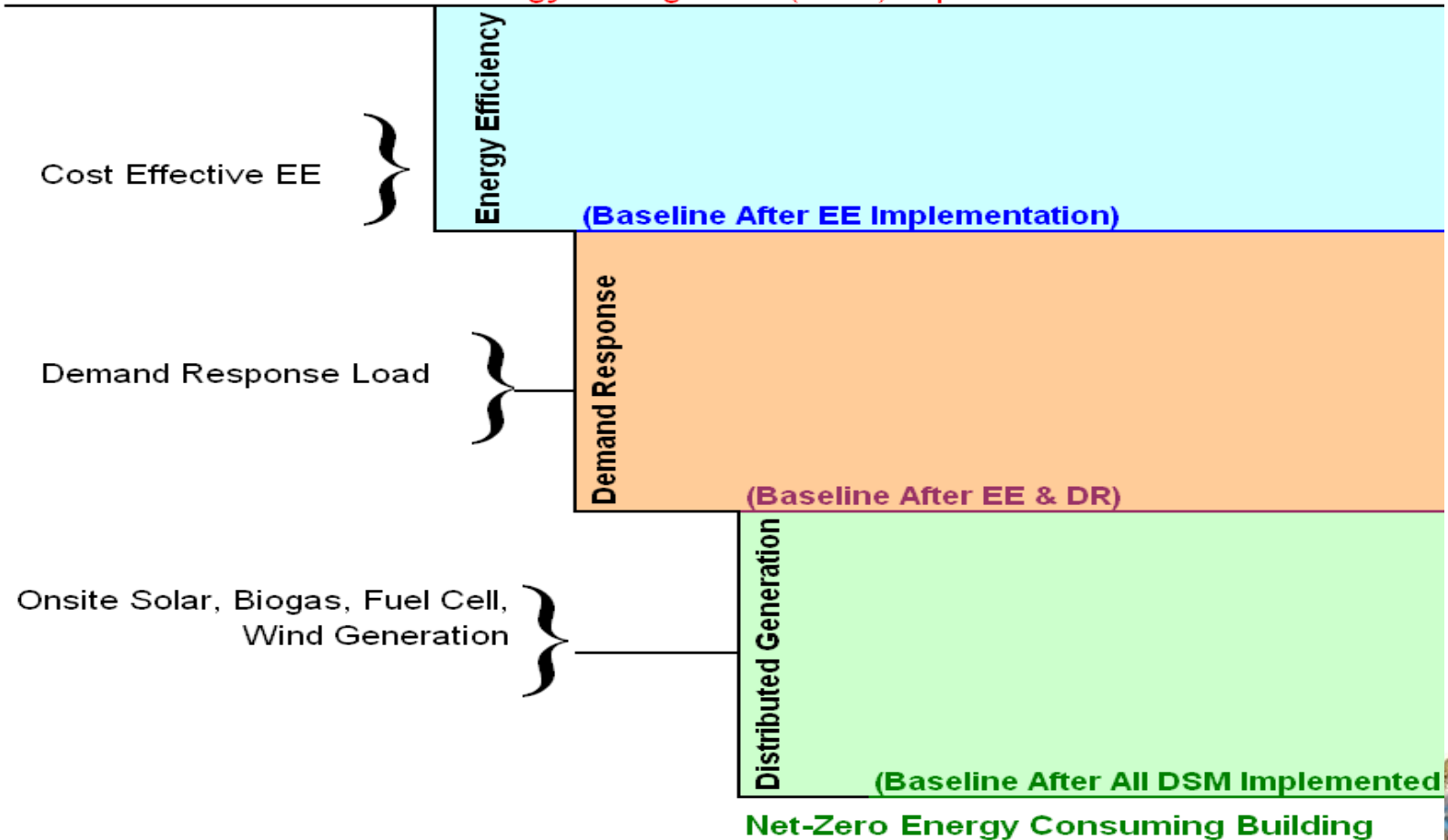
- **Strategy 1:** Market Integrated Demand Side Management (IDSM) opportunities across all customer classes
- **Strategy 2:** Support integrated pilot program in all commercial segments.
- **Strategy 3:** Develop integrated programs across resources including energy, water, and transportation.
- **Strategy 4:** Develop technologies that facilitate or enable IDSM.





# Challenges: Measurement and Attribution of Different DSM Resources

Baseline - No Demand Side Energy Management (DSM) Implemented







## Metrics for Defining Success:

- kW, kWh Savings
- Saving \$
- Avoiding lost opportunities
- Reducing GHGs
- Reducing program administration costs
- Water Savings
- Increase in Sustainable Energy Sources





## D.09-09-047 IDSM Directives

- Cost-effectiveness protocols for integrated projects and programs
- Measurement and evaluation protocols for IDSM programs and projects;
- IDSM enabling emerging technologies;
- Standardized integrated audit tools;
- Integration pilot programs
- Report on IDSM progress;
- Utility Reorg to support IDSM strategies
- Integrated marketing campaigns





# IDSMS Process Evaluation Findings – Positive Findings

- Utility personnel have a good understanding of the concepts of IDSMS.
- Commercial and industrial customers are provided with information necessary to promote integrated projects.
- Development of Online Integrated Energy Audit for Residential and Small Commercial.
- Leveraging AMI Deployment to support rate, cycling, and behavioral programs in the Residential Market Sector.





## Areas for Improvement

- Integrated Pilots should be redesigned to test integration.
- Resolution needed for conflicting program goals for EE and DR.
- Sync timing of EE, DR, and DG program cycles for planning purposes.
- Develop clear definition of IDSM.
- Develop shared funding sources to promote integration of EE, DR, and DG
- Streamline program application and participation processes.





## Next Steps

- The IOUs have revised their Program Implementation Plan for IDSM and are directed to address the findings of the IDSM Process Evaluation.
- The CPUC has clarified that the IOUs can utilize EE funding to support integration activities that include DG and DR to address funding barrier concerns.

Contact: Lisa Paulo  
Energy Division  
California Public Utilities Commission  
415-355-5495  
[LP1@cpuc.ca.gov](mailto:LP1@cpuc.ca.gov)

