Demand Side Programs and the Water-Energy Nexus

Meredith Leigh Younghein, JD
Water/Energy Analyst
CPUC-Energy Division
State Water Resources Control Board
How the current Demand Side Portfolio addresses water-energy

- **Energy Efficiency programs:**
  - “Industrial” Custom projects for water agencies/utilities/districts
    - Target savings in water/wastewater treatment, pump efficiency
  - Local Government and Institutional Partnerships
    - LGPs work with municipal water utilities
    - Institutional Partnerships with large water supply agencies: joint project implementation
  - Agricultural projects for Irrigation Districts

- **Integrated Demand Side Management**
  - Encouraging DR and DG simultaneously with EE improvements

- **Continuous Energy Improvement**
  - Helping water agencies to create and implement strategic energy management plans
Past Efforts on Water-Energy

• Three comprehensive studies regarding the water-energy nexus
  – Leak/loss detection and pressure management
  – Landscape irrigation efficiency
  – High efficiency toilets
  – Ozone laundry
  – More
• All materials can be downloaded via:
  http://www.cpuc.ca.gov/PUC/energy/Energy+Efficiency/Water-Energy+Nexus+Programs.htm
New Energy Efficiency Activities

- Commission Guidance Decision on Energy Efficiency (May 2012)
  - directed IOUs to implement expanded water-energy efficiency programs, including:
    » leak/loss detection and pressurization studies at water utilities
    » Joint water/energy programs for industrial and agricultural customers
New Energy Efficiency Activities, Cont.

- Commission Guidance Decision on Energy Efficiency (May 2012)
  - directed staff to develop a method for analyzing cost effectiveness of programs/measures that save energy by saving water
    - Need to quantify embedded energy in water to calculate potential energy savings
    - Programs for embedded energy cannot be fully analyzed using current tools
Next Steps for Water-Energy Cost Effectiveness

1) Project Coordination Group formed
2) Develop Cost Effectiveness Calculations
3) Propose cost effectiveness framework to Commission for consideration and potential adoption