

DOCKETED

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**Commissioner Catherine Sandoval
California Public Utilities Commission**

California Energy Commission Public Staff Meeting

July 2, 2015 Lynwood, CA





CPUC Jurisdiction

- The Commission has wide reach in California through its jurisdiction over investor-owned energy, water, and telecommunication utilities, common carriers including some pipelines, rail safety and rail crossings, and other utilities and services such as Transportation Network Carriers.
- Jurisdiction over energy providers serving ~2/3 of the state's energy ratepayers
- Jurisdiction over water providers serving ~ 19% of the water ratepayers
- Support for communications and broadband deployment
- Consumer education, low income assistance, and public safety elements across those sectors.





CPUC Energy Efficiency Funding

- CPUC Energy Efficiency Programs: \$1 billion/year
- CPUC Low Income Energy Programs: \$300 million/year
- Pilots conducted pursuant to a 2007 Energy Efficiency decision concluded that the water leak detection pilot program generated high energy savings for the utility due to the embedded energy in water.





CPUC Water-Energy Nexus Proceeding, Cost Effectiveness, Draft Calculator

- Goal: Determine the cost effectiveness of joint water energy projects for investor owned utility ratepayers
 - Estimate the IOU and non-IOU embedded energy savings that result from joint water-energy programs.
 - Assess the benefits that accrue to energy utilities and to water utilities from programs and measures that save both energy and water.
 - Determine if incentivizing measures and programs that save both energy and water is a cost effective use of IOU energy utility funds, and examine other issues and opportunities stemming from the water-energy nexus.





Finalizing the Water-Energy Nexus Tools

- Draft tools were released for public comment on April 29, 2015. Available here: <http://www.cpuc.ca.gov/PUC/energy/Energy+Efficiency/Water-Energy+Nexus+Programs.htm>
- Tool allows evaluation of a measure or suite of measures per energy intensity information at hydrologic basin or more localized level
- Questions:
 - Are they ready for prime time?
 - Does a particular reduction in water use reduce energy use?
 - Who should pay for measures that save both water and energy, especially if tool shows measure meets energy efficiency cost effectiveness test?
 - Future updates and functionalities?





Sample Water-Energy Nexus Cost Effectiveness Tool Run

Example Run by SCE: SCE's Water Leak Detection Pilot: E3 EE Model vs. W-E Cost Effectiveness Model (w/o allocation of budget costs)

City	Gross Measure Cost	kWh Savings	kW Savings	TRC
City 1	\$15,080.00	278.3	0.11	0.01
City 2	\$34,788.00	18349.7	6.40	0.28
City 3	\$20,221.00	6840.4	2.51	0.18
City 4	\$28,101.00	10027.3	3.36	0.19
City 5	\$27,834.00	914.2	0.30	0.02
TOTAL	\$126,024.00	36,409.9	12.68	

Water Loss Cost Effectiveness Using CPUC-Navigant Draft Calculator Newest Version

Scenario	Gallons of Water Saved	Avoided IOU Electric Energy Cost (2014\$)	Avoided Water & Wastewater Capacity Cost (2014\$)	Combined Total Resource Cost Test
City 1	530,000	\$641.66	\$17,436.29	1.28
City 2	21,550,000	\$26,090.08	\$708,966.24	22.59
City 3	11,040,000	\$13,365.87	\$363,201.27	19.91
City 4	8,410,000	\$10,181.79	\$276,677.78	10.91
City 5	530,000	\$641.66	\$17,436.29	0.69
TOTAL	42,060,000	\$50,921.06	\$1,383,717.87	12.17





Energy Savings Assistance Program for Low-Income Investor Owed-Utility Customers

- Current CPUC Proceeding examining adoption of measures and priority to address the water-energy nexus
- Water-Energy Nexus measures important to renters and landlord participation as most landlords pay the water bill, though tenants pay electric and gas bill
- Proposals for new measures: Coordinate with water utilities, home leak detection, etc.





The Water-Energy Nexus Proceeding Issues

- Actions to address the drought emergency
- Inter-agency coordination
- Communications-Water/Energy Nexus
- Public Safety
- Cost Calculator Tool
- Cost Effectiveness and Cost Sharing
- Enabling demand response and cost shifting
- Intra-Agency coordination (between CPUC programs and proceedings)





Governor Brown's April 1, 2015 Executive Order

- Mandated 25% residential water use cutback
- Ordered steps to foster water conservation in agricultural, commercial-industrial, and residential sector including deployment of Advanced Technology to conserve water
- Broadband access key to saving water and energy
- CPUC study of broadband deployment gaps informs program and policy development





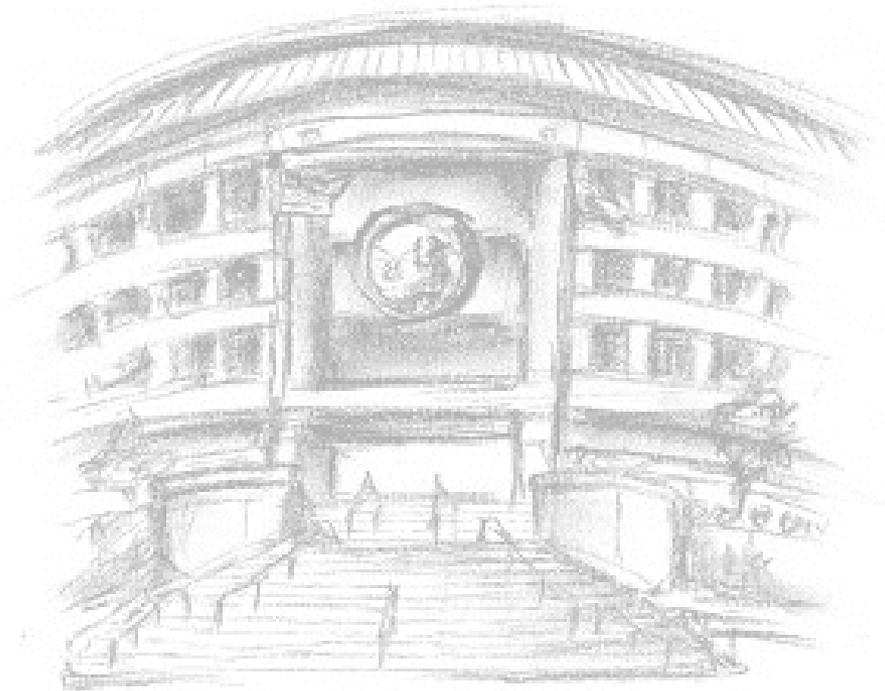
How to Participate

- Become a party to CPUC Water-Energy Nexus Proceeding R.13-12-011 or subscribe to proceeding documents with our subscription service. Attend, watch or listen to a proceeding workshop or read the documents online.
- Join us at the monthly Water Energy Team of the Climate Action Team (WETCAT) public meetings in San Francisco/Sacramento or by phone.
- Participate in CEC meetings on the WET program:
<http://www.energy.ca.gov/wet/>





Thanks & Questions



Catherine J.K. Sandoval, Commissioner
California Public Utilities Commission

