

DOCKETED

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California Energy Commission

Water and Energy Efficiency Research and Development

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Presentation Overview

- Water and Energy R&D Background
- Electric Program Investment Charge
 - Water-Energy Related Activities
- Examples of Water and Energy R&D Projects funded
- Energy Innovation Showcase



Water and Energy R&D Background

- **Since 2000 have been involved in water and wastewater energy efficiency research**
- **Current Funding**
 - **Electric Program Investment Charge (EPIC)** funds clean energy technology projects that promote greater electricity reliability, lower costs and increased safety
 - Provide electric investor owned utility benefits
 - Focus on energy efficiency, renewable energy and advanced clean generation, energy-related environmental protection, energy transmission and distribution and transportation
 - **Natural Gas R&D program** funds natural gas-related energy research projects that that increase energy efficiency, reduce pollution and greenhouse gas emissions, and increase public safety.
- **Water Agency Coordination**
 - Collaboration on water and energy related activities with other state agencies



Electric Program Investment Charge Water-Energy Related Activities

- **Solicitation GFO-15-317** released in 2015 focused exclusively on water and energy efficiency, and included consideration for embedded energy in water projects:
 - Fund advanced and innovative pre-commercial technologies and strategies that will result in **both** water and energy savings and will overcome barriers to large scale deployment;
 - Fund innovative and replicable approaches for accelerating the deployment of drought resilient strategies that minimize need for new water related energy infrastructure.
 - Targeted sectors:
 - Agriculture
 - Industry, businesses, and residences
 - Local governments and water districts
 - Disadvantaged communities



Electric Program Investment Charge Water-Energy Related Activities

- **Solicitation GFO-15-323** released in 2016 focused on an integrated approach that combined both energy and water efficiency and included advanced or new technologies.
 - Fund advanced pre-commercial technologies and processes that would result in both water and energy savings. Each application must encompass at the demonstration site:
 - Major reductions in on-site energy use through energy efficiency, **and**
 - On-site water reuse, reduction and/or production of water that meets drinking water, water recycling or on-site water use standards (e.g., Title 22).
 - Targeted sectors:
 - Industrial, including food processing
 - Water or wastewater facilities
 - Commercial facilities
 - Disadvantaged communities



Examples of Water-Energy R&D Projects Funded

- EPIC Program has funded the following types of water-energy R&D projects:
 - Energy and water management for the industrial, commercial and agriculture sectors
 - Wastewater treatment and reuse
 - Treatment of degraded water supplies and reuse
 - Leakage reduction strategies
- All projects must show electric IOU ratepayer benefits



California Energy Commission

HIGHLIGHTING ENERGY INNOVATION

BY THE NUMBERS

DOLLARS AWARDED
\$167 MILLION

PROJECTS AWARDED
86

MATCH FUNDING
\$100 MILLION

Featured Projects



Demonstrating Energy Efficient Drying for Walnuts

This project will demonstrate a novel infrared technology for walnut drying at pilot and ...



Bringing A New Generation of LED Lighting Solutions to Market

The purpose of this agreement is to design and develop innovative light-emitting diode ...



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