

# **Tackling the Nexus: Exemplary Programs that Save Both Energy and Water**

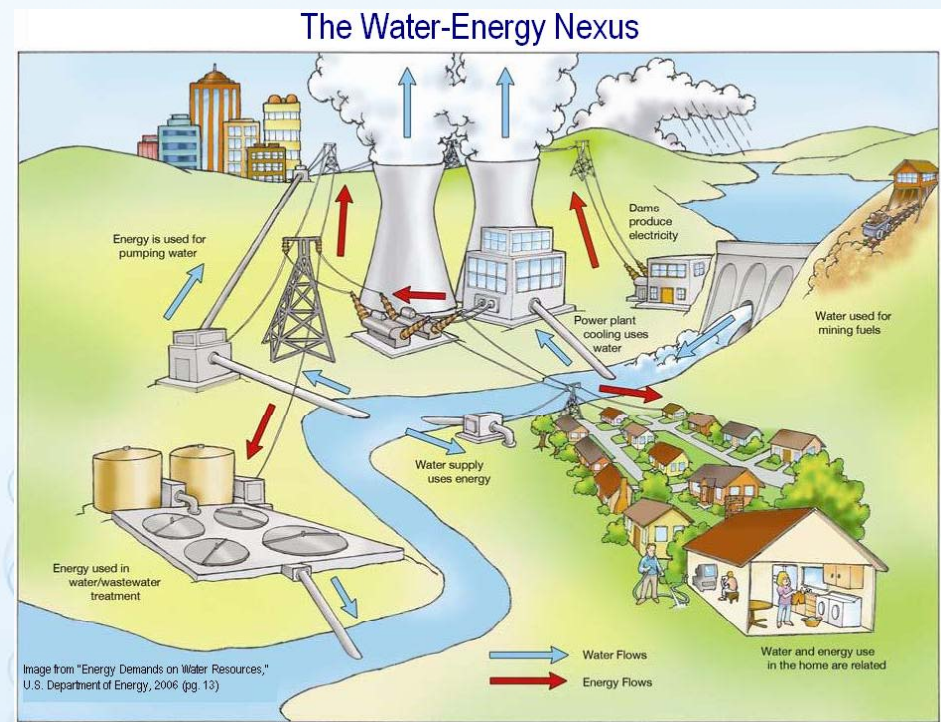
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Energy-Water Nexus Focus Meeting

# Water-Energy Nexus

- Energy is needed to transport, treat, heat, cool, and recycle water.
- Water is needed in energy extraction, production, and processing.
- Saving water saves energy and saving energy saves water.



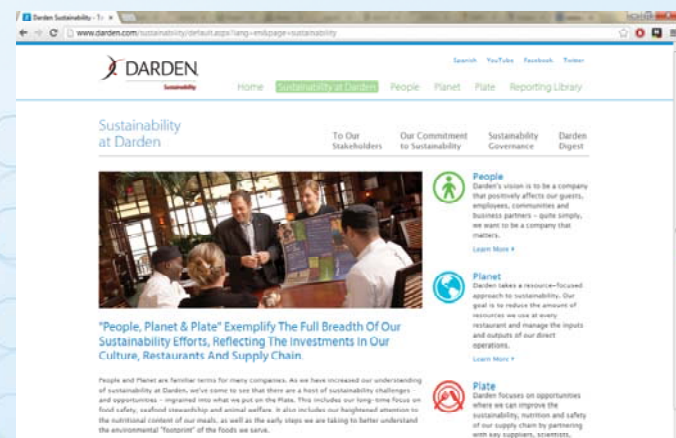
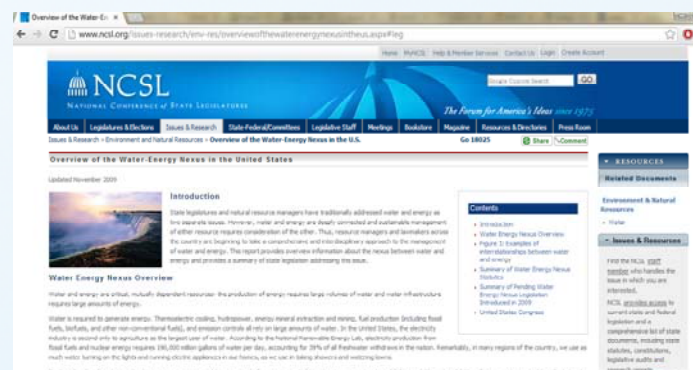
# Working Together

- A greater recognition of the savings potential has resulted in more joint programs.
- Energy and water utilities have worked together.
  - There are many efficiency measures that save both energy and water:
    - E.g., efficient clothes washers and better cooling towers.
  - Other utility efficiency programs
    - Education and outreach, combined energy and water audits, efficiency kits, and rebate and installation programs.



# Working Together

- Increasing interest from corporations to become “green” and “sustainable.”
- States and Cities are:
  - Supporting programs.
  - Instituting state policies that recognize the nexus.
  - Improving energy and water efficiency in public facilities.

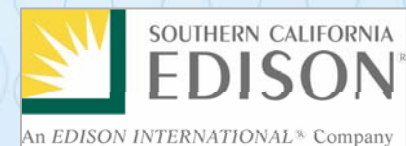


# Goals of the Report

1. Highlight opportunities where efficiency gains are made from recognizing the energy-water nexus in program delivery and accounting practices;
2. Demonstrate that better understanding and coordination between the energy and water communities can help achieve greater savings;
3. To recognize possible future directions for program delivery reaps the benefits of the water-energy nexus; and
4. To identify and publicly recognize the programs that are exemplary and innovative.

# Winning Programs


- Boulder, Colorado
  - Energy Performance Contracting Program
- Darden Restaurants
  - Darden Sustainability—15 X 15
- Massachusetts Water Resources Authority (MWRA)
  - Long Term Sustainability Program
- Southern California Edison (SCE)
  - Leak Detection Pilot Program
- United Technologies Corporation (UTC)
  - 2015 Sustainability Goals





# Water-Energy Program Directory

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## Water-Energy Program Directory

Keyword

State (e.g., CA, NY)

Organization

Program Category  
- Any -

### Programs Directory

**Low Flow Showerhead and Faucet Aerator Program**  
CenterPoint Energy | AR, MN, OK  
Program Category: Residential (indoor & outdoor)

**Bonneville Power Administration (BPA) Agricultural Energy Efficiency – “Save Water-Save Energy” Program**  
Bonneville Power Administration | BPA's service area includes the states of WA, OR, ID, western parts of MT and WY, and the northern parts of CA, NV and UT  
Program Category: Agriculture

**Des Moines Metropolitan Wastewater Reclamation Authority - Infor ASE Implementation**  
Des Moines Metropolitan Wastewater Reclamation Authority | Des Moines, IA  
Program Category: Corporate/ Government/ Institutional Sustainability

**EMWD - Energy Management Strategies**  
EMWD | Eastern Municipal Water District, CA  
Program Category: Energy Supply or Generation

**West Basin Municipal Water District- Water-Energy Efficiency Master Plan**  
West Basin Municipal Water District | CA  
Program Category: Corporate/ Government/ Institutional Sustainability

### About the Directory

This directory is a publicly-available online resource which provides basic information on over 450 existing programs saving both water and energy from across the United States, Canada and Australia. The program information was received from program nominations for *Tackling the Nexus: Exemplary Programs that Save Both Energy and Water*, submissions directly to the directory, and from the E Source DSMdat database. The directory also includes contact information for point people administering each program when available.

Does your organization have a water-energy program you'd like to share? In order to keep the directory up to date we encourage anyone involved in the management of a program that saves both water and energy to submit their program for inclusion in the directory. If your program is already in the database and you would like to update information on it, please [email us](#).

# Motivations for Program Development

- State or Local Policies
  - City of Austin Multifamily Energy and Water Efficiency Program
- Cost Saving Potential
  - City of Boulder Energy and Performance Contracting Program
- Requirement from Public Utility Commission
  - Santa Rosa Utilities Ozone Laundry Program
  - RAP LivingWise Program



# Motivations for Program Development

- Benefits of Cooperation and Coordination
  - BPA Save Water-Save Energy Ag Program
- Improved Public Images and Reputation
  - Darden Sustainability – 15X15
- Environmental Stewardship
  - MWRA Long Term Sustainability Program
  - UTC 2015 Sustainability Goals

# Program Trends: Similarities

- Linking energy and water savings led to broader program goals and initiatives.
  - Programs that made the link often expanded into institutional sustainability programs.
- Water-energy programs are long-term investments.
  - Cost-effective measures still can require upfront investments that payback over time.
  - Investments were seen as worthwhile because of the ongoing benefits.

# Program Trends: Similarities

- Successful programs use partnerships and collaboration among a diversity of organizations.
  - Utilities, nonprofit organizations, industries, governments, and regional groups.
- A common and successful program model was the “one-stop-shop” structure.
  - Customers can find all the information on efficiency opportunities available to them at one location.



# Program Trends: Challenges

- Getting organizations to understand their roles, communicate effectively, willing to trust, and commit to the program.
  - Ensuring that stakeholders understood the full scope of potential benefits from the program helped increase commitment and investment levels.
  - Many programs established a decision-making process, rules of operations, and draft legal documents to ensure effective collaboration.

# Program Trends: Challenges

- Sustained funding, staff time, and organizational commitments.
  - Some overcome this challenge through collaboration among multiple organizations or applying for federal grant money.
- Quantifying the embedded energy use in water.
  - On-going challenge, not all programs were able to overcome.

# Future Research and Next Steps

- Identify opportunities and barriers to joint energy utility and water utility programs.
- Create a template for how to design an energy and water utility collaborative program.
- Document best practices of collaboration of water and energy utilities on the integrated resource planning process.
- Clarify the process for calculating embedded energy savings from water efficiency.



# Questions

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Downloadable version of the report is available here:

<http://aceee.org/research-report/e131>

Water-Energy Program Directory:

<http://www.aceee.org/w-e-programs>

Alliance for Water Efficiency: [www.a4we.org](http://www.a4we.org)