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Docket 15-WATER-01 - Aclara Technologies comments

Dear Docket Office,

On behalf of Aclara Technologies, please find enclosed Aclara's comments in Docket 15-WATER-01, Drought Response Water Energy Technologies (WET) Program.

Please do not hesitate to contact me with any questions or if you have any trouble opening the attachments.

Best regards,

Jim Hawley
Dewey Square Group
1020 16th Street, Suite 20
Sacramento, CA 95814

Additional submitted attachment is included below.



July 7, 2015

Pamela Doughman
Dockets Unit
California Energy Commission
1516 Ninth Street, MS 4
Sacramento, CA 95184

RE: Docket 15-WATER-01 -- Aclara Technologies Comments regarding Drought Response Water Energy Technologies (WET) Program.

Dear Ms. Doughman,

Aclara Technologies LLC, the leading provider of smart water infrastructure technologies, with offerings in device networking and communications, data management, analytics and customer service, appreciates the opportunity to provide these comments regarding the Energy Commission's Water Energy Technology (WET) Program.

Aclara agrees with the Association of California Water Agencies about the need to focus on program technologies that can provide immediate solutions to reduce water waste and consumption, particularly the opportunity of saving large amounts of water –estimated by ACWA at ten percent of the total water supplied – enabled by a statewide leak detection effort.¹

The Commission's July 2 workshop in Lynwood raised the possibility that the market price of water could spike dramatically if the drought extends into next year, placing a premium on solutions that can effectively provide agencies and consumers with tools that can help them manage water use and reduce waste over the next year.

The State of California has been a leader in recognizing the close nexus between water and energy use. Reducing losses of surface water supplies from distribution system leaks, for example, can save not only water but energy, since pumping groundwater typically requires more energy than the use of surface water supplies.

This Commission has recognized that data-driven technologies can better manage use of scarce natural resources. The Commission's Draft Existing Buildings Energy Efficiency Action

¹ Comments of the Association of California Water Agencies, Docket 15-Water-01

supports access to electricity usage data for consumers. A comparably significant opportunity exists in water. The Commission through its technology investments has an opportunity to work with water districts across the state to promote the use of data-driven smart water use technologies, particularly advanced metering solutions that provide districts information as to how they can reduce system leaks and educate their consumers about individual water usage and how consumers can improve their use of water. Understanding where and how water is being lost can enable agencies and state policy makers to precisely identify and target water waste, targeting investments to those opportunities that present the opportunity for the largest savings. While current law requires water meters to be in place by 2025, smart metering technologies have not yet been widely adopted.

Aclara is pleased to respond to the questions specifically posed by the Commission at its July 2 workshop.

1. What emerging technologies should be considered that provide direct on-site energy, water and greenhouse gas savings for each of the identified sectors?

Aclara, which has more than 20 years of experience in smart water management and has designed and implemented data-driven technologies successful used in some of America's biggest cities, offers an integrated line of STAR_select™ network, sensing, data analytic, and meter asset and data management tools bring clarity and control to a water utilities' distribution system, setting the foundation for true Smart Infrastructure Solutions (SIS). Aclara's systems can work with a wide range of metering technologies and can be adapted and customized depending upon the needs of a water utility.

The core of Aclara's system is the STAR® network, a water meter reading solution that delivers comprehensive usage data through a secure, long-range wireless network. The STAR network reduces on-site visits and estimated reads, facilitates time-of-use billing, and lowers non-revenue water losses. Utilities that replacing manual meter reading or mobile advanced meter reading systems with Advanced Metering Infrastructure (AMI) reduce greenhouse gas emissions by taking vehicles used in meter reading operations off of the street.

Aclara's hosted meter data management tool, STAR_prestige™, offers real time data analytics and tools such as water balancing, meter trending and right-sizing as well as accurate consumption and billing data for improved customer service. Providing consumers with immediate feedback as to their water use can help them identify ways of reducing water waste. Observed water use in the household even at hours when they are asleep or not using any appliances often indicates a leak the customer may not have known they have.

Aclara agrees with ACWA as to the importance of detecting and repairing leaks – the fact that one system leak can waste as much water as hundreds of inefficient appliances -- and the promise of new technologies to achieve these goals. Aclara's STAR ZoneScan acoustic leak-detection system reduces non-revenue water losses by developing critical water distribution system knowledge automatically and with minimum operator involvement. Our technology is

best-in-class, allowing water utilities to identify system leaks within 3 feet, enabling prompt and cost-effective repairs.

Additional information about our offerings and capabilities is enclosed.

2. What are some of the main barriers preventing implementation of advanced water and energy saving projects?

The main barrier preventing implementation of advanced water savings is that utilities do not have the data needed to advance such programs. The most prevalent simple meter reading systems do not provide the data that could be used to drive conservation, or perform leak detection. Aclara agrees with ACWA that cost is a barrier for installing these advanced systems. However, there are ways to limit these costs that Aclara recommends that the Commission explore. One way to contain the cost is to look to the existing infrastructure that is installed in larger utilities that cover the same territory. The Aclara technology can be used as a multi-utility network that could be shared between a gas utility and a number of smaller water municipalities. By utilizing the existing infrastructure, costs can be minimized.

A second barrier is the lack of awareness of the true benefits of a smart water system and the benefits of being able to accurately measure the results. A simple AMI system provides leak detection information within a consumer's location by recording hourly data. A more sophisticated implementation is adding leak detection devices to also identify leaks on the distribution pipes.

3. To what extent is broadband or internet availability a factor that prevents implementation of water and energy savings projects, especially on farms and in rural areas?

Aclara's networks include data collectors that do not rely on Internet connectivity. Consumer access to granular water usage information does depend on Internet connectivity, but usage reports can be generated and included in the bills provided to households without connectivity.

4. Are there any operational, regulatory or other constraints that prevent installing projects quickly?

One operational constraint many companies face is the cost-benefit business case for the installation of water conservation. It has been difficult to form a financial case for projects that benefit conservation (a hard to value business benefit) and reduced loss (when water prices are low), and therefore, these project may get stalled in the approval process for funding.

In addition, there are limitations on the installation of simple infrastructure. One solution is to leverage the existing infrastructure already installed. The Aclara solution includes a small box mounted on existing street lights, poles, rooftops, water towers. However, permission to install these devices often slows the process of installation.

5. What is the capability of obtaining utility data showing pre- and post-energy and water use? If utility data is not available, how will pre- and post-results be documented?

Aclara water technologies are in use in a number of large and small cities and municipalities in California. Aclara would be pleased to work with its customers to provide data on these technology solutions at the Commission's request.

6. How can the WET program best bring benefits to disadvantaged communities?

Many water districts face the difficult situation of reduced income because of falling water availability and consumption, even as water prices and other costs associated with the drought put upward pressure on spending. Disadvantaged communities are especially vulnerable to this squeeze. Solutions that allow disadvantaged communities to reduce water loss and improve efficiency, thus avoiding more costly solutions, are of particular value.

Aclara appreciates the opportunity to offer these comments on the WET program. Please do not hesitate to contact Aclara government affairs representatives Jim Hawley at 916.447.4099 or Kara Saul-Rinaldi 202.276.1773 for additional information.

Sincerely,

Robert Florence
Senior Vice President
Aclara Technologies