

## DOCKETED

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*Comment Received From: Jan Boyer*

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**Badger Meter Input on Innovative Water Conservation & Water Loss Detection**

*Additional submitted attachment is included below.*



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October 27, 2016

**Docket # 16-OII-01**

Commission Andrew McAllister  
California Energy Commission  
1516 Ninth Street  
Sacramento, CA 95814

**RE: Badger Meter input on Innovative Water Conservation and Water Loss Detection and Control Technologies**

Dear Commissioner McAllister:

As a long standing member of the American Water Works Association and the manufacturer of leading flow measurement solutions for water utilities, Badger Meter has over 100 years of industry experience that can be used to help drive water conservation and water loss detection and control. In serving more than ten thousand water utilities in North America, Badger Meter has been an active partner with our utility customers, helping to bring visibility to water.

Badger Meter already has solutions in place that strive to conserve water, reduce water loss due to leaks, and provide the tools necessary to deliver proactive information to drive efficient utility operations. Specifically, these solutions include Automatic Meter Reading (AMR), Automated Meter Infrastructure (AMI) and Advanced Metering Analytics (AMA) systems. When combined with the reliability of our Recordall® and E-Series® meters, utilities have increased visibility to drive enhanced customer service.

One of the basic tenets of all Badger Meter water utility solutions is the ability to provide more than just reading data. In addition to data that can be used for billing and analytics purposes, all ORION endpoints deployed as part of an AMR, AMI and AMA solution support value added alerts. These alerts are sent with each RF message and provide information back to the utility that includes: whether the encoder has been removed from the meter to bypass registering the flow, tamper detection to identify concerns with the wire between the endpoint and the encoder and potential leak notifications that use

an algorithm to monitor the hourly reading data captured by the endpoint for quickly identifying leaks at a premise.

As an added benefit to AMR customers, the additional hourly reading data stored within the endpoint can be accessed at any time by utility personnel through two-way communication with the endpoint. This additional data can be provided to the end water consumer to help educate them and to support the validity of higher bills when leaks do occur between reading / billing cycles.

AMI and AMA solutions provide further value to water utilities by providing hourly reading data and alert conditions back to the utility through a public or private network. This information is collected on a regular basis throughout the day and provides data for reading, billing and analytic purposes to proactively manage their utility operations. In addition to helping the utility manage their system and increase customer service, the additional consumption data and potential leak alerts can be shared with end water consumers through the BEACON software consumer engagement platform. Once utilities provide access to the information, end water consumers can sign up and access their consumption and alert data using an internet based computer, tablet or smart phone. To ensure that subscribers use the proactive intelligence provided with their consumption data, reminders can be set within the BEACON app to alert water consumers when they are reaching usage thresholds or if there are reported potential leaks seen at their account. Utilities have determined that end water customers who are given access to their usage activity will gain a greater understanding and control of what they use and become part of the solution to reduce water usage and correct potential leaks more quickly.

The ability of AMR/AMI/AMA systems to 'flag' potential leaks for the utility (and, optionally, for the consumer as well) is a direct, unambiguous and immediate identification of water loss concerns. In contrast, the ability of water meters to register a significant portion of leak flows, while of value for billing equity, does not provide the direct, unambiguous and immediate identification of potential leaks within the consumers' premises. The increased billing that results from the development of leaks will only be noted at the end of a billing cycle, perhaps several weeks or even months after a leak has developed. And, an increased water billing is not necessarily an obvious indication of a leak. For example, from water end-use studies conducted both in California and nation-wide, residential meters are registering small, continuous flows that would be symptomatic of leaks – clearly the end-user is being billed for this usage, yet it appears that such leaks are not being corrected, despite their contribution to the over-all water bill.

Badger Meter has an end --to--end solution for utilities to support the goals of driving water conservation, identifying potential leaks and providing data to drive optimal and efficient utility operations. With over thousands of utilities deploying AMR, AMI or AMA solutions provided through Badger Meter, we have systems and tools in place to lead the water industry forward through greater

visibility to water. While we do not believe that AMR/AMI/AMA use needs to be mandated through regulatory action, we believe that such usage should be encouraged and supported. In addition, we believe that water loss audits would be more valuable if leakage occurring 'after the meter' were to be included in the analysis.

Sincerely,

**Badger Meter, Inc.**

A handwritten signature in black ink that reads "Jan Boyer". The signature is written in a cursive, slightly slanted style.

Jan Boyer  
Marketing Manager, Metering Solutions

cc: G. De Jarlais, Badger Meter, Principal Mechanical Engineer  
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