ITP Straw Proposal #3 v.2 (10/15/13)

Inclusion of Energy Intensity and expanded Water System Description for large Urban Water Suppliers

Potential amendments to §10631 of the Urban Water Management Planning Act and the accompanying DWR UWMP Guidebook for the calculation and display of the energy intensity of urban water deliveries, as well as reporting of water system components.

Purpose: The purpose of this proposal is to provide for the periodic reporting of information about large water suppliers' energy usage and system characteristics in a uniform format throughout the state. This will greatly improve understanding of the "water/energy nexus" at both the state and local level. With minimal cost to individual water agencies, it will remove a major impediment to collaboration between the water and energy sectors, and will allow the water industry and policymakers a better understanding of the potential opportunities for cost-effective joint water/energy efficiency programs.

The inclusion of the information outlined below in 2015 Urban Water Management Plans will accelerate the development of joint programs between water agencies and energy utilities (both investor and municipally owned). Such programs would be very beneficial to water agencies by providing a potential source of funding and expertise to achieve water savings at reduced cost by conserving energy and water simultaneously.

Development of these joint programs is currently hindered by a lack of current and uniform information. Therefore, these amendments would serve the purpose of creating a credible dataset for each large retail and wholesale water agency's energy use that would be updated every five years and made accessible to electric and gas utilities interested in developing joint programs.

Energy Intensity:

The energy intensity of urban water deliveries can be defined as the cumulative amount of energy (either in kWh or therms) required to convey, treat, and distribute a specified volume of water to a customer. This value is often expressed in kWh/MG or kWh/AF.

Recognizing that calculating the energy intensity of water may take at least some staff time and resources not currently committed to the UWMP process, the requirement to report can be limited to the largest water agencies in the state, so as not to burden smaller agencies with limited staff. However, reporting this information may become a pre-requisite for participating in efficiency projects funded by the energy Public Goods Charge, so reporting is in the best interest of most water agencies, regardless of size. We recommend that the requirement be limited to the 73 agencies serving a population of

greater than 100,000 people. This would represent water deliveries to approximately 20.5 million Californians, or about 57% of the population served by a public water supplier in 2010.

Guidance: To ensure that the information reported serves its intended purpose, guidance for this portion of the 2015 UWMP Guidebook should be developed by DWR in consultation with the CPUC, as well as other stakeholders. Retail water suppliers would report the average energy intensity of the *water system that they operate*, expressed as energy per unit of volume, along with the energy intensity of any sources of purchased water (calculated by the wholesale supplier as indicated below). Because of inter-annual variability related to weather and supply changes, the energy intensity value will be a multi-year average using a consistent method specified by DWR in its 2015 guidance. Then, for each component of their system (supply, transmission, distribution, potable water treatment), an estimate of the amount of energy used as a % of the total, i.e., supply 15%, transmission 10%, distribution 50%, treatment 25%, would be made using guidance from DWR to ensure reasonable consistency across water suppliers.

Wholesale water suppliers would report on the energy intensity of the water they deliver to retail agencies at each point of delivery. Wholesalers would also provide their system-wide energy intensity allocated to their functional components (supply, transmission, distribution, treatment).

The Guidebook should include a methodology and/or information sources where retailers and wholesalers can find energy intensity calculation tools and best practices for compiling their energy data so as to calculate these values.

The Guidebook should also be amended to request simple information regarding energy and gas utility service within the urban water system area. Both wholesale and retail agencies would identify their own electric and/or gas utility providers. Additionally, retail agencies would identify the electric and gas utilities whose service area overlaps their own, i.e., who provide service to the same customers as the water agency.

Suggested Statutory Language: After §10631(k) add the following:

Water suppliers serving a population of greater than 100,000 shall report on the energy intensity of water use as follows:

"Wholesale agencies: for each of the water sources identified in §10631(b), provide an estimate of the average energy intensity value expressed in Kwh/MG. Separately, include any additional energy used by the wholesale agency to distribute and treat water delivered to customers, together with the average energy intensity value at each point of delivery to a water supplier.

"Retail agencies: for each of the water sources identified in §10631(b), including purchased water, provide the estimated annual energy intensity value expressed in kWh/MG for each source type. Also include any additional energy used by the retail agency to distribute and treat water delivered to customers."

System Description

The Guidebook currently states that it is "helpful" to describe the components of the physical water system (transmission, treatment, and distribution facilities). This basic information should be reported by all water suppliers that serve a population of greater than 100,000, and encouraged for all agencies that may wish to be eligible for efficiency partnerships with investor owned electric and gas utilities.

This information is generally helpful in allowing those outside water agencies to understand system operations and function. It is necessary to understand where improvements may be made within a system to decrease energy use by that system, and is therefore complimentary to the Energy Intensity reporting proposal above.

Suggested statutory language: Add the following to Section 10631(a) of the Water Code:

"For water suppliers with a service area population of more than 100,000 persons, include a description of the main functional components of the supplier's water system, including transmission infrastructure, distribution infrastructure, pressure zones, lifting stations, and treatment facilities."

[Note: 73 suppliers serve populations over 100k and served roughly 20.5 million people in 2010]