Comments of the Natural Resources Defense Council on the 2009 Irrigation Equipment Performance Standards and Labeling Requirements Proceeding Scope

Docket No. 09-AAER-1A
April 8, 2009

Submitted By:
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The Natural Resources Defense Council (NRDC), which has 250,000 members and activists in California, is writing to provide brief scoping comments on the California Energy Commission's (Commission) proceeding to establish performance standards and labeling requirements for landscape irrigation equipment.

NRDC has long advocated for prioritizing water and energy efficiency as the best way to meet the resource needs of a growing population, sustain economic activity, and protect the environment. California, with leadership from the California Energy Commission (CEC), has a remarkable track record in the area of energy efficiency. California per capita electricity use is now half the national average. Strong efficiency standards are at the core of this success. The state can now learn from its energy experience and replicate this success by adopting water efficiency standards.

Efficiency standards are the foundation of market transformation for both water and energy efficiency. Indeed, an analysis of water efficiency programs in California shows that despite 15 years of implementing voluntary best management practices (BMPs) for water conservation under the *Memorandum of Understanding Regarding Urban Water Conservation in California*, codes and standards are responsible for 46 to 84% of projected water savings.[1] Landscape irrigation equipment is an area where such standards are greatly needed.

NRDC has a long history of working on energy and water efficiency, including in multiple proceedings before the CEC. With respect to the water-energy relationship, in 2004 NRDC and the Pacific Institute co-published *Energy Down the Drain: The Hidden Costs of California's Water Supply*.[2] This report was instrumental in highlighting the important embedded energy costs in the water cycle in California. The CEC subsequently expanded on this work and produced a staff paper entitled *The Water-Energy Relationship* (CEC-700-2005-011), which developed the now often-cited statistic that 19% of California's electricity use and over 30% of the state's non-power plant natural gas use are associated with water supply. These figures were included in the 2005 Integrated Energy Policy Report to the legislature, with a recommendation that the California Public Utilities Commission adapt its policies to pursue these water-related energy savings. The CPUC has subsequently authorized pilot programs and associated studies which are now underway.

[1] CALFED Bay-Delta Program, *Water Use Efficiency Comprehensive Evaluation*, (Sacramento, CA: 2006) p.15.
[2] The full report is available online from NRDC's webpage at http://www.nrdc.org/water/conservation/edrain/edrain.pdf.

In addition, NRDC has been intimately involved in the administrative and legislative processes that resulted in this specific proceeding. In 2005, the Legislature enacted AB 2717, which convened a stakeholder Task Force to make recommendations on how to improve the efficiency of new and existing urban irrigated landscapes. Ronnie Cohen of NRDC was a member of that Task Force, which in December 2005 forwarded its recommendations to the legislature. *See* California Urban Water Conservation Council, December 2005. "Report to the Governor and Legislature: Water Smart Landscapes for California, AB 2717 Landscape Task Force Findings, Recommendations, and Actions." Among the top twelve recommendations, was adoption of performance standards for irrigation equipment. In 2006, NRDC supported AB 1881, which codified many of the legislative recommendations of the AB 2717 Landscape Task Force. Among other measures, AB 1881 required the CEC to establish performance standards and labeling for landscape irrigation equipment.

Urban landscaping uses an estimated 3 million acre feet of water per year, according to the final report of the AB 2717 Landscape Task Force. Indeed, that report estimated that approximately one half of residential water use in California is currently used for landscaping. *Id*. This percentage is even higher in some of the hotter and fastest growing inland areas of the state. The report also estimated that California could save between 600,000 and 1 million acre feet of water per year through improved water use efficiency and implementation of the other Task Force recommendations.

Improvements in landscape water use efficiency have the potential to significantly stretch California's water supply, which is particularly important given the three consecutive dry years, growing water demand, and the likely water supply impacts of climate change.

In addition to the water savings from improved efficiency, there is great potential for energy savings. Water use for urban landscaping includes a significant embedded energy component resulting from the energy costs of transmitting and treating water, particularly in Southern California. The CEC's 2005 staff report on the Water-Energy Relationship estimated that storage and conveyance, treatment, distribution, and wastewater treatment of water in California required between 4,000 and 12,000 kWh/MG. As discussed above, the CPUC has several studies and pilot projects underway (R0606010; A0701024) to better refine estimates of embedded energy use in this and other water use sectors. The CEC should incorporate information from these pilot programs and associated studies, as it becomes available, to inform this standard-setting proceeding.

Ultimately, improved water and energy use efficiency in the urban landscaping sector will be critical to meeting the State's water and energy needs in a manner that also protects the environment, particularly once the impacts of climate change, which is likely to increase the severity and duration of dry periods, is factored in. Improved efficiency in irrigation equipment can help reduce energy use and the greenhouse gas emissions associated with the transport and treatment of water used for urban landscaping. Indeed, improving water efficiency is included as a measure in the Scoping Plan to assist the state in meeting its greenhouse gas reduction targets under AB 32. Efficiency standards are a highly cost-effective way to help the state reach this goal.

As noted above, AB 1881 directs the Commission to adopt regulations that provide performance standards and labeling requirements for landscape irrigation equipment, including irrigation controllers, moisture sensors, emission devices, and valves, in order to reduce the inefficient or wasteful use of water or energy. Water Code § 25401.9. The Act requires the Energy Commission, in establishing these standards, to consider the Irrigation Association's Smart Water Application Technology Program testing protocols. *Id*. The legislation also prohibits the sale or installation of an irrigation controller or moisture sensor for landscape use on or after January 1, 2012, unless the controller or sensor meets those adopted standards. We thus urge the CEC to devote adequate resources to these proceedings to enable them to conclude in a timely manner in order to meet this legislative directive.

NRDC is encouraged that the Commission has begun these proceedings, and we look forward to working with the Commission to implement this statutory mandate in a timely manner, resulting in strong standards that substantially improve water and energy use efficiency for these products.