Panel Discussion Notes
Climate Change, Drought & Water Supply:
Addressing a Crisis in the Making

Remarks of Commissioner John A Bohn
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- Good afternoon. Thank you for inviting me to appear on this panel. I am a commissioner at the California Public Utilities Commission, one of five independent commissioners who regulate the investor-owned electric, gas, telephone, and water utilities of California.

- Our topic is dismal: *"Climate Change, Drought & Water Supply: Addressing a Crisis in the Making."* It may be just the thing to send you on your way from this conference – Or maybe you are already heading for the door, because this does not seem like a very urgent or exciting topic. After all, why should anybody care about something that MAY happen, and if it does, probably

will happen over 50 or 100 years. No wonder this panel is last on the agenda; it is just the kind of uplift you need at the end of the day!

- Still, there is something for us to be concerned about here. And there are things we can do to prepare for the difficult times that may lie ahead.

    - First, it is not just one crisis, it is two: there is the physical problem that occurs during a drought, and may, with global climate change, become a permanent feature in some places: Not enough water to go around, or too much because of flooding[1]. This is the kind of problem we all can understand, even if we are not sure what to do about it. (After all, we cannot have "rolling drought-outs" the way we had "rolling black-outs" during our energy crisis in California!)

    - The other crisis is financial. This second crisis is much more immediate, much more threatening to

[1] State bond monies are being spent to bolster the levies and address some of the flooding and drought implications.

utilities and to their customers, and, fortunately, more amenable to a solution. So that is where I will start.

- What is the first thing that happens when there is a drought? Particularly a sharp and prolonged drought? Less water is available to be delivered, and that means lower sales. That means lower revenue, and most likely, revenue falls faster than costs. That means the water utility shortly would be facing a financial crisis. Most likely, because the people in utility management are aware of the bad financial implications of lower sales, they will resist the call to conserve, thereby making the eventual crisis worse. That means regulators have to act to impose cuts, or the reservoirs will be emptied, and the people may become unruly without water. So, adding all these effects together, without effective regulatory action, the utility would go broke.

- That means you in the investment community are relying on regulators to step in when there is a crisis. The whole scenario becomes one cat fight after another within this

sector. And if you have been in this industry for a while, you probably have seen it happen more than once.

- In California, we have been working to reduce the likelihood of this bad scenario playing out. For us, it is a very real and immediate threat. We have developed a *Water Action Plan* that is designed to help with the new realities of the 21st century, including the idea of conservation, of selling less water.

- There are many elements of the *Water Action Plan* – You can get a copy from the CPUC's web site by clicking on "Water." Let me concentrate on a few elements of the plan that relate particularly to what would happen during a drought:

    - We are decoupling revenues from sales so that utilities do not have any reason to resist having their water quantity sales decline. The primary reason is so that we can get the utilities to focus on efficiency and conservation programs. But it also helps in the case of a decline in sales due to

drought, as rates would be adjusted automatically without the need for regulatory intervention.

- We are instituting pass-through accounts, known as balancing accounts, for certain water utility costs. So, if the quantity falls, the dollar amount collected from customers can also fall. However if the cost of the water purchased rises because of scarcity during a crisis, the account can reflect that, too.

- We are moving in the direction of getting all customers metered. Believe it or not, this is still an issue in some areas. We want all customers to be charged by the quantity they consume. That sends the right signal to customers, but it could aggravate the problem of declining revenue resulting from declining sales.

- Here is another little issue. Like regulators in some other states, we are moving towards putting a higher percentage of fixed costs into the

volumetric charges,[2] and we are moving towards increasing-block rates. Both of those changes are aimed at increasing the rewards to customers who conserve. But both have would result in even steeper revenue declines in the case of a drought. Therefore, at the same time, we are adopting mechanisms to recover appropriate revenues if conservation efforts are successful.

- Essentially, this means we are getting more involved with the companies that we regulate. These policies, taken together, mitigate – do not eliminate, but mitigate – the worry that during a crisis, management of water utilities will not know what to do, and regulators will not be prepared to do what must be done with regard to the financial matters.

- One consequence of these regulatory actions and policies, however, is that you folks, the investors and analysts, need to look harder at the quality of the

[2] (California Urban Water Conservation Council (CUWCC) recommends 70%)

regulators, the decoupling mechanisms, and the regulatory processes to evaluate the risk of financial difficulties arising from prolonged drought. The good news is that if the regulators get it right, financial risk in the industry due to drought should remain nearly neutral, or actually could go down!

- Now, turning to the physical crisis, here we also have some hope. No water system can be completely insured against a prolonged drought or a change in circumstances due to climate change. Recall that large parts, and some of the most populous parts of California, are essentially desert. If any of you have seen the movie "Chinatown," that would be a good place to begin a review of how seriously Californians take the subject of water!

    - As I mentioned previously, California utilities are instituting a rate structure that is designed to foster moderation in water consumption, a structure designed to avoid what some would call "over-consumption." We do this through an

"increasing-block" rate structure. Moderate consumption is charged at low rates, and higher levels of consumption are charged higher rates. You may have qualms about government agencies deciding how much water people should be allowed to buy before they run into very high prices. So do I. Still, this type of rate structure does provide a strong incentive to be conservative in water use.

- Second, the water utilities regulated by the CPUC are encouraged to plan carefully, and to have contingency plans in place. We also are working on conservation programs of all types. And we are working on water conservation as part of California's efforts to curb greenhouse gas emissions.[3] Still, in these areas California may

[3] About 20% of all electric energy use in California is used in the pumping and processing of water. A reduction in the need for water use, therefore, provides a reduction in energy generation and, finally, a reduction in greenhouse gas emissions.

be only slightly ahead of the curve, as water utilities across America are undertaking similar efforts.

- But in terms of ultimate preparation for long droughts and for major climate change, no one can claim to be fully prepared. Ultimately, in a crisis, we will be forced to rely on government actions, such as enforced rationing and penalties. I do not think anyone else could claim anything more.

- Let me conclude by noting my biggest failure as a state regulator to date. There is one thing that would be very helpful in the event of any type of crisis, including the drought situation we are discussing here today: Full communication, coordination, and understanding across all government agencies and all types of suppliers. I have been making a concerted effort to meet with the regulators and operators of the municipal and other government-owned and operated water systems in California, and to say to them,

> "Look, your water utilities are regulated differently from mine. But we are all going to be facing the same problems, big planning problems, such as infrastructure investment needs and responses to the policy plans of our governor and legislature. You are responsible for 80% of the urban water business in California, while the IOUs do only the remaining 20%. Let's talk. Let's work together on these issues. Let's also look at regional plans to coordinate wastewater use as well." I need to do more of this, and I am trying to take every opportunity. And I have been encouraging the managers of the jurisdictional water utilities to do the same.

Thank you for having me today.