



Opening Statement of Chairman Ron Wyden

Hearing on Drought Issues

April 25, 2013

- The Committee will come to order. This morning we are going to look at drought and the impacts to the energy and water sectors. Water is life and without access to water, the world as we know it ceases to exist, or at least to run effectively.
- Last year was the warmest on record and combined with the exceptionally dry conditions, severe drought affected over **sixty** percent of our country. Again, that was sixty percent of the country.
- The cost of the damages associated with last year's drought exceeded \$35 billion. That is a very substantial hit for our economy to take at a time when we have huge economic challenges ahead.
- In addition to last year's drought, the country is seeing increasing numbers of extreme weather events, and unfortunately it seems like drought has become almost part of the norm. One reason that we are focusing on this topic today is to better understand how the recent drought conditions fit into the overall picture of climate change, and if there are lessons to be learned to minimize the impact in the current climate and for the future.

- Drought impacts everything from farmers to power plant operations and everything in between. Water is a critical resource, and yet, so often it seems to almost be treated as an afterthought.
- In my home state of Oregon, Oregonians are seeing severe drought in the Klamath region. The Bureau of Reclamation has told me that the Klamath Basin has experienced the second driest January through March **on record**.
- This is a dire situation. This area is one of our thorniest watersheds. It has caused the governor of my state and Klamath County to issue drought declarations last week. In effect this has become a symbol of the debate over how to deal with droughts and you saw in the important Wall Street Journal article that recently ran on drought, really spotlighting what's going on in the Klamath Basin.
- The Bureau of Reclamation will be a key player in the work to address drought conditions and solve the long-term resource disputes in the Klamath and other such places across the West, and we have always worked with the Bureau in a bipartisan way, and we are going to continue to work with them to meet our goals.
- Water is also a critical resource for generating electricity. Water is obviously needed for generating hydropower, but it's also critical for cooling in many other types of thermoelectric generation like nuclear, biomass, and coal. For those applications, water must not only be sufficiently available, but also be cool enough to allow the plants to run safely and efficiently. This means that climate change poses a double threat to some of these facilities, potentially threatening both water availability and sufficiently cool intake water.

- Recent history has demonstrated the vulnerability of the power sector to both drought and high temperatures. In 2001, for example, severe drought in California and the Pacific Northwest resulted in significantly reduced hydroelectric generation, causing tight electricity supplies and high prices throughout the West. That drought was estimated to have an economic impact of between \$2.5 and \$6 billion dollars.
- High temperatures have also curtailed generation. In 2007, the Tennessee Valley Authority had to temporarily shut down its Brown's Ferry nuclear plant because the intake water temperatures were too high. In 2012, the Millstone nuclear plant that powers half of Connecticut had to take 40% of its capacity offline for almost two weeks because the cooling water it was getting from Long Island Sound was too warm. In that same year, the Braidwood nuclear plant in Illinois had to get an exemption to use intake water that was 102 degrees instead of shutting down during a heat wave.
- The situation in Texas may demonstrate both the concerns and some of the solutions the best. During the extreme drought conditions of Summer 2011, Texas made it through with only one power plant curtailing. They did it through extreme conservation efforts by customers, and they were also helped by having a lot of wind-energy on their system that doesn't require any water at all. They also bought power on the spot market, with prices hitting an incredible three thousand dollars per Megawatt-hour, so consumers definitely felt the impact in their power bills.
- The following summer was also hot and dry in Texas, but caused less disruption thanks to steps that I had mentioned, which the utilities had chosen to adopt. An important goal of this hearing is to understand both

the risks to the power sector and the strategies for mitigating those risks for the long-term.