

A CONVERSATION ON CALIFORNIA'S CLEAN ENERGY FUTURE

What the drought means for our energy future

BY TONY EARLEY, CHAIRMAN & CEO, PG&E CORPORATION

WITH 95 PERCENT OF CALIFORNIA experiencing “severe” drought conditions, 71 percent in “extreme” drought and close to half of the state suffering “exceptional” drought, we are learning—the hard way—about the pervasive impact of persistent water shortages.

California’s historic drought is distressing enough, but many climate experts say that if extreme weather trends continue, it may be but a bitter taste of worse things to come.

We all understand the threat drought poses to our economy and lifestyle, our health and well-being. What many don’t realize is that a perpetual water crisis will also add to our state’s energy challenges—and redouble the threat to our future.

What’s the connection? For starters, California’s energy supply relies on fresh water for everything from generating clean hydropower to cooling many power plants.

Water and energy are also connected in

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another fundamental way: because water takes so much energy to pump, transport, purify, and heat, water-related processes account for about 19 percent of California’s electricity consumption and 32 percent of all natural gas use, according to the California Energy Commission.



As part of our efforts to address the drought, PG&E has helped residential and business customers save water—and money—through a variety of incentives and programs.

But you can do something about that. Running your hot water for just five minutes uses as much energy as leaving a 60-watt incandescent light bulb burning for 14 hours.

The upshot is that making more efficient use of our state’s limited water supplies is one of the best ways we can save energy—and in the process, slow the carbon emissions fueling climate change.

PG&E is committed to being a crucial contributor to solutions to the energy-water nexus. We start close to home, working hard to curb our own water use. Our new natural gas generation plants use state-of-the-art “dry cooling” technology to slash their water needs by as much as 98 percent. Our Diablo Canyon nuclear plant relies on the ocean, rather than fresh water, to cool

its turbines. And most of the renewable energy we buy—such as wind and photovoltaic solar—uses very little water.

In 2009, we set a five-year goal to reduce water use at our facilities by 20 percent. By installing low-flow plumbing fixtures, carefully managing irrigation systems, and planting drought resistant landscaping, we cut usage by 30 percent, exceeding our target. Our annual water usage has dropped by 48 million gallons—enough to supply the needs of nearly 33,000 homes for an entire summer.

We’ve also helped residential and business customers save water—and money—with incentives to promote low-flow showerheads, low-energy drip irrigation, ozone laundry equipment,

and efficient clothes washers. In 2014, customers who adopted such measures saved an estimated 1.8 billion gallons of water, while cutting back on energy use and, therefore, their energy bills. That’s more than half the amount that pours over Niagara Falls every hour.

And with dwindling spring snowmelt increasing our agricultural customers’ reliance on groundwater, PG&E is also helping farmers make efficient use of their pumping equipment and avoid overdrawing their wells.

There’s room for all of us to do even more—with minimal disruption to our lives and businesses. Given the future we face of diminished water supplies, we at PG&E know we must continue to find more ways to conserve water and help build a better and more sustainable California.

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