

ONE HUNDRED TWELFTH CONGRESS
Congress of the United States
House of Representatives
COMMITTEE ON ENERGY AND COMMERCE
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September 10, 2012

The Honorable Fred Upton
Chairman
Committee on Energy and Commerce
2125 Rayburn House Office Building
Washington, D.C. 20515

The Honorable Ed Whitfield
Chairman
Subcommittee on Energy and Power
Committee on Energy and Commerce
2125 Rayburn House Office Building
Washington, D.C. 20515

Dear Chairman Upton and Chairman Whitfield:

We are writing to urge you to hold a hearing to examine the impacts of climate change on the operation of our nation's energy generation. For years, scientists have warned that climate change will bring more heat waves and droughts, and we are currently experiencing impacts consistent with these predictions. Now there are growing indications that these climatic changes are having a harmful impact on the electricity sector.

The *Washington Post* reports today that climate change is challenging the nation's hydroelectric, coal-fired, and nuclear power plants.¹ The record-breaking heat and drought conditions are forcing power plant operators to operate hydroelectric projects with less water and to cool fossil and nuclear power plants with less water.

There have been several cases of nuclear power plants being forced to shut down because cooling water was either too warm or too scarce. Last month, Dominion Power was forced to shut down a nuclear reactor at its Millstone Power Station in Connecticut because the water it

¹ The Washington Post, "Climate change challenges power plant operations" (Sept. 9, 2012) (online at http://www.washingtonpost.com/national/health-science/climate-change-challenges-power-plant-operations/2012/09/09/42b26b8e-f6a5-11e1-8b93-c4f4ab1c8d13_story.html).

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needs to cool its reactor became too warm.² The average water temperature near the intake pipes in the Long Island Sound had risen to 76.7 degrees, almost 2 degrees above the maximum allowable temperature of 75 degrees.³ This is apparently the first time since the power plant began operation in 1970 that this has occurred. According to a spokesperson for Dominion, “Temperatures this summer are the warmest we’ve had since operations began here at Millstone.”⁴

Other reactors have been affected by the extreme heat. Exelon Corporation had to receive special permission from regulators this summer to continue to operate its Braidwood reactors in Illinois when their cooling water pond’s temperature reached 102 degrees – four degrees warmer than the allowable maximum of 98 degrees established when the plant began operating 26 years ago.⁵ The Tennessee Valley Authority had to curtail the output of its Browns Ferry nuclear reactors in Alabama during the summers of 2010 and 2011 because the temperature of the river used for their cooling water became too hot.⁶

The Midwest Independent System Operator (MISO) reported that another reactor had to shut down this summer because its cooling water source had fallen below its intake pipes.⁷ According to MISO, yet another reactor’s output was “partially curtailed.”⁸

As the warming continues, this problem is expected to worsen. A recent article in *Nature Climate Change* found that “climate change will impact thermoelectric power production [primarily nuclear and coal plants] in Europe and the United States through a combination of increased water temperatures and reduced river flow, especially during the summer.”⁹ According to David Lettenmaier, a co-author of the article and professor of civil and environmental engineering at the University of Washington, “this study suggests that our

² The *New York Times*, “Heat Shuts Down a Coastal Reactor,” online at <http://green.blogs.nytimes.com/2012/08/13/heat-shuts-down-a-coastal-reactor/>.

³ *Id.*

⁴ *Id.*

⁵ The *New York Times*, “So How Hot Was It?,” online at <http://green.blogs.nytimes.com/2012/07/17/so-how-hot-was-it/>.

⁶ *USA Today*, “Climate Change Causes Nuclear, Coal Plant Shutdowns,” online at <http://content.usatoday.com/communities/greenhouse/post/2012/06/climate-change-makes-nuclear-coal-power-plants-vulnerable/1>.

⁷ The *New York Times*, “So How Hot Was It?”

⁸ *Id.*

⁹ *Nature Climate Change*, “Vulnerability of U.S. and European electricity supply to climate change,” online at <http://www.nature.com/nclimate/journal/vaop/ncurrent/full/nclimate1546.html>.

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reliance on thermal cooling is something that we're going to have to revisit."¹⁰ In addition, the Associated Press conducted an analysis of the United States' 104 commercial nuclear reactors and found that "24 are in areas experiencing the most severe levels of drought. All but two are built on the shores of lakes and rivers and rely on submerged intake pipes to draw billions of gallons of water for use in cooling."¹¹

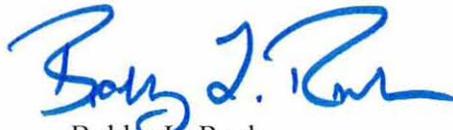
The impacts of climate change on our nation's power plants are real and are happening now. They are imposing costs and logistical challenges today.

We respectfully ask you to schedule a hearing on this issue as soon as possible so that the members of the Committee can hear from experts about these impacts.

Sincerely,



Henry A. Waxman
Ranking Member



Bobby L. Rush
Ranking Member
Subcommittee on Energy and Power

¹⁰ *USA Today*, "Climate Change Causes Nuclear, Coal Plant Shutdowns."

¹¹ Associated Press, "Drought Could Shut Down Nuclear Plants," online at <http://www.msnbc.msn.com/id/22804065/ns/weather/>.