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Electricity Prices, River Temperatures and Cooling Water Scarcity

by Grant R. McDermott, Øivind Anti Nilsen
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Abstract:

Thermal-based power stations rely on water for cooling purposes. These water sources may be subject to incidents of scarcity due to environmental regulations and competing economic concerns. This paper analyses the effect of water scarcity and increased river temperatures on German electricity prices from 2002 to 2009. Having controlled for demand effects, the results indicate that the electricity price is significantly impacted by both a change in river temperatures and the relative abundance of river water. An implication is that future climate change will affect electricity prices not only through changes in demand, but also through increased water temperatures and scarcity.

Text: See [Discussion Paper No. 6842](#)

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