Troubling interdependency of water and power

By Felicity Barringer, New York Times

In Modesto, utility records chart an 18 percent rise in farmers' energy use in 2014 compared with 2013. No evidence shows exactly why this happened, but California's drought, now in its fourth year, sent many farmers to their wells to pump from hidden aquifers water that normally would be found at ground level.

Such measures are a timely illustration of the way water needs power – not just to move it, but to clean it and even, with desalination, to create it from brine. A large desalination plant being built to provide 7 percent of San Diego's water will require about 38 megawatts of power, enough for more than 28,000 homes. And it is no coincidence that primary owners of the 2,250-megawatt, coal-fired Navajo generating station near Page, Ariz., are water managers; they need the power to move water.

The converse is also true: Water is required for power – for hydropower; for extracting oil, natural gas and coal; and, most of all, for cooling power plants. A report from the Congressional Research Service projects that 85 percent of the growth in domestic water consumption from 2005 to 2030 will come from the power sector.

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