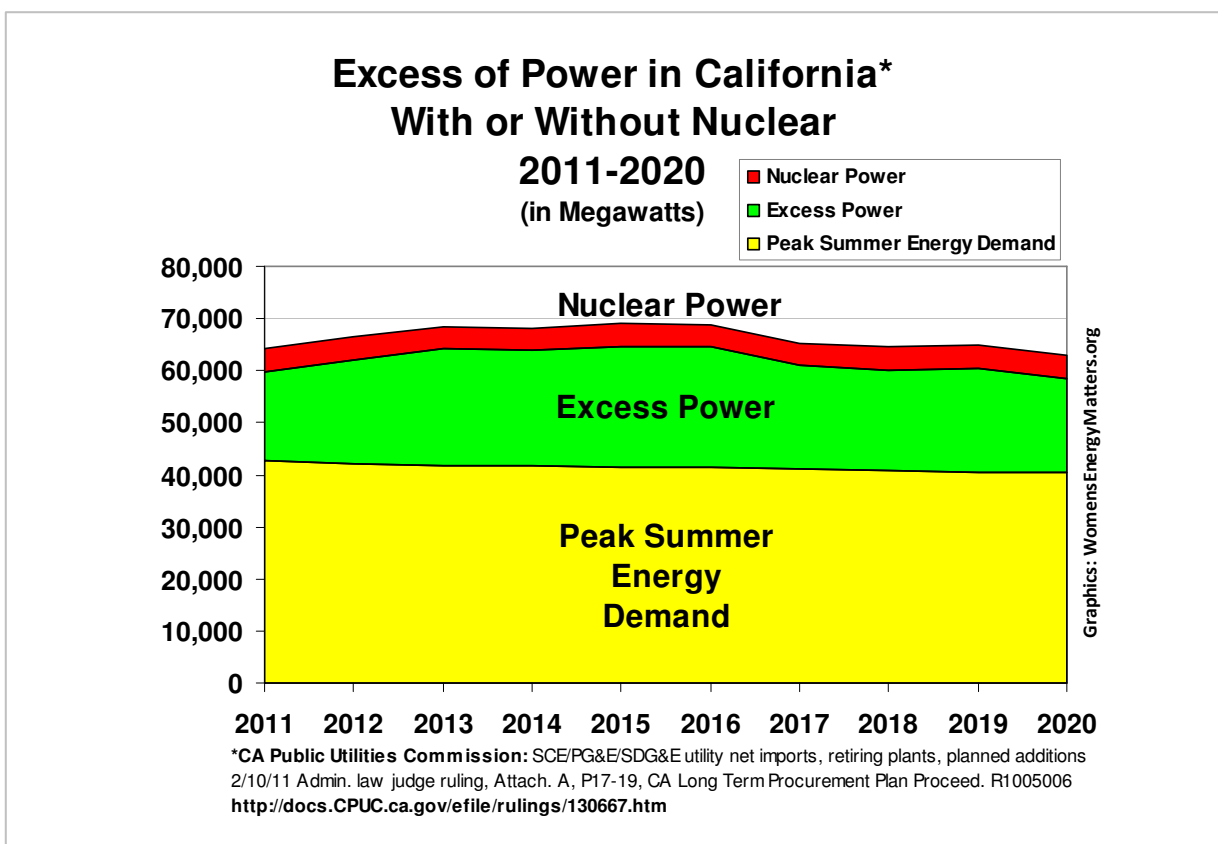


## No Blackouts with San Onofre Shut Down



- California has excess power without our unreliable nuclear power plants.<sup>1</sup> This includes power needed for peak summer demand, voltage and grid stability.<sup>2</sup>
- Southern California had no blackouts this hot summer caused by San Onofre being off-line for almost 9 months.
- California's electricity grid operator has recommendations to avoid blackouts next year.
  - Major transmission upgrades have been completed, increasing the availability of power into the Southern California L.A. basin.<sup>3</sup>
  - Huntington Beach gas fired units 3 and 4 will be used only for voltage stability next year and not for gas power.<sup>4</sup>

Topping the list of recommended mitigation actions is converting Huntington Beach units 3 and 4 into synchronous condensers. The units were brought back into service this year to fill the void left by the nuclear plant shutdown. As synchronous condensers, the Huntington Beach units do not produce electricity and, therefore, no air emissions credits are required.

Instead, the condensers, acting somewhat like spinning flywheels, adjust to grid conditions by providing the voltage support, normally supplied by the nuclear plant, to the local 230 kilovolt switchyard. Megavars, instead of megawatts, would be produced and used to push megawatts through the grid, much like water pressure helps push water through a hose.

<sup>1</sup> 2/10/2011 CA Public Utilities Commission: Administrative Law Judge Ruling Attachment A, Pages 17-19, CA Long Term Procurement Plan Proceedings R005006 <http://docs.CPUC.ca.gov/efile/rulings/130667.htm>

<sup>2</sup> 2011-2012 ISO Transmission Plan <http://www.caiso.com/Documents/Board-approvedISO2011-2012-TransmissionPlan.pdf>

<sup>3</sup> <http://sanonofresafety.org/energy-options/>

<sup>4</sup> <http://www.caiso.com/Documents/CaliforniaISOPreparesforAnotherPotentialSummerWithoutSanOnofreGeneration.pdf>