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**BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT
COMMISSION OF THE STATE OF CALIFORNIA**

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APPLICATION FOR CERTIFICATION

Docket No. 11-AFC-01

**Rob Simpson, Helping Hand Tools and Mr. Powers' Supplemental Comments to Pio Pico
PMPD**

Helping Hand Tools and Mr. Bill Powers submits the following comments. On September 8, 2011, the San Diego Union Tribune published Mr. Powers' op ed. entitled "One Year Later: Planning for unexpected vital to preparedness." We submit that article as a Supplemental Comment to our previous submitted comments.

Respectfully submitted on September 11, 2012.

/s/ Gretel Smith

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One year later: Planning for unexpected vital to preparedness

By Bill Powers

Saturday, September 8, 2012

SDG&E is subject to conservative grid reliability requirements to assure the lights stay on under the most extreme conditions – specifically the simultaneous loss of the 2,000-megawatt Southwest Powerlink transmission line along the border and the 600-megawatt Otay Mesa combined cycle power plant. Yet the loss of only the Southwest Powerlink caused an unprecedented regional blackout on Sept. 8, 2011.

The California Independent System Operator (CAISO) oversees grid operations in the San Diego area. The deregulated market-based power purchase structure that CAISO was founded to facilitate in the mid-1990s presumes that consumers are best served at all times by a market that seeks the lowest electricity prices. CAISO uses advanced grid monitoring procedures to ostensibly account for all foreseeable contingencies every few seconds.

However, unexpected events occur with some regularity. In late October 2007, SDG&E came close to blacking out substantial portions of its service territory when multiple fires simultaneously cut San Diego's two major transmission import pathways. This event exposed a major strategic weakness in the regional grid – insufficient local generation to cover San Diego's needs if the transmission lines are unavailable.

At midnight on April 1, 2010, CAISO inexplicably ordered SDG&E to shut off the one operating power plant in the local area. This erroneous instruction, which immediately triggered a major blackout in the eastern portion of the greater San Diego area, had a Homer Simpson life-imitates-art quality to it. The CAISO operator who issued the instruction was subsequently fired.

CAISO projected very high demand for Sept. 8, 2011, the third day of a major heat wave. Yet the grid was being operated as if it were just another day, with most of the electricity being imported from afar. The San Diego area's largest power plant, 1,000-megawatt Encina in Carlsbad, was not producing significant power at the time of the blackout.

The FERC blackout report concluded that the overall grid design and operation strategy is what it is, and – but for poor inter-utility communication – all is well. The wisdom of allowing high levels of power imports during peak demand periods is not considered. The right question is never asked.

At a critical time after the Southwest Powerlink was lost but before the blackout occurred, a period of about 11 minutes, local fast start peaking units were ordered online by CAISO to help fill the void. These units can go from cold start to full capacity in 10 minutes or less. The response to the call was not immediate, and these units were providing no power when the blackout occurred.

Those who were in San Diego on Sept. 8, 2011, remember how unprepared the community was. The U-T reported an initial damage estimate of \$118 million.

So what is the real lesson from the blackout? The lesson is that Murphy's Law periodically trumps the advanced grid model.

Another lesson is that saving consumers a few dollars per megawatt-hour should not be the overriding objective during summer peak demand hours, especially when the financial penalty for getting it wrong may be many orders-of-magnitude greater than any savings.

SDG&E sought and received preventive grid shut-off authority for fire-prone areas under certain high wind and temperature conditions to lessen the fire hazard. Similarly, during periods of critical peak demand, a different grid management approach should apply. All available local generation should be online during this period, about 100 hours per year. This will reduce stress on the transmission grid and increase its capacity to respond to the unexpected.

More local generation should also be added. This generation should be "inherently online" local solar and combined heat and power (CHP) plants, not high-cost ratepayer-financed peaker plants that may or may not respond in time to an emergency dispatch call like the one issued on Sept. 8, 2011. The cost of rooftop solar and CHP is borne by the owners of those systems, not utility ratepayers.

Running all available local generation at peak demand hours and adding more clean local power to the San Diego area would be the correct response to the Sept. 8, 2011 blackout, not de facto validation of a status quo grid management strategy that leaves San Diego vulnerable at critical times.

Powers, a San Diego electrical engineer, is an energy consultant.

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