

Raitt, Heather@Energy

From: Raitt, Heather@Energy
Sent: Wednesday, August 27, 2014 11:43 AM
To: Francis Brandt
Cc: Green, Lynette@Energy
Subject: RE: Wind Energy

California Energy Commission

DOCKETED

14-IEP-1

TN 73721

AUG 27 2014

Hello Mr. Brandt,

Thank you for your interest in the IEPR and for the information. The topics covered in the *2014 IEPR Update* are outlined in the Scoping Order that is available on line at http://www.energy.ca.gov/2014_energy_policy/2014-04-03_2014_IEPR_Update_Scoping_Order.pdf.

Unfortunately, the process for adding topics to the scope of the report is closed as the draft Scoping Order was released on February 18, 2014 and comments were due March 4.

That said, I will be sure to docket your email so that it will be distributed to the Commissioners and other key staff. I encourage you to participate in the *2015 IEPR* proceeding, particularly when the draft scoping order is released early next year.

Thanks again for your interest,
Heather

Heather Raitt
Assistant Executive Director for Policy Development
California Energy Commission
916.654.4735

From: Green, Lynette@Energy
Sent: Monday, August 25, 2014 10:23 AM
To: Francis Brandt
Cc: Raitt, Heather@Energy
Subject: RE: Wind Energy

Hello Mr. Brandt,

Suzanne and I no longer work on the IEPR. I'm copying Heather Raitt in this email so she can assist you. Thank you.

Lynette Esternon Green
RPS Certification
Renewable Energy Division
California Energy Commission
1516 9th Street, MS 45
Sacramento, CA 95814
(916) 653-2728

From: Francis Brandt [<mailto:f.brandt@att.net>]
Sent: Thursday, August 21, 2014 3:43 PM

To: Green, Lynette@Energy
Subject: Fw: Wind Energy

Hi MS Green,

I'm not sure that MS Korosec ever forwarded this information to the CEC Board. I wish it could be incorporated into the 2014 IEPR.

Frank Brandt

On Friday, February 15, 2013 2:27 PM, Francis Brandt <f.brandt@att.net> wrote:

From: sherer600Subj: Wind energy

Data here...not modeled scenarios. Wind is ok for limited use but no solution in providing in long term needs...no matter what the models and politicians say.

The Australian Experiment: When challenged about the failure of a wind farm to produce electricity when the winds fail, a favorite response of the wind promoters is that if sufficient farms are built over a broad area then the entire system will produce even if the winds fail on a few farms. The amount of excess capacity needed never seems to enter the discussion. It is important to remember that the electrical grid operator (distributor) must balance electricity output with consumption



within fairly tight tolerances, or the entire system fails.

Australian Tom Quirk provided TWTW a reference to a paper in the peer-reviewed British journal, Energy and Environment, that describes a study of the production from 21 farms spread out over the grid for eastern Australia which is described as, geographically, the largest, most widely dispersed, single interconnected grid in the world. Unlike many studies, such as the ones by the US National Renewable Energy Laboratory (NREL) which relied on computer models, this study relies on hard data. The results are grim, but not unexpected.

The study focuses on the year 2010, which was, apparently, not significantly different from other years. The study uses an unusually low standard of 2% of installed capacity for the Minimum Acceptable Level (MAL). It relies on data provided by the grid operator that covers average power output over five minutes. Shorter time periods are preferable and instantaneous output is ideal. For 2010, the entire fleet (the combined output of all wind farms) failed to produce 2% of installed capacity 109 times. The longest period was for 70 minutes. One wind farm, described as typical, failed 559 times in the six months. The longest period was for 2.8 days. Not only does the entire

fleet fail frequently, but also it fails throughout the year. Clearly, such performance would be unacceptable for any traditional method of generating electrical power.

After analyzing the data, the authors state that wind cannot be used for base load, the daily minimum requirement, and that the installed capacity of required back-up must be at least 80% of installed wind farm capacity. In eastern Australia the required back up is open cycle gas turbines (basically jet engines) which far less efficient than closed cycle gas turbines. But the closed cycle systems cannot react sufficiently quickly to variation of wind power output. Further, the open cycle turbines must be operating constantly on stand-by mode, wasting energy when the electricity is not needed.

Wind power promoters, and their supporting politicians, are leading the public into an expensive wind trap. Please see link under Alternative, Green (“Clean”) Solar and Wind.

