

PRESS RELEASE

**AS WIND DROPS, SPAIN NEAR MISSES A BLACKOUT.
IT GOES FOR A PRECAUTIONARY "BROWNOUT" INSTEAD.**

The views expressed below are my personal views. I am not expressing any official position of Proact International, of which I am the Windfarm/Bird Research Manager - www.proact-campaigns.net

Madrid, Wednesday March 2nd 2005

Yesterday, as the wind rapidly abated, the Spanish grid operator REE (Red Electrica Española) advised 300 heavy electricity users it was going to avail itself of the interruption clause in their contract. Then, their electricity supply was cut off.

The effect was to reduce overall demand by 2,000 MW, and avoid a possible blackout.

Since December, Spain has weathered several cold fronts that brought snow to the beaches of Javea and Mallorca, something unseen in 20 years. Yesterday, snow brought chaos once more to much of the road network in the northern half of the country. When night came, March temperature records were broken in a number of provinces. In the Valle de Salazar, Navarra, a weather station recorded minus 24.8° Celcius.

Electricity consumption, in such weather, was high on March 1st, peaking at 40,340 MW at 7.49 PM, but below the all-time record of 43,708 MW established on January 27th.

However, there was no brownout in January. So what went wrong on March 1st?

On Radio Litoral, at about 7 PM, a news bulletin mentioned the partial interruption in the electricity supply, saying the wind had dropped, which had the effect of reducing the production of 11,000 windmills to 700 MW.

Next day, the business paper EXPANSION said much the same thing: little wind, 800 MW produced by the Spanish windfarms in spite of their installed capacity of 8,000 MW. (1)

But this cause, which is very real and documented on REE's website in real-time graphs (2), was taken off centre-stage in favour of a side-story. And the dismal windpower performance was given 27 words in the body of the article.

- Political correctness at work?

Here is what the article chose to relate at length:

Because of bad weather, three methane carriers could not dock in the harbours of Barcelona, Sines and Huelva. This prompted REE to worry that gas pressure in the feeders (gas pipelines) might slacken due to the high demand level. And this could impair the performance of gas-fired power plants (Spain has modern CCGT plants with a combined installed capacity of 8,259 MW). So the decision was made to activate the interruption clause with the 300 large users so as to avoid a possible blackout.

Question: were Spanish stocks of LNG so low that a delay in the docking of 3 gas tankers could cause a blackout? The newspaper does not mention the level of gas stocks. And the operator of the Spanish gas supply network, ENAGAS, said that pressure in the feeders was normal and that all customers were supplied with the gas they required.

ENAGAS added, however, that they had advised some of their clients to modulate their consumption. And CCGT plants that can use fuel oil as an alternative were advised to do so.

In a nutshell, this is side-tracking from the main cause of the crisis: an important drop in the average windspeed over Spain during a peak in demand (see real time graphs - (2) below). For if this had not happened, there would have been no need to cut off the supply of 2,000 MW.

A few hours into the brownout, 1,400 MW were imported from France. After 8 PM, demand began to abate, as it normally does on weekdays at

that time. And REE resumed supplying electricity to the 300 large customers, some of which no longer needed it by then.

CONCLUSION

The EXPANSION article (1) concludes with two opposite quotes: one, from an electricity company, boasting that the system was able to cope thanks to the CCGT plants; the other, from another company, pointing to the advisability of not phasing out coal-fired power stations.

The most obvious conclusion was left out: windfarms are unreliable and will let you down when you need them most (cold snaps as well as heat waves normally combine high electricity demand and a lack of wind).

The upshot is that, for every 1,000 MW of windpower installed capacity, new conventional generating unit(s) able to deliver 1,000 MW should be built as back-up - preferably not gas-fired.

For indeed, what if more of the Spanish generating capacity had been inoperative due to maintenance & repair? If we are to believe the article, only 5,000 out of 66,700 MW generating capacity were out of commission on brownout-Tuesday. So the outcome could have been much worse.

This back-up requirement will further increase the already exorbitant cost of windpower, as two power stations are needed to do the job of one. And consumers will pay the price, as they now do in Denmark with domestic electricity prices c. 100% higher than in the UK.

Germany also found that out, from an official report that was quickly shelved by the windpower-bent coalition government of Greens and Social Democrats.

The report was leaked out to Der Spiegel, however, who exposed the disturbing news in an article (English translation available from the undersigned upon request).

But judging from the way the Spanish media treated the March 1 brownout, Madrid may well slip the issue under the carpet - till repeated blackouts force a decision further down the road. Much unnecessary damage will have been done by then, to the landscape, to the birds, to our quality of life.

Spanish politicians want to cling to their green image, and windfarms are the easiest way towards that end. - Yet, *real* solutions exist for the reduction of our emission levels (3). It is up to the media to take their responsibilities, and inform the public. For nobody else will.

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RESEARCH ON WINDFARMS:

www.iberica2000.org/Es/Articulo.asp?Id=1186 (no CO2 savings)

www.iberica2000.org/Es/Articulo.asp?Id=1875 (chilling statistics)

<http://www.iberica2000.org/Es/Articulo.asp?Id=1228> (articles in English)

<http://www.iberica2000.org/Es/Articulo.asp?Id=1255> (articles in Spanish)

<http://www.iberica2000.org/documents/dirlist2-main.asp?f=/EOLICA>

(documents)

http://www.iberica2000.org/documents/EOLICA/PHOTOS/BIRDS_KILLED_BY_WINDFARMS/ (photos)

(1) - scanned article posted here:

http://www.iberica2000.org/documents/EOLICA/brownout_March_1st.jpg

(technical problems to be fixed by 11 AM Thursday - hopefully)

http://www.iberica2000.org/documents/EOLICA/brownout_March_1st_continued.jpg (OK)

(2) - www.ree.es - webpage of REE, the operator of the Spanish electricity supply grid. Follow these steps:

a) click the English flag

b) click: "operation of the power system"

c) click: "power demand tracking in real time" (second link under picture)

d) click the graph: here is the demand curve, hour by hour, in real time.

e) get back to previous page

- f) click "wind power generation" (square to the right)
- g) click the graph: here is windpower electricity production in real time (yellow line) against installed capacity of 6266 MW* (straight red line) - Exact figures are posted above the graph.
- e) to see previous days: go back I page and click "last days": you will see the drop in windpower generation occurring on March 1st.

* that portion of installed capacity which is being monitored, or "tele-metered"

(3) - real solutions posted here:

http://www.iberica2000.org/documents/EOLICA/real_solutions.doc