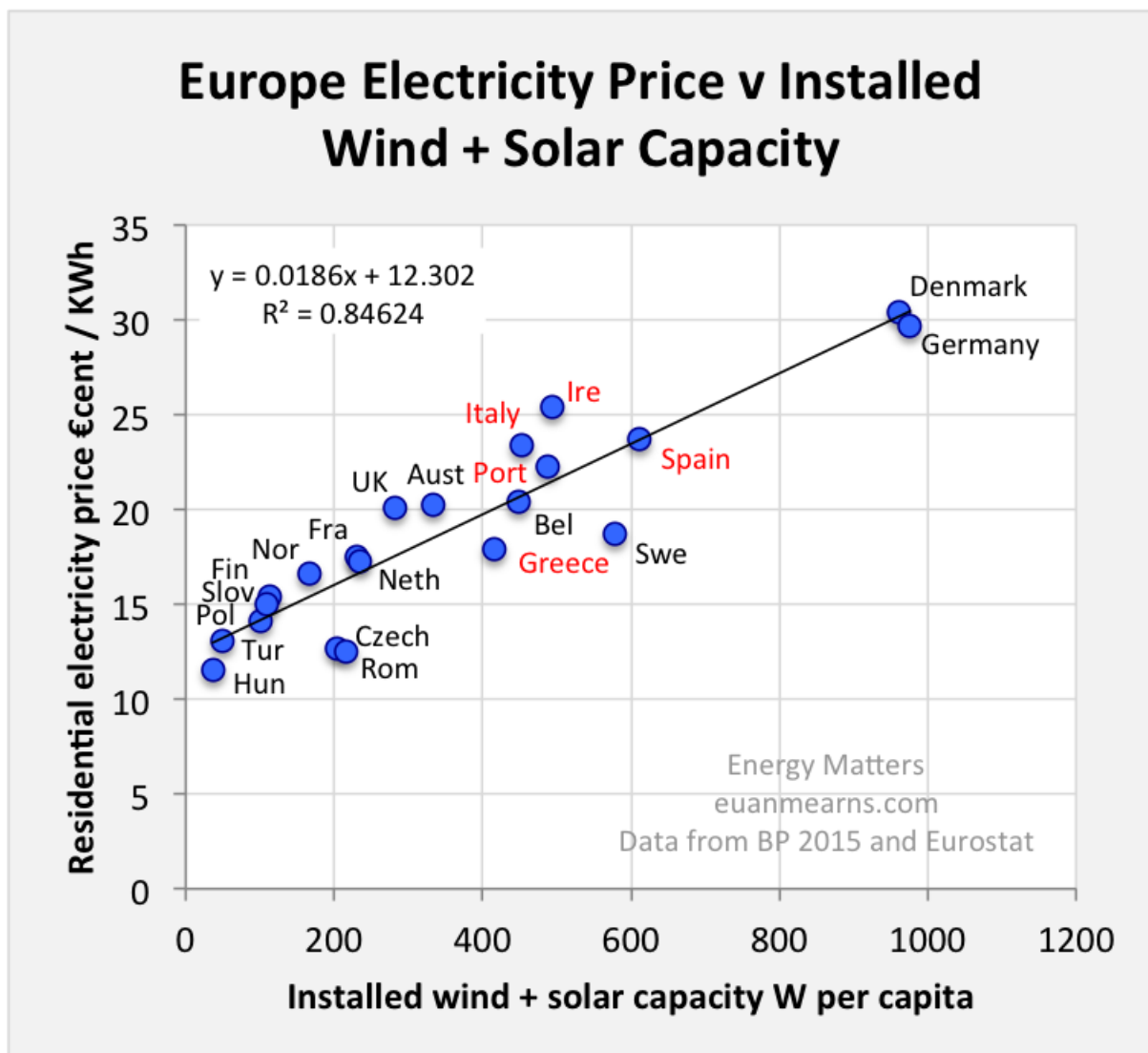


## SUBMISSION REGARDING PROPOSED SOLAR FARM AT URALLA NSW

I wish to lodge an objection to this proposed development on the basis of the effect it will have on increasing electricity prices and costs borne by me as a taxpayer to accommodate intermittent energy sources into the existing electrical distribution system. The proposed location is also inappropriate for various reasons and could easily be relocated somewhere less contentious. It is also being promoted as a “clean and green” development when it is demonstrably the opposite.

Intermittent sources of electricity are usually portrayed as being cost effective by comparing the lifetime output of electricity to the cost of manufacture. For example, PV panels are stated as producing typically five times their manufacturing cost in useable electricity generated. In this narrow sense, the statement is correct.



With reference to Fig1., this graph shows the data for household domestic electricity charges with respect to the percentage of intermittent energy supplementing the traditional electricity grid. European figures have been chosen because they accurately reflect the cost of measures taken to accommodate intermittent sources

which are then passed on to the consumer. Australian and US data tends to allocate these costs in capital budgets and taxation, they exist in full measure but not as clearly defined.

Denmark is the poster child for intermittent energy use being in the order of 20% of energy consumed as against laggards such as Poland and Hungary. It will be noted that consumers in Denmark pay double the amount of their Polish counterparts.

*It should be clearly understood that these additional charges/costs are over and above the costs borne by the owner of the intermittent source, in this case the owner of the solar farm.*

The costs in the main relate to additional power system infrastructure needed to overcome instability of the grid and increased grid capacity in sections experiencing power surges. Compounding this, is the fact that a lot of this additional infrastructure sits unused for much of the day. An example would be night time for solar farms as they generate nothing. Additional expensive short term generating capacity has to be available at short notice to cover negative fluctuations in intermittent power. All these costs are ultimately borne by the consumer and/or taxpayer and not by the intermittent generator. Australia now has some of the most expensive electricity in the world, this will get a lot worse.

The company proposing the solar farm is being disingenuous in portraying this project as being “clean and green”. By employing the narrow cost/benefit definition of PV panels, the true cost is disguised, beyond these costs are factors such as:

- Mining, separation and smelting of materials
- Un-remediated, toxic mine sites
- Transport costs
- Pollution from (Chinese) manufacturing plants.
- Increased pollution from the production of materials, manufacture of equipment, transport of same, because of the additional infrastructure needed to accommodate intermittent sources. In the Danish example, equal to the base (Polish) total electricity cost.
- Environmental degradation for example the draining of the Atacama Desert Aquifer, this has left a toxic sludge over large areas of the surface, has caused the death of nearly all vegetation in a system of oases which have been occupied since prehistoric times, the people being deprived of a livelihood and driven off.

- Closer to home, the construction of this project will continue for three years during which time the small town of Uralla, pop. 2,700 will have to endure an insane truck convoy through the town day and night, an influx of up to 700 itinerant workers. The project will sit there for thirty years. Already stretched services will be overwhelmed. It will drive up rents resulting in lower income rental residents being forced out of town.

Dirty and brown may be a better description.?

One of the reasons given for locating the solar farm near Uralla town is that it is adjacent to a major transmission line.

With modern DC transmission line technology, this is entirely unnecessary.

Power from solar farms can now be transmitted for hundreds of Kilometres with minimal loss.

DC lines do not suffer from reactive or skin effect losses, resistance losses are minimised by the high voltage/current ratio.

It is now World's best practice to locate solar farms in remote areas, of which Australia has ample. Energy is then delivered to the optimum location in an existing grid.

In view of above, there is little merit in this project particularly because of the damage it will cause to the environment, disruption to local residents and a significant increase in the cost of electricity to consumers. This is a commercial project that could be quite possible in some remote area. The company is only pursuing this local option so that it can save costs, disregarding the effect it will have.

R.J. RUDD

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