

Alternate Power June 21, 2018

After reading an article in the WSJ about how recent spending on renewable electrical energy projects (mostly wind and photovoltaic) is outpacing spending on regular energy base load projects (coal, nuke and natural gas) I dug into the story a little more since the economics of this activity seems highly questionable.

It was interesting to me to see this level of spending for what I thought was a very expensive alternative and a very poor base load solution. Some people were quoted in the article claiming that alternate energy costs were now equivalent or cheaper than conventional power systems. Base load balancing using at least 50% alternate energy sources was justified by having natural gas power stations heavily in the mix ready to go with short notice. Another “justification” was that grid wide balancing techniques are being developed to simplify load handling issues. They are expected to be in place and effective in the future but as far as I can tell there has been little real evidence of success of these balancing techniques and as you will see below, the actual costs of these techniques may be very high.

Regardless of the claims in the article that alternate energy is now cheaper, no evidence was given for this. As far as I can tell the only way that this is possible is that various government entities are outright subsidizing or granting tax breaks for alternate energy home and business installations and are also forcing power companies to buy all furnished alternate power at high fixed rates. Conventional power is presently bought and sold on a very dynamic and fluctuating basis that requires a lot of backbone and steel nerves to venture into that market.

In fact for the foreseeable future base load issues for alternate energy sources that begin to approach 40 or 50% of the total supply are complicated and expensive. Most costs of these alternate energy power systems are high and cannot seriously compete with any of the conventional power sources.

A story in the Financial Times noted that in the UK average value of electricity was about \$21.50 for a MWhr. A recent report by the UK Energy Research Centre, which tends to take a favourable view of renewables, suggested that alternate energy additional premiums would be only about

\$13/MWh higher even if solar and wind production doubled from today's levels. That's not trivial when you consider that in 2016, the average wholesale market value of wind output was \$50.50/MWh.

The above \$13/MWh seems clearly way too low when considering the wholesale market value of wind output. In fact, research by Gordon Hughes, a former professor of economics at Edinburgh University who is more skeptical, paints a much gloomier but probably more realistic picture. It was his estimate that average actual electric costs were about \$21.50/MWh as noted above. That would put actual additional premiums for wind power above the actual cost of electricity at \$29/MWh rather than \$13/MWh. And worse, he thinks the balancing costs will magnify as renewables become a bigger chunk of the system, rising to perhaps \$105/MWh for "substantial periods of each year within 10 years". In effect, that is a very substantial hidden subsidy for those alternate energy technologies, on top of the overt ones they already receive.

In the name of cutting fossil fuels and CO₂ emissions and at the same time removing the nuclear option for unknown reasons, a small group of people wishing to "save the planet" would have us pay exorbitant rates for very unreliable energy sources for no clear benefit. Especially when they use the man-made global warming argument. I am very skeptical of this save the planet idea. And it bodes poorly for the billions of folks who yearn for a better and more abundant way of life in the future. It is not without reason that the US over the past 15 years have used fossil fuels for about 80% of all our energy needs. And an interesting fact is that during that same period we have seen a leveling and a decline in our CO₂ output.

We all know that sources of energy over the past several decades have not been competing on a level playing field. Renewables have been given lots of subsidies and tax breaks as well as glowing endorsements by the environmentalists and socialists so that no one wants to challenge the idea that they may not be the best solution for our energy problems. In my opinion it is a huge cover up by a number of political groups and the media.

On the other hand, nukes have gotten a bad rap and are faced with mountains of regulations in trying to get them designed, built and operational. Do you see much in the media about the new compact very fail safe recent nuclear technology? There is a huge underground

technical effort being carried out by the nuclear power industry that is rarely discussed by anyone. I don't need to even talk about the huge propaganda wave that fossil fuels must face.

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