Big energy wants to kill the LRET

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Ever heard of the merit order effect? Readers of this column may be familiar with it, because it is emerging as a key issue in the Australian electricity sector, and a flashpoint between the established fossil fuel generators and the new wave of renewable energy technologies, and a conflict between short term profits and long term gains.

The National Electricity Market, like many around in the world, is based on a merit order, where the plants with the cheapest marginal cost of fuel get preference. They bid into an energy stack until demand is filled. The price of electricity for that period is set by the bid of the last generator into the stack.

For decades, this has meant that the brown coal generators in Victoria, shoveling in cheap and dirty coal from their doorstep, go first, followed by black coal, gas, and then gas peaking stations when demand is really high. But the rollout of renewables has changed those dynamics, because their marginal cost of generation is next to nil, so they go first, forcing other generators further up the stack, meaning prices are pushed down, and some fossil fuel generators miss out altogether.

This has been a well documented effect in Europe and elsewhere, and is considered a virtue by the International Energy Agency, which says the merit order effect has meant that cost savings on wholesale energy prices have, in some cases, more than compensated for the cost of the subsidies that got the renewables built in the first place. Looked at another way, EU Energy Commissioner Günther Oettinger said this week that this means the ultimate cost of completely decarbonising the grid by 2050 is the same as business as usual, as the higher upfront cost is offset later by the lower running costs.

This is good. But in Australia, the established energy industry considers it to be evil, because it threatens the very business model of current and future fossil fuel generation investments.

The depth of their feeling was revealed in the draft energy white paper released earlier this week. **The Investor Reference Group**, which includes some of the major generators, market regulators, bankers and bureaucrats, said it is concerned about the “suppressing” impact on wholesale energy prices caused by the deployment of renewables, which are supported by the LRET.

It described the LRET as a “cross-subsidy” that can “distort efficient market outcomes” and result in some “discontinuity” between price and investment signals. “Analysis suggests that this effect does impact pool prices and reduces the economic return earned by conventional generators,” it wrote, **citing the case in South Australia, which has been experiencing the lowest average wholesale prices since the NEM was created more than a decade ago. This is mostly due to the large deployment of wind, which accounts for more than 20 per cent of the state’s generation, the third largest penetration in the world.**

Although wind has already had an impact in Australia – and in the German market, where Statkraft has signaled it will retire two gas generators totaling

1000MW because they have effectively been frozen out of the stack – **what really scares the fossil fuel generators is the potential impact of a widespread deployment of solar,** which some analysts predict could dominate the LRET rollout post 2015, as the cost of large-scale solar PV matches that of wind.

Large-scale solar can fairly consistently hit the peak demand periods in summer, the time when NEM prices would normally soar, delivering a large part of the annual revenue for generators. This is not just the cream on the cake, it is an essential part of the business model . Our story last month on why utilities hate solar, which quoted a study by the Melbourne Energy Institute and Beyond Zero Emissions, underlined this case, and its potential impact even on the super peak periods when wholesale electricity costs can surge to $10,000/MWh. The generators earn around one quarter of their annual revenue from the energy price windfall from around 40 hours a week - as Energy Minister Martin Ferguson confirmed this week.

The Investor reference group says the impact of the merit order effect "could discourage" market entry by new generators – i.e. gas. It doesn't buy the argument of the IEA that the impact on wholesale energy prices is positive, arguing instead that consumers are paying more. And it wants the situation to be monitored and says governments should "avoid interventions that distort wholesale and contract prices."

What do they mean? Abandon the LRET, of course. And they have form on this. In Victoria, the state auditor general recently confirmed that the brown coal generators forced the then Labor government to wind back the state's renewable energy target because the merit order effect was impacting their earnings. It is believed that this is why the interconnector from South Australia to Victoria has not been upgraded, despite the clear case for that to happen, to unlock the considerable (and cheaper) wind resources in south Australia. (The Copperstring project in Queensland would have delivered a similar impact, where the owners of the proposed Kennedy wind farm argued that the benefit from reduced wholesale prices would more than offset the cost of renewable energy certificates. They never got to find out, because a gas plant will be built in its place.)

It is clear that there is a big push from industry and from the established generators to remove all "complementary measures" now that a carbon price has been implemented, and this includes the LRET – which, incidentally, is up for review next year. Expect a big push, and expect this to be a considerable issue in the structure and the mandate of the proposed $10 billion Clean Energy Finance Corporation, which will become one giant political football well before it invests its first dollar, if it ever does.

A report into the LRET by the Australian Energy Market Commission released last week revealed that the big energy retailers may choose to pay the penalty price for not acquitting their obligations under the LRET, rather than adding renewable generation, because it would be more cost effective for them – although more expensive for everyone else. Some suspect that might become a fait accompli, because of the delays in the build-out caused by the miscalculation of small-scale solar technologies, which caused the utilities to

have excess renewable energy certificates. It has been all but impossible for wind farms to obtain a power purchase agreement.

The Coalition may find itself in an interesting position on the LRET. It professes to support it, but not a carbon price. But the AEMC report makes it clear that the LRET will fall 50 per cent below its target without a carbon price, because it would be cheaper for utilities to pay the penalty price instead. And it makes clear that if the LRET fails, then the alternative - new gas plants and added gas infrastructure - will lead to *higher* energy costs.

And it notes that with a carbon price, the LRET certificates fall to just $10/MWh by 2020 and the cost of abatement from the LRET ranges from around $50/tonne CO2-e to around $40/tonne CO2-e by 2030/31 – considerably below the cost of abatement without a carbon price, and less than the anticipated carbon price at that time in any case. It estimates the cost of meeting the LRET will range from 0.6c/kWh to 0.8c/kWh.

The AEMC also notes that with a LRET, and a large build-out of wind and biomass, transmission costs would be lower than if there was no LRET and more gas generation was constructed. And what would happen to wholesale energy prices if the LRET was scrapped? The AEMC makes it clear what will happen, anyway, from 2020 to 2030 as the LRET winds down: in effect, the reverse of the merit order impact – “wholesale prices increase steeply as … increased gas plant is installed to meet demand,” it writes. But you won’t hear that line from the big energy industry folk.