

## Transition teething problem or permanent disaster?

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Politicians, regulators, and subsidy-seekers portray the present difficulties in the energy market as being part of the transition from fossil fuels to renewable energy – and perhaps to more exotic forms of energy derived from extracting hydrogen from water.

They go on to claim that transitions always involve teething problem difficulties.

This is false.

Transitions in the past from horse-drawn transport to trains, motor vehicles, and aeroplanes involved only benefits to consumers. Indeed, producers adapted to the changing technology with ease. This was also seen in the progression from sail ships to steamships and from the abacus to the mechanical calculator to the computer. The transition from obtaining power, heat, and light from wood and watermills to coal oil, and gas was equally painless and was essential to bringing about modern living standards.

Today's 'energy transition' is one forced by governments – there is likely not a single megawatt of wind/solar anywhere in the world that was built without a subsidy. Glib statements about cheap renewables are based on estimates of their costs without including the vastly increased transmission expenses they entail (according to the Australian government, this would be a fourfold increase in the cost of the current network) and the costs of filling in the supply gaps inevitable with intermittent wind and solar supplies.

In contrast to an 'energy transition' force-fed by highly subsidised wind and solar generation, governments played a passive role in the earlier transitions. Those transitions were driven by entrepreneurial innovations being embraced by customers because they were cheaper or had other superior features. Among the latter was greater reliability – a severe shortcoming of an energy system being converted from fossil fuels to wind/solar.

The latest wasteful spending program pursuing 'energy transition' goals is the America's oxymoronically named *Inflation Reduction Act*. This will increase spending by \$369 billion on 'Energy security and climate change investment'. US Energy Secretary Jennifer Granholm

praised the Act's support of [batteries](#). Banally, she said batteries complement wind and solar by storing their energy for when there is inadequate wind or sunlight, adding, 'When you combine wind or solar with battery technology, that becomes like baseload power that is reliable, which is very exciting.'

There is very little analysis of what America measures actually entail in terms of associated costs. In global terms, [Thunder Said Energy](#) estimates the power grid would be four times its present costs, even to accommodate a 25 per cent share of renewables. That's because the power is less concentrated, irregular, and must come from more highly dispersed locations than is the case with major coal, nuclear, or gas generators.

For Australia, [Global-Roam](#) (forty-minute mark) estimates that even with a perfect system, the equivalent of 25 Snowy 2's or 70,000 Hornsdale-type batteries would be required to firm up an exclusively wind-supplied generation system. Even so, the outcome would still mean less reliability than at present. Based on Global-Roam's analysis, total cost (and therefore prices) would be some 4-5 times that of the system from which we are being transitioned.

Consistent with the Global Roam estimates, [James Taylor](#), in critiquing the Integrated System Plan (ISP) recently published by the Australian Energy Market Operator, concludes it, 'Would require at least 7980 GWh instead of the 319 GWh in the ISP. Cost estimates for this scale of battery back-up would be in the \$5-7 trillion range.' As the batteries would be on a 10-year replacement cycle, the cost would be \$500-\$700 billion a year, or over one-quarter of GDP each year. Then there is the cost of the additional transmission and the wind/solar units themselves!

Modern living standards depend on cheap and reliable energy supplies. But ill-informed prejudices from electorates and pressures

from the wind/solar industries' vested interests, has brought aphasia among politicians in Western democracies regarding the energy industry.

Accustomed to market forces mitigating adverse effects of political interventions and soothed by unrealistic cost estimates of wind/solar supplies, governments have embarked upon a radical transformation of their energy supply industry. This has involved subsidies to renewables and regulatory impositions or outright bans on the use of coal, gas, and uranium. These measures are forcing closures of coal and nuclear generation. The consequent increased costs of generation are compounded by increased network costs.

The outcomes are now being seen in surging electricity (and gas) prices undermining living standards by both their direct effect on household energy bills and by raising input costs for all goods. Russia's reduction in gas supplies is merely a catalyst in this development.