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TASMANIAN ENERGY STRATEGY: SUBMISSION, PETER BOYER

Following please find my comment on the current draft of the
Tasmanian Energy Strategy.

This is in the form of a draft of my column published weekly in the *Mercury* newspaper. This is to appear on Tuesday 17 February 2015, subject of course to last-minute changes and sub-editing. It reflects my present thinking about this important subject.

There are two principal sources for my conclusions. They are as follows:

- (1) 2014 Schultz, George P. and Robert C. Armstrong (eds). *Game Changers: Energy on the Move*. Stanford CA, Hoover Institution Press.
- (2) 2014 Seba, Tony. *Clean Disruption*. Silicon Valley CA, Clean Planet Ventures.

Sincerely,

Peter Boyer
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ENERGY STRATEGY TACKLES THE SHOCK OF THE NEW (Boyer/Feb 17)

The first thing to be said about the Tasmanian government's five-year Energy Strategy, now in its final stage after public consultation, is that it acknowledges its limitations.

This is a compliment, not a criticism. In these turbulent times for the energy business, the hardest thing to do is to recognise that what we've always thought was part of the furniture may soon be a historical curiosity.

However well-established, no business is ever safe, and that's especially true for technology-based businesses. A case in point is Kodak, which enjoyed over 100 years as the global colossus of the film-based photographic industry.

As the 20th century drew to a close, Kodak wasn't sitting on its hands. Having invented all the key elements of digital photography, it seemed well-placed to dominate electronic imaging just as it had dominated the world of film. Instead it went into steady decline, filing for bankruptcy in 2012.

Kodak died because of deeply-ingrained ways of thinking built around very specific sets of skills. In the 1990s Kodak people could see that the future lay in digital technology, but they couldn't bring themselves to embrace it and run with it. It was alien to all that they knew and loved.

As the Tasmanian Energy Strategy recognises, there's a similar story in play in the future of our use of energy on this island.

Abundant energy with its vast electricity networks and the big generating plants that supplied them shaped the post-war world in which I grew up. In Tasmania the energy came from moving water; in other states it was from steam created by heat from burning coal.

The electricity networks of five states are now united as the National Electricity Market. With about 40,000 km of transmission lines, the NEM proudly claims to administer the longest alternating current system in the world.

Electricity networks are a kind of natural monopoly, where a product or service is deemed to be delivered more cheaply by a single provider than multiple ones. Experience suggests that with good regulation this can work, but like all monopolies it's prone to complacency.

Other dominant symbols of my time are the motor car and its internal combustion engine, centrepieces of a huge global industry powered by mineral oil. These technologies were fully mature when I was born, which makes them positively ancient today.

Making, servicing and fixing the car and its engine is a big enterprise, as befits this beast of many parts. Even more than grid electricity, it's become part of the furniture.

Enter two interlopers into this comfortable scene, like digital imaging intruding into the world of Kodak. Rooftop solar power and the electric motor vehicle are set to massively disrupt today's energy industries, here and everywhere.

The reason for this lies in both the technologies themselves and in the economic forces that drive all such enterprises.

Unlike centralised power generation, rooftop solar is a distributed energy source. While it can be profitable to sell solar power into a grid, it doesn't have to be that way. It can simply power the building it sits on, or buildings nearby. It doesn't have to have poles and wires.

The cost trajectory of both solar panels and electric motor vehicles is heading down, driven by both economies of scale and advancing technology. Solar costs a tiny fraction of what it did a mere 15 years ago. Electric cars and the batteries that drive them are going rapidly in the same direction.

Solar power is free and locally supplied, while grid electricity is beset with network costs and fuel costs in the case of coal. The petrol-diesel engine's complexity makes it far costlier to maintain and ensures a shorter operating life than applies to the relatively simple electric engine.

The Tasmanian Energy Strategy recognises the value of rooftop solar to the electricity grid with smart metering and an appropriate pricing structure, and sees the potential of electric cars both in saving on transport fuel and providing battery power to enhance network energy storage. A couple of caveats: the strategy's tacit approval of pricing to represent the "true cost" of network supply isn't a good way of dealing with solar and battery power. With these options getting cheaper by the day, this may eventually encourage householders to go it alone – not a great help to the grid. Biofuels and natural gas are put up as possible extra strings to the energy bow. But government-funded feasibility studies are bound to find that the value of biofuel is at best peripheral. As for natural gas, it's a fossil fuel whose propensity for leakage has cast doubt on its mitigation value. Like Kodak, the Tasmanian Energy Strategy has spotted the big disruptions ahead. Unlike Kodak, it must now find a way to deal with them. I look forward to the next stage.

Peter Boyer is a journalist with a special interest in climate and energy.

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