5 top ideas for Energy Policy – what will drive a transition?

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I headed over the Totally Renewable Yackandandah the other day and admired the commitment and strategies behind their ambition, something I hope to blog about soon.

I was asked what I would say if I was given the opportunity to talk to Ministers and bureaucrats about energy policy and I didn't come up with much substance straight away – I've been thinking about it ever since though and my question is, "What policies would really help drive the energy transition that we need to have?".

If you've read my Community Energy post you'll know that I think the future is supported by:

- much more local renewable energy – ie distributed generation because it can provide a better economic case than centralised generation.
- much more local renewable energy because solar is getting cheaper and it's modular and it makes sense to place it close to the loads that use it.
- storage and demand management because with the right information and price signals we can all utilise our energy investments better, including the electricity grid.
- smarter systems based on an Internet of Things approach – a smart grid makes many of the localised approaches more feasible and facilitates some energy efficiency and cheaper electricity bills to boot.
- I didn't mention it before but it's worth talking about gas and transport fuel. I believe we might come to rely more heavily on electricity to provide most of the services these fossil fuels provide at the moment.
- and most importantly, I believe communities will have a greater say in their local energy and community leaders will need to learn in concert with utilities and regulators if we are all to help choose the best path forward.

But what policies will get us there? I've picked five key domains and offered my top idea in each.

1. Financial – Ultra Local price incentives: There have been numerous debates about the benefits to the electricity network of localised power but in general solar owners are offered a paltry 6c/kWh for excess electricity to match the cost of the electricity from the wholesale market and nothing for network benefits (don't get me started on the disincentives that are offered). The thing is, network pricing is always averaged across large parts of the network. That means that if assets need to be upgraded in 5% of the network every year, that cost is spread across all the consumers. Solar energy could be providing a benefit, but it's most likely to be providing a large benefit in 5% of the grid and very little advantage elsewhere. What we need is a more transparent and long term approach to valuing the benefit that local generation can provide. That means we need to give communities a ten year insight into their asset needs and real opportunity/ incentives to change the energy trajectory in that time. A group including the Total Environment Centre is having a crack at this same issue – they have suggested local generation network credits to better recognise the value of excess solar energy. I propose that we insist the utilities craft MOUs with communities, covering the next ten years of likely investment and include opportunities to share the spoils when investment can be improved or deferred effectively. I'm confident that communities will have

different priorities for the investment and both parties – the network operators and the community will need to work hard together to find the best way forward – but under this model it will be the best – not just the investment that the utility deems is the best and feels most comfortable providing.

2. Shared control over decision making: Financing the grid differently leads to a different decision making model. Obviously I'm a fan of more localised decision making and that will be the topic of my Churchill Fellowship in May 2016. Many people don't realise that local government control used to be the norm for electricity supply and in many parts of the world it still is. Hamburg in Germany and Boulder in Colorado have both voted to buy back their electricity network from private operators. Cooperatives that operate electricity systems and are owned by their electricity customers can be found in the USA and the UK. District heating power plants that provide the right amount of heat and electricity to the local town can be found in Denmark – governed by a town committee. The grid death spiral has been talked about in Australia, especially since the release of the CSIRO's report on energy futures. (If people leave the grid, those left on the grid pay more and have a stronger incentive to leave as well.) It is a real possibility and concern, even if it might look unlikely at this stage. I was delighted to hear one of our regulators speak about his opinion to managing the death spiral – involve the community more in the decisions that affect their infrastructure. My proposal is that regulators, utilities and communities all need to be involved in decision making because we all need to learn – the grid of the future doesn't look like the investments that we currently know.

3. Investing in innovation, learning about technology: I attended a smart grid conference in the UK in 2010 and at that time the regulator was promoting its newly formed $2bn? (I'll check but it was massive) investment fund. The rationale was that the incentives for utilities to fund innovation were pretty discretionary and limited. The learnings from innovation could be shared across the whole sector for the benefit of all. Our system looks very similar to theirs but it is only this year that the regulator has started the development of an innovation fund proposal. Let's not forget that innovation can lead to business development and economic advantages – we are not the only country in the world with desires to shift to a low carbon future. I say speed it up, allocate the funds to getting projects that might be difficult to fund over the line and to taking the learnings from those projects and iterating/improving. Make sure the projects are local ones, that they solve energy issues and they involve both the communities and their electricity providers.

4. Information, making it available and well used: Understanding your electricity bill can be difficult and confusing as can finding a tariff that suits your usage. In the book Nudge, they cover the many unconscious biases that shape our decision making and argue that we need to nudge people to make the best decision for themselves. The path of least resistance should be a good one and usually it isn't – for example I have to ring my electricity retailer every time my contract expires because I suspect that the automatic rollover and the online re-subscribe options (do nothing or do a little) are both less competitive than the threaten to leave option. In this day and age of smart meters and plenty of data, I like the idea that everyone should be given their electricity data in a standard format. This would allow online comparison sites to take someone's data without any fiddle and it would be only a matter of time before we could offer energy savings advice at the same time as the optimum electricity offerings. This option will become even more essential as we move further into solar energy and the main option to reduce our peakiness might be a storage investment – with the right data it might even be an investment that your supplier is prepared to help you fund.

5. Long Term Strategy: Practical support for a transition to community and decentralised energy, like the ideas I have suggested above, will be fairly useless if the main direction of Australia's energy policy continues to

envisage only a system that throws up barriers to community energy. We have an electricity market that has refused to prioritise climate change and tried to argue for an agnostic approach to all technology. I attended an economics lecture recently where the argument was put that our electricity market (and others like it) work well when all players are in the midlife of their assets with a manageable amount of debt. At the beginning and end of asset life however, the market goes screwy. Old coal fired power stations have an incentive to go until the bitter end because they are no longer carrying the finance costs, having all but written off their assets. New investments will never get off the ground because the market isn't structured to develop and finance new projects if they represent significant proportions of the capitalisation of the whole market. It's probably no surprise that the trend to localised energy hasn't been a strategic investment on behalf of the energy market players – it's been driven by the $1.4million households that have invested much of their own money in solar energy. Even if community energy is seen as a small part of our energy mix originally – having it explicitly recognised and deliberately supported as a permanent feature of our energy transition is important for a long term coherent approach. And voila`, thanks to our many community energy advocates we have a strategy for the sector – now for this to be supported and part of a shared vision with governments and regulators.

Most of all – lets just get on with it shall we? a clean energy future beckons…

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