



April 22, 2010

To:

Office of Energy WA  
[energy2030@energy.wa.gov.au](mailto:energy2030@energy.wa.gov.au)

Hello,

Sustainable Energy Now Inc., would like to thank you for the Forum on Mon 19 April, discussing the way forward on energy.

We have a few comments which were not able to be made at the time, so we would like to put them forward:

1. On the comments of the high cost of implementing some of the changes discussed, in particular new transmission infrastructure and renewables, being a major obstacle, we would submit that while these items are presently expensive, they are offset by the following:

- the same expensive claim could have been said for the costs of the original electrical, gas, railway and other infrastructure at the time they were installed, but it is a very necessary investment in our future. Because it is an investment in our future, we should not necessarily shy away from amortising the costs over the future life of the system;
- investing in 'smart-grid' will help level peak loads and allow more effective use of renewables and other generators to reduce their cost of producing electricity;
- costs of renewables are reducing (and projected to continue) with mass production, economy of scale of installation and improvements in technology. At the same time, costs of fossil generation are increasing and the crossover point is likely to occur for these within the timeframe of the Initiative, We can't let present costs be our guide in decision making. An incremental investment in the various renewable and technologies, in line with a strong long-term plan will effectively achieve a 'dollar cost averaging' to reduce the risks of 'backing the wrong horse'. We also need to quickly learn from and adopt the best practices of renewables and grid from around the world, as applicable to WA's 'islanded' system; and
- externalised costs to society and environment are presently un-accounted and this must change for us to gain a proper appreciation for and make sustainable decisions based on the triple-bottom line evaluation.

2. On the comment/s of renewable energy "not producing baseload power", we submit



that the conventional definition of baseload power is somewhat due to the limitation of coal not being able to vary its output rapidly, and what we are really looking for is a system which provides reliable, variable and stable-frequency power matched with demand. We believe that this can be achieved by using a mix of renewables which complement each other, along with some energy storage (pumped hydro, electric vehicle fleet batteries on charge, flywheels for spinning inertia and others), smart-grid, DSM, and electric vehicle fleet charge modulation (V2G).

3. The method by which the topics were chosen for workshopping was too short and not methodical. A bit of forewarning and a more thorough canvassing of the audience would have produced a more comprehensive list, from which the audience could vote on the most important. Having said that, it did produce some interesting discussion.

4. SEN would like to state that we do not agree with the proposed separation of stationary energy from transport and liquid fuels, during the Forum. As mentioned in '2' above, there are numerous synergies between electrified transport and stationary power. There is tremendous potential to displace fossil or liquid fuels for transport by electrification, including rail such as trams, light, passenger and heavy haulage. The Tindo electric bus (mentioned in the SEN submission) is in use presently in Adelaide. The ex-hydrogen buses in Perth could be converted to run on lithium batteries to demonstrate the feasibility of this. Furthermore, domestic aviation can be displaced by high-speed rail such as the French-demonstrated 570km/hr on rail (wheels). The significant benefit of rail is that it is 5-10 times more energy efficient than wheeled transport and should be used wherever possible. As Ray Wills presented, electric vehicles are rolling out from all the major manufacturers in the next few years and some of these have ranges of 350km+. With ever-improving battery energy capacity and charge rates, plus battery-swap and charging stations being installed throughout the eastern coast by 2012 and Perth thereafter (by "Better Place Project") it makes sense to build electrified transport into our stationary energy picture.

Thank you once again for the opportunity to participate, and we look forward to further consultation.

Regards,

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