

**Submission
No 218**

SUSTAINABILITY OF ENERGY SUPPLY AND RESOURCES IN NSW

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Submission to the inquiry into Sustainability of energy supply and resources in NSW

This submission is based upon unpublished Australian Research Council Future Fellow research work conducted into energy transition and its problems. The information, largely comes from interviews with those in the field.

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General

1. Australia's greenhouse gas emissions are not declining significantly. Those emissions produce climate change, and need to be cut back, to allow some degree of climate stability to emerge. Otherwise, it may become increasingly hard to sustainably maintain life in Australia.
2. The problem is global not national. Because of this, every state has to stop pretending that it can only act when others act. Otherwise no one will act.
3. Fossil Fuel burning is the primary cause of climate change.
4. Fossil fuel mining and burning, badly affects the health of those living nearby, and the crops being grown nearby. Fossil fuels are poisons. No amount of positive advertising about new technologies will alter this in the foreseeable future.
5. Exports of fossil fuels do affect the world levels of greenhouse gas emissions. They do not just affect the atmospheres of the countries they burn in. Every export, helps destabilise climate in the world and Australia. That other people will export is no defence as, unless someone stops, no one will.
6. Carbon Capture and Reuse or Storage, has not been shown to work at the levels, price and low energy usage, required for it to make fossil power climate safe.
7. Rehabilitation of land devastated by coal mining does not seem that common in Australia, and most of it faces the road, rather than goes deep. See the Hunter Valley.
8. Coal mining takes large amounts of water, and risks polluting large quantities of water, despoiling rivers or subterranean water aquifers. This is particularly destructive, in times of lengthening drought.

9. Destroying agricultural land, in a country with few very fertile areas of farmable land, and growing population, strains sustainable survival.
10. Therefore, as part of the struggle against climate change and ecological despoliation, the government should not allow any more coal or gas mines, no matter how economically beneficial they are claimed to be. It should not encourage the building of more coal fired power stations. Gas based energy should not be enabled unless it is replacing coal, as it is still a source of greenhouse gas emissions, particularly 'fugitive emissions' or those emissions from well sites and from leaky pipes. It should be assumed all old gas pipes are leaky.
11. Transport and agriculture also seem to be major sources of greenhouse gas emissions.
12. Land-clearing and deforestation prevents the breakdown of carbon dioxide into carbon and oxygen, and heightens the risk of water runoff. It increases the risks of climate change.
13. Renewable based, electric, or hydrogen, powered transport needs to be encouraged so as to replace petrol fuel transport.
14. We also need to encourage regenerative agriculture to improve carbon storage, land fertility and water retention.
15. Different types of energy storage need investigation, development and installation, domestically, locally and grid wide. There may not be one universal solution.
16. Renewable energy is essential, but it is not enough to solve the problems of climate change, and sustainability, by itself.

Politics of Economics

1. Polls consistently show that the majority of Australian people want to encourage renewable energy, but this so far has not produced any change in politics, economic regulation, or economic process.
2. If large-scale renewable energy is installed the way that most major private or public/private projects seem to be installed nowadays, with apparently low levels of real consultation, or as impositions from on high, then there will, more likely, be resistance as people see their landscapes being destroyed for the profit of outsiders, with little local benefit.
3. This resistance is particularly important in rural areas, where it is easy to organise a resistance which motivates a large proportion of the relatively small local population.

4. Companies have more incentive to make money than to get local communities involved. Taking a hint from coal mines they may even import labour, so that most of the money earned in construction goes outside the areas being developed.
5. Renewable projects, in the long term, appear to require few maintenance jobs, so the overall employment available in a rural area may decline as jobs lost from agriculture are not replaced.
6. As with fossil fuel mining, land use can be changed and valuable agricultural land rendered unfarmable in the long term.
7. Together with “imposition from on high,” this importation of labour, lack of continual work, destruction of other jobs, and change of land-use may mean that local councils are, at best, unenthusiastic about renewable projects, particularly when faced with relentless upbeat ‘information’ from fossil fuel companies.
8. It is frequently suggested in the literature, that the ways corporations gain land through secret negotiations with land owners, and with no recompense to other locals who are not involved, but have to look at the results, that conflict and jealousy can be caused in small towns, which adds to the bad reception of the renewable installations.
9. These points can also encourage astro-turf groups, and corporate deniers move in and make allies to delay the transition, so as to lengthen the time available to profit from fossil fuels, even if people do not want more coal power and coal mines.
10. If community groups and local citizens can fully participate in the energy transformation the transformation will encounter less resistance.
11. Lessening community dependence on the grid, means that local areas may be able to survive climate change based weather events that pull down grid power lines, or put centralised power stations out of commission. This supports national resilience.
12. Community groups can find it hard to build their own energy sources, and lessen their dependence on the grid, because of regulations which are geared towards protecting existing corporate players in the energy market.
13. Community groups and Local Councils require regulation and implementation schedules that allow them to act.
14. A paradox. Community energy may lack the speed to produce the transformation in time, but if we do not encourage community based energy, it may be alienating for most people, put in place without proper consultation or participation, and generate protest and disruption.

NSW

1. Regulations structure the market and both encourage and limit what can be done.
Company control over parts of the grid, also encourages and limits what can be done.
2. Current regulations hinder local community based installations from happening, in the ways that people would like.
3. For example, I have heard of attempts by small towns to power themselves, as well as use the grid, but it proved impossible, or extremely costly, to link power from one rooftop to another house. Likewise, some local councils have had the same problem with plans to generate power on one of their rooves and transfer the power across the road to another council building. Similarly with trying to power the main street shops with a small solar farm on suitable roof tops.
4. Talking with people from various organisations and Local Councils it appears that NSW is renowned for the vagueness of its position. It seems hard for people to figure out precisely what help or hindrance is available.
5. For example, it does not seem clear to many people what the designation of an area as an “energy priority zone” actually means. Although I have heard of companies deciding there must be some benefit to this, it does not really encourage any activity.
6. Likewise regulations, such as the corporations act, may prevent communities or councils raising money for projects with ease. For example, if the energy source is above a certain size then the certification system works in a different way. If the money is above a certain amount then it appears there are different requirements as to how it needs to be administered and how many shareholders can be involved. These issues can limit the capacity of local organisations to raise money from the community, pay that money back and limit the size of the energy source. If this is not the case, then it needs to be set out clearly, as it certainly appears that people think this is the case.
7. New regulations, need to be developed in consultation with local community power groups, and local Councils. Government’s need to listen to accounts of the problems that such groups face, and help them as much as they help larger businesses.
8. I have often been told that the grid connections are such that local suppliers of renewable energy face difficulty shifting their energy elsewhere in NSW. Sometimes the grid is apparently just not designed for non-centralised, non-one way energy traffic.

9. Grid issues need to be remedied, but large energy companies cannot be relied upon to provide help for their much smaller rivals. So public works may be necessary.
10. Some Energy companies are both suppliers and retailers. This reputedly enables them to increase the price of supply while selling below cost, thus making life difficult for smaller retailers while still making a profit. If true, such a situation needs remedying.

Climate change and renewables

1. Climate change, produces tumultuous changes in the weather, and may affect renewables.
2. Wind patterns may change – affecting the areas which are good for windfarms.
3. Solar panels may need cleaning regularly because of dust deposits, especially if there are high winds and no rain. This takes water, which may produce problems with locals.
4. Pumped hydro storage may be affected by drought and evaporation. If installed then it needs to be installed near permanent supplies of water, probably near the coast.

Recommendations

1. The NSW government should engage in planning to shift the economy away from dependence on fossil fuels in any way; mining, energy supply and so on. It should probably set signposts for the end of large scale fossil fuel exploration, mining, export and import. It should insist on proper rehabilitation for all mines. Fossil fuels do not produce sustainability.
2. The government, should encourage renewable based electric or hydrogen powered electric transport.
3. It should encourage regenerative agriculture, and discourage land clearing.
4. It should encourage an investigation into the best ways of energy storage for different situations – making the information public.
5. It should encourage Community and Local Council based renewable Energy.
6. It should discourage “top down” imposition of renewable projects by companies, and make it illegal for companies to have secret agreements and negotiations with local landowners.
7. It should run an inquiry into the effects of regulation on small scale renewable energy projects, with input from local groups and local Councils.

8. It should abolish those regulations, or powers held by business, which render small scale energy difficult to impossible.
9. If the government is going to designate areas as “special” with regard to renewable energy, the designation should have clear and beneficial consequences for the whole of NSW.
10. The government should aim for regulatory clarity.
11. It should help simplify processes of raising money for local projects.
12. It should consider acting to make the grid suitable for renewable energy, by building new parts of the grid and changing the grid anatomy.
13. It should investigate, and try to eliminate, those ways of price-fixing that benefit large scale operators and penalise small scale operators.
14. It should make consideration of climate change factors part of any renewable installation.
15. The government should investigate laws to compel the construction of energy efficient housing and office blocks, and to encourage renewable energy to be deployed on all new buildings in the most appropriate ways. Ideally people in cities should be able to choose between renewable energy and new toll roads.

Thank you.