114 Boundary Street
Railway Estate, Townsville
PO Box 364, Townsville
Qld, 4810
Ph: 07 4771 6226
Mob: 0428 987 535
office@nqcc.org.au
www.nqcc.org.au
ABN: 55 903 033 286

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Submission to the Renewable Energy Study

The North Queensland Conservation Council welcomes the opportunity to make a submission to the Renewable Energy Expert Panel on the Issues Paper and its consultation questions.

NQCC is the regional conservation council for the area from Cardwell to Bowen, and from the Reef to the Northern Territory border. Established in 1974, it falls under the broad umbrella of the Queensland Conservation Council and focuses on education, advocacy and policy development.

Rather than addressing each consultation question, I will make some key recommendations and list consultation question it corresponds to.

1. Rephrase the QCA Electricity Objective

What, if any, are the key policy barriers in Queensland preventing renewable energy investment?

How might the policy options affect the efficiency of the current NEM design?

The National Electricity Objective informs the Queensland Competition Authority's code objective. The National Electricity Objective is:

> *to promote efficient investment in, and efficient operation and use of, electricity services for the long term interests of consumers of electricity with respect to – price, quality, safety, reliability, and security of supply of electricity; and the reliability, safety and security of the national electricity system.*

The QCA code objective is the same, except the final three words are 'Queensland electricity system', and is enshrined in the *Electricity Act 1994*.

These objectives underpin the operation of the electricity market, and in their current form, there isn't any reference to environmental outcomes. This exclusion means that innovative renewable projects are being overlooked.

NQCC supports the phrasing of a new National Electricity Objective suggested in the Homegrown Power Plan, being:

> *to deliver an affordable, efficient, reliable, safe and fair electricity system that is powered by 100% renewable energy.* [1]

2. Utilise reverse auction funding mechanism

If subsidies for renewables are required, how should they be funded?

What policy options are likely to deliver increased renewables in the most effective and efficient manner under a Queensland renewable energy target, taking into account existing schemes such as the Federal LRET?

This can be used to support new renewable energy infrastructure projects as well as encouraging fossil fuel power stations to shut down.

The Homegrown Power Plan found that among the obstacles to the roll-out of renewable energy was the oversupply of cheap, dirty energy from old coal power stations.[2]

At the end of the operational life of brown-coal generators, bids are taken for how much money they would need to receive in order to shut immediately. The cost of the winning bid wouldn't be paid by the government, instead being spread across all the other generators proportionate to their carbon dioxide emissions. The generators that are still operation benefit from the reduction of supply resulting in a stronger wholesale price. The increase in the retail electricity price would be small – somewhere between 1% and 2% according to rough calculations based on a one-off payment for closure of between $400 million and $1 billion, shared between the remaining power generators. And the reduction in greenhouse emissions from closing a big brown-coal-fired plant would be between 2 million and 7 million tonnes of carbon dioxide a year, even taking into account that some of the generation would move to black-coal-fired stations.[3]

The Australian Capital Territory government has successfully utilised reverse auction mechanisms to secure renewable energy infrastructure project capital. Developers bid to build projects at the lowest possible price. Using this method is believed to have provided a stable investment environment during uncertainty as

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[1] Ison, N. and Lyons, M. (2016) 'Homegrown Power Plan', GetUp! and Solar Citizens, Sydney, Australia, p. 36. http://cdn.getup.org.au/1499-Homegrown_Power_Plan_-Full_Report.pdf

[2] http://www.theguardian.com/environment/2016/apr/19/power-plan-maps-out-route-to-follow-for-100-renewable-energy-future

[3] http://www.theguardian.com/environment/2015/nov/19/radical-plan-proposes-power-generators-pay-to-close-dirty-coal-competitors

the national Renewable Energy Target was being reviewed.[4] Minister for the Environment Greg Hunt has also said it is an effective method of price discovery.[5]

Holding regular clean energy auctions, starting in 2017, would be a cost-effective way to get a head start on the essential elements of a stable, affordable, 100% renewable grid. The State Government should let the experts figure out what technologies are most needed where, and then run national reverse auctions to deliver the outcomes the grid needs at an affordable price.

3. Set a 100% renewable energy target by 2050

How might the Queensland Government expedite the delivery of renewable projects (e.g. regulations and development approvals)?

What renewable services could Queensland look to specialise in and export from?

The Queensland Government should be commended for setting a 50% renewable energy target by 2030, but NQCC believes that more can be done, and that it is entirely achievable. Modelling by the Institute for Sustainable Futures used in the Homegrown Power Plan demonstrated that a transition to 100% renewable electricity by 2030 is not only possible, but will save money compared to continuing using fossil fuels.[6]

Between now and 2050, the shift to renewables and increased energy efficiency delivers enough fuel-cost savings to cover 110% of the bill for building 100% renewable power. Australia would save, on average, $9 billion a year on power sector fuel costs and $11 billion a year on transport fuel costs.[7]

Setting a more ambitious renewable energy target could demonstrate to investors that the Queensland government is committed to their transition because there is a stable policy in place, and attract a larger share of investment in renewable energy infrastructure projects, and research and development. Queensland has

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[4] https://www.cleanenergycouncil.org.au/news/2016/May/act-renewable-target-100-2020.html

[5] http://reneweconomy.com.au/2015/hunt-urges-states-to-adopt-act-style-auctions-to-boost-wind-and-solar-projects-67719

[6] Teske, S., Dominish, E., Ison, N. and Maras, K. (2016) 100% Renewable Energy for Australia – Decarbonising Australia's Energy Sector within One Generation. Report prepared by ISF for GetUp! and Solar Citizens, p. 3. http://www.uts.edu.au/sites/default/files/article/downloads/ISF_100%25_Australian_Renewable_Energy_Report.pdf

[7] Ison, N. and Lyons, M. (2016) 'Homegrown Power Plan', GetUp! and Solar Citizens, Sydney, Australia, p. 5. http://cdn.getup.org.au/1499-Homegrown_Power_Plan_-Full_Report.pdf

opportunities to capitalise on its abundant sunshine, and northern Queensland could export knowledge to the world in 'tropical renewable energy'.

4. Have a decentralised, community-based power system

How can the existing framework better support alternative energy solutions, particularly in fringe-of-grid and isolated locations?

What policies might need to be developed to support communities and individuals that might suffer losses as a consequence of the transition to greater renewable energy including the potential premature closure of power station facilities?

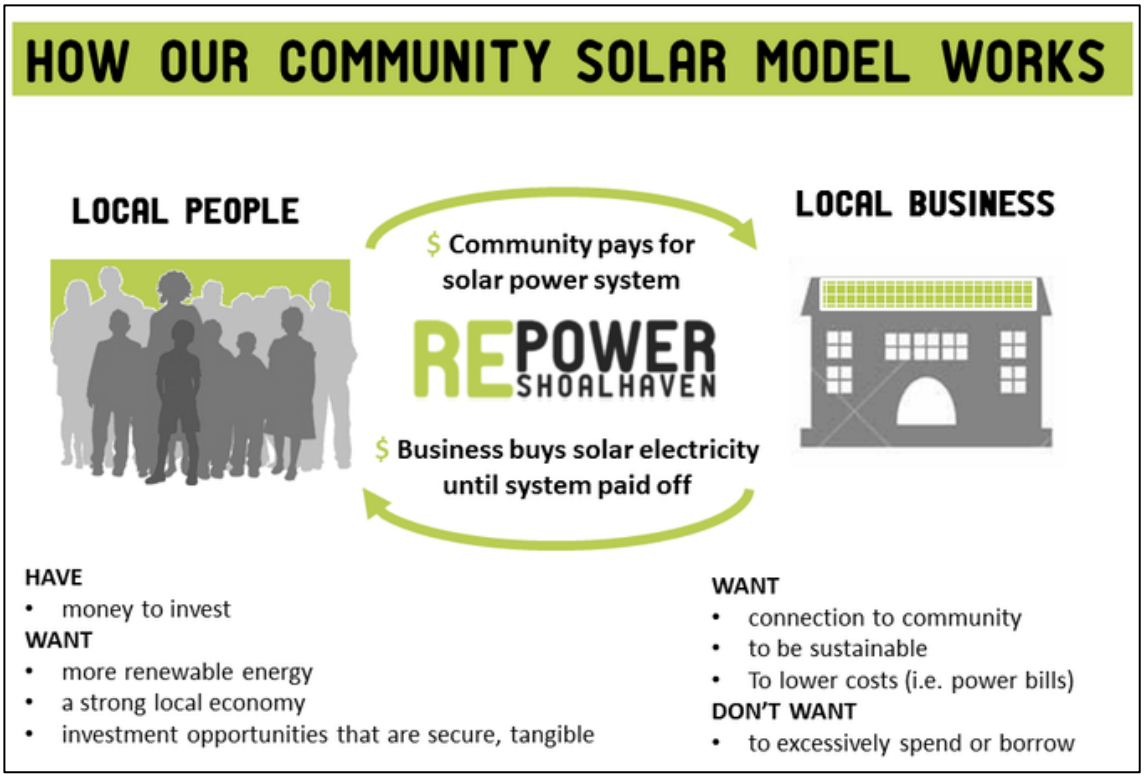
Opportunities need to be examined within communities so that towns, cities and regions can have a higher degree of energy autonomy. What works well in Cape York will be vastly different to what works in suburban Brisbane. Communities based around traditional energy forms such as coal mining towns will have a harder transition to renewable energy than affluent inner-city dwellers.

Having a large grid that reaches remote communities has considerable infrastructure maintenance costs. These areas should be prioritised when considering how to reduce dependence on the grid, so that electricity transport costs and network maintenance can be reduced.

Many remote Indigenous communities are off-grid already, but relying on diesel generators to produce electricity. AllGrid Energy is aiming to use the renewable energy boom to employ and empower Indigenous Australians. Their Portagrid product is a low cost, portable solar battery that's perfect for providing power to remote communities where electricity is expensive and difficult to obtain. NQCC believes that its just as important to get smaller, community-run businesses on board as well as the big energy industry players.

Local community investment offers plenty of opportunities. Community funded solar investment programs like RePower Shoalhaven in NSW use grassroots investment models for projects up to 99 kW. Their 99kW project at the Shoalhaven Heads Bowling and Recreation Club was the first community-owned-solar power system of its kind in Australia. The graphic below, from their website, demonstrates key factors driving the model.[8]

[8] http://www.repower.net.au/about.html



Their second project was for two 15 kW projects at local churches. The revenue mechanism used is a Power Purchase Agreement, each share cost $533, and the expected return on investment was 6.5% per annum.[9] There are community-driven ventures like RePower Shoalhaven commencing all over Australia[10] – showing that renewable energy projects can be locally financed, be locally implemented, with local benefits.

Other suggestions in the Homegrown Power Plan to empower a community-led transition to renewables included:

- Add a micro-finance division to the CEFC so that ordinary citizens and smaller projects can access its low-interest loans.
- Unlocking equity crowd funding in the clean energy sector, too allow thousands of people to invest in and benefit from local renewable projects.
- State governments should work with unions, employers and community groups to ensure that retraining is offered well before a plant closes, that redeployment options are available and that community-driven economic renewal plans are in place ahead of time.

Communities and consumers really must be at the forefront of the planning process to transition to renewables. An increase of electricity costs to the consumer will give cause for a lack of support for the shift towards renewables.

[9] http://www.repower.net.au/repower-two.html
[10] http://cpagency.org.au/about-us/

Communities need to be consulted and consider what their energy needs are and how they want their community to be powered.

Conclusion

Finally, I'd like to draw the panel's attention to existing organisations and publications that comprehensively discuss what policies and financing are required to bring Queensland, and Australia, to a more energy efficient and sustainable future.

These reports have been written by the nation's policy and economics experts, with detailed policy suggestions, economic modelling and fully-costed plans.

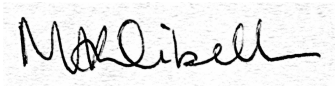
Beyond Zero Emissions
Stationary Energy Plan
Renewable Energy Superpower Plan
Repowering Port Augusta

GetUp! and Solar Citizens
Homegrown Power Plan

Institute for Sustainable Futures
100% Renewable Energy for Australia – Decarbonising Australia's Energy Sector within One Generation

Community Power Agency
Community-Owned Renewable Energy – A How To Guide
Renewables for All: Increasing Customer Access to New Energy Technologies - NSW Discussion Paper 2015

Regards,



Maree Dibella
Acting Coordinator