



# Newsletter

December 2013

## CLEAN ENERGY CORPORATION AUSTRALIA

### Welcome to our Christmas newsletter

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Power Purchase Agreements by Clean Energy Corporation Australia allow customers to contribute to helping our environment and also benefit from lower electricity costs.

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Workshops:  
Clean Energy Corporation will be holding workshops throughout January and February.  
Topic: Commercial Solar –  
How to determine viability

After a great year in 2013 everybody at Clean Energy Corporation Australia would like to thank you for all the support extended to us.

2014 will be an especially exciting year for us and we look forward to sharing all the benefits of solar energy in the new year.

This month's newsletter covers an interesting topic about how and why electricity utility companies actively disrupt the potential of a renewable energy future. Also, we look at what it would be like in the future if we didn't have to rely on electricity utility companies.

# Utilities Against Solar Stand With Backs To The Future



Contributed By  
**Schuyler Matteson**

As solar power charges ahead in the Australian electricity market, families in over a million homes are benefitting from cleaner electricity and lower energy costs. However, utilities are interpreting this increased investment in solar as a threat to their old ways of doing business. To deal with this threat, utilities have proposed that solar users pay an additional fee for accessing the grid. Essentially, solar users significantly reduce their energy pull from the grid by installing solar panels, reducing the utility's revenues and causing them to seek reimbursement<sup>1</sup>. There are a variety of problems with the solution proposed by utilities; so many, in fact, that they may be separated into groups according to the basis of the problem. The rest of this newsletter will outline the issues, including logical, political, financial, and sustainability issues, that arise when considering this new proposition from traditional energy companies.

## Logically

First, we deal with the logical inconsistencies within the proposal. Australia's government has supported the growth of the solar industry for some time, and the various financial incentives available to solar users stand as an example of this support. Any financial analyst or economist would quickly point out that

subsidizing a technology, and then allowing users to be taxed for using the technology is a very inefficient way of doing business.

The next reason boils down to the argument put forth by utilities. If the reason solar users are being taxed for grid use is due to their sudden decrease in demand, then homeowners who have recently installed a fleet of new, ultra-efficient appliances must also be taxed for their behavior. On the other hand, if the reason is simply that solar users are changing the demand patterns experienced by the grid, homes with air conditioners or electric vehicles, which significantly increase demand, need to be taxed too. It seems unreasonable to think anyone can be taxed for using an air conditioner or efficient lighting and appliances in the home, and it is equally unreasonable to present a tax on solar users.

## Politically

This section deals with the political difficulties of instituting a tax on solar users. If the government considers this proposal, then they must also consider the effects on previous policies, such as the current solar incentives. Also, 1

million people have already installed solar panels, and more are doing so every day, which raises the question: Who do you charge and how much? One would assume the tax would be equivalent to what the utility calls "lost revenue," but should all current solar users be charged? Or perhaps only those who install solar panels from now on. Either choice results in political difficulties, by penalizing solar users who purchased solar panels under a policy of incentives, or disincentivizing all future solar installations.

The second political issue is slightly more unwieldy. It deals with keeping some semblance of a "competitive market" in the energy industry. The Australian Energy Regulator (AER)<sup>1</sup> is charged with controlling the country's electricity networks to fight against monopoly behavior. The rise of solar power has resulted in the closest thing to competition that most electricity companies have ever seen. It would be a shame for this important new technology to be stifled by the profit-seeking monopolistic behavior of traditional energy companies.

#### Financially

The first financial reason for dismissing the proposal goes back to the inefficiency that arises when subsidizing and taxing the same technology. As the scheme plays out, the government pays some incentive to solar buyers to help with the capital investment. However, some of this financial incentive would be used to pay utilities for the potential loss in revenue. The end result of the process: the utilities receive the same financial benefit as before, solar users have less incentive to purchase solar, and the government ends up paying for a

portion of the utility revenues - the government and citizens lose and the utilities stay the same.

This next reason for utilities to drop their battle against solar power may be the one that resonates most within electric utilities themselves: cost management. As network infrastructure ages and peak demand grows, utilities look for cost minimizing solutions. According to the Department of Resources, Energy and Tourism, within the next few years, utilities will have to pay upwards of \$23 billion in infrastructure and asset replacement costs<sup>1</sup>. \$17 billion of this, more than 75%, is directly related to increases in peak demand. It just so happens that solar power output is very well matched to peak demand, and in many cases it matches so well that during peak hours, grid electricity demanded from solar users may actually decrease<sup>1</sup>. This allows the utilities to utilize less peak assets, their most expensive assets, and push the need for additional infrastructure investment into the future, saving billions of dollars for the utilities. As the country's electricity demand grows, there will be plenty of demand for the utilities to meet, and with the help of solar power, they may meet this demand while improving their profit margin.

#### Sustainably

The final category of reasons utilities should support solar power involves planning for the future. The market for electric vehicles has yet to experience growth in Australia comparable to many other industrialized nations. This may be one reason utilities have yet to plan for the large increase in demand that a fleet of electric vehicles will create. If Australia begins to experience similar growth patterns as many European countries, or the United States, utilities will have to react quickly with expensive, large-

scale infrastructure additions. However, with increasing solar penetration, utilities will have the benefit of additional available capacity to supply the electric vehicles. Also, it is no logical stretch to believe that many people willing to purchase an electric vehicle may have previously invested in solar panels. If that is the case with any regularity, the utilities will end up supplying the "solar homes" with more electricity, due to the power draw of electric vehicles.

One final comment on this matter: there have been no studies reporting an end to solar power in the near, or distant, future. This is because "peak solar" does not exist. The sun will continue to shine, and with a little foresight, will continue to help power the world. Hopefully, utilities will consider many of these arguments and utilize solar power as a hedge on their future energy supplies.

Purchase electricity from

**CLEAN ENERGY**  
CORPORATION AUSTRALIA

for only 19 cents per kWh.  
That's an average saving of

**27%**



# Power Purchase Agreements

## Power Purchase Agreements

With our Power Purchase Agreements you can purchase electricity generated from solar and reduce your carbon footprint. In addition, you get huge savings on your electricity costs immediately and into the future.

Our Power Purchase Agreements provide the opportunity for property owners and operators to lock in a lower electricity rate long term and guarantee a lower rate than the normal utility companies.

To learn more about our Power Purchase Agreements, contact us on 1300 510 169.

# Workshops



## Workshops

Clean Energy Corporation Australia conducts regular workshops aimed at providing our industry partners better understanding of solar products and applications. The workshops cover the following areas:

**Technology** – Products that are currently available in the market and evaluation of their effectiveness. Look into upcoming technologies and what we can expect from them.

**Application** – System design and installation. Determining the best product and system design for a property. Environmental ratings and how they improve your buildings status.

**Financials** – Analysis and review of the cost pressures associated with sustainable energy solutions and return on investment.

To find out more about the workshops, please contact us on 1300 510 169 or send an email to [james.cronan@cleanenergycorp.com.au](mailto:james.cronan@cleanenergycorp.com.au)

## Workshop dates:

### January 2014

Wednesday 15/01/14

10am-12noon

Wednesday 29/01/14

10am-12noon

### February 2014

Wednesday 05/02/14

10am-12noon

Wednesday 19/02/14

10am-12noon

# A renewable Energy Future: Without Utilities?

By James Cronan

As the cost of utility supplied electricity continues to increase, many consumers are calling for change in the electricity paradigm. Most people would like to see a reduction in electricity costs, and many are concerned with the effects of global warming, but some believe there is a need for a complete rethinking of the electricity system.

In places like Boulder, Colorado and Schönau, Germany, consumers have voted to buy back the local grid networks from utilities in order to secure lower long-term electricity costs. These cities have found that community controlled electricity networks provide lower costs and also allow the community to determine its own energy supply future.

Once these areas own their own electricity network, it is up to them to decide which energy sources will provide power to their networks. Since the communities are not concerned with sunk costs and are not guilty of technological digging-in as were the utilities, they have more freedom to choose better, cheaper, and cleaner electricity sources. Whereas an electric utility with large quantities of coal and natural gas

infrastructure might be opposed to developing solar or wind and wasting its other assets, communities are able to further optimize their situation once they control the grid.

The effect on the utilities is profound. For so long they have existed in a world with limited, and sometimes nonexistent, competition, and a general acceptance that utility companies were a necessary piece of the energy puzzle. In this way, utilities have become comfortable in their way of doing business with large supply sources and huge sunk costs, leading to technological digging-in and a resistance to developing new energy sources. Now it seems that not only are their energy sources unsustainable, but so is their way of doing business.

Significant reductions in the cost of solar power have been an important influence in many consumers' decision to generate their own electricity. Even this development is not an endgame for utilities, as the majority of people still get their power from centralized utilities. If utilities had attempted a small change in their business model, to allow for more renewable energy development they may have avoided their recent predicament. Instead, they

have sought to fight back against off-grid power and residential distributed generation by charging additional fees to solar users and charging exorbitant cancellation fees to people who discontinue utility service.

These actions have created a clear dichotomy in the minds of consumers. They now see that a clean and sustainable renewable energy future is at odds with a utility-controlled energy system. This development raises two important challenges that must be overcome to ensure sustainable progress.

First, what is to be done now with electric utilities? If utilities are found to be of some use in a renewable energy future, how big of a role with they play? Many people recognize some of the benefits of having utility structures in place, such as for reliability and infrastructure management. But could we maintain these same qualities in community or regionally owned grids, and perhaps do so while increasing security, improving environmental performance and decreasing costs? Also, utilities are large corporations that represent a significant portion of the economy. What would the effects on the greater economy be of a community driven overthrow of the utilities? These questions must be answered before a sustainable energy future becomes possible.

Second, if the utilities are removed and communities take control of their own electricity networks, at what scale should microgrids, or traditional grid management, be employed? At the residential scale, many homeowners have found that while solar power is

affordable, off-grid technologies such as batteries and backup generators make the overall system less viable. The technologies are key at all scales to community-controlled power, since reliability is one of the largest challenges to overcome apart from utilities.

While there are many downfalls to utility owner power, there are some benefits afforded by interconnected grid systems. A community system in which each home is separate from others would be less effective than an interconnected microgrid in the same area. This is because if each individual can only depend on his or her own system, say some solar panels on the roof, when a cloudy day hits, they will need to have far more backup power available than in another grid structure. For example, in a community microgrid, solar power, wind turbines, and natural gas microturbines can combine to supply everyone in the community with safe, clean, and reliable electricity.

This brings us back to the second question that needs answering. If community microgrids show more promise than many individual off-grid systems, does it follow that larger, city-wide, or regional microgrid systems perform even better? This important optimization question has many different facets and must be considered by many experts before large changes are made.

The best thing for consumers to do now is to find ways to support a clean energy future. If managed properly, this would mean a reduction in emissions, while decreasing total system cost and improving overall sustainability. Many are finding that fulfilling this mission includes breaking away from utility companies and develop a new paradigm for the energy system. If this remains the primary choice for progressive energy consumers we may indeed see a renewable energy future without utilities.

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