# Consumer Energy Resources (CER)

SUBMISSION

ALLOW DECENTRALISED DOMESTIC CLEAN RENEWABLE ENERGY GENERATION ON A MASSIVE SCALE

Clean Renewable Energy (RE) ...from all sources. Not just from solar, but also from small and micro wind generation, hydro, wave, tidal and micro geothermal.
All feeding into the grid network, in the same way computers everywhere provide information content from anywhere on the internet.

All that's needed is a fixed pricing structure that provides a guaranteed feed in price that is pegged at 80% of the retail price being charged at the time of supply.

This pricing guarantee would be limited to small and micro feed-ins of up to 100kW. Larger clean energy suppliers would continue to negotiate their prices directly with the power companies.

This pricing system would provide profitability for anybody that can generate and feed power into the grid (of up to 100kWs).
Whilst also providing a set profit margin of 20% for power companies purchasing and re-selling feed-ins from their customers.
It is estimated that once people realize they can establish guaranteed extra income from electricity generated from home and their businesses, the proportion of clean renewable power in the national energy mix (NEM) will increase exponentially.

PREMISE: If half of any population generates at least twice the amount of Renewable Energy (RE) they use for them selves, there’s enough for the other half who don’t generate their own electricity.

Distributed Renewable Energy (DRE) potentially has the cumulative capacity to provide base load power, reduce power costs, stimulate investment by small producers and reduce power wastage through localized sharing. The adoption of

this proposal will also enable the Federal and State governments to meet international obligations for climate mitigation and transition to a sustainable economy. Distributed RE does not require government or corporate funding which inevitably drives up retail power prices. The reduction of subsidies for mining, production, installation and input of renewable energy will reduce government costs as the economy and population grow.

Larger scale utility sized renewable electricity generation will continue to provide larger inputs of electricity to the energy mix. However these utilities, typically wind, solar and hydro require significant funding to build and will cater for a smaller proportion of the energy mix as volumes of grid networked home and small business inputs grow.

MARKET MECHANISM: All retailers of electricity would be required to buy their customers renewable power at a price that is 80% of the retail price that would otherwise be charged for power purchased at that time. This requirement would apply for all inputs of RE up to 100kWs per customer.

The supply of RE by customers of more than 100kW would be purchased by the power retailers at prices negotiated between the parties as happens currently.

The small systems required to generate small domestic RE inputs are easily financed by primary producers from income from the sale of the energy generated. Some will be designed to supply all their power production to the grid, while others will be set up to supply their excess output to the grid. Mains power can be used in periods when power production is low or unavailable (eg: solar at night). Some systems will include battery storage to eliminate any drawdown from the grid while also providing flexibility to increase power exported during periods of high demand when retail prices are higher.

Systems that only provide their excess power to the grid will almost always generate more power than needed domestically in high charge periods eg: when it’s sunny and/or windy.

Income from electricity sold to the grid will be accessible to all producers of RE from all sources of RE regardless of how small the contribution is (up to 100kW).

Primary producers could decide how little or how much energy to produce based on their budget and available resources (up to 100kW).
All feed-ins would be accounted for on the customer's (the "prosumer's") monthly or quarterly energy account.

There are six categories of RE;

• Wind - small 500 watt wind turbines are cheap and unobtrusive. New designs allow for suburban use.
• Solar - 1kW can be produced with 5 or less solar panels.
• Hydro - small 1kW to 50kW systems can be set up in streams and below farm dams.
• Geothermal - domestic geothermal systems can use refrigerant gases to directly heat water and provide heating and electricity when the heat applied to pressurized gas to drive generators.
• Wave - small wave generators are already available that can be moored close to shore.
• Tidal – currents and inlets of all sizes and can be utilized to generate power.

All can be utilized and developed to contribute to 'baseload' power when a nationally guaranteed wholesale price is established for inputs of 100kWhs or less.

No one energy source would be favoured. It's the cumulative total that's important.

Resellers of electricity (power companies) will have the choice to buy from any generators they choose but will be required to buy all their customers' contributions of up to 100kW.

All sales of RE to the power companies will appear as credits on the customers / prosumer's account.

Payments of amounts owing to the customer / prosumer would be settled electronically on a monthly or quarterly basis.

There will be significant savings in transmission costs as all power consumption will be closer to its source. Currently transmission losses are typically in the range of 5% to 15%.

All land owners and tenants would be entitled to generate power from any water that flows through their property.

Wave and tidal generators can be employed by any person or business as long as they don't interfere with boating, shipping and recreation.

Retail price rises would be curtailed because any price increases would proportionately cause an increase in the wholesale price paid for DRE.

The number of contributors can be expected to increase as people realize they can eliminate their power bills whilst generating extra income as soon as they start generating RE.

The intermittency of solar and wind power would be offset by increases in small hydro, wave, tidal and geothermal power in national energy mix (NEM) and because the RE would be sourced from across the country (in areas with more or less sunlight or wind).

Demand for RE generating equipment and services will soar and be a boon for small business.

CONCLUSION
This is a proposal for productive regulatory change that can be implemented quickly and without disruption to reliable energy distribution. It will lower prices and produce a large positive impact to mitigate climate change.

The proposal specifically addresses the mostly untapped small and micro RE market.

Collectively (utilizing the grids ability to amalgamate inputs) the capacity of this sector is greater than centralized utility sized generation.

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