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AER

**ClearSky Submission to “Refining our regulation of alternative energy sellers –issues paper”**

**Who we are**

ClearSky Solar Investments Pty Ltd (CSSI) is a not for profit company limited by guarantee which secures funding from community investors for solar PV systems of between 15 and 100 kW. The investors get a return via a PPA with the property owner over a defined term, after which ownership of the installation reverts to the property owner. A commercial company with an exemption under the National Energy Retail Law does the installation, owns the equipment over the term of the PPA, maintains the equipment and bills the customer. In effect CSSI provides loan finance to the commercial company, with the loan repaid with interest through the revenue earned from electricity sales.

The formation of CSSI was the result of an initiative from the community environmental organisation Clean Energy for Eternity (CEFE). Establishment was secured with the assistance of a grant from NSW Office of Environment and Heritage. CEFE is committed to accelerating he uptake of renewable energy in Australia

CSSI investors have so far funded 5 installations, all in rural NSW, with a total capacity of 200 kW

**Some introductory observations**

While the discussion paper confines itself to how the regulatory framework may need to be adapted to accommodate an ever increasing proportion of the energy consumption in Australia being sourced on-site, it needs to be recognised that a much bigger challenge faces the traditional electricity market players – the generators, the network operators and the traditional retailers. The traditional electricity industry has a business model that is predicated on it having a monopoly in the sense that end-users had no choice other than to get their energy supply from the grid. Under this regime there was no risk of underutilisation of the grid. Solar and storage technology erode this monopoly and consequently represent a seriously disruptive force which will require a new business model for grid electricity generation, distribution and supply.

Under the new model the value of a grid connection to a customer will be that it is there when needed to allow the customer to either buy or sell electricity. The fact that a customer has their own generation and storage capacity liberates them from dependence on their grid retailer and introduces real competition – the customer can in theory negotiate when and at what price they will buy and sell electricity from and to the grid as at other times they can use their own. With this competition comes the spectre of ‘stranded assets’ – a not unusual manifestation of what happens when a disruptive technology is introduced in a free-market economy.

It is therefore essential that alongside any consideration of how energy retailers might be regulated a companion discussion needs to be taking place on how the business model of the traditional electricity generation sector needs to change. What is happening in other countries such as Denmark and Germany could offer some insights. Its seems inevitable that future contracts between traditional retailers and their customers will involve a significant grid connection fee related to the ‘size of the pipe’ (peak power flow) and buy and sell pricing that is dependent on time of day, day of week and other factors.

A further complication would be the inequity that not all consumers would have the means, capacity or inclination to exploit on-site generation and storage so would be captive of traditional retailers and may end-up cross-subsidising those who have.

**The approach we have taken in this submission**

In order to answer the questions posed, we consider four scenarios, any or all of which could emerge given likely advances in what is feasible and affordable as the supporting technology advances. As is acknowledged in the discussion paper, the regulations associated with the NERL were developed to match conditions prevailing at the time. A useful test of the effectiveness of any proposed adaptation of the NERL is whether or not the principles that informed the regulations when they were first drafted are achieved under the adapted regulations for each of the four scenarios.

In this submission we explore the questions posed in the discussion paper with reference to each scenario and then draw some general conclusions.

The scenarios represent different ways in which businesses can provide customer value by exploiting one or more of the following possibilities, likely to be economically and technologically viable in the near future.

* The ability to store energy on site
* The ability to pool generation and storage capacity over a number of sites to reduce the need for the collective to draw supply from the grid
* The ability of a consumer to source its energy sequentially from multiple suppliers (or its own supply) depending on what is most cost effective at that time
* The advent of the ‘prosumer’ – a customer connected to the grid who, depending on conditions at the time, may choose to sell electricity to a retailer or buy it from them.

The changes to the regulatory approach must be flexible enough to at least accommodate the four scenarios below.

**Scenario 1: Single site, no grid connection.**

Already in remote areas there are individuals and businesses that take care of their own energy needs via their own generation and storage. They get none of the protections available to customers of an authorised retailer hence the principle is established that provided an individual is fully informed they can take on the risk for example of having supply interrupted due to equipment failure even when such an interruption would be life threatening.

The issue of regulation does not arise if the installation is owned outright as there is no retailer.

Similarly, if the installation is financed via a bank loan there is no retailer so no protection. If the bank foreclosed and repossessed and switched off the system, the customer would simply have to get a grid connection to restore supply.

The issue of regulation does arise when the system is purchased via a PPA. While the system is being paid off there is an effective retailer who must bill the customer and maintain the system to ensure no interruption of supply. It could be argued in this case that it would be reasonable to put certain site specific customer protection conditions on the retailer exemption given electricity supply is an essential service. But given individuals who have outright ownership are permitted to take on the core risk of an independent supply, why should PPA customers have any additional protection other than that offered by Australian Consumer Law (ACL) . Putting on customer protection conditions and the process of applying for them and monitoring compliance would add costs to the retailer. If theses protections were desired by the customer it should be in the form of an ‘enhanced’ PPA with a different charging regime.

**Scenario 2: Single site, with both grid connection and on-site generation and storage**

The AER has already gone through the arguments and come up with a position for the case of grid connection and on-site generation in its paper: *Industry Guidance: solar power purchase agreements*

The argument is that the customer is still connected to the grid and thus has access to an authorised retailer and thus is in turn protected by the existing regulations. Thus there is no need to impose conditions on the PPA ‘retailer’ exemption.

This argument still holds even when there is storage. There ***is*** an issue as to whether exempting the ‘retailer’ who sets up the PPA is getting an unfair competitive advantage with respect to the authorised retailer supplying the grid power. The authorised retailer has all the costs of not only maintaining the grid infrastructure despite the fact that the customer would rarely need to draw power from it, and also bear the full cost of regulatory compliance to be a last resort back-up should the customer need protection.

Our view is that it solar generation and storage is a disruptive technology and it simply has to be accepted that the disruption cannot be regulated away. A far better approach would be to

* Give authorised retailers the option of providing a ‘no frills’ service to customers who have on-site generation and/or storage. The no frills service would simply be one governed solely by ACL and not by the NERL
* Insist that to get an exemption, SPPA ‘retailers’ would need to offer their customers and enhanced service (at an extra cost) that gave the protections embedded in the NERL

As alluded to in the section ‘Some Introductory Observations’, providing for truly fair competition in a market with significant on-site generation and storage as well as the traditional generators, distributors and retailers will require a across the sector reforms coupled with innovative application of smart-grid technology of a magnitude far greater than the restrictive framework of the discussion paper.

**Scenario 3: Multiple customers, single site**

This scenario is of particular interest to CSSI. Examples are owners’ corporations of strata unit complexes, retirement villages, community housing facilities and shopping centres.

The model is for solar panels to be distributed across the site and storage concentrated, but all behind a single meter connecting to the grid. The owning authority (owner’s corporation, housing association etc) would be the sole customer of the authorised retailer supplying grid power. Each of the individual entities would have a sub-meter. The owning authority would in effect become a mini-retailer issuing accounts based on the sub-meter readings. The charging rate would be sufficient to cover whatever was required to pay for grid electricity consumed by the complex that quarter along with the amount paid as a consequence of the PPA.

The tenants or strata owners would not, under this scenario, have a direct relationship with an authorised retailer, instead their electricity supply would be one further service provided by the owning authority and billed for as a component of the tenant’s rent or the strata owners strata fees.

In this scenario there could be three ‘retailers’. The grid supply retailer, the complex’s owning authority and the company offering the SPPA. The arguments for giving exemption used in Scenario 2 would justify an exemption for the SPPA company but not for the owning authority, as the end user no longer has a direct relationship with a grid retailer.

The arrangement described in this scenario could deliver lower cost power to the end users, so it is important that it is not extinguished as a possibility by the regulations. Some mechanism needs to be found however to provide the level of consumer protection traditionally available to grid retail customers. Unfairness to grid retailers is also an issue but this has been addressed in the discussion of Scenario 2.

The only way to provide the consumer protection needed would be to impose conditions on the exemption – a subset of those listed in Attachment A of the discussion paper. The ones that could be included are

* Exempt seller to only sell under business model in relation to which exemption applied
* An obligation to obtain informed consent
* An obligation to sell electricity that is metered
* An obligation to provide clear and accurate billing information
* Core exemption condition 1 and 2 (cannot refuse supply)
* Core exemption condition 2b and c (information provision )
* Core exemption condition 3 (billing and payment). A further condition could be that only actual meter readings rather than estimates should be used for billing. This would obviate the need for Core exemption condition 4.
* Core exemption condition 5 and 6 (pay by date and receipts)
* Core exemption condition 7 (pricing).The collective entity should be able to choose to pay more for their electricity that they could obtain from the grid in the short term in order to get a greater benefit in the long term. This condition would need to be redrafted to ensure that the exempt retailer operated on a not for profit basis and to limit the admin fees that the exempt retailer could charge.
* Core exemption condition 8 (under- and over-charging)
* Core exemption condition 9, 10 and 11 (disconnection and reconnection)
* Core exemption condition 12 (concessions and rebates)
* Core exemption condition 14 (contact details)
* Core exemption condition 15 (dispute resolution)
* Core exemption condition 19 (maintaining records)

Some exemption conditions would need to be modified, eg

* Core exemption condition 2a and 13 (right to choose retailer). Individuals would no longer have the right to choose their retailer but collectively they would still have this right. An individual sub-customer could still have the right to opt-out and connect directly to the grid and thus not be part of the consumer collective.
* Core exemption condition 16 (life support customers) . This condition would take the form of requiring the exempt retailer to register themselves at that property as being a life support customer if any one of their own internal customers had life support status
* Core exemption conditions 17 and 18 would need to be redrafted to make provision for the reconnection of all internal customers to the grid retailer of their choice in the event of the owners authority ceasing to operate its generation and storage system.

**Scenario 4: Multiple customers, multiple sites**

In other countries, whole neighbourhoods, both virtual and physical have formed cooperatives to share generation and storage capacity in a way that meets their collective consumption needs. Consider this example. A not-for-profit community energy company (CEC) puts solar generation and storage capacity on every public school in NSW. The CEC then retails this energy to customers across the state using smart technology and suitable customer contracts that manages demand such that demand never exceeds supply.

Such a CEC would not need to participate in the NEM (although it could), but in every other sense it would operate as a traditional electricity retailer. It therefore should have a retailer’s licence.

Another example of the multiple customer, multiple site scenario would be a where a street are larger neighbourhood decided to form an electricity cooperative in their local area, on the same basis as an owners’ corporation might take on the role of an electricity retailer for the strata units in its block. In the case of the street/neighbourhood model both generation and storage would be distributed and customers would be ‘prosumers’, buying and selling to the cooperative that owns or leases the ‘micro-grid’. The cooperative could buy or lease the poles and wires serving its region but otherwise the micro-grid could be isolated from the grid, or it could have a single connection. Once again smart technology would be needed to regulate this mini-grid with contracts that had variable pricing depending on demand and energy currently in store.

A neighbourhood electricity retail cooperative of this type would need either to be licenced or be exempt subject to conditions which protected its customers.

**Conclusions**

We at ClearSky agree that the technologies of on-site generation and storage call for revised regulations covering electricity retailers. We would go much further and say that the business model upon which the traditional electricity market is based iis under severe challenge from these two technologies. The existing grid needs to re-envisaged as a platform to support the buying and selling of energy wherever it is generated and a new business model developed that recognises that on-site generation and storage will dramatically reduce the amount of energy that needs to be transported and will make demand on network resources to be subject to large fluctuations.

In terms of the specific questions we have presented four scenarios which show that Option 2 will work best in that it allows for individual cases to be considered on their merits, with conditions selected to give the best compromise between costs and benefits.

We agree that inherent in Option 2, trigger points will be needed to ensure that when circumstances change, the conditions can be modified appropriately.

We believe that Option2 with flexible exemption conditions gives the best chance of getting the benefits offered by technological innovation in the sector while at the same time protecting consumers and maintaining a ‘level playing field’. It also represents the most cost effective solution by minimising the regulatory compliance costs on retailers and the enforcement cost of the regulator. In this sense it is true to the principles that informed the development of the current regulations.

One concern that remains is that of equity. Certain individuals, for a variety of reasons will not be able to exploit the potential of on-site generation and storage to bring down their electricity costs. Such individuals will form part of an ever diminishing cohort of consumers wholly dependent on the grid for the supply of power. Without some form of policy intervention, the capital cost of the poles and wires would need to be met via a smaller and smaller cohort of users. An important question for consideration is what is the fairest way of distributing the cost of supporting the grid across all users ranging from those who are solely dependent on it for supply, to those who may use it only a few days a year when their demand exceeds the capacity of their on-site system? Coming up with a solution that is not only fair but keeps in place strong incentives for investment in on-site generation and storage will require some very serious deliberation, but is beyond the scope of this submission

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