



4 October 2016

COAG Energy Council Secretariat
GPO Box 9839
CANBERRA ACT 2601

Email: energycouncil@industry.gov.au

Dear Sir/Madam,

STAND-ALONE ENERGY SYSTEMS IN THE ELECTRICITY MARKET

CitiPower Pty and Powercor Australia Limited (**the Business**) welcome the opportunity to respond to the consultation published by the COAG Energy Council (**Energy Council**) in relation to stand-alone energy systems in the electricity market. Serving the largely rural and remote areas of western and northern Victoria, our Business is particularly aware of the issues and challenges of stand-alone networks, hence is uniquely positioned to comment on the issues that may arise.

The primary points we raise in the submission are:

- consumers will not be afforded the same levels of protection and competition on stand-alone energy systems. Although a jurisdictional consideration, safety in particular will be an issue;
- the levels of reliability are unlikely to be the same under a stand-alone energy system but this should not be an issue as consumers on stand-alone energy systems should be free to negotiate their own levels of service;
- at least for our business, stand-alone energy systems are considered today however at this point they have not shown to be economic;
- consideration needs to be given to how assets annexed from the distribution grid or stranded are treated for regulatory purposes; and
- without efficient pricing for distribution pricing, there is a very real risk uneconomic decisions are made with respect to stand-alone energy systems that undermine the long term interest of customers.

Objective

We agree with the consultation paper premise that the objective of any changes should be the promotion of the long term interests of consumers with regard to price, quality and reliability of electricity and gas services. We would caution against other objectives being incorporated by the Energy Council that may have the effect of lessening the achievement of the Energy Council's general objective.

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Consumer protection

As a Business serving rural and remote customers, we have spent considerable time examining stand-alone energy systems. Those investigations have highlighted a large number of largely jurisdictional based regulatory and market impediments including:

- customers losing access to full retail contestability which has implications in terms of retail choice and charges;
- customers losing access to the potential for meter contestability which impacts a customer's metering charges and choice;
- loss of applicability of the National Electricity Rules (**Rules**) and National Energy Retail Law (**NERL**) which has implications for network charges and some network service standards;
- a lack of clarity as to whether jurisdiction based Victorian economic regulatory instruments apply, such as the *Electricity Distribution Code*, as network services could be provided by an entity other than the licensed distributor; and
- an absence of clarity as to whether safety based regulatory requirements administered by Energy Safe Victoria would apply, as again, these obligations are tied to the concept of a distribution licence.

Aside from the regulatory impediments in 'brown field' circumstances e.g. a town deciding to adopt a stand-alone energy system, not all customers may wish to participate. This has led to situations where stand-alone energy system proponents have effectively sought to retain a 'back up' distribution supply which has implications for other customers on the distribution grid.

It is also important for the Energy Council to consider circumstances where it may be economic from a distribution network service provider's (**DNSP**) position to disconnect customers from the distribution grid, either permanently or temporarily. At this point in time the regulatory arrangements only allow for individual customers to voluntarily choose to move off grid but do not allow for involuntary disconnection. This is likely to become an important issue should it be found a customer or group of customers is more efficiently served by a stand-alone energy system but the customer wishes to remain on the distribution grid.

Reliability and service protections

We do not believe that the same reliability and service protections that apply to a distribution grid should necessarily apply to a stand-alone energy system.

One of the considerations customers make in deciding to move off grid is the potential price versus reliability trade off. It is unlikely that a customer would ever move off grid for a higher reliability standard hence what is important is customers being able to make trade-offs for lower levels of reliability. We would also note that even if reliability and service protections were imposed, it would be very difficult to enforce them given the potentially large number and small scale nature of stand-alone energy systems.

After the 2009 Victorian bushfires, the Bushfire Royal Commission recommended a number of bushfire risk mitigation activities. This has resulted in increased costs for customers and a greater focus on reducing bushfire risk, which has become a priority for both the Victorian Government and our business. Although a jurisdiction based issue, we also note that safety standards, such as bushfire risk, will be an issue for stand-alone energy systems and there does not appear at this stage a clear regulatory framework to manage these issues.

Regulatory challenges

RIT-D

The consultation paper notes stand-alone energy systems maybe an economic alternative to replacement of the existing network in certain locations, however, the consultation paper goes on to suggest there are possibly issues with DNSPs independently considering stand-alone energy systems.

From our perspective, stand-alone energy systems are considered along with any other alternatives to network solutions. We have spent considerable time over the last 2 years working to develop business cases for stand- alone energy systems across our distribution network. We found that, taking into account the associated operating and capital expenditure network costs for each customer, there are savings to be made by off-gridding only a relatively small number of customers. A modest potential economic surplus of \$2 million per year was identified which would be achieved through optimising current single wire earth return (**SWER**) assets and off-gridding about 1,500 customers.

To that end stand-alone energy systems have been actively considered as alternatives to network replacement however it is recognised this may not always be transparent to the community. The Australian Energy Regulator's (**AER**) recent Rule change to extend the RIT-D to replacement capital expenditure will largely address this issue.

It is noted in Victoria the *Electricity Safety (Bushfire Mitigation) Regulations 2015* will require us to build at a higher standard for asset construction in codified areas. Specifically, electric lines with a nominal voltage of between 1kV and 22kV that are constructed or wholly or substantially replaced in prescribed areas must be put underground or insulated. The aim of these requirements is to increase safety standards on specific components of our network in order to reduce bushfire risk.

The Business, in discussion with the Victorian Government, has identified ten sites in high bushfire areas where it is \$630,000 cheaper to use solar and battery to avoid undergrounding the lines. The Business is considering a model where the customer will own the fully funded off-grid system. The customer will not have to pay for the upfront cost of the off-grid system; however, they will have to pay for the operation and maintenance of the off-grid system.

Demand management incentives

As mentioned previously, we have spent considerable time considering stand-alone energy systems as an alternative to network augmentation or replacement.

The environment in which we supply electricity services is however changing and the emerging technologies are challenging our monopoly status. Technologies to rival 'poles and wires' are becoming available and hence what is a regulated and unregulated service is becoming 'blurred'.

The consultation paper seems to start from the premise that DNSPs are focused on growing the regulatory asset base (**RAB**). From our perspective, it is not prudent or commercial to continue to grow the RAB, given the rise of disruptive technologies in energy markets that challenge the value proposition of the distribution grid. As a business, our focus is very much on reducing distribution tariffs and that cannot be achieved in an environment where the RAB continues to grow.

Given the above, we would consider it imprudent not to be actively considering stand-alone energy systems. Consequently, we do not see it as an imperative that specific innovation funding be provided to support stand-alone energy systems.

We do, however, consider that it would be useful to broaden the current Demand Management Incentive Scheme to include innovation where it supports the National Electricity Objective e.g. where it can lead to reduced distribution costs. It seems highly restrictive to focus only on demand management when it is just one of many initiatives which can reduce distribution costs. Consideration should be given to a broader innovation fund that examines all options to lower energy costs including the network.

Regulatory asset base

As the Rules presently stand, where we to provide a 'green field' stand-alone energy system, it would not be covered by Chapter 6 of the Rules and therefore would necessitate us to negotiate a tariff with the customers connected to that stand alone system. Alternately, if a third party provided that stand-alone energy system, recovery of costs would be a matter for the customers and third party provider. Under neither scenario would the stand-alone energy system form part of the RAB.

A more interesting scenario is a 'brown field' situation where a group of customers chooses to establish a stand-alone energy system using part of the existing distribution network i.e. a town choosing to off grid. In such a situation, the customers would be seeking to 'absorb' part of the distribution network in their own stand-alone energy system and perhaps strand some distribution assets that remain connected to the larger distribution network.

There are two issues for the RAB in this second scenario, compensation for assets annexed by the stand-alone energy system and secondly, assets stranded through the disconnection of the stand-alone energy system from the distribution grid. In such circumstances we believe the Rules need to contemplate the development of a grid exit fee to compensate remaining customers for distribution assets that now form part of the stand-alone energy system and secondly, compensate them for the potential stranding of part, or all, of certain distribution assets that previously serviced that group of customers.

We note in Victoria that should we be the party that provides a stand-alone energy system, our Electricity Distribution Licence still applies, including the quality of supply and reliability

of supply standards. Further, we may need to obtain a small scale licence. The restrictions provided by these licences effectively constrain us to offering the same service standards to stand-alone energy system customers as grid connected customers which is likely to make stand-alone energy system unattractive due to the costs involved in providing an equivalent level of services to that received by grid connected customers.

It is noted that Western Power has recently put forward a Rule change on this issue to the Australian Energy Markets Commission.

Price signals

Price signals play a vital role in determining when, and where, a stand-alone energy system may be economic. We agree strongly that postage stamp pricing and community service obligations (**CSOs**) play a major role in determining the economics of stand-alone energy systems.

Based on the analysis we have conducted, customers have no economic reasons to off-grid themselves. In all cases, the energy delivered by a stand-alone energy system is significantly more expensive than retail prices (less than 300 \$/MWh). This of course does not stop customers who may still decide to off-grid or partially off-grid due to other reasons such as an altruistic desire to use renewable energy.

A major concern in the absence of locational pricing and imposition of CSOs by state governments, is that the value of the distribution grid is effectively 'masked', and that customers leave the distribution grid for a stand-alone energy system in circumstances where they would have been better off remaining on the distribution grid. Taken to its extreme, this situation could develop to the point where only those customers who are unable to afford a stand-alone energy system remain on the distribution grid resulting in higher energy costs for all users, both stand-alone energy system and grid connected customers alike, undermining the competitiveness of the economy.

Network connection framework

We do not believe that stand-alone energy systems should be subject to the same degree of regulation as grid connected systems. To do so will discourage innovation in service offerings and potentially undermine the economics of stand-alone energy systems. As a consequence we do not support a Chapter 5 Part A style framework being imposed.

We would be pleased to discuss any aspect of this letter with the Energy Council. Please contact me on 03 9683 4082 or rvogt@powercor.com.au.

Regards



Renate Vogt
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