

ATTACHMENT 2.3
**DISCONNECTING REMOTE
COMMUNITIES FROM THE NETWORK**

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1. Introduction

The Australian Energy Regulator (AER) has formed a Consumer Challenge Panel to advise on whether network business proposals are justified in the services to be delivered to customers, and on the effectiveness of network businesses' consumer engagement activities.

The Consumer Challenge Panel has proposed that network businesses should investigate the option of disconnecting isolated customers and communities from the electricity network. Alongside this, the panel suggested that individuals could be offered a one-off incentive payment to supply their own electricity through a stand-alone system comprising diesel, solar or wind generation, or a combination of these.

Essential Energy and members of its community representative advisory groups have reviewed the feasibility of this proposal in line with consumer engagement activities and found it to be an unviable option at this time for a number of key reasons explored below.

2. Statutory requirements

Under Section 66 of the National Energy Retail Law (NSW), Essential Energy is obliged to provide customer connection services for the premises of a customer who requests those services and whose premises are connected, or who is seeking to have those premises connected, to the electricity distribution system.

Legislative change would be required to make provision for network operators such as Essential Energy to mandate disconnection from the electricity grid. Failing this, if a single customer in a remote or isolated town chooses to remain grid-connected, Essential Energy is legislatively required to continue to maintain the existing distribution network.

3. Customer cost to serve

Essential Energy acknowledges that the capital cost of some long grid extensions – especially those supplying power to remote communities or individual properties – can be relatively high and network infrastructure maintenance costs can be greater than the return from electricity charges to the customer.

Essential Energy assesses all electricity distribution network augmentation projects for demand management opportunities in accordance with its Demand Management Engagement Strategy (available on the Essential Energy website at <http://www.essentialenergy.com.au/content/network-investments-demand-management>), looking for alternative options to complement traditional network solutions.

We examine various cost-effective alternatives – including embedded generation – to find the lowest-cost solution that meets the required standards, and deliver a safe and reliable energy supply now and in the future.

Essential Energy has also proposed a number of programs for the next regulatory control period that are designed to further decrease cost to serve during periods of peak demands. These include power factor correction programs, customer education and controlled load programs.

Where it may be more cost effective, Essential Energy suggests to owners of properties located at a significant distance from the existing distribution network who are seeking grid connection to consider installing a stand-alone power supply system.

However, experience to date has been that these property owners prefer to pay a higher up-front cost for grid connection. Anecdotally, they generally state this to be due to the ongoing repair, maintenance and renewal costs associated with stand-alone system ownership, and lack of confidence in system capability and reliability. Customers appreciate the level of confidence with regards to a reliable power supply that comes with a grid connection. Alongside this, the costs of the connection and ongoing retailer bills are transparent through contracts and agreements.

4. Proposal review outcomes

Essential Energy has reviewed the Consumer Challenge Panels proposal and finds that it is not feasible on the following grounds:

- > Essential Energy has a statutory obligation to provide grid connection services to any customer who requests it
- > the majority of Essential Energy's remote area customers consistently express preferences for grid connection
- > decommissioning the existing network supplying to remote or isolated towns – which is reliable and in good condition – would cut some 200 properties located beyond the town off from grid supply and create a stranded asset
- > the cost saving of the disconnection will not materially reduce Essential Energy's distribution use of network tariffs .

Members of Essential Energy's Rural Advisory Group and Customer Council have also considered the Consumer Challenge Panels proposal and made strong objections to it on behalf of the communities they represent, including:

- > once consumers go off grid, there will be no external monitoring of electrical safety
- > generators require regular maintenance, which may be beyond the capability of the consumer to provide and could potentially create environmentally hazardous waste oil and filters
- > generators and storage batteries have a limited life and require periodic replacement, which will require recurrent capital expenditure
- > renewable systems are weather dependant and require diesel generator back up, which is noisy and polluting
- > diesel is expensive in remote communities and is likely to increase in price at a higher rate than coal or gas
- > potential changes to the fuel tax credit – the 'diesel rebate' – in the Federal Budget may further increase the cost of diesel
- > diesel transport is costly and can be difficult in Far West NSW, where rain makes the unsealed roads impassable
- > individual property values will decrease following disconnection from the electricity grid
- > cutting isolated communities off the grid would effectively prevent further development in those communities, reducing employment opportunities and regional sustainability
- > the proposal makes no provision for funding and maintaining power supplies for public assets, such as street and traffic lighting, sewerage services and water pumping for parks and other public amenities
- > an electricity connection represents good social policy.

Attached is a letter supporting the above from Rural Advisory Group member, David Hughes.

5. Demonstrated experience

Essential Energy has previous experience relating to remote area stand-alone generation versus electricity grid connected power supply.

Prior to the mid-1980s, much of Far Western NSW was not connected to the electricity grid. For example, until 1995, power was supplied to the town of Tibooburra (located in far north western NSW, with a current population of approximately 160 residents) by a diesel-fuelled power generation station owned and operated by the Electricity Commission of NSW.

The power station comprised three diesel generators, any two of which could service town load and the third could be used as a back-up generator during periods of planned maintenance or unplanned failure of the in-service generators.

The Tibooburra Power Station was more costly to operate than an equivalent distribution network would have been, and did not incorporate sufficient capacity to meet potential load growth.

Many town residents, and rural landowners living outside the township who relied on individual private generation systems, made representations to the NSW government for connection to the electricity grid.

In acknowledgement that supply of electricity to rural areas of the State has broad social and economic benefits, during this period the NSW Government provided renewable energy technology funding through mechanisms such as the State Energy Research and Development Fund and, from 1987 to the mid-1990s administered the Remote Area Power Assistance Scheme (RAPAS), which provided capital assistance to remote area residents for either grid connection or for the purchase of a stand-alone power supply system.

Uptake of assistance via RAPAS appears to have trended slightly higher for stand-alone systems (perhaps around 57 per cent) than for grid connection. However, over time, many owners of stand-alone generators became dissatisfied with system capability and reliability and the high costs of maintenance or renewal, and made representations to Government for connection to the State-owned electricity grid.

In response, the NSW Government initiated the Far West Electrification Scheme and, in 1991, established the Darling Electricity Construction Agency (DECA) to plan and construct an electricity grid in Central Darling Shire and the unincorporated area of NSW north of Broken Hill. The \$28 million cost was planned to be partially funded through a contribution of \$53,000 by each landowner requiring grid connection.

Through this scheme, grid supply was extended to the rural communities and properties near White Cliffs, Packsaddle, Milparinka, Tibooburra and Wanaaring.

Tibooburra town was connected to the electricity grid in 1995 via a 290km long, Essential Energy-owned 33,000 volt powerline running from Mount Gipps zone substation.

More recent experience indicates that reliable electricity supply remains a priority for town residents.

Following storm events that severely damaged the Far West electricity distribution network and left residents without power for three days in November 2009 and nine days in February 2010, Tibooburra residents called for a public meeting with Essential Energy's local regional management team in September 2010 to seek re-commissioning of the Tibooburra diesel power station as a back-up power source during periods of network failure. Essential Energy advised that, while the old diesel power station was not operational, a mobile generator was maintained in Broken Hill that could be deployed in an emergency.

The meeting demonstrates residents' continuing reliance on, and preference for, State-owned, operated and maintained power supply – with grid connection as the first priority and a community stand-alone system for back-up supply.

It is also worth noting that, in September 2009, severe storm activity brought down five TransGrid transmission towers, cutting power supplies to around 13,000 Essential Energy customers in Broken Hill, White Cliffs, Menindee, Wilcannia and Tibooburra for several days.

Essential Energy arranged for diesel supplies for its generators to be secured and transported from Adelaide to Broken Hill to maintain power to the area while TransGrid repaired its infrastructure. Around 200,000 litres of fuel was required daily to maintain supply to residents and small businesses in the area.

The current average cost of diesel fuel is \$1.56 in Adelaide and \$1.78 in Tibooburra. The variation of 22 cents is mainly for transportation costs.

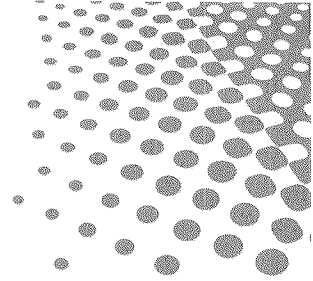
Essential Energy estimates that, on average, residents of Tibooburra would require a 25kVA generator to meet power supply needs.

A 25 kVA generator uses about five litres of diesel fuel per hour. If customers were required to buy diesel to run individual stand-alone power supply systems of this size, at Tibooburra prices it would cost each of them on average \$213.60 per 24 hour period, or \$77,964 per year.

An on-going operating based on this approximate calculation would be financially unviable for both the network operator and customers who are disconnected from the electricity network.



SKILLED ASSET
MANAGEMENT



26th March 2014

Natalie Lindsay,
Manager Network Regulation
Essential Energy
Via Email

Dear Natalie,

Re: RAG Meeting 25 March 2014 – AER Consumer Challenge Panel

I have been a member of Essential Energy's (and its forebears) Rural Advisory Group since 1997 and during that time I have represented the farming community and rural and regional customers alike. The RAG has over that time presented advice that has been taken on board or at the very least given great consideration by Essential Energy's management.

Also during that time we have always kept in mind that we are an advisory group so we have maintained an arm's length approach to ensure that we don't become complacent.

So it was with an overwhelming sense of horror that we received the proposal from the AER Consumer Challenge Panel (CCP) that isolated communities be separated from the network and that individuals be given a sum of money (\$100,000?) to supply their own energy by diesel, wind or solar or a combination these. This supposedly would save large sums of money because maintenance would not be required on these very long feeders.

I would be very interested to see how this could be justified given that the network is already in place and after the past four or so years of investment is in great condition.

These communities are also experiencing a boom in tourism; tourists who expect some degree of civilisation even in the outback.

Here are a few points that strongly defy the CCP's proposal:-

1. How will they compensate for the lowering of property values?
2. How can they be sure that the money will be spent on energy infrastructure?
3. What is to prevent a house being sold and the owner pocketing the money?
4. Who is going to maintain the equipment? Diesel mechanics are scarce.
5. Tibooburra, Charleville then where? Broken Hill, Mt Isa?
6. The NSW Government is committed to maintaining the existing network?
7. The AER does not have the power to regulate this type of proposal.
8. As mentioned, the network is in good condition.
9. The cost of this proposal obviously hasn't been thought through. A hundred properties in a small town would cost \$10 million. How many years would it take to recover that in maintenance savings?

As a Member of RAG I earnestly urge Essential Energy to resist this proposal with the utmost vigour.

Yours faithfully,

David Hughes

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