

19 May 2016



Mr Chris Pattas
General Manager
Network Investment and Pricing
Australian Energy Regulator
GPO Box 520
Melbourne Vic 3001

Dear Mr Pattas,

ENERGEX APPLICATION FOR A RING-FENCING WAIVER UNDER THE ELECTRICITY DISTRIBUTION RING-FENCING GUIDELINES

Energex Limited (Energex) is writing to the Australian Energy Regulator (AER) to seek a waiver from section 1(b) of the Final Determination Electricity Distribution Ring-Fencing Guidelines, September 2000 (the ring-fencing guidelines) issued by the Queensland Competition Authority.

Clause 11.14.5 of the National Electricity Rules provides for jurisdictional ring-fencing guidelines to continue to apply, following regulatory responsibility transferring to the AER, until such time as the new guidelines are developed.

Section 1(b) of the ring-fencing guidelines states "a Distribution Network Service Provider (DNSP) that provides prescribed distribution services in Queensland must not carry on a related business within that legal entity". A related business is defined as "the business of producing, purchasing or selling electricity".

Energex's waiver application relates to a 150 kilowatt (kW) solar photovoltaic (PV) system for installation at Energex's Eagle Farm Distribution Centre.

Background

Energex's Eagle Farm Distribution Centre is located within an embedded network owned by TradeCoast. Energex has approval from TradeCoast to install 150 kW of solar PV capacity at the site.

The solar PV system will reduce the operating cost of the facility, deliver environmental benefits and contribute to research and development learnings. Regarding this latter point, the solar PV system will be used in conjunction with a commercial sized Battery Energy Storage System (BESS) as part of a trial project for a period of approximately three years. Specific details of the Eagle Farm solar PV configuration are set out in Attachments 1 and 2.

Enquiries
Leigh Henderson
Telephone
(07) 3664 4118
Facsimile
(07) 3664 9818
Email
leighhenderson@energex.com.au
Corporate Office
26 Reddacliff Street
Newstead Qld 4006
GPO Box 1461
Brisbane Qld 4001
Telephone (07) 3664 4000
Facsimile (07) 3025 8301
www.energex.com.au

ENERGEX Limited
ABN 40 078 849 055

Primary benefit (Solar PV installation)

Similar to other market participants and businesses, Energex has investigated the use of solar PV as an alternative energy source to reduce operating costs at the Eagle Farm Distribution Centre.

Energex has undertaken a financial analysis for the commercial solar PV installation which is NPV positive for the base case. These savings form part of Energex's operating expenditure and therefore, the investment will deliver cost efficiencies which are in the long term interest of customers. Customers will ultimately receive the benefit through reduced network costs.

In addition to savings in operating costs, the installation of solar PV will deliver positive environmental benefits. The installation of solar PV will reduce Energex's carbon footprint by reducing greenhouse gas emissions and the dependence on traditional energy sources derived from fossil fuel. The transition of some energy use from fossil fuel sources towards renewable energy plays an important part in government policy to mitigate the effects of climate change.

Secondary benefit (BESS trial)

Energex expects an increase in commercial customers applying for connection of large-scale BESS systems (either in conjunction with a new or existing solar PV system) and has already received tentative requests from a number of commercial customers. BESS pilot projects provide Energex with a better understanding of how the installation of batteries used in conjunction with solar PV, will impact Energex's future network load profile and power quality. While these pilot projects are primarily to inform Energex of the potential network operational issues, they may also provide some insights for future capital investment and tariff reform decisions. The importance of a viable electricity network is integral to connecting consumers to new technologies and facilitating the provision of new energy services, which will best serve the long term interests of consumers.

Energex currently has a domestic BESS pilot project in operation at the Rocklea training facility. Including a BESS trial at the Eagle Farm location will allow Energex to simulate the installation and operation of a BESS in conjunction with solar PV at a commercial premise. Large scale commercial solar PV in conjunction with BESS represents a different challenge to network businesses in terms of load profile, visibility on the network and system wide coordination. Throughout the trial Energex will gain an understanding, for commercial installations, of the network impacts, options for network support and the interplay between customer driven operation and provision of network support. In addition, any opportunities for maximising benefits to reduce the cost to serve and improve network performance will be investigated.

Funding and operating model

Energex intends to fund the solar PV installation through the non-system capex allowance approved as part of the 2015-20 regulatory proposal.

The BESS will be funded, owned and operated by Energy Impact Pty Ltd, which is a separate legal entity in accordance with the current ring-fencing guidelines. A service level agreement (SLA) will be established between Energex Ltd and Energy Impact Pty Ltd for the ownership and maintenance of the installation as well as access to data. It is proposed that the costs under the SLA will be funded through Energex's Demand Management Innovation Allowance as proposed in Energex's regulatory proposal.

Energex will conduct this business at arm's length and in a competitively neutral manner. In particular the agreement will include terms which are no more favourable than would be offered to any other third party.

Waiver Requirements

Section 22 of the ring-fencing guidelines allows distribution network service providers (DNSPs) to request the AER issue a notice under section 21. Under section 21 the AER may waive any obligations provided that the DNSP can demonstrate that the administrative cost to the DNSP and its associates of complying with the obligation outweighs the benefit or any likely benefit to the public.

Energex has considered the existing ring-fencing guidelines in developing the Eagle Farm project. While the solar PV installation involves the generation of electricity from the solar PV panels, Energex does not consider this constitutes carrying on a related business. This is because Energex is not in the business of producing electricity as there is no intention to make a profit. Energex is only producing electricity for the purposes of using the electricity onsite to reduce operating costs. To the extent that there is any net export, customers will be the beneficiaries through reduced losses. Energex considers these activities are being undertaken as part of our carrying on a distribution business.

In addition, Energex notes the AER's recent release (April 2016) of the preliminary position paper on ring-fencing guidelines which will provide consistency across jurisdictions and accommodate structural and technological changes in the electricity industry. Energex therefore understands that the AER may consider this installation not only in the context of the current guidelines but also in terms of the development of the national ring-fencing guideline. As stated above, this installation is only for the purposes of using electricity onsite in the delivery of standard control services and is expected to have a negligible market impact. Moreover, Energex understands from the AER's preliminary position paper that ownership of roof top solar PV to reduce a network's operating cost would be accepted (waiver approved) up to a capacity cap.¹

Grounds for Seeking a Waiver

Energex considers the administrative costs of complying with section 1(b) outweighs the benefit or likely benefit to the public given that this project reduces Energex's operating costs and facilitates network learnings for the integration of new technology with the existing network assets.

An estimate of the establishment and ongoing costs associated with ring-fencing the Eagle Farm project are provided in Attachment 3 as Commercial in Confidence. These costs would be required to be passed on to customers as part of Energex's standard control services.

Energex does not consider that the establishment and operation of this solar PV installation:

- has any impact on the national electricity market given the negligible export capacity of the solar PV installation;
- constitutes entering the generation or retail markets; and
- interferes in any way with Energex's legislative requirements.

¹ AER's Electricity Ring-fencing Guideline - Preliminary Positions, April 2016 p31.

Based on the above rationale, Energex considers that the criteria for issuing of a waiver are met. If you have any queries in relation to the information provided, please do not hesitate to contact Leigh Henderson, Network Regulation Manager on (07) 3664 4118.

Yours sincerely



Jennifer Hocking
A/Executive General Manager,
Strategy, Regulation & Governance

Attachment 1	Eagle Farm DC Solar PV Installation: Summary
Attachment 2	Eagle Farm DC Solar PV Installation: Configuration
Attachment 3	Eagle Farm DC Solar PV Installation: Estimated costs of ring-fencing

Attachment 1 - Eagle Farm DC Solar PV Installation: Summary

Site Address	120 Schneider Road, Eagle Farm, QLD 4009	
Site Specifics	Energex's Eagle Farm Distribution Centre is located within an embedded network owned by TradeCoast.	
Estimated Cost	\$0.44million (base case)	
Estimated Benefit	\$0.52million (base case)	
Investment	25 years	
Installation	150 kW solar PV system Total generation installed – 151.2 kW Inverter size – 2 x 75 kW, total = 150 kW	
Change in Load Profile at site	<p>Estimated load profile – sunny weekday</p>	<p>Estimated load profile – cloudy weekday</p>
	<p>Estimated load profile – sunny weekend</p>	<p>Estimated load profile – cloudy weekend</p>
Estimated Export to TradeCoast's network (and possibly Energex's network)	<p>Eagle Farm Distribution Centre (DC):</p> <ul style="list-style-type: none"> base load is approximately 120kW daytime load is approximately 150kW and up to maximum 179kW. <p>Considering the efficiency of the panels and taking into account cloudy days and seasonal solar radiation changes, the amount of export into TradeCoast's network is expected to be close to minimal.</p> <p>On a sunny weekend day, when the building load is approximately 120kW, there is potential for up to 100kWh export to TradeCoast's network. In addition, with the battery storage capability the amount of export can be limited/controlled where required.</p> <p>Based on the 150kW generation size, it has been estimated that annual PV generation will be approximately 236MWh and excess PV generation will be approximately 5MWh.</p>	
Use of assets for BESS trial	Excess solar PV generation and/or electricity from the grid will be used to charge a 250kW/488kWh Tesla battery as part of a commercial BESS trial.	
Funding (solar PV system)	The solar PV system will be funded through Energex's approved non-system capex allowance.	
Configuration	Please refer to single line diagram (Attachment 2)	

Attachment 2 – Eagle Farm DC Solar PV Installation: Configuration

Single line diagram of proposed Solar PV and BESS configuration for Eagle Farm DC

