

Final Decision

Energex application for waiver from Queensland Ring Fencing Guidelines

Solar PV and BESS trial project

**August 2016**

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**Contents**

[Shortened forms 1](#_Toc459704384)

[1 Summary 2](#_Toc459704385)

[2 Queensland Ring Fencing Guidelines 4](#_Toc459704386)

[2.1 Procedure for waiving ring fencing obligations 4](#_Toc459704387)

[3 Energex’s waiver application 5](#_Toc459704388)

[3.1 150kW solar PV system & BESS project 5](#_Toc459704389)

[3.2 A related business 6](#_Toc459704390)

[3.3 Costs of compliance with ring fencing obligations 6](#_Toc459704391)

[3.4 Reasons for seeking a waiver 7](#_Toc459704392)

[4 Our assessment 8](#_Toc459704393)

[4.1 Submissions 8](#_Toc459704394)

[4.2 Our considerations 9](#_Toc459704395)

[4.3 Our final decision 10](#_Toc459704396)

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# Shortened forms

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| --- | --- |
| Shortened form | Extended form |
| AEMC | Australian Energy Market Commission |
| AER | Australian Energy Regulator |
| DNSP | Distribution Network Service Provider |
| Energex | Energex Limited |
| NEL | National Electricity Law |
| NEM | National Electricity Market |
| NER | National Electricity Rules |
| QCA | Queensland Competition Authority |
| Guidelines | Electricity Distribution: Ring-Fencing Guidelines, September 2000[[1]](#footnote-1) |

# Summary

The current waiver application was submitted by Energex on 20 May 2016 for its Battery Energy Storage System (BESS) project incorporating solar photovoltaic (PV) generation and batteries.[[2]](#footnote-2) We are required to assess this application under the Queensland Electricity Distribution: Ring Fencing Guidelines (the Guidelines) that were developed by the Queensland Competition Authority in 2000.

Section 1(b) of the Guidelines prevents a Distribution Network Service Provider (DNSP), such as Energex, from carrying on a "related business" within its legal entity. A "related business" is defined by the Guidelines as a business of producing, purchasing or selling electricity.

Energex intends to install 150kW of solar PV capacity at its Eagle Farm Distribution Centre to be used in conjunction with its commercial BESS trial. The trial project includes a 250kW Tesla battery. Energex described its BESS project as providing reduced operating costs, positive environmental benefits and benefits through research and development learnings that will come from the BESS project’s solar PV generation and batteries. Energex indicated electricity exports to the grid from its facility would be minimal as most electricity generated by the project's PV units would be used onsite.

Our view is that the solar PV system installation and BESS project falls within the definition of a "related business" in the Guidelines because it involves electricity generation and supply to the network. i.e. producing electricity. The waiver, if granted, would allow Energex to operate the project as a related activity.

We may grant a waiver from the Guidelines’ obligations if we consider the DNSP’s costs of complying with those obligations, in respect of undertaking a “related business”, would outweigh the public benefit.

The purpose of the current Guidelines is to prevent DNSPs from vertically integrating to provide electricity generation and retailing activities. The Guidelines do not account for the broader scope of considerations reflected in the AEMC’s recent work on energy storage, including market development issues.[[3]](#footnote-3) However, we are taking these issues into account in developing new national ring fencing guidelines, due by December 2016.[[4]](#footnote-4)

We received three submissions in response to Energex’s waiver application for its solar PV and BESS project. We did not receive any submissions in response to our draft decision. Origin Energy, the Australian Energy Council and Energy Consumers Australia opposed granting waivers, submitting that the waiver applications should be considered under the new national ring fencing guidelines. They also argued that DNSPs should not provide energy storage services—rather, such services should be purchased by third party providers—and that the granting of a ring fencing waiver should be a last resort based on exploring alternatives to DNSP provided BESS solutions. While we have noted the positions advanced by submitters, we are required to assess ring fencing waiver applications on the basis of existing regulatory arrangements and cannot defer consideration until the new ring fencing guidelines are made. We therefore consider the objections are not well founded in respect of the Queensland Guidelines. We are, however, taking market contestability issues into account in developing new national ring fencing guidelines.

Energex submitted that it will not sell electricity injected by its BESS project into the network so will not receive an immediate financial benefit. As such, it will not profit from the solar electricity generated. Electricity will be used onsite to reduce operating costs and any net export that occurs (expected to be minimal) would benefit customers through reduced line losses. Energex's waiver application is premised on the project not equating to the "business" of generating/supplying electricity. We note, however, that there is an opportunity for Energex to sell electricity, particularly with the combination of PV and batteries used in the project. Therefore we consider it appropriate for Energex to submit a ring fencing waiver application for our assessment.

Having considered the material submitted by Energex and the submissions provided in response to its application, our final decision is to grant a temporary and conditional waiver from section 1(b) of the Guidelines. The waiver is limited to the solar PV system installation and commercial BESS project described in Energex's waiver application. The waiver is conditional on Energex not selling electricity injected into the network. The waiver will remain in place until 12 months after we release new national ring fencing guidelines, due before December 2016. Alternatively, new national ring fencing guidelines may specify an approach to pre–existing waivers such as this.

The new national guidelines will supersede existing jurisdictional ring fencing guidelines currently administered by the AER, including the existing Queensland Guidelines. In respect of this BESS project, Energex will be required to comply with the new guidelines within 12 months after being established, or otherwise comply with transitional arrangements for existing waivers as set out by the new guidelines.

# Queensland Ring Fencing Guidelines

The Queensland Competition Authority (QCA) published its Ring Fencing Guidelines in September 2000. The objective was to underpin an environment where the price, quantity and quality of electricity traded in the retail, generation and distribution markets was not biased due to vertical integration of distribution and other businesses.[[5]](#footnote-5) The Guidelines recognised the potential need for ring fencing waivers in certain circumstances to capture activities where the cost imposed by complying with the ring fencing obligations could outweigh the likely benefit to the public.

On 1 July 2010 we assumed responsibility for administering the Guidelines. Under clause 11.14.5(b)(3) of the NER, guidelines in force for a participating jurisdiction immediately before our assumption of regulatory responsibility (transitional guidelines) continue to be in force for that jurisdiction subject to amendment, revocation or replacement by the AER. We have not made any amendment, revocation or replacement in respect of the (Queensland) Guidelines to date. However, we are currently in the process of developing new national ring fencing guidelines to replace existing jurisdictional guidelines, due before December 2016.

## Procedure for waiving ring fencing obligations

Section 1 of the Guidelines sets out the minimum ring fencing obligations imposed on the Queensland DNSPs. A DNSP has the right to seek a waiver from these obligations under section 21 of the Guidelines:

“The QCA may, by notice to a DNSP, waive any of a DNSP’s obligations under section 1 provided that the QCA is satisfied 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.”

Where a DNSP applies for a waiver of its ring fencing obligations, we must follow the procedure set out in sections 22 to 30 of the Guidelines in assessing the application.

On 31 May 2016 we published a notice in The Australian newspaper to seek comment on Energex's waiver application. We also published the waiver application on the AER website and issued an email alert to AER subscribers.

# Energex’s waiver application

The waiver sought by Energex is in regard to section 1(b) of the Guidelines, which 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 in section 30 of the Guidelines as a business of producing, purchasing or selling electricity.

Section 21 allows the AER to waive the Guidelines' obligations if we consider the administrative costs of compliance will outweigh the public benefit. Section 22 of the Guidelines allows DNSPs to seek a notice from the AER to be issued under section 21.

## 150kW solar PV system & BESS project

Energex’s waiver application described the expected benefits of the solar PV installation and BESS project at its Eagle Farm Distribution Centre. In particular, it undertook financial analysis as part of an investigation into the use of solar PV as an alternative energy source to reduce operating costs at the facility and found the installation to have positive net present value for the base case. Energex expects to see savings in operating expenditure which are in the long term interests of customers. That is, the cost efficiencies from this investment will be passed through to customers via reduced network costs.

Energex submitted that through the BESS trial project it intends to gain a better understanding of how the installation of batteries used in conjunction with solar PV will impact its future network load profile and power quality. Energex indicated that, while the pilot project is primarily to understand network operational issues, it may also provide insight for future capital investment and tariff reform decisions. Energex emphasised the importance of a viable electricity network in connecting consumers to new technologies and facilitating the provision of new energy services, which will best serve the long term interests of consumers.

Energex submitted that the BESS trial at the Eagle Farm Distribution Centre will simulate the installation and operation of batteries in conjunction with solar PV at a commercial premise. It currently has a domestic BESS pilot project in operation at its Rocklea training facility. The proposed commercial BESS project will include installation of a Tesla battery (total storage of 250kW). Energex submitted that 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 of:

* commercial installations
* the network impacts
* options for network support
* the interplay between customer driven operation and provision of network support.

Energex noted that, throughout the BESS trial, it will investigate any opportunities for maximising benefits to reduce the cost to provide and improve network performance.

In addition, Energex submitted that environmental benefits would accrue from the solar PV installation. By reducing the facility’s greenhouse gas emissions and dependence on traditional energy sources derived from fossil fuel, Energex will reduce its carbon footprint and contribute to climate change mitigation.

Energex proposed to fund the solar PV installation through the non-system capital expenditure allowance approved as part of the 2015-20 regulatory proposal. Energy Impact Ltd, a separate legal entity, will fund, own and operate the BESS under a service level agreement (SLA) established between Energex and Energy Impact. The SLA relates to the BESS’ ownership and maintenance and access to data. Energex has proposed to fund the costs under the SLA from resources in its Demand Management Innovation Allowance. [[6]](#footnote-6)

Energex expects the amount of electricity exported into TradeCoast’s network to be minimal, estimating excess solar PV generation to be approximately 5MWh based on the 150kW generation size of the solar PV system. This electricity sent into the network will not be sold but rather will be counted as a reduction in line losses and so Energex will not receive a financial benefit. Energex noted that the amount of export can be limited or controlled where required with the Tesla battery storage capability.

* 1. **A related business**

Energex submitted:[[7]](#footnote-7)

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.

* 1. **Costs of compliance with ring fencing obligations**

For a ring fencing waiver to be granted, Energex must demonstrate that the administrative cost of complying with the ring fencing obligation outweighs the benefit, or any likely benefit, to the public. Energex submitted an estimate of its expected costs of ring fencing the Eagle Farm project with its waiver application. Energex has claimed commercial confidentiality over its cost estimates so we have not set them out here.

While the cost estimates submitted by Energex are not significant in comparison with Energex's revenues, they will ultimately be borne by Energex's customers as part of its standard control services through increases in network charges. Against these costs we must assess the potential benefit of requiring Energex to establish a separate legal entity to undertake the solar PV system installation and commercial BESS project. Our assessment of these costs and benefits must be in light of the Guidelines’ focus on a related business of producing electricity.

We have taken Energex's proposed costs into account in considering Energex's waiver application.

* 1. **Reasons for seeking a waiver**

Energex submitted:[[8]](#footnote-8)

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.

…

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 capacity of the solar PV installation;

constitutes entering the generation or retail markets; and

interferes in any way with Energex's legislative requirements.

# Our assessment

As set out above, we may waive a ring fencing requirement if we are satisfied the administrative cost to the DNSP in complying with the ring fencing obligations outweighs the benefit, or any likely benefit, to the public.

## Submissions

We did not receive any submissions in response to our draft decision on Energex’s waiver application. The submissions provided previously in response to the waiver application are available to view on the AER website.

In response to Energex’s waiver application, the Australian Energy Council submitted:

The granting of a waiver should be a last resort based on exploring all possible solutions. For example, for this particular application the Energy Council would urge the AER to require Energex to undertake a competitive tender process … and that all information gathered, including wider energy market outcomes, should be made publically available to all market participants.

…

The AER has the opportunity to send a strong signal that it will only support a level playing field and competitively neutral outcomes consistent with the principles that underpinned the establishment of ring-fencing. The purpose of ring-fencing is to provide confidence to others that they will be able to compete with an unregulated business on a fair and equal basis. The Energy Council submits that the AER must properly and fully consider the potential detriments to competition before granting Energex waiver applications.

Energy Consumers Australia submitted:

The AER’s approach has been framed on the assumption that a [national Electricity Distribution Ring Fencing Guideline] is being reviewed and that the decision made in the interim therefore has a reduced significance.

…

ECA has fundamental concerns about the ability of ring fencing arrangements to protect the long term interest of consumers by fostering competitive markets for new and emerging energy services.

Energy Consumers Australia further submitted that Energex has not provided sufficient evidence that the benefits of the AER granting a ring fencing waiver for this project are outweighed by the costs of requiring Energex to ring fence the Eagle Farm trial project.

Finally, Origin Energy submitted:

We believe the solar PV application is sufficiently contentious. The application provides inadequate explanation of the cost recovery models, how external energy discharge is treated and it lacks transparency regarding the information sharing arrangements that form the SLA. Furthermore the application relates to long-lived assets so there appears no urgency to have the application assessed immediately.

As such, Origin submitted that the AER should defer consideration of the Eagle Farm trial waiver request so it may be considered under new national ring fencing guidelines.

## Our considerations

Consistent with our draft decision, our final decision is to grant a waiver from section 1(b) of the Guidelines. We accept that Energex’s commercial BESS project and solar PV installation is to be undertaken for the purposes of reducing operating costs at the Eagle Farm Distribution Centre where the solar PV system will be installed, delivering environmental benefits and contributing to research and development learnings. Further, that the project will give Energex an understanding of the network impacts of commercial solar PV installations.

Energex is not proposing to enter the wholesale market for electricity. In the context of the Queensland Guidelines there are unlikely to be any benefits from not waiving the ring fencing requirements in this case. However, we accept that Energex would incur administrative costs in complying with the ring fencing requirements. Therefore, we consider the possible benefits from enforcing ring fencing requirements on Energex are outweighed by the costs it would incur in undertaking ring fencing.

The solar PV system and BESS project will not be undertaken for business purposes, in that Energex will not sell any electricity injected into the network. While the Guidelines do not define what a "business" is, as a general principle we accept that a business activity is normally undertaken to achieve a positive financial return. Nevertheless, the Guidelines could be interpreted such that Energex would be captured by the ring fencing requirements. For this reason we consider it is appropriate that Energex seek a waiver for the project.

With respect to the proposal from Origin Energy and Energy Consumers Australia that more information is required for us to make a decision on Energex’s waiver application, we consider the available information sufficiently illustrates the key issues. Submissions have raised a broader range of issues than the Guidelines themselves contemplate. Information provided by Energex may not address the broader range of issues raised by submissions but is appropriate for the decision we are required by the Guidelines to make.

Energy Consumers Australia submitted that, in the period leading up to the inception of new national ring fencing guidelines, we are treating ring fencing waiver requests with “reduced significance”. This is not the case. In fact, we are assessing waiver applications submitted under the existing ring fencing arrangements as we are required to. We conduct a thorough assessment of all ring fencing decisions under existing regulatory arrangements. By limiting waivers issued now to no longer than 12 months after the inception of the new national ring fencing guidelines we are acknowledging that the existing arrangements will soon expire. Energex will then be required to comply with the new national ring fencing approach.

Energex has proposed to fund the solar PV system through its non-system capex allowance and the BESS through its DMIA resources. We do not see anything to prevent this. Energex will be required to submit to us a DMIA report summarising outcomes from the BESS project. While we note submitters’ concerns about the information generated from the project, it is beyond the scope of the Guidelines to include a waiver condition that Energex be required to publish the findings of its research. Nonetheless, we encourage Energex to share further details with the broader energy sector through industry conferences and the like. The project's results should provide insight to stakeholders of the impact batteries can have on networks, including how networks and commercial batteries will interact.

While we note the Australian Energy Council’s comments regarding the emerging market for energy solutions, we do not consider that its premise is sustainable in this context. The Queensland Guidelines were developed by the QCA to maintain separation of the provision of network services from generation and retail activities.

We consider that the Guidelines do not contemplate competitive neutrality and broader market contestability issues that have been raised by stakeholders in previous ring fencing waiver applications. As explained by the QCA in its final decision on the existing Guidelines:[[9]](#footnote-9)

…the Authority’s objective for the Guidelines is to assist in creating an environment where the price, quantity and quality of electricity traded in the retail market, and the price, quantity and quality of distribution services used to deliver the energy, are not uneconomically biased by the vertical integration of distribution and other businesses…

We recognise that the potential provision of services from batteries will be subject to further consideration as part of the development of our ring fencing guidelines and will also be informed by any further policy direction from the COAG Energy Council and the Australian Energy Market Commission (AEMC).[[10]](#footnote-10) We hold the view that contestable services should be provided in competitive markets. Networks should not be able to leverage off their monopoly business activities to gain an advantage in competitive markets. These issues are a focus of our consultation in developing new national guidelines.

As required by the current Guidelines, for Energex's waiver application we have considered the likely benefit to the public of enforcing the current ring fencing provisions against Energex's submitted cost estimates. To the extent that Energex's solar installation and BESS project could be considered to be a related business as defined by the Guidelines, we consider it unlikely that there will be material benefits to consumers from requiring Energex to undertake ring fencing in this instance. So even though the administrative costs of Energex ring fencing the project would be relatively minor compared to Energex's total revenues, they outweigh any potential benefit.

## Our final decision

For the above reasons we consider granting a temporary and conditional waiver is appropriate. Our final decision is to grant a temporary waiver from section 1(b) of the Guidelines, conditional on Energex not selling electricity injected into the network by the commercial BESS project.

Energex will be required to comply with national ring fencing guidelines within 12 months of them being established, or otherwise comply with arrangements for existing ring fencing waivers as set out by the new guidelines (see box below on how the PV and BESS installation may be treated under the draft national ring-fencing guidelines).

**New national ring fencing guideline**

On 15 August 2016 we published a Draft Ring-Fencing Guideline (the Draft Guideline) for stakeholder feedback under the national electricity rules. Once finalised, this new national guideline will supersede existing jurisdictional guidelines. In this text box we discuss how Energex’s Eagle Farm PV and BESS installation would be treated under the Draft Guideline.

*Treatment of Energex’s PV and BESS installation under the Draft Guideline*

The Draft Guideline specifies:

* a DNSP may provide network services
* a DNSP may provide non–network services up to a cumulative threshold value of $500,000
* non-network services above the threshold value may not be provided by the DNSP—they must be provided by a separate legal entity (which may be owned by the DNSP or its corporate group).

This means under the proposed guideline and current national electricity rules the ring fencing treatment of Energex’s PV and BESS installation at its Eagle Farm location would depend on how the service(s) it provides is classified. Our current service classification decision for Energex is set out in our final determination for the 2015-20 regulatory control period.

Potentially, a single installation (asset) may provide more than one service. This is true for distributed generation and distributed energy storage assets. Such assets may provide network support by, for example, substituting for network augmentation. They may also facilitate involvement in electricity wholesale markets through the sale of electricity.

Energex’s Eagle Farm PV and BESS installation is capable of providing both a network support service (a network service) and the sale of electricity exported to Energex’s network (a non-network service). How the installation would be treated would depend on Energex’s intended use of the installation to provide one or more services.

Under our Draft Guideline:

* if the service(s) were classified as a network service, Energex may provide the service(s)
* if the service(s) were considered a non-network service, Energex may still provide the service up to the cumulative threshold value
* if the service(s) were classified a non-network service and Energex had reached the threshold value, the service(s) must be provided by a separate legal entity.
1. By Queensland Competition Authority. [↑](#footnote-ref-1)
2. Energex, Energex application for a ring fencing waiver under the electricity distribution ring fencing guidelines, May 2016. [↑](#footnote-ref-2)
3. AEMC, *Final report — Integration of Storage: Regulatory Implications,* December 2015. [↑](#footnote-ref-3)
4. AER, *Ring-Fencing Guideline – Preliminary Positions Paper*, April 2016. [↑](#footnote-ref-4)
5. Queensland Competition Authority, Final Determination: Electricity Distribution: Ring fencing Guidelines, September 2000, p.8. [↑](#footnote-ref-5)
6. Energex, Energex application for a ring fencing waiver under the electricity distribution ring fencing guidelines, May 2016, p.2. [↑](#footnote-ref-6)
7. Energex, Energex application for a ring fencing waiver under the electricity distribution ring fencing guidelines, May 2016, p.3. [↑](#footnote-ref-7)
8. Energex, Energex application for a ring fencing waiver under the electricity distribution ring fencing guidelines, May 2016, p.3. [↑](#footnote-ref-8)
9. QCA, *Final determinations—Electricity distribution: ring fencing guidelines,* September 2000, p.2. [↑](#footnote-ref-9)
10. AER, *Ring-Fencing Guideline – Preliminary Positions Paper*, April 2016. [↑](#footnote-ref-10)