

National Carbon Offset Standard Carbon Neutral Program Public Disclosure Summary



An Australian Government Initiative



meridian



POWERSHOP

Powershop Australia Carbon Neutral Electricity Product

Public Disclosure Summary

FY2016



Australian Government

Department of the Environment

Summary

Meridian Energy Limited has a proud heritage of harnessing our earth's energy in generating affordable electricity every day – enough to supply more than one million homes. We are proud to say we are the largest company in Australasia that is integrated to provide retail electricity and entirely renewable electricity generation. Our company has made a conscious choice to invest in our children's future by not investing in polluting fossil fuel based plants. We seek to add value in a sustainable way by minimising the resources we draw on in going about our business. We seek to ensure the choices we make offer good value, to ensure we can keep our energy affordable.

In Australia, Meridian generates electricity from its own wind farms which is sold into the National Electricity Market (**NEM**). We also retail electricity, bought from that same market under our iconic Powershop brand for which we surrender a range of carbon offset credits to produce a carbon neutral outcome for the product. This Public Disclosure Statement (**PDS**) supports our ongoing accreditation under the National Carbon Offset Carbon Neutral Program that covers Powershop Australia's Carbon Neutral electricity product (Product). It details for FY2016:

- the total of our existing emissions from this Product;
- how we define and measure those emissions; and
- how we use our purchases of Large-scale Generation Certificates ("LGCs") GreenPower and Carbon Emissions Reduction ("CER") carbon offsets to neutralise that impact.

The MEA Group (which includes Powershop Australia) operates on a carbon neutral basis and surrenders LGCs and CERs to neutralise its Scope 1, 2 and 3 emissions.

1. Organisation and Emission details

Table 1: Organisation and Product Information

Organisation Name	Powershop Australia Pty Ltd	
Name of the subject(s) of certification	Powershop Carbon Neutral electricity	
Type of certification (tick all applicable)	<input type="checkbox"/> Organisation <input type="checkbox"/> Part of organisation	<input checked="" type="checkbox"/> Product/service <input type="checkbox"/> Event
Reporting year period	1st July 2015	30th June 2016
Emissions in this reporting year	01 July 2015 – 30 June 2016 <i>tonnes CO₂-e</i> Total Emissions 356,729 Total Offsets 356,729 Net emissions 0	
Base year period	From 1st July 2014	30 June 2015
Emissions in the base year	189,836 tCO ₂ -e (reduced to 0 t CO ₂ -e by offsets)	

2. Description of Organisation Activities

Meridian Energy Limited (**MEL**) is Australasia's largest entirely renewable electricity generator and New Zealand's largest electricity generator. Meridian Energy Australia (**MEA**) is the subsidiary corporate group responsible for MEL's electricity generation, wholesale and corporate support activities in the Australian market. Powershop Australia is the organisation's retailing arm.

MEA owns and operates the Mount Millar Wind Farm in South Australia and the Mount Mercer Wind Farm in Victoria. The business also manages its own wholesale electricity trading in the Australian National Electricity Market ("NEM") and the Powershop Australia retail electricity business which sells retail electricity to customers in Victoria and NSW.

This Public Disclosure Summary relates specifically to the electricity "Product" that is created by Powershop Australia when it buys electricity from the NEM and on-sells that electricity to its retail customers under the Powershop brand. It is this Product which is accredited under the National Carbon Offset Scheme Carbon Neutral Program.

Further information about Powershop can be found at www.powershop.com.au

Further information about MEA can be found at www.meridianenergy.com.au.

3. Scope & system Boundary

Powershop Australia retails electricity bought from the NEM to end use customers in Victoria and NSW. In calculating the GHG emissions from electricity purchased and on sold to Powershop customers, we have applied Scope 2 and Scope 3 emission factors to the quantity of electricity purchased from the NEM. The boundary of Powershop's Carbon Neutral electricity Product therefore incorporates GHG emissions associated with extraction, production and transport of fuels, electricity generation, transmission and distribution to Powershop customers.

4. Purchase of GreenPower, Retirement of GreenPower Eligible LGCs and CERs

Powershop Australia surrendered Mandatory LGCs¹, GreenPower LGCs and CERs² to ensure its retail electricity was carbon neutral for the FY2016 period for reporting under the NCOS Standard. The details of those instruments surrendered are set out in the following tables.

¹ The quantum of Mandatory LGCs to be retired by Retailers is set by the rate of the Renewable Power Percentage which is adjusted at the end of each calendar year. The rate is designed to achieve the current target of 33,000GWhs of electricity being produced from renewable resources is reached by 2020. For current and future targets see - <http://www.cleanenergyregulator.gov.au/RET/About-the-Renewable-Energy-Target/The-certificate-market/The-renewable-power-percentage/Annual-targets>

² LGCs = 1MWh, CERs = 1 tCO₂-e

Table 2 -Greenpower LGC's pertaining to Powershop Retail Electricity Product (Quantification)

Type	Volume	Unit	tCO ₂ -e	Status
GreenPower Compliance	10,501	MWh	10,501	Surrendered Part of surrender March 2016: WD00SA17 412,448 – 417,727 (5,280) WD00SA17 386,686 – 388,659 (1,974) WD00SA17 402,448 -403,447 (1,000) WD00SA17 406,769 – 409,016 (2,247)
GreenPower Compliance	12,990	MWh	12,990	Purchased To be surrendered in March 2017

Table 3: Mandatory LGC's pertaining to Powershop Retail Electricity Product (Quantification)

Details of LGCs surrendered as per mandatory Renewable Power Percentage requirements	
Quantity	Serial Number
18,130	Surrendered Part of surrender 2016 WDOONMS08 70,639 – 71,138 (500) WDOOSA06 139101 – 148,792 (9692) WDOOVC17 132,102 – 140,039 (7938)
24,424	To be surrendered in February 2017

Table 4: CER's pertaining to Powershop Retail Electricity Product (Quantification)

Details of CERs voluntarily Surrendered		
Quantity	Serial number	Date of surrender
1,552	52,907,153 - 52,908,704	Surrendered 2014-15 (surplus)
68,633	2,210,404 – 2,227,037	April 2016
108,313	1,445,203 – 1,553,515	April 2016
14,107	74,743,773 - 74,757,880	September 2016
164,124	83,496,110 - 83,660,233	September 2016
Total CERs voluntarily surrendered		356,729

Registry: Australian National Registry of Emissions Units (ANREU).

5. Purchase of NCOS Carbon Neutral Products

The purchase of carbon neutral products will be reported at the MEA group level as part of MEA's corporate accreditation.

6. Total Carbon Footprint

The total electricity sold is determined by reference to invoices provided by AEMO for each state.

The instruments used to lower the gross carbon emissions from the sale of electricity are as follows:

- voluntary GreenPower LGCs bought by customers; and
- voluntary surrender of CERs.

Each LGC is the equivalent of 1MWh of electricity; each CER represents the equivalent of 1 tonne of CO₂-e.

The emissions from the electricity purchased by Powershop Australia and sold to customers are categorised as:

- Scope 2 emission i.e.:

Indirect GHG emissions (Scope 2): The release of greenhouse gas as a result of electricity generation, heating, cooling or steam - that is consumed by a facility³

- Scope 3 emissions i.e.:

Indirect GHG emissions (Scope 3): Emissions are all indirect emissions that occur as a consequence of the activities of the organisation, but occur from sources not owned or controlled by the organisation.

The tCO₂-e produced by the generation of this electricity has been calculated by:

- 1) reducing the gross carbon emissions of the volume (MWh) of electricity purchased in each state (Victoria and NSW) as shown on AEMO invoices and National Meter Identifier ("NMI") data by the surrender of GreenPower eligible LGs in an amount equal to the amount of voluntary GreenPower bought by customers;⁴ then
- 2) calculating the scope 2 Carbon Footprint of the Powershop Australia Electricity Product by multiplying the remainder volume (MWh) of electricity purchased by the relevant Emission Factors for each state as shown in the National Greenhouse Accounts Factors (2015) at: Table 5 (a): Indirect (scope 2) emission factors for consumption of purchased electricity from the grid; and
- 3) calculating the Scope 3 Carbon Footprint of the Powershop Australia Electricity Product by multiplying the remainder volume (MWh) of electricity supplied⁵ (as per Powershop NMI data) by the relevant Emission Factors for each state as shown in the National Greenhouse Accounts Factors (2015) at: the third bullet point that follows

³ National Carbon Offset Standard-V3

⁴ Each LGC equals 1 MWh

⁵ Powershop customer's electricity consumption, net of solar generated by Powershop customers - data derived from Powershop's billing system.

Table 41: Scope 2 and Scope 3 emission factors – consumption of purchased electricity by end users.⁶

- 4) The sum of the products of these multiplications is the total of tonnes CO₂-e remaining to be offset to achieve a zero emissions target for the Powershop Australia Electricity Product; then
- 5) CERs are surrendered to cancel out the quantum of those remaining tCO₂-e⁷.

The NGA Factors continue to be an appropriate source for this instance because:

- NGA is listed as an appropriate source under section 2 of the National Carbon Offset Standard;
- NGA is published by the Department of Environment, the same entity that regulates NCOS;
- the emissions analysis within the NGA covers manufacture (including of materials). Electricity production, electricity distribution, electricity use and then the end of life activities associated with decommissioning, dismantling and recycling the facility; and
- The methods used to generate the default factors are consistent with international guidelines and are subject to international expert review each year.⁸

The following is a copy of the relevant sections of the tables setting out those emissions factors from the National Greenhouse Accounts Factors document. (Note: Table numbering here is from the NGA document).

Table 5 (a): Indirect (Scope 2) emission factors for consumption of purchased electricity from the grid⁹

State or Territory	Emission factor kg CO ₂ -e/kWh
New South Wales and Australian Capital Territory	0.84
Victoria	1.13
Queensland	0.79
South Australia	0.56
South West Interconnected System (SWIS) in Western Australia	0.76
North Western Interconnected System (NWIS) in Western Australia	0.66
Darwin Katherine Interconnected System (DKIS) in the Northern Territory	0.57
Tasmania	0.12
Northern Territory	0.67

Sources: National Greenhouse and Energy Reporting (Measurement) Determination 2008 (Schedule 1) and Department of the Environment.

⁶ The point of metering that Powershop Australia uses to calculate its electricity products carbon footprint is at the Node (i.e. before the loss in the distribution networks) as such it is appropriate when calculating the Products Scope 3 emissions to use the same emissions factors as the distribution network.

⁷ CERs = 1 tCO₂-e

⁸ This approach was discussed and approved by the Department of Environment on 3 August 2015.

⁹ National Greenhouse Accounts Factors – Updated August 2015 (pg. 19)

Example: calculation of emissions from electricity consumption

A company in New South Wales consumes 100,000 kWh of purchased electricity from the grid.

Emissions of greenhouse gases (scope 2) in tonnes of CO₂-e are estimated as follows:

$$\begin{aligned} &= 100,000 \times (0.84 / 1000) \\ &= 84 \text{ tonnes.} \end{aligned}$$

Total scope 2 GHG emissions = 84 tonnes CO₂-e

- **Electricity emission factors for end users**

Table 41: Scope 2 and 3 emissions factors - consumption of purchased electricity by end users

- Footnote 3
- Scope 3 emission factors for transmission and distribution network operators are lower as they include only emissions attributable to the extraction, production and transport of fuels and not emissions attributable to the electricity lost in transmission and distribution networks. Transmission and distribution network operators should use the scope 2 factors in the table above and the following latest estimate scope 3 factors for 2012/13: NSW and ACT: 0.03kg CO₂-e/kWh, VIC: 0.01kg CO₂-e/kWh, QLD: 0.04kg CO₂-e/kWh, SA: 0.05kg CO₂-e/kWh, WA: 0.02kg CO₂-e/kWh, TAS: 0.02kg CO₂-e/kWh, NT:0.05 kg CO₂-e/kWh.
- The application of this calculation for FY2016 is shown in the following tables.

Table 5 - Powershop net Carbon Footprint

Large-scale Generation Certificates (LGC) and GreenPower	2015 (July - Dec)	2016 (Jan - June)	Totals for FY2016
Electricity purchases Vic (MWh)	123,194	130,838	254,033
GreenPower Purchases Vic (MWh)	6,855	8,228	15,083
Electricity purchases NSW (MWh)	29,953	47,693	77,646
GreenPower Purchases NSW (MWh)	3,721	4,831	8,552
National Totals (MWh)	163,690	191,557	355,313
Mandatory LGC surrender (% of total MWh)	11.11%	12.75%	
Mandatory LGC Liability	18,130	24,424	42,554
LGCs Surrendered (period)	18,130	0	
LGC Liability Outstanding	0	24,424	LGCs to be surrendered in February 2017 in accordance with market practices
GreenPower LGC Liability			
GreenPower LGCs Surrendered (period)	10,501	0	
GreenPower LGC Liability Outstanding	(0)	12,990	LGCs to be surrendered in March 2017 in accordance with market practices
Electricity Purchases Vic – Net of voluntary GreenPower LGCs (MWHrs)	123,194	130,838	254,033
Electricity Purchases NSW – Net of voluntary GreenPower LGCs (MWHrs)	29,953	47,693	77,646
Net National Totals (MWh)	153,147	178,531	331,679



Table 6 – Emissions to be offset by CERs from the Powershop Retail Electricity Product (Quantification)

Scope	Emission source	Source of activity data	Methodology reference	Energy content factor	Emission factor	Activity data	Unit	t CO ₂ -e
2	Electricity purchased from the NEM and sold to Powershop's Victorian Customers (net of voluntary GreenPower LGC surrender)	AEMO Finalised Market Invoices	<p>NGA Factors (August 2015) published by the Australian Department of the Environment</p> <p>Table 5 (a): Indirect (scope 2) emission factors for consumption of purchased electricity from the grid – Victoria</p> <p>Powershop purchased 269,048 MWh of electricity from the NEM to sell to Victorian customers.</p> <p>Powershop sold 15,015 MWh worth of accredited GreenPower to Victorian customers during the 2016 financial year.</p>	N/A	1.13kg CO ₂ -e/kWh	254,033	MWh	287,057
2	Electricity purchased from the NEM and sold to Powershop's NSW Customers (net of voluntary GreenPower LGC surrender)	AEMO Finalised Market Invoices	<p>NGA Factors (August 2015) published by the Australian Department of the Environment</p> <p>Table 5 (a): Indirect (scope 2) emission factors for consumption of purchased electricity from the grid - NSW</p> <p>Powershop purchased 86,199 MWh of electricity from the NEM to sell to NSW customers.</p> <p>Powershop sold 8,553 MWh worth of accredited GreenPower to NSW customers during the 2016 financial year.</p>	N/A	0.84kg CO ₂ -e/kWh	77,646	MWh	65,223



3	Electricity purchased from the NEM and sold to Powershop's Victoria customers (net of voluntary GreenPower LGC surrender and solar generated by Powershop customers)	Customer electricity usage data at the NMI	<p>NGA Factors (August 2015) published by the Australian Department of the Environment</p> <p>Third Bullet point in Notes that follow: Table 41: Scope 2 and 3 emissions factors - consumption of purchased electricity by end users (pg. 70)</p> <p>Powershop supplied 252,061 MWh of electricity (net of solar generated electricity by customers) from the NEM to Victorian customers.</p> <p>Powershop sold 15,015 MWh worth of accredited GreenPower to Victorian customers during the 2016 financial year.</p>		0.01kg CO2-e/kWh	237,046	MWh	2,370
3	Electricity purchased from the NEM and sold to Powershop's NSW Customers (net of voluntary GreenPower LGC surrender and solar generated by Powershop customers)	Customer electricity usage data at the NMI	<p>NGA Factors (August 2015) published by the Australian Department of the Environment</p> <p>Third Bullet point in Notes that follow: Table 41: Scope 2 and 3 emissions factors - consumption of purchased electricity by end users (pg. 70)</p> <p>Powershop supplied 77,824 MWh of electricity (net of solar generated electricity by customers) from the NEM to sell customers.</p> <p>Powershop sold 8,553 MWh worth of accredited GreenPower NSW customers during the 2016 financial year.</p>		0.03kg CO2-e/kWh	69,271	MWh	2,078
Total Footprint Net of GreenPower LGCs (Powershop Retail)								
								356,729

7. Carbon Offset Purchases and Retirement for this Reporting Period

The organisation will utilise carbon offsets for offsetting all included Scope 1, Scope 2 and Scope 3 emissions associated with the Powershop Carbon Neutral Electricity Product.

Excess offsets that have been surrendered will be banked for future use, which are to cover MEA’s organisational and product emissions in the following reporting period.

Only NCOS eligible carbon offsets will be utilised in this activity.

MEA cancelled offsets equivalent to its organisational and product emissions for FY2016 and will do so for the following reporting periods. For the FY2016, offsets were as per Table 4: CER’s pertaining to Powershop Retail Electricity Product (Quantification).

Surplus offsets are to be carried forward into the next reporting period for future periods are shown in the following table.

Table 7: Surplus Offset Cancellations from FY2016 – banked for future use

Offset type	Registry	Serial number	Quantity (t CO ₂ -e)
CER	Australian National Registry of Emissions Units (ANREU)	74,757,880 - 74,759,430	1,552
Total			1,552

8. Emission Reduction Measures

Our emission reduction measures are covered in more detail in the Meridian Energy Australian Group Emissions Management Plan.

The methods and efficiency associated with production, distribution and consumption of electricity purchased from the NEM are beyond Powershop Australia’s direct ability to influence however, as a participant in the Australian energy market, and Powershop Australia and MEA are positioned to influence the emissions intensity of this market. We do this both directly, by encouraging our own customers to use less electricity and giving them the tools to do so, and indirectly, by supporting efforts to encourage policies that will drive lower emissions (including supporting the continuation and integrity of the Renewable Energy Target).

Powershop Australia will continue to offer our customers the opportunity to purchase both GreenPower accredited and carbon offset electricity product offerings. In addition to these offerings to customers, Powershop Australia has also trialled a “Your Neighbourhood Solar”

product. This product rewards those customers who have solar installed at their property with account credits, which are generated as a result of Powershop Australia customers purchasing the “Your Neighbourhood Solar” product.

The purpose of this product is twofold:

1. to encourage the installation of rooftop solar which drives emission reductions in the energy market; and
2. reward solar customers with account credits generated from customers purchasing the product.

More information on this product can be found on Powershop’s blog.¹⁰

9. Marketing and Communication of Carbon Neutral Certification

Powershop Australia uses the NCOS trademark across a number of different marketing and communication channels.

We initially announced our NCOS accreditation on our social media channels, with a number of posts linking to more information on the Powershop Australia blog.

Further to the announcement, we have added information about our accreditation to our website FAQs, and to customers’ monthly account review email. In addition, the NCOS logo is displayed on a number of places on our website.

Use of the NCOS trademark is captured in a register whenever we use it. This register is maintained by the Powershop Australia Marketing team. Meridian Energy Australia Pty Ltd does not use the NCOS trademark as part of their organisational accreditation.

Facebook announcement:




Homepage banner:



¹⁰ <http://blog.powershop.com.au/neighbourhood-solar-trialling-something-new/>

10. Declaration

To the best of my knowledge and having implemented the quality controls and standards required under the NCOS Carbon Neutral Program and made all appropriate inquiries, the information provided in this Public Disclosure Summary is true and correct.

Name of Signatory	Lynne Sutton
Signature:	
Position:	Company Secretary
Date	28 February 2017