PUBLIC DISCLOSURE STATEMENT

HANWHA ENERGY RETAIL AUSTRALIA PTY LTD

NECTR CARBON NEUTRAL ELECTRICITY PLAN PRODUCT CERTIFICATION

FY2021–22

Australian Government

Climate Active
Public Disclosure Statement

An Australian Government Initiative

NAME OF CERTIFIED ENTITY	HANWHA ENERGY RETAIL AUSTRALIA PTY LTD trading as NECTR
REPORTING PERIOD	financial year 1 July 2021 – 30 June 2022 arrears report
DECLARATION	*To the best of my knowledge, the information provided in this public disclosure statement is true and correct and meets the requirements of the Climate Active Carbon Neutral Standard.* 
	Mr. Tae Hong Kim Director 27 June 2023

Australian Government
Department of Industry, Science, Energy and Resources

Version March 2022. To be used for FY20/21/CY2021 reporting onwards.

1. CERTIFICATION SUMMARY

TOTAL EMISSIONS OFFSET	97,808.41 tCO2-e
THE OFFSETS BOUGHT	0.6% VCUs, 99.4% CERs
RENEWABLE ELECTRICITY	45.52%
TECHNICAL ASSESSMENT	14/04/2021 Adina Cirtog Pangolin Associates Next technical assessment due: 14/04/2024

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2. CARBON NEUTRAL INFORMATION

Description of certification

Australian-based, Nectr was launched in late 2019 and is backed by a global leader in renewable energy, including solar power and battery storage technologies – Hanwha Energy. Currently, Nectr provides electricity and new energy solutions within QLD, NSW and SA (from March 2021). Nectr is a 100% owned affiliate of the Hanwha Energy group. This certification relates to electricity under Hanwha Energy Retail Australia Pty Ltd trading as Nectr ABN: 82 630 397 214.

The Hanwha Energy group is a major investor of utility scale solar farms with co-investments in two operating solar farms - the Barcaldine solar farm (Queensland) and Bannerton solar farm (Victoria). Hanwha Energy is currently developing a further two solar farms in New South Wales that will produce enough energy to supply in excess of 65,000 Nectr residential and small business customers.

We believe that every Australian has the right to choose affordable renewable energy and we are committed to offering affordable smarter energy products and plans that are environmentally sustainable and will ultimately allow our customers to control and reduce their energy usage

"Nectr does and continues to champion for a cleaner, affordable and more sustainable future. This commitment means our customers will be offered the most cost-effective 100% renewable or carbon neutral energy products as a priority and we will invest in projects that proactively focus on reducing

Product description

Hanwha Energy Retail Australia Pty Ltd trading as Nectr is an Authorised Electricity Retailer. Under this product certification, Nectr is certifying all electricity supplied to customers under the following plans:

- Nectr 100% Clean
- Nectr 100% Clean Solar
- Nectr Super Solar
- Nectr Clean
- Nectr Friends Clean
- Nectr Online
- Nectr Standing and Default Market Offers
- Nectr Hive Saver

The component of electricity drawn from the grid and supplied for these plans is assumed to have an average grid emissions profile for the location where it is sold.

A cradle to gate life cycle assessment was undertaken for this product as there are no emissions associated with end of life that aren't already captured in the cradle to gate approach

Functional Unit

The function unit for this certification is a kilowatt hour (kWh) of electricity usage, with emissions expressed in terms of kg of CO2-e per kWh of electricity sold.

3. EMISSIONS BOUNDARY

Inside the emissions boundary

All emission sources listed in the emissions boundary are part of the carbon neutral claim.

Quantified emissions have been assessed as 'attributable processes' that become the product, make the product and carry the product through its life cycle. These have been quantified in the carbon inventory.

Non-quantified emissions have been assessed as attributable and are captured within the emissions boundary, but are not measured (quantified) in the carbon inventory. All material emissions are accounted for through an uplift factor. Further detail is available at Appendix C.

Outside the emissions boundary

Non-attributable emissions have been assessed as not attributable to a product or service. They can be **optionally included** in the emissions boundary and therefore have been offset, or they can be listed as outside of the emissions boundary (and are therefore not part of the carbon neutral claim). Further detail is available at Appendix D.

Inside emissions boundary

Quantified

Electricity supplied to customers (S2 & S3)

Electricity used by Nectr for its operations

Stationary energy

Water

Waste

Freight

Business Flights

Expenses

Employee Commute

Working from home

Refrigerants

Non-quantified

N/A

Optionally included

N/A

Outside emission boundary

Non-attributable

N/A

Product process diagram

The following diagram is cradle to gate.

Data management plan for non-quantified sources

There are no non-quantified sources in the emission boundary that require a data management plan.

4. EMISSIONS REDUCTIONS

Emissions reduction strategy

At Hanwha Energy, we've implemented a set of initiatives to foster a healthy and ethical corporate culture where everyone is accountable for his/her own conduct and where actions are transparent. Making the environment safe and healthy is our top priority, but at the same time, we strive for shared growth with our partners. And as responsible corporate citizens, we do our best to fulfill our social responsibilities for a sustainable future.

In terms of today's challenging energy environment, our response is a commitment to a set of energy services with a wide range of capabilities. The breadth and depth of Hanwha Energy's offerings distinguishes us from the rest of the energy solutions providers and positions our company to be a clear global industry leader. Our confidence comes from a long-proven track record in energy development and successful operation of global energy projects across diverse areas including solar, cogeneration, ESS, O&M and more recently, hydrogen fuel cell power plants. Our goal is to meet the clean, safe and reliable energy needs of our customers and communities worldwide. Our deep experience and expertise in the energy industry will not only allow us to succeed today but also ensure that the sustainable energy for generations to come.

Hanwha Energy commits to reduce emissions across the value chain (scopes 1, 2 and 3) to net zero by 2050. The initiatives that will form the key elements of Nectr's emission reduction strategy include:

- Continuing to prioritise and promote all electricity supplied to Nectr customers, to be either 100% renewable energy or 100% carbon neutral by 2030
- Continuing to expand our range of residential solar and energy storage (behind the meter renewable energy plans) to facilitate more customers to create their own renewable power
- Grow our NEM-wide Virtual Power Plant capacity to 100MW by 2040
- Development and commissioning two solar farms in NSW that will form the back bone of our grid supply to more than 65,000 Nectr customers, by 2027 and
- Development and commissioning of utility scale energy storage systems that assist in reducing grid demand and the impacts of climate change, by 2030

Emissions reduction actions

Emissions reduction activities to date:

- Nectr has been very active in engaging with numerous renewable projects for renewable PPA offtakes (although none were signed in FY22), and
- there was a significant focus on our retail team to promote lower emission distributed energy plans which include solar and battery systems.

5.EMISSIONS SUMMARY

Emissions over time

Emissions since base year			
		Total tCO_2-e	Emissions intensity of the functional unit
Base year/Year 1:	2020–21	36,416.9	0.93
Year 2:	2021–22	97,808.41	0.90

Significant changes in emissions

Emission source name	Current year (tCO_2-e)	Previous year (tCO_2-e)	Detailed reason for change
Carbon Neutral electricity sold to customers	97,479.09	35,988.4	There were increased sales in this reporting period which resulted in the eincrease in customer electricity.

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Use of Climate Active carbon neutral products and services

N/A

Product emissions summary

Stage	tCO2-e
Total electricity sold as carbon neutral	97,479.09
Organisation emissions	329.33
Total	**97,808.41**

Emissions intensity per functional unit	**0.90**
Number of functional units to be offset	**109,081,519**
Total emissions to be offset	**97,808.41**

6. CARBON OFFSETS

Offsets retirement approach

In arrears	
1. Total number of eligible offsets banked from last year's report	583
2. Total emissions footprint to offset for this report	97,809
3. Total eligible offsets required for this report	97,226
4. Total eligible offsets purchased and retired for this report	101,338
5. Total eligible offsets banked to use toward next year's report	4,112

Co-benefits

ALLAIN DUHANGAN Hydroelectric Project, India

Allain Duhangan Hydroelectric Project (ADHP) proposed by AD Hydro Power Ltd. (ADPL) is a run-of the-river 192 MW hydro power project at the confluence of Allain & Duhangan rivulets at Pirni village in Manali town of Kullu district in Himachal Pradesh state of India.

The project has the following co-benefits:

Social well-being:

- The project is implemented in a rural area that does not have proper roads and other infrastructure facilities. The project activity would augment infrastructural development like roads etc. in the area, thus benefitting local communities.
- The project activity would lead to enhanced direct and indirect employment opportunities at all levels from unskilled to skilled workers.

Economic well-being:

- The project activity involves capital investments, thus leading to the overall development of the region.
- The project activities would also lead to enhanced business opportunities for local stakeholders

like consultants, suppliers, manufacturers, contractors etc. All this would lead to improved financial security and overall development of the region.

Environmental well-being:

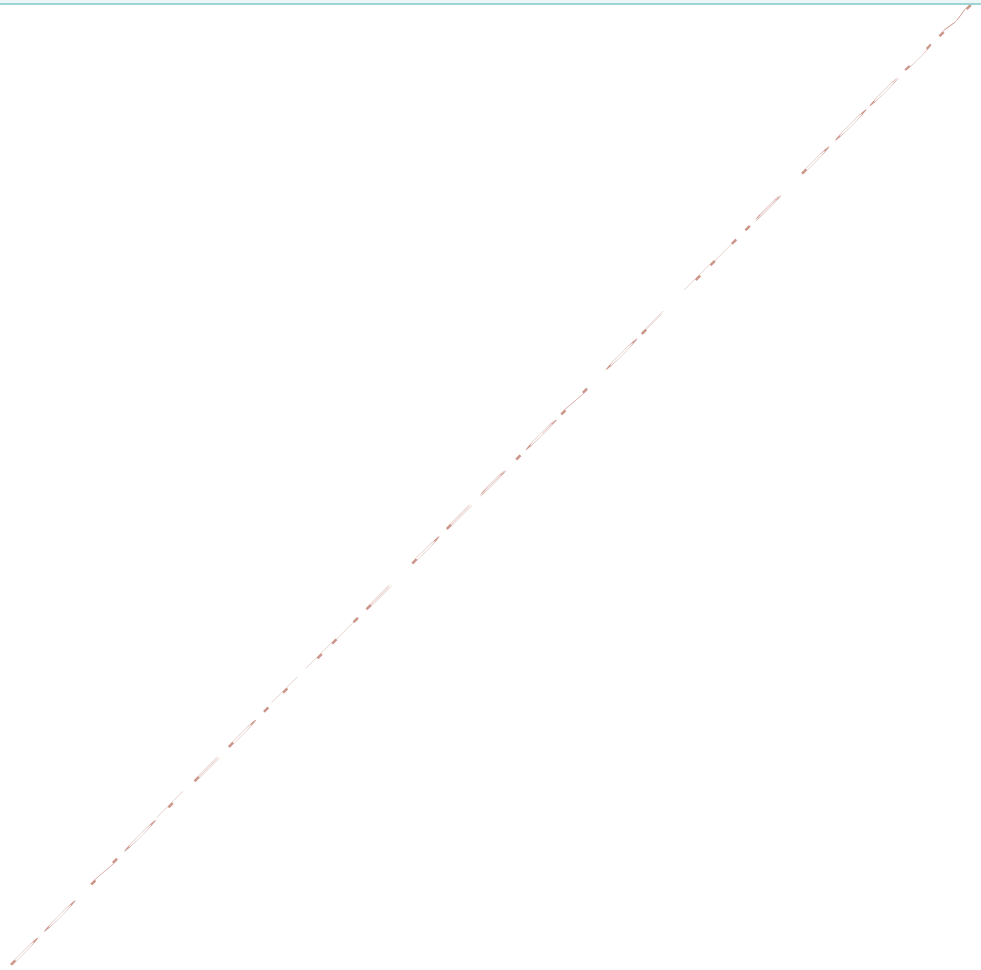
- The project activity being run-of-the-river power project will have minimum environmental impact as compared to a reservoir based hydro power plant.
- Contribute in bridging the demand-supply gap of electricity by producing green energy
- The electricity generated by the project activity will be supplied to the Southern grid, which otherwise would have been generated by fossil fuel fired power plants in the grid.

The project activity also helps in conservation of depleting fossil fuels which at present are predominantly used for power generation

Eligible offsets retirement summary

Offsets cancelled for Climate Active Carbon Neutral Certification											
Project description	**Type of offset units**	**Registry**	**Date retired**	**Serial number (and hyperlink to registry transaction record)**	**Vintage**	**Stapled quantity**	**Eligible quantity (tCO_2-e)**	**Eligible quantity used for previous reporting periods**	**Eligible quantity banked for future reporting periods**	**Eligible quantity used for this reporting period**	**Percentage of total (%)**
ALLAIN DUHANGAN Hydroelectric Project, India	VCUs	Verra	27 April 2021	9566-108975671-108981670-VCS-VCU-997-VER-IN-1-2026-01012018-31122018-0	2018	0	6,000	5,417	0	583	0.60%
Wind Power Project in Rajasthan, India by M/s Devki Builders Pvt. Ltd	CER's	CDM	10 February 2022	IN-5-274764583-2-2-0-5923 to IN-5-274822987-2-2-0-5923	CP2	0	58,405	0	0	58,405	59.71%
Jangi 91.8 MW wind farm in Gujarat	CER's	CDM	10 February 2022	IN-5-273445466-2-2-0-6702 To IN-5-273487060-2-2-0-6702	CP2	0	41,595	0	2,774	38,821	39.69%
Cerro de Hula Wind Project CDM CER Credit, Honduras	CER's	CDM	17 December 2021	2,097,761 - 2,098,262 – HN-5584	CP2	0	502	0	502	0	0%
Cerro de Hula Wind Project CDM CER Credit, Honduras	CER's	CDM	17 December 2021	1,798,129 - 1,798,964 – HN-5584	CP2		836	0	836	0	0%
									Total offsets retired this report and used in this report	97,809	
									Total offsets retired this report and banked for future reports	4,112	

Type of offset units	Quantity (used for this reporting period claim)	Percentage of total
Certified Emissions Reductions (CERs)	97,226	99.4%
Verified Carbon Units (VCUs)	583	0.6%



7. RENEWABLE ENERGY CERTIFICATE (REC) SUMMARY

Renewable Energy Certificate (REC) Summary

N/A

APPENDIX A: ADDITIONAL INFORMATION

N/A

APPENDIX B: ELECTRICITY SUMMARY

Electricity emissions for Nectr's operations are calculated using a market-based approach.

Location-based method

The location-based method provides a picture of a business's electricity emissions in the context of its location, and the emissions intensity of the electricity grid it relies on. It reflects the average emissions intensity of the electricity grid in the location (State) in which energy consumption occurs. The location-based method does not allow for any claims of renewable electricity from grid-imported electricity usage.

Market-based method

The market-based method provides a picture of a business's electricity emissions in the context of its renewable energy investments. It reflects the emissions intensity of different electricity products, markets and investments. It uses a residual mix factor (RMF) to allow for unique claims on the zero emissions attribute of renewables without double-counting.

Market Based Approach Summary

Market Based Approach	Activity Data (kWh)	Emissions (kgCO2e)	Renewable Percentage of total
Behind the meter consumption of electricity generated	0	0	0%
Total non-grid electricity	**0**	**0**	**0%**
LGC Purchased and retired (kWh) (including PPAs & Precinct LGCs)	0	0	0%
GreenPower	11,304	0	27%
Jurisdictional renewables (LGCs retired)	0	0	0%
Jurisdictional renewables (LRET) (applied to ACT grid electricity)	0	0	0%
Large Scale Renewable Energy Target (applied to grid electricity only)	7,803	0	19%
Residual Electricity	22,868	22,753	0%
Total grid electricity	**41,975**	**22,753**	**46%**
Total Electricity Consumed (grid + non grid)	**41,975**	**22,753**	**46%**
Electricity renewables	19,107	0	
Residual Electricity	22,868	22,753	
Exported on-site generated electricity	**0**	**0**	
Emissions (kgCO2e)		22,753	

Total renewables (grid and non-grid)	**45.52%**
Mandatory	**18.59%**
Voluntary	**26.93%**
Behind the meter	**0.00%**
Residual Electricity Emission Footprint (TCO2e)	**23**

Figures may not sum due to rounding. Renewable percentage can be above 100%

Location Based Approach Summary

Location Based Approach	Activity Data (kWh)	Scope 2 Emissions (kgCO2e)	Scope 3 Emissions (kgCO2e)
ACT	0	0	0
NSW	41,975	32,741	2,938
SA	0	0	0
Vic	0	0	0
Qld	0	0	0
NT	0	0	0
WA	0	0	0
Tas	0	0	0
Grid electricity (scope 2 and 3)	**41,975**	**32,741**	**2,938**
ACT	0	0	0
NSW	0	0	0
SA	0	0	0
Vic	0	0	0
Qld	0	0	0
NT	0	0	0
WA	0	0	0
Tas	0	0	0
Non-grid electricity (Behind the meter)	**0**	**0**	**0**
Total Electricity Consumed	**41,975**	**32,741**	**2,938**

Emission Footprint (TCO2e)	**36**
Scope 2 Emissions (TCO2e)	33
Scope 3 Emissions (TCO2e)	3

Climate Active Carbon Neutral Electricity summary

Carbon Neutral electricity offset by Climate Active Product	Activity Data (kWh)	Emissions (kgCO2e)
N/a	**0**	**0**

Climate Active carbon neutral electricity is not renewable electricity. The emissions have been offset by another Climate Active member through their Product certification.

APPENDIX C: INSIDE EMISSIONS BOUNDARY

Non-quantified emission sources

The following sources emissions have been assessed as attributable, are captured within the emissions boundary, but are not measured (quantified) in the carbon inventory. These emissions are accounted for through an uplift factor. They have been non-quantified due to one of the following reasons:

1. **Immaterial** <1% for individual items and no more than 5% collectively
2. **Cost effective** Quantification is not cost effective relative to the size of the emission but uplift applied.
3. **Data unavailable** Data is unavailable but uplift applied. A data management plan must be put in place to provide data within 5 years.
4. **Maintenance** Initial emissions non-quantified but repairs and replacements quantified.

Relevant-non-quantified emission sources	(1) Immaterial	(2) Cost effective (but uplift applied)	(3) Data unavailable (but uplift applied & data plan in place)	(4) Maintenance
N/A				

Excluded emission sources

Attributable emissions sources can be excluded from the carbon inventory, but still considered as part of the emissions boundary if they meet **all three of the below criteria**. An uplift factor may not necessarily be applied.

1. A data gap exists because primary or secondary data cannot be collected **(no actual data).**
2. Extrapolated and proxy data cannot be determined to fill the data gap (**no projected data**).
3. An estimation determines the emissions from the process to be **immaterial**).

	No actual data	No projected data	Immaterial
N/A			

APPENDIX D: OUTSIDE EMISSION BOUNDARY

Non-attributable emissions have been assessed as not attributable to a product or service (do not carry, make or become the product/service) and are therefore not part of the carbon neutral claim. To be deemed attributable, an emission must meet two of the five relevance criteria. Emissions which only meet one condition of the relevance test can be assessed as non-attributable and therefore are outside the carbon neutral claim. Non-attributable emissions are detailed below.

Relevance test					
Non-attributable emission	*The emissions from a particular source are likely to be large relative to the organisation's electricity, stationary energy and fuel emissions*	*The emissions from a particular source contribute to the organisation's greenhouse gas risk exposure.*	*Key stakeholders deem the emissions from a particular source are relevant.*	*The responsible entity has the potential to influence the reduction of emissions from a particular source.*	*The emissions are from outsourced activities previously undertaken within the organisation's boundary, or from outsourced activities typically undertaken within the boundary for comparable organisations.*
N/A					

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