PUBLIC DISCLOSURE STATEMENT

HANWHA ENERGY RETAIL AUSTRALIA PTY LTD (TRADING AS NECTR)

PRODUCT CERTIFICATION

FY2022-23

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 2022 – 30 June 2023 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 Date: 20 June 2024

Australian Government
Department of Climate Change, Energy, the Environment and Water

Version: August 2023

1.CERTIFICATION SUMMARY

TOTAL EMISSIONS OFFSET	135,534 tCO_2-e
CARBON OFFSETS USED	60.07% VCUs, 39.93% CERs
RENEWABLE ELECTRICITY	48.65% (corporate electricity only)
CARBON ACCOUNT	Prepared by: Hanwha Energy Retail Australia Pty Ltd
TECHNICAL ASSESSMENT	14/04/2021 for FY2020-21 report Adina Cirtog, Pangolin Associates Next technical assessment due: FY2023-24 report

Contents

2.CERTIFICATION INFORMATION

Description of certification

This certification relates to electricity sold by Hanwha Energy Retail Australia Pty Ltd, trading as Nectr (ABN: 82 630 397 214).

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 Hive Saver
- Nectr Hive Connect
- Nectr Hive Solar 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 lifecycle 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 functional unit for this certification is a kilowatt hour (kWh) of electricity usage, with emissions expressed in terms of kg of CO_2-e per kWh of electricity sold.

Business description

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, ACT, SA and VIC. Nectr is a 100% owned affiliate of the Hanwha Energy group.

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 the impact of climate change.

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' of a product or service. These attributable processes are services, materials and energy flows that become the product or service, make the product or service and carry the product or service through its life cycle. These attributable emissions 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	Non-quantified
Electricity supplied to customers (S2 & S3)	N/A
Electricity used by Nectr for its operations	
Stationary energy	
Water	
Waste	
Freight	
Business Flights	
Expenses	
Employee Commute	
Working from home	
Refrigerants	

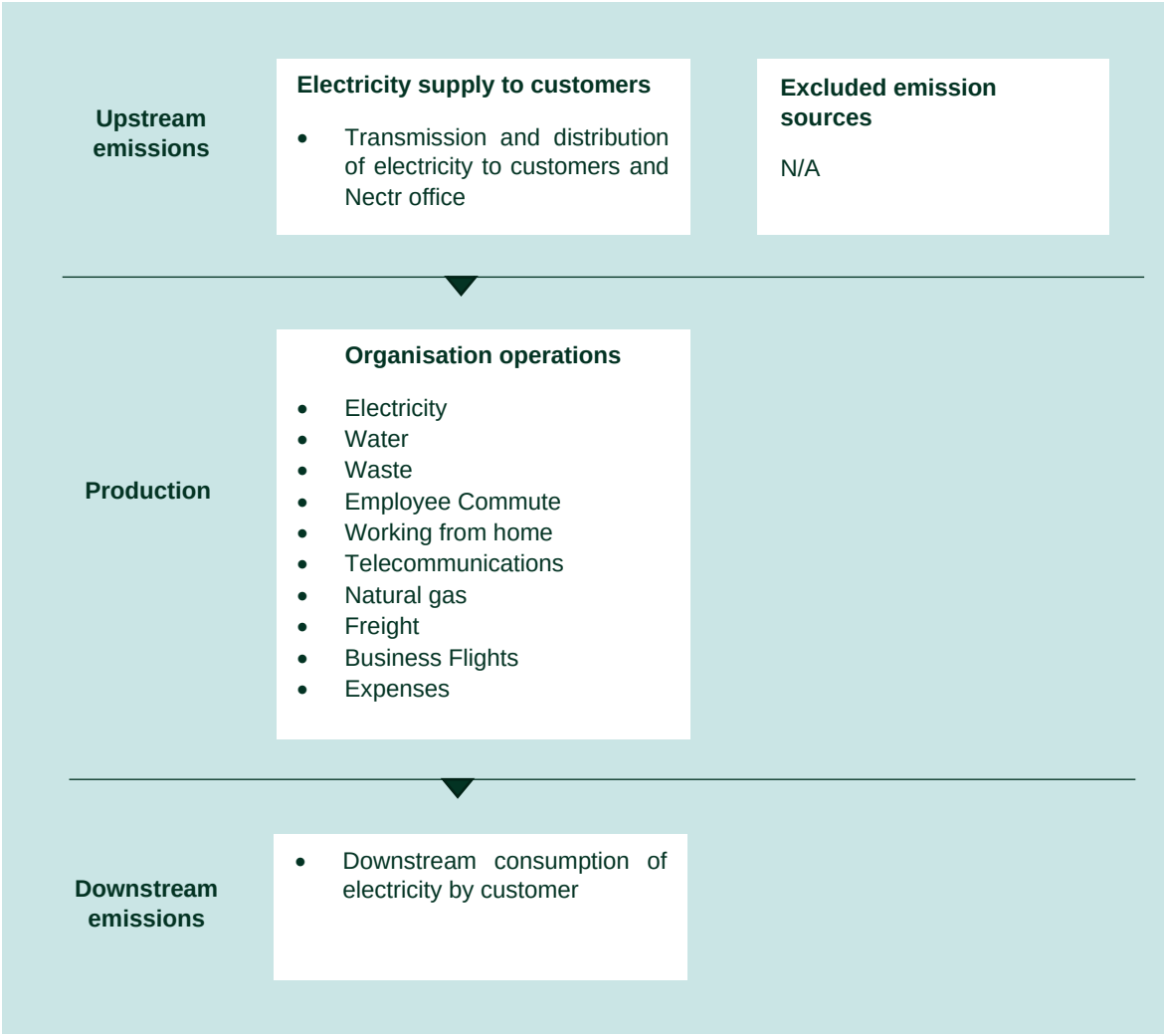
Outside emission boundary

Non-attributable

N/A

Product process diagram

The following diagram is cradle to gate.It includes downstream electricity consumption by custmomers, even though there are no emissions associated with this process. However, the boundary does include all emissions associated with producing, transmitting and distributing the electricity to customers.



4. EMISSIONS REDUCTIONS

Emissions reduction strategy

At Hanwha Energy, we acknowledge the climate challenge and the urgency to take action. Australia is in a time of great shift in policy towards speeding up the transition to net zero and as responsible corporate citizens, we do our best to fulfill our social responsibilities for a sustainable future. We are committed to providing a greener path forward for all Australians. We understand that the environmental impact of our energy choices cannot be ignored any longer. That's why we offer solar and battery solutions that not only benefit households but also make a significant positive impact on the environment.

We have 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. Our vision is that customers will reduce their emissions as much as possible and the residual balance to be net zero will be acheived via carbon credits. We are educating our customers to be energy efficient by publishing energy saving for tips for customers on our website and social media channels. In addition we are strongly advocating for customers to produce their own renewable energy by installing rooftop PV and battery storage systems via the many products and promotions we offer to facilitate this. We are continually evolving our available products to make solar and battery systems as affordable and accessible as possible.

Our own organisational energy consumption will also be clean energy sourced from our own utility scale generation assets. We are also applying technology in our activities to continue reducing emissions incurred as part of our operations. We have transitioned to utilising digital channels as the primary avenue to communicate with customers and potential customers. Nectr continues to promote efficiency in all aspects of our operations which will continue to achieve reduction in emissions. Any remaining emissions that are calculated from our activities will be offset with carbon certificates.

The current initiatives we are taking to achieve the emission reductions strategy include:

- Development and commissioning of a portfolio of utility scale solar and battery energy storage systems
- Commercialising a range of residential solar and energy storage (behind the meter renewable energy plans) to compliment grid supplied solar electricity
- Growing our Virtual Power Plant which plays an increasingly vital role in optimising supply during period of peak demand
- Continuing to enhance our phone app for our customers to assist them in monitoring their usage and address any of their queries

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 FY23), and
- Significant focus by our retail team to promote lower emission distributed energy plans which include solar and battery systems.
- Acquisition of Instyle Solar Pty Ltd, an award-winning Australian solar installation company and adding home battery storage systems to their solution package.

5.EMISSIONS SUMMARY

Emissions over time

Emissions since base year			
		Total tCO_2-e	Emissions intensity of the functional unit (tCO_2-e/kWh)
Base year:	2020–21	36,416.9	0.93
Year 1:	2021–22	97,808.41	0.90
Year 2:	2022–23	135,533.80	0.84

Significant changes in emissions

Emission source	Previous year emissions (t CO_2-e)	Current year emissions (t CO_2-e)	Reason for change
Electricity sold to customers (carbon neutral electricity product)	97,479.09	134,532.77	There were increased sales in this reporting period which resulted in the increase in customer electricity.

Use of Climate Active carbon neutral products and services

N/A

Emissions summary

Emission source	tCO_2-e
Total electricity sold as carbon neutral	134,532.77
Organisation emissions	1,001.03
Total	**135,533.80**

Emissions intensity per functional unit	**0.84 tCO_2-e/kWh**
Number of functional units to be offset	**161,372.18 kWh**
Total emissions to be offset	**135,534 tCO_2-e**

6.CARBON OFFSETS

Offsets retirement approach

This certification has taken in-arrears offsetting approach. The total emissions to offset are 135,534 tCO_2-e. Of the total eligible offsets used, 4,112 were previously banked and 131,422 were newly purchased and retired. 11,578 are remaining and have been banked for future use.

Co-benefits

The Cerro de Hula Wind Project, Honduras

The Cerro de Hula Wind Project is developed by Energía Eólica de Honduras, S. A. (EEHSA) which is a subsidiary of Globeleq Mesoamerica Energy. The Project will be located in the Municipalities of Santa Ana and San Buenaventura, Department of Francisco Morazán, 24 km South of Tegucigalpa in Honduras. The elevation of the Project site is between 1,340 and 1,720 m above sea level. The Project will be the first wind farm interconnected to the National Interconnected System of Honduras. The Project will have 126 MW of installed capacity 3 , consisting of 63 turbines, each with a 2MW capacity. The electricity generated will be sold to the National Power Utility in Honduras called Empresa Nacional de Energía Eléctrica ("ENEE" 4) through a 25 year Power Purchase Agreement (PPA) contract.

Co-benefits:

- Increases employment opportunities in the area where the Wind Farm will be located:

  During construction of the initial 102 MW, an average of 50 people will be hired, and during the construction peak stage, 180 employees will be contracted by the EPC contractors, additionally 20 indirect jobs will be created. Similar figures are foreseen during the implementation of the additional 24 MW capacity.

  Once operating, the initial 102 MW will demand 40 people, who will be permanently employed, and an estimate of 20 indirect jobs will be created. The 24 MW expansion will require an additional 3 permanent workers. o During maintenance stage (three months per year), 75 permanent employees will be needed, and an estimated 15 indirect jobs will be created through.

- Enhances the local investment environment and therefore improves the local economy
- Diversifies the sources of electricity generation, important for meeting growing energy demands and the transition away from fossil fuel electricity generation
- Makes greater use of wind renewable energy generation resources for sustainable energy production
- Demonstrates replicable clean energy technology
- Furthermore, the Project Developer is making donations to several community based development projects located in the Municipality of San Buenaventura and Santa Ana (i.e.

projects linked to electrification, water distribution services, road maintenance, improvement of equipment and accessories in schools, health clinic support, etc.)

- The project also benefited the local communities with a degree program that achieved the enrolment of more than 220 full ownership titles to community residents with the support of the Municipalities, and the project has brought significant benefits directly to the local communities, through a grants of more than 5 million Lempira (HNL) 9 in the areas of health, education, electrification, water and infrastructure, including support for municipalities, schools, churches, foundations and other local organizations.

Eligible offsets retirement summary

Offsets retired for Climate Active carbon neutral certification

Type of offset units	Eligible quantity (used for this reporting period)	Percentage of total
Certified Emissions Reductions (CERs)	54,112	39.93%
Verified Carbon Units (VCUs)	81,422	60.07%

Project description	Type of offset units	Registry	Date retired	Serial number (and hyperlink to registry transaction record)	Vintage	Stapled quantity	Eligible quantity retired (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 (%)
Jangi 91.8 MW wind farm in Gujarat	CER	CDM Registry	10 eb 2022	IN-5-273445466-2-2-0-6702 to f IN-5-273487060-2-2-0-6702	CP2	-	41,595	38,821	0	2,774	2.05%
Cerro de Hula Wind Project CDM CER Credit, Honduras	CER	ANREU	17 Dec 2021	2,097,761 - 2,098,262 – HN-5584 (502 CERs) 1,798,129 - 1,798,964 – HN-5584 (836 CERs)	CP2	-	1,338	0	0	1,338	0.99%
Enercon Wind Farms in Karnataka Bundled Project – 33 MW	CER	ANREU	20 Nov 2023	238,773,646 – 238,823,645	CP2	-	50,000	0	0	50,000	36.89%
Dereli Hydroelectric Power Plant	VCU	Verra	20 Nov 2023	9765-131856766-131856795-VCS-VCU-262-VER-TR-1-1758-10012014-31122014-0	2014	-	30	0	0	30	0.02%

Project description	Type of offset units	Registry	Date retired	Serial number (and hyperlink to registry transaction record)	Vintage	Stapled quantity	Eligible quantity retired (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 (%)
Dereli Hydroelectric Power Plant	VCU	Verra	20 Nov 2023	9765-131849797-131856765-VCS-VCU-262-VER-TR-1-1758-10012014-31122014-0	2014	-	6,969	0	0	6,969	5.14%
Dereli Hydroelectric Power Plant	VCU	Verra	20 Nov 2023	9765-131856796-131884226-VCS-VCU-262-VER-TR-1-1758-10012014-31122014-0	2014	-	27,431	0	0	27,431	20.24%
AKOCAK HYDROELECTRIC POWER PLANT	VCU	Verra	20 Nov 2023	10579-229996237-230001806-VCS-VCU-279-VER-TR-1-535-01012015-31122015-0	2015	-	5,570	0	0	5,570	4.11%
Vishnuprayag Hydro-electric Project (VHEP) by Jaiprakash Power Ventures Ltd.(JPVL)	VCU	Verra	20 Nov 2023	10593-230739446-230757445-VCS-VCU-259-VER-IN-1-173-01012013-31122013-0	2013	-	18,000	0	0	18,000	13.28%
7 MW Bundled Hydro power project at Himachal Pradesh of Raajratna Energy Holdings Pvt. Ltd	VCU	Verra	20 Nov 2023	10406-211883451-211902813-VCS-VCU-1491-VER-IN-1-2323-01012016-31122016-0	2016	-	19,363	0	0	19,363	14.29%
7 MW Bundled Hydro power project at Himachal Pradesh of Raajratna Energy Holdings Pvt. Ltd	VCU	Verra	20 Nov 2023	10567-229349065-229364701-VCS-VCU-1491-VER-IN-1-2323-01012017-31122017-0	2017	-	15,637	0	11,578	4,059	2.99%
									Total offsets retired this report and used in this report	**135,534**	
									Total offsets retired this report and banked for future reports	**11,578**	

7. RENEWABLE ENERGY CERTIFICATE (REC) SUMMARY

Renewable Energy Certificate (REC) Summary

N/A

APPENDIX A: ADDITIONAL INFORMATION

N/A

APPENDIX B: ELECTRICITY SUMMARY

There are two international best-practice methods for calculating electricity emissions – the location-based method and the market-based method. Reporting electricity emissions under both methods is called dual reporting.

Dual reporting of electricity emissions is useful, as it provides different perspectives of the emissions associated with a business's electricity usage.

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.

The below electricity emissions summary represents Nectr's own organisational electricity consumption only, and do not represent electricity sold to customers. These are calculated using a market-based approach.

Market Based Approach Summary

Market Based Approach	Activity Data (kWh)	Emissions (kg CO2-e)	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)	0	0	0%
GreenPower	13,053	0	30%
Climate Active precinct/building (voluntary renewables)	0	0	0%
Precinct/Building (LRET)	0	0	0%
Precinct/Building jurisdictional renewables (LGCs surrendered)	0	0	0%
Electricity products (voluntary renewables)	0	0	0%
Electricity products (LRET)	0	0	0%
Electricity products jurisdictional renewables (LGCs surrendered)	0	0	0%
Jurisdictional renewables (LGCs surrendered)	0	0	0%
Jurisdictional renewables (LRET) (applied to ACT grid electricity)	0	0	0%
Large Scale Renewable Energy Target (applied to grid electricity only)	8,220	0	19%
Residual Electricity	22,451	21,441	0%
Total renewable electricity (grid + non grid)	**21,273**	**0**	**49%**
Total grid electricity	**43,724**	**21,441**	**49%**
Total electricity (grid + non grid)	**43,724**	**21,441**	**49%**
Percentage of residual electricity consumption under operational control	100%		
Residual electricity consumption under operational control	**22,451**	**21,441**	
Scope 2	19,827	18,935	
Scope 3 (includes T&D emissions from consumption under operational control)	2,624	2,506	
Residual electricity consumption not under operational control	**0**	**0**	
Scope 3	0	0	

Total renewables (grid and non-grid)	**48.65%**
Mandatory	**18.80%**
Voluntary	**29.85%**
Behind the meter	**0.00%**
Residual scope 2 emissions (t CO2-e)	**18.93**
Residual scope 3 emissions (t CO2-e)	**2.51**
Scope 2 emissions liability (adjusted for already offset carbon neutral electricity) (t CO2-e)	**18.93**
Scope 3 emissions liability (adjusted for already offset carbon neutral electricity) (t CO2-e)	**2.51**
Total emissions liability (t CO2-e)	**21.44**

Location Based Approach Summary

Location Based Approach	Activity Data (kWh) total	Under operational control			Not under operational control	
Percentage of grid electricity consumption under operational control	**100%**	**(kWh)**	**Scope 2 Emissions (kg CO2-e)**	**Scope 3 Emissions (kg CO2-e)**	**(kWh)**	**Scope 3 Emissions (kg CO2-e)**
NSW	43,724	43,724	31,918	2,623	0	0
Grid electricity (scope 2 and 3)	**43,724**	**43,724**	**31,918**	**2,623**	**0**	**0**
NSW	0	0	0	0		
Non-grid electricity (behind the meter)	**0**	**0**	**0**	**0**		
Total electricity (grid + non grid)	**43,724**					

Residual scope 2 emissions (t CO2-e)	**31.92**
Residual scope 3 emissions (t CO2-e)	**2.62**
Scope 2 emissions liability (adjusted for already offset carbon neutral electricity) (t CO2-e)	**31.92**
Scope 3 emissions liability (adjusted for already offset carbon neutral electricity) (t CO2-e)	**2.62**
Total emissions liability (t CO2-e)	**34.54**

Operations in Climate Active buildings and precincts

Operations in Climate Active buildings and precincts	Electricity consumed in Climate Active certified building/precinct (kWh)	Emissions (kg CO2-e)
N/A	**0**	**0**

Climate Active carbon neutral electricity is not renewable electricity. These electricity emissions have been offset by another Climate Active member through their building or precinct certification. This electricity consumption is also included in the market based and location based summary tables. Any electricity that has been sourced as renewable electricity by the building/precinct under the market based method is outlined as such in the market based summary table.

Climate Active carbon neutral electricity products

Climate Active carbon neutral product used	Electricity claimed from Climate Active electricity products (kWh)	Emissions (kg CO2-e)
N/A	**0**	**0**

Climate Active carbon neutral electricity is not renewable electricity. These electricity emissions have been offset by another Climate Active member through their electricity product certification. This electricity consumption is also included in the market based and location based summary tables. Any electricity that has been sourced as renewable electricity by the electricity product under the market based method is outlined as such in the market based summary table.

APPENDIX C: INSIDE EMISSIONS BOUNDARY

Non-quantified emission sources

The following emissions sources 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.

N/A – no attributable processes have been non-quantified.

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**).

N/A – no attributable processes have met all 3 exclusion criteria.

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.

1. **Size** The emissions from a particular source are likely to be large relative to other attributable emissions.

2. **Influence** The responsible entity could influence emissions reduction from a particular source.

3. **Risk** The emissions from a particular source contribute to the responsible entity's greenhouse gas risk exposure.

4. **Stakeholders** The emissions from a particular source are deemed relevant by key stakeholders.

5. **Outsourcing** The emissions are from outsourced activities that were previously undertaken by the responsible entity or from outsourced activities that are typically undertaken within the boundary for comparable products or services.

N/A – no non-attributable processes have been identified and disclosed for this certification in this reporting period.

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