PUBLIC DISCLOSURE STATEMENT

NEURIZER LTD

ORGANISATION CERTIFICATION
FY2021–22 (TRUE-UP)

Australian Government

Climate Active
Public Disclosure Statement

NeuRizer
TOWARDS A CARBON NEUTRAL WORLD

An Australian Government Initiative

Climate Active

NAME OF CERTIFIED ENTITY	NEURIZER LTD
REPORTING PERIOD	1 July 2021 – 30 June 2022 True-up 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.*
	Phil Staveley Managing Director Date 24 November 2022

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

Version March 2022.

1.CERTIFICATION SUMMARY

TOTAL EMISSIONS OFFSET	4,965 tCO_2-e
OFFSETS BOUGHT	81.5% CERs and 18.5% VCUs
RENEWABLE ELECTRICITY	0%
TECHNICAL ASSESSMENT	1 February 2022 Mark Wallace EnergyLink Services Pty Ltd Next technical assessment due: October 2025
THIRD PARTY VALIDATION	Type 1 13 October 2022 Tim Pittway *RSM Australia*

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2. CARBON NEUTRAL INFORMATION

Description of certification

This Climate Active Organisation certification includes all Australian business operations of NeuRizer Ltd (NeuRizer), ABN 31 107 531 822, formerly known as Leigh Creek Energy Limited.

The NeuRizer Urea Project (NRUP) is NeuRizer's (ASX: NRZ) flagship project, developing low-cost nitrogen-based fertiliser for local and export agriculture markets. Located in South Australia, 550 kilometres north of Adelaide, the NRUP will initially produce 1Mtpa (with the potential to increase to 2Mtpa) of urea.

NeuRizer is focused on developing the NRUP, which will produce high value fertiliser from using in situ gasification technologies at the Leigh Creek site, NeuRizer aspires to have a carbon neutral process to produce fertiliser in the form of urea. The urea will be supplied to the Australian and international marketplaces. NeuRizer has a comprehensive environmental, social and governance strategy.

"'Climate Active accreditation provides transparent evidence to our external shareholders that what we have committed to is real"

The emissions reported within this public disclosure statement cover FY2021/22, acting as the first year of certification.

Organisation description

NeuRizer is an Australian Securities Exchange (ASX) listed energy company that is headquartered in Adelaide, South Australia. Its focus is on producing urea from its gasification project as part of the NRUP. The project will be carried out at the Leigh Creek Site located 550km north of Adelaide, which has favourable conditions for an in-situ gasification (ISG) plant in terms of environmental, socio–economic, technical, and commercial aspects. The project will produce low-cost granular urea (fertiliser) using ISG technology, resulting in the generation of syngas. The urea synthesis and production process will consume large quantities of carbon dioxide gas generated during the syngas production process, with excess CO_2 being captured and stored by geo-sequestration.

NeuRizer has strong ESG commitments that are signed off at the board level. This commitment is demonstrated by its qualification as a signatory to the United Nations Global Compact and its commitment to being carbon neutral from these early design and engineering phases of the NRUP. NeuRizer wishes to reduce its operational impact on the environment and make positive impacts on the communities around it. To that end, NeuRizer is working with local landholders to develop projects that will reduce atmospheric carbon through biological carbon sequestration.

The NRUP will be completed in two stages. Stage 1 will see the construction of the first gasification wells and the installation of a 5 MW gas fired power generation plant. Stage 2 will expand on the gasification fields

and see the installation of a larger gas fired power generation plant, ammonia generation facility and urea facility. The scale of Stage 2 is yet to be determined.

NeuRizer is in the closing stages of completing the final design and approvals works for the construction of Stage 1. NeuRizer is expecting a significant increase in emissions as the organisation expands over Stage 1 and Stage 2 of the NRUP.

3. EMISSIONS BOUNDARY

Inside the emissions boundary

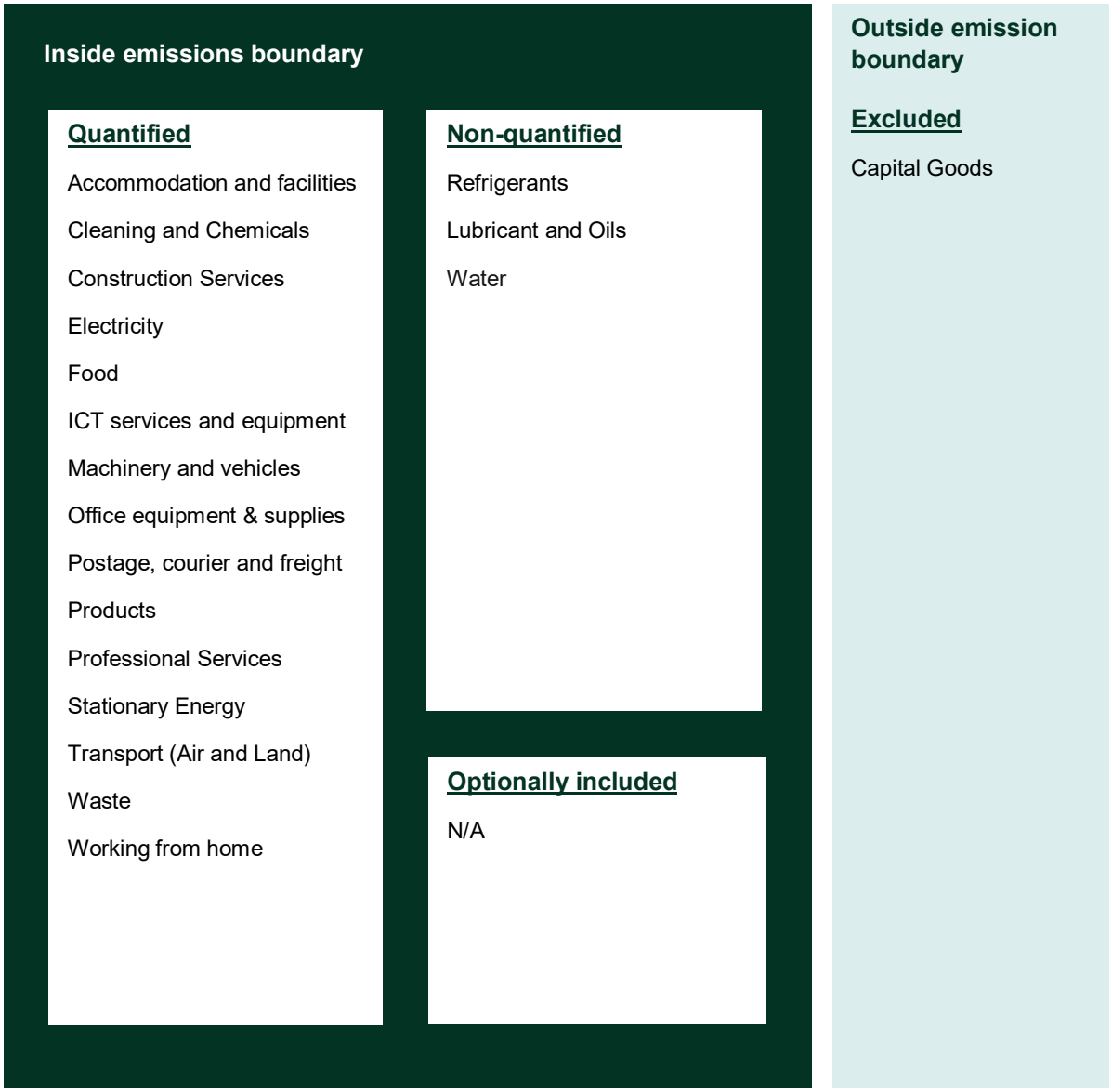
All emission sources listed in the emissions boundary are part of the carbon neutral claim. The organisation's primary operations are currently focused on Stage 1 of the NRUP, so all associated professional services related to the design and planning of the project are included in the emissions boundary. It is noted that these professional services will decrease once Stage 1 of the NRUP is operational however the emissions from operating the facility will increase and become part of the emissions inventory.

Quantified emissions have been assessed as relevant and are quantified in the carbon inventory. This may include emissions that are not identified as arising due to the operations of the certified entity, however are **optionally included**.

Non-quantified emissions have been assessed as relevant 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

Excluded emissions are those that have been assessed as not relevant to an organisation's or precinct's operations and are outside of its emissions boundary or are outside of the scope of the certification. These emissions are not part of the carbon neutral claim. Further detail is available at Appendix D.



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

NeuRizer Ltd is committed to reducing its carbon footprint and becoming the first large scale fertiliser project in the world to be carbon neutral. To achieve this, NeuRizer will utilise an integrated portfolio of innovative technology solutions from ISG syngas production, ammonia and urea synthesis, on-site gas-fired power generation and renewable electricity generation, and on-site carbon capture and storage.

NeuRizer has committed to achieving its carbon neutral program across its operations and activities by 2022. This commitment begins with this voluntary commitment to Climate Active. As NeuRizer expand exponentially over the coming years, the decarbonisation pathway has been defined by NeuRizer, with the key components including:

- Syngas generation to ammonia production
- Syngas fired electricity generation
- CO_2 consumption through urea synthesis and production
- Renewable/hybrid electricity to reduce emissions from syngas fired electricity generation
- Carbon Capture and Storage (CCS)
- Low carbon density in finished product distribution
- Participating in Carbon Farming projects

At this point of the organisation's journey, it is impractical to set emissions reduction targets for the whole organisation as emissions are expected to increase until the NRUP is operational. However, once fully operational, the site is expected to operate with net zero emissions by implementing the aforementioned decarbonisation pathway elements. Once FID has been reached, the appropriate plans will be devised to achieve this outcome. FID is expected to be made in FY2023.

While it is impractical to set reduction targets during the construction phase, NeuRizer recognises that there are some practical strategies that can be implemented in the early stage of the project to reduce site emissions during construction and site expansion. The first site initiative that may be implemented during the 12-month construction stage is the installation of a renewable energy source - to be defined when FID is reached - to reduce Scope 1 emissions by displacing diesel that would otherwise be used in the diesel generators. Other initiatives that NeuRizer will explore at the site will be offsetting any flights using Climate Active carbon neutral products and services and installing solar PV arrays on purchased properties (staff housing) to reduce the consumption of emissions intensive grid electricity.

NeuRizer is committed to reducing the carbon footprint of its office activities at its head office in Adelaide. At its current stage growth, staff numbers and functions are growing exponentially. By the end of the 2022/2023 financial year NeuRizer will understand its staffing profiles better and will explore setting robust emissions reduction targets based on an emission intensity per full time equivalent employee. NeuRizer is implementing the following initiatives to reduce its office-based emissions:

- Switching the current electricity retailer to a Climate Active certified alternative
- Install LED lighting

- Implement a switch-off campaign that will increase awareness of its employees and reduce energy consumption
- Continue the work with NeuRizer's "Going Green Initiative" which promotes staff to opt for low-emission transport options by financially incentivising staff that make the environmentally friendly switch. The initiative promotes employees to commute to work by public transport, share ride, or bike rather than using private cars.
- A review of the company's supply chain to identify opportunities to engage with carbon-neutral suppliers to reduce Scope 3 emissions.

More information on NeuRizer's sustainability commitments and results can be found in the NeuRizer Sustainability & Annual Report 2022.

5. EMISSIONS SUMMARY

Use of Climate Active carbon neutral products and services

N/A

Organisation emissions summary

The report is the true-up of the previous forecast report. The below table shows the differences between the projected emissions and the actual emissions recorded. The actual emissions recorded were significantly lower than the projected emissions due to unavoidable delays in planned engagements with professional services. These engagements will now occur during FY2022/2023.

The electricity summary is available in the Appendix B. Electricity emissions were calculated using a location-based approach.

Emission category	Projected emissions (tCO_2-e)	Sum of Scope 1 (tCO_2-e)	Sum of Scope 2 (tCO_2-e)	Sum of Scope 3 (tCO_2-e)	Sum of total emissions (tCO_2-e)
Accommodation and facilities	93.58	-	-	45.73	45.73
Cleaning and chemicals	3.31	-	-	2.10	2.10
Construction materials/services	304.45	-	-	2.26	2.26
Electricity	54.15	-	33.73	-	33.73
Food	16.35	-	-	24.79	24.79
ICT services and equipment	23.49	-	-	19.18	19.18
Machinery and vehicles	56.55	-	-	69.81	69.81
Office equipment & supplies	2.60	-	-	8.15	8.15
Postage, courier, and freight	274.02	-	-	107.60	107.60
Products	4.06	-	-	1.63	1.63
Professional services	12,570.34	-	-	4,173.61	4,173.61
Refrigerants	-	-	-	-	-
Stationary energy (liquid fuels)	26.55	21.74	-	1.11	22.85
Transport (Air)	15.45	-	-	351.51	351.51
Transport (Land and Sea)	83.76	36.09	-	48.11	84.20
Waste	12.05	-	-	12.62	12.62
Water	0.15	-	-	-	-
Working from home	4.49	-	-	4.51	4.51
Total net emissions	**13,545.36**	**57.83**	**33.73**	**4,872.72**	**4,964.28 tCO_2-e**
		Difference between projected and actual			**(8,581) tCO_2-e**

Uplift factors

N/A

6. CARBON OFFSETS

Offsets retirement approach

In arrears		
1.	Total emissions footprint to offset for this report	4,965 tCO_2-e
2.	Total eligible offsets purchased and retired for this report	13,546
3.	Total eligible offsets banked to use toward next year's report	8,581

Co-benefits

NeuRizer has chosen carbon projects that not only offset its carbon emissions but also align with its SDGs and internal company values. Below is a highlight of each of the projects chosen and the co-benefits that each project will provide to the communities that they impact.

Malawi Cookstove Project

Carbon credits have been surrendered from the RIPPLE Africa cookstove project in Nkhata Bay District, Malawi. The project is run by RIPPLE Africa (a charity from the UK) and involves the installation of low cost, high efficiency wood fired cookstoves specially designed for local conditions. RIPPLE has so far replaced about 40,000 traditional three-stone cooking fires with fuel efficient cookstoves. The project has had a positive impact on approximately 200,000 people. These fuel efficiency wood stoves have significant benefits compared with the traditional three stone fires. The benefits include:

- Reducing approximately 80,000 bundles of wood consumed per week. This reduced consumption subsequently reduces deforestation as well as the time necessary to collect the additional wood. The time saved now allows the local woman to spend more time on other activities and education.
- Improved health of children and women who spend time around the stoves. The new stove produces less smoke and reduces injuries from burns.

RIPPLE Africa has made this fuel-efficient cookstove a way of life and has significantly reduced Malawi's greenhouse gas emissions. The benefits and impact the project has had on the community can be seen in RIPPLE's video.

RIPPLE Africa will use the funds from the sale of the credits to expand the project and support other RIPPLE Africa activities such as fish conservation, tree planting, forest conservation, education and health care services. RIPPLE Africa wants to expand the project so that 500,000 people will benefit from this fuel-

efficient cookstove. All RIPPLE's activities address various Sustainable Development Goals (SDGs). The cookstove project alone addresses the following SDGs:

Guatemalan Deforestation

The forests of the Guatemalan Caribbean coastline are home to extraordinary beauty and biodiversity. The coastline is a migratory corridor for birds as they make their biannual journey between North and South America. Hundreds of species of birds depend on these forests as part of the Mesoamerican 'flyway,' and the area is home to almost 10% of the world's known bird species.

The Guatemalan Conservation Coast Project uses climate finance through the sale of carbon credits to protect this incredible landscape and reduce greenhouse gas emissions, aligning world-class conservation with viable, sustainable economic activities. Implemented by local NGO FUNDAECO, hundreds of landowners, including local communities, have joined together to protect almost 54,000 hectares of threatened forest coastline.

The project is also critical to the local water supply, building up natural coastal defences and supporting local agriculture. Its revenue supports agroforestry ecosystems and the growth of eco-tourism and provides resources to monitor the area and support community development programmes, such as health and education for women and girls. The project impacts over 100 local and indigenous communities, and they play a pivotal role in maintaining the integrity of the work through active participation in consultation, decision making and implementation of activities. This project aligns with the following SDGs:

Indonesia Geothermal

Located on the volcanic island of Java, 150km from Jakarta, this project avoids greenhouse gas emissions associated with electricity generation from fossil fuels by tapping into Indonesia's vast geothermal resources to generate electricity for the JAMALI grid. Recognised as one of the most efficient geothermal plants in the world, Darajat Unit III is helping to displace coal and oil in Indonesia's electricity infrastructure and supporting the Nation's transition to renewable energy.

Sitting within an area known for its biodiversity, Darajat Unit III has helped improve infrastructure in the region, and supports the local community through job creation and investment in schools, helping to address high illiteracy rates in the area. The project addresses the following SDGs:

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 (%)**
Improved Cook Stove Project 1, Nkhata Bay District, Malawi	CER	CDM	30/01/2022	MW-5-329992-2-2-0-9933 – MW-5-332493-2-2-0-9933	CP2	-	2,502	0	1,585	917	18%
REDD+ Project for Caribbean Guatemala: The Conservation Coast	VCU	Verra	31/01/2022	6370-317292345-317294888-VCU-024-MER-GT-14-1622-01012014-31122014-1	2014	-	2,544	0	1,612	932	19%
Darajat Unit III Geothermal Project, Indonesia	CER	ANREU	31/01/2022	10,104,296 – 10,104,395 10,727,579 – 10,735,978	CP2	-	8,500	0	5,384	3,116	63%
								Total offsets retired this report and used in this report		4,965	
								Total offsets retired this report and banked for future reports	8,581		

Type of offset units	Quantity (used for this reporting period claim)	Percentage of total
Certified Emissions Reductions (CERs)	4,033	81%
Verified Carbon Units (VCUs)	932	19%

7. RENEWABLE ENERGY CERTIFICATE (REC) SUMMARY

Renewable Energy Certificate (REC) summary

No additional RECs were purchased for the carbon neutral claim.

APPENDIX A: ADDITIONAL INFORMATION

No further information.

APPENDIX B: ELECTRICITY SUMMARY

Electricity emissions are calculated using a **location-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 ($kgCO_2$-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 & Precinct LGCs)	0	0	0%
GreenPower	0	0	0%
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)	16,947	0	19%
Residual Electricity	74,217	73,843	0%
Total grid electricity	**91,164**	**73,843**	**19%**
Total Electricity Consumed (grid + non grid)	**91,164**	**73,843**	**19%**
Electricity renewables	16,947	0	
Residual Electricity	74,217	73,843	
Exported on-site generated electricity	**0**	**0**	
Emissions ($kgCO_2$-e)		73,843	

Total renewables (grid and non-grid)	**18.59%**
Mandatory	**18.59%**
Voluntary	**0.00%**
Behind the meter	**0.00%**
Residual Electricity Emission Footprint (tCO_2-e)	**74**

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 ($kgCO_2$-e)	Scope 3 Emissions ($kgCO_2$-e)
ACT	0	0	0
NSW	0	0	0
SA	91,164	27,349	6,381
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)	**91,164**	**27,349**	**6,381**
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	**91,164**	**27,349**	**6,381**

Emission Footprint (tCO_2-e)	**34**
Scope 2 Emissions (tCO_2-e)	27
Scope 3 Emissions (tCO_2-e)	6

Climate Active carbon neutral electricity summary

Carbon Neutral electricity offset by Climate Active product	Activity Data (kWh)	Emissions ($kgCO_2$-e)
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

Emissions from water, refrigerants, lubricants, and oils have been assessed as relevant and captured within the emissions boundary but are not quantified in the carbon inventory as they are considered immaterial at this stage of NeuRizer's operations. Currently, NeuRizer has only had a small number of vehicles and motors operating within the organisation's emission boundaries and small office-based refrigerators and air-conditioning units.

As the NRUP comes online, there will be a considerable increase in water consumption, and in the number of vehicles, motor-driven equipment, and refrigeration systems in operation. As these emissions sources become material, they will be included in the carbon inventory.

Non-quantified emission sources

The following sources emissions have been assessed as relevant, are captured within the emissions boundary, but are not measured (quantified) in the carbon inventory. 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
Water	Yes	No	No	No
Refrigerants	Yes	No	No	No
Lubricant and Oils	Yes	No	No	No

APPENDIX D: OUTSIDE EMISSIONS BOUNDARY

Excluded emission sources

The below emission sources have been assessed as not relevant to an organisation's or precinct's operations and are outside of its emissions boundary. These emissions are not part of the carbon neutral claim. Emission sources considered for relevance must be included within the certification boundary if they meet two of the five relevance criteria. Those which only meet one condition of the relevance test can be excluded from the certification boundary.

Emissions tested for relevance are detailed below against each of the following criteria:

1. **Size** The emissions from a particular source are likely to be large relative to the organisation's electricity, stationary energy and fuel emissions

2. **Influence** The responsible entity has the potential to influence the reduction of emissions from a particular source.

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

4. **Stakeholders** Key stakeholders deem the emissions from a particular source are relevant.

5. **Outsourcing** 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.

Emission sources tested for relevance	(1) Size	(2) Influence	(3) Risk	(4) Stakeholders	(5) Outsourcing	Included in boundary?
Capital goods	Yes	No	No	No	No	No

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