PUBLIC DISCLOSURE STATEMENT

HOLCIM (AUSTRALIA) PTY LTD

HUMES CARBON NEUTRAL PRECAST CONCRETE PRODUCTS (OPT-IN)

CY 2022

Australian Government

Climate Active
Public Disclosure Statement

An Australian Government Initiative

NAME OF CERTIFIED ENTITY	HOLCIM (AUSTRALIA) PTY LTD
REPORTING PERIOD	1 January 2022 – 31 December 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.*  Cyril Giraud Head of Sustainability 15 June 2023

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

Version March 2023.

1. CERTIFICATION SUMMARY

TOTAL EMISSIONS OFFSET	86 tCO_2-e
THE OFFSETS USED	100% VCUs
RENEWABLE ELECTRICITY	N.A
CARBON ACCOUNT	Prepared by start2see Pty Ltd through the Environmental Product Declarations (EPDs) of Humes reinforced concrete pipes and precast and prestressed concrete products.
TECHNICAL ASSESSMENT	Date: 1 July 2021 Name: Rob Rouwette Organisation: start2see Next technical assessment due: 30 April 2024

Contents

2. CARBON NEUTRAL INFORMATION

Organisation Description

Holcim, a prominent supplier of construction materials in Australia, boasts a rich legacy dating back to 1901. Today, Holcim continues its legacy by providing essential construction materials, including aggregates, sand, ready-mix concrete, engineered precast concrete, and prestressed concrete solutions, to a diverse array of customers and projects across Australia.

Humes is Holcim Australia's precast concrete solutions business. Humes is Australia's leading provider of engineered concrete solutions for the civil construction industry. Humes registered an Environmental Product Declaration (EPD) for its reinforced concrete pipes (RCPs) in 2017. This was followed by Humes Precast and Prestressed Concrete in 2020. The development of the EPDs is part of Holcim's drive to comprehensively analyse and communicate to customers the embodied environmental impacts of Holcim's products and having all of our key products represented by an EPD in Australia. EPDs help support designers and developers to drive improved sustainable procurement and materials selection and supporting the standardisation and transparency of environmental claims and specifications.

Description of certification

Holcim's Opt-in Climate Active Certification for Humes covers its ranges of pre-cast concrete products and solutions covered by an EPD. An EPD is a meticulously verified and registered document that transparently communicates comparable data about the life-cycle environmental impact of a product, including its Global Warming Potential (GWP), commonly referred to as embodied carbon.

Through Holcim's Climate Active Certification, customers have the option to opt-in for the offsetting of the GWP associated with their ready-mix concrete. This certification is managed through the EPD pathway. The carbon accounting in the EPD aligns with the Climate Active Products and Services. The carbon accounting published in the EPDs is based on data collected from across Humes operations and is compliant with international life cycle and EPD standards (ISO 14025 and EN 15804). Additionally, it undergoes independent review by an approved, third-party verifier under EPD Australasia.

Product description

Carbon neutral pre-cast concrete products are available to Humes' customers on an opt-in basis. The type and quantity of concrete products supplied to a project and/or client will be different for each project and/or client, with carbon offset requirements determined using the EPDs. The total carbon emissions inventory to be offset is assessed annually based on the quantity of carbon neutral certified products sold.

- The functional unit is defined as 1 tonne of opt-in carbon neutral precast concrete product manufactured by Humes in Australia.
- The emissions reported in this document are for calendar year 2022 (CY2022).
- The carbon account covers the cradle-to-gate (A1-A3) life cycle stages (as shown in figure 1) of the of precast and prestressed concrete products, including reinforced concrete pipes, manufactured by Humes in Australia. The cradle-to-gate life cycle assessment covers the impact from raw material extraction and processing (cradle) for all ingredients and materials, up until the product leaving the Humes Pre-cast Concrete facility (gate).
- Life cycle stages for the construction stage (A4-A5), use stage (B1-B7), and end of life stages (C1-C4) are not included in this carbon neutral certification shall not be considered zero and the final life of a product is highly variable (e.g. can be used for a bridge, pipes or retaining walls)

Figure 1 – Cradle-to-gate (A-A3) life cycle stages of precast concrete products

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.

The emission sources in the boundary diagram below are as per the emissions categories in the emission summary table (in section 4).

Inside emissions boundary

Quantified

Electricity

Stationary energy used in production

Fuels used in equipment

Fuels used in materials transport

Process emissions (clinker production)

Explosives (quarries)

Water

Waste

Auxiliary materials (bar chairs, mould oil, etc.)

Non-quantified

n/a

Optionally included

n/a

Outside emission boundary

Non-attributable

Capital goods

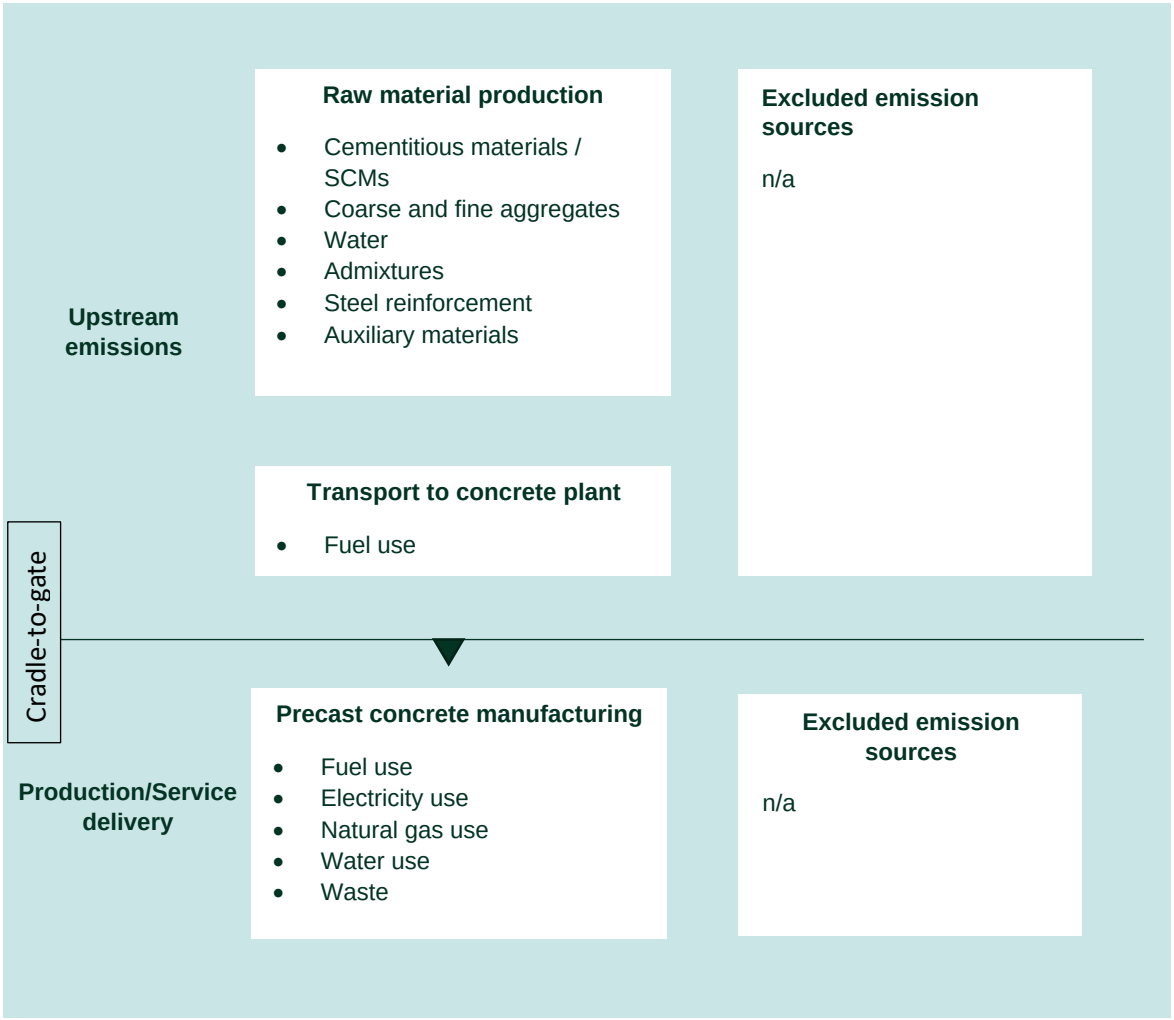
Personnel

Outside scope

Downstream life cycle stages

Product process diagram

The following diagram shows the product processes included within the scope of the footprint. The emission sources covered cover the cradle-to-gate boundary. Downstream emissions are outside the scope of the certification.



The contribution of capital goods (production equipment and infrastructure) and personnel is outside the scope of the LCA, in line with the Product Category Rules.[1]

[1] International EPD System PCR2012:01 (version 2.33), Product category rules according to ISO 14025 and EN 15804, Combined PCR and PCR Basic Module for Construction products and Construction services, registration number 2012:01, published on 18 September 2020.

4. EMISSIONS REDUCTIONS

Emissions reduction strategy

To avoid the most extreme impacts of climate change, the world must rapidly transition to a near net-zero economy by 2050 to limit warming to 1.5°C against pre-industrial levels. As a global leader in innovative and sustainable building solutions, Holcim is part of the solution in addressing the urgent challenge of climate change. We are putting climate action at the heart of our business strategy, to build progress for people and the planet.

At Holcim, we are taking a science-driven approach on the journey to becoming a net-zero company. Holcim was amongst the first companies worldwide to have its 2030 and 2050 CO_2 reduction targets validated by the Science Based Targets initiative (SBTi) as aligned with a 1.5°C scenario.

Our commitment to accelerate decarbonization across the whole building value chain is based on four key areas:

- **Decarbonizing our operations**: We are decarbonizing our energy use across our operations, from alternative fuels to renewable electricity; deploying decarbonized materials for low carbon product.
- **Building better with less**: We are decarbonizing construction with our range of low carbon materials.
- **Circular construction**: Shifting gears from a linear “take-make-dispose” approach to a circular “reduce, recycle, regenerate” economy.
- **Making buildings sustainable**: We are decarbonizing cities with our broad range of Solutions and Products, to make buildings more sustainable in use.

In 2022, Holcim updated its Global 2030 climate targets in line with the SBTi's revised 1.5°C-aligned roadmap. With these upgraded targets, we confirm our commitment to decarbonize building, leveraging the most advanced science.

- Holcim commits to Globally reduce gross scope 1 and 2 GHG emissions 25% per tonne of cementitious materials by 2030 from a 2018 base year.[2] Within this target, Holcim commits to reduce gross scope 1 GHG emissions 22.4% per tonne of cementitious material and scope 2 GHG emissions 65% per tonne of cementitious materials within the same timeframe.[1]
- Holcim commits to reduce gross scope 3 GHG emissions from purchased goods and services 25.1% per tonne of purchased clinker and cement by 2030 from a 2020 base year.
- Holcim also commits to reduce scope 3 GHG emissions from fuel and energy related activities

[2] The target boundary includes land-related emissions and removals from bioenergy feedstocks

20% per tonne of purchased fuels by 2030 from a 2020 base year.

- Furthermore, Holcim commits to reduce scope 3 GHG emissions from downstream transport and distribution 24.3% per tonne of materials transported within the same timeframe.

In 2022, Holcim also updated its Global 2050 climate targets in line with the SBTi's revised 1.5°C-aligned roadmap

- We will reduce scope 1 and 2 GHG emissions by 95% per tonne of cementitious materials from a 2018 base year.[3]
- We will reduce absolute scope 3 GHG emissions by 90% by 2050 from a 2020 base year.[4]

Our second Global Climate Report shares our progress on our net-zero journeys, including our upgraded 2030 targets aligned with the 1.5°C framework and validated by the Science Based Targets initiative. Please refer to Holcim's Climate Policy[5] , webpage on climate action[6] and Global Climate Report[7] for further details.

Emissions reduction actions

Humes continues to focus on reducing the embodied carbon impact of its products through a number of levers, such as:

- Design efficiency of the product - The embodied carbon impact is able to be reduced through optimizing the design of a product to ensure the optimal quantity and ratio of materials are used.
- Optimising the quantity of cement in the concrete mix design - Cement is typically the largest embodied carbon impact within the cement.
- Increasing use of supplementary cementitious materials (SCM) - The carbon intensity can be reduced by replacing the cement with alternative materials. Depending on the application and the manufacturing site, SCM may include industrial by-products like fly ash and/or blast furnace slag.
- Using admixtures - Admixtures can assist in reducing the amount of cement and water needed in the mix, improving its workability, enhance durability and longevity and reduce carbon emissions.
- Optimising the quantity and type of reinforced steel used – Steel is typically the second highest

[3] The target boundary includes land-related emissions and removals from bioenergy feedstocks.
[4] This net-zero validation was evaluated within the parameters of the Business Ambition for 1.5°C campaign and it covers categories 1, 3, 4, 6, 7 and 9 of Holcim's scope 3 emissions.
[5] https://www.holcim.com/sites/holcim/files/2023-04/holcim_climate_policy.pdf
[6] https://www.holcim.com/sustainability/climate-action
[7] https://www.holcim.com/sites/holcim/files/2023-03/31032023-holcim-climate-report-2023-7392605829.pdf

contributor to the embodied carbon impact of precast concrete

- Reviewing and reducing site impacts (i.e. quantity of steam for curing concrete products, efficiency of boilers)

- Increasing percentage of renewable electricity used by install solar power systems - Humes is in the process of installing solar power systems across ten sites. With a total annual capacity of approximately 1.1millon kWh, the combined systems will have the capacity to generate enough energy to offset the electricity demand of Blacktown in Western Sydney, which is the location of one of Hume's largest production facilities.

5.EMISSIONS SUMMARY

Emissions over time

This section compares emissions over time between the base year and the current year of certification. The emissions intensity of the of the functional unit and the total emissions change each year depending on quantity and type of opt-in carbon neutral products sold.

Emissions since base year			
		Total tCO_2-e	**Emissions intensity of the functional unit**
Base year / Year 1:	CY 2021	0	n/a
Year 2:	CY 2022	86	0.404

Significant changes in emissions

Our products are Climate Active certified on an opt-in basis. This means we expect to see significant changes in emissions intensity and total emissions of certified products from year-to-year, depending on which ones of our thousands of products are offset in a given year.

Use of Climate Active carbon neutral products and services

Holcim does not claim to have used any Climate Active certified carbon neutral products in the reporting period.

Emissions summary

Humes produces thousands of different precast and prestressed concrete product variations, as well as thousands of different concrete pipe product variations, across Australia. Our EPDs allow the quantification of cradle-to-gate emissions for each of these products based on key characteristics. Under our opt-in carbon neutral scheme, Humes will determine the GHG intensity of each product sold as carbon neutral and establish the total footprint to be offset accordingly.

The values in the table below are based on a typical set of precast concrete products for rail and road applications (based on a project example for the Parkes to Narromine section of the Inland Rail project). The cradle-to-gate emission factors are expressed per tonne of average precast product (as supplied to this project).

Note: in line with our NGER reporting, we have applied a location-based approach to electricity in the LCA. As the breakdown below shows, electricity use in concrete production makes up only 4% of the GHG emissions of precast concrete. The vast majority of emissions are coming from the raw materials (especially cement and steel) used to make reinforced precast concrete.

Stage / Attributable Process / Source	tCO_2-e*
Concrete (raw materials plus transport to plant)	45
Steel Reinforcement (raw materials plus transport to plant)	33
Production Process	9
Production Process breakdown: Electricity	*3*
Production Process breakdown: Natural Gas	*2*
Production Process breakdown: Diesel	*2*
Production Process breakdown: Miscellaneous and overhead	*2*

* The contribution of emission sources is an estimate only based on the carbon neutral products supplied to the Parkes to Narromine (P2N) section of the Inland Rail project in 2020. The actual values will depend on the volume and type of reinforced precast concrete sold within the reporting period. Totals may not add up due to rounding.

No uplift factors have been applied.

Emissions intensity per functional unit	0.404 t CO_2e *
Number of functional units to be offset	213
Total emissions to be offset	86

* 0.404 t CO_2e/tonne is the emissions intensity across the range of products sold as carbon neutral in 2022.

6. CARBON OFFSETS

Offsets retirement approach

This certification has taken an in-arrears offsetting approach. The total emissions to offset is 86 t CO_2-e. The total number of eligible offsets used in this report is 86 t CO_2-e. Of the total eligible offsets used, 40,680 t CO_2-e were previously banked and none were newly purchased and retired. 40,594 t CO_2-e are remaining and have been banked for future use.

Co-benefits

Across India, wind farms introduce clean energy to the grid, which would otherwise be generated by coal-fired power stations. Wind power is clean in two ways: it produces no emissions and also avoids the local air pollutants associated with fossil fuels. Electricity availability in the regions have been improved, reducing the occurrence of blackouts across the area.

The projects support national energy security and strengthen rural electrification coverage. In constructing the turbines new roads were built, improving accessibility for locals. The boost in local employment by people engaged as engineers, maintenance technicians, 24-hour on- site operators and security guards also boosts local economies and village services.

Eligible offsets retirement summary

Offsets retired 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 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 (%)**
Renewable Power Project by Axis Wind Farms (MPR Dam) Private Limited	VCUs	VERRA	1 July 2021	8556-30354050-30354729-VCS-VCU-997-VER-IN-1-1790-02082018-31122018-0	2018		680	0	594	86	100%
CER-IND-Enercon Wind Farms Karnataka Project, India	CERs	VERRA	23 Nov 2021	200,764,977 - 200,824,976	CP2		60,000	0	40,000*	0	0%
									Total offsets retired this report and used in this report	86	
									Total offsets retired this report and banked for future reports	40,594	

**40,000t for Holcim's Humes Precast concrete (opt-in) future sales / 20,000t for Holcim's ViroDecs ready-mix concrete (opt-in) future sales*

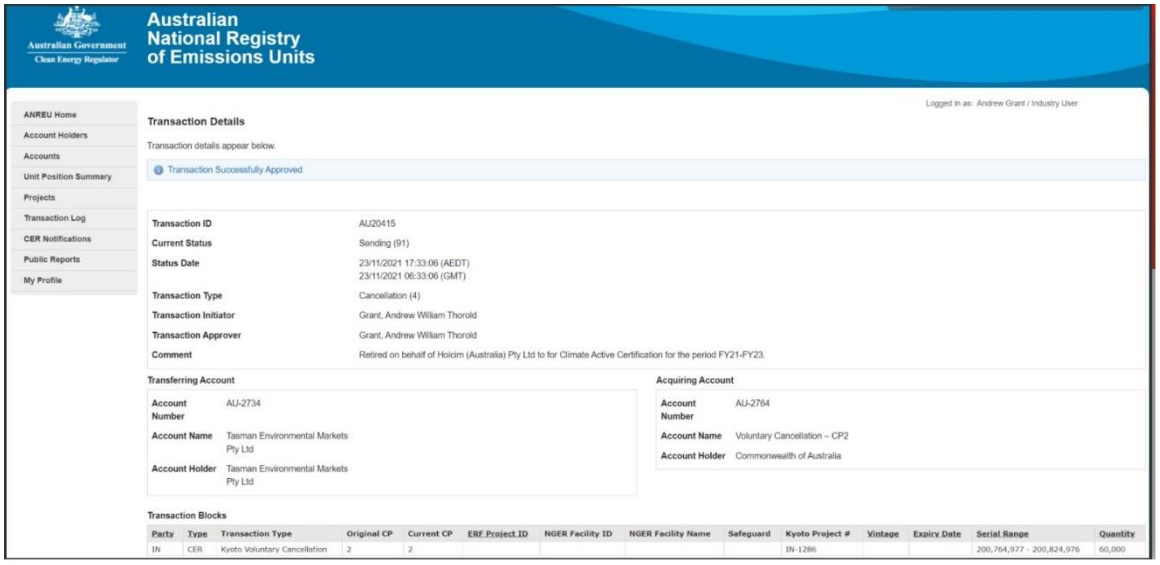
Type of offset units	Eligible quantity (used for this reporting period)	Percentage of total
Verified Carbon Units (VCUs)	86	100%

7. RENEWABLE ENERGY CERTIFICATE (REC) SUMMARY

Renewable Energy Certificate (REC) Summary

N/A

APPENDIX A: ADDITIONAL INFORMATION



Australian Government
Clean Energy Regulator

Australian National Registry of Emissions Units

Logged in as: Andrew Grant / Industry User

ANREU Home
Account Holders
Accounts
Unit Position Summary
Projects
Transaction Log
CER Notifications
Public Reports
My Profile

Transaction Details

Transaction details appear below.

Transaction Successfully Approved

Transaction ID	AU20415
Current Status	Sending (91)
Status Date	23/11/2021 17:33:06 (AEDT) 23/11/2021 06:33:06 (GMT)
Transaction Type	Cancellation (4)
Transaction Initiator	Grant, Andrew William Thorold
Transaction Approver	Grant, Andrew William Thorold
Comment	Retired on behalf of Holcim (Australia) Pty Ltd to for Climate Active Certification for the period FY21-FY23.

Transferring Account

Account Number	AU-2734
Account Name	Tasman Environmental Markets Pty Ltd
Account Holder	Tasman Environmental Markets Pty Ltd

Acquiring Account

Account Number	AU-2764
Account Name	Voluntary Cancellation – CP2
Account Holder	Commonwealth of Australia

Transaction Blocks

Party	Type	Transaction Type	Original CP	Current CP	ERF Project ID	NGER Facility ID	NGER Facility Name	Safeguard	Kyoto Project #	Vintage	Expiry Date	Serial Range	Quantity
IN	CER	Kyoto Voluntary Cancellation	2	2					IN-1286			200,764,977 - 200,824,976	60,000

APPENDIX B: ELECTRICITY SUMMARY

Not applicable for this certification.

APPENDIX C: INSIDE EMISSIONS BOUNDARY

Not applicable for this certification.

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.

Non-attributable emissions sources summary

Emission sources tested for relevance	Size	Influence	Risk	Stakeholders	Outsourcing	Justification
Capital goods	N	N	N	N	N	**Size:** The emissions source (capital goods) is likely to be between 0% and 5% of attributable emissions, which is not large compared to other attributable emissions. **Influence:** We do not have the potential to significantly influence the emissions from this source, including by shifting to a different lower-emissions supplier for our product. Most capital goods related emissions are historical emissions. **Risk:** There are no relevant laws or regulations that apply to limit emissions specifically from this source, the source does not create supply chain risks, and it is unlikely to be of significant public interest. **Stakeholders:** Key stakeholders, including the public, are unlikely to consider this a relevant source of emissions for our product. **Outsourcing:** n/a.
Personnel	N	N	N	N	N	**Size:** Personnel is likely to be between 0% and 5% of attributable emissions, which is not large compared to other attributable emissions. **Influence:** We do not have the potential to significantly influence the emissions from this source. **Risk:** There are no relevant laws or regulations that apply to limit emissions specifically from this source, the source does not create supply chain risks, and it is unlikely to be of significant public interest. **Stakeholders:** Key stakeholders, including the public, are unlikely to consider this a relevant source of emissions for our product. **Outsourcing:** n/a

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