



PUBLIC DISCLOSURE STATEMENT


VULCAN ENERGY RESOURCES LIMITED

**ORGANISATION CERTIFICATION
CY2024**

Australian Government

Climate Active Public Disclosure Statement



NAME OF CERTIFIED ENTITY	Vulcan Energy Resources Limited
REPORTING PERIOD	1 January 2024 – 31 December 2024
DECLARATION	<p><i>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.</i></p>  <p>Felicity Gooding Executive Director and Group Chief Financial Officer 30/04/25</p>



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

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Version 9.1.

1.CERTIFICATION SUMMARY

TOTAL EMISSIONS OFFSET	497 tCO ₂ -e
CARBON OFFSETS USED	100% VCU's
RENEWABLE ELECTRICITY	N/A
CARBON ACCOUNT	Prepared by: Sustainable Business Consultants
TECHNICAL ASSESSMENT	25/4/23 Sustainable Business Consultants Next technical assessment due: CY2025 report

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2.CERTIFICATION INFORMATION

Description of organisation certification

This organisation certification is for the Australian business operations of Vulcan Energy Resources Limited (“Vulcan Energy” or “Vulcan”), ABN 38 624 223 132.

Subsidiary companies, Vulcan Energy Resources Europe Pty Ltd and Vulcan Energy Ressourcen GmbH (both based in Germany) own the Lionheart Project and have office personnel and lithium optimisation plants based in Germany. The German operations are outside of the boundary of this Climate Active certification and are certified Carbon Neutral through Climate Impact Partners. This decision may be revisited in the future if and when the Climate Active Trademark becomes recognized and more popular in markets outside Australia.

The operational boundary of this Climate Active certification includes Scope 1, 2 and 3 emissions of the Australian operations, as well as international travel.

This Public Disclosure Statement includes information for the CY2024 reporting period.

Organisation description

Vulcan Energy Resources Limited ABN 38 624 223 132 is the parent company of a group of companies involved in geothermal and lithium exploration and the creation of the Lionheart Project. Vulcan has designed its Phase One Lionheart Project using existing commercial technologies which will co-produce renewable power, heat and lithium from the same geothermal brine source, while minimising environmental impacts and creating shared value.

The Australian operations (located in Perth) consist of office-based activities and travel for senior management, as well as goods and services purchased in the course of the activities described below.

At the heart of Vulcan is its unique proposition: the decarbonisation of two traditionally carbon-intensive industries, the energy industry and lithium supply chain, to empower the European energy and mobility transition.

Purpose. We will empower a carbon neutral future

Mission. Becoming Europe’s leading sustainable lithium business and enabling energy security through geothermal energy.

This organisation certification follows the operational control approach and excludes operations in Germany. The following Australian entities are excluded from this certification as they are holding companies, as are a number of other companies that are owned by Vulcan Energy, which are registered overseas.

Legal entity name	ABN
Vulcan Energy SA Pty Ltd	22 671 790 855
Vulcan Energy Resources Europe Pty Ltd	99 627 029 369

3.EMISSIONS BOUNDARY

This is a small organisation certification, which uses the standard Climate Active small organisation 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 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 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.

Inside emissions boundary

Quantified

- Accommodation
- Carbon neutral products and services
- Cleaning and chemicals
- Electricity
- Food
- ICT services and equipment
- Office equipment and supplies
- Professional services
- Postage, courier and freight
- Transport (air)
- Transport (land and sea)
- Waste
- Working from home

Non-quantified

- Stationary energy and fuels
- Refrigerants
- Water

Outside emission boundary

Excluded

- Consulting services
- Project finance fees related to advisors including due diligence and legal document drafting
- Consulting services to support Vulcan's German tax accounting

4. EMISSIONS REDUCTIONS

Emissions reduction strategy

Rather than having an absolute target at this time, the Company considers the most appropriate measure for Vulcan's emissions reduction is emissions intensity associated with its Australian FTEs. Vulcan commits to reducing the emissions intensity per FTE of Scope 2 emissions by 10% by 2029, compared to the 2020 baseline emissions intensity of 0.45 tCO₂-e/FTE. The current Scope 2 emissions intensity for the 2024 reporting year is 0.41 tCO₂-e/FTE. Vulcan also commits to reducing the emissions intensity per FTE of Scope 3 emissions by 50% by 2029, compared to 2020 baseline emissions intensity of 175.51 tCO₂-e/FTE. The current Scope 3 emissions intensity for the 2024 reporting year is 59.28 tCO₂-e/FTE. This translates to an overall reduction target by FTE of 60% from the 2020 baseline of 175.97 tCO₂-e.

These targets will be reviewed and revised next year taking into consideration the work the Company is currently undertaking to develop an emission reduction target in line with science. Any revision of the target will be aimed at ensuring it is realistic and achievable in terms of future developments for Vulcan's operations.

The initiatives set out below are based on the emissions causing activities in Vulcan's carbon inventory. In setting these initiatives management have considered Vulcan's ability to control or influence emissions reduction, to switch to alternative sources and to purchase lower carbon supplies and services.

Initiative ("x" indicates action year)	CY24	CY25	CY26	CY27	CY28	CY29	Comment
Scope 2: Energy efficiency and savings							
Utilise light sensors to turn off lights when not required	x	x	x	x	x	x	Ongoing
Lease low energy consumption printer	x	x	x	x	x	x	Epson, heat-free Workforce Pro printer and scanner, saves up to 87% electricity (ongoing)
Scope 3: Transport (air)							
Purchase Climate Active certified offsets for business flights with Australian airlines (Qantas and Virgin)			x	x	x	x	Continuous, once financing is approved
Scope 3: Professional services							
When engaging professional services enquire if they measure their emissions so that Vulcan can use a more accurate emissions per		x	x	x	x	x	Continuous, begin discussions with existing consultants to understand their emissions profile

Initiative ("x" indicates action year)	CY24	CY25	CY26	CY27	CY28	CY29	Comment
professional service hour method for future reporting							or reduction strategy
Increase internal capacity of business and accounting service FTEs at Vulcan		x	x	x	x	x	Continuous

Emissions reduction actions

Vulcan has put the following initiatives in place during 2024 or prior:

- Scope 2 emissions
 - Office lights are automatic and turn off when no motion is detected
 - Monitors, including the TVs in the boardroom have energy-saving modes. Vulcan does not use desktop computers, only laptops which employees take home
 - Lease of a low-energy consumption printer.
- Scope 3 emissions
 - Purchased second hand office equipment and kitchenware
 - Onboarded more tax accounting services within the Vulcan Australia team to reduce reliance on external providers
 - Reduced subscriptions for physical newspapers
 - Streamlined and reduced the number of memberships with external interest groups
 - Reduced the need for security services

5.EMISSIONS SUMMARY

Emissions over time

Emissions since base year			
		Total tCO ₂ -e (without uplift)	Total tCO ₂ -e (with uplift)
Base Year/Year 1:	2020	269.12	282.58
Year 2:	2021	568.58	597.12
Year 3: (as amended in 2023)	2022	725.20	761.60
Year 4:	2023	641.33	N/A*
Year 5:	2024	472.75	496.39

Note: In 2023, Vulcan's emissions fell outside of the Climate Active Small Organisation scope and so no mandatory or other uplift was applicable.

Significant changes in emissions

Significant changes in emissions			
Emission source	Previous year emissions (t CO ₂ -e)	Current year emissions (t CO ₂ -e)	Reason for change
Business services	61.41	68.59	Additional support required as the business continues to grow and expand, whilst waiting on financing to employ more FTEs.
Long business class flights (>3,700km)	84.76	254.11	Business growth and increase in Perth based leadership team members

Use of Climate Active carbon neutral products, services, buildings or precincts

Certified brand name	Product/Service/Building/Precinct used
N/A	

Emissions summary

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

	Sum of Scope 1 emissions (tCO ₂ -e)	Sum of Scope 2 emissions (tCO ₂ -e)	Sum of Scope 3 emissions (tCO ₂ -e)	Sum of Total emissions (t CO ₂ -e)
Accommodation and facilities	0.00	0.00	1.78	1.78
Cleaning and chemicals	0.00	0.00	0.46	0.46
Climate Active carbon neutral products and services	0.00	0.00	0.00	0.00
Electricity	0.00	3.24	0.24	3.48
Food	0.00	0.00	2.55	2.55
ICT services and equipment	0.00	0.00	8.80	8.80
Equipment repair and maintenance	0.00	0.00	0.96	0.96
Office equipment and supplies	0.00	0.00	1.44	1.44
Postage, courier and freight	0.00	0.00	0.08	0.08
Products	0.00	0.00	0.02	0.02
Professional services	0.00	0.00	183.05	183.05
Refrigerants	0.00	0.00	0.00	0.00
Stationary energy (gaseous fuels)	0.00	0.00	0.00	0.00
Transport (air)	0.00	0.00	261.74	261.74
Transport (land and sea)	0.00	0.00	5.32	5.32
Waste	0.00	0.00	1.50	1.50
Water	0.00	0.00	0.00	0.00
Working from home	0.00	0.00	1.57	1.57
Grand Total	0.00	3.24	469.51	472.75

Uplift factors

An uplift factor is an upwards adjustment to the total carbon inventory to account for relevant emissions that cannot be reasonably quantified or estimated. This conservative accounting approach helps ensure the integrity of the carbon neutral claim.

For small organisation certifications, a 5% uplift must be applied to the emissions total, in addition to any uplifts applied to account for non-quantified and/or immaterial emission sources. All uplifts applied must be listed below.

Reason for uplift factor	tCO ₂ -e
Mandatory 5% uplift for small organisations	23.64
Total of all uplift factors (tCO ₂ -e)	23.64
Total emissions footprint to offset (tCO₂-e) <i>(total emissions from summary table + total of all uplift factors)</i>	496.39

6. CARBON OFFSETS

Eligible offsets retirement summary

Offsets retired for Climate Active certification

Type of offset unit		Quantity used for this reporting period		Percentage of total units used	
Verified Carbon Units (VCUs)		497		100.00%	

Project name	Type of offset unit	Registry	Date retired	Serial number	Vintage	Total quantity retired	Quantity used in previous reporting periods	Quantity banked for future reporting periods	Quantity used for this reporting period	Percentage of total used this reporting period
Gansu Zhangye Heihe Longhui Small Scale Hydropower Project	VCU	Verra Registry	22/5/2024	11075-277651041-277652543-VCS-VCU-324-VER-CN-1-666-01012013-31122013-0	2013	1503	52	954	497	100.00%
Offset Totals:						1503	52	954	497	100.00%

Note: Vulcan purchases offsets in bulk for both its Australian Climate Active organisation certification and for its operations overseas. Therefore the respective registries on which the offsets purchased have been retired do not specifically state that these are for Vulcan Australian operations. Instead, VER is provided with certificates from the provider of its offsets. A copy of the certificate for the offsets in the table above is shown in Attachment A. No offsets were used for any other purpose since the 2023 organisation certification.

7. RENEWABLE ENERGY CERTIFICATE (REC) SUMMARY

Renewable Energy Certificate (REC) summary

N/A

APPENDIX A: ADDITIONAL INFORMATION

The certificate shown below provides evidence that the offsets detailed in this document were retired on behalf of Vulcan Energy.



Certificate of Verified Carbon Unit (VCU) Retirement
Verra, in its capacity as administrator of the Verra Registry, does hereby certify that on 22 May 2024, 1,503 Verified Carbon Units (VCUs) were retired on behalf of:
Vulcan Energy Resources Ltd
Project Name Gansu Zhangye Heihe Longhui Small Scale Hydropower Project
VCU Serial Number 11075-277651041-277652543-VCS-VCU-324-VER-CN-1-666-01012013-31122013-0
Additional Certifications
Powered by 

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.

For this certification, electricity emissions have been set by using the **location-based approach**.

Market-based approach summary			
Market Based Approach	Activity Data (kWh)	Emissions (kg CO 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)	0	0	0%
GreenPower	0	0	0%
Climate Active certified - Precinct/Building (voluntary renewables)	0	0	0%
Climate Active certified - Precinct/Building (LRET)	0	0	0%
Climate Active certified - Precinct/Building jurisdictional renewables (LGCs surrendered)	0	0	0%
Climate Active certified - Electricity products (voluntary renewables)	0	0	0%
Climate Active certified - Electricity products (LRET)	0	0	0%
Climate Active certified - 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)	1,129	0	18%
Residual electricity	4,981	4,532	0%
Total renewable electricity (grid + non grid)	1,129	0	18%
Total grid electricity	6,110	4,532	18%
Total electricity (grid + non grid)	6,110	4,532	18%
Percentage of residual electricity consumption under operational control	100%		
Residual electricity consumption under operational control	4,981	4,532	
Scope 2	4,433	4,034	
Scope 3 (includes T&D emissions from consumption under operational control)	547	498	
Residual electricity consumption not under operational control	0	0	
Scope 3	0	0	

Total renewables (grid and non-grid)	18.48%
Mandatory	18.48%
Voluntary	0.00%
Behind the meter	0.00%
Residual scope 2 emissions (t CO₂-e)	4.03
Residual scope 3 emissions (t CO₂-e)	0.50
Scope 2 emissions liability (adjusted for already offset carbon neutral electricity) (t CO₂-e)	4.03
Scope 3 emissions liability (adjusted for already offset carbon neutral electricity) (t CO₂-e)	0.50
Total emissions liability (t CO₂-e)	4.53

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

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 (kgCO ₂ -e)	Scope 3 Emissions (kgCO ₂ -e)	(kWh)	Scope 3 Emissions (kgCO ₂ -e)
ACT	0	0	0	0	0	0
NSW	0	0	0	0	0	0
SA	0	0	0	0	0	0
VIC	0	0	0	0	0	0
QLD	0	0	0	0	0	0
NT	0	0	0	0	0	0
WA	6,110	6,110	3,238	244	0	0
TAS	0	0	0	0	0	0
Grid electricity (scope 2 and 3)	6,110	6,110	3,238	244	0	0
ACT	0	0	0	0		
NSW	0	0	0	0		
SA	0	0	0	0		
VIC	0	0	0	0		
QLD	0	0	0	0		
NT	0	0	0	0		
WA	0	0	0	0		
TAS	0	0	0	0		
Non-grid electricity (behind the meter)	0	0	0	0		
Total electricity (grid + non grid)	6,110					

Residual scope 2 emissions (t CO ₂ -e)	3.24
Residual scope 3 emissions (t CO ₂ -e)	0.24
Scope 2 emissions liability (adjusted for already offset carbon neutral electricity) (t CO ₂ -e)	3.24
Scope 3 emissions liability (adjusted for already offset carbon neutral electricity) (t CO ₂ -e)	0.24
Total emissions liability (t CO₂-e)	3.48

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 CO ₂ -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 electricity product used	Electricity claimed from Climate Active electricity products (kWh)	Emissions (kg CO ₂ -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 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		Justification reason
Refrigerants		Immaterial
Stationary energy and fuels		Immaterial
Water		Immaterial

Data management plan for non-quantified sources

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

APPENDIX D: OUTSIDE EMISSIONS BOUNDARY

Excluded emission sources

The below emission sources have been assessed as not relevant to this organisation'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.

Excluded emissions sources summary

Emission sources tested for relevance	Size	Influence	Risk	Stakeholders	Outsourcing	Justification
Consulting fees - Project Finance fees related to BNPP/due diligence/ legal	Y	N	N	N	N	<p>The associated emissions of this Scope 3 activity will be included in the German emissions inventory as the activity is outside of the Company's Australian operational control boundary.</p> <p>Size: This emissions source is relatively large, greater than 5%, compared with Australia's emissions inventory.</p> <p>Influence: Vulcan do not have the potential to influence the emissions from this source.</p> <p>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.</p> <p>Stakeholders: Key stakeholders, including the public, are unlikely to consider this a relevant source of emissions for our business as they are attributed to Germany's profile.</p> <p>Outsourcing: Vulcan have not previously undertaken this activity within our emissions boundary and comparable organisations do not typically undertake this activity within their boundary.</p>
Consulting services - Germany tax accounting support	Y	N	N	N	N	<p>The associated emissions of this Scope 3 activity will be included in the German inventory as the activity is outside of the Company's Australian operational control boundary.</p> <p>Size: This emissions source is relatively large, greater than 5%, compared with Australia's emissions inventory.</p> <p>Influence: Vulcan do not have the potential to influence the emissions from this source.</p> <p>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.</p> <p>Stakeholders: Key stakeholders, including the public, are unlikely to consider this a relevant source of emissions for our business as they are attributed to Germany's profile.</p> <p>Outsourcing: Vulcan have not previously undertaken this activity within our emissions boundary and comparable organisations do not typically undertake this activity within their boundary.</p>



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