

2024



# GHG ACCOUNTING AND VERIFICATION REPORT



Together for Wonder



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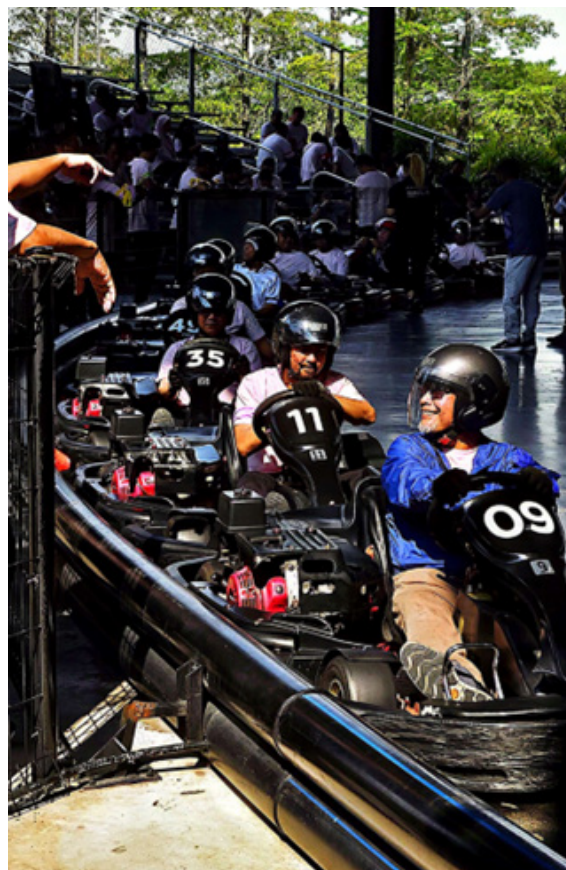


# WHO IS ECOCERES

EcoCeres is a pure-play renewable fuels producer, with over a decade of experience in biomass utilisation, incubated by Towngas and backed by international investors Bain Capital and Kerogen Capital. Founded with a mission to address the challenges of climate change, EcoCeres has earned a reputation as a global innovator in the conversion of waste into renewable fuels, renewable chemicals and materials.

At EcoCeres, our motto, "Together for Wonder", is more than a slogan — it represents our mission to forge a sustainable future. Rooted in the belief that innovation and environmental stewardship can coexist, we are committed to transforming biomass waste into renewable energy and high-value biofuel, driving meaningful solutions to combat global climate change. As an advanced biorefinery platform headquartered in Asia, EcoCeres leverages industrial-scale production capabilities and cutting-edge proprietary technologies to lead the charge toward a low-carbon economy.

EcoCeres stands at the forefront of the global biorefinery industry, distinguished by our ability to commercialize a diverse portfolio of renewable products. As an ISCC-certified decarbonisation solution provider, the company produces industrial scale sustainable aviation fuel (SAF), hydrotreated vegetable oil (HVO), renewable naphtha and cellulosic ethanol (CE) through its proprietary processes. These advanced biofuels are pivotal in decarbonizing high-impact sectors such as aviation, heavy transport, and industrial manufacturing, offering low-carbon alternatives to fossil fuels without compromising performance.



This report, based on 2024 operational data, provides a comprehensive GHG emissions inventory and verification of GHG emissions for EcoCeres Group and its production facilities. It aims to support the Group's sustainability strategy by identifying carbon reduction opportunities and challenges.



# QUANTIFICATION CRITERIA

## PURPOSE OF THE REPORT

This report marks a pivotal step in EcoCeres Group's journey towards climate leadership. By systematically quantifying the Group's GHG emissions for 2024, it lays a robust foundation for evaluating sustainability targets and refining strategic direction.

Grounded in scientific rigor and a commitment to transparency, the analysis pinpoints key opportunities for carbon reduction across operations. These insights empower the Group and its production plants to design actionable, low-carbon initiatives that not only drive environmental impact but also reinforce EcoCeres' competitive edge in a rapidly evolving global economy.

## MISSION

- **Relevance:** Emissions data is tailored to EcoCeres' unique organisational and operational footprint, ensuring it meets the expectations of stakeholders and decision-makers.
- **Completeness:** Every material source of emissions within defined boundaries is accounted for, with any exclusions clearly justified — leaving no room for ambiguity.
- **Consistency:** Standardised methodologies and boundaries enable year-on-year comparability, supporting long-term strategic planning and performance tracking.
- **Transparency:** From data sources to assumptions, every element is disclosed with clarity, enabling full traceability and independent verification.
- **Accuracy:** Precision is paramount. The report prioritises robust methodologies and credible estimates to minimise uncertainty and maximise reliability.



These principles are not just technical standards — they are the foundation of EcoCeres' climate integrity. By embedding them throughout the reporting process, the Group ensures a fair, credible, and actionable representation of its carbon footprint.

## ACCOUNTING STANDARDS

The report draws on authoritative standards and data sources, including:

- *ISO 14064-1:2018*: Specification for GHG quantification and reporting.
- *GHG Protocol*: Corporate Accounting and Reporting Standard.
- *IPCC 2019*: Updated emission factors.
- *IPCC AR6*: Global Warming Potential (GWP) values.
- *China Statistical Yearbook 2024*: Energy and economic data.
- *China Product Life Cycle GHG Emission Factor Database*: Product emission factors.
- *Conversion Factors 2024*: UK Department for Energy Security and Net Zero.
- *2025 GHG Emissions Hub*: U.S. EPA data centre.
- *2023 National Electricity Carbon Footprint Factor*: China's Ministry of Ecology and Environment and National Bureau of Statistics.
- Grid Emission Factor (GEF) in Malaysia (2022): Malaysia's grid emission factor.

These standards ensure the report's scientific credibility and alignment with global best practices.



# BOUNDARY SCOPE

## REPORTING PERIOD

This report encompasses GHG emissions data from 1 January to December 31, 2024.

## TYPES OF GHG

Per the Kyoto Protocol, the inventory includes:

- Carbon dioxide (CO<sub>2</sub>)
- Methane (CH<sub>4</sub>)
- Nitrous oxide (N<sub>2</sub>O)
- Hydrofluorocarbons (HFCs)
- Perfluorocarbons (PFCs)
- Sulfur hexafluoride (SF<sub>6</sub>)



EcoCeres affirms that its operations do not involve emissions of PFCs or SF<sub>6</sub>. In line with international best practice, all GHG emissions are reported in carbon dioxide equivalents (tCO<sub>2</sub>e), and calculated using the latest Global Warming Potential (GWP) values from the IPCC's Sixth Assessment Report (AR6). This approach ensures consistency, scientific integrity, and comparability across reporting periods.

# REPORTING BOUNDARIES

## ORGANIZATIONAL BOUNDARIES

EcoCeres Group defines its GHG reporting boundary, using the financial control approach, ensuring alignment with its financial accounting practices and reinforcing the integrity of its sustainability disclosures.

Under this approach, the following entities are included:

- Production Plants in China (Hebei, Jiangsu) and Malaysia (Johor)
- Research & Development Centers in China (Zhangjiagang, Shanghai)
- Corporate Offices in Hong Kong (Headquarters), China (Shanghai), Singapore, and Switzerland

Subsidiaries are incorporated into the reporting scope from the date financial control is established and are excluded upon cessation of control. This methodology ensures that EcoCeres' emissions data reflects the full extent of its operational influence, supporting accurate performance tracking and informed decision-making.



# EMISSIONS INVENTORY

The inventory covers Scope 1, Scope 2, and Scope 3 emissions:

Emissions Inventories	Applicability Explanation	Emission Sources
<b>Scope 1: Direct GHG Emissions from Company-Owned or Controlled Operations/Emission Sources</b>		
Diesel	Applicable	Stationary sources: diesel generators Mobile sources: vehicles
Petrol	Applicable	Mobile sources: vehicles
Natural gas	Applicable	Stationary sources: production facilities
Fire extinguishers	Applicable	Fugitive emissions: firefighting equipment in factories, workplaces, etc.
Refrigerants	Applicable	Fugitive emissions: air conditioning and refrigeration in factories, workplaces, etc.
<b>Scope 2: Indirect Greenhouse Gas Emissions from Purchased Electricity or Heat</b>		
Purchased electricity	Applicable	Equipment and facilities using electricity in factories, workplaces, etc.
Purchased heat	Applicable	Purchased steam for factories, etc.
<b>Scope 3: Other Indirect Greenhouse Gas Emissions from Upstream and Downstream Supply Chains</b>		
Purchased goods and services	Applicable	Raw materials and auxiliary materials needed for factory production, construction materials, equipment, and construction services purchased for factory construction.
Capital goods	Applicable	Mainly includes computers, tools and equipment, office equipment, furniture, and intangible assets such as software systems and patents



Emissions Inventories	Applicability Explanation	Emission Sources
Energy and fuel-related activities	Applicable	Based on data collection results from Scopes 1 and 2, this category mainly accounts for the extraction, production, and transportation of fuels consumed by diesel, petrol, natural gas, and purchased electricity and heat (parts not included in Scopes 1 and 2).
Upstream transportation and distribution	Applicable	Transportation services for raw materials from producers to factories, including sea and road transportation.
Waste generated in operations	Applicable	Mainly general and hazardous waste generated during production, and construction waste from factory construction.
Business travel	Applicable	Main travel methods for employee business trips are air, high-speed rail, and road travel. Due to data collection limitations, only carbon emissions from air travel are calculated.
Employee commuting	Applicable	Employee commuting methods include subway, bus, private car, taxi, shuttle bus, etc. Due to data collection limitations, only carbon emissions from shuttle bus transportation are calculated.
Upstream leased assets	Applicable	Leased assets not included in Scopes 1 and 2 calculations, mainly workplaces. Emissions from the operation of such leased assets are calculated in Scope 3.
Downstream transportation and distribution	Applicable	Carbon emissions from transporting products from factories to customers, including sea and road transportation.
Processing of sold products	Not Applicable	All EcoCeres Group products are derived from biomass energy sources and are produced without secondary processing.
Use of sold products	Applicable	All EcoCeres Group products are biomass-derived fuels that generate zero carbon emissions.
End-of-life treatment of sold products	Not Applicable	All EcoCeres Group products are biomass-derived fuels designed for combustion, with no end-of-life treatment required.

Emissions Inventories	Applicability Explanation	Emission Sources
Downstream leased assets	Not Applicable	EcoCeres Group has no downstream leased assets.
Franchises	Not Applicable	EcoCeres Group has no franchised assets.
Investments	Not Applicable	EcoCeres Group had no investment projects in 2024.



# INVENTORY RESULTS & VERIFICATION CERTIFICATES

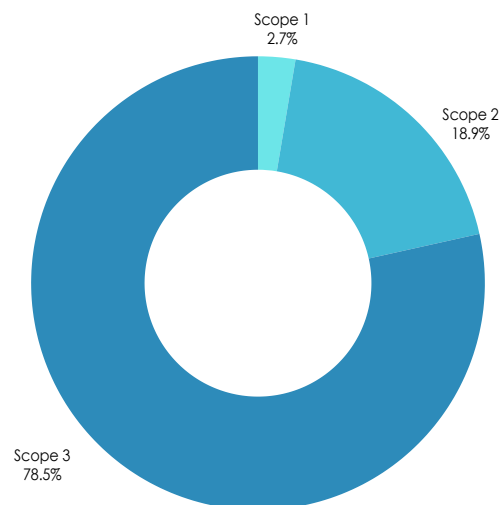
## GROUP-WIDE EMISSIONS

In 2024, EcoCeres Group's total GHG emissions reached 428,455.97 tCO<sub>2</sub>e, with Scope 1 contributing 3%, Scope 2 contributing 19%, and Scope 3 contributing 78%.

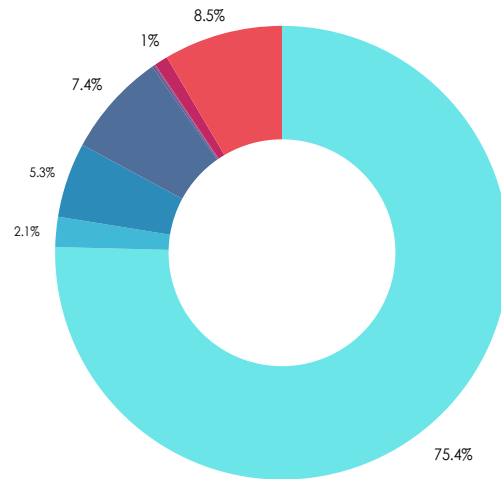
### GHG Emissions of Companies and Subsidiaries within the Organizational Boundary in 2024

GHG Emissions Category	Unit	Emissions in 2024
Scope 1 GHG Emissions	tCO <sub>2</sub> e	11,360.56
Scope 2 GHG Emissions	tCO <sub>2</sub> e	80,811.82
<b>Scope 1+2 GHG Emissions</b>	<b>tCO<sub>2</sub>e</b>	<b>92,172.38</b>
Scope 3 GHG Emissions	tCO <sub>2</sub> e	336,283.59

Percentage of GHG Emissions in 2024 by Scope



### Percentage of Scope 3 GHG Emissions by Category



●	Category 1: Purchased goods and services
●	Category 2: Capital goods
●	Category 3: Fuel and energy related activities
●	Category 4: Upstream transportation and distribution
●	Category 5: Waste generated in operations
●	Category 6: Business Travel (flight)
●	Category 7: Employee commuting (shuttle bus)
●	Category 8: Upstream leased assets
●	Category 9: Downstream transportation and distribution

Verification was performed by independent third-party BV per ISO 14064-1:2018, ISO 14064-3:2019, and GHG Protocol standards, covering Scope 1, Scope 2, and material Scope 3 emissions under EcoCeres' control.





## Greenhouse Gases Verification Opinion

is awarded to

### EcoCeres, Inc.

Bureau Veritas Certification (Beijing) Co., Ltd. was engaged to conduct an independent verification of the greenhouse gases (GHG) emissions reported by EcoCeres, Inc. for the period stated below. This verification opinion applies to the related information included within the scope of work described below.

#### Boundaries covered by the verification:

- Verification site name: EcoCeres, Inc.
- Reporting period covered: 01/01/2024 to 31/12/2024

**Organizational boundaries:** Activities and facilities of EcoCeres, Inc. under operational control approach.

**Reporting boundaries:** GHG emissions generated in production of biofuels and related management activities within the organizational boundaries, as well as significant indirect greenhouse gases emissions.

#### Emissions data verified under reporting boundaries:

- |  |                               |
|--|-------------------------------|
| • Scope 1: Direct GHG emissions:                                   | 11,360.56 tCO <sub>2</sub> e  |
| • Scope 2: Indirect GHG emissions from imported energy:            | 80,811.82 tCO <sub>2</sub> e  |
| • Scope 3: Indirect GHG emissions from transportation:             | 336,283.59 tCO <sub>2</sub> e |
| • 3-1 Purchased goods and services                                 | 253,564.08 tCO <sub>2</sub> e |
| • 3-2 Capital goods  | 7,200.42 tCO <sub>2</sub> e   |
| • 3-3 Fuel and energy related activities                           | 17,964.18 tCO <sub>2</sub> e  |
| • 3-4 Upstream transportation and distribution                     | 24,952.93 tCO <sub>2</sub> e  |
| • 3-5 Waste generated in operations                                | 541.64 tCO <sub>2</sub> e     |
| • 3-6 Business travel (flight)                                     | 201.97 tCO <sub>2</sub> e     |
| • 3-7 Employee commuting (shuttle bus)                             | 153.88 tCO <sub>2</sub> e     |
| • 3-8 Upstream leased assets                                       | 3,200.27 tCO <sub>2</sub> e   |
| • 3-9 Downstream transportation & distribution                     | 28,504.22 tCO <sub>2</sub> e  |
| • 3-11 Use of sold products  | 0 tCO <sub>2</sub> e          |
| • Total quantified emissions:                                      | 428,455.97 tCO <sub>2</sub> e |
| (biogenic CO <sub>2</sub> emissions: 83,257.23 tCO <sub>2</sub> e) |                               |

**Limitations and exclusions:** Excluding other non-significant indirect GHG emissions

#### GHG verification protocol used to conduct the verification:

- ISO 14064-1:2018 Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals
- ISO 14064-3:2019 Specification with guidance for the verification and validation of greenhouse gas statements
- Greenhouse Gas Protocol Corporate Accounting and Reporting Standard

Certification body address: Room 02, 9 / F, West Office Building 1, Oriental Economic and Trade City, Oriental Plaza, No.1 East Chang'an Street, Dongcheng District, Beijing, China. 100738  
Further clarifications regarding the verification scope of this opinion may be obtained by consulting the organization.  
To check this opinion validity please call: +86 10 59683663



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# Bureau Veritas Certification



- Greenhouse Gas Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard

## Level of assurance:

- Reasonable assurance

## GHG verification methodology:

- Interview for relevant personnel;
- Review of the documentary evidence;
- Evaluation of the methodology and information systems for data collection, aggregation, analysis and review;
- Audit of sampled sites and data to verify source.

## Verification conclusion:

Based on the verification process and findings, the GHG emission data in the GHG inventory report from EcoCeres, Inc. is in compliance with ISO 14064-1:2018 Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals, Greenhouse Gas Protocol Corporate Accounting and Reporting Standard, and Greenhouse Gas Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard.

## Statement of independence, impartiality and competence:

Bureau Veritas Group is an independent professional services company that specializes in Quality, Health, Safety, Social and Environmental management with over 190 years' history in providing independent assurance services.

No member of the verification team has a business relationship with EcoCeres, Inc. and its directors or managers beyond that required by this assignment. We conducted this verification independently and to our knowledge there has been no conflict of interest.

Bureau Veritas Group has implemented a Code of Ethics across the business to maintain high ethical standards among staff in their day-to-day business activities.

**Lead verifier:** Pin Tian

**No.:** EMICN100633A

**Version No.:** No.1

**Verification date:** 16/04/2025

**Issue date:** 28/05/2025

Signed on behalf of  
Bureau Veritas Certification (Beijing) Co., Ltd.

Certification body address: Room 02, 9 / F, West Office Building 1, Oriental Economic and Trade City, Oriental Plaza, No.1 East Chang'an Street, Dongcheng District, Beijing, China. 100738  
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# PLANT-LEVEL EMISSIONS

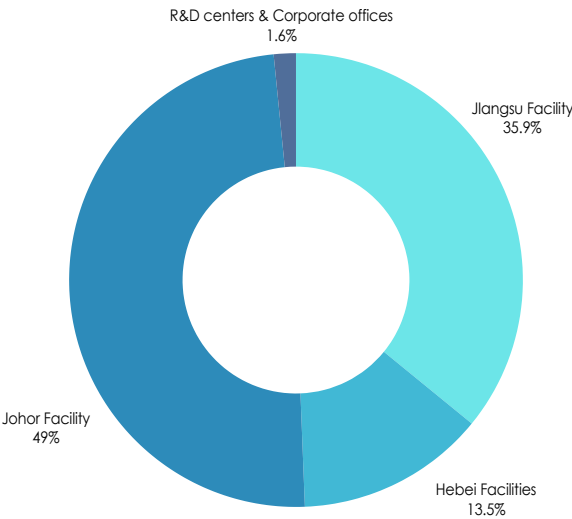
A comprehensive greenhouse gas (GHG) emissions inventory was conducted for EcoCeres' production plants in China (Jiangsu, Hebei) and Malaysia (Johor). The total combined emissions across these sites amounted to **421,709.94 tonnes of tCO<sub>2</sub>e**.

- The **Jiangsu Plant** contributed **153,806.05 tCO<sub>2</sub>e**, representing 35.90% of total emissions.
- The **Hebei Plants** collectively emitted **57,749.70 tCO<sub>2</sub>e**, accounting for 13.50% of total.
- The **Johor Plant**, currently under construction, reported **210,154.19 tCO<sub>2</sub>e**, comprising 49.04% of total emissions.

## GHG Emissions of Companies and Subsidiaries within the Organizational Boundary in 2024

Production Plants	Unit	Emissions in 2024
Jiangsu	tCO2e	153,806.05
Hebei	tCO2e	57,749.19
Johor	tCO2e	210,154.19
R&D centers & Corporate offices	tCO2e	6,746.03

Percentage of GHG Emissions in 2024 by Facilities



These figures reflect site-specific operational activities and lifecycle stages, with the Johor plant's emissions predominantly arising from Scope 3 sources associated with construction-related procurement. The emissions data will inform targeted mitigation strategies and support the development of site-level decarbonisation plans aligned with EcoCeres' broader climate objectives.



# JIANGSU PLANT EMISSIONS

At EcoCeres' Jiangsu plant — its largest production site — greenhouse gas emissions totalled 153,806.05 tonnes of tCO<sub>2</sub>e, representing approximately 35.9% of the company's overall emissions. Of this, Scope 1 emissions (direct emissions from owned or controlled sources) accounted for 1%, Scope 2 emissions (indirect emissions from purchased electricity, steam) comprised 30%, and Scope 3 emissions (all other indirect emissions across the valuechain) made up the remaining 69%.

Within Scope 3, the principal contributors were:

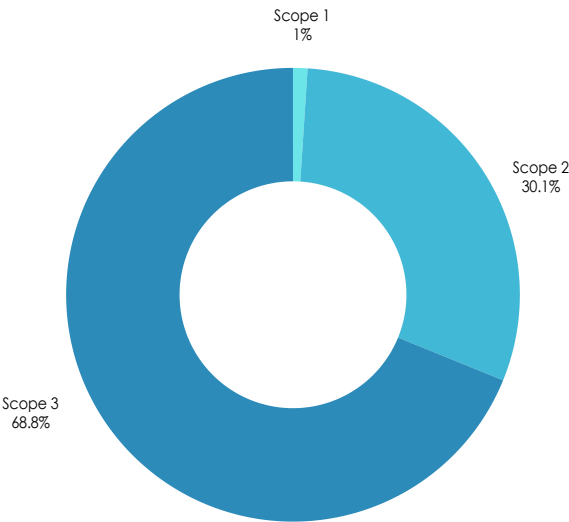
- Category 1: Purchased goods and services
- Category 4: Upstream transportation and distribution
- Category 9: Downstream transportation and distribution

These three categories collectively accounted for 87% of Scope 3 emissions. Additionally, Category 3: Fuel- and energy-related activities (not included in Scope 1 or 2) contributed a further 9% to Scope 3 emissions.

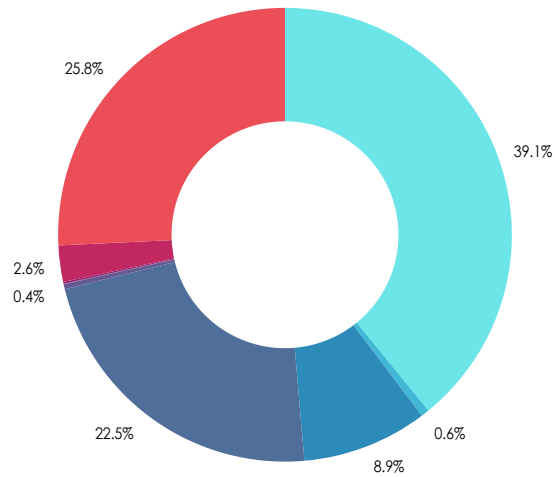
To mitigate emissions, enhancing energy efficiency remains a critical strategy. Reducing energy consumption through improved operational efficiency and optimised resource use is essential for achieving meaningful decarbonisation across the value chain.

GHG Emissions of Jiangsu Plant in 2024		
GHG Emissions Category	Unit	Emissions in 2024
Scope 1 GHG Emissions	tCO <sub>2</sub> e	1,579.26
Scope 2 GHG Emissions	tCO <sub>2</sub> e	46,342.37
<b>Scope 1+2 GHG Emissions</b>	<b>tCO<sub>2</sub>e</b>	<b>47,921.63</b>
<b>Scope 3 GHG Emissions</b>	<b>tCO<sub>2</sub>e</b>	<b>105,884.42</b>

Percentage of GHG Emissions of Jiangsu Plant in 2024 by Scope



### Percentage of Scope 3 GHG Emissions of Jiangsu Plant by Category



●	Category 1: Purchased goods and services
●	Category 2: Capital goods
●	Category 3: Fuel and energy related activities
●	Category 4: Upstream transportation and distribution
●	Category 5: Waste generated in operations
●	Category 6: Business Travel (flight)
●	Category 7: Employee commuting (shuttle bus)
●	Category 8: Upstream leased assets
●	Category 9: Downstream transportation and distribution

Verification was performed by independent third-party BV per ISO 14064-1:2018, ISO 14064-3:2019, and GHG Protocol standards, covering Scope 1, Scope 2, and material Scope 3 emissions under EcoCeres' control.



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## Greenhouse Gases Verification Opinion

is awarded to

### ECO Biochemical Technology (Zhangjiagang) Co., Ltd.

Bureau Veritas Certification (Beijing) Co., Ltd. was engaged to conduct an independent verification of the greenhouse gases (GHG) emissions reported by Eco Biochemical Technology (Zhangjiagang) Co., Ltd. for the period stated below. This verification opinion applies to the related information included within the scope of work described below.

#### Boundaries covered by the verification:

- Verification site name: Eco Biochemical Technology (Zhangjiagang) Co., Ltd.
- Reporting period covered: 01/01/2024 to 31/12/2024

**Organizational boundaries:** Activities and facilities of Eco Biochemical Technology (Zhangjiagang) Co., Ltd. under operational control approach.

**Reporting boundaries:** GHG emissions generated in production of biofuels and related management activities within the organizational boundaries, as well as significant indirect greenhouse gases emissions.

#### Emissions data verified under reporting boundaries:

- Scope 1: Direct GHG emissions: 1,579.26 tCO<sub>2</sub>e
- Scope 2: Indirect GHG emissions from imported energy: 46,342.37 tCO<sub>2</sub>e
- Scope 3: Indirect GHG emissions from transportation: 105,884.42 tCO<sub>2</sub>e
  - 3-1 Purchased goods and services 41,413.55 tCO<sub>2</sub>e
  - 3-2 Capital goods 615.89 tCO<sub>2</sub>e
  - 3-3 Fuel and energy related activities 9,468.03 tCO<sub>2</sub>e
  - 3-4 Upstream transportation and distribution 23,830.44 tCO<sub>2</sub>e
  - 3-5 Waste generated in operations 373.95 tCO<sub>2</sub>e
  - 3-6 Business travel (flight) 44.47 tCO<sub>2</sub>e
  - 3-7 Employee commuting (shuttle bus) 134.53 tCO<sub>2</sub>e
  - 3-8 Upstream leased assets 2,737.85 tCO<sub>2</sub>e
  - 3-9 Downstream transportation & distribution 27,265.71 tCO<sub>2</sub>e
  - 3-11 Use of sold products 0 tCO<sub>2</sub>e
- Total quantified emissions: 153,806.05 tCO<sub>2</sub>e  
(biogenic CO<sub>2</sub> emissions: 76,713.13 tCO<sub>2</sub>e)

**Limitations and exclusions:** Excluding other non-significant indirect GHG emissions

#### GHG verification protocol used to conduct the verification:

- ISO 14064-1:2018 Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals
- ISO 14064-3:2019 Specification with guidance for the verification and validation of greenhouse gas statements
- Greenhouse Gas Protocol Corporate Accounting and Reporting Standard

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# Bureau Veritas Certification



- Greenhouse Gas Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard

#### Level of assurance:

- Reasonable assurance

#### GHG verification methodology:

- Interview for relevant personnel;
- Review of the documentary evidence;
- Evaluation of the methodology and information systems for data collection, aggregation, analysis and review;
- Audit of sampled sites and data to verify source.

#### Verification conclusion:

Based on the verification process and findings, the GHG emission data in the GHG inventory report from Eco Biochemical Technology (Zhangjiagang) Co., Ltd. is in compliance with ISO 14064-1:2018 Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals, Greenhouse Gas Protocol Corporate Accounting and Reporting Standard, and Greenhouse Gas Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard.

#### Statement of independence, impartiality and competence:

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No member of the verification team has a business relationship with Eco Biochemical Technology (Zhangjiagang) Co., Ltd. and its directors or managers beyond that required by this assignment. We conducted this verification independently and to our knowledge there has been no conflict of interest.

Bureau Veritas Group has implemented a Code of Ethics across the business to maintain high ethical standards among staff in their day-to-day business activities.

Lead verifier: Pin Tian

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# HEBEI PLANT EMISSIONS

At EcoCeres' Hebei plants, GHG emissions totalled 57,749.19 tonnes of tCO<sub>2</sub>e, representing approximately 13.5% of the company's overall emissions. Of this, Scope 1 emissions (direct emissions from owned or controlled sources) accounted for 17%, Scope 2 emissions (indirect emissions from purchased electricity, steam) comprised 24%, and Scope 3 emissions (all other indirect emissions across the value chain) made up the remaining 59%.

Within Scope 3, the principal contributors were:

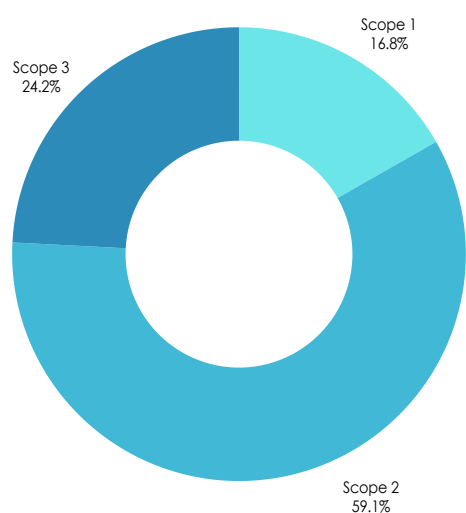
- Category 1: Purchased goods and services
- Category 3: Fuel and energy related activities
- Category 4: Upstream transportation and distribution
- Category 9: Downstream transportation and distribution

These three categories collectively accounted for 99% of Scope 3 emissions. Notably, Category 3: Fuel- and energy-related activities (not included in Scope 1 or 2) contributed a further 60% to Scope 3 emissions.

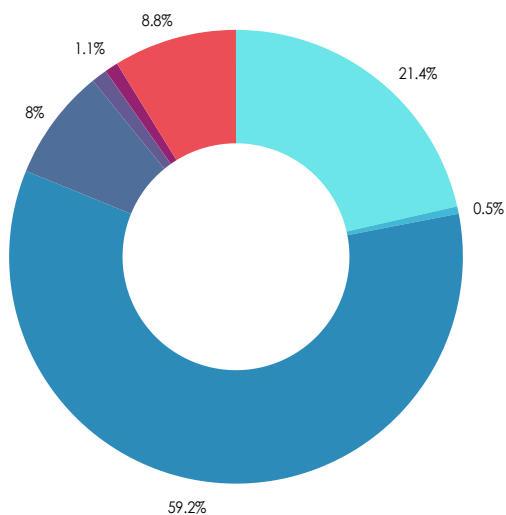
To mitigate emissions, enhancing energy efficiency remains a critical strategy. Reducing energy consumption through improved operational efficiency and optimised resource use is essential for achieving meaningful decarbonisation across the value chain.

GHG Emissions of Hebei Plants in 2024		
GHG Emissions Category	Unit	Emissions in 2024
Scope 1 GHG Emissions	tCO <sub>2</sub> e	9677.88
Scope 2 GHG Emissions	tCO <sub>2</sub> e	34,110.75
Scope 1+2 GHG Emissions	tCO <sub>2</sub> e	43,788.13
Scope 3 GHG Emissions	tCO <sub>2</sub> e	13,961.06

Percentage of GHG Emissions of Hebei Plants in 2024 by Scope



### Percentage of Scope 3 GHG Emissions of Hebei Plants by Category



●	Category 1: Purchased goods and services
●	Category 2: Capital goods
●	Category 3: Fuel and energy related activities
●	Category 4: Upstream transportation and distribution
●	Category 5: Waste generated in operations
●	Category 6: Business Travel (flight)
●	Category 7: Employee commuting (shuttle bus)
●	Category 8: Upstream leased assets
●	Category 9: Downstream transportation and distribution

Verification was performed by independent third-party BV per ISO 14064-1:2018, ISO 14064-3:2019, and GHG Protocol standards, covering Scope 1, Scope 2, and material Scope 3 emissions under EcoCeres' control.



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## Greenhouse Gases Verification Opinion

is awarded to

### HEBEI ECO BIOFUEL CO. LTD., HEBEI ECO BIOENERGY CO. LTD.

Bureau Veritas Certification (Beijing) Co., Ltd. was engaged to conduct an independent verification of the greenhouse gases (GHG) emissions reported by HEBEI ECO BIOFUEL CO. LTD., HEBEI ECO BIOENERGY CO. LTD. for the period stated below. This verification opinion applies to the related information included within the scope of work described below.

#### Boundaries covered by the verification:

- Verification site name: HEBEI ECO BIOFUEL CO. LTD., HEBEI ECO BIOENERGY CO. LTD.
- Reporting period covered: 01/01/2024 to 31/12/2024

**Organizational boundaries:** Activities and facilities of HEBEI ECO BIOFUEL CO. LTD., HEBEI ECO BIOENERGY CO. LTD. under operational control approach.

**Reporting boundaries:** GHG emissions generated in production of biofuels and related management activities within the organizational boundaries, as well as significant indirect greenhouse gases emissions.

#### Emissions data verified under reporting boundaries:

- Scope 1: Direct GHG emissions: 9,677.88 tCO<sub>2</sub>e
- Scope 2: Indirect GHG emissions from imported energy: 34,110.75 tCO<sub>2</sub>e
- Scope 3: Indirect GHG emissions from transportation: 13,961.06 tCO<sub>2</sub>e
  - 3-1 Purchased goods and services 3,021.23 tCO<sub>2</sub>e
  - 3-2 Capital goods 74.19 tCO<sub>2</sub>e
  - 3-3 Fuel and energy related activities 8,346.06 tCO<sub>2</sub>e
  - 3-4 Upstream transportation and distribution 1,122.49 tCO<sub>2</sub>e
  - 3-5 Waste generated in operations 157.04 tCO<sub>2</sub>e
  - 3-6 Business travel (flight) 1.54 tCO<sub>2</sub>e
  - 3-9 Downstream transportation & distribution 1,238.51 tCO<sub>2</sub>e
  - 3-11 Use of sold products 0 tCO<sub>2</sub>e
- Total quantified emissions: 57,749.70 tCO<sub>2</sub>e  
(biogenic CO<sub>2</sub> emissions: 6,544.10 tCO<sub>2</sub>e)

**Limitations and exclusions:** Excluding other non-significant indirect GHG emissions

#### GHG verification protocol used to conduct the verification:

- ISO 14064-1:2018 Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals
- ISO 14064-3:2019 Specification with guidance for the verification and validation of greenhouse gas statements
- Greenhouse Gas Protocol Corporate Accounting and Reporting Standard

Certification body address: Room 02, 9 / F, West Office Building 1, Oriental Economic and Trade City, Oriental Plaza, No.1 East Chang'an Street, Dongcheng District, Beijing, China, 100738

Further clarifications regarding the verification scope of this opinion may be obtained by consulting the organization.

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- Greenhouse Gas Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard

## Level of assurance:

- Reasonable assurance

## GHG verification methodology:

- Interview for relevant personnel;
- Review of the documentary evidence;
- Evaluation of the methodology and information systems for data collection, aggregation, analysis and review;
- Audit of sampled sites and data to verify source.

## Verification conclusion:

Based on the verification process and findings, the GHG emission data in the GHG inventory report from HEBEI ECO BIOFUEL CO. LTD., HEBEI ECO BIOENERGY CO. LTD. is in compliance with ISO 14064-1:2018 Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals, Greenhouse Gas Protocol Corporate Accounting and Reporting Standard, and Greenhouse Gas Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard.

## Statement of independence, impartiality and competence:

Bureau Veritas Group is an independent professional services company that specializes in Quality, Health, Safety, Social and Environmental management with over 190 years' history in providing independent assurance services.

No member of the verification team has a business relationship with HEBEI ECO BIOFUEL CO. LTD., HEBEI ECO BIOENERGY CO. LTD. and its directors or managers beyond that required by this assignment. We conducted this verification independently and to our knowledge there has been no conflict of interest.

Bureau Veritas Group has implemented a Code of Ethics across the business to maintain high ethical standards among staff in their day-to-day business activities.

**Lead verifier:** Pin Tian

**No.:** EMICN100635A

**Version No.:** No.1

**Verification date:** 16/04/2025

**Issue date:** 28/05/2025

Signed on behalf of  
Bureau Veritas Certification (Beijing) Co., Ltd.

Certification body address: Room 02, 9 / F, West Office Building 1, Oriental Economic and Trade City, Oriental Plaza, No.1 East Chang'an Street, Dongcheng District, Beijing, China. 100738  
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# JOHOR PLANT EMISSIONS

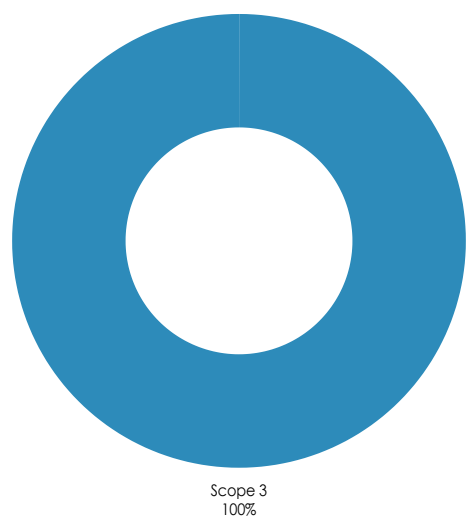
At EcoCeres' Johor plant, which is currently under construction, GHG emissions amounted to 210,154.19 tonnes of tCO<sub>2</sub>e, representing approximately 49.4% of the company's total emissions. Given the site is not yet operational, emissions are exclusively attributed to Scope 3 — indirect emissions across the value chain.

Within Scope 3, Category 1: Purchased goods and services accounted for almost 100% of emissions, primarily driven by the procurement of construction materials, services, and equipment. These emissions are considered non-recurring, associated solely with the construction phase. As such, they are expected to fall to zero in the subsequent reporting period once construction is complete.

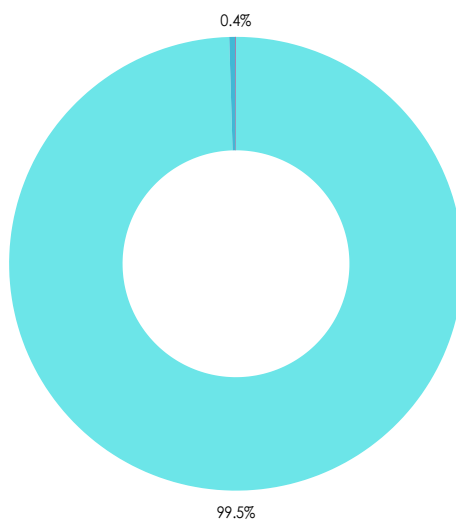
A comprehensive carbon reduction strategy will be developed based on future operational data, enabling targeted mitigation measures aligned with actual energy use and process emissions during the plant's operational phase.

GHG Emissions of Johor Plant in 2024		
GHG Emissions Category	Unit	Emissions in 2024
Scope 1 GHG Emissions	tCO <sub>2</sub> e	18.07
Scope 2 GHG Emissions	tCO <sub>2</sub> e	3.91
Scope 1+2 GHG Emissions	tCO <sub>2</sub> e	21.98
Scope 3 GHG Emissions	tCO <sub>2</sub> e	210,132.21

Percentage of GHG Emissions of Johor Plant in 2024 by Scope



### Percentage of Scope 3 GHG Emissions of Johor Plant by Category



<span style="color: #00FFFF;">●</span>	Category 1: Purchased goods and services
<span style="color: #008080;">●</span>	Category 2: Capital goods
<span style="color: #008080;">●</span>	Category 3: Fuel and energy related activities
<span style="color: #008080;">●</span>	Category 4: Upstream transportation and distribution
<span style="color: #008080;">●</span>	Category 5: Waste generated in operations
<span style="color: #800080;">●</span>	Category 6: Business Travel (flight)
<span style="color: #800080;">●</span>	Category 7: Employee commuting (shuttle bus)
<span style="color: #800080;">●</span>	Category 8: Upstream leased assets
<span style="color: #FF0000;">●</span>	Category 9: Downstream transportation and distribution

Verification was performed by independent third-party BV per ISO 14064-1:2018, ISO 14064-3:2019, and GHG Protocol standards, covering Scope 1, Scope 2, and material Scope 3 emissions under EcoCeres' control.



## Greenhouse Gases Verification Opinion

is awarded to

### ECOCERES RENEWABLE FUELS SDN. BHD.

Bureau Veritas Certification (Beijing) Co., Ltd. was engaged to conduct an independent verification of the greenhouse gases (GHG) emissions reported by ECOCERES RENEWABLE FUELS SDN. BHD. for the period stated below. This verification opinion applies to the related information included within the scope of work described below.

#### Boundaries covered by the verification:

- Verification site name: ECOCERES RENEWABLE FUELS SDN. BHD.
- Reporting period covered: 01/01/2024 to 31/12/2024

**Organizational boundaries:** Activities and facilities of ECOCERES RENEWABLE FUELS SDN. BHD. under operational control approach.

**Reporting boundaries:** GHG emissions generated in construction of the plant and related management activities within the organizational boundaries, as well as significant indirect greenhouse gases emissions.

#### Emissions data verified under reporting boundaries:

- Scope 1: Direct GHG emissions: 18.07 tCO<sub>2</sub>e
- Scope 2: Indirect GHG emissions from imported energy: 3.91 tCO<sub>2</sub>e
- Scope 3: Indirect GHG emissions from transportation: 210,132.21 tCO<sub>2</sub>e
  - 3-1 Purchased goods and services 209,129.30 tCO<sub>2</sub>e
  - 3-2 Capital goods 878.18 tCO<sub>2</sub>e
  - 3-3 Fuel and energy related activities 5.61 tCO<sub>2</sub>e
  - 3-5 Waste generated in operations 10.65 tCO<sub>2</sub>e
  - 3-6 Business travel (flight) 78.20 tCO<sub>2</sub>e
  - 3-7 Employee commuting (shuttle bus) 19.35 tCO<sub>2</sub>e
  - 3-8 Upstream leased assets 10.92 tCO<sub>2</sub>e
- Total quantified emissions: 210,154.19 tCO<sub>2</sub>e

**Limitations and exclusions:** Excluding other non-significant indirect GHG emissions

#### GHG verification protocol used to conduct the verification:

- ISO 14064-1:2018 Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals
- ISO 14064-3:2019 Specification with guidance for the verification and validation of greenhouse gas statements
- Greenhouse Gas Protocol Corporate Accounting and Reporting Standard
- Greenhouse Gas Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard

#### Level of assurance:

- Reasonable assurance

Certification body address: Room 02, 9 / F, West Office Building 1, Oriental Economic and Trade City, Oriental Plaza, No.1 East Chang'an Street, Dongcheng District, Beijing, China. 100738  
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## GHG verification methodology:

- Interview for relevant personnel;
- Review of the documentary evidence;
- Evaluation of the methodology and information systems for data collection, aggregation, analysis and review;
- Audit of sampled sites and data to verify source.

## Verification conclusion:

Based on the verification process and findings, the GHG emission data in the GHG inventory report from ECOCERES RENEWABLE FUELS SDN. BHD. is in compliance with ISO 14064-1:2018 Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals, Greenhouse Gas Protocol Corporate Accounting and Reporting Standard, and Greenhouse Gas Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard.

## Statement of independence, impartiality and competence:

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No member of the verification team has a business relationship with ECOCERES RENEWABLE FUELS SDN. BHD. and its directors or managers beyond that required by this assignment. We conducted this verification independently and to our knowledge there has been no conflict of interest.

Bureau Veritas Group has implemented a Code of Ethics across the business to maintain high ethical standards among staff in their day-to-day business activities.

**Lead verifier:** Pin Tian

**No.:** EMICN100634A

**Version No.:** No.1

**Verification date:** 16/04/2025

**Issue date:** 28/05/2025

*Signed on behalf of*  
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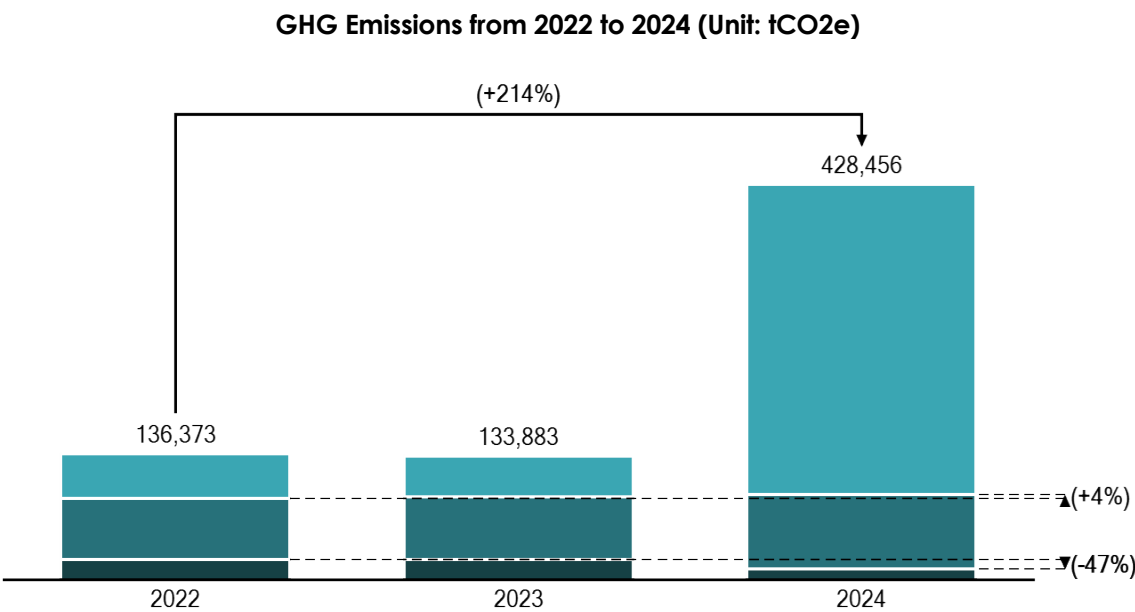
# GHG EMISSIONS PERFORMANCE

At EcoCeres, we conducted a detailed assessment of our GHG emissions across Scopes 1, 2, and 3 for the reporting years 2022 to 2024. The data reveals notable shifts in emissions patterns, particularly within Scope 3.

**Scope 1 emissions**, representing direct GHG emissions from sources owned or controlled by EcoCeres, remained relatively stable between 2022 (21,615.15 tCO<sub>2</sub>e) and 2023 (21,607.65 tCO<sub>2</sub>e). In 2024, emissions declined significantly to 11,360.56 tCO<sub>2</sub>e. This reduction is attributable to the implementation of on-site mitigation measures, including the utilisation of green electricity and the deployment of self-produced renewable energy carriers such as renewable naphtha, biogas, and biomass pellets, alongside process optimisation initiatives.

**Scope 2 emissions**, which account for indirect emissions from the consumption of purchased electricity, increased progressively over the three-year period: from 66,732.19 tCO<sub>2</sub>e in 2022 to 68,396.43 tCO<sub>2</sub>e in 2023, and further to 80,811.82 tCO<sub>2</sub>e in 2024. This upward trend reflects increased energy demand associated with the expansion of production capacity.

The most pronounced change was observed in **Scope 3 emissions**, encompassing all other indirect emissions across our value chain. Emissions decreased from 48,025.66 tCO<sub>2</sub>e in 2022 to 43,879.36 tCO<sub>2</sub>e in 2023, indicating early improvements in supply chain efficiency and procurement practices. However, in 2024, Scope 3 emissions rose sharply to 336,283.89 tCO<sub>2</sub>e. This increase is primarily due to an expanded organisational boundary and construction-related activities at our Johor plant, with Category 1 emissions from purchased goods and services — such as materials and equipment — being non-recurring.



# GHG EMISSIONS INTENSITY

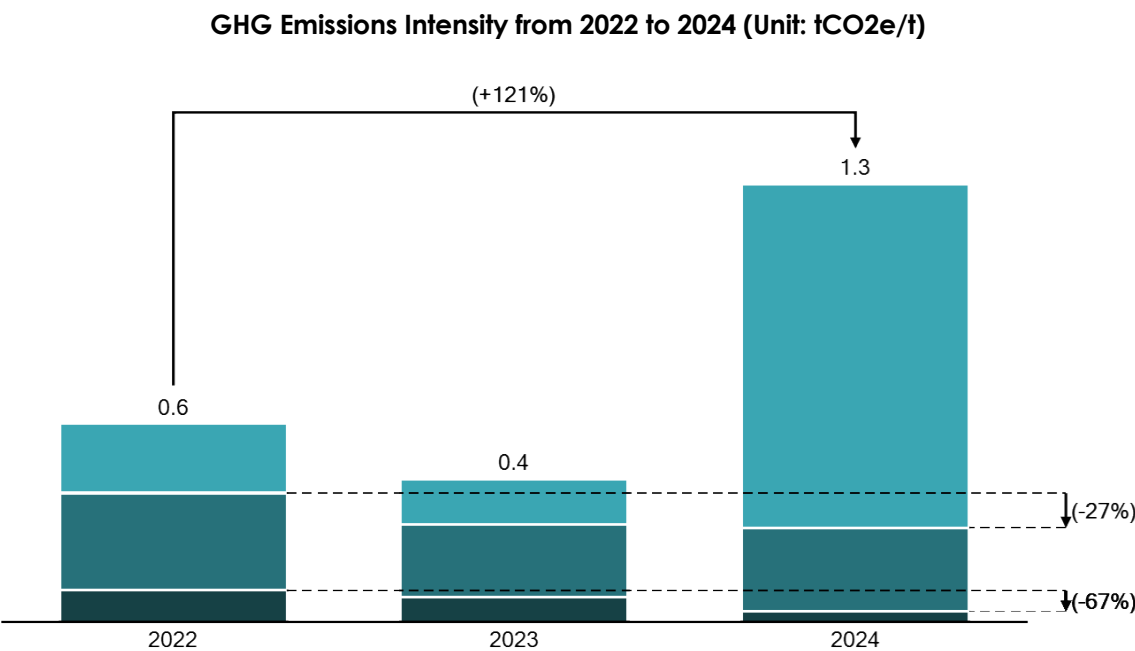
At EcoCeres, we have undertaken a detailed assessment of our greenhouse gas (GHG emission intensity across Scopes 1, 2, and 3 for the years 2022 through 2024. This analysis provides insight into the evolving carbon performance of our operations.

In 2022, our Scope 1 (direct) emission intensity was recorded at 0.09 tCO<sub>2</sub>e/unit, Scope 2 (indirect emissions from purchased energy) at 0.28, and Scope 3 (indirect emission sacross the value chain) at 0.20. These values indicate a relatively balanced distribution of emissions sources, with Scope 2 being the predominant contributor.

In 2023, we achieved reductions across all scopes: Scope 1 intensity declined to 0.07, Scope 2 to 0.21, and Scope 3 to 0.13. These improvements reflect enhanced operational efficiency and the integration of self-produced renewable energy sources, including renewable naphtha, biogas, and biomass pellets.

However, in 2024, a significant shift was observed. Scope 1 intensity further decreased to 0.03, while Scope 2 rose slightly to 0.24, driven by increased energy demand from expanded production capacity. Most notably, Scope 3 intensity surged to 0.99, nearly a fivefold increase compared to 2022. This spike is attributable to one-off construction-related activities at our Johor plant, specifically Category 1 emissions from purchased goods andservices. These emissions are non-recurring and are not expected to persist in future reporting periods.

Overall, the data demonstrates our progress in reducing direct and energy-related emissions intensity. Moving forward, we will continue to embed sustainability into procurement and construction practices, while advancing energy efficiency and emissions control to ensure long-term decarbonisation across our value chain.



# BIOGENIC CARBON EMISSIONS

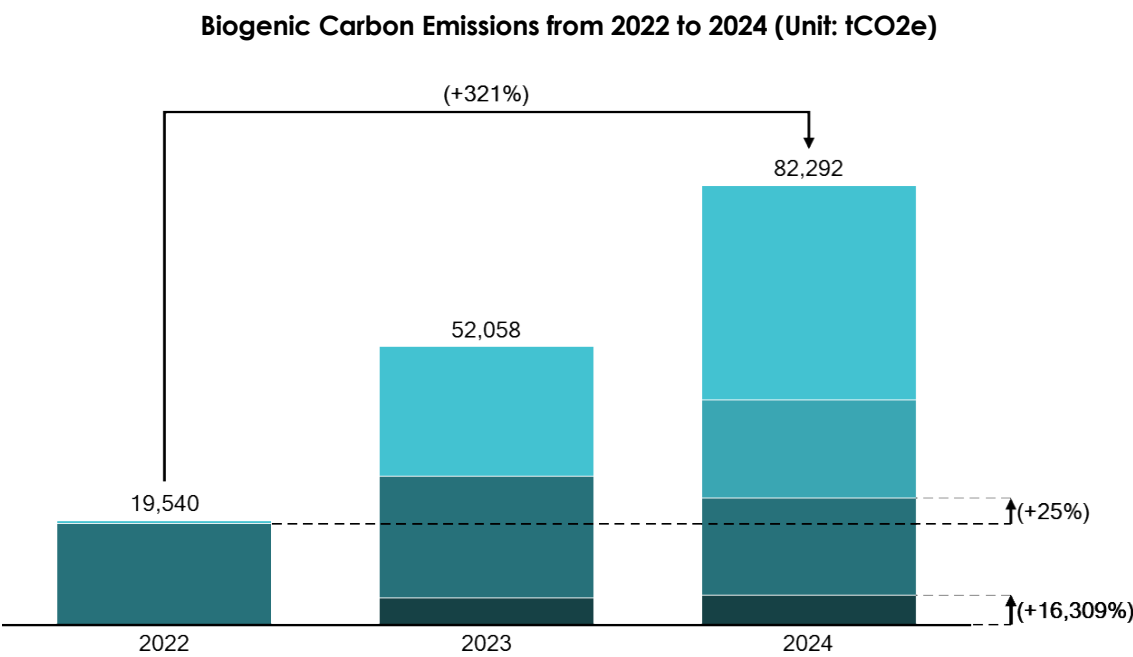
At EcoCeres, we have conducted a three-year assessment of biogenic carbon emissions across our operations, categorised into four emission sources: CE, Low Pressure Dry Gas, High Pressure Dry Gas, and Renewable Naphtha. These emissions originate from biomass-based feedstocks and are generally considered part of the short-term biogenic carbon cycle under prevailing accounting frameworks.

In 2022, our biogenic emissions were relatively modest. CE contributed 34 tCO<sub>2</sub>e, Low Pressure Dry Gas accounted for 631 tCO<sub>2</sub>e, and High Pressure Dry Gas was the dominant source at 18,875 tCO<sub>2</sub>e, reflecting a reliance on high-pressure gas processes during the initial phase of operations.

In 2023, emissions increased substantially across all categories. CE rose to 5,104 tCO<sub>2</sub>e, Low Pressure Dry Gas to 22,782 tCO<sub>2</sub>e, and High Pressure Dry Gas to 24,172 tCO<sub>2</sub>e. This escalation corresponds with increased utilisation of renewable energy carriers and expanded production throughput.

In 2024, CE emissions continued to rise slightly to 5,579 tCO<sub>2</sub>e, while emissions from Low Pressure and High Pressure Dry Gas declined to 18,352 tCO<sub>2</sub>e and 18,124 tCO<sub>2</sub>e, respectively. The most significant development was the introduction of renewable naphtha, which contributed 40,237 tCO<sub>2</sub>e, indicating a strategic shift toward producing higher-value bio-based fuels and diversifying our product portfolio.

This evolving emissions profile underscores the dynamic nature of our production processes and energy strategy. Although biogenic emissions are often treated as carbon-neutral, their magnitude and trajectory necessitate rigorous monitoring. As part of our forward-looking climate strategy, we aim to enhance process efficiency and explore carbon capture and utilisation technologies to mitigate the atmospheric impact of biogenic CO<sub>2</sub> and support long-term climate resilience.





# CARBON REDUCTION RECOMMENDATION

EcoCeres' strategy targets measurable reductions across all scopes with specific, evidence-based actions:

## SCOPE 1: DIRECT EMISSIONS REDUCTION

To further lower Scope 1 emissions:

- **Expand renewable energy adoption:** Increase substitution of natural gas with self-produced bio-based fuels (e.g., renewable naphtha, bio gas, biomass pellets) across facilities.
- **Enhance process efficiency:** Deploy advanced combustion technologies and heat recovery systems to cut emissions from stationary sources.
- **Control fugitive emissions:** Implement rigorous leak detection and repair programs for refrigerants and fire extinguishers.

## SCOPE 2: INDIRECT EMISSIONS (from Energy Use) REDUCTION

To address Scope 2 emissions:

- **Scale green electricity:** Transition to renewable electricity (solar, wind, hydropower) for all facilities progressively, reducing reliance on grid-based fossil fuels.
- **Leverage bio steam:** Expand self-produced bio steam from biomass waste to offset purchased heat step by step, cutting emissions from heating processes.
- **Improve energy efficiency:** Retrofit facilities with LED lighting, smart controls, and high-efficiency motors, realizing reduction in electricity consumption.

## SCOPE 3: INDIRECT EMISSIONS (from the Value Chain) REDUCTION

To tackle Scope 3 emissions, dominated by supply chain:

- **Adopt sustainable procurement:** Shifting goods and services sourcing to low-carbon suppliers.
- **Optimize transportation:** Transition upstream and downstream logistics to low-emission modes (e.g., electric trucks), cutting Category 4 and 9 emissions.
- **Minimize waste:** Enhance recycling and reuse programs to divert production waste from landfills, lowering waste-related emissions.
- **Engage employees:** Promote low-carbon commuting (e.g., bus, train, bicycles) and expand business travel tracking to all modes.

These targeted measures align with EcoCeres' goal of carbon neutrality by 2050, leveraging innovation and collaboration across its value chain.

# CONCLUSION

EcoCeres is steadfast in its commitment to a low-carbon future, harnessing scientific rigor and technological advancement to drive decarbonization. By executing the detailed carbon reduction strategies outlined, EcoCeres aims to achieve carbon neutrality by 2050. This ambition not only aligns with global climate goals but also solidifies EcoCeres' leadership in the renewable fuels sector, delivering sustainable value to stakeholders and the planet.





