# Our Environmental Stewardship

> Solar panel at guard house, Ladang Sungai Buan.

## GHG Emissions

### Why It Matters

**Climate change poses significant risks to ecosystems, economies and communities worldwide, and the onus is upon us to be a part of the solution.**

As a player in the oil palm sector, which has been subject to considerable scrutiny from regulators and the general public, it is vital that we take a proactive approach to addressing climate change and its impacts.

### Our Approach

**In our commitment to addressing climate change and reducing our GHG emissions, we are guided by our Environmental Policy and our Climate Transition Strategy, which is integrated within the AL-Falah Strategic Business Plan.**

Our Climate Transition Strategy focuses on three strategic pillars of our decarbonisation journey:

**Pillar 1: Managing Our Emissions**

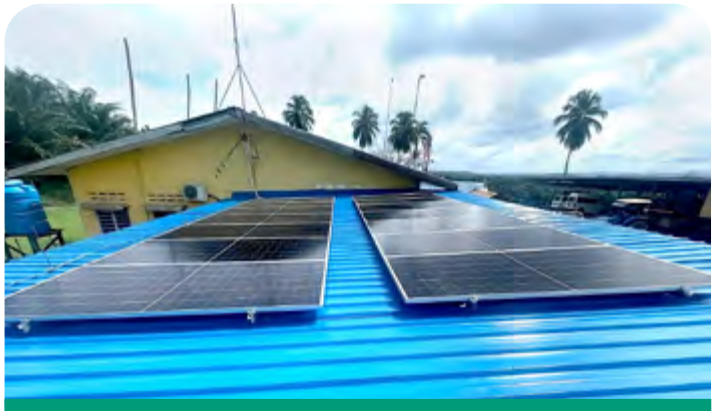
**Effort: Improving energy efficiency at our premises**

**Energy Efficiency**
*(Strategic Business Plan: AL-Falah 22/22)*

- Boiler and turbine replacement contract awarded for Bukit Lawiang Mill.

**Effort: Integrating sustainable practices into our developments**

- Implemented the Industrialised Building System ("IBS") for housing projects on peatlands in Sarawak to reduce environmental impact.



*Solar panel at Ladang Sungai Tenegang, Sabah.*

# Our Environmental Stewardship

## Pillar 2: Investing in Low Emissions and Green Technologies

- Installing solar panels at office buildings, guardhouses, nurseries, loading ramps, stores and street lighting.

**Effort: Alignment to SDG Goals**

### On-Grid Biogas Plant

*(Strategic Business Plan: AL-Falah 22/22)*

- Shareholders' Agreement signed with Cenergi RE.
- Preliminary works initiated, with completion targeted in 2026.

### Biomass Waste Utilisation

- Utilising fibres and palm kernel shells as fuel for renewable energy ("RE").

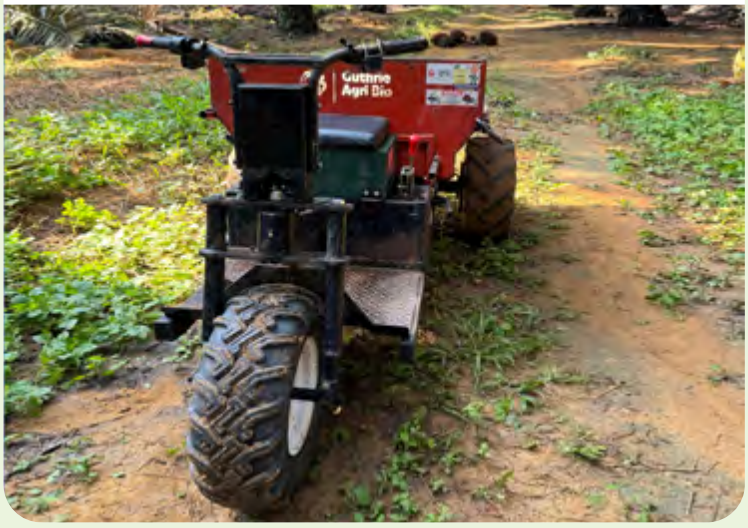
### Solar Panels

*(Strategic Business Plan: AL-Falah 22/22)*

- Installation of rooftop solar panels in Sabah Region.

### Electrical Vehicles

- Exploring the use of electric vehicles ("EVs") at Ladang Bukit Lawiang with the purchase of two Badang electric-powered mechanical buffaloes.




## Pillar 3: Leveraging Partnerships and Collaborations

- Collaborating with a local NGO over a seven-year project (2022-2029) to restore 4,300 ha of the degraded GAFR in Johor, focusing on conserving its biodiversity and ecosystems through nature-based solutions.
- Carbon sink will increase through re-vegetation and tree planting activities.

***Task Force on Climate-related Financial Disclosures ("TCFD") Recommendations***

We are enhancing our internal capabilities to address the recommendations of the TCFD, enabling us to manage critical climate-related risks and opportunities more strategically and comprehensively.

# Our Environmental Stewardship

## *Energy Management*

### Energy Consumption

In FY2024, we utilised 197,890 GJ of energy, marking a 7% decrease compared to FY2023 that underscores the effectiveness of our energy conservation initiatives.

| Item | 2023 (GJ) | 2024 (GJ) |
|---|---|---|
| Non-Renewable Energy Fuel (Purchased & Consumed) | 5,601.55 | **2,564.75** |
| Non-Renewable Energy Electricity (Purchased) | 3,744.14 | **6,371.73** |
| Renewable Energy Fuel (Purchased / Acquired & Consumed) | 153,917.28 | **157,752.56** |
| Total Renewable Energy (Generated) | 49,970.81 | **31,201.06** |
| **Total Energy** | 213,233.78 | **197,890.10** |

### Managing Our GHG Emissions

**We have adopted a range of strategies to reduce and remove our GHG emissions including:**

1. Setting up of biogas plant.
2. Installing rooftop solar panels at our mills, estates and office buildings.
3. Upgrading our boilers and turbines to be more energy efficient.
4. Utilising fibres and palm kernel shells as fuel for renewable energy (RE).
5. Exploring electric vehicles (EVs) at our estates.
6. Improving our operational processes - including better peatland management, optimised waste management, and more - to reduce unnecessary emissions.
7. Strictly adhering to our zero-burning policy.

A key component of our emissions reduction strategy is the construction of biogas plant at our mill. This facility capture methane emissions and convert them into energy, providing a resource while reducing operational costs. Recognising the substantial investment required, we are taking a measured, long-term approach to their implementation.

### *GHG Data Collection Training*

During the year, we engaged an expert consultant to conduct four GHG data collection workshops across our operations in Peninsular Malaysia, Sarawak and Sabah, and at our HQ.

**Completed by Q3 2024, these workshops covered:**

1. An introduction to GHG emissions and climate change.
2. Frameworks and methodologies for GHG inventories tailored to our operations.
3. Data collection processes and workflows for our staff.

The workshops aimed at strengthening staff expertise and understanding, empowering more effective GHG data management and supporting our broader climate action initiatives.

# Our Environmental Stewardship

## *Our Carbon Footprint*

FY2024 marks the baseline for measuring our carbon footprint across Scope 1, 2 and 3 of GHG emissions, establishing a benchmark to track progress and assess impact. To ensure alignment with our strategic objectives and sustainability priorities, our AL-Falah 22/22 framework will guide future mitigation strategies.

**GHG Emissions**

| Item | 2022 | 2023 | 2024 |
|---|---|---|---|
| Scope 1 Emissions ($tCO_2e$) | N/A | N/A | **157,907** |
| Scope 2 Emissions ($tCO_2e$) | N/A | N/A | **2,063** |
| Scope 3 Emissions ($tCO_2e$) | N/A | N/A | **628** |
| **Average Total GHG Emissions ($tCO_2e$/MT)** | N/A | N/A | **160,598** |

*Scope 3: For business travel and employee commuting only*

## *Boiler Emissions*

We closely monitor emissions from our mill boilers through our Continuous Emissions Monitoring System (CEMS), which ensures compliance with local environmental regulations and provides real-time updates to the DOE. Furthermore, to enhance transparency, we installed closed-circuit television (CCTV) systems in FY2024 to continuously monitor emissions from boiler chimneys, allowing both mill managers and head office teams to access live video feeds as needed.

As of FY2024, all our mills are equipped with Electrostatic Precipitator, ensuring effective management of dust and smoke opacity. This proactive step positions us to not only meet but exceed future regulatory requirements for detailed reporting on dust particles and smoke opacity.

**Boiler Emissions**

For the past three years, all our mills have consistently operated within smoke opacity regulatory limits, demonstrating the success of our dust and smoke management practices.

| | | Smoke Opacity Readings (%)/Year | | |
|---|---|---|---|---|
| **Mill** | **Regulatory Limits (%)** | **2022** | **2023** | **2024** |
| Bukit Lawiang, Johor | 20 | 18.00 | 18.00 | **18.00** |
| Kota Bahagia, Pahang | 20 | 12.98 | 2.05 | **9.78** |
| Sungai Tenegang, Sabah | 20 | 3.98 | 5.92 | **5.84** |
| Mamahat, Sabah | 20 | 17.20 | 4.54 | **5.28** |
| Raja Udang, Sarawak | 20 | 21.90 | 29.00 | **4.70** |
| Gedong, Sarawak | 50 | 29.13 | 25.97 | **24.70** |