



PT. Great Giant Pineapple

ENERGY REPORT 2024



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Introduction



Energy Management

GGP, as a company operating in the agricultural sector, has a vested interest in mitigating the climate crisis triggered by global warming. Ongoing climate change will have significant impacts on the plantation industry in various aspects, including production, crop quality, and the overall long-term sustainability of GGP's operations. Therefore, efforts to reduce carbon emissions or decarbonization have become a central focus in GGP's current sustainability strategy.

GGP's primary goal is to achieve Zero Emissions by the year 2050. To reach this objective, GGP has devised a long-term strategy and a roadmap up to 2030 for reducing Greenhouse Gas (GHG) emissions from its operational activities across all its business units, particularly those located within the GGP Food and Energy Estate (FEE) in Lampung. GGP is still developing and implementing efficient energy management in our main part of our operation, it's one of our way towards Zero Emissions 2050.

Energy Audits to Identify Opportunities for Improving Energy Performance

PT. Great Giant Pineapple has been audited by the GGP internal audit team and external auditors in relation to the implementation of ISO 50001. Internal audits are conducted annually, every semester. The internal audit will refer to the indicators outlined in ISO 50001. Meanwhile, external audits are carried out by third parties every 1 to 3 years. In February 2024, GGP was audited by external auditors from PT. Langgeng Ciptalindo. This audit aims to ensure that the implementation of the energy management system in accordance with ISO 50001 has been carried out effectively, as well as to serve as a basis for continuous improvement in the energy sector at GGP.

Energy Efficiency Action

Energy Target

In 2024, The energy objective and target are outlined in the KPIs, and it can be seen in the table below :

Objective	Key Performance Indicator	Target
Energy Efficiency	Total Energy Savings	2%

Action to reduce amount of energy

To achieve the established objectives and targets, several improvements related to energy efficiency have been implemented. These improvements are based on identified savings opportunities from both the Energy Team and the results of previous energy audits. The various initiative that have been undertaken to meet the set targets that can be seen in below:

No	Energy Reduction Initiatives
1	Woodchip Co-firing
2	Utilizing effluent for cleaning and sanitazation
3	Implementing Energy Monitoring Management System

Energy Performance

In the past three years, we have monitored our energy performance, which can be implied from our activities and sustainable energy initiatives. Our energy effort is a long process that cannot be done in a matter of seconds. We still give our full effort to achieve our energy long-term goal for the year to come.

Energy Consumption

Type of Energy	Total Energy Consumption (MWh)			
	2021	2022	2023	2024
Non-Renewable Energy	618,960	620,964	751,560	879,113
Renewable Energy	47,159	44,546	35,780	25,422
Total Energy Consumption*	666,119	665,510	787,340	904,535

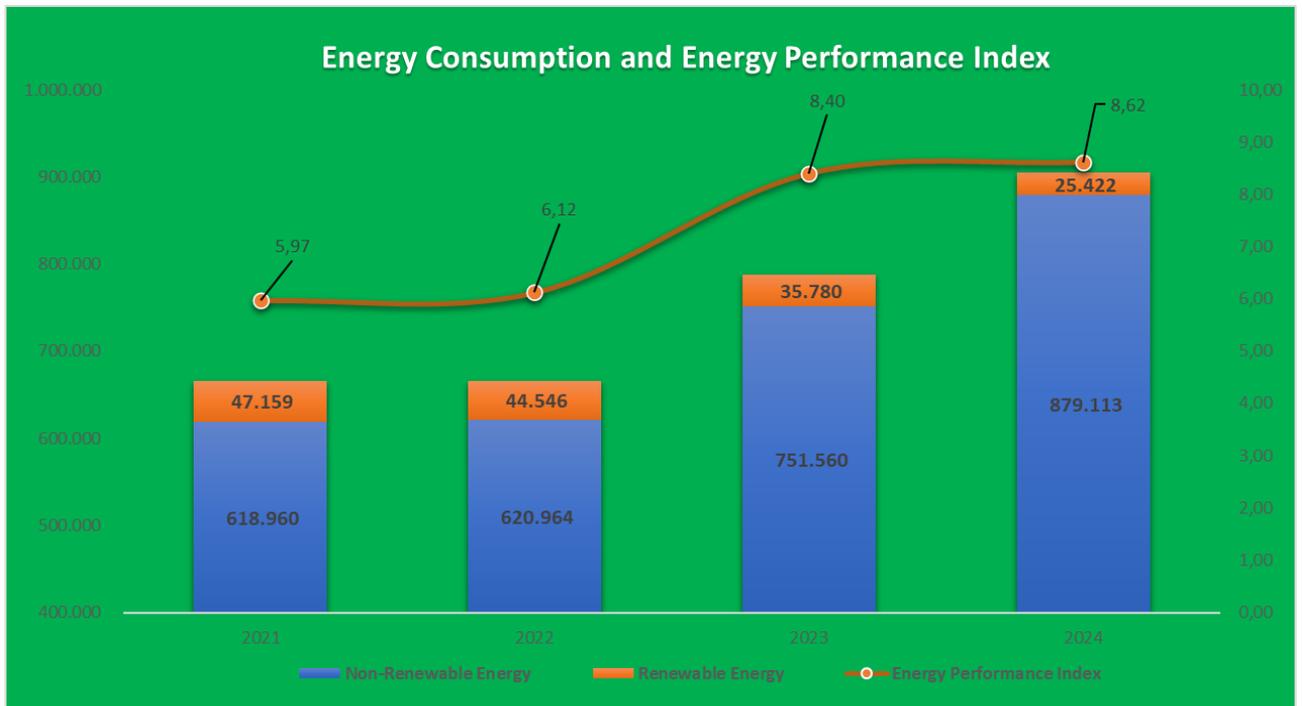
*Exclude External Energy Sourcing (PLN)

Evaluation of Progress in Reducing Energy Consumption

Energy performance is also monitored using an index, which compares energy consumption with its driving factors. This index monitoring is used solely as a comparison based on linear regression.

	2021	2022	2023	2024
Energy Index*	5.88	6.02	8.26	8.48

*Exclude External Energy Sourcing (PLN)



From the observation through energy consumption in GGP that shown in table and chart above, it can tell a glimpse the GGP energy management and activities going on in GGP 2024.

Objective	Key Performance Indicator	Target	Realization
Energy Efficiency	Total Energy Savings	2%	0,77%

The table above shows that our target for 2024 was set at 2%, yet we have only achieved 0.77%. This shortfall is largely due to the ongoing long drought from 2023, which has severely impacted our plantation productivity and hindered our factory processing capabilities. The resulting decline in productivity has led to inefficient use of carbon fuels for our operations. Furthermore, the expansion of other GGP business units has significantly reduce the biogas supply available for use in the GGP factory.

However, in the face of these challenges, we remain steadfast in our commitment to conserving energy and seeking out sustainable energy initiative. We recognize the importance of acting decisively toward our energy goals, and we outline our activities and initiatives in the next section of this report. Together, we can overcome these hurdles and pave the way for a more sustainable future.

Energy Related Training

At PT. Great Giant Pineapple, annual training is conducted to raise employee awareness about energy consumption reduction and their competency managing energy. In 2024, this training took place in the month of July, with 24 attendees consisting of representatives from various departments at GGP. These representatives will become champions in their respective departments to promote awareness regarding energy consumption reductions. GGP energy related training can be seen in the list below :

1. Awareness Energy Training
2. Energy Efficiency Training
3. Energy Team Competency Training
4. Energy Baseline (EnB) dan Energy Performance Indicator (EnPI) (ISO 50001) Training



Sustainable Energy Initiative

Green Energy

GGP's operations utilize both renewable and non-renewable energy sources. In 2010, GGP initiated its journey towards sustainable energy use by committing to renewable energy practices, marked by the development of a biogas fuel plant which converts liquid waste into biogas. This transformation focuses on processing pineapple liquid waste from GGP and tapioca waste from PT. Umas Jaya Agrotama into biogas, thereby addressing waste management and energy needs simultaneously.

The biogas produced is strategically utilized, with 30% replacing heavy fuel oil (HFO) in the tapioca factory, allowing the factory to substitute 100% of the fossil fuel oil used in its thermal oil boiler unit with biogas. The remaining 70% is supplied to the power plant, substituting 7-10% of the fossil fuel required for the boiler unit.

In addition to using biogas as a fuel source for operating the Biogas Plant, GGP's efforts to reduce energy consumption also include a transition program where the use of solar fuel for transportation and heavy equipment operations in the plantation is shifting to Compressed Natural Gas (CNG). This transition program is part of GGP's commitment to reducing its carbon footprint.

Through continuous innovation and dedication, GGP continually commit to reduces its environmental footprint, and demonstrates leadership in sustainable energy solutions and circular economy implementation within our industry sector.



Energy Innovation Investment

In our effort to become a sustainable company and achieve Net Zero Emissions in 2060, we are investing in several energy projects that will produce efficient and clean energy that can impact our environment and drive our sustainable growth by decreasing our portion of non-renewable fuel consumption.

GGP has allocated around 6 billion rupiah to commit to our sustainable energy initiative in 2024. Most of our energy initiatives are focused on reducing our electricity consumption in our operation. Our investments already saved our energy consumption 21.170 GJ, and from the monetary side saved around 2 billion rupiah of our energy operational cost.

APPENDIX



ATTENDANCE SHEET

Subject / Code	: ISO 5001 :	Time	: 08.00 - 16.00
Group	:	Instructor	: 1. Agung Sedyanegara 2.
Date	: 02 Agustus 2022		
Jenis Training*	: Luar Negeri	Lembaga	: Enercross
Place	: TERC	Alamat Lembaga	:

No	No. Indek	Nama Name	Jabatan/Bagian Position/Dept.	Tanda Tangan Signature / NO WA
1.	1000381	M. Chairuddin	Learning digitalization	1.
2.	10012976	Juli Erwanda	Cannery	2.
3.	10007808.	HARRY C.	LABELING & PACKAGING.	3.
4.	02248	Supriyono B	Labelling	4.
5.	03617	Siti Aisyah	Purchasing	5.
6.	3877	Ewom. R	PP	6.
7.	02367	Keket Santia	Main tenence factory	7.
8.	02782	Fulvahi	PP	8.
9.	0909	Sisilia	Cannery	9.
10.	03771	Wayan Pande	FK	10.
11.		M Akdan Spatur	Sustainability	11.
12.		M. Ibtis Muadimullah	Sustainability	12.
13.	02529	Supriyono	conc	13.
14.	01001	JAROT	conc.	14.
15.	02921	IMade Duri P	Cone	15.
16.	10003208	I Made S	mc	16.
17.	6867	Prapi	cm	17.
18.	3157	ISA	COGEN	18.
19.	07512	I kekot HM	Sustara	19.
20.	10006574	Dan Saputri	PP	20.

Berita Acara Pelaksanaan Training

- | | |
|-----------------------------------|---|
| 1. Tanggal pelaksanaan | : 02 Agustus 2022 |
| 2. Jam pelaksanaan | : 7 jam |
| 3. Durasi | : 3 hari |
| 4. Rencana peserta | : 80 orang |
| 5. Realisasi peserta | : 34 orang |
| 6. Alasan ketidak hadiran peserta | : Absen (jika ada peserta yang tidak hadir) |
| 7. Materi yang disampaikan | : ISO 5001 |

Sign of Instructor :

1. Agung Sedyanegara
2. _____

Approval Mgr/Head of Dept



ATTENDANCE SHEET

Subject / Code	: 180 2001	Time	: 08.00 - 16.00
Group	:	Instructor	: 1. Agung Sedjawan
Date	: 02 Agustus 2022		2.
Jenis Training*	: Inhouse	Lembaga	: CNERCOSS
Place	: TC Re	Alamat Lembaga	:

No	No. Indek	Nama Name	Jabatan/Bagian Position/Dept.	Tanda Tangan Signature / NO
1.		Julius S.	Eustia	1.
2.	1002887	Suryo	PP	2.
3.	03706	Nuzlar	QA	3.
4.		Meilan A	Jc	4.
5.				5.
6.				6.
7.				7.
8.				8.
9.				9.
10.				10.
11.				11.
12.				12.
13.				13.
14.				14.
15.				15.
16.				16.
17.				17.
18.				18.
19.				19.
20.				20.

Berita Acara Pelaksanaan Training

- 1. Tanggal pelaksanaan : 02 Agustus 2022
- 2. Jam pelaksanaan : 8 jam
- 3. Durasi : 3 hari
- 4. Rencana peserta : 30 orang
- 5. Realisasi peserta : 29 orang
- 6. Alasan ketidakhadiran peserta : *absen* (jika ada peserta yang tidak hadir)
- 7. Materi yang disampaikan : 1802001

Sign of Instructor :

1.

2. _____

Approval Mgr/Head of Dept



PT. Great Giant Pineapple

Doc.No : F/H/ T.08
Rev : 5
Date of Issue : 5 Juni 2015

ATTENDANCE SHEET

Subject / Code	: ISO 50001	Time	: 08.00 - 16.00
Group	:	Instructor	: 1. Agung Ledyana
Date	: 03 Agustus 2015		2.
Jenis Training*	: In house	Lembaga	: Bakti Coss
Place	: TCRS	Alamat Lembaga	:

No	No. Indek	Nama Name	Jabatan/Bagian Position/Dept.	Tanda Tangan Signature
1.	10001321	M. Charuddin	Learning Development	1.
2.	10007800	HARRY CHRISTANTO	LABELING & PACKAGING	2.
3.		M. Abdan Spaur	Sustainability	3.
4.	02248	Supriyono B	Labeling	4.
5.	03617	Siti Aisyah	Purchasing	5.
6.	03771	Wayan Pande	FK	6.
7.	06867	Eupraphi	CM	7.
8.		M. Dini M.	Sustainability	8.
9.	3877	Zwinn. R	PP	9.
10.	10002007	Agus	PP	10.
11.	02509	Supriyono	COOK	11.
12.	02021	IMADE RIZKI	Care	12.
13.	00982	Puradi	PP	13.
14.	07512	Ikeet Herta	sustan	14.
15.	0909	Sisilia	CN	15.
16.	02369	Kelut. Santia	MC.	16.
17.	03151	ISA IRANAN	COGEX	17.
18.		Dian Lajana	QA	18.
19.		Muzlat	QA	19.
20.	09597	Afri dyaningcha	QA Factory	20.

Berita Acara Pelaksanaan Training

- 1. Tanggal pelaksanaan : 03 Agustus
- 2. Jam pelaksanaan : 7 jam
- 3. Durasi : 3 hari
- 4. Rencana peserta : 30 orang
- 5. Realisasi peserta : 20 orang
- 6. Alasan ketidak hadiran peserta : Audis (jika ada peserta yang tidak hadir)
- 7. Materi yang disampaikan : ISO 50001

Sign of Instructor :

1.
AGUNG LEDYANA

2. _____

Approval Mgr/Head of Dept



PT. Great Giant Pineapple

Doc.No : F/H/T.08
 Rev : 5
 Date of Issue : 5 Juni 2015

ATTENDANCE SHEET

Subject / Code	: 180 50001	Time	: 08.00 : 16.50
Group	:	Instructor	: 1. Agung Sedyanegara
Date	: 04 Desember 2012		2.
Jenis Training*	: Inhouse	Lembaga	: enerecess
Place	: RC RC	Alamat Lembaga	:

No	No. Indek	Nama Name	Jabatan/Bagian Position/Dept.	Tanda Tangan Signature
1.	1000634	Dian Jupun	lp	1.
2.	02529	Supriyono	conc	2.
3.	10007808	HARRY C.	LABELING.	3.
4.	03617	Siti Aisyah	Purchasing	4.
5.		M. Fauz Muslimullah	Sustainability	5.
6.		M Akbar Syarif	Sustainability	6.
7.	1001381	M. Chandella	L&D	7.
8.	02248	Supriyono B.	Label	8.
9.	3877	Eroni R	PP	9.
10.	05706	Nuzul	QA	10.
11.	02921	Masa Anjib	Conc	11.
12.	07512	Leet HM	Sustain	12.
13.	10002882	Suryo	PP	13.
14.	03151	LPA Masran	COGEN	14.
15.	04597	Afridiyansya	SA	15.
16.	02367	Leht. Faria	Uc	16.
17.	03771	Wayan Pande	FK	17.
18.	0282	Purmi	PP	18.
19.		Maslan A	JE	19.
20.				20.

Berita Acara Pelaksanaan Training

- 1. Tanggal pelaksanaan : _____
- 2. Jam pelaksanaan : _____ jam
- 3. Durasi : _____ hari
- 4. Rencana peserta : _____ orang
- 5. Realisasi peserta : _____ orang
- 6. Alasan ketidakhadiran peserta : _____ (jika ada peserta yang tidak hadir)
- 7. Materi yang disampaikan : _____

Sign of Instructor :
 1.

Approval Mgr/Head of Dept