CENERGI SEA
SUSTAINABILITY REPORT 2018

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TABLE OF CONTENTS

Section 1:
Introduction

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Introduction

"Powering Southeast Asia towards a Sustainable Future"

Who We Are

A Premier Renewable Energy Investment Company

That is our commitment.
With our technical expertise, modern technology, and financial capabilities, we:

1. Develop renewable energy projects, from start to end, focusing on biogas, biomass, solar PV, and mini hydro.
2. Provide corporations and institutions with innovative and cost-saving energy efficiency solutions.
3. Continuously seek and invest in alternative technologies that reduce carbon footprint and propel the sustainability movement forward
4. Together, our mission in Southeast Asia is to turn emissions into energy, and policy into actions.

About Us

At Cenergi, we are a team of diverse personalities with a common passion for promoting sustainable practices and reducing carbon emissions across southeast Asia. We believe that conscious and responsible use of energy is key to a sustainable future. Together, we envision a world where society functions in harmony with the environment.

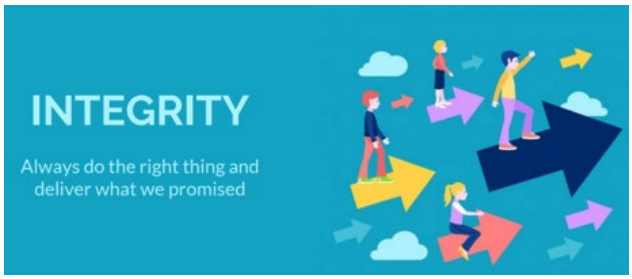
Our award-winning business is divided into three main areas; 'Renewable Energy', 'Energy Efficiency' and 'New Ventures'. Across these areas, we possess the full spectrum of technical, commercial, financing and operational capabilities for clean energy and energy efficiency projects.

We started our journey in 2013, and today Cenergi is one of the largest grid-connected Palm Oil Mill Effluent (POME) biogas players in Malaysia. We own and operate five plants that together generate 7.0 MW of power as of December 2018. Construction work has already commenced for our first Indonesian venture - a 3.0 MW in Indonesia as well as another 1.5MW locally. We have also recently completed the second phase of a RM 40 million energy efficiency project that guarantees electricity savings of up to 33% for a local university, with all four phases due to be completed in early 2019.

By 2021, Cenergi aims to have 100 MW of operating clean energy assets and a total investment of RM 300 million in Energy Savings Performance Agreements (ESPA) projects across Southeast Asia.

VISION	To be the premier sustainable utilities company in SEA
MISSION	Turn Emissions into energy, and policy into actions.
aspirational GOALS	<u>2021</u> • 100 MW of renewable power generation capacity installed • EE projects revenue with a cumulative investment value of RM 300 million across Southeast Asia generated <u>2023</u> • Producer 300,000 tonnes/annum of biomas pellets • 2 mt of CO2 equivalent avoidance • RM 1 billion revenue

Our Core Values



Message from the

Head of Sustainability

Welcome to Cenergi SEA's first Sustainability Report

Cenergi's very foundation is built on the principles of sustainability. Our value proposition has remained simple - we are committed to providing clean energy using the region's natural and renewable resources. We aim to ensure that Malaysia and the ASEAN region meet the energy and economic challenges of the future through responsible investment, innovation and the setting up of a new, robust industry.

The propagation of clean renewable energy resources has many benefits; the foremost being carbon reduction. As we move into a future where climate change increasingly threatens our living environment, our communities and our economy, it has become pertinent to look into improved technologies, to incubate ideas and to encourage green, sustainable infrastructure. There are also numerous supporting benefits that come from following this path. A dynamic green technology industry would spur on the creation of jobs, knowledge transfer, resource diversification, energy security and general economic growth.

In its journey to date, Cenergi has had its share of pressures in growing an industry that has not yet achieved its true potential. From operational road bumps in the nascent energy efficiency industry to lack of awareness in the constantly changing renewable energy policy and landscape space, we acknowledge that the process of our growth is one where we are continuously learning.

In this space, we have already pioneered ideas in energy efficiency particularly in delivering this across to the educational arena with our largest investment at present, in delivering low-carbon solutions to local

universities to save on their electricity bills. Reaching out to the larger market where we merge energy efficiency and environmental consciousness with educational arenas remains one of our top goals. Our operations have also given us many insights in terms of treading the space of responsibly managing biofuel power plants and closing the loop in waste management. As one of the region's largest grid-connected biogas power producers, we aim to achieve the gold standard in biogas operations and maintenance as well as ensure that our HSE (health, safety & environment) policies are closely monitored.

We do believe that standing by our pillars of sustainability and maintaining our reputation as a responsible developer and operator will see us through to our vision of being the leading clean energy company in the region. In terms of corporate responsibility, we put our people and local communities at the forefront of our business.

In this year alone, we have launched what will be an annual effort to reach out to the local communities surrounding our power plants by running educational workshops with primary school students as well as providing our plant staff and their families with educational tools for the upcoming school year.

Cenergi has grown from a handful of passionate people to a team of over 100 that inculcates a culture of integrity, respect and teamwork into our everyday operations. Our team is not only driven but also diverse and inclusive. We highly encourage women in the work force and have a staff ratio of 60:40 (men to women) as well as innovative schemes that encourage female leadership and participation in the industry.

Cenergi also holds the values of transparency and accountability close to the heart. Our business development strategies and our review processes include the highest standards in governance and compliance. Our new investments and ventures undergo a multi-layered review process in which a Sustainability Committee offers guidance and weighs the opportunities and risks against an ESG (Environmental, Social & Governance) context. We take compliance and anti-corruption policies seriously in our business dealings and practice 'No Gift' policies as well as have an open and honest approach to issues of corporate governance with our board and top management.

Action against climate change remains at the top of Cenergi's goals for the future. We truly believe that through our business activities, we are aligned in tackling global challenges such as access to energy, carbon reduction, social development, innovation in technology and support for economic prosperity. The UN's Sustainable Development Goals draw the framework for our organisation's own future plans to ensure long-term resilience against changing environments.

For this reason, we promote the UN Sustainable Development Goals as an important framework for measuring progress. As an organization, we are currently working to ensure the long-term resilience of our business by implementing a dedicated Sustainability Strategic Plan. Based on the UN goals, it consists of a set of long-term commitments that guide our activities and our action plans to address key sustainability topics. We believe that in implementing targets that are aligned toward alleviating key environmental, social and governance issues, we will truly be a corporate citizen of the new era and pave the way toward to a more sustainable future.

*- **Shakila Rajendra,** Head of Sustainability -*

CEO's Message

From the Desk of the Group Chief Executive Officer

Since Cenergi's journey began in 2013, we have built a solid foundation for growth and are ready to capitalise on more opportunities in our key operating areas. I am excited about what the future holds for our company and its role in shaping sustainability across Southeast Asia.

At Cenergi, our objective is clear – to become the premier clean energy generation company (GENCO) and fully integrated energy service company (ESCO) in Southeast Asia. We want to lead the region in Renewable Energy (RE) and in the reduction of carbon footprint. Clean and renewable energy is gaining traction in global policy and Cenergi is committed to making it into a sustainable and viable business of the future. We take great pride in possessing the full spectrum of technical, commercial, financing and operational capabilities in energy efficiency and clean energy projects. My personal vision for the company is to improve the current RE industry by developing safe, reliable, and affordable energy solutions for Southeast Asia. In the year ahead, our business priorities are to continue growing our Malaysian portfolio but also to venture beyond the domestic market, focusing on Indonesia and Vietnam.

We in Cenergi believe in placing community at the forefront of our work. To create a higher quality of life by increasing environmental-responsibility in our corporate activities and to use our unique position to help realise a society that functions in harmony with the environment. Corporate Social Responsibility is integrated in all that we do besides bi-annual events that include not just communities in immediate contact with Cenergi's operations but also those that could directly benefit from exposure to sustainable practices and awareness.

On the policy front, my aim for the year is to implement and execute the Health, Safety and Environment (HSE) and Whistleblowing policies across the company.

We have set ourselves an ambitious target of adding an average of 90 MW per year for the next three years and to achieve 270 MW of new generation capacity by 2020. Over the past 12 months, I am pleased with the tremendous progress we have made in managing costs, promoting conservation and expanding our service options.

Apart from owning and operating five biogas plants in Peninsula Malaysia, we have also successfully implemented the last phase of our largest project to-date with the International Islamic University Malaysia (IIUM) which started in October 2016. I am delighted to report that we are on track in completing this project and have already seen savings of over 30% in energy costs since its implementation. Our renewable energy projects are also on track with 7MW of biogas in Malaysia already in operation as well as another 3MWs in Indonesia currently under construction. The next year will be an exciting one as the project in Indonesia will be Cenergi's first venture internationally.

I am proud of the milestones we have achieved throughout our journey thus far and the steady progress we have made. These successes would not be possible without the dedication and hard work, throughout the years, of the staff and support from the Board of Directors.

I am humbled to lead an outstanding team that has become the "Cenergi family" that I envisioned us to be. With high quality of work and collaborative team ethics, we are well-positioned for growth; to generate clean energy and to reduce carbon emissions.

*- **Ernest Navaratnam,** Group CEO -*

Section 2:

Our Business – Overview

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Renewable Energy – Biogas

The Situation:

Being one of the world's largest producers and exporters of palm oil, Malaysia is well-positioned to promote the use of biogas as a renewable energy resource.

Methane-filled wastewater called Palm Oil Mill Effluent (POME) is discharged in huge amounts daily through processes of sterilisation, crude oil clarification and cracked mixture separation. These highly polluting processes include the release of a mixture of gases including methane into the atmosphere. Methane alone has a Global Warming Potential 21 times that of carbon dioxide. This poses as a critical issue for palm oil mill owners - to contain and dispose off methane gas as the emissions released from their industry pose a harmful threats to both the environment and the humans who inhabit it.

The Opportunity:

Seizing the opportunity to transform POME into power, Cenergi partnered with Havys Palm Oil Mill to develop a 2 MW biogas power plant with the mill. Operating under a 13-year Build-Own-Operate-Transfer (BOOT) agreement, the project uses anaerobic digestion to recover biogas from the POME supplied by Havys Palm Oil Mill.

The in-ground anaerobic digester typically generates 1,000 – 1,200 m3 of raw biogas per hour, which is then scrubbed to remove hydrogen sulphide and transmitted through a dehumidifier system to reduce its moisture content. This treated biogas is then channelled to engines that produce electricity which is then exported to the national grid through a Renewable Energy Power Purchase Agreement (REPPA) with Tenaga Nasional Bhd.

The Havys project qualified for a renewable energy feed-in tariff (FiT) programme by the Sustainable Development Authority of Malaysia (SEDA) and has generated enough electricity to power over 4,000 households per month since its operations began in August 2013. The plant not only supplies electricity to the community, but also provides employment opportunities to local talent and reduces carbon

emissions. Havys has contributed to carbon avoidance a total of 36,000 tonnes of CO2 (2013 to 2018) equivalent by capturing methane gas from being released to the atmosphere. Havys celebrated its 5-year operational anniversary this August 2018

Riding on the success of Havys, Cenergi consequently initiated the Sawira and Cheekah biogas plants which are extensions of the biogas application. As rural agriculture areas are often sizeable, its potential for biogas application is as enormous.

Our grid-connected biogas plants reduce carbon emissions while providing a clean energy resource for heat and power generation. Additionally, our biogas projects also supply electricity to the national grid and help improve the quality of wastewater in the area.

The Journey So Far:

Ultimately, Cenergi aims to utilise electricity generation which results in the reduction of greenhouse gas emissions as well as to increase awareness among rural societies in managing effluents of palm oil mills.

In 2017, Cenergi launched their first jointly-owned biogas power plant with Tanah Makmur Berhad (TMB). Similar to the first three projects in its core functions, the Sri Jelutung plant uses an innovative double-scrubber technology which enables it to capture methane more efficiently from the POME. This has resulted in the total reduction of carbon emissions from the plant since its commencement of operations to equate that of 2000 passenger vehicles.

The Future:

To date, Cenergi is the largest grid-connected biogas-to-energy developers in Malaysia and our four biogas-to-energy plants generate a total capacity of 7.0 MW as of December 2018. Cenergi has also expanded its expertise to Indonesia and expect to operate similar projects in the near future. With each plant, Cenergi strengthens its name in not just the biogas field but also as a market leader in greening the energy industry.

Energy Efficiency

The Situation

As energy prices rise, cost reductions are becoming a key concern, making investments in energy efficiency more attractive and rewarding. Energy efficiency measures can provide a fast boost to reducing production costs in operations.

Key Drivers for Energy Efficiency:

- Identification of opportunities to counter rising energy costs
- Addressing energy security
- Improving operational efficiency
- Ensuring competitiveness in a low carbon economy
- Improving the bottom line

The Opportunity

In January 2014, the then Ministry of Energy, Green Technology and Water (KeTTHA) released a National Energy Efficiency Action Plan (NEEAP) which aims at presenting a strategy for a well-coordinated and cost-effective implementation of energy efficiency measures in the industrial, commercial and residential sectors which will lead to reduced energy consumptions and economic savings for the consumers and the nation.

The concept of energy efficiency in the context of Cenergi's business operations therefore refers to a dynamic energy management system and technology implemented into buildings to ensure cost savings and reduction in environmental impact. Energy efficiency

is seen as the 'low-hanging' fruit in terms of carbon reduction as well as providing a greater cost savings to energy consumption.

The Journey So Far

Cenergi's Energy Savings Performance Agreement (ESPA) model was built as a commercial model that allows a developer to invest in energy efficiency measures and incorporate these into buildings to allow the consumer to enjoy energy savings. Using innovative commercial structures, our energy efficiency solutions can pay for themselves out of the savings realised, meaning our customers realize immediate operating cost savings with no upfront capital expenditure.

To date, Cenergi has successfully implemented the ESPA model through four key projects in Malaysia. Our latest and largest project is with the International Islamic University Malaysia (IIUM). On October 24th 2016, Cenergi entered an agreement with IIUM to be able to design, procure, install, operate and maintain energy saving equipment. Through this agreement, we executed a RM40 million Built-Own-Transfer (BOT) energy savings contract guaranteeing an electricity savings of up to 33.53% per year. The successful implementation of the ESPA model at IIUM has inspired us to roll-out similar projects across all universities in the country.

The Future

Energy intensity in Malaysia has been rising affecting both energy security and environmental targets. This provides one of the most compelling reasons to incorporate measures that improve the efficient usage of energy. Through the National Energy Efficiency Action Plan (NEEAP) the government of Malaysia is encouraging and pushing toward the productive use of energy and minimising waste. In Sept 2018, the Ministry of Energy, Science, Technology, Environment & Climate Change (MESTECC) announced plans to introduce the Energy Efficiency Conservation Bill which will further strengthen policy toward energy efficiency.

In line with these efforts to promote a sustainable future, at Cenergi, we take two approaches under our Energy Efficiency arm, the Energy Savings Performance Agreement (ESPA) and Energy and Resource Management advisory.

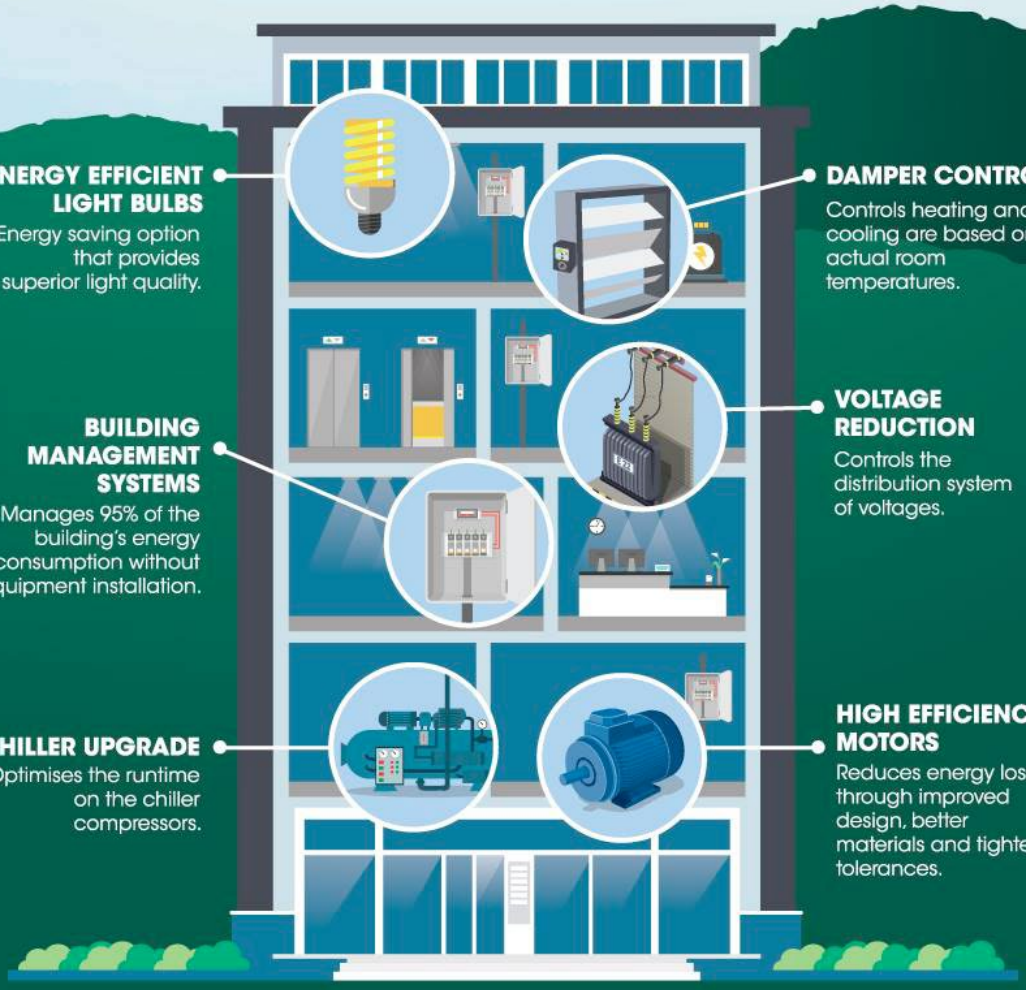
To date, we have helped reduce 75 MW in energy consumption, amounting to over RM80 million in cost savings for commercial and institutional building owners through our four projects spread across Malaysia.

Our future plans in energy efficiency include replicating our model across higher educational institutions across the region, not just to help reduce costs and carbon emissions but also to incorporate awareness building and to use the concept of resource efficiency as educational tools and to inspire innovation.

REDUCING CARBON FOOTPRINT FOR A SUSTAINABLE FUTURE

cenergi

Energy efficiency improvements available today decrease carbon emissions instantly. To promote a sustainable future, Cenergi offers two approaches under its energy efficiency arm, the Energy Savings Performance Agreement (ESPA) and Energy and Resource Management. With ESPA, Cenergi helps Building Operators by financing energy efficiency projects that reduce the total utility bill and most importantly, carbon footprint. On the other hand, its Energy and Resource Management comprises of energy audits that offer sustainable energy efficiency solutions.



ENERGY EFFICIENT LIGHT BULBS
Energy saving option that provides superior light quality.

DAMPER CONTROL
Controls heating and cooling are based on actual room temperatures.

BUILDING MANAGEMENT SYSTEMS
Manages 95% of the building's energy consumption without equipment installation.

VOLTAGE REDUCTION
Controls the distribution system of voltages.

CHILLER UPGRADE
Optimises the runtime on the chiller compressors.

HIGH EFFICIENCY MOTORS
Reduces energy losses through improved design, better materials and tighter tolerances.

Carbon Impact of Our Business

Our Total Energy Efficiency Savings

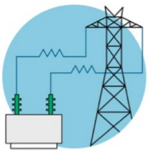
Cumulative from 2013 to 2018

38,308

MWh

Our Total Renewable Energy Generation

Cumulative from 2013 to 2018



89,479

MWh

Our Total Energy Cost Savings

Cumulative from 2013 to 2018

RM 13.4

mil

Section 3:
Sustainability At Cenergi

Section 3: *Sustainability At Cenergi*

We aim to be ASEAN's leading renewable energy company focusing on carbon reduction initiatives through diversified & sustainable solutions.

Cenergi prides itself as an ethical company. Our core values, integrity, transparency, respect, sustainability and safety all that we do as a corporate citizen. To us, this means building a commercially viable business that does not cause harm, but more than that, we strive to make positive changes to the environment and community.

Public events, outreach programs, and pro bono commitments aren't just a nice-to-have, but a priority for us. We have since adopted the international Environment, Social, and Governance (ESG) standards and these are reflected in all aspects of our business.

What is Sustainability To Us?

"Sustainability is something everyone can work towards... whether it is picking up garbage you see on the street or boycotting a company that practices environmentally harmful business methods, we all can make a difference."

- UN Decade of Education for Sustainable Development 2005 – 2014

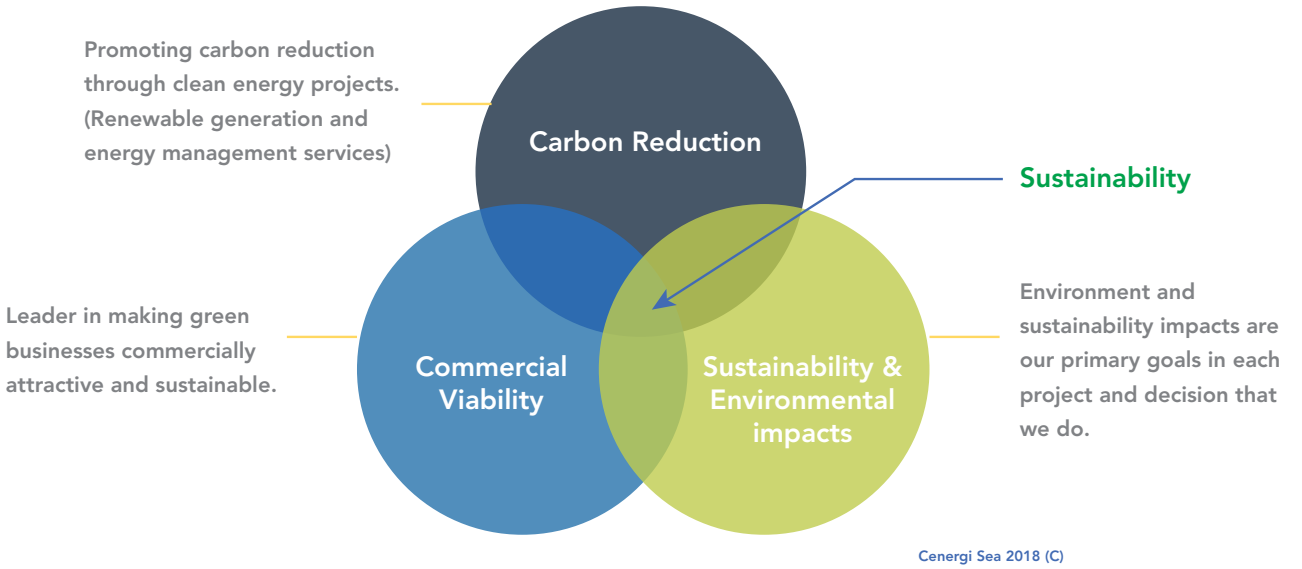
Our vision, policies, and business strategies are all aimed at reducing carbon footprint and building a sustainable future. As economies all over the world welcomed the Paris Agreement in 2015 (COP21), we too are doing our part in keeping the global temperature rise to a minimum. It is now more important than ever for us to lower carbon emissions, and clean energy plays an immense role towards this cause.

Beyond complying with all relevant environmental regulations and encouraging environmental awareness in our business culture, we are working to arm Southeast Asian countries with the knowledge and infrastructure to grow sustainably with our renewable energy and energy efficiency solutions.

For Cenergi SEA, we are governed with our Sustainability pillars: Commercial Viability, Carbon Reduction and Environmental Impacts. In whatever we do, we ensure that these 3 principles are embodied in to our projects, our decision making and even our lifestyle. We believe that there should be a balance between the three aspects in order to produce a sustainable business which benefits not only the shareholders, but our people, the community and the environment. In today's corporate industry, the focus has shifted towards High

Sustainability companies. Our sustainability philosophy is that 'High sustainability companies appears to be more long-term oriented: they have an investor base with a larger proportion of long-term oriented investors and they communicate more long-term information in their conference calls with sell-side analysts'. They measure not only financial measures but also non-financial data.

We aim to develop a reporting system in accordance to the Bursa Malaysia reporting guidelines, which includes: stakeholders' engagement, materiality assessment and the usage of the ESG matrix in our reports in 2018.



i. Carbon reduction: Promoting carbon reduction through clean energy projects. (Renewable generation and energy management services).

ii. Commercial viability: Leader in making green businesses commercially attractive and sustainable.

iii. Sustainability & Environmental impacts: Sustainability and environmental impact awareness

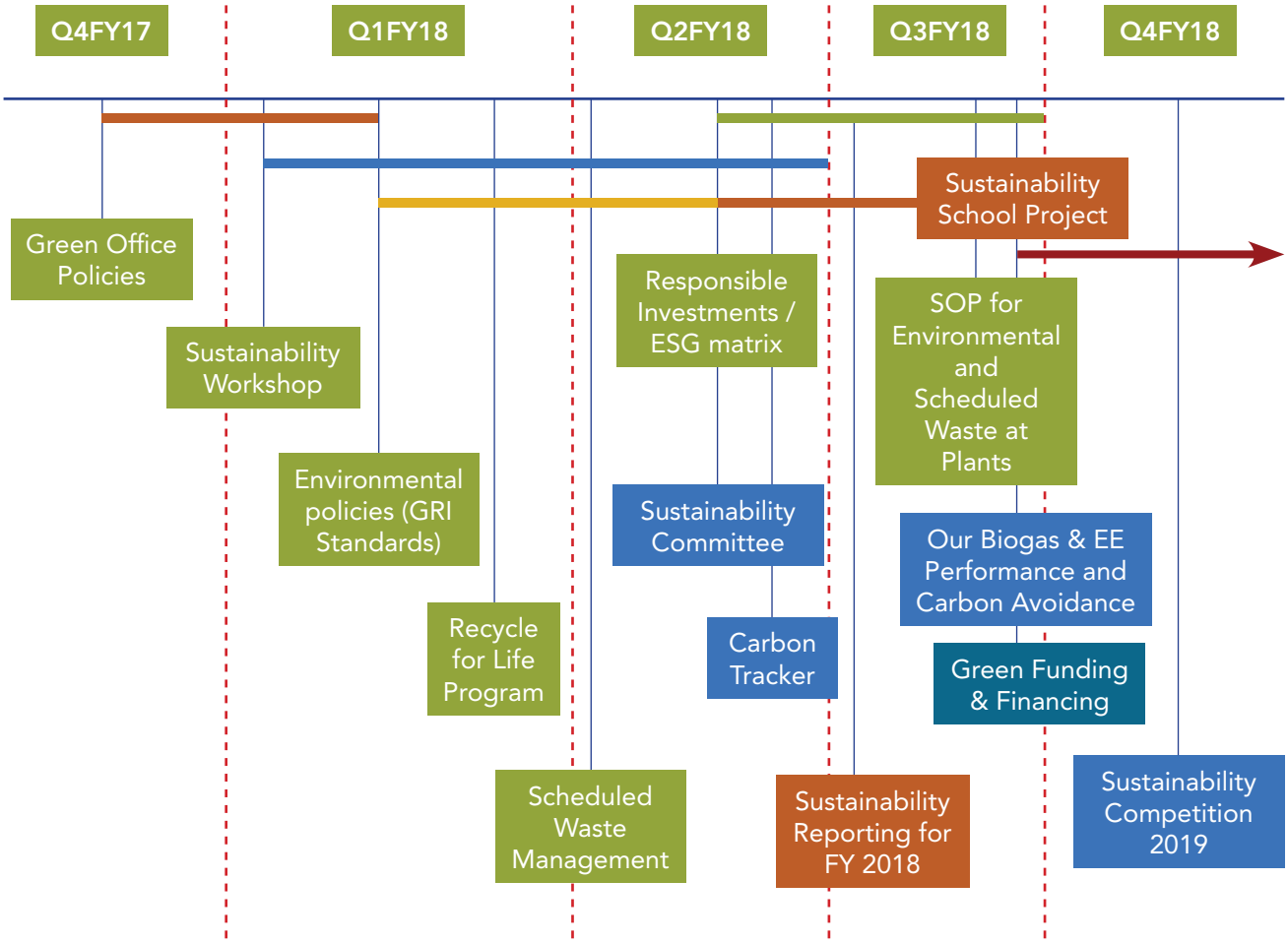
We aim to emulate the SDGs, New Economic Model & 11th Malaysia Plan's (11MP) core values in our long-term goals: People, Planet and Profit.

Sustainability in Cenergi SEA are involved in the following areas:

- Green Financing and Impact investments
- Sustainability Reporting
- Environmental Policies
- ESG Matrix for our investment strategy review
- Carbon Reduction Strategy
- Health, Safety & Environmental monitoring at our asset sites
- Scheduled Waste Management
- Green Office
- Risk and Materiality assessment
- Human Capital engagement
- Compliance and Corporate Governance

Sustainability - Timeline 2018

Timeline for the development of our Sustainability measures & initiatives at Cenergi

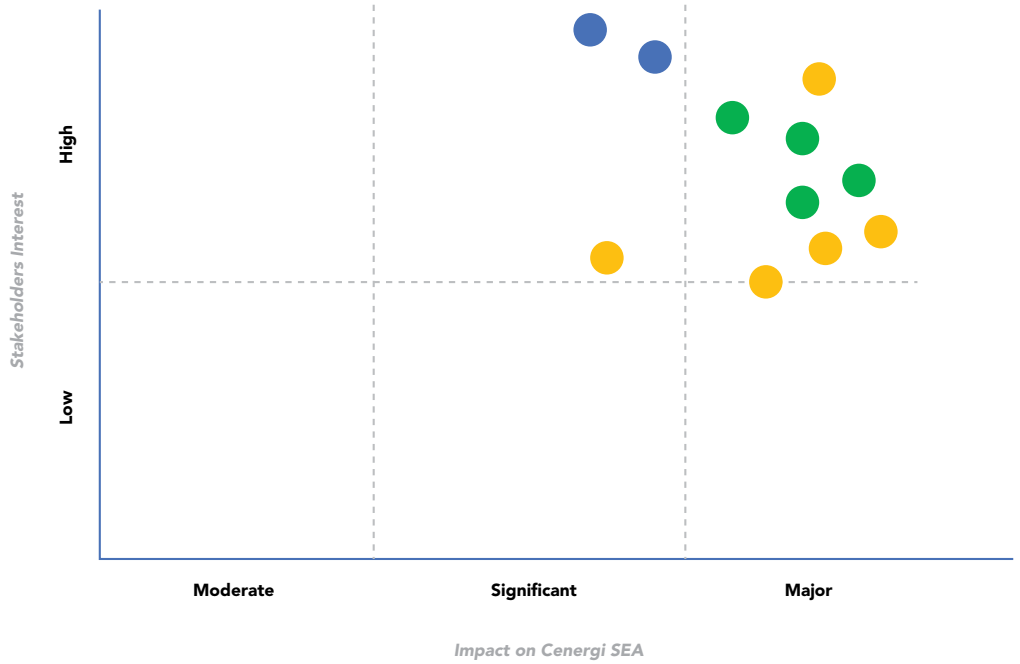


Materiality at Cenergi SEA

The concept of materiality is central to sustainability reporting, and it factors into investors' evaluations of the companies in which they invest. GRI provides high-level guidance in its Sustainability Reporting Standards to help companies undertake a process through which topics are identified and prioritized for reporting and communicating. Companies put this guidance into practice by considering their main sustainability impacts and, in dialogue with their stakeholders, prioritize certain topics and issues to report on.

Materiality Assessment: What Matters to Us?

Theme	Description	Programme	Indicator	SDG
Climate change	Reduce carbon footprint and hazardous emissions through our sustainable renewable energy projects	Green energy generation	Green energy share (%); greenhouse gas intensity of heat and power generation (g CO e/kWh)	13
Integration of green energy	Deployment of clean energy solutions to help meet growing global demand	Our biogas plants	Smart meters in use (number)	9
Waste and Resource Management	Efficient use of resources and proper waste management to minimise waste and to optimise efficiency level.	Green office policy	Waste for recycling	6 & 12
Energy Efficiency	Help our customers reduce their energy consumption	Energy savings	Energy savings realised through our energy consultancy services (GWh)	7
Community impacts and local contents	Ensure that our business operations and projects do not pose any negative impacts to local communities.	Local communities	We engage in continous dialogue with stakeholders and invest in in community development funds and skill-based initiatives	11
Employee Well-being	Promote employee health and well-being	Flexi-work policy	Satisfaction with health initiatives	
Talent development	Foster professional development of employees, develop next-generation employees, and attract new talent to increase the overall capacity and expertise in the company	Performance and development; employee satisfaction and motivation	Satisfaction with learning and development (0-100); Employee satisfaction and motivation (0-100)	5
Diversity	Support development of a more diverse workforce and provide equal access to opportunities	Employee diversity	- Racial diversity - Gender-balanced workforce - Balanced age groups	5
Safety and well-being	Provide a safe working environment	Workplace safety	Safe Man Hours	8
Governance and accountability	Prevent corruption and fraud by our employee in their relationships with authorities and business partners	Whistleblowing policy and ESG checklist	Substantiated whistleblower case	16

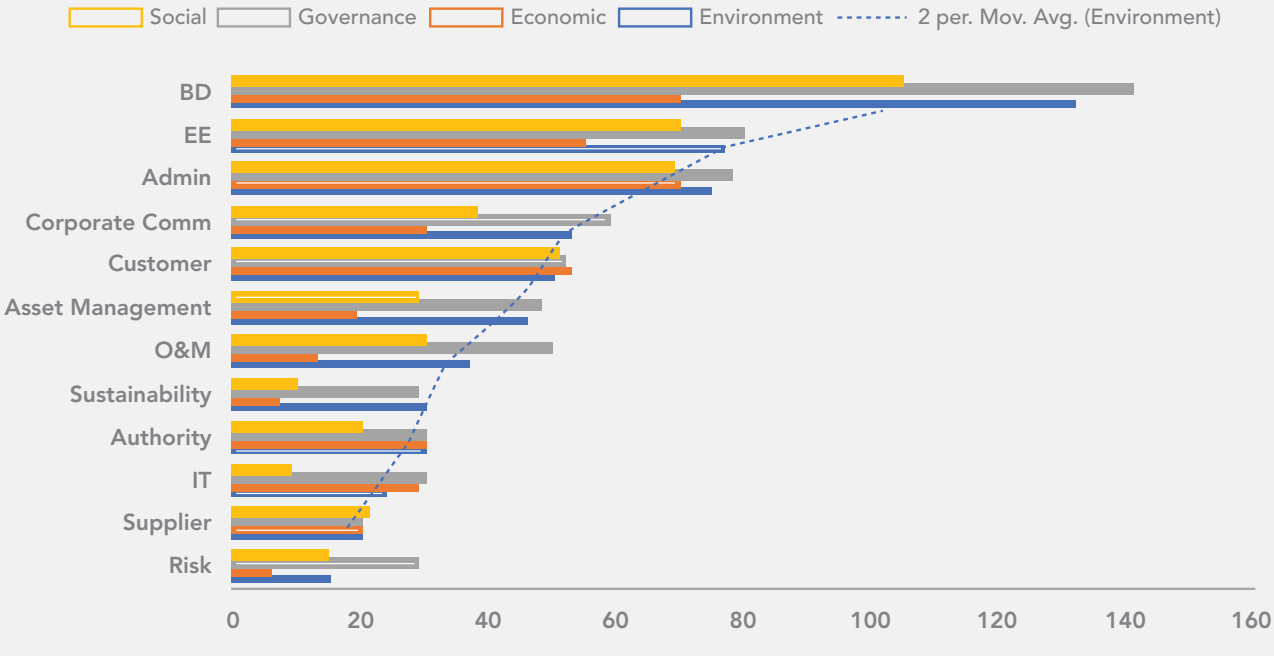


Key Focus Areas

In April 2018, we conducted a survey to all stakeholders – both internal and external for Cenergi SEA to provide their perception towards the importance of sustainability in the RE industry. The questions were categorised into core functions of sustainability: Economic, Environmental, Social and Governance.

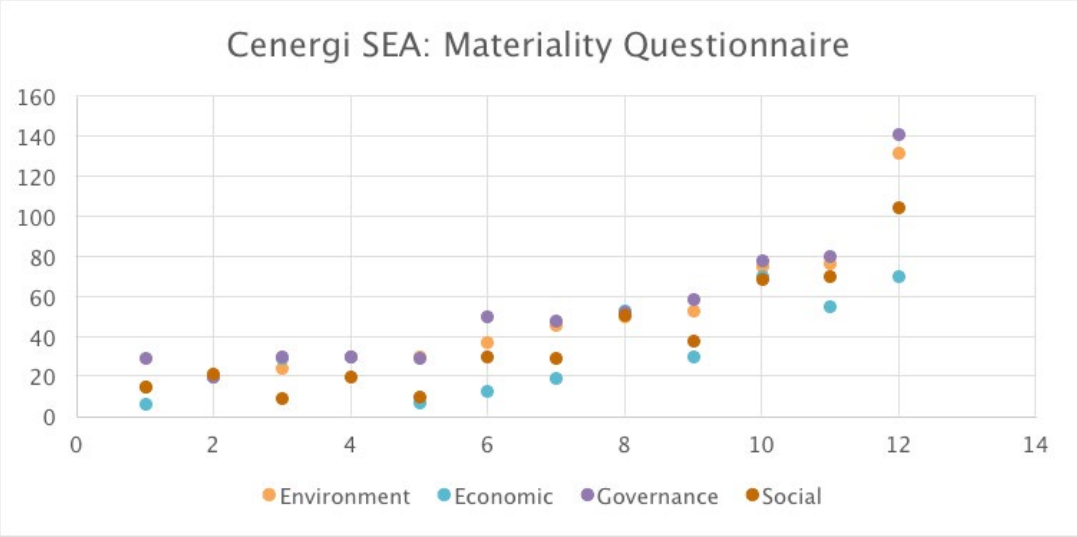
From the table below, the most common perception with the highest vote is (1) Governance which scored at 31% of the entire testing population, (2) Environment, (3) Social and (4) Economics.

Graph 2: Total Scoring based on Cenergi SEA's Department/Stakeholders



From Graph 2, it shows that the Business Development (BD) division had the highest number of respondents, (140). As per Table 1, Governance had the highest number of votes.

Dept	Environment	Economic	Governance	Social	Total
Total	589	402	646	467	2,104
Percentage (%)	28%	19%	31%	22%	100%



Based on the results of the questionnaire above, we have concluded that Governance is perceived as the most important value for our business according to our stakeholders. This reflects that Governance risks a material topic or area which the company has to focus on in ensuring that the organisation is sustainable in the future.

ESG – The Sustainability Score Board

Environmental, social and governance (ESG) refers to the three central factors in measuring the sustainability and ethical impact of an investment in a company or business.

Social: The company's degree of social responsibility, including Fair and beneficial business practices towards labour and the community.

Environmental: The measurement of a company's environmental responsibility through minimising ecologically destructive practices.

Governance: The economic value generated through the organisation's operations after costs.

The concept of sustainability, more often than not, remains interdisciplinary as they encompass Economic, Environmental, Social and Governance features. Climate change and anthropogenic pollution has however, made the Environmental aspect of sustainability the most pressing matter to ensure corporate resilience. Nonetheless, the Economic, Social and the Governance aspects should be considered just as intrinsic to the concept of true sustainability.

What is EESG?

- A corporate's Economic, Environmental, Social and Governance (ESG) indicates its non-financial performance through their initiatives with sustainable activities, dealing ethical issues and improving corporate governance.
- EESG also incorporates the intangible aspects of a respective corporate by taking in non-financial performance indicators such as carbon footprint measuring and reporting, accountability and transparency etc.
- A corporate's EESG are values are customarily reflected from their investments, actions and policies, and hence these three fundamental factors remain central to the sustainability and ethical outreach or impact.
- ESG is bound to be crucial as a framework as Responsible Investors look into several factors for evaluate risks in their decision-making process.

What consists of EESG?

Environment

- Waste and polution
- Resource depletion
- GHG emissions
- Deforestation
- Climate Change

Governance

- Corporate policies
- Company governance
- Tax Strategy
- Executive remuneration
- Political lobbying
- Corruption and bribery
- Board diversity
- Board structure

Social

- Employee relations
- Employee diversity
- Working conditions
- Local communities
- Health, Safety and conflict

Economic

- Ethical Profit generation
- Financial stability
- Ethical investments

Economic aspect of EESG

For a company to run successfully and have a long presence in an industry, the respective company needs to be financially stable and balanced. This can be achieved when the company obtains profits beyond the break-even. However, the difference between gaining profits that are environmentally and ethically sound makes a profound difference. Hence Cenergi SEA takes precautionary measures before making investments which fall in accordance to this factor in the EESG.

Environmental aspect of EESG

Our Vision, Policies and Business strategies are always inclined towards Sustainable development. We are aiming to become a carbon-positive organisation that balances the Economic, and the Environmental impacts, which is well facilitated by our policies and Investments. With environmental sustainability at the core of our culture, we strive to disseminate the importance of improving Energy Efficiency and transforming the existing exhaustible Energy systems to renewable sources. Energy generation in Malaysia is predominantly based on Natural Gas and Coal, two fossil fuel derived Energy sources that accounted for about 76% of the Greenhouse gas emissions in 2011.

Governance aspect of EESG

As we expand in the Southeast Asian market, the requirement of governance and reporting becomes vital. In order to render transparency in reporting our sustainability progress and activities, we would also comply with the GRI standards to by the United Nations Global Compact. We also intend to develop a reporting system that falls under the Bursa Malaysia reporting guidelines which includes materiality matrix, stakeholders' engagement and ESG matrix.

Sustainability Value Creation

Sustainability Value Creation is can be defined as a corporation's utilisation of its tangible and intangible capital to generate provide contemporary value and profit without compromising the principles of Environmental, Social and Governance factors of sustainability.

Sustainability accounting may be demonstrated by a corporate firm's response towards sustainability challenges that are consequential to its production of goods and services, innovation, business models and corporate governance, in order to create a long-term value. The sustainability accounting framework can manifest five areas of action namely: -

- Environment
- Social Capital
- Human Capital
- Business Model and Innovation
- Leadership and Governance.

The importance of Sustainability goes back to the principles of ESG and the measuring of the "non-financial performance" of a company. It is also believed that without these accounting standards in the capital markets would not be viable to ensure a sustainable society.

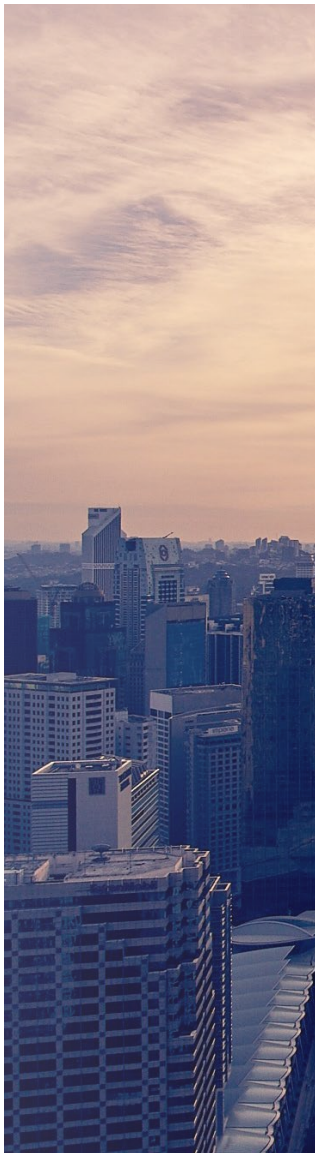
PRI - Principles for Responsible Investment

Principles for Responsible Investment are a set of investment principles which would accommodate Environmental, Social and Governance factors to include them into mainstream investment practices. The principles were laid out by an International group of Investors in the presence of the UN Secretary General. The PRI mentions on the embodiment of analysis, decision-making, ownership, practices and appropriate disclosures for ESG related issues. The principles also mention to effectively implement and report the ESG factors. Despite these principles being voluntary, they are aspirational in terms of improving the quality of investment - an investment that is morally, ethically, environmentally sound.

Many companies are realising the benefits of practicing the values of ESG, as they are commonly seen to outweigh the scenario of not following them. Retail and Institutional investors look for ESG to be integrated and embedded within the respective company's policy framework and implementation - they are commencing to give balanced importance to both financial and non-financial aspects/performances. However, many investors have raised concerns on the lack of good or consistent information, which hindered their chances of practicing ESG integration.

Section 4:
Managing Emissions and Climate Change

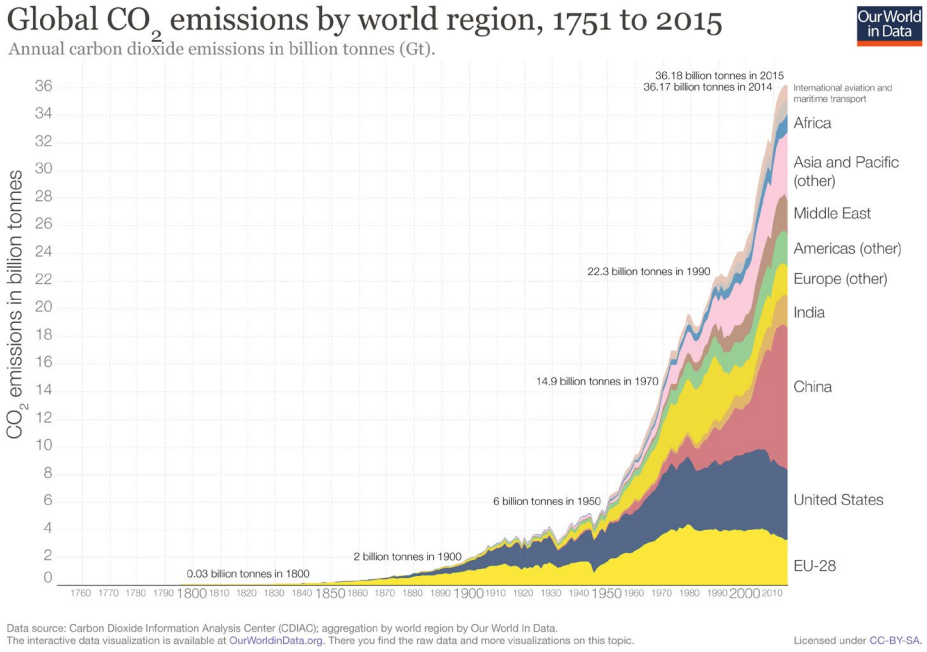
Section 4:
Managing Emissions and Climate Change



Energy & Emissions

The world's energy demand is expected to increase by 1.5% annually through to 2030 and with coal and oil demand growing at a slower pace, the world is seeing a clear transition towards renewables in the global energy mix. It is a trend that shows we are moving away from tapping into fossil fuels and moving towards infinite resources to meet our energy needs. On top of being an infinite source of power, harnessing of renewable energy leads to a practice that is clean, non-extractive, and most importantly, sustainable. Between the present day through to 2050, the net capacity of power generation through renewables is expected to reach 80% of due to the cost decline of renewables.

The renewable energy industry has never been placed with higher importance in the history of climate change mitigation as the energy supply sector is one of the largest emitters of greenhouse gases (GHG). The current unsustainable trend of energy production through coal and natural gases has taken a toll on global temperatures as



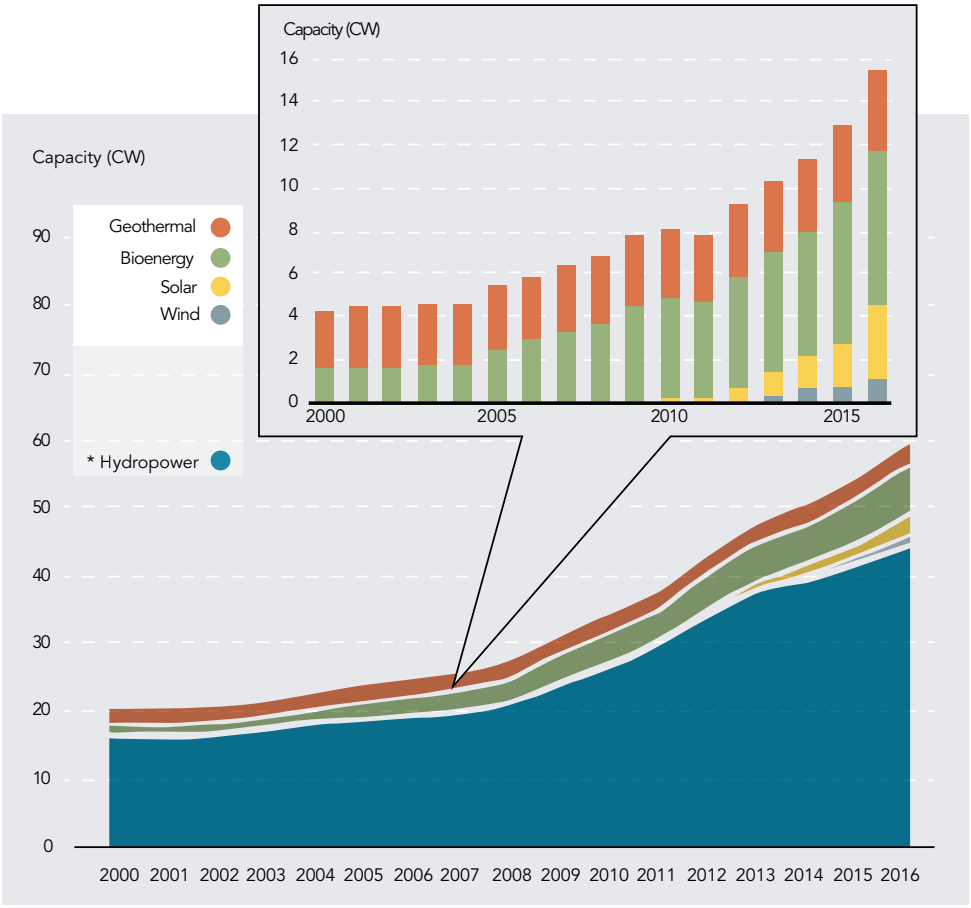
Section 4 GHG Chart - Source-Hannah Ritchie and Max Roser 2018- CO_2 and other Greenhouse Gas Emissions. Published online at OurWorldInData.org.

the levels of CO2 being released into the atmosphere has been rising. To put things into perspective, CO2 concentrations in the atmosphere before the industrial revolution stood at around 280 parts per million (ppm). Concurrently, current average CO2 values stand at 410 ppm today. This continuing trend is expected to reach the 450-500 ppm mark in the next 30 years. Should CO2 levels continue to levels above the 450ppm mark, the consequences on the earth's natural processes will be unchartered territory for mankind.

Already we are seeing the impacts on global economy due to increasing surface temperature which includes extreme weather events, loss of biodiversity, deterioration of air and water quality, sea level rise, droughts, floods and loss of food source. To curtail activities to further contribute to climate change, several agreements, protocols and treaties have been enacted such as the Paris Agreement and the Sustainable Development Goals (SDGs) to ensure action against unsustainable practices.

To ensure that the private sector move towards the transition away from unsustainable practices, more and more global businesses are aligning themselves with these international agreements.

Carbon Reduction Strategies in ASEAN



Renewable Energy capacity in Southeast Asia in accordance to sector from 2000 to 2016 (Source - IRENA, 2017)

Nationally Determined Contributions (NDCs)

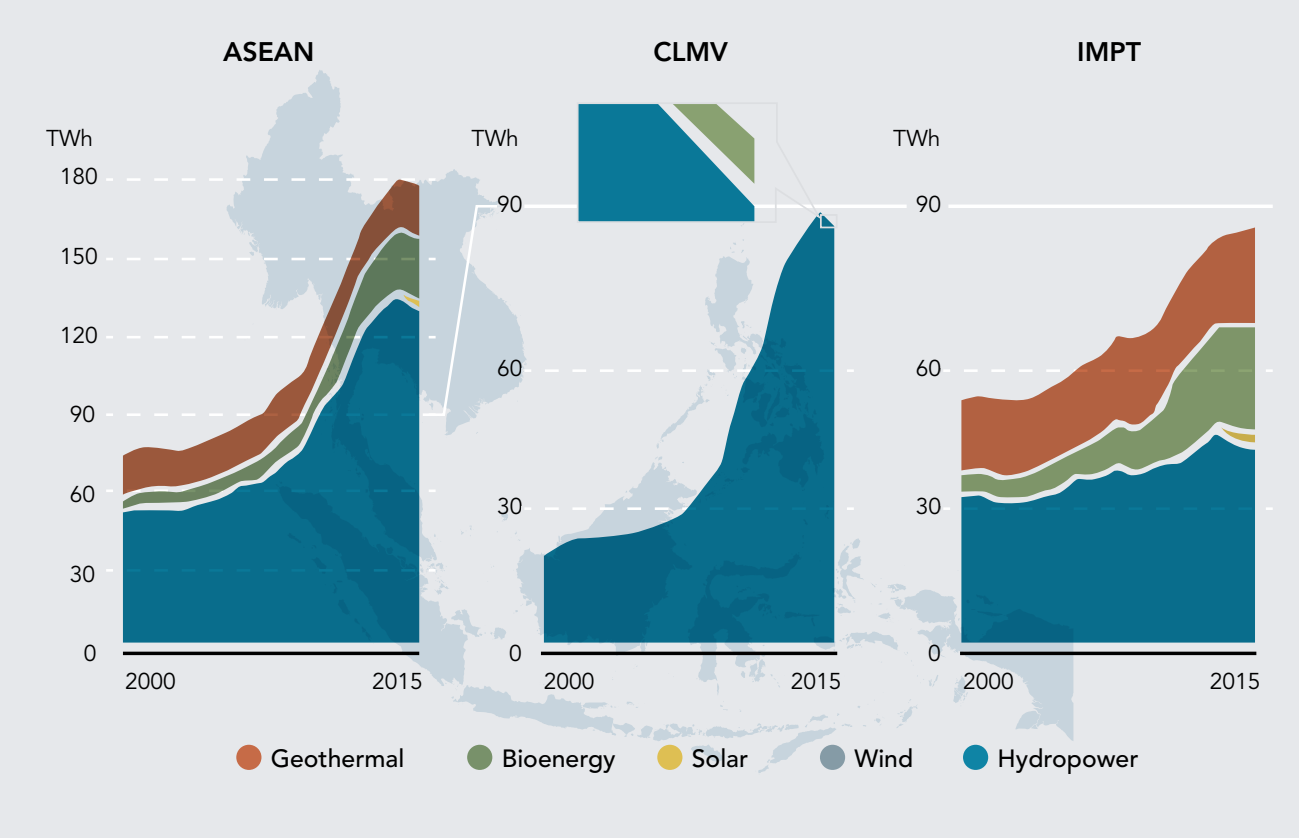
NDCs are efforts by countries to reduce national emissions and adapt to the impacts of climate change. Each country's NDCs were submitted as part of their commitments to the Paris Agreement.

Malaysia-

- Malaysia intends to reduce its greenhouse gas (GHG) emissions intensity of GDP by 45% by 2030 relative to the emissions intensity of GDP in 2005. This consist of 35% on an unconditional basis and a further 10% is condition upon receipt of climate finance, technology transfer and capacity building from developed countries.
- Increase renewable energy capacity from 2 to 20 percent by 2025.

Indonesia -

- Reduction of 26% of its GHG emissions unconditionally by 2030 and the number increases to 41% of GHG reduction with International support in funding and technology. The baseline is that from of the Business-as-usual Scenario (BAU).



Renewable Energy generation from 2000-2015 in ASEAN [Association of Southeast Asian Nations], CLMV [Cambodia, Lao PDR, Myanmar and Vietnam] and IMPT [Indonesia, Malaysia, Philippines and Thailand] (Source - IRENA, 2017)

- Indonesia plans to generate 23% of Electricity as Renewable Energy by 2025.

Thailand -

- Thailand intends to reduce its greenhouse gas emissions by 20 percent from the projected business-as-usual (BAU) level by 2030
- The Power Development Plan of Thailand sets a target to achieve a 20% share of power generation from renewable sources in 2036.

Philippines-

- The Philippines intends to undertake GHG (CO_2e) emissions reduction of about 70% by 2030 relative to its BAU scenario of 2000-2030.
- Renewable Energy Act of 2008) expects the increase in the utilization of renewable energy sources.

"Already we are seeing the impacts on global economy due to increasing surface temperature..."

The Sustainable Development Goals

On 1 January 2016, the 17 Sustainable Development Goals (SDGs) of the 2030 Agenda for Sustainable Development — adopted by world leaders in September 2015 at an historic UN Summit — officially came into force. The SDGs build on the success of the Millennium Development Goals (MDGs) and aim to go further to end all forms of poverty. The new Goals are unique in that they call for action by all countries, poor, rich and middle-income to promote prosperity while protecting the planet. (Source: shttps://www.un.org/sustainabledevelopment/development-agenda/)

Targets, Challenges and Opportunities

Cenergi SEA's nature of business are such that they are closely-knit to the Sustainable Development Goals (SDGs) formulated by the United Nations in 2015. Also known as the Global Goals, the SDGs are a universal call to action to eradicate poverty, protect the planet and ensure that people all over the world have the right to a peaceful and prosperous life. A framework which sets out quantitative objectives across the social, economic and environmental aspects of development, the SDGs are implemented by the United Nations Development Program (UNDP), the lead development agency of the UN, where it will guide UNDP policy and funding until 2030.

UN member states are expected to use these goals to frame their agenda and political policies over the next 12 years, but in order to leave a better planet for future generations, governments cannot do this alone - they require the partnership of the private sector, civil society and civilians alike. Such recognition has not gone unnoticed by Cenergi with our work linking to Goals 3, 4, 7, 8, 9, 10, 11, 13 and 17. Refer to the chart below on our alignment to the respective SDG Goals.

Our Alignment to the SDGs

The following are the SDG targets which are linked to Cenergi's operations:-

Goal	Targets	How the Goals are linked to Cenergi's operations
SDG 7 - Affordable and Clean energy	a. By 2030, ensure universal access to affordable, reliable and modern energy services	Cenergi's business plan is based around investing in renewable energy (RE) and energy efficiency (EE) projects. Hence the growth of the organization would be based off its vision of investing in commercially and technically viable new ventures and technologies in the RE and EE sector. By 2021, we plan to include solar power generation as well as additional renewable energy utilities into our portfolio, and grow our sphere of influence throughout Southeast Asia, by implementing projects pertaining to wind power generation, biomass and mini-hydro power plants across Indonesia, Thailand, Laos and Vietnam.
	b. By 2030, increase substantially the share of renewable energy in the global energy mix	
	c. By 2030, double the global rate of improvement of energy efficiency	
	d. By 2030, enhance international cooperation to facilitate access to clean energy research and technology and promote investment in energy infrastructure and clean energy technology	
	e. By 2030, expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in accordance with their respective support programmes	
SDG 9 - Industry, innovation and infrastructure	Promote inclusive and sustainable industrialization and, by 2030, significantly raise industry's share of employment and gross domestic product	Aspiring to be a leader in the RE industry, the growth of Cenergi would not only lead to employment opportunities, but it will also increase the percentage of how much the industry will actually contribute to the nation's gross domestic product. Cenergi's EE initiatives so far have included retrofitting commercial buildings and a public university, which not only save costs, but contribute in cutting down the buildings' carbon footprint.
	By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes	
	Enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries.	
	Facilitate sustainable and resilient infrastructure development in developing countries through enhanced financial, technological and technical support.	
	Support domestic technology development, research and development in developing countries.	

SDG 11 - Sustainable cities and communities 	Strengthen efforts to protect and safeguard the world's cultural and natural heritage.	By adopting a business model that is based on RE and EE, slowly but surely, we are reducing our reliance on fossil fuels, moving away from an extractive process of obtaining energy to power communities. Gradual retrofitting of commercial buildings has also led to a general decline in carbon footprint per municipality. By 2021, our renewable energy utility projects are such that they aim to power isolated underprivileged communities through biogas plants which rely on palm oil mill effluent, substituting their reliance on diesel.
	By 2030, reduce the adverse per capita environmental impacts of cities, including by paying attention to air quality and municipal and other waste management	
	Support positive economic, social and environmental links between urban, per-urban and rural areas by strengthening national and regional development planning	
	By 2020, increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change	
SDG 13 - Climate action 	Integrate climate change measures into national policies, strategies and planning. Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning Implement the commitment undertaken by developed-country parties to the United Nations Framework Convention on Climate Change to a goal of jointly mobilizing $100 billion annually by 2020	Cenergi's business development plan targets investing into a total of 100 MW of renewable energy generation within the next 5 years in both Malaysia and the ASEAN region. This is in line with the Malaysian government's commitment to increase renewable energy generation to 20% of the nation's total energy mix. This also correlates with cutting carbon emissions in the region through the development of renewable energy.

Energy at Cenergi – Generation, Consumption & Savings

Since 2016, we have delivered over 59,158 MWh of clean energy to the national grid, powering more than 9,800 households in the local area.

By coupling innovative financing arrangements with renewable power sources, we ensure that our cost-effective on and off-grid clean energy projects have a measurable impact on consumer and investor interests.

In addition to making renewable energy projects a secure and environmentally-responsible investment, our proven industry experience enables businesses to capitalise on the most current energy technologies whilst keeping ahead of volatile energy markets. Many companies have realised the positive business implications for being an early mover in sustainability and are staking out their positions and seeking like-minded partners.

As we strive to advance the current renewable energy industry by developing safe, reliable, and affordable energy solutions in the region, we aim to have 100 MW of operating assets generating clean energy by 2021.

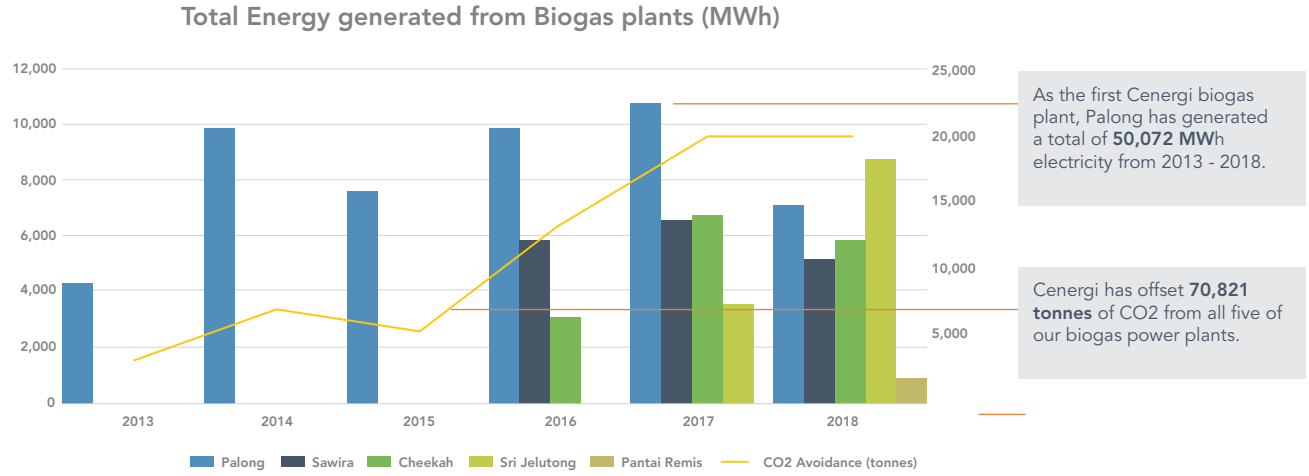
Cenergi's Contribution to Climate Change

Our Biogas Performance & Carbon Avoidance (CO2 eq)

Cumulative from 2013 to 2018

Below are our renewable energy generation and cumulative C02 avoidance from our Biogas projects.

Our first biogas plant commenced operations in 2013.

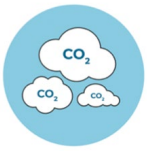


As the first Cenergi biogas plant, Palong has generated a total of **50,072 MW**h electricity from 2013 - 2018.

Cenergi has offset **70,821 tonnes** of CO2 from all five of our biogas power plants.

Data collected as of 30 Dec 2018

98,362 MWh
Energy generated



70,821 tonnes
CO2 eq

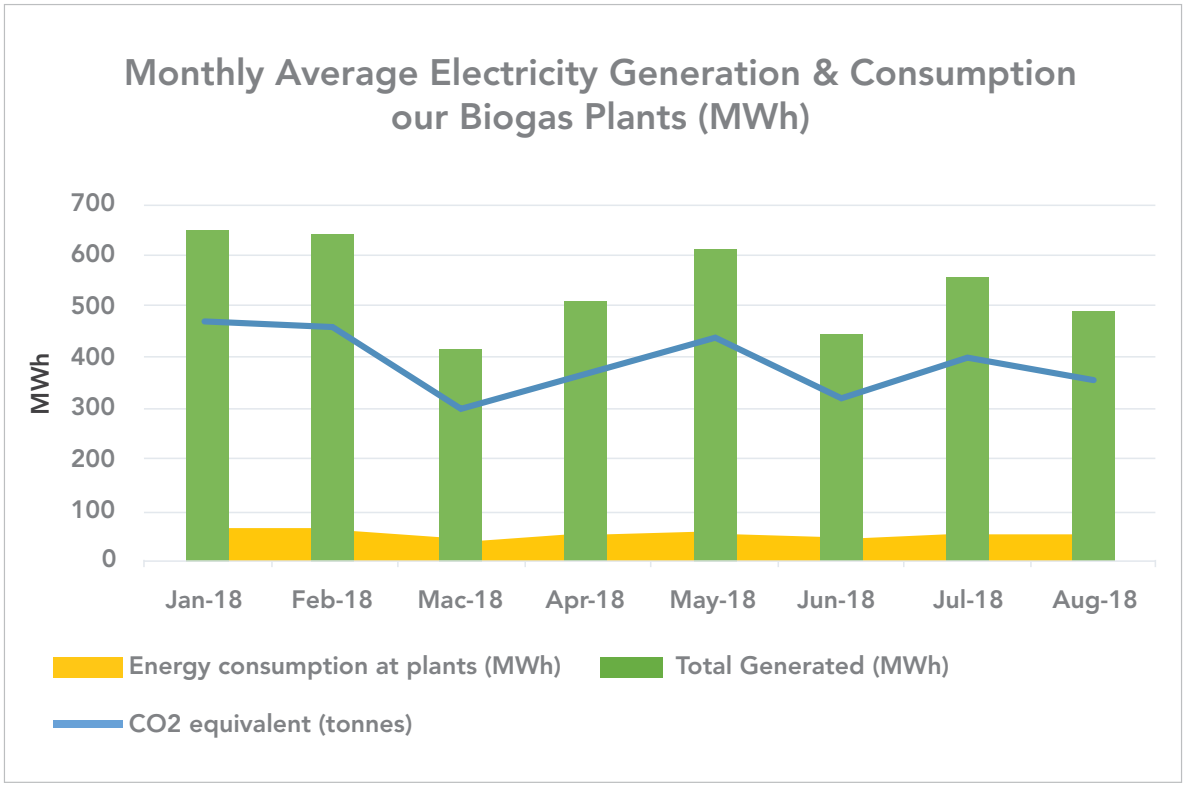
The above chart is the monthly average electricity MWh generated (based on exported energy) and the level of energy consumption at our biogas plants. Generally, our biogas plant consumes ~10% of the total energy it produces for internal consumption. We generated an average of 533 MWh per month; of which we have consumed 10% (53MWh) from the electricity exported to the grid monthly. Our energy generation, resulted from methane capturing from the palm oil mill activities has produced a total of 3,838 tonnes of CO2 eq for the year 2018.

Disclaimer:
Power generation can be affected by factors such as

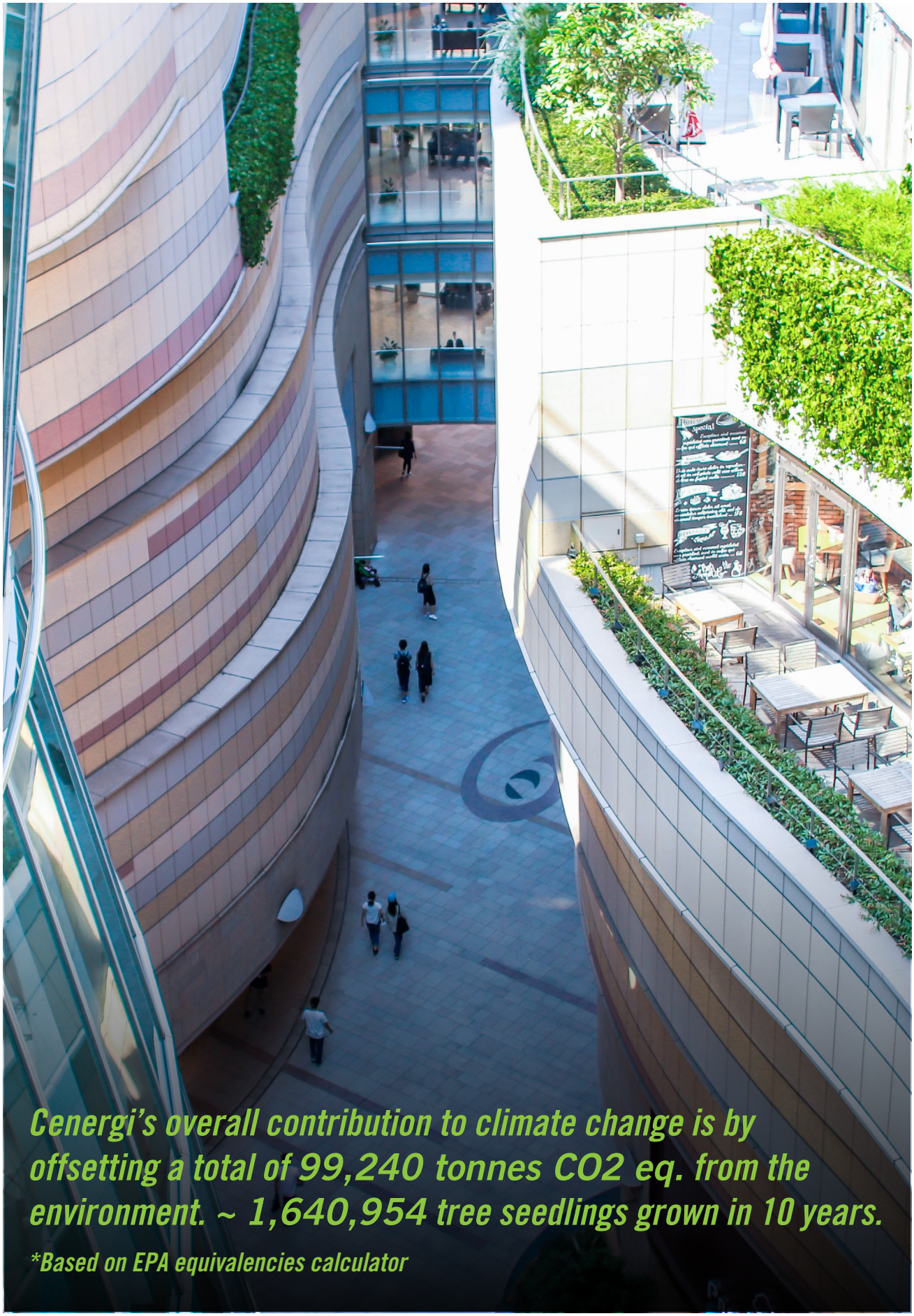
i. Seasonal changes in palm oil crop yield
ii. Lack of demand from local consumers of the nearby
iii. High fault level of the electric Grid
iv. Downtime for scheduled/un-scheduled
v. Circuit breaker tripping due to lightning strikes

Energy Input & Output - Biogas

Biogas Plants	Commercial Operating Date
1. Cenergi Palong	15 August 2013
2. Sawira	8 April 2016
3. Cheekah	3 September 2016
4. Sri Jelutung	5 October 2017
5. Pantai Remis	14 December 2018



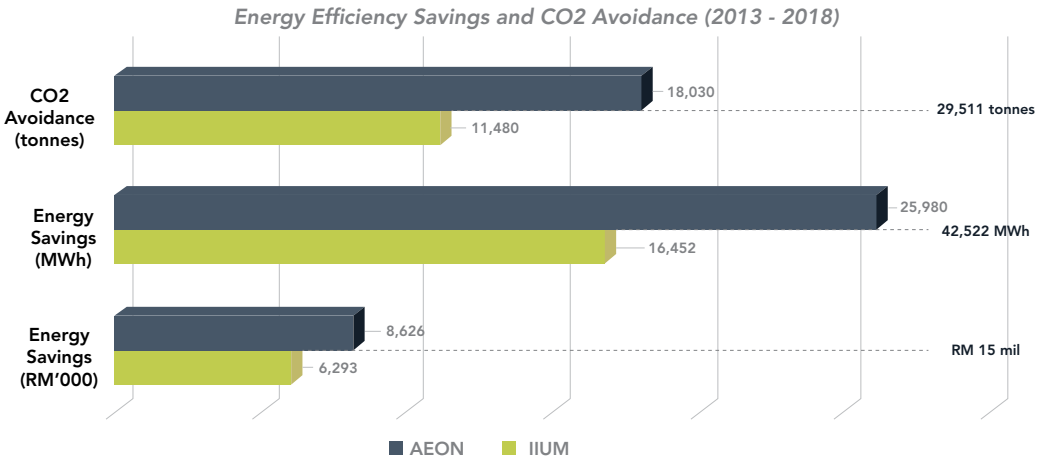
Graph 1: Our monthly average electricity generation and consumption at Biogas plants (Jan - Aug 2018)



Cenergi's overall contribution to climate change is by offsetting a total of 99,240 tonnes CO2 eq. from the environment. ~ 1,640,954 tree seedlings grown in 10 years.

**Based on EPA equivalencies calculator*

Our Energy Efficiency Performance & Carbon Avoidance (CO2 eq)
Cumulative from 2013 to 2018



Total (Cumulative) from 2013 - 2018

In 2018, Cenergi saved **15,773 MWh energy** and offset **10,947 tonnes CO2 eq.** from our Energy Efficiency projects

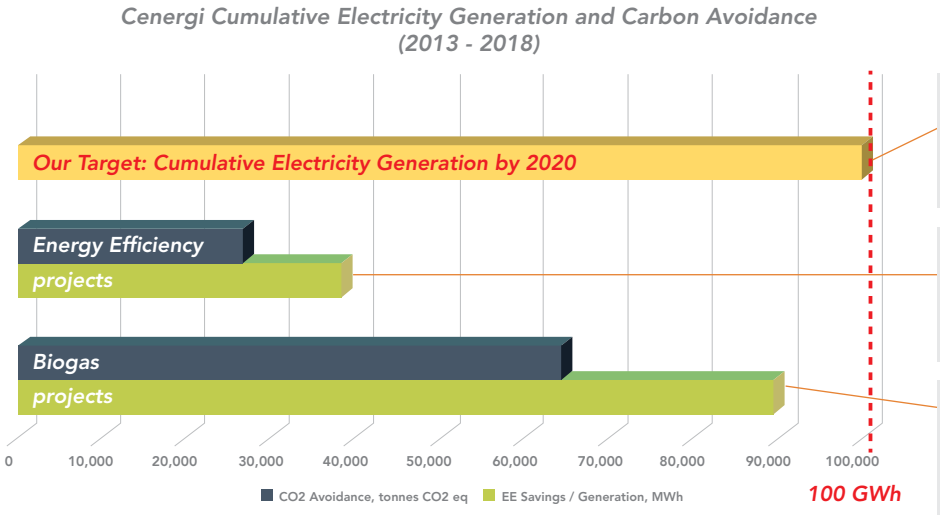
**Data collected as of 30 Dec 2018*

40,984 MWh
Energy saved

14.4 mil
Cost saved

28,419 tonnes
CO2 eq

Our Overall Impact to the Environment
Cumulative from 2013 to 2018



By 2020, we aim to achieve:-
- 100 GWh generation by 2019 as target
- 100k tonnes CO2 eq achieved this year by end of 2018.

Energy Efficiency:
Over the span 2 years, we have saved a total of 38,308 MWh of electricity from our Energy Saving Performance Contract.

Biogas:
For 5 years, we have generated a total of **89,479 MWh** of electricity, which contributed to **64,425 tonnes of CO2 eq** avoidance.

**Data collected as of 30 Sept 2018*

Section 5:
Our Sustainability Initiatives

Section 5: *Our Sustainability Initiatives*

Internal Groups and Committees

Below are the internal groups and committees formed within Cenergi SEA which contribute towards our sustainable goals.

Board of Directors

- Reviewing and adopting a strategic plan for the Company
- Overseeing the conduct of the Company's business
- Identifying principal risks and ensuring the implementation of appropriate systems to manage them
- Succession plan
- Overseeing the development and implementation of a shareholder communications policy for the Company

Zainul Rahim Bin Mohd Zain, Chairman of the Board

Investment Committee

- Assist the Board in reviewing significant matters related to all existing and potential investments and making appropriate recommendations to the Board
- Reviewing the Group's investment portfolio to assess the performance of the Group, including emergency risks and opportunities, market outlook, economic indicators, currency market, regulatory developments as well as key business developments

Michael Robert Ashburn, Chair

Remuneration Committee

- Assist the Board in developing, maintaining, and reviewing the criteria to be used in the recruitment process
- Recommending to the Board the policy and framework of the Director's remuneration and their remuneration package

Nik Rizal Kamil Bin Nik Ibrahim Kamil, Chair

Audit and Risk Committee

- Review and discuss the financial results of the group
- Review the audit strategy, scope of work and plan of the External Auditors
- Review the External Auditor's report in relation to audit and accounting issues arising from the audit
- Review, assess and ensure there is adequate framework for risk identification, measurement, monitoring and control

Loh Tzu Anne, Chair

Safety Committee

- Maintain zero Loss Time Incident (LTI) to Group Cenergi SEA
- Achieve 100% HSE compliance in the organisation
- Align all Occupational Safety & Health programs with ISO45001 and Environmental Programs with ISO14001 (Aiming for ISO certification by 2020/2021)

Review Committee

- Review projects before approval to be presented to investment committee
- Educate other HODs regarding potential projects within the company
- Advise project teams on how to further improve their projects (address gaps in knowledge)
- Improve communication between HODs by streamlining expectations of the project

Sustainability Committee

- To incorporate ESG into anything we do:
- To enhance the robustness of our projects
- To evaluate prospective projects prior to IC meetings
- To discuss sustainability issues pertaining to CSEA projects monthly
- To vote on the viability of the projects based on a pre-determined voting structure

Corporate Social Responsibility

- Corporate Social Responsibility - due to our special responsibility towards the community, a CSR unit has been set up to fulfill our vision in caring for the community and environment by:

- Connecting Cenergi to our project communities
- Cenergi Team Retreat
- Student and youth education programmes
- Stakeholder engagement

- Sustainability Reporting: Adhering to the principles of environmental, social and corporate governance, this will be a move to further highlight our commitment to illustrating the environmental, social, economic and ethical impacts of our business

Corporate Social Responsibility

- Improving the company efficiency through its people
- Building employees capacity so that it may contribute to the company efficiently

The Green Way Forward

Green Office Campaign

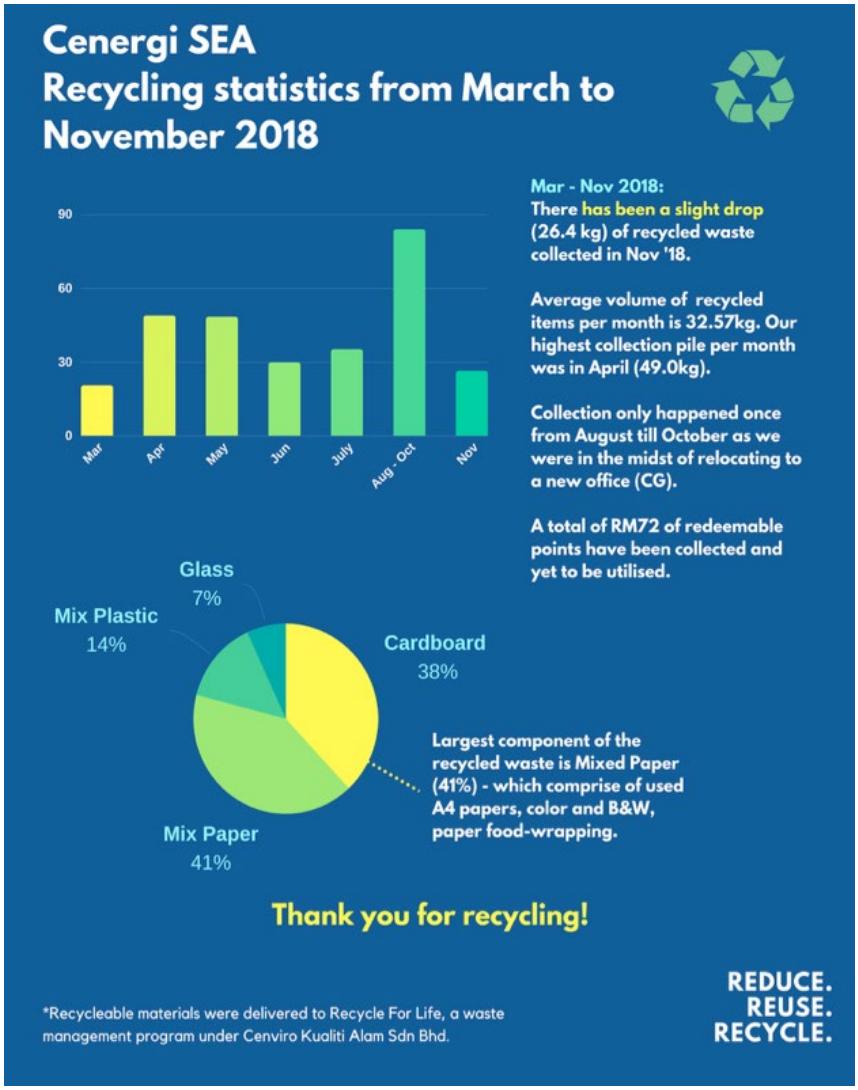
Cenergi's Green Office policies are geared towards cultivating a workplace that is environmentally-friendly, well-balanced and sustainable. The importance of such a campaign lies in embedding Cenergi's employees with the company's core values - People, Planet and Profit. On top of contributing significantly to the health-being of our employees, cultivating such a culture would also contribute to the branding of Cenergi.

As of November 2017, Cenergi has set up a Green Office committee responsible for initiating green practices within the office. Past initiatives that have taken place are as such:

Adding on, a carbon credit reward system exists for those who adhere to any of the green office policies. Though such a system exists to contribute to the employees' overall performance, the Sustainability team is still in discussion with regards on how to best implement the approach. Such a system is vital in instilling the company's core values within employees and aid them in transitioning towards a green and sustainable lifestyle.

Attached below is an illustration of how the recycling initiative at Cenergi has performed so far:

"Cenergi's Green Office policies are geared towards cultivating a workplace that is environmentally-friendly, well-balanced and sustainable"



Carbon Reduction Strategies in ASEAN

Green Financing

"If we were to transition towards a sustainable global economy, we need to scale up the financing of investments that provide environmental benefits, known as green finance."

What is Green Finance?

Green finance is loosely defined as the financing of investments, projects and assets that safeguard environmental interests within the broader context of sustainable development. A survey by the World Bank Group concludes that although green financing definitions are country-specific, many of them share similarities, featuring obvious industries like renewable energy and green buildings and debatable industries such as carbon capture and storage and nuclear power. While it is true that poverty eradication is attained through economic growth, traditional economic development models do not take into account safeguarding the environment, undermining utilization of natural resources for future generations. On the other hand, environmentally-friendly technology and infrastructure are often costly investments that developing economies are challenged to raise sufficient funding for.

The need for green finance especially within developing and emerging economies, stems from a lack of funds for ecologically sustainable and resource-efficient investments but is crucial in building climate-resilient economies .

The Green Climate Fund

One of the many entities that facilitate the flow of green finance is the Green Climate Fund (GCF). The fund was developed to support developing countries to make the paradigm shift to low-carbon and climate-resilient development, taking into account differentiated capacities of the respective nations. Aimed to channel equal amounts of funding through adaptation and mitigation measures, the GCF was set up by the 194 parties to the United Nations Framework Convention on Climate Change (UNFCCC), as part of the Convention's financial

mechanism. Though it began initializing resources in 2014, the Green Climate Fund was given a vital role in serving the Paris Agreement when it was signed in 2015, which is to support the goal of keeping climate change well below 2°C. As of 2017, pledges worth up to $10 billion have been gathered, with the Fund paying particular attention to societies highly vulnerable to the effects of climate change, namely the Least Developed Countries (LDCs), Small Island Developing States (SIDS), and African States.

Cenergi's Green Financing Aims

In 2017, Cenergi initiated work on the Green Sukuk Programme (GSP), an innovative financial structure proposed by Cenergi, along with consortium partners Clarmondial and Amanie Advisors to drive Malaysia, and eventually Southeast Asia, into a green economy. The focus of the GSP is to enhance the development of smaller, high quality renewable energy (RE) and energy efficiency (EE) projects by engaging with new types of investors, including local and regional institutional investors, private banks and family offices. In establishing GSP, the consortium applied to the Green Climate Fund in its call for proposals and was shortlisted among hundreds of applications. The mobilising of such a unique financial structure would provide a foundation to support the development of similar schemes and establish a "funding channel" for green projects, from inception to scale.

Carbon Credit Management

What are Carbon Credits?

It goes without saying that our world is being threatened by global warming through ever-increasing greenhouse gas emissions and the best way to stop climate change is simply through cutting emissions. Recognising the profound impact industrial activities have on the environment, the Kyoto Protocol (1997) introduced measures to reward organizations that take the initiative to reduce their carbon emissions and charge those producing excessive amounts of carbon footprint - all through a carbon credit system.

Through this instrument, one carbon credit would allow businesses to emit one tonne of carbon dioxide or an equivalent amount of any greenhouse gas into the atmosphere. This system was created on the basis of promoting the use of carbon-reducing technologies through the generation of revenue by reducing greenhouse gas emissions. Businesses that emit in excess of their quota must purchase carbon credits whereas those who emit below their quota may sell their accumulated credits. The act of businesses trading carbon credits has encouraged an both local and international markets, where credits can be exchanged between businesses or bought and sold, at prevailing market prices, on credit trading

platforms such as the Chicago Climate Exchange and the European Climate Exchange. There have also emerged online trading platforms and blockchain technology that have emerged in recent years to rejuvenate the carbon trade market.

How it works

The market for carbon credits is divided into two - the Compliance Market and the Voluntary Market. In the former, governments signatory to the aforementioned Kyoto Protocol -mostly developed countries- are responsible for ensuring themselves as well as the companies operating within their countries meet their GHG emission reduction targets. Companies undergoing projects under the compliance markets have to have their credits generated from high quality consortiums which are regularly checked and verified by independent review boards as well as registered and verified by the UNFCCC. After this registration phase, credits generated by a project are known as Certified Emissions Reductions (CERs). As for Voluntary Markets, governments, companies and individuals purchase carbon offsets to mitigate their own greenhouse gas emissions, be it from transport, power consumption or some other function. They may be doing so with the aim that emissions regulations may become more generally applicable in the near future and that it helps in the green branding of their company - these are considered Voluntary Emissions Reductions (VERs) and are less scrutinised compared to the CERs.

"The focus of the GSP is to enhance the development of smaller, high quality renewable energy (RE) and energy efficiency (EE) projects by engaging with new types of investors..."

Section 6:

Health, Safety & Environment Focus


BOMBA


cenergi

Section 6:
Health, Safety & Environment Focus

Objective and targets for HSE Department:-

i. Zero accidents throughout the year 2018
ii. To achieve 80% HSE compliance in the organization
iii. Implementation and operation training, awareness and effective communication in organization
iv. Build up safety culture in the workplace

Established safety committee and sub-committee for all project sites and biogas plant

Safety committee consists of representatives from each department at HQ and safety sub-committee consists of representatives from all project sites and biogas plants.

Our 2018 Achievement

	Training
1	Emergency Response Team Training
2	First Aid Training
3	Confined Space Training (Authorised Entrants and Standby Person, AESP)
4	Personal Protective Equipment Training at Construction site for Contractors
5	Certified Environmental Professional Handler for Scheduled Waste Management (CePSWaM)
6	Certified Environmental Professional in Scrubber Operation (CePSO)
7	Authorised Gas Tester (AGT)

Various HSE related activities conducted to achieve the targets

Occupational Safety & Health Act 1994 (OSHA)

1. Occupational Safety & Health (Safety and Health Committee) Regulation 1996
2. Occupational Safety & Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemical) Regulation 2013 – *CLASS Regulation*
3. Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health) Regulations 2000 – *USECHH Regulation*
4. Occupational Safety & Health (Safety and Health Officer) Regulations 1997
5. Occupational Safety & Health (Notification of Accident, Dangerous Occurrence, Occupational Poisoning and Occupational Disease) Regulation 2004 - *NADOPOD*

Environmental Quality Act 1974 (EQA)

1. Environmental Quality (Clean Air) Regulation 2014
2. Environment Quality (Scheduled Wastes) Regulations 2005

Factories & Machinery Act 1967 (FMA) 1. Factories and Machinery (Building, Operations and Works of Engineering Construction Safety) Regulations 1986	**Fire Services Act 1988**
Uniform Building By-Laws 1984 (UBBL)	**Lembaga Pembangunan Industri Pembinaan Malaysia Act 1994 (CIDB Act)**

HSE STATISTICS (JAN- DEC 2018)

No.	Project	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	YEARLY TOTAL
1	CSEA	10,272	10,088	11,008	11,576	11,952	12,800	12,872	12,192	9,624	15,016	12,156	10,840	***140,396***
2	IIUM Gombak	1,168	1,385	1,064	1,352	1,292	768	1,530	1,350	2,952	4,806	7,932	6,912	***32,511***
3	Cenergi Palong	1,876	1,317	1,104	1,803	1,728	1,822	2,743	1,923	1,752	1,864	1,784	1,783	***21,499***
4	GLTE Cheekah	1,732	1,732	1,362	1,670	1,699	1,616	1,732	1,731	1,678	1,766	1,707	1,686	***20,111***
5	GLTE Sawira	2,097	1,786	1,159	1,965	2,233	2,101	2,124	2,218	2,183	2,073	1,837	1,953	***23,729***
6	Cenergi Tanah Makmur	1,812	1,516	1,430	1,944	1,952	1,872	1,963	1,994	1,804	2,128	1,941	1,822	***22,178***
7	Pantai Remis	4,772	3,480	4,472	5,984	4,727	2,918	3,484	7,398	12,240	32,776	3,128	907	***86,286***
8	FJP										1,820	2,080	5,120	***9,020***
9	Astana Endah											1,300	1,040	***2,340***
	TOTAL	**23,729**	**21,304**	**21,599**	**26,294**	**25,583**	**23,897**	**26,448**	**28,806**	**32,233**	**62,249**	**33,865**	**32,063**	***358,070***

Table 1: Safe man-hours accumulated throughout January- December 2018

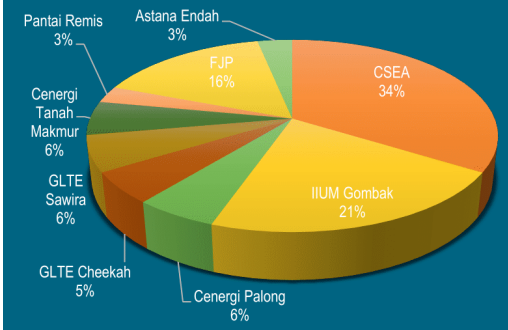


Chart 1: Man-hours distribution (percentage) of December 2018

As of December 2018, we have achieved 542, 592 safe man-hour, from the Commercial Operation Date (COD) of Cenergi Palong in 2013 – the first biogas plant being operated.

December 2018

The largest contributor for December's man-hour is Cenergi SEA headquarter and followed by biogas power plants which is 34% and 26% respectively.

Jan- Dec 2018

As of the January to December 2018, the accumulated safe man-hours is 358, 070. The largest contributor for the man-hour is the Cenergi SEA headquarter itself, comprised 84 staffs, followed by all five biogas power plants.

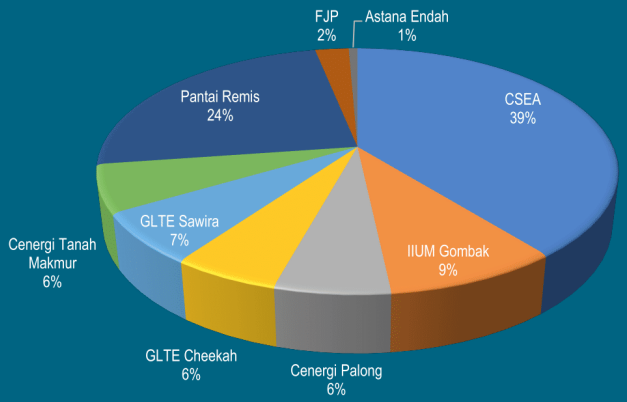


Chart 2: Man-hours distribution (percentage) in January - December 2018

Man-hours is collected monthly based on each site (i.e.: HQ, biogas power plants, CEPC projects & EE project). We are targeting to achieve 1-million safe man-hours by the year 2020.

"Don't Learn Safety By Accident"

Scheduled Waste Management

Introduction on Scheduled Waste Management (SWM)

Schedule Waste Management (SWM) is defined as the governing of waste materials that possess and have potentially harmful characteristics that remain to be deleterious to the environment. These type of wastes are generally strenuous to dispose as compared to non-scheduled waste and hence require special recycling/upcycling facilities and technologies.

The classification of Scheduled Wastes depends on the origin of the raw materials and other processes involved in the generation of waste, which would be classified under specific SW codes in accordance to the Environmental Quality (Scheduled Wastes) Regulations 2005 act.

At Cenergi SEA, our SWM action plans follow the First Schedule (Regulation 2) under this act (EQA 2005). There are 77 types of schedule wastes listed under this regulation in Malaysia. Specific codes for the respective scheduled wastes are assigned, which would then facilitate the safe disposal of the waste. Further information about the types of our scheduled waste are elaborated in Section 5: Our Scheduled Waste Management approach below

Our SWM approach

At Cenergi SEA, we have commenced and implemented our Scheduled Waste Management Journey effectively since October 2017, primarily at our Biogas plants as these are our main scheduled waste generators.

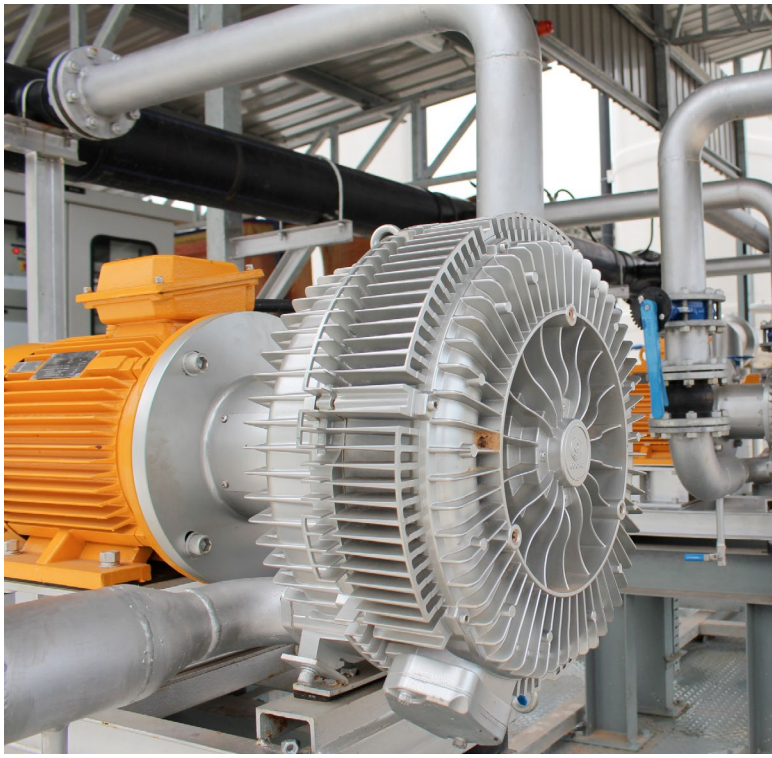
Scheduled Waste Characteristics

Any form of scheduled waste has the following characteristics. We use the following criterias to ascertain the condition and disposal method of our scheduled waste at our plant:-

- Ignitable
- Corrosive
- Reactive
- Toxic
- Infectious

Impacts of Scheduled Waste to the Environment

Scheduled wastes are typically detrimental to the environment and hence classified in this category in the first place. These wastes typically contain carcinogenic elements (Arsenic, Mercury, Lead etc.), extremely high or low pH fluids, medical wastes and other toxic sludges. However, not all schedule wastes possess immediate threats to the environment but would eventually require treatment and safe disposal.



Types of Scheduled Waste at our Biogas Plants

The types of Scheduled waste which are present at our biogas plant are as follows: -

No.	Description of Scheduled Waste	DOE Waste Code	Estimated Quantity 1 year (metric tonnes)	Producing Area
1.	Oily Sludge (Non-Pumpable) from desludging	SW311	TBA	Covered lagoon
2.	Engine Oil			Workshop
3.	Contaminated/Oily Gloves and Rags	SW410	30 KG	Operation area (Engine)
4.	Mixture of scheduled wastes (Sulphur)	SW421	1 TONNE	Scrubber tank
5.	Waste containing mercury or its compound	SW109	30 KG	Laboratory
6.	Waste from electrical or electronic devices	SW110	40 KG	Workshop

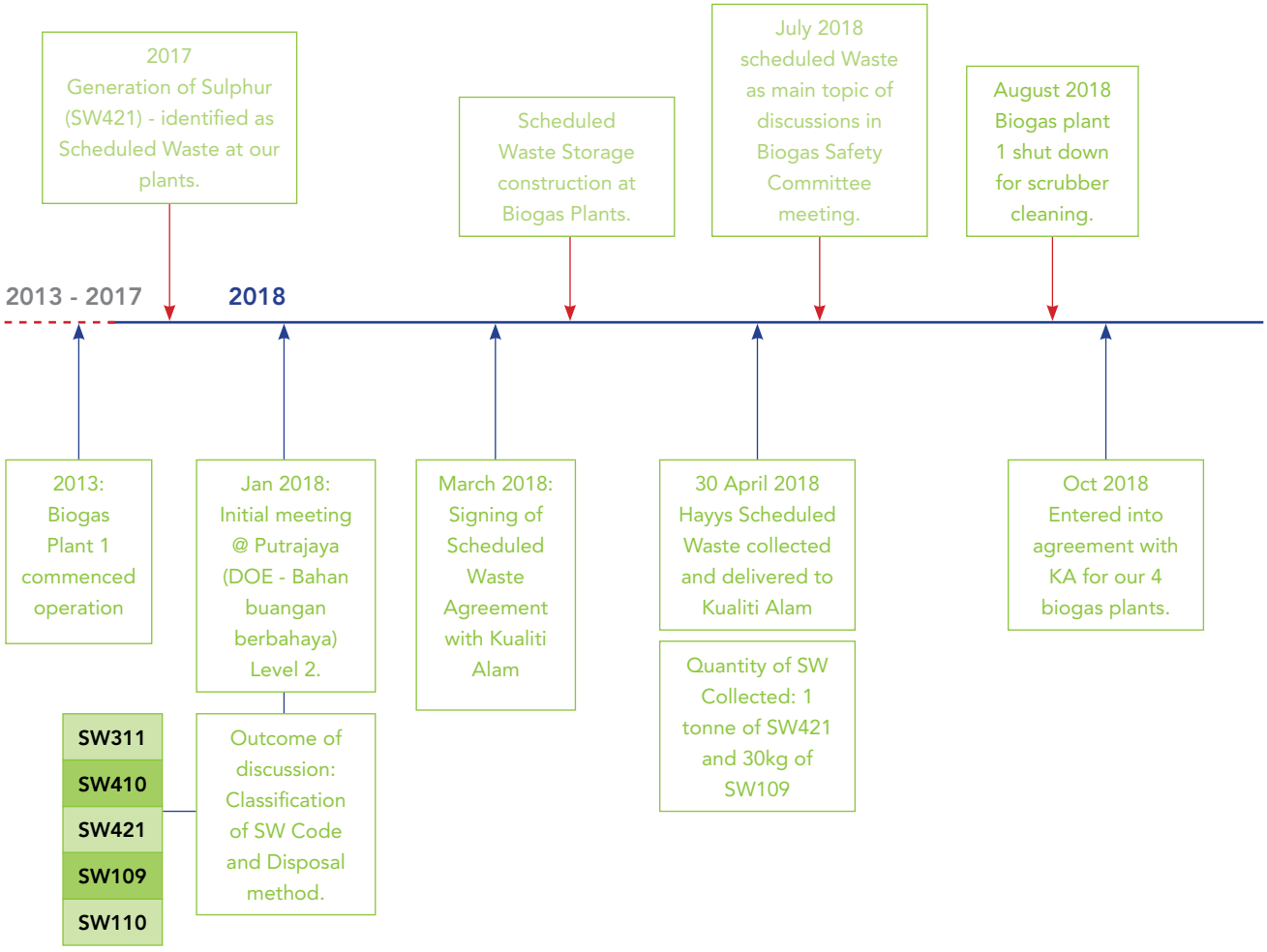
Table 1: Description of Scheduled Waste & Estimated Quantity (1 year)

The above Scheduled Waste have been identified at our biogas plants as a product of our biogas process. The above SW codes were determined based on our discussion with the relevant authorities (DOE, Putrajaya) and ALS environmental auditor. We have taken the necessary measures to handle, store and dispose these scheduled wastes as per DOE's requirement. As we have ascertained that the majority of our waste is in the form of sulphur from our biological scrubber, we have provided the information below to clarify further on how the sulphur is formed.

Our SWM Timeline

The chronological sequence of our scheduled waste management focuses mainly on the sulphur waste (SW421), as it has the highest quantity and it needs urgent method of disposal method. Below is the milestones for our SWM at Cenergi:-

Cenergi SEA:
Scheduled Waste Management Timeline



	Description of Scheduled Waste	DOE Waste Code
	Oily Sludge (Non-Pumpable) from desludging	SW311
	Contaminated/Oily Gloves and Rags	SW410
	Mixture of scheduled wastes (Sulphur)	SW421
	Waste containing mercury or its compound	SW109
	Waste from electrical or electronic devices	SW110

The Byproduct Of Biogas: Sulphur

Based on Table 1 above, we have identified that the majority of scheduled waste generated at our biogas plant is sulphur, which is classified as SW421: mixture of scheduled and non-scheduled waste. This section explains the process of sulphur production at our biogas process:

The Formation of Sulphur

Sulphur participates in the biochemical implementation processes in the anaerobic environment and plays a special role in balancing anaerobic processes. A separate balance sheet for sulphur is necessary because the end product - hydrogen sulphide - is toxic.
The input substrate fed into the anaerobic reactor contains sulphur compounds like sulphate sulphur (SO4-S), organic sulphur, sulphite-sulphur (SO3-S) and sulphide-sulphur. Sulphur is also discharged via the gas phase.

Biogas needs to be purified, mainly the Hydrogen sulphide (H2S) contents should be removed before it is fed into Biogas Engine to generate electricity. Hydrogen sulphide (H2S) is particularly harmful when biogas is used in internal combustion engines. Its chemical reactions and those of its combustion product 'sulphur dioxide' lead to corrosion and damage to engines. The acid which is formed, corrodes engine parts in the combustion chamber, exhaust system and bearings too. This damage is enhanced by frequent starts, short running times and the relatively low temperatures when starting up and after cutting off the engine.

The Biogas Process

The overall biogas process for Cenergi Biogas Plants is summarised in the above diagram. The raw palm oil mill effluent (POME) is being pumped into a POME mixing pit. This POME mixing pit mixes the fresh raw POME with the recycled POME from the bio-digester. From there, the POME is then fed into the bio-digester (also referred to as covered lagoon), where anaerobic digestion takes place. Further explanation is provided in the section below which discusses the anaerobic digestion. POME is then converted into biogas, a mixture of methane (CH4), carbon dioxide (CO2) and other gases such as hydrogen sulphide (H2S) and nitrogen (N2).

Covered lagoons generally have a treatment efficiency of between 80-85% of conversion which means that 80-85% of the chemical oxygen demand (COD) in the POME pumped into the bio-digester will be treated and converted to biogas. Treated POME from the bio-digester will then be sent back to the POME mixing pit where the mixing of raw POME and treated POME takes place.

The raw biogas from the bio-digester will then be sent to a moisture removal process and passed through a blower before being fed into a biological scrubber. The biological scrubber will then remove the contents of H2S in the raw biogas, before being fed into a chiller or dehumidifier. As a result of the gas being 'wet' from passing through a biological scrubber, the moisture must be drawn out to a much lower percentage before being fed into the engines. The now dryer and treated biogas is then utilised in a biogas engine which then converts this into electricity and feeds it back to the grid.

For any excess biogas produced, the flare would be utilised, preventing from the release of CH4 gas into the atmosphere; producing CO2 before releasing it to the atmosphere.

"Biogas needs to be purified, mainly the Hydrogen sulphide (H2S) contents should be removed before it is fed into Biogas Engine to generate electricity."

i. Preliminary Evaluation of Treatment/Disposal Method for Sulphur Sludge by Kualiti Alam Sdn Bhd (Cenviro):-

Name of Waste: Sulphur Sludge
Type of Sample: Solid
Waste form: Non-pumpable
Treatment method: Incineration

From the above results, we have concluded that sulphur from our biogas plant is considered hazardous and a form of scheduled waste as it is corrosive– the pH value of 1.0 is below 2.0 pH, similar to acids and bases and it has the potential to corrode metals and burns human skin. Elemental sulfur with pH lower than 2.0 poses an environmental threat if it is in direct contact to the soil. Hence we have ascertained that the right treatment and disposal method should be applied to our waste above to avoid any potential harm to the environment and also to our employees.

Environmental Threats of Hydrogen Sulfide

Effects of Sulfur:

- Process inhibitation –H2S is a strong poison in the respiratory chain
- Corrosion
- Odor problems and potential risk of staff
- Shortening the maturities of power station
- exclusion of alternative use of biogas

Odour Problems and Potential Risks for Staff

Even in low concentrations sulphide is extremely toxic to most organisms because it inhibits enzymes of the aerobic respiratory chain (BORKENSTEIN, 2006). Table 1 shows the harmful effects of H2S in dependence of the concentration. The threshold of odour of H2S is between 0.002 and 0.15 ppm, depending on the personal sensitivity. Occupational safety guidelines specify a maximum allowable concentration (MAK) of 10 ppm. First serious damage to health occurs at a concentration of 20 ppm.

Reduction of Durability of Combined Heat and Power and Exclusion of Alternative Use of Biogas During the fermentation of sulphur containing compounds, a significant proportion of hydrogen sulphide is formed in the reactor. During combustion the toxic sulphur dioxide (SO2) develops. Additionally, H2S and SO2 contribute to the corrosion of valves and engine components and lead to an accelerated acidification of the engine oil.

Conclusion

Based on the above report, Cenergi SEA has taken the respective and appropriate measures to overcome and manage our scheduled waste generated at our biogas plants. To date, the types of wastes produced do not pose substantial harm to the environment and people on site. We have implemented and prepared a standard operating procedure (SOP) to contain, store, and dispose the scheduled waste mentioned above. External parties (SWM managers, authoritative bodies) have been engaged in regards to our waste production below to discuss about the right procedure to handle these wastes.

As a way forward, we aim to continuously improve our scheduled waste management methods each year and present findings internally and externally to increase awareness and to improve our level of operations at our biogas plants.

Section 8:
People and Us

Section 8:
People and Us

Our People – Human Capital Development

As a fast-growing company going places in an increasingly competitive industry, we are faced with numerous external and internal challenges. To ensure continued success, we are committed to proactively look for ways to improve our company's performance and build on our competitiveness through our people. We work to improve and maintain a productive and sustainable organization, recruit passionate and talented people, develop and support their development, strengthen our leadership, and enhance people performance through strong engagement.

Capability Building

Building organizational capabilities is a high strategic priority for Cenergi. In 2018, about 80% of our employees completed their training in mostly functional programmes. Some of our people development highlights include participation in the Powerful Manager Programme, Sustainability Workshops and the Women in Leadership programme. Our capabilities agenda for 2019 will see great focus on leadership development, internal knowledge transfer programmes, innovation and commercial awareness trainings - all of which are core competencies to drive our business performance forward and sustain our growth. Our capability strategy will also address developing the necessary soft skills in our people particularly on communication, negotiation and problem-solving skills to build on their resilience in unpredictable and stressful circumstances at work.

We are also on track in re-evaluating our performance management system with aligned measures and ratings to push our people towards achieving our common goals. To keep ourselves agile and be able to respond quickly to challenging market conditions, we will also be establishing systems and/or processes to allow for dynamic movement of our people based on changes to business needs. This will also present opportunity for vertical and horizontal career advancement for our people.

The graph below illustrates the number of training hours that were taken up by Cenergi Group and its subsidiaries in 2018:

Training	No. of training hours
Cenergi SEA Sdn Bhd	2,222.5
Cenergi EE Holdings Sdn Bhd	234
Cenergi RE Sdn Bhd	120.5
Cenergi O&M Sdn Bhd	858
Total training hours for the group	**3,435**

Engagement & Culture

To foster a positive and productive working experience, it is important that our people feel heard, recognized and valued for what they do in the company. At Cenergi, people engagement is an ongoing effort. As part of our regular engagement, we regularly hold staff townhalls, coffee chat sharing sessions and social gatherings during festive seasons to connect with our people and motivate them.

In 2018, we conducted our maiden survey on employee experience to understand the improvement areas. This survey reveals that almost 80% of our people are passionate about the work that they do and more than half of our workforce would recommend others to work in the company.

Our newly established core values - integrity, transparency, respect, sustainability and safety - were voted by our people through the survey that they believe are important to deliver our corporate ambitions. We are currently developing our engagement strategy for 2019 based on the survey results gathered, where various campaigns and programmes to enhance communication, internalize our core values and build a culture of excellence will be implemented throughout the year.

Diversity & Inclusion

At Cenergi, we value diversity and inclusion and are committed to equal opportunities for all employees, regardless of age, gender, race or any other characteristics. We pride ourselves on our work ethics and good relationships, where integrity, transparency and respect are valued. We have a multicultural and multigenerational workforce from interns in between studies to industry veterans - a blend of dynamic and enthusiastic individuals committed to pursuing a sustainable future.

Cenergi makes an effort to employ local talents when it comes to recruiting plant employees. Most of our colleagues at site live within proximity of the plant location.

We have a gender balance of 60:40 male to female ratio at all levels of our workforce. We are on track to meeting our 50:50 target by 2020. We also recruit women returnees after a long career break for mothers through our unofficial career comeback programme. Our Head of Legal and Energy Efficiency Business Development officer are just a few examples of our women returnees.

In order to attract and retain a workforce that is diverse and inclusive, our recruitment strategy for 2019 will focus our efforts on employer branding and career page optimization. To also ensure that we only hire the best talents that are aligned with our values, new talents will be hired based on both skills and culture-fit.

Work Environment

As a fast-paced organization, our business at times require extended working hours, frequent travels and deadline pressures. It is our commitment to ensure a healthy and balanced work-life environment for our people. Besides its employees being entitled to health insurance schemes, we encourage health and wellness activities by providing gym memberships and organizing sporting activities. Our flexible work arrangements policy allows employees to vary their clock-in/clock-out times within a stipulated time frame, and work-from home two days a month to manage their personal commitments.

Our headquarters operates out of an open, communal office space to increase interaction and foster stronger teamwork and collaboration. We have also started to introduce new practices in 2019 to transform the way we work as part of our journey to create a performance and value driven organization. This includes but not limited to stricter compliance to company policies, measuring core values in our performance management system and to increase motivation through more frequent performance review.

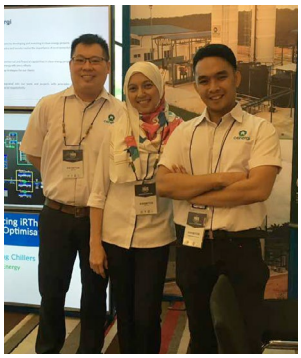
Industry Participation

For the past year, Cenergi has actively been participating in conferences that promote renewable energy and the green agenda as a whole. Thus far, we have sponsored a few conferences and have also used those conferences as a platform to share our industry knowledge through forums by sending representatives to speak as panellists of forums.

Sponsored Conferences

- Platinum sponsor for International Sustainable Energy Summit 2018: a bi-annual platform focusing on renewable energy and energy demand management. This was jointly organised by the Ministry of Energy, Green Technology and Water (KeTTHA) and the Sustainable Energy Development Authority (SEDA) Malaysia.

- Gold Sponsor for IEEE PES Asia Pacific Power & Energy Engineering Conference: this conference provided a platform for electrical engineers and researchers to present their works and to share experiences and ideas in power and energy engineering with experts and scholars from around the world.



Speaking Engagements

Malaysian Biogas Information Day 2017: A member of our RE team was invited to a Renewable Energy Symposium and Business Matching Event in Frankfurt, Germany to share on knowledge and expertise on the development and potential within the Biogas industry in Malaysia.

Astana EXPO-Future Energy 2017: Cenergi sent a representative from top management to partake in a discussion reovlving around lowering carbon emissions by promoting the shift towards sustainable energy.

REGTech Sabah 2017: Cenergi's CEO gave a pocket talk at the conference, promoting the values of EESG (Environment, Economics, Social & Governance) that are crucial to an organisation by today's international standards.

Universiti Tun Hussein Onn Malaysia (UTHM): A senior member of Cenergi's Operations and Maintenance division gave a talk to the students of UTHM's Faculty of Electrical and Electronic Engineering on renewable energy within the context of the Industry 4.0 Revolution.

International Sustainable Energy Summit 2018 (ISES 2018): Cenergi's CEO was invited by the Sustainable Energy Development Authority Malaysia (SEDA) to be on a panel discussing the potential of the bioenergy market. At the panel, he offered insight from a developer's perspective on how Malaysia can establish a sustainable bioenergy business model based on the untapped potential of palm oil mill effluent and palm oil empty fruit bunches.

Communities & Us

Our Corporate Social Responsibility Projects

Over the past year, Cenergi has been involved with activities that not only benefit its immediate environment, but also the people surrounding its operations. Cenergi recognises that it needs to conduct its business in an ethical and sustainable manner, and that giving back to society reflects this responsibility.

Sawira CSR

On 22nd December 2017, Cenergi organised a project aimed towards the underprivileged children schooling or living near the Sawira Biogas Power Plant (Sawira) in Muadzam Shah, Pahang. These children come from welfare homes and rural communities, where the schooling needs of the children, such as getting school supplies for the new year, cannot be fulfilled due to financial constraints. Besides helping through provision of financial aid, the children were also taught basic concepts of renewable energy, recycling and carbon footprint after being introduced to Cenergi and its mission.

"I really thank all of you (Cenergi's volunteers) because as much as contributions are helpful to them (the children), sometimes it is more important for them to know that there are people who care about them. Seeing how you interact with the children has truly touched my heart."
- Bilal of Muadzam Shah district -

Chester Homes CSR

As of January 2018, a project involving an old folk's home was carried out at Chester Welfare Home Kampung Desa Aman, located in Sungai Buloh. The majority of the residents are handicapped or mentally ill (by age or illness) and cannot care for themselves. Though the house has one administrator and three helpers, it still relies on the help of NGOs and visitors in getting basic necessities and general medical supplies, along with payment of medical bills. On top of acquiring the basic necessities (groceries) the home lacked, Cenergi organised a mural painting and gardening session to beautify the proximity, where Cenergi's own employees volunteered to help.

"They (the old folks) usually go about their daily routines doing the same old thing. When you (Cenergi) come here with all these activities planned out, it excites them to try new things and it gives them a chance to share their lives. Today has been wonderful and I do hope you will come visit the home again."
- Miss Shirley Lee, Chester Home Manager -

Hari Hasanah

In conjunction with Hari Hasanah, Cenergi organised a renewable energy workshop at SK Palong 14 on 18 September. The workshop introduced the concept of solar energy to the students as well as the importance of climate change awareness through interactive ways. Exposing the students to the idea of clean energy is important as it streamlines with the company's goals. Furthermore, SK Palong 14 students were chosen for the outreach program due to their proximity to Cenergy's Havys Biogas Power Plant. Quite a few of the plant workers also had children studying in the school.

Practising "Gotong-Royong" at Home

Havys Cleanup

On August 15th this year, Cenergi organised a clean-up activity at Havys Biogas Power Plant in Palong in commemoration of its 5 year-anniversary. A major aspect of the activity was to have volunteers from HQ work together with the plant staff. The initiative was organised as an effort to bridge the gap between HQ staff and those who are stationed at the plant due to the two groups being separated through distance and work scope. Through activities such as gardening, landscaping, painting, separation and disposal of waste, teamwork and inclusivity were promoted between staff.

Future Plans - Community Development Projects

Cenergi believes that it is important to 'invest' in endeavours that promote clean energy and carbon reduction in order for the green industry to continue to flourish. A way in which Cenergi strives to do so is by its community development projects. These are community driven and aimed towards carbon reduction through the propagation of clean energy; this aligns with both Cenergi's core business and sustainability aspirations.

Barefoot College Sabah

This initiative was introduced to Sabah through the Sabah Women Entrepreneurs and Professionals Association (SWEPA) to ensure access of sustainable energy sources to over 100 rural/off-grid communities across the state. The idea behind this initiative is to train illiterate/semi-illiterate rural women into solar engineers, who are capable of installing such systems within their villages to provide electricity to their homes and families. The 1st Solar Grandmother in Malaysia, Tarihing Masanim, graduated from Barefoot College Tilonia, India in 2015 and ever since her return, has installed over 100 units of solar panels and lights within her village.

Sustainable Schools

The Sustainability School program aims to address the lack of awareness with regards to environmental education amongst public and private schools in Malaysia, as well as the lack of energy regulation and monitoring of school buildings. On top of introducing the idea of sustainability to the school's curriculum, Cenergi has the capacity to provide technical consultation to these schools on how they can operate more sustainably.