



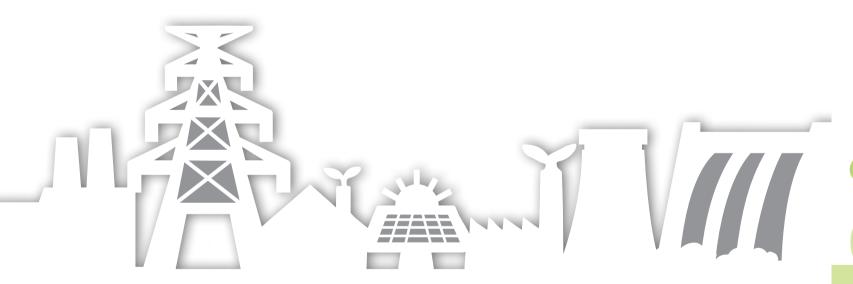
Towards A Renewable and Sustainable Energy Future













Hydropower

Renewable, reliable and affordable energy for Sarawak and beyond



Thermal Energy

Indigenous coal and gas resources provide energy security and diversity for Sarawak



Alternative Energy

Advancing alternative renewable energy solutions for a sustainable energy future

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About This Report



Oriving Thought Leadership for A Sustainable Energy Future for Sarawak and Beyond.

This Annual and Sustainability Report 2019 marks Sarawak Energy Berhad's (Sarawak Energy or the Company) inaugural combined Annual and Sustainability Report and presents the Company's performance to stakeholders.

As a State-owned enterprise that is not a listed company, Sarawak Energy is exempted from the corporate reporting requirements of public listed companies. Nevertheless, the Company is pleased to adopt voluntary disclosure of its performance and activities of the year for transparency and as part of its commitment to demonstrate delivery of value to its stakeholders.

The Company also continues to improve its standards of disclosure each year and is delighted to share strategy, value creation and sustainability agenda for 2019.

REPORTING STANDARDS

The development of this Report was guided by local and global best practices in corporate statutory reporting, such as Bursa Malaysia Securities Berhad's Listing Requirements, the Malaysian Code on Corporate Governance and GRI Sustainability Reporting Standards. In terms of sustainability reporting, this Report was prepared in accordance with the GRI Standards Core option and the full list of the Company's GRI disclosures and relevant references are available in the GRI content index on pages 157 - 189 of this Report.

The Company has also aligned its activities with the United Nations Sustainable Development Goals (SDGs). The Company's progress in contributing to the achievement of the 17 SDGs is included in this

For the first time in Sarawak Energy's sustainability reporting, the Company has incorporated recommendations from the Task Force on Climate-related Financial Disclosures (TFCD), which aims to provide consistent, comparable, reliable, clear and efficient climate-related financial disclosures for voluntary use by companies to enable informed decision-making among investors and other stakeholders.

REPORTING SCOPE AND BOUNDARIES

This Report serves to inform all the Company's stakeholders in Sarawak, Malaysia and the region.

Unless otherwise stated, this Report covers all of the Company's operations in Sarawak, including its subsidiaries, covering the period of 1 January 2019 to 31 December 2019. It evaluates the Company's environmental and social performance as well as includes the Company's achievements and challenges seen during the year, in addition to its long-term strategy and progress. The Report also discloses the Company's initiatives on corporate governance.

This Report was also developed in consideration of feedback received from the Company's stakeholders and inputs from the assessment of its operations against developments in the economy and the local and global energy industry.

The interactive PDF allows you to access information easily, search for a specific item, view website or navigate between pages, sections and links.

























We Are Sarawak Energy O • O O O O O O O O O

102-2, 102-9, 103-1

This Report contains forward-looking statements on the Company's outlook and strategy for 2020 and beyond, although actual results and initiatives may vary from expectations based on current developments, risks and unforeseen circumstances.

ASSESSMENT OF MATERIAL MATTERS

The Company has identified its Materiality Issues based on an assessment on matters of the most pressing importance to its stakeholders. The Company's Materiality Issues and accompanying materiality matrix are available on page 91 of this Report.

ASSURANCE

A third party has assured selected indicators of this Report and the Independent Third Party Assurance Statement is available on pages 154 - 156 of this Report.

FEEDBACK

The Company continuously aims to improve its reporting standards and welcomes feedback on this Report.

Comments and inquiries on this report can be sent to the following emails:

Corporate Enquiries: corpcomm@sarawakenergy.com

Sustainability Enquiries: sustainability@sarawakenergy.com

STATEMENT OF THE BOARD OF DIRECTORS OF SARAWAK ENERGY BERHAD

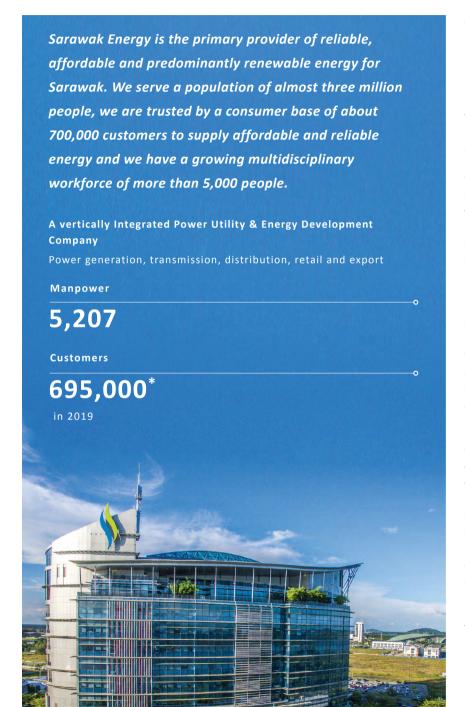
In presenting this Annual and Sustainability Report 2019, the Board is confident that the Report presents a fair and balanced perspective of the Company's activities for 2019.

Approved by the Board of Directors and signed on behalf of the Board.

Datuk Amar Abdul Hamed Sepawi Chairman

Datu Haji Sharbini SuhailiGroup Chief Executive Officer

About Sarawak Energy



Sarawak's generation mix is primarily renewable hydropower complemented by indigenous coal and gas generation for security of supply. Sarawak Energy's history stretches back nearly 100 years. During that time, we have built a reputation as a respected energy developer and also as a forward-thinking, modern utility able to respond to change and provide the power to grow as a catalyst for the sustainable development and prosperity of Sarawak.

We play an integral role in advancing Sarawak's economic and industrial growth by providing power to the Sarawak Corridor of Renewable Energy (SCORE), the 70,000 sq km economic development zone central to Sarawak's ambition to reach developed status by 2030. We are also making progress towards becoming a key player in the regional energy arena, exporting power to West Kalimantan in Indonesia and exploring hydropower development in Borneo.

Working with the Ministry of Utilities Sarawak, our rural electrification projects strive to bring electricity to even the most remote areas of Sarawak and we are on target to achieve our goal of 100% electrification coverage by 2025.

We have completed the final year of our three-year Strategic Roadmap 2020, a plan of action to witness us transforming into a high performing and technologically advanced utility and energy developer who is able to compete with the leading energy companies. Whilst we are transforming at speed and with determination, we remain committed to the core values which lie at the heart of our success: courage, unity, respect, integrity and accountability.

This combination of progressive thinking and adherence to our core attributes will enable us to bring innovative solutions to the challenges that lie ahead and greater reward to all our stakeholders.







We Are Sarawak Energy O • O O O O O O O O O

Vision, Mission and Living Our Values

OUR CORE VALUES VISION **MISSION WINNING BEHAVIOURS** Sustainable To realise our vision, we will Demonstrating Our Core Values and Winning Behaviours towards a High Performance Culture growth and Pursue opportunities for growth by fully developing the Sarawak **KEY ATTRIBUTES** Proactive on HSSE Government's Sarawak Corridor of Renewable Energy agenda prosperity COURAGE Value and bottom line driven with for Sarawak by Ensure our own safety and the safety of others, with a commitment strong cost discipline • Dare to speak one's mind We dare to do what is right • Dare to share different viewpoints to do 'no harm to anyone at any time' and in the best interests of our meeting the • Dare to intervene to right the wrong Trusted to deliver on our promises Company and the community, • Dare to take risks in decision-making even when it is not easy to do region's need Provide a reliable supply of clean, competitively-priced energy to Precise and speed conscious support the economic and social development of Sarawak and our for reliable, UNITY partners in the region Conducting our business with renewable integrity • Purposeful collaboration We collaborate and work • Enterprise – first mindset Operate as a business based on principles that reward our owners together to deliver our energy · We before me business objectives. Focusing on team work and and employees, and delight our customers · Synergy and teamwork integration RESPECT Honour the trust placed in us by the people of Sarawak, Working across functional and organisational boundaries by acknowledging and respecting them and contributing to · Value differences We value differences, include • Be inclusive their well-being and acknowledge different • Listen Proud of Sarawak Energy and will do points of view and listen well • Be humble in all situations. our best Set and achieve high ethical and corporate standards that are a INTEGRITY source of pride for our employees, customers and owners Open and adaptable to leverage technology for solutions Professionalism We are honest and can be Develop our people, leadership and teamwork to build an agile, Honesty trusted by people to do what Learning from our experience and Trustworthy open and customer-focused culture that responds to challenges is right. mistakes Do the right thing and the need for change with innovation and cooperation **ACCOUNTABILITY** Employees of choice, working for an employer of choice Harness and utilise natural resources in a sustainable and Ownership We work hard and are responsible way Commitment responsible for delivering Respectful of our people and the law · Delivery on promises our promises to the highest of the land • Do things right / professionalism standards. Achieve operational excellence through a commitment to continual improvement and best practice

Annual and Sustainability Report 2019

ABOUT THIS REPORT

WE ARE SARAWAK ENERGY

LEADERSHIP STATEMENTS

A COMMITMENT TO GOVERNANCE

KEY HIGHLIGHTS

STRATEGY ALIGNED WITH VALUE CREATION

HOW WE'VE PERFORMED

SUSTAINABILITY REPORT



SARAWAK ENERGY BERHAD • Annual and Sustainability Report 2019

102-6, 102-9, 103-1, 103-3, 203-1, 305-4, FU3, FU26

Sustainable Energy Future for Sarawak and Beyond

Sarawak Energy aligns its corporate responsibility as the primary electricity provider in Sarawak with the United Nations Sustainability Development Goals (UN SDGs), focusing on six main goals while continuing its growth agenda within Sarawak and beyond for sustainable value creation:





A BALANCED GENERATION MIX

predominantly renewable hydropower

complemented by indigenous thermal

Carbon intensity for electricity supply

Sarawak's generation mix is

CARBON FOOTPRINT

resources.

decreased by

68%

since 2011













ELECTRICITY TARIFFS

Competitively priced unsubsidised electricity tariffs in the region.

LIGHTING UP COMMUNITIES

Sarawak is reaching the last mile of its electrification initiatives, with around 22,350 more or 7% of rural households set to be lighted up to achieve full electrification by 2025.



Domestic Coverage (Urban & Rural) in 2019 **Rural Coverage** in 2019

Electrification Target by 2025

Sarawak Alternative Rural Electrification Scheme (SARES), a Governmentcommunity partnership programme that utilises standalone renewable solar and micro-hydro systems to light up Sarawak's most remote communities, was accorded a regional recognition under the Off-Grid – Power Category at the ASEAN Energy Awards 2019.

Number of Customer Accounts:

Industry:

607,999

106,639

1.078

CAPTURING GROWTH - SCORE

Sarawak Corridor of Renewable Energy

> 2,000MW energy demand

Business and employment opportunities through bulk power customer investment.

GOING GREEN



Menara Sarawak Energy is the first green building in East Malaysia.



The first company in Sarawak to incorporate electric vehicles and hydrogen fuel cell vehicles in its corporate fleet.

We Are Sarawak Energy O • O O O O O O O O O

102-9, 103-1, 103-3, 203-1



DRIVING THE GREEN ENERGY AGENDA IN SARAWAK

Commissioned Southeast Asia's first Integrated Hydrogen Production Plant and Refueling Station in Kuching in May 2019 to cater for Sarawak's hydrogen-powered buses to progress Sarawak's Green Energy Agenda.

Launched Sarawak's first Renewable Energy Certificate (REC) at the inaugural Sustainability and Renewable Energy Forum in November 2019. Each REC given out represents the environmental benefits of 1MWh renewable energy from Batang Ai HEP.

Exploring the development of floating solar at Batang Ai HEP.

BECOMING A REGIONAL POWERHOUSE

Progressing the Borneo Grid with the first power export to West Kalimantan, Indonesia in 2016 with an average supply of 190MW - 200MW.

Potential power export to Sabah and Brunei.

Exploring hydropower development in North Kalimantan, Indonesia.

Based on Power Purchase Agreements (PPA) with Sarawak Energy.

102-2, 103-1, 103-2, 203-1

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We Are Sarawak Energy 0 • 0 0 0 0 0 0 0 0 0 0

102-2, 103-2, 203-1, EU1, EU10

Energy for Sarawak





reliable and renewable energy for all, Sarawak Energy remains compliant with Sarawak and Malaysian laws and stays guided by international best practices in sustainably harnessing Sarawak's abundant natural resources in hydro, coal and gas, to provide reliable, renewable, clean and affordable power for the growth and prosperity of the

In line with SDG 7 to ensure access to affordable,

At the 2,400MW Bakun Hydroelectric Plant

ADVANCING HYDROPOWER

Sarawak Energy focuses on hydropower development to provide renewable, reliable and affordable energy for Sarawak and its people. The development of hydropower has enabled Sarawak to enjoy the lowest average unsubsidised electricity tariffs in Malaysia and amongst the most competitive tariffs in the region.

Sarawak Energy started its hydropower journey in 1985 when Batang Ai, Sarawak's first hydroelectric plant (HEP), came into operation. The Company now contributes 3,452MW of renewable hydropower energy to Sarawak's generation mix from its Batang Ai, Murum and Bakun plants, and is progressing towards SDG 7 of ensuring access to affordable, reliable, sustainable and modern energy for all, with Baleh, its fourth hydroelectric project, well under construction.

Bakun Hydroelectric Plant

Sarawak Energy became the sole owner and operator of the 2,400MW Bakun HEP, the largest hydropower plant in Malaysia, after the successful completion of the acquisition of Sarawak Hidro in 2017. Integrating the operations of Bakun HEP into the Company optimises water resources management between the Bakun and Murum HEPs, allowing a more efficient allocation of resources, generating long-term savings and supporting the distribution of reliable power supply to the State.

Baleh Hydroelectric Project

Located on the Baleh River, about 105km upstream from the confluence of the Rejang River in Kapit, the 188m-high Concrete Faced Rockfill Dam is one of Sarawak's largest infrastructure projects. Generating 1,285MW of renewable energy to the grid once completed, Baleh HEP is set to meet the anticipated rising energy demands especially in Bintulu's Samalaju Industrial Park catering for energy-intensive industries within the Sarawak Corridor of Renewable Energy or SCORE. Baleh HEP is Sarawak Energy's second hydropower development project under the SCORE initiative after Murum HEP and will be the largest HEP developed by the Company. The project is expected to be fully commissioned in 2026.

Baleh HEP opens up the more remote parts of Kapit Division and connects villages to the main town. Four bridges link Kapit town to the project site in Putai, providing direct access from Kapit to the dam site and will benefit longhouses located along the route when the spur roads are completed.

ADVANCING HYDROPOWER

Batang Ai Hydroelectric Plant

108MW

Murum Hydroelectric Plant

944MW

Bakun Hydroelectric Plant

2,400MW

Baleh Hydroelectric Project

1.285MW

Under construction

THERMAL POWER FOR ENERGY SECURITY

Balingian Coal-Fired Power Plant -Sarawak's Last Coal-Fired Power Plant

The 624MW (2 x 312MW) Balingian Coal-Fired Power Plant is the first power plant in Malaysia to use Circulating Fluidised Bed (CFB) boiler technology, which enables the low-emission plant to handle a wide range of coal types including high moisture indigenous coal commonly found in the Balingian region. The plant's CFB boiler, being the largest of its kind in Southeast Asia, will reduce nitrogen dioxide and sulphur dioxide emissions by over 40% and minimise its environmental footprint. The plant has been fully commissioned with the commencement of Unit 1 and Unit 2 Commercial Operation on August 2019 and September 2019, respectively.

The plant is located near the Balingian River, 25km southeast of the Mukah 2 x 135MW Power Station and about 60km from Mukah Town. The RM3 billion plant consisted nine work packages: the construction of the main power plant; substation and plant site earthworks; upgrading of the access road; administration and ancillary buildings; operator's village; the 33kV supply; 275kV transmission substation and lines and ash pond. About 45% of the work is undertaken by local contractors.



The 624MW Balingian Coal-Fired Power Plant.

Tanjung Kidurong New Combined Cycle Power Plant Project

The Tanjung Kidurong Combined Cycle Power Plant (CCPP) project is an extension of the existing Kidurong Power Station in Bintulu and is set to be one of the most efficient combined cycle power plants for its class in the world when it is completed. The Tanjung Kidurong CCPP will contribute 842MW of gross generating capacity when its two blocks are targeted for full commissioning by Q1 2021 and Q4 2021, respectively.

General Electric (GE), a world leader in power generation solutions for utilities, takes the lead as the Engineering Procurement and Construction (EPC) contractor with consortium partner Sinohydro, China's leading power and infrastructure EPC contractor. The project is also undertaken by local contractors as part of Sarawak Energy's continued commitment to maximise local participation and content.

The Tanjung Kidurong CCPP will be connected to GE's Monitoring and Diagnostics (M&D) Centre, for machine performance prediction using real-time data, to improve decision-making and potentially reduce plant maintenance costs. A computerised maintenance management system will be deployed to increase safety mechanisms while maintaining high plant reliability and availability.

We Are Sarawak Energy O • O O O O O O O O O

102-2, 103-2, 203-1, EU29

SECURING UPSTREAM RESOURCES

102-2, 103-2, 203-1, EU1, EU10

For supply security and diversity, Sarawak Energy secures upstream resource supply by extracting indigenous low sulphur eco-coal resources for its low-emission coal-fired power plants. Actively engaging in the entire value-chain from exploration, mining, processing and delivery of coal, Sarawak Energy incorporates advanced mining practices and planning techniques to optimise coal recovery and ensure sustainable coal resource development.

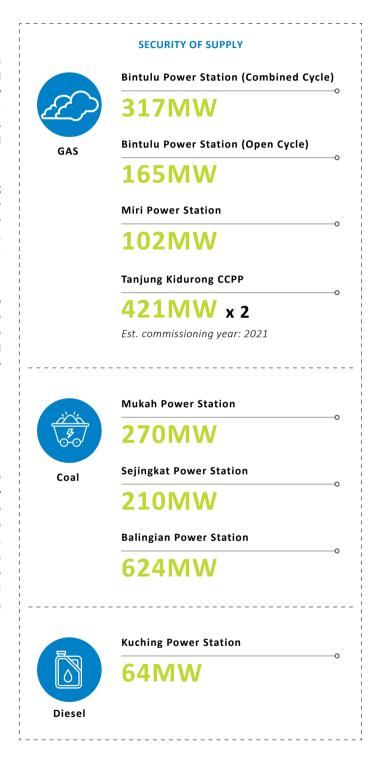
Sarawak Energy has been awarded six General Prospecting Licenses to explore coal in the Mukah and Balingian areas. The development of coal resources in Mukah and Balingian will create more job opportunities and promote the area's infrastructure growth including better road accessibility and provision of basic amenities. The Company is also extracting coal resources in Merit Pila, Kapit.

Sarawak has the largest coal resources in Malaysia with up to 1.4 billion tonnes of coal. Sarawak Energy plans to use an average of 5.4 million tonnes of locally-mined coal each year to generate power from coal-fired power plants. The Mukah and Balingian coal mines will be able to supply the life-of-plant requirement for the new Balingian Coal-Fired Power Plant.

STRENGTHENING THE RELIABILITY OF OUR SYSTEM

Reinforcement Projects to Enhance Supply Reliability to Matu and Daro

Sarawak Energy continues to prioritise efforts to improve the reliability of electricity supply for residents of Matu and Daro by investing RM333.2 million in new installations to reinforce the overall distribution system. Major reinforcement works include the construction of a new Daro substation which was energised in May 2019 and the construction of the 132kV transmission lines from Sungai Maaw and Petian substations which is currently ongoing. The second power supply to Matu was energised in December 2019 and has helped to reduce the risk of disturbances along the stretch as a backup to reinforce the existing supply system.





The Mapai to Entinggan line energised in September 2017.

500kV Backbone Transmission Grid

The RM2.7 billion 500kV backbone transmission grid is a key State infrastructure project and acts as a second transmission backbone running parallel to the 275kV transmission grid for better security and reliability of Sarawak's power system network. The transmission lines, which involve the construction of 1,182 transmission towers over 516km, will stretch all the way from Similajau in the Northern Region to Tondong in Kuching.

The project saw major progress with the commissioning and energising of two critical packages – the Similajau to Mapai line in June 2017 and the Mapai to Entinggan line in September 2017. The Lachau to Tondong line is underway and is estimated to be commissioned and energised by Q2 2021.

SYSTEM AVERAGE INTERRUPTION DURATION INDEX (SAIDI) FOR GENERATION, TRANSMISSION AND DISTRIBUTION

Sarawak Energy is progressing towards operational excellence with a SAIDI of less than 100 minutes in 2019 for the first time in almost 100 years of operations.

Overall SAIDI

96.49¹ minutes

in 2019

Overall SAIDI

101.36¹ minutes

in 2018



The Similajau to Mapai line commissioned in June 2017.

Note

¹ Include generation, transmission and distribution.

102-2, 102-11, 102-14, 102-16



Q

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— Leadership Statements ○ ○ ● ○ ○ ○ ○ ○ ○ ○ ○ ○

102-2, 102-11, 102-14, 102-16, 103-3

Chairman's Statement

"

Sarawak Energy is a key player in accelerating the economic growth of Sarawak and we are determined to achieve our vision to ensure sustainable growth and prosperity for Sarawak by meeting the region's needs for reliable and renewable energy.

"

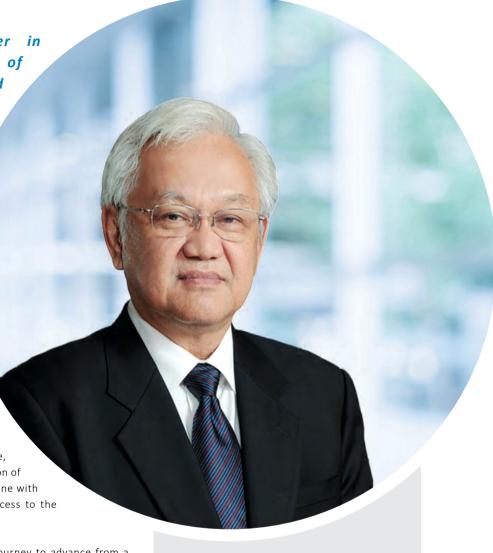
DEAR SHAREHOLDERS,

On behalf of the Board of Directors, I am pleased to present Sarawak Energy Berhad's first combined Annual and Sustainability Report (ASR) which discloses our performances for the year ended 31 December 2019.

We have combined our Annual Report and Sustainability
Report into one platform to disclose our corporate,
operational and sustainability performances as a reflection of
our commitment to improve our reporting standards in line with
global best practices, and ensure stakeholders have access to the
relevant information in one document.

Just over a decade ago, we began our transformation journey to advance from a traditional utility into a modern and agile corporation with sustainability at the core of our business, project delivery and operations. This inaugural combined report provides a record of this journey and underscores our commitment to transparency and accountability to our stakeholders to show the progress of our corporate transformation and the increasing importance of incorporating sustainability into our business.

The year 2019 has shown us that we are on track to achieve our vision to ensure sustainable growth and prosperity for Sarawak by meeting the region's need for reliable and renewable energy. We are also optimistic that our people will be able to deliver this aspiration through our strategic roadmap, guided by our five Key Focus Areas.



DATUK AMAR ABDUL HAMED SEPAWI

Chairman

YEAR IN REVIEW

Sarawak Energy is on track to provide sustainable growth and prosperity for Sarawak by meeting the region's need for reliable, renewable and affordable energy. We strive to incorporate sustainability into our business, project development and operations to ensure there is always a net positive benefit to the community.

In reflection of our commitment, Sarawak Energy has achieved significant milestones capped by our first thought leadership programme, the inaugural Sustainability and Renewable Energy Forum (SAREF) held in December 2019. Co-organised with the Ministry of Utilities Sarawak, this forum was conceptualised as a 10-year campaign to showcase regional efforts in building a more sustainable energy future.



The forum supports the call for all to align and achieve the SDGs by 2030, particularly SDG 7 to ensure access to affordable, reliable, sustainable and modern energy for all. Sarawak Energy is committed to work towards achieving the goals in partnership with organisations dedicated to the

same cause. Our efforts to develop a more sustainable energy future were also underscored by the launch of Sarawak's first Renewable Energy Certificate at SAREF.

Green Energy Agenda – Towards A Sustainable Energy Future

As an anchor organisation in advancing Sarawak's Green Energy Agenda funded by the Sarawak Government, we began research on the viability of hydrogen production and fuel cell application as an alternative fuel in 2018 following the announcement by Sarawak's Chief Minister that we would be entrusted to spearhead energy related research in 2017.

This resulted in a significant milestone when we formed a strategic partnership with Linde EOX Sdn Bhd, as subsidiary of Linde Malaysia, established and commissioned Southeast Asia's first Integrated Hydrogen Production Plant and Refueling Station in Kuching in 2019.

The facility was a bold initiative that put Sarawak on the map as an early pioneer and adopter of hydrogen production and application. This also enabled Sarawak's first hydrogen-powered vehicles to be in use, including hydrogen fuel-cell buses under the ownership and management of Sarawak Economic Development Corporation (SEDC). As part of our commitment to greening Sarawak's transportation sector agenda, Sarawak Energy also incorporated two units of hydrogen fuel cell vehicles into our corporate fleet.

In progressing this green initiative, we will continue our strategic partnership with Linde Malaysia in the research and development of the hydrogen pilot facility and assess lower-cost hydrogen production technology with Shell MDS.

All these efforts are geared towards supporting and complementing Sarawak's sustainability agenda and the ongoing transition towards a low carbon economy in the long-term, and support decarbonisation while accelerating the State's economic development. This will ensure a more sustainable energy future for Sarawak and beyond, as well as contribute to the global effort to mitigate climate change under SDG 13.

As a catalyst for the Sarawak Corridor of Renewable Energy (SCORE) agenda, we will continue to develop generation assets to meet power demand growth, especially at the energy-intensive Samalaju Industrial Park in Bintulu. In our role as Malaysia's largest provider of renewable energy, we are supporting the growth of Sarawak's development and creating employment, wealth and economic opportunities for Sarawakians through our projects and operations. This year, we signed a total of 727MW of new SCORE demand. I am optimistic of the opportunity to sign more Power Purchase Agreements (PPAs) with premium customers next year.



 Sarawak Energy's participation in the Hydrogen and Fuel Cell Research was announced in 2017.



 The launching of Southeast Asia's first Integrated Hydrogen Production Plant and Refueling Station.

102-2, 102-11, 102-14, 102-16

challenge traditional thinking by providing

a platform to grow these talents. We

introduced the Young Professionals Network

(YPN) this year to empower our junior

executives and build capacity through a

series of coaching and training. Young

executives under the YPN programme

can build rapport among each other and

integrate within the company as well as use

the platform as a communication channel for

I also applaud the efforts of senior

management to engage employees through

townhalls, focused group discussions, sports

events, festive occasions and other formal

and informal platforms for everyone to meet,

greet and talk to each other. I am certain

that this is why our employee engagement

scores as measured by the Sarawak Energy

Employee Survey have been consistently

inter-departmental collaboration.

Leadership Statements 0 0 • 0 0 0 0 0 0 0 0 0

102-2, 102-11, 102-14, 102-16



Artist's impression of the 1,285MW Baleh Hydroelectric Project.

ADVANCING RENEWABLE HYDROPOWER

Our 1,285MW Baleh Hydroelectric Project (HEP) is on track to meet the scheduled commissioning date of 2026. In addition to increasing our generation capacity of renewable hydropower when completed, Baleh HEP will provide access to more remote parts of the Kapit Division and connect the villages to the main town.

We also commissioned our 10.5MW micro-hydro at Kota 2 in the Lawas district of northern Sarawak to displace expensive diesel generation and provide much needed generation capacity.

ENHANCING ENERGY SECURITY

While we have abundant renewable hydropower, we also harness our indigenous resources of coal and gas for our thermal power plants to ensure energy security. This year, we began commercial operation of our 624MW Balingian Coal-Fired Power Plant.

This plant will help meet the demand from both retail and SCORE's bulk power customers as well as provide energy security to our generation mix.

This RM3 billion project, based on more environmentally friendly Circulating Fluidised Bed (CFB) boiler technology, is the largest of its kind in Southeast Asia and will be the last coal-fired power plant to be built in Sarawak.

The new technology incorporated into this power plant will reduce the emission of harmful gases and improve the environmental footprint of the plant.

The plant is located 60km from Mukah town, and 45% of the power plant construction works was undertaken by local contractors. This is in line with SDG 8 to provide decent work and boost economic growth in Sarawak.

BECOMING A REGIONAL POWERHOUSE

Sarawak Energy is moving forward towards becoming a regional powerhouse by collaborating with PT Kayan Patria Pratama (PT KPP) through a joint-venture (JV) company, PT Kayan Hydro Nusantara (PT KHN). The company was developed to advance the proposed 1,375MW Mentarang Induk HEP at the Malinau Regency in Indonesia's Northern Province of Kalimantan (KALTARA).

Following the Indonesian Government's plan to relocate their capital from Jakarta to Kalimantan, the Mentarang Induk HEP may support electricity demand growth for the development of the proposed new capital and potentially supply electricity to the new power-intensive industries at the proposed Tanah Kuning-Mangkupadi industrial and port zone. A full feasibility study on the Mentarang Induk HEP was completed in 2018 and the Malinau regency government has given their commitment and support.

The hydropower project represents a strategic entry to the region as the HEP under study has the potential to support the expansion of the ASEAN Grid in Borneo to improve energy security across the region. Once completed, this hydroelectric project is also expected to provide reliable and renewable electricity to the community of Malinau, strengthen the provincial economy, provide job opportunities and enhance the living standards of the communities around the HEP and extend Sarawak's successful hydro-industrialisation model to pursue economic growth. Through the JV, we will continue to work closely and consult the Malinau authorities and communities to ensure longterm benefits accruing from the proposed project are planned in a sustainable manner. We will also ensure short-term negative impacts are mitigated and positive benefits enhanced, especially where resettlement is required.

We are also progressing with our power export negotiations with Sabah and Brunei. I am positive of this prospect as it is one step towards realising the ASEAN Grid, beginning with an interconnected Borneo Grid, crucial for our future energy security and reliability.



 (Front row, from right to left) Datuk Amar Abdul Hamed Sepawi, Sarawak Energy Chairman; Juanda Lesmana, KPP Group Chairman; Indonesian President Joko Widodo: Dr. Drs. Yansen Tipa Padan. M.Si, Regent of Malinau; and Antony Lesmana, President Director

SUSTAINABILITY HIGHLIGHTS









Over the last decade, we have grown into a strong advocate of sustainability as a provider of renewable energy in Sarawak. Our operations, developments and practices are aligned with the SDGs, with a focus on SDGs 7, 6. 8. 13.11 and 17.

We have shared our story and aspirations to pursue sustainability in our energy development at global and regional conferences throughout

We develop our strategy based on the material matters identified. There are 32 kev issues under the Economic, Social and Environment pillars and they are prioritised based on the level of importance to the company and stakeholders.

part in enabling innovative ideas to improve

decision-making through a deeper and

more comprehensive viewpoint. Over the

years, we have strived to provide a working

promotes diversity and inclusiveness across

environment that respects, supports and

AWARDS AND RECOGNITION

high over the last few years.

It has been an eventful year for Sarawak Energy, and we have been honoured with several awards.

At the Sustainability Business Awards Malaysia 2019, Sarawak Energy received five awards for Best Overall for Sustainability Excellence, Strategy and Sustainability Management, Energy Management, Climate Change and received a Special Recognition in Stakeholder Engagement and Materiality.

The Sarawak Alternative Rural Electrification Scheme or SARES was recognised during the ASEAN Energy Awards in Thailand and was also recognised as Solar Power Project of the Year - Malaysia Category at the Asia Power Award 2019 in Kuala Lumpur.

During the 11th Annual Global CSR Summit and Awards 2019, we received three platinum awards under the Best Community Programme, Empowerment of Women for SELWN and CSR Leadership for driving the company's CSR and sustainability efforts.

BOARD MATTERS

There were no changes in the Board of Directors in 2019.

BUMIPUTERA PARTICIPATION

Our Procurement Policies and Procedures (PPP) are in line with international and industry best practices. One of our procurement guiding principles is to maximise local and Bumiputera content in our contracts.

To support the State's initiatives, we have specifically embedded Bumiputera content requirements in contracts as part of our corporate Key Performance Indicator (KPI).

To date, the share of work awarded to local and Bumiputera contractors has been consistently progressing well.

DIVERSITY AND INCLUSIVENESS

To be a top quartile energy company, diversity and inclusiveness play an integral

This is demonstrated by our introduction of initiatives and programmes which encourage honest discussions, provide constructive feedback and drive innovation under the High Performance Culture Key Focus Area. This includes the formation of the Sarawak Energy Leading Women Network (SELWN) which remains a strong platform to provide development and networking opportunities

for women employees, creating a support system for them to advance their career and develop leadership skills. The network identifies common challenges faced by working women and takes steps towards

addressing their needs.

To maintain a balanced mix of professionals, we encourage our young professionals to bring in innovative ways of working and

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Sarawak Energy's commitment to pursuing brand excellence was recognised with a Nation Branding Award 2019 at The BrandLaureate Awards. We were also the silver award recipient at the 'Anugerah Ketua Menteri Sarawak 2019' under the category of 'Agensi Utama Negeri'.

Our Annual Report 2017 was awarded Silver at the 69th Australasian Reporting Awards (ARA) themed "Celebrating Excellence in Reporting" in Melbourne.

Our efforts to make Sarawak Energy the best place to work were recognised with the "HR Asia Best Companies to Work for in Asia" Award. We were the only Sarawak-based company to win the award.

At the ASEAN International PR Excellence Awards, Sarawak Energy received two top Diamond Awards – the 'Best PR Programme – ASEAN Category' for its 'Mat Weavers' programme, the 'Best PR Campaign – ASEAN Category' for its 'Electrifying Sarawak and Beyond' campaign for outstanding communication work at the regional level.

PROSPECTS FOR 2020

As we move into a new decade, I am positive and confident that Sarawak Energy's strong and strategic partnerships with various global and regional agencies will help us advance in our aspirations to be a regional powerhouse and a digital utility.

Our dedicated workforce is our most valuable asset in progressing our vision for Sarawak and we are constantly looking into helping our people to reach their potential and achieve their professional aspirations. This is supported by a comprehensive talent management framework enabled by a High Performance Culture embedded in our corporate culture.

We will continue to advocate Health, Safety, Security and Environment (HSSE) awareness in our culture and among our contractors by implementing stricter compliance to HSSE, as there is always room for improvement. Ultimately, our goal is to achieve no harm to our people and our environment.

Guided by our Key Focus Areas of Operational and Project Delivery Excellence, I am optimistic that we can practise the highest standards and professionalism in delivering our projects in a timely manner based on our performance in 2019.

We are constantly adapting to the ever-changing economic developments to enable us to contribute to Sarawak's growth and development while securing our reputation as a preferred employer and trusted brand.

ACKNOWLEDGEMENTS

I would like to take this opportunity to express my deepest appreciation to the management and our staff for another year of excellent work. Thank you for your contributions and commitment in ensuring our continued success and making Sarawak Energy a great place to work.

Congratulations to Datu Haji Sharbini Suhaili for another successful year under his stewardship as Group Chief Executive Officer. I also congratulate Datu Haji Sharbini for his re-election to the Board of the International Hydropower Association (IHA). This signifies the association's continued confidence towards Sarawak Energy as a strong advocate of sustainable hydropower development.

On behalf of the Board of Sarawak Energy, I would like to extend our gratitude to all our stakeholders, shareholders, partners and customers for your continuous support and confidence in Sarawak Energy through the years. We will continue to serve

Our appreciation also goes to the Sarawak Ministry of Utilities for their continuous guidance and wholehearted support for Sarawak Energy in delivering reliable and affordable energy to all Sarawakians.

I also extend my gratitude to the Chief Minister of Sarawak, Yang Amat Berhormat Datuk Patinggi Abang Haji Abdul Rahman Zohari bin Tun Abang Haji Openg for his wisdom, leadership and judgement in ensuring Sarawak's future progression and growth.

May

DATUK AMAR ABDUL HAMED SEPAWI

Group CEO's Statement



"

The year 2019 marked the completion of our three-year strategic roadmap towards Sarawak Energy Excellence 2020. During the year, we achieved several milestones and continued to support Sarawak's economic development. Together as a united team with a vision provide sustainable. reliable and affordable energy for Sarawak, we overcame challenges and continued to embed change and improvements to what we do. Sarawak Energy is well-placed to move forward in our strategic roadmap towards becoming a regional powerhouse.

"

STRATEGIC ROADMAP

Sarawak Energy Excellence 2020, introduced in 2017, was a blueprint for uniting and focusing our organisation in our collective effort towards becoming a top quartile corporation and a best-in-class utility built on our five Key Focus Areas (KFA): Health, Safety and Environment; Operations; Project Delivery; Talent Management and High Performance Culture

Over these three years of focus on sustaining value and continuous growth, we have achieved significant milestones. In capturing growth, we successfully signed 579MW in Power Purchase Agreements (PPAs), mainly at the Samalaju Industrial Park in Bintulu. In 2017, with the support and guidance of our Chief Minister, we acquired the 2,400MW Bakun HEP and added Southeast Asia's joint largest hydropower facility into our stable of renewable energy generation plants, increasing capacity to more than 5,000MW. We secured additional upstream fuel resources for our thermal plants and reinforced our security of supply as we energise the 500kV transmission backbone.

DATU HAJI SHARBINI SUHAILI

Group Chief Executive Officer

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HSSE EXCELLENCE

At Sarawak Energy, safety is the top priority and we continue with our efforts to ingrain it as a shared responsibility so everybody who works for us can go home safely. Emphasising our Life-Saving Rules, we continue to embed the safety culture amongst our employees, contractors, and stakeholders in all aspects of our operations to achieve zero harm to people.



Building upon our Life Saving Rules campaign launched in 2017, we also rolled out our new HSSE Culture – **Assess, Comply, and Empower (ACE)** as the 3 elements of core behaviours to instill and inculcate in our workforce as part our safety culture.

Sarawak Energy was also recognised for our HSSE efforts and initiatives at the 37th Occupational Safety and Health Awards organised by the Malaysian Society for Occupational Safety and Health. Our 2,400MW Bakun HEP, 108MW Batang Ai HEP, 270MW Mukah Power Plant, 25MW Limbang Power Station, and 60MW Sungai Biawak Power Station won Gold Class I under the Utilities Sectors category for good management and practices in occupational safety and health. We also received Silver for our 944MW Murum HEP and 102MW Miri Power Station

In implementing a stringent HSSE Management system which includes Occupational Health & Safety Assessment



 Sarawak Energy received five Gold Class I and two Silver awards at the 37th Occupational Safety and Health Awards.

System (OHSAS) and Environmental Management System (EMS), our major power plants have been certified with OHSAS 18001:2017 Management System as well as ISO 14001:2015 EMS. Distribution and retail offices in Kuching, Miri, Sibu and Bintulu as well as Bakun Hydroelectric Plant received ISO 45001:2018 Occupational Health & Safety Management System and ISO 14001:2015 EMS certifications on 19 December 2019.

However, despite these efforts, we recorded three fatalities involving our contractors this year. We must continue a stringent and disciplined culture that embeds safety across the organisation and all stakeholders. We must also work on ensuring safety compliance and competency among our contractors.

OPERATIONAL EXCELLENCE

The reliability of our generation facilities is measured by Equivalent Availability Factor (EAF) and the results have been positive. EAF Gas achieved 91.06% and EAF Hydro attained 93.41%, exceeding our 2020 target of 89% and 93%, respectively, although there is room for improvement in our EAF Coal of 77.49%, to meet our 2020 target of 87%. By measuring the full capacity of our generation on an annual basis, we can improve and adjust the generation required to light up our community.



Our efforts to improve our customer delivery service through operational excellence have yielded much improvement with a year on year reduction of the overall System Average Interruption Duration Index (SAIDI) from 101.36¹ minutes in 2018 to 96.49¹ minutes in 2019. This is our lowest SAIDI to date, registering a 60% improvement since 2016. With consistent and continuous improvement, we hope to achieve our target to reduce SAIDI to 60 minutes by 2020. The System Average Interruption Frequency Index (SAIFI) also showed constant improvement from 2.84¹ times in 2016 to 1.73¹ times in 2019. With this improvement, we have been able to reduce the frequency of the average outage for each customer by 1.1 times since 2016.

Note

Includes generation, transmission and distribution.



Saradise Customer Service Counter in Kuching.

The response times of our operational and technical team has also improved – we recorded a success of 94.28% of street lighting cases repaired within 24 hours, an increase of 1.4% from last year while 92% of connection charges were released within 14 days.

Our operational excellence efforts were also reflected in our Mobile Field Force Automation (MFFA) Live Customer Satisfaction Survey which showed a rating of 94.63%.

To provide greater accessibility for customers at key touchpoints, we relocated our customer service counters in Miri, Bintulu and Kuching to areas with higher populations and prominence.

Despite continued power theft cases, we were also able to recover RM20.89 million worth of arrears in electricity bills, which exceeded our target of RM18 million. Sarawak Energy also won 34 out of 35 power theft court cases, with four cases still on trial.

PROJECT DELIVERY EXCELLENCE

To achieve project delivery excellence, we aim to complete our projects on time, at cost and within budget with quality assurance, in compliance with HSSE guidelines and EIA standards. We are also attentive to the needs and aspirations of communities adjacent to our project sites and make best efforts to maximise positive outcomes and minimise the negative impacts.

In continuing our efforts to strengthen and enhance organisational effectiveness, we reorganised our Project Delivery Department as part of our project delivery transformation efforts. We added new key functionalities in the department as a holistic approach to enhance and streamline



our internal processes and functions. As a result, we have improved our capability to address critical hurdles that are impacting our project delivery through substantially higher resourcing on projects and manpower

On the project delivery front, we have increased project delivery manning by 37%, which enhances our ability to manage projects better and improve HSSE site supervision. This also enables improvement to front-end loading, a very important factor to subsequent successful project execution. A Technical Capability Management Unit has been set up to strengthen the development of core competencies required for successful project delivery. Additionally, we formalised our regulatory and permitting function which significantly resolves work pass issues and expedites permitting process and established an interface management function to address interface issues arising from project connection points.

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To be a best-in-class utility, we must continuously benchmark our performance and practices against other industry players to articulate our strengths, address areas for improvement and evolve current and new strategies for the company.

As part of our project standards benchmarking exercises and to strengthen business relations, in April Sarawak Energy visited Singapore Power (SP) Group – a leading energy utility company in Asia Pacific renowned for its reliable and cost- effective networks. This visit to SP's facilities offered an opportunity for network and relationship building as well as knowledge sharing. To enhance our technical knowledge and skills to better manage our gas-powered generation plant and projects, we also visited PETRONAS's Pengerang Integrated Complex in February to learn more about their gas and power project. Our visit to their refinery, Petrochemical Integrated Development and other facilities provided us with the opportunity to learn from the petroleum giant.

Continuing our efforts to benchmark our project system, we engaged Independent Project Analysis (IPA) at the end of 2018 to assess the competitive position of our key project metrics, which included cost, schedule and functionality against industry peers. With the results, we were able to plan our strategy to improve our position in 2019.

TALENT MANAGEMENT EXCELLENCE SUPPORTED BY A HIGH-PERFORMANCE **CULTURE**

We believe people are our greatest assets and the key to drive the Company towards being a top quartile utility company, by making Sarawak Energy a great place to work through our Talent Management Excellence and High Performance Culture Key Focus Areas.

We actively invest in the development of human capital for an employee to reach their full potential through Human Resources



Visiting PETRONAS's Pengerang Integrated Complex in Johor.





processes such as the Staff Progression, Internal Open Resourcing, Departure Window, Competency Assurance Framework and Individual Development Plans.

This year, we launched the inaugural Business-Smart HR and HR-Smart Business Roadshow which aimed to inform and engage

our employees on issues related to human resources such as disciplinary issues, career progression, ethics and compliance through interactive activities. The HR portal was also rolled out as a one-stop centre for all staff to acquire HR information from career progression to leadership.

We are on track with our talent management excellence target to prepare a sustainable talent bench strength.

The High Performance Culture focus area targets enhanced employee engagement by ensuring our diverse workforce has an inclusive and enabling environment, building on a platform of our core values of courage, unity, respect, integrity and accountability.

In addition to our ongoing 'turun padang' and 'teh tarik' leadership reach-out communication sessions to listen directly to staff views, we also officially launched our on-site childcare centre Little Power Genius at Menara Sarawak Energy to support our colleagues with young children to juggle their career and family. This initiative is expected to contribute to better talent retention in Sarawak Energy while attracting more talents

Indicative of the success, the engagement scores of Sarawak Energy Employee Survey continue to exceed the KFA target.



Tanjung Kidurong Combined Cycle Power Plant

FINANCING ACTIVITIES

In 2019, RAM Rating Services Berhad (RAM) upgraded Sarawak Energy Berhad's RM15 billion Sukuk Musyarakah Programme (2011/2036) from AA1/Positive to AAA/Stable.

Subsequently, RAM upgraded the ratings of Mukah Power Generation Sdn Bhd's RM665 million Senior Sukuk Mudharabah Programme (2006/2021) and Sarawak Power Generation Sdn Bhd's RM215 million Serial Sukuk Musharakah (2006/2021) from AA2(s)/Positive to AA1(s)/ Stable. RAM also reaffirmed the AAA/Stable rating for Bakun Hydro Power Generation Sdn Bhd's RM5.54 billion Sukuk Murabahah Programme (2016/2031).

While Sarawak Energy Berhad did not undertake any Sukuk issuance this year, our wholly-owned subsidiary SEB Power Sdn Bhd successfully secured its first Export Credit Agency financing for Block 1 of the Tanjung Kidurong Combined Cycle Power Plant.

As at 31 December 2019, the total outstanding borrowings of the Sarawak Energy Group stood at approximately RM20.148 billion, comprising RM19.785 billion in onshore borrowings and RM0.363 billion in offshore borrowings. The Company's enlarged equity base, due to sustained profit improvements, has translated to a lower gearing ratio of 1.94 times against 2.20 times in 2018.

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ENTERPRISE MODERNISATION AND DIGITALISATION

To achieve our ambition to become a digital utility by 2025, we have introduced several fit for purpose Information and Communication Technology (ICT) innovations this year to ensure smoother operations and processes.

Our efforts in modernising and digitalising processes resulted in the migration of manual procurement processes to the Sarawak Energy e-Procurement system (SEPRO) in August. SEPRO is a procurement transformation initiative with an end-to-end integrated platform consolidating all procurement spend from sourcing and orders through invoicing and payment. Powered by SAP Ariba, this cloud-based procurement platform enables Sarawak

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Energy and vendors to connect and do business globally. Sarawak Energy can negotiate better agreements with vendors and achieve better spend visibility and control.

We have also introduced integrated payroll via our Sarawak Energy People Systems for the convenience of our people. This new function saves time and manages information efficiently by ensuring human resources and staff can access the same information without duplicate paperwork.

Since migrating to Microsoft Office 0365 (0365), the variety of tools or programmes in 0365 has modernised our workplace, increased enterprise collaboration and promoted working through virtual teams such as Skype and Microsoft Teams to enhance efficiency and communication among colleagues across Sarawak. With Microsoft 0365, mobile working is available anywhere and anytime. Besides laptop and desktops, it is also accessible via mobile phones.

On the Retail side, we have initiated the smart meter pilot project to replace existing conventional energy meters. We have installed 4,943 smart meters this year, with a target of 6,000 smart meter



The launching of SEPRO at Menara Sarawak Energy.

installations for the pilot project. With this wireless communication technology, we can obtain real-time meter readings while enabling our customers to receive prompt and accurate electricity bills The smart meter also allows faster detection of outages, hence shortening the power restoration time

We have also implemented several new systems to enhance the processes and reliability of our distribution network. Among the systems introduced was Enterprise Asset Management solution with mobility to Distribution for efficient work management and retrofitting and installing new motorised ring main units (RMU) to achieve faster supply restoration during

power outages for underground systems. The smart overhead line monitoring system detects abnormalities and notifies the operation team. This saves time in locating faults and reduces the number of customers affected during the outages.

To strengthen the physical security of our major assets, we extended the Distribution Remote Monitoring Systems (DRMS) to 380 distribution substations and deployed smart substation surveillance systems (CCTV) to our transmission and zone substations. The CCTV automatically detects substation abnormalities via sensors and video analytics which then alerts the response team with minimal human

Sarawak Energy has charted the Digital Power Plant (DPP) Blueprint in line with the corporate ICT Blueprint and aspiration to become a digital utility. The DPP Blueprint focuses on the progression of Sarawak Energy's large power plants by leveraging on the latest technologies and best practices adopted by global industries. The approach is designed and implemented in stages depending on the location of the power plant and size of impact.

PROJECT HIGHLIGHTS

With all the contract packages in progress, the 1,285MW Baleh Hydroelectric Project (HEP) is on schedule for completion in 2026. We safely completed the upper bench breakthrough of the Baleh HEP diversion tunnels in August. The diversion tunnels will divert the water flow during the construction phase of the project site. We also achieved 2.9 million manhours without Lost Time Injury for this project. The construction of the plant is being guided by best practices in hydropower development under the Hydropower Sustainability Assessment Protocol of the International Hydropower Association.

Our project delivery team also safely completed and commissioned 12 transmission projects this year. These projects have reinforced electricity supply in the central coast area, Sejingkat Industrial Park and Song district; and provides power evacuation from Tanjung Kidurong CCPP.

We achieved a significant milestone for Sarawak's Green Energy Agenda in 2019 with the official launch of Southeast Asia's first Integrated Hydrogen Production Plant and Refueling Station in Kuching. Tasked by the Sarawak Government to undertake research on hydrogen for energy-related applications in November 2017, we partnered with Linde EOX Sdn Bhd to complete this facility which includes a plant that produces hydrogen through electrolysis and a refueling station for Sarawak's first hydrogen fuel cell electric buses under the ownership and management of Sarawak Economic Development Corporation (SEDC).



At the breakthrough section of Baleh HEP diversion tunnel.

Sarawak Energy is now able to explore hydrogen's potential as a part of Sarawak's energy mix as a fuel and energy storage. The plant is the first step towards enabling a hydrogen-based economy in Sarawak as well as building a green energy future for the transportation sector in Sarawak and the region in line with SDG 11 to ensure sustainable cities and communities.



ENERGY SECURITY WITH THERMAL POWER

We achieved a significant milestone in ensuring energy security and diversity in our generation mix with the commissioning of the

624MW Balingian Coal-Fired Power Plant in September.

Utilising Circulating Fluidised Bed (CFB) boiler technology, this plant is the largest of its kind in Southeast Asia and uses Sarawak's indigenous coal for security of supply. With this power plant in commercial operation, Sarawak Energy can enhance the infrastructure and socio-economic well-being of communities around the Mukah and Balingian areas through improved access roads, basic amenities and enhanced local economic activities.

In terms of upstream resources, our subsidiary Balingian Energy Minerals (BEM) also achieved Sarawak's highest coal sales with more than 1.35 million tonnes sold to the Balingian Power Plant. Our subsidiary Sarawak Energy Resources also secured additional coal supply sources for the plant in preparation for potential increase in demand.

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RURAL ELECTRIFICATION

We remain fully committed to support the Sarawak Government's ambition of full electrification across Sarawak by 2025. Through the implementation of grid and off-grid solutions under the Accelerated Rural Electrification Masterplan, our rural electrification coverage grew to 93% in 2019, increasing our overall domestic coverage to 96.9%.

Our sizeable rural population is dispersed across remote and inaccessible areas in the region and not all are feasible for grid solutions under the Rural Electrification Scheme and Rural Power Supply Scheme. To address this, off-grid solutions such as the Sarawak Alternative Rural Electrification Scheme (SARES) and Hybrid Power Stations have proven effective in lighting up these remote communities. SARES has provided 277 villages covering 7.987 households with electricity while our 24 solar hybrid stations supply 53 villages with 2,075 households.

In the coming year, we will intensify our efforts to provide more rural households with access to 24/7 reliable electricity.

PROGRESSIVE PROFESSIONAL INITIATIVES

Sarawak Energy invests significantly in developing all levels of our people to ensure they can advance in their career through a structured competence and performance-based progression. Our leadership development programmes and trainings are designed to motivate and accelerate the development of our people.

As a progressive organisation, we acknowledge the importance of diversity and inclusiveness in the workforce, and how this can bring unique qualities, creativity and skillsets to the business. Our aspiration to achieve a better gender balance in the company drives us to step up our efforts in women empowerment in Sarawak Energy while supporting Malaysia's target of achieving 30% of women in top leadership positions in the Company.

The Sarawak Energy Leading Women Network (SELWN) was formed to develop women leaders and empower them through talent management programmes, professional networking and learning experience. Among the notable partnerships included our collaboration with 30% Club Malaysia, Pemandu Associates, Association of Voices of Peace, Conscience and Reason (PCORE), Malaysia Women in Energy (MyWIE), Maybank Women Council and Sarawak Women and Family Council.

COMBATING FRAUD & CORRUPTION

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Sarawak Energy is working towards embedding our core values across the company and our people, with a focus on integrity in combating fraud and corruption. We practise zero tolerance for fraud and have developed strategies for the prevention, detection and response to fraud.

Overall domestic coverage 96.9% SARES has electrified 277 villages covering 7.987 households Figure reflects SARES Phase 1 to 4 implementation.

This year, we held our Integrity, Risk and Business Continuity Management Day at all regions and power plants to inculcate a culture of proactive risk management in day-to-day business with uncompromised integrity and zero tolerance to fraud.

All colleagues across Sarawak are also required to sign an integrity pledge to make a unilateral declaration against corrupt practices and express our resolve to work towards a highly principled business environment.



Group Executive Committee members signing the integrity

THOUGHT LEADERSHIP PROGRAMME

In partnership with the Ministry of Utilities, we launched the Sustainability and Renewable Energy Forum (SAREF) to kick off a 10-year thought leadership campaign to develop networks and showcase our role as a key regional player in discussions on building a sustainable

The event was attended by 1,000 people overall and reflects the region and the world's commitment to environmental sustainability. United Nations Development Programme (UNDP) Goodwill Ambassador Tan Sri Michelle Yeoh delivered a special address at SAREF 2019.

Prominent international and local experts were able to share their experience and roles in a sustainable and renewable energy future. We were also able to share our story and our efforts in ensuring a sustainable and renewable supply of energy for Sarawak, both with the conference participants as well as through local and international media partnerships including with CNBC Catalyst and the South China Morning Post.

In line with SAREF, we will undertake a study on certified renewable energy supply together with Shell MDS. In a landmark for the local energy sector, we signed a Memorandum of Understanding to focus on research into Renewable Energy Certificates (RECs) as a mechanism for procuring and driving greater integration of renewable energy into energy supply chains.

REGIONAL AND INTERNATIONAL PRESENCE

We were at the Singapore International Energy Week 2019 for the second time to share our ambitions to accelerate renewable energy solutions. We also shared our hydropower story at the 24th World Energy Congress in Dubai and the 2019 World Hydropower Congress in Paris. At the Energy Capital Leaders Asia Summit at POWERGEN Asia & Asian Utility Week 2019, we were one of the panellists of the session and exhibited at the summit in Kuala Lumpur.

During the Global CSR Summit 2019 in April. Sarawak Energy also shared initiatives on corporate activism including our efforts in mitigating climate change and how we maximise the benefits while minimising the negative impact to the community in our operations and projects.

POWERING YOUNG MINDS

Sarawak Energy believes that education plays a vital role in an individual's development and is a critical investment in driving sustainable development. Through a range of education funding, scholarships and bursaries, Sarawak Energy is playing our part to power young minds all over Sarawak.

To promote interest and innovative thinking in science, technology, engineering and mathematics, we resumed our collaboration with The Learning Curve to organise the second Sarawak Community Innovation Engineering Competition Exhibition (SCIENCE) this year.

Besides academic investments, Sarawak Energy is also nurturing interest and developing potential young talent in sports. Our annual state-wide Sarawak Energy Junior Badminton Championship provides an avenue to groom young shuttlers to compete at local, regional and international levels.

SENIOR LEADERSHIP APPOINTMENTS

Hajah Siti Aisah Adenan was appointed the Senior Vice President for Corporate Services, succeeding Datin Aisah Eden who retired in August this year. Joining Sarawak Energy in 1990, Hajah Siti has undertaken diverse roles in technical and non-technical fields including as a Regional Manager, Vice President of People and Leadership Development and Vice President for Distribution. We would also like to express our gratitude to Datin Aisah for leading the Corporate Services department and for her contributions throughout her 35 years with Sarawak Energy.

ACKNOWLEDGEMENTS

I would like to thank our customers, Sarawak Energy and my colleagues commitment and dedication in achieving our 2019 targets and deliverables.

My appreciation goes to our Chairman and the Board of Directors for your continuous guidance and leadership.

I would like to take this opportunity Berhormat Datuk Patinggi Abang Haji Abdul Rahman Zohari bin Tun Abang Haji Openg for driving Sarawak's growth. Our have been possible without the trust and confidence from Dato Sri Dr Stephen Sarawak and his Ministry.

As we move towards 2020, I look forward to further growth and achievement in providing energy and the power to grow for Sarawak and beyond.



DATU HAJI SHARBINI SUHAILI **Group Chief Executive Officer**

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Management Discussion and Analysis



Ocelebrating HSSE Excellence at Baleh HEP.

Over the last decade, Sarawak Energy has grown rapidly. We grew our generation capacity to over 5,000MW and our workforce today numbers over 5,000.

With corporate restructuring, we are becoming a more agile corporation and increasing our company value. Building on this achievement, we began a transformation journey – Sarawak Energy Excellence 2020 – from 2017 to 2019 as a three-year strategic roadmap to accelerate our progression towards becoming a regional powerhouse.

Following the completion of this consolidation period between 2017 to 2019, we were able to align our company to sustain our business value and growth. As a result, 2019 was an exciting year as we achieved several milestones while also meeting with our fair share of challenges. We improved our operational performance while achieving cost optimisation and continuous improvement within the Company.

Sarawak Energy Excellence 2022 is our next three-year roadmap to become the Best Operator and Capture Growth through Continuous Improvement. To be delivered from 2020 to 2021, we are working on continuous improvement initiatives to drive change across the Company's value chain and investing in various digitalisation plans to reach our aspiration to become a regional powerhouse.

KEY FOCUS AREAS

Under our Sarawak Energy Excellence 2020 strategic roadmap and underpinned by our five key focus areas, we are focused on achieving excellence in our operations and Health, Safety, Security and Environment (HSSE), project delivery and talent management enabled by a high-performance organisational culture. In aligning our operations and business with the United Nations Sustainable Development Goals (UN SDGs), we are focused on the three pillars of sustainability: catalysing economic sustainability, transitioning social outcomes and improving our environmental footprint.

During the year, we recorded 2.9 million manhours without Lost Time Injury (LTI) at our Baleh Hydroelectric Project while our Tanjung Kidurong CCPP reported 5 million manhours without LTI. Sarawak Energy Resources also achieved 2.6 million manhours without LTI. For project delivery, our lost time injury frequency rate (LTIFR) was 0.19, whereas our operational LTIFR recorded 0.27, bringing our overall corporate LTIFR to 0.23. However, there is still more work to be done to ensure that we achieve our Zero Lost Time Injury and Zero Fatality goal – we recorded three fatalities involving our contractors this year. We will continue with programmes to inculcate and embed a culture that is HSSE-focused and equip our staff and contractors with the right knowledge and competency. This includes engaging competent contractors who comply with our HSSE practices and EIA standards to undertake our projects.

While we successfully delivered several projects this year, we were also faced with various challenges which led to project delays and cost escalation. We recognised that land and wayleave issues, procurement complications, contractors' performance and front-end loading are areas of improvement.

In line with SDG 7 to provide secure and reliable electricity supply throughout Sarawak, we are extending our transmission infrastructure and network further into rural and remote areas, traversing geographically challenging regions with proposed transmission line routes occasionally passing through land with difficult claimants. Together with our Land and Wayleave Department, the project team will engage with the landowners for wayleave permission and compensation. However, when consensus cannot be reached, complications such as protests leading to access denial and blockade will result in project delays and cost escalation.

With an accelerated time frame for delivery, we must have a structured and standardised approach to resolve such issues. We have worked on developing a comprehensive way forward with our Legal and Enterprise Risk team to amicably resolve disputes or disagreements amongst the parties. We continue to seek the understanding and cooperation of the public for the successful implementation of our projects, all of which are meant to benefit the community.

Sarawak's urban population enjoys 100% electricity coverage with full access to 24/7 reliable electricity. Together with the Ministry of Utilities, our efforts are geared towards increasing overall domestic coverage in the coming months by focusing on rural electrification projects so we can achieve full electrification for Sarawak by 2025. Through a variety of governmentfunded programmes under the Accelerated Rural Electrification Masterplan, we have reached 93% electrification for Sarawak's rural communities this year, an increase from 91% in 2018.

Throughout 2019, Sarawak Energy did well in terms of our operational excellence initiatives and targets. We achieved several firsts in our generation operational excellence as well as network and customer service excellence.

Digitalisation is a key enabler to accelerate our business growth, providing long term solutions to make the company's operations and processes more efficient. We are on track with our digital transformation by utilising information technology to drive innovation while aligning our people, processes and systems to keep up with the changing global scene. We continue to adapt to changes by modernising our technologies and implementing new ways of working to prepare us towards becoming a digital utility.

We are also focused on digitalisation of project management processes, strengthening project governance, high-quality front-end works, standardisation of engineering designs and enhancing technical capability development of our engineers to drive project delivery excellence.

While we pursue enterprise-modernisation initiatives to integrate digital technology applications into our various business management functions, we are also building a workforce that is knowledgeable in utilising and optimising these technologies. We will continue to digitalise processes for greater efficiency and add value for our customers and support Sarawak in its drive to achieve a digital economy.



Digitalising systems at Customer Service Counters.

— Leadership Statements ○ ○ • ○ ○ ○ ○ ○ ○ ○ ○ ○

At Sarawak Energy, we strive to provide a conducive working environment for our people at work, in line with SDG 8 to provide decent work for all as well as meet the professional needs of our people. In 2019, we received the "HR Asia Best Companies to Work for in Asia" award and emerged third in Jobstreet's top ten preferred companies to work for in their Sarawak survey just behind two multi-nationals, making us the local employer of choice for Sarawakians.

energy

Our talent development programme is aligned with our core values and fit for purpose for a sustainable talent bench strength that meets our Company's needs. The Sarawak Energy Talent Council ensures robust succession planning and a sustainable talent bench strength for critical positions. 'Ready Now' and Ready Later' successors are identified for all critical positions and structured development interventions are taken to accelerate the development of successors. We ensure that all levels of our people are developed accordingly through our Individual Development Plan and Competency Assurance Framework. This platform empowers our people to take control of their career progression and personal development.

The AIM 100 Leadership Conference 2019 was held for 100 high calibre and high potential employees to learn from industry experts through engaging TED Talk-like sessions and panel discussions centred on leadership roles to promote growth and address current and future development challenges.

Effective leadership is crucial for bringing positive change required to help the Company prepare for future growth.



AIM 100 panel debate to demonstrate agility.

SELWN supports Malaysia's target of achieving

30%

of women in top leadership positions.

In 2019, Sarawak Energy added

95 new women executives

into our workforce.

The Melbourne Business School programme, as part of the Sarawak Energy Executive Leadership Programme, develops leaders and enhances leadership skills. Two cohorts consisting 48 leaders from across the company have benefitted and graduated from the programme this year and two new cohorts are planned for next year.



Our Sarawak Energy Leading Women Network (SELWN) continues with programmes and initiatives to empower and develop women leaders in the company. SELWN subscribes to UN SDG 5 on Gender Equality and supports Malaysia's target of achieving 30% women participation in top leadership positions in the company. In 2019, we saw an increase of 87 women employees recruited and 95 new women executives as compared to 2018.

Our employee engagement score increased to 85% in 2019 from 84% in 2018. The employee engagement survey is an important gauge of how our people feel about their work and job satisfaction.

At Sarawak Energy, we recognise that a positive corporate reputation is a strategic asset that helps create space for growth and earns our licence to operate by building trust and confidence among our stakeholders and customers. Significant efforts have been made to grow our brand and strengthen our corporate identity in the past years. With our refreshed logo, representing clean and renewable energy that sustains growth for Sarawak and its people, we continue to actively promote our brand and identity.

We believe building strategic partnerships is pivotal in giving us a competitive edge and boosts overall brand equity. Through collaboration and sharing of ideas, we expand our knowledge and resources to provide quality products and services to customers.

The year 2019 was fruitful for strategic partnerships ranging from collaborations with project-affected communities, the banking industry, education institutions and government agencies. Among notable collaborations were our signing of a Memorandum of Understanding (MoU) with Shell MDS (Malaysia) to study certified renewable energy supply; collaboration with a Korean Consortium for microgrid technology research in Sarawak; MoU with Bank Islam and Syarikat Jaminan Pembiayaan Perniagaan (SJPP) to provide financing solutions; talent development and research collaboration with Swinburne University Sarawak and the University of Nottingham Malaysia; collaboration with Sarawak's Forest Department on Baleh Watershed Wildlife Connectivity Project as well as partnerships with the community for culture and heritage initiatives.



Memorandum of Understanding with Bank Islam and SJPP.



Supporting the Uma Baha community in Apau Koyan, Belaga to deliver the tallest Belawing Tower in Malaysia.



Driven by a strong commitment to sustainable development, we continue to tap into and contribute to global expertise and best practices through international partnerships with thought leading organisations such as the International Hydropower Association, Global Compact Network Malaysia and Global Reporting Initiative.

In our three-year journey towards Sarawak Energy Excellence 2020, we have been able to sustain our business value through continuous growth. Several key achievements over this three-year journey include securing upstream fuel resources; acquiring the Bakun Hydroelectric Plant; increasing generation capacity above 5,000MW; signing 579MW of power purchase agreements and energising the 500kV transmission backbone.

With the conclusion of the third year for Sarawak Energy Excellence 2020, we will embark on a new three-year strategic roadmap — Sarawak Energy Excellence 2022 — in the following year to drive us closer to our aspiration to become a regional powerhouse beyond 2023.

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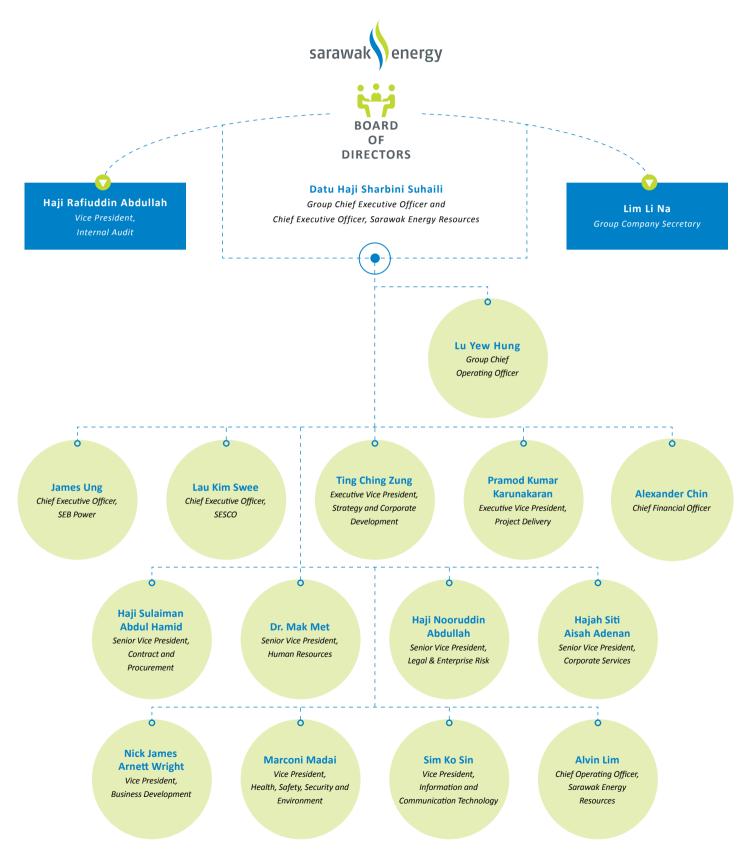
— A Commitment to Governance ○ ○ ○ ● ○ ○ ○ ○ ○ ○ ○ ○

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Our Corporate Structure

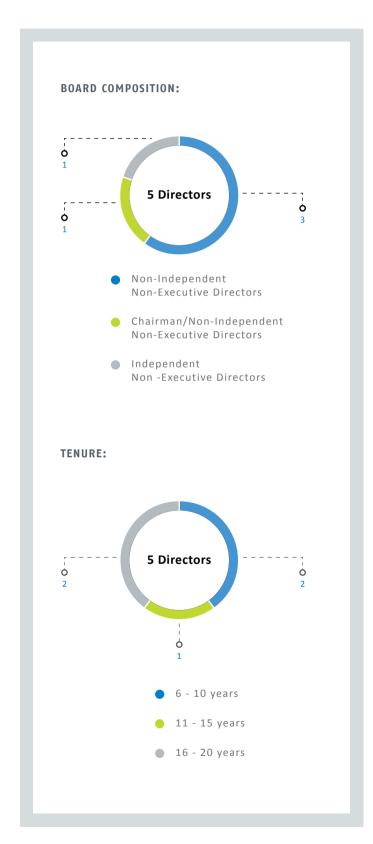


Group Organisation Structure



A Commitment to Governance oooooooooooo

Board of Directors Profile





Chairman of Sarawak Energy/
Non-Independent Non-Executive Director

Yang Berbahagia Datuk Amar Abdul Hamed Sepawi joined the Board of Sarawak Energy and was appointed Chairman of the Company on 27 June 2005. He attended all Board meetings held in 2010.

Datuk Amar Abdul Hamed is a trained forester, corporate management strategist and industrialist in the timber, food and beverages, and energy industries.

He graduated with a Bachelor of Science degree from University of Malaya in 1971 and pursued his undergraduate studies in Forestry at the Australian National University from 1974 to 1975. He also holds a Masters degree in Forest Products Utilisation from Oregon State University, USA.

He was conferred the Panglima Gemilang Bintang Kenyalang in 1999 and the Datuk Amar Bintang Kenyalang in 2012. He received the Sarawak Entrepreneur of the Year 2004 and was adjudged The BrandLaureate's prestigious 'Man of the Year' Brand Icon Leadership Award 2015.

He also serves as Chairman of Syarikat SESCO Berhad and Naim Holdings Berhad, and Executive Chairman of Ta Ann Holdings Berhad and Sarawak Plantation Berhad.





Non-Independent Non-Executive Director

Yang Berbahagia Tan Sri Datuk Amar Haji Mohamad Morshidi Bin Haji Abdul Ghani joined the Board of Sarawak Energy on 26 May 2010. He is a Non-Independent Non-Executive Director and attended four out of six Board meetings held in 2019.

Tan Sri Datuk Amar Haji Mohamad Morshidi graduated with a Bachelor of Economics from Universiti Kebangsaan Malaysia and has a Master of Science in Human Resource Administration from the University of Scranton, Pennsylvania, USA. He was a Management Executive with PETRONAS from 1980 to 1988, and Director of Kuching North City Hall from 1989 to 1998. He held a number of senior positions in the Chief Minister's Department before being appointed Permanent Secretary in the Ministry of Social Development and Urbanisation in 2001. He was Director of the State Planning Unit in the Chief Minister's Department prior to his appointment as the Deputy State Secretary of Sarawak in 2006 and later, the State Secretary of Sarawak in August 2009, a position he held until August 2019.

Tan Sri Datuk Amar Haji Mohamad Morshidi sits on the board of Syarikat SESCO Berhad and several other private limited companies.





Independent Non-Executive Director

Yang Berbahagia Tan Sri Dato Sri Mohd Hassan Bin Marican joined the Board of Sarawak Energy on 9 June 2010. He is an Independent Non-Executive Director and has attended two out of the six Board meetings held in 2019.

Tan Sri Dato Sri Mohd Hassan is a Fellow of The Institute of Chartered Accountants in England and Wales (ICAEW), and a member of the Malaysian Institute of Accountants (MIA) and the Malaysian Institute of Certified Public Accountants (MICPA). He began his professional career in 1972 at Touche Ross & Co., London, and subsequently became a Partner at Hanafiah Raslan & Mohamad/Touche Ross & Co. in 1981. He was appointed PETRONAS Senior Vice President of Finance in February 1989, its President and Chief Executive Officer from February 1995 to February 2010, and the Acting Chairman from July 2004 to February 2010.

Tan Sri Dato Sri Mohd Hassan also serves as a board member on several other private limited companies.



A Commitment to Governance ○ ○ ○ ● ○ ○ ○ ○ ○ ○ ○ ○

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Non-Independent Non-Executive Director

Yang Berbahagia Dato Sri Fong Joo Chung joined the Board of Sarawak Energy on 31 January 1996. He is a Non-Independent Non-Executive Director and has attended five out of six Board meetings held in 2019.

Dato Sri Fong received his LLB (Hons) from the University of Bristol, U.K., in June 1971. He was subsequently called to the Bar at Lincoln's Inn. London, in November of the same year. In 1972, he began his professional career at Reddi & Co. Advocates in Kuching. He was appointed the State Attorney-General, Sarawak in August 1992. He officially retired on 31 December 2007, but was retained by the Sarawak Government as the State Legal Counsel. He also served as Councillor with the Kuching Municipal Council and Council of Kuching City South. He is a founding member and past President of the Advocates' Association of Sarawak.

Dato Sri Fong was conferred the award of Panglima Jasa Negara (PJN) by the Yang di-Pertuan Agong, Malaysia in 1999 and Panglima Gemilang Bintang Kenyalang (PGBK) by the Yang di-Pertua Negeri, Sarawak in 1994.

He was conferred the Panglima Negara Bintang Sarawak (PNBS) in

Dato Sri Fong sits on the boards of several other subsidiaries of the Sarawak Energy Group besides holding directorships in Bintulu Port Holdings Berhad and Sarawak Cable Berhad.





Non-Independent Non-Executive Director

Yang Berhormat Dato' Haji Idris Bin Haji Buang joined the Board of Sarawak Energy on 24 June 2000. He is a Non-Independent Non-Executive Director and has attended all Board meetings held

Dato' Haii Idris graduated with an LLB (Hons) from the University of Buckingham, and was subsequently called to the Bar and qualified as a Barrister at Lincoln's Inn, London, U.K.. He is the proprietor of Idris-Buang & Associates (since 1985), a legal firm located in Kuching, Sarawak. He was formerly the Chief Political Secretary to YAB Chief Minister of Sarawak, a position he held from August 2000 to August 2006. He was appointed Senator of the Dewan Negara on 28 November 2005, and was reappointed to another three-year term on 29 November 2008.

He was elected as State Legislative Assemblyman in 2016.

Dato' Haji Idris also sits on the boards of several other subsidiaries of the Sarawak Energy Group besides holding directorships in Amanah Saham Sarawak Berhad and Hock Seng Lee Berhad as well as other private limited companies.



Our Management Team

Datu Haji Sharbini Suhaili

Group Chief Executive Officer



Sarawak Energy. Under Datu Sharbini's stewardship, Sarawak Energy continues to advance hydropower which currently accounts for approximately 75% of installed generation capacity in Sarawak, powering residential, commercial and industrial activities, and supporting the government's economic growth Sarawak Energy is delivering on Sarawak's mission to achieve 99% electrification coverage by 2020, together with the Ministry of Utilities.

Datu Sharbini is strongly committed to managing Sarawak Energy's business to minimise any Datu Sharbini holds a degree in engineering as a socially responsible corporate citizen. Management College, UK.

Datu Haii Sharbini Suhaili is the Group CEO of Datu Sharbini is also a strong advocate of safety as a key focus area for the corporation.

Sarawak Energy has been an International Hydropower Association (IHA) platinum member and sustainability partner since 2010. On the IHA Board since 2017. Datu Sharbini is also a director strategy. In accelerating rural electrification, of Petros, a wholly government-owned petroleum company. In 2018, he was conferred the Darjah Jasa Bakti Sarawak (D.J.B.S) which carries the title Datu, on the occasion of His Excellency the Governor of Sarawak's birthday.

negative impact of its operations and maximise the (Hons) from University of Leeds, UK, and a masters positive impact of what it does for the community, in business administration (MBA) from Henley

Lu Yew Hung

Group Chief Operating Officer

Lu Yew Hung is the Group Chief Operating Officer of Sarawak Energy, a position he was appointed to in 2013. In his current role, Lu is responsible for establishing the vision and strategy to lead the Company's operational units in the execution of critical and transformative operational strategic initiatives, including asset management, improvements while maintaining engineering and operational excellence.

Starting as an electrical engineer, in 1980 he joined Sarawak Electricity Supply Corporation (SESCO), now a wholly-owned subsidiary of Sarawak Energy Group.

Lu holds a Bachelor's degree in Electrical and Electronics Engineering from the University of Dundee in the U.K. He was a Class 1 Switching Engineer up to 275kV before relinquishing his switching duties to assume leadership positions. Since 1988, he has been a professional engineer and also a Corporate Member of the Institution of infrastructure upgrades, and technology Engineers, Malaysia (IEM). Since 1996, he has also served as a principal interviewer with the IEM.



Lau Kim Swee

Chief Executive Officer, SESCO



Lau Kim Swee is the Chief Executive Officer of Syarikat of RM40 million and winning Sarawak Energy the first oversight of end-user customer care.

Lau has served with Sarawak Energy for almost 30 years and other customer oriented initiatives. in various roles. Prior to his last appointment as Senior Vice President, Distribution, he held the retail portfolio Company's efforts to combat power theft – reduction from Monash University in Melbourne, Australia.

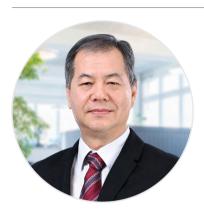
SESCO Berhad (SESCO) and is responsible for the prize in the 2012 Key Focus Award from the Sarawak reliability and security of the power system as well as Government. Lau also brought visible change to the Company's customer service approach, spearheading Sarawak Energy's 24-7 Customer Care Centre in 2013

Born and raised in Kuching, Lau holds a Bachelor's and was responsible for significant success in the degree in Electrical and Computer Systems Engineering

A Commitment to Governance ○ ○ ○ ● ○ ○ ○ ○ ○ ○ ○ ○

James Ung Sing Kwong

Chief Executive Officer, SEB Power



He joined Sarawak Electricity Supply Corporation James holds a Bachelor's degree in Mechanical (SESCO) in 1990, now a wholly owned subsidiary of Engineering from the University of South Alabama Sarawak Energy Group, and has more than 25 years in the USA. of experience in the power generation business and

James Ung. formerly Senior Vice President, Thermal. project management in power plant construction. is the Chief Executive Officer of SEB Power and He served as General Manager of Sejingkat Power oversees Sarawak Energy's power generation Plant and led the Mukah Coal Power Plant project to its successful commissioning in December 2008.

Ting Ching Zung Executive Vice President, Strategy and Corporate Development

Company's overall goals.

restructuring and rationalisation exercises. Accountants Australia and New Zealand and holds financial planning and analysis, and profit-and-loss a Bachelor's degree in Accountancy from the leadership. Before joining Sarawak Energy, he was University of Otago, New Zealand.

Ting Ching Zung is the Executive Vice President of the Chief Executive Officer of Trienekens (Sarawak) Strategy and Corporate Development, a position Sdn. Bhd., a waste management company which he was appointed to in May 2015. In his current handles scheduled waste throughout East Malaysia position, he leads the development strategies and municipal waste in Sarawak's major cities. Prior for sustainable business growth and heads the to that, he held various leadership positions in the implementation of strategic plans to achieve the finance and accountancy sector in the East Asia region.

Ting has extensive experience in major corporate Ting is a Chartered Accountant of Chartered



Pramod Kumar Karunakaran

Executive Vice President, Project Delivery



Project Delivery in July 2018.

covering all phases of projects from initiation, Power Project. concept development to operational readiness and commissioning, through to delivery of commercial operations

Pramod Kumar Karunakaran joined Sarawak He has managed oil and gas downstream Energy as the Executive Vice President for infrastructure and power generation projects (including downstream gas and power asset) and operations. Prior to joining Sarawak Energy, Pramod has 33 years of experience in oil and gas he was responsible for the delivery of the major project management and development, multi-billion ringgit PETRONAS Pengerang Gas &

Alexander Chin

Chief Financial Officer



to drive the Company's performance. Alexander which carried out strategic planning and business financial results are reported accurately, timely and in both the public and private sectors. compliance with the relevant regulations.

Before joining Sarawak Energy, Alexander held a Certified Accountants (U.K.) and a Member of the range of responsibilities with one of Malaysia's Big Malaysian Institute of Accountants and the Chartered 4 assurance companies – in 2007 as a Partner in its Tax Institute of Malaysia.

Appointed as the Chief Financial Officer in January East Malaysia office, responsible for audit clients 2014, Alexander Chin oversees Sarawak Energy's from the manufacturing, construction, banking, financial risk management, a portfolio which supports mining, telecommunications and palm oil industries, the development of the Company's financial and and from 2010 to 2014 as Partner-in-Charge of its strategic plan as well as the use of financial metrics Advisory and Risk Services. In this role, he led teams also holds the responsibility for developing and performance improvement services as well as monitoring the financial control systems designed to corporate governance reviews, risk management preserve the Company's assets and for ensuring that implementation and internal audits for clients from

Alexander is a Fellow of the Association of Chartered

Tuan Haji Sulaiman Bin Haji Abdul Hamid

Senior Vice President, Contract and Procurement

1988.

Haji Sulaiman has held the positions of Consumer Accountant, SESCO Regional Accountant (Western Haji Sulaiman holds a Diploma in Accounting Region), Senior Accountant (Management from Universiti Teknologi MARA, a Bachelor's in Accounting), Manager Internal Audit, Manager Corporate Finance and Head of Finance.

Haji Sulaiman Bin Haji Abdul Hamid has 30 years of He is also actively involved in social initiatives both experience with Sarawak Energy, joining SESCO in within Sarawak Energy and externally, notably with the Sarawak Orphanage Association and as Chairman of the Sports Club.

> Accounting from Universiti Kebangsaan Malaysia and an Executive MBA from Ohio University in the USA. He is also a Certified Accountant of the Malaysian Institute of Accountants.



Dr. Mak Met

Senior Vice President, Human Resources



headed Human Resources for Shell's upstream passion for building Sarawakian talent. businesses in Malaysia. Dr. Mak has a background in mechanical engineering, and served in SESCO for five Dr. Mak works with the Group Executive Committee years before moving to Shell in the 1990s.

a strong understanding of people and leadership and future challenges. development, in-depth knowledge of the HR function,

Dr. Mak Met joined Sarawak Energy from Shell framework and processes of a company that serves Malaysia Exploration and Production where he as a global benchmark for talent development and a

and HR team to build and develop the talent pipeline, ensure the Company attracts and retains the best With over 30 years of experience and a Doctorate talents, and resource and develop people so that the in Human Resources, he brings to Sarawak Energy company is ready to face Sarawak Energy's current

A Commitment to Governance ○ ○ ○ ● ○ ○ ○ ○ ○ ○ ○ ○

Haji Nooruddin Abdullah | Senior Vice President, Legal & Enterprise Risk



the Group Executive Committee.

Sarawak Energy strong legal and corporate advisory October 1989 to September 2017.

Nooruddin Abdullah joined Sarawak Energy as the expertise and experience from the petroleum Senior Vice President, Legal & Enterprise Risk in industry, covering exploration and production, gas October 2017. In this role, Nooruddin leads the and petrochemicals, LNG and unconventional shale functions of Legal, Land and Wayleave, Enterprise, oil and gas. He has covered both Malaysian and Risk, and Company Secretary, and is a member of international operations, including his most recent role as the Head of Upstream Legal for PETRONAS. Nooruddin graduated from the University of Malaya With close to 30 years of experience, he brings to in 1989 and built his career with PETRONAS from

Hajah Siti Aisah Adenan | Senior Vice President, Corporate Services

Hajah Siti joined Sarawak Energy as an electrical Administration; as Regional Manager for Sibu and Bintulu; Vice Management & Logistics. President of People & Leadership Development and hold this key technical position.

grow her knowledge as a technical specialist and programme. broaden her management and leadership skills.

functions of Sarawak Energy overseeing Corporate engineering.

Corporate Communication: engineer in 1990 under operating arm Sarawak Corporate Social Responsibility & Sustainability; Electricity Supply Corporation (SESCO). In her 30 Government Relations, Event Management and years of service, she has undertaken diverse roles Protocol; Buildings, Facilities and Infrastructure; in technical and non-technical fields including stints

 Integrated Quality Management System and Fleet

Vice President for Distribution – the first woman to She is also the Executive Champion for the Sarawak Energy Leading Women Network (SELWN), playing an active role in the network's activities including Her diverse career experience has allowed her to as a pioneer in the Women Mentoring Women

Hajah Siti graduated from George Washington In Hajah Siti's current role, she leads the support University, Washington DC with a degree in electrical



Nick Wright

Vice President, Business Development



Nick Wright joined Sarawak Energy in June 2010. For the four years prior to joining Sarawak Energy, with Indonesian national utility Perusahaan Listrik Tasmania Negara (PLN) governing the interconnection between operation in early 2016.

Brunei and Sabah, and secured a deal with Malaysia's University of Tasmania. national oil company PETRONAS to supply 250 million standard cubic feet a day of natural gas to Sarawak.

As the Vice President of Business Development, he
Nick was the Senior Advisor for Energy, Water and led the negotiation of the Power Exchange Agreement Mining to the Minister for Energy and Resources,

Sarawak and West Kalimantan, which commenced Nick holds a Master of Business Administration (MBA) from the Graduate School of Business, University of New England. He also has a Bachelor of Arts (with He is also leading the negotiation of similar First Class Honours) in Government and Economic agreements for Sarawak to export power to Policy, as well as a Bachelor of Laws, from the

Marconi Madai Vice President, Health, Safety, Security and Environment



Marconi Madai is the Vice President of Health. disciplinary team to drive excellence in health. safety and environment in Sarawak Energy as well as ensure business continuity management in line Marconi graduated with a Bachelor of Science with the Company's business objectives.

Marconi has extensive industry experience, having served in management positions in the chemical

industry in Malaysia, where he developed standard Safety, Security and Environment, a position he was operating procedures, oversaw compliance to appointed to in September 2011. He leads a multi- standards, managed business risks and drove initiatives on human resources and CSR.

> degree in Chemical Engineering from the University of Utah, Salt Lake City in the USA in 1997.

Sim Ko Sin

Vice President, Information and Communications Technology

Sim Ko Sin joined Sarawak Energy as the Vice Sim has worked in the energy industry for 23 President for Information and Communications years and has extensive international experience, Technology in April 2018.

In line with the increased importance of information as well as IT services management expertise. and communications technology as an enabler for the business, Sim is responsible for driving Sarawak Sim has a Bachelor's degree in Computer and Energy's ICT functions. These include ICT Strategy Mathematical Sciences from the University of and Planning, Applications, Telecommunications Western Australia and an MBA from Imperial College and IT Infrastructure, Information Management, London. She is also a certified project management Operations, as well as Information Security and Risk professional. Management.

particularly in the Asia-Pacific, U.K.and China. She has well-rounded industrial experience and knowledge



Alvin Lim

Chief Operating Officer, Sarawak Energy Resources



Energy Resources and is responsible to consolidate Sarawak Energy's upstream resource activities.

25 years in various roles ranging from technical to corporate management positions. Starting as an electrical engineer, he joined Sarawak Electricity Supply Corporation (SESCO), now a wholly-owned subsidiary of Sarawak Energy Group.

Alvin Lim is the Chief Operating Officer of Sarawak Prior to his appointment as Vice President of Coal Resources, Alvin served as General Manager for Planning and Strategy, at a time which the company experienced significant growth. He led the Company's Alvin has served with Sarawak Energy for close to development strategies including for system planning, key accounts and corporate development.

> Born and raised in Kuching, Alvin holds a Bachelor's degree in Electrical and Electronics Engineering (Hons) from the University of Tasmania, Australia.

Statement of Corporate Governance

The Sarawak Energy Berhad Board of Directors (Board) is committed to ensure that the highest standard of Corporate Governance is practiced throughout the Group with the objective of strengthening the Group's growth and corporate accountability and safeguarding the interests of the Shareholders.

The Board is pleased to present a statement to the Shareholders on how the Group has applied the principles of good governance and compliance with the best practices set out in the Malaysian Code of Corporate Governance.

THE BOARD OF DIRECTORS

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The Board's principal responsibilities for corporate governance are to set out the strategic direction of the Group and establish the objectives and the achievements of the objectives and goals.

The current Board consists of five (5) members, whereby four (4) of the members are Non-Independent Non-Executive Directors and one (1) member is an Independent Non-Executive Director. The Directors collectively have wide range of experience and expertise drawn from the area of business, accounting, economics, legal as well as public administration. Their expertise, experience and background are vital for the strategic direction of the Group. The profiles of the Directors are set out on pages 34 - 36 of the Annual Report.

The Chairman's responsibility is to ensure the effectiveness and efficiency of the Board meetings and their conduct, whereas the role of Independent Non-Executive Director is to ensure that the views provided are professional and independent and that the advice and judgment made on issues and decisions are in the best interest of the stakeholders and the Group.

The Company has limits of authority prescribed by the terms of reference provided in the Procurement, Policies and Procedures (PPP) that identifies the various persons or authorities responsible for different business transactions including matters that require board approval. It sets out a clear line of accountability and responsibility of the persons or authorities to facilitate decision making and approval at the appropriate level in the organisation's hierarchy.



SUPPLY OF INFORMATION

The Board and its Committees have full and unrestricted access to all information within Sarawak Energy pertaining to the Group's business and affairs.

All the Directors are notified of the Board meetings within stipulated time prior to the date of the meetings. The Directors are also provided with an agenda and a set of Board papers in ample time prior to each Board meeting to enable them to gain information and insights to be properly briefed before the meeting.

In most instances, the Senior Management of the Group as well as external advisors may be invited to attend Board meetings, to provide further information and to provide clarification on issues that may be raised by the Board.

Board members also have access to the Company Secretary to obtain any further details they may require. Directors may also seek independent professional advice on any matter connected with the discharge of their responsibilities if deemed necessary and appropriate, whether as a full board or in their individual capacities, at the Company's expense.

RE-ELECTION OF DIRECTORS

In accordance with the Company's Articles of Association, all Directors appointed by the Board are subject to election by Shareholders at the first Annual General Meeting after their appointment. One-third of the remaining Directors are required to submit themselves for re-election by rotation at each Annual General Meeting thereafter. All Directors must submit themselves for re-election at least once every three years.

DIRECTORS' TRAINING

The Directors attend various accredited programs organised by various course leaders in the country to enhance their knowledge and skills to enable them to effectively carry out their role as Directors. The Company will continuously arrange for Directors to attend such training to provide them with current updates and information so that they are equipped with the skills in good governance required to act as effective Directors of the Company.

BOARD COMMITTEES

The following Committees have been established to assist the Board in the execution of its responsibilities. These Committees have written terms of reference which have been approved by the Board and set out their authority and duties.

1. Board Audit and Risk Committee (BARC)

The BARC plays an important role in reviewing the Group's financial management and reporting and assessing the integrity of the Group's accounting procedures and financial control. The BARC is responsible for the review of accounting policy and the presentation of external financial reporting including the Group's interim results and its disclosures, overseeing the activities of the internal audit function and ensuring an objective and professional relationship is maintained with the External Auditors, and that conflicts of interest, if any, are avoided. The BARC has full access to both Internal and External auditors, who in turn, have access at all time, to the Chairman of the BARC.

The BARC strives to ensure that it keeps abreast of all material developments in regulations and best practices in its area of responsibility.

The report of the BARC, including their attendance at the Committee meetings, is set out on page 50 of this Annual Report.

whether as a full board or in their individual capacities, at 2. Governance, Nomination and Remuneration Committee (GNRC)

The responsibilities of the GNRC are to identify potential candidates for Directorships to the Board and make recommendations on all new or re-appointments of members of the Board. Further, the GNRC also make recommendations on the Company's framework for remuneration and its cost and to determine on behalf of the Board specific remuneration packages and the terms and conditions of employment for the Group's employees.

The GNRC further duties are to provide remuneration input on contracts of employment with executive directors, determine the terms of any compensation in the event of early termination of the employment contracts, make recommendations on human resource policies from time to time and discuss and approve the revision of the Group's organisation structure, as and when needed.

The GNRC also acts as a disciplinary committee to decide and recommend disciplinary action for senior staff misconduct to the Board for approval.

The composition of the GNRC members for the financial year ended 31 December 2019 is as follows:

- i) Tan Sri Datuk Amar Haji Mohamad Morshidi bin Haji Abdul Ghani (Non-Executive Director) Chairman
- ii) Tan Sri Dato' Sri Mohd. Hassan bin Marican (Non-Executive Director)
- iii) Dato Sri Fong Joo Chung (Non-Executive Director)
- iv) Dato' Haji Idris bin Haji Buang (Non-Executive Director)

The GNRC held six (6) meetings during the financial year ended 31 December 2019. The attendance record of the members is as follows:

Directors	Position	Meetings Attended	% of Attendence
Tan Sri Datuk Amar Haji Mohamad Morshidi bin Haji Abdul Ghani	Non- Independent Non-Executive Director	5/6	83
Tan Sri Dato Sri Mohd Hassan bin Marican	Independent Non-Executive Director	1/6	17
Dato' Haji Idris bin Haji Buang	Non- Independent Non-Executive Director	6/6	100
Dato Sri Fong Joo Chung	Non- Independent Non-Executive Director	5/6	83

3. Bumiputera Participation Board Committee (BPBC)

The responsibility of the BPBC is to ensure that it is aligned with the State government's vision to maximise local and Bumiputera participation in Sarawak Energy's procurement and contract activities. BPBC has formulated and is implementing an overall plan to ensure that Sarawak Energy's current and potential contractors are fully aware of the opportunities and incentives available. The objective of these new initiatives is to expand the pool of qualified local contractors that can participate in Sarawak Energy's projects.

The composition of the BPBC members for the financial year ended 31 December 2019 is as follows:

i) Dato Haji Idris bin Haji Buang

(Non-Executive Director) Chairman

ii) Dzulkornain bin Masron (Public Sector) – Member

iii) Dato Ir. Abang Jemat bin Abang Bujang

(Professional & Entrepreneurial Group) – Member

iv) Datu Haji Wan Kassim bin Tuanku Zubir (Professional & Entrepreneurial Group) – Member

v) Dr. Simon Sinang Bada (Professional & Entrepreneurial Group) – Member

vi) Ir. Haji Zawawi bin Haji Embong

(Professional & Entrepreneurial Group) – Member

vii) Stell Sindau

(Professional & Entrepreneurial Group) – Member

viii) Datu Haji Abang Helmi bin Tan Sri Ikhwan

(Bumiputera Business Chambers) – Member

ix) Allan Keripin Nangkai

(Bumiputera Business Chambers) - Member

The BPBC held five (5) meetings during the financial year ended 31 December 2019. The attendance record of the members is as follows:

Directors	Position	Meetings Attended	% of Attendence
Dato' Haji Idris bin Haji Buang	Chairman	5/5	100
Dzulkornain bin Masron	Member	2/5	40
Dato Ir. Abang Jemat bin Abang Bujang	Member	5/5	100
Datu Haji Wan Kassim bin Tuanku Zubir	Member	5/5	100
Dr. Simon Sinang Bada	Member	5/5	100
Ir. Haji Zawawi bin Haji Embong	Member	4/5	80
Stell Sindau	Member	5/5	100
Datu Haji Abang Helmi bin Tan Sri Ikhwan	Member	1/5	20
Allan Keripin Nangkai	Member	4/5	80

MANAGEMENT COMMITTEE

To assist the Board in the execution of its responsibilities, a Management Committee named Group Executive Committee (GEC) has been established to ensure that corporate-level policies are well developed before they are adopted, and to award tenders within the approving limits as prescribed by the prevailing terms of reference provided in the Procurement, Policies and Procedures (PPP) of the Company.

The GEC also functions as the Executive Risk Committee (ERC) for the Group, to promote risk discussion at Top Management level.

The GEC has written terms of reference which have been approved by the Board and their authority and duties are set out as follows:

- Monitor and evaluate political, economic and business conditions and formulate measures to ensure that any potential material impact is identified and managed;
- Review, decide, endorse on strategic decisions and policy discussions or such other matters that require submission to, or further deliberation on a decision from, the Board of Directors, Board Committees or Subsidiary Company Boards:
- Review, decide or endorse on strategic directions of the Sarawak Energy Group, including Decision Gate on projects, new business directions and the like;
- d) Review, decide or endorse on strategic directions and policies relevant to the Sarawak Energy Group (such as Human Resources and leadership development, implementation of management leadership, change management and continuous improvements programs and initiatives for the Sarawak Energy Group);
- e) Review, decide or endorse on strategic directions and policies for Key Performance Indicators (KPIs) for the Sarawak Energy Group;
- f) Review, decide, endorse or share of issues of timely importance to the Sarawak Energy Group (such as Corporate Risk, Health, Safety, Security and Environment, Customer related issues, land access concerns and the like);
- g) Manage and regularly review the operational and financial performance of the Sarawak Energy Group;
- h) Optimise and allocate the Sarawak Energy Group's resources;

- Discuss and debate Sarawak Energy Group corporate culture and set ways forward to address any issues or encourage beneficial developments;
- j) Consider other matters as required by the Board;
- k) Oversees the establishment, implementation and consistent adoption and communication of the Group's risk management framework, which includes policies, processes and procedures to identify, analyse, evaluate, monitor and report on significant financial and nonfinancial risks, and is responsive to changes in the Group's internal and external environment;
- Endorses any changes to the Group's Risk Management Framework to Board Audit and Risk Committee and Sarawak Energy Board for approval;
- m) Sets the risk appetite within which the Board expects
 Management to operate and ensures that actions
 are taken in a timely manner when risks are outside
 acceptable tolerance ranges;
- n) Monitors risk exposure against risk appetite tolerance ranges;
- Deliberate and provide directive, where applicable, on risk appetite metrics and tolerance ranges, portfolio of key risks and risk issues highlighted to the ERC, through regular reports;
- Ensures that controls are in place to mitigate and manage the key risks of the Group; and
- q) Provides reasonable assurance that adverse impact arising from a foreseeable future event or situation on the Group's objectives is mitigated and managed.

A Commitment to Governance ○ ○ ○ ● ○ ○ ○ ○ ○ ○ ○ ○ 102-15 103-2 103-3

Statement on Risk Management and Internal Control

Although Sarawak Energy is not listed on Bursa Malaysia, for good corporate governance, Sarawak Energy has voluntarily adopted the best practices for the Sarawak Energy Board of Directors (Board) to make a statement in its Annual Report about the state of risk management and internal control as a Group.

Accordingly, Sarawak Energy's Board is pleased to provide the following statement that has been prepared in accordance with the best practices recommended by the Statement on Risk Management and Internal Control: Guidelines for Directors of Listed Issuers (2012).

This Statement outlines the nature and scope of the risk management and internal control systems within the Group during the year under review.

implemented to ensure the adequacy and effectiveness and integrity of the risk management framework and system of internal control of the Sarawak Energy and the Group during the financial year ended 31 December 2019.

The Group's risk management framework and system of internal control applies to Sarawak Energy and its subsidiaries.

The Board is committed to its responsibility of maintaining a sound risk management framework and system of internal control, covering financial and operating activities to safeguard Shareholders' investment, the Group's assets and customers' interests. This Statement on Risk Management and Internal Control outlines the processes that have been

Associated companies and joint ventures are excluded because the Group does not have full management control over them.

BOARD RESPONSIBILITY

The Board has an overall responsibility for the Group's risk management framework and system of internal control to provide reasonable assurance of efficient operations, effective internal checks and compliance with laws and regulations.

The on-going process for identifying, evaluating, monitoring and managing the significant risks faced by the Group is periodically reviewed by the Board during the financial year under review. However, the Board recognises that the Group's system of internal control is designed to manage rather than eliminate the risk of failure to achieve the Group's objectives, hence it can only provide reasonable but not absolute assurance against material misstatement, fraud or loss.

The Board is assisted by the Management in the implementation of the approved policies and procedures on risks and controls, in which the Management identifies and assesses the risks faced as well as implements and monitors appropriate control measures to mitigate and control these risks.

Further, the Board is assisted by the Board Audit and Risk Committee (BARC) to review the adequacy and effectiveness of the system of internal controls in the Group as part of the governance and risk management processes.

ENTERPRISE RISK MANAGEMENT (ERM)

The Board also acknowledges that effective risk management is part of good business practices and recognises the need for a sound system of internal control capable of managing the significant risks of the Group.

Thus, in addition to discharging its duties and responsibilities in maintaining a robust and sound system of internal control, the Board has also formalised and implemented an ERM Framework for the Group to provide guidance relating to the implementation of enterprise risk oversight and management processes. This framework incorporates identification, assessment, mitigation and control, monitoring and reviewing processes especially relating to strategic risks and their trending.

The ERM framework ensures that significant risks are continuously identified and that instituted controls are efficaciously applied by the management to manage risk exposure which are tolerable and acceptable to the Group consistent with the Group's risk appetite and risk management practices.

Continuous risk awareness and education programmes are conducted for the employees including via the Group's on-boarding programme for new recruits with the ultimate aim of inculcating a risk conscious culture within the Group.

As at 31 December 2019, the GEC comprises the following members:

i) Datu Haji Sharbini Bin Suhaili

(Group Chief Executive Officer) - Chairman

ii) Lu Yew Hung @ Lu Yew Hong (Group Chief Operating Officer)

iii) Lau Kim Swee

(Chief Executive Officer, Syarikat SESCO Berhad)

iv) Ung Sing Kwong, James

(Chief Executive Officer, SEB Power Sdn. Bhd.)

v) Aisah Eden

(Executive Vice President, Corporate Services) (retired with effect from 1 September 2019)

vi) Ting Ching Zung

(Executive Vice President, Strategy & Corporate Development)

vii) Pramod Kumar Karunakaran

(Executive Vice President, Project Delivery) (Project Execution Department renamed as Project Delivery Department with effect from 29 January 2019)

viii) Alexander Chin

(Chief Financial Officer)

ix) Haii Sulaiman bin Haii Abdul Hamid

(Senior Vice President, Contract & Procurement)

x) Dr Mak Anak Met

(Senior Vice President, Human Resource)

xi) Nooruddin Bin Abdullah @ Liew Sze Hoon (Senior Vice President, Legal & Enterprise Risk)

xii) Hajjah Siti Aisah Bt. Adenan

(Senior Vice President, Corporate Services) (appointed with effect from 1 September 2019)

xiii) Nick Wright

(Vice President, Business Development)

xiv) Sim Ko Sin

(Vice President, Information & Communication Technology)

(Vice President, Health, Safety, Security & Environment)

xvi) Alvin Lim Khiok Leong

[Chief Operating Officer, SER (COO SER)/Vice President, Coal Resources (VP CS)] (appointed with effect from 4 April 2019)

There were fourteen (14) GEC meetings, six (6) Special GEC meetings, one (1) Extraordinary GEC meeting, two (2) GEC Technology Council meetings, two (2) Group Digital Council meetings and one (1) GEC Away Day held during the financial year ended 31 December 2019.

CONFIDENTIALITY OF INFORMATION

Under the Company's Information Governance guidelines, documents are to be classified. For documents classified as Confidential, Secret or High Secret, there are stipulated guidelines to be adhered to.

Staff or external parties privy to information or documents classified "Confidential" or higher are required to sign a Secrecy Oath or Non-Disclosure Agreement.

Internal Controls

Information on the Group's internal controls system is presented in the Statement on Risk Management and Internal Control as set out on pages 47-49 of this Annual Report.

102-15. 103-2. 103-3

SARAWAK ENERGY BERHAD • Annual and Sustainability Report 2019

A Commitment to Governance ○ ○ ○ ● ○ ○ ○ ○ ○ ○ ○ ○ ○

102-15, 103-2, 103-3

In 2019, the Group also continues to roll out the implementation of the Fraud Risk Management Framework roadmap, embedded within the existing ERM Framework, which comprises of fraud control policy and plan as well as fraud awareness training, reporting procedures and related programmes.

Further, the Management of the Group has signed Sarawak Energy's Integrity Pledge on 5 December 2019 followed by rolling out to all its employees similarly to affirm their respective pledge individually. This demonstrates Sarawak Energy's commitment to integrity and zero tolerance to fraud, as well as a step in its journey towards meeting the Adequate Procedures requirement of the MACC's Section 17A (Amendment) Act 2018.

BUSINESS CONTINUITY MANAGEMENT (BCM)

The Board acknowledges the significance of instituting a holistic BCM Framework and Crisis Management Plan for the Group to build and enhance its organisational resilience with the capability and capacity to create an effective response that safeguards the interests of its key stakeholders, reputation, and value-creating activities.

The Group had implemented the BCM Framework, Crisis Management Plan and continues its roll out of the BCM implementation roadmap, and related programs.

SYSTEM OF INTERNAL CONTROLS

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Some of the key elements of the Group's System of Internal Control are as follows:

......

- The Group's Organisational & Management Structure formally defines line of responsibility for all aspects of the Group's affairs which is aligned to the Group's strategic and operational requirements. The structure will be reviewed and updated as and when needed to reflect the changing business environment and operating activities within the Group.
- The Group has in place written policies and operating procedures, which are reviewed and updated as and when necessary to improve on the control environment and operating efficiency. New policies, procedures and guidelines are also introduced from time to time to meet the regulatory and operational requirements.
- Senior Management prepares and presents the business plans and budgets annually for Board approval and updates on the progress on a quarterly basis.
- Measurement of performance is regularly monitored through the GCEO Report to the Board incorporating key project progress, financial and operational key performance indicators and departmental initiatives.

- The BARC reviews the statutory annual financial statements and the quarterly group management reports and recommends to the Board for approval.
- The Management of the Group has established, documented and implemented the information security management system according to the ISO 27001 Information Security Management System (ISMS) Standard and shall continually improve and upgrade its effectiveness and efficiency based on changes which may affect the information security risk exposure.
- The Group has implemented the Procurement Policies and Procedures (PPP) which includes the establishment of the tender committees and the limits of authority of all these committees.
- All major capital project investments will be subject to Sarawak Energy Berhad Project Model (SPM). The SPM is a stage-gate decision process for investment projects, to allow consistent assessment of investment opportunities with the intent to achieve the business goals.

INTERNAL AUDIT FUNCTION

The BARC, assisted by the Group Internal Audit Department (GIAD), provides the Board with the assurance it requires on the adequacy and effectiveness of the system of internal controls. The BARC has an oversight function of all activities carried out by the GIAD.

The GIAD adopts a risk-based approach in preparing its audit strategy and annual plan. The GIAD independently reviews the risk exposures and control processes implemented by the Management and conducts assignments which cover auditing and review of critical areas within the Group, including financial, operations, projects and IT/information systems. The internal audit functions and activities are guided by its internal audit charter and annual audit plan which are approved by the BARC and the internal audit reports are tabled at the BARC meetings for review and deliberation.

Further, the GIAD engages in regular communication with senior management team and various departments within the Group related to internal audit activities and efforts for continuous improvement in operations and systems. External auditors' recommendations for improvements noted during their audit, if any, are also closely monitored and followed up to ensure that they are promptly implemented.

CONCLUSION

The Board has obtained assurances from the Group Executive Committee (GEC) that to the best of their knowledge and belief, the Group's risk management and internal control system is operating adequately and effectively, in all material aspects. Where weaknesses are identified, rectification steps have been put in place.

To the best of their knowledge and belief, the Board is of the view that the risk management and internal control system in place for the year under review and up to the date of approval of this statement for inclusion into the Annual Report, is adequate and effective to safeguard shareholders' investment, the interests of customers, regulators and employees, and the Group's assets.

REVIEW OF THE STATEMENT BY EXTERNAL AUDITOR

The external auditors have reviewed this Statement on Risk Management and Internal Control pursuant to the scope set out in Audit and Assurance Practice Guide 3, Guidance for Auditors on Engagements to Report on the Statement on Risk Management and Internal Control included in the Annual Report (AAPG3) issued by the Malaysian Institute of Accountants (MIA) for inclusion in the Annual Report of the Group for the year ended 31 December 2019, and reported to the Board that nothing has come to their attention that cause them to believe that the statement intended to be included in the Annual Report of the Group, in all material respects: has not been prepared in accordance with the principle disclosures required by paragraphs 41 and 42 of the Statement on Risk Management and Internal Control: Guidelines for Directors of Listed Issuers or is factually inaccurate.

AAPG3 does not require the external auditors to consider whether the Directors' Statement on Risk Management and Internal Control covers all risks and controls, or to form an opinion on the adequacy and effectiveness of the Group's risk management and internal control system including the assessment and opinion by the Directors and management thereon.

The report from the external auditors was made solely for, and directed solely to the Board in connection with their voluntary adoption of the best practices recommended by the Statement on Risk Management and Internal Control: Guidelines for Directors of Listed Issuers (2012) which is for the Board to make a statement in its Annual Report about the state of risk management and internal control as a Group and for no other purposed or parties. The external auditors do not assume responsibility to any person other than the Board in respect of any aspect of this report.

This statement is made in accordance with the resolution of the Board dated 24 September 2020.

A Commitment to Governance ○ ○ ○ ● ○ ○ ○ ○ ○ ○ ○ ○

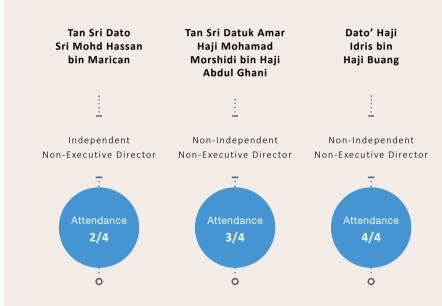
Board Audit and Risk Committee Report

MEMBERSHIP AND MEETINGS

The Board Audit and Risk Committee ("BARC") members are appointed by the Board from amongst its non-executive members. The BARC comprises of one independent non-executive director and two non-independent non-executive directors of the Board as set out in the table helow

YBhg Tan Sri Dato Sri Mohd Hassan Bin Marican is a Fellow of the Institute of Chartered Accountants in England and Wales, a Member of Malaysian Institute of Accountants and Malaysia Institute of Certified Public Accountants.

During the financial year under review, the BARC convened four (4) meetings. The attendance record of the members is as follows:



The Vice President/Head of Internal Audit and the Group Company Secretary, being Secretary of the BARC were present at all the meetings. Upon invitation, representatives from the External Auditors, Group Chief Executive Officer/Chief Financial Officer and other members of senior management and external parties also attend specific meetings whenever required.

SUMMARY OF ACTIVITIES OF THE BARC

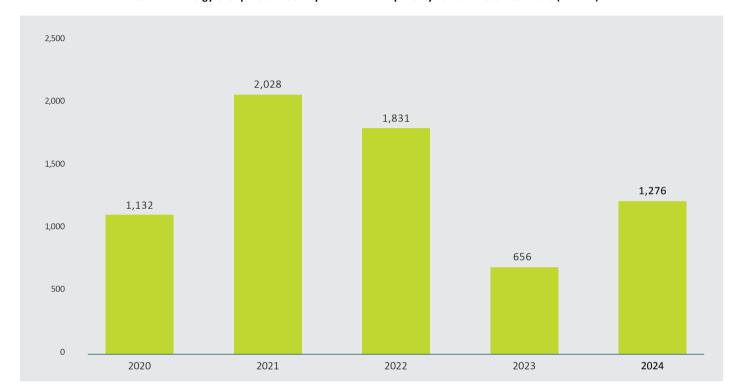
The BARC carried out the following main activities as set out in its terms of reference:

- Reviewed and recommended the Quarterly Group Management Reports of the Sarawak Energy Group to the Board for approval.
- Reviewed and endorsed the External Auditors Audit Plan, Scope of Work and Fees for Sarawak Energy Group and recommended the same for approval by the Board.

- Reviewed and recommended the Quarterly Enterprise Risk Management Report -Updates on Sarawak Energy Berhad's Risk Profiles, Key Strategic and High Risks and Key Mitigation Actions taken by the Management to address the risks.
- Reviewed and noted the strategic risk for SCORE and Export Customers' demand.
- · Reviewed and approved the enhancement to Sarawak Energy Berhad's Risk Management Frameworks with regards to risk appetite and risk organization.
- Reviewed and endorsed the BARC Reports, Statement on Risk Management & Internal Controls and Corporate Governance Statement for inclusion in Sarawak Energy Berhad Annual Reports.
- Reviewed and discussed Sarawak Energy Berhad Group Annual Revenue and Capital Budget & Year End Estimates and recommended the same for submission to the Board.
- Reviewed and endorsed the Report of Sarawak Energy Forex Hedging Committee on the hedging activities transacted during the year.
- Reviewed and noted on the status updates on the Sarawak Energy's insurance services and initiatives.
- Reviewed and approved/noted the Group Internal Audit Plans, KPIs Achievement and Quarterly Internal Audit Update Reports.
- Reviewed and deliberated reports issued by the External Auditors and Group Internal Audit on significant findings and remedial actions taken by the Management to address the issues raised.
- Reported to the Board on its activities and any significant issues and remedial actions taken by the Management arising from the audits undertaken by the External and Internal Auditors on specific areas and reports/papers presented by the Management at each BARC meeting.

Group Debt Maturity Profile

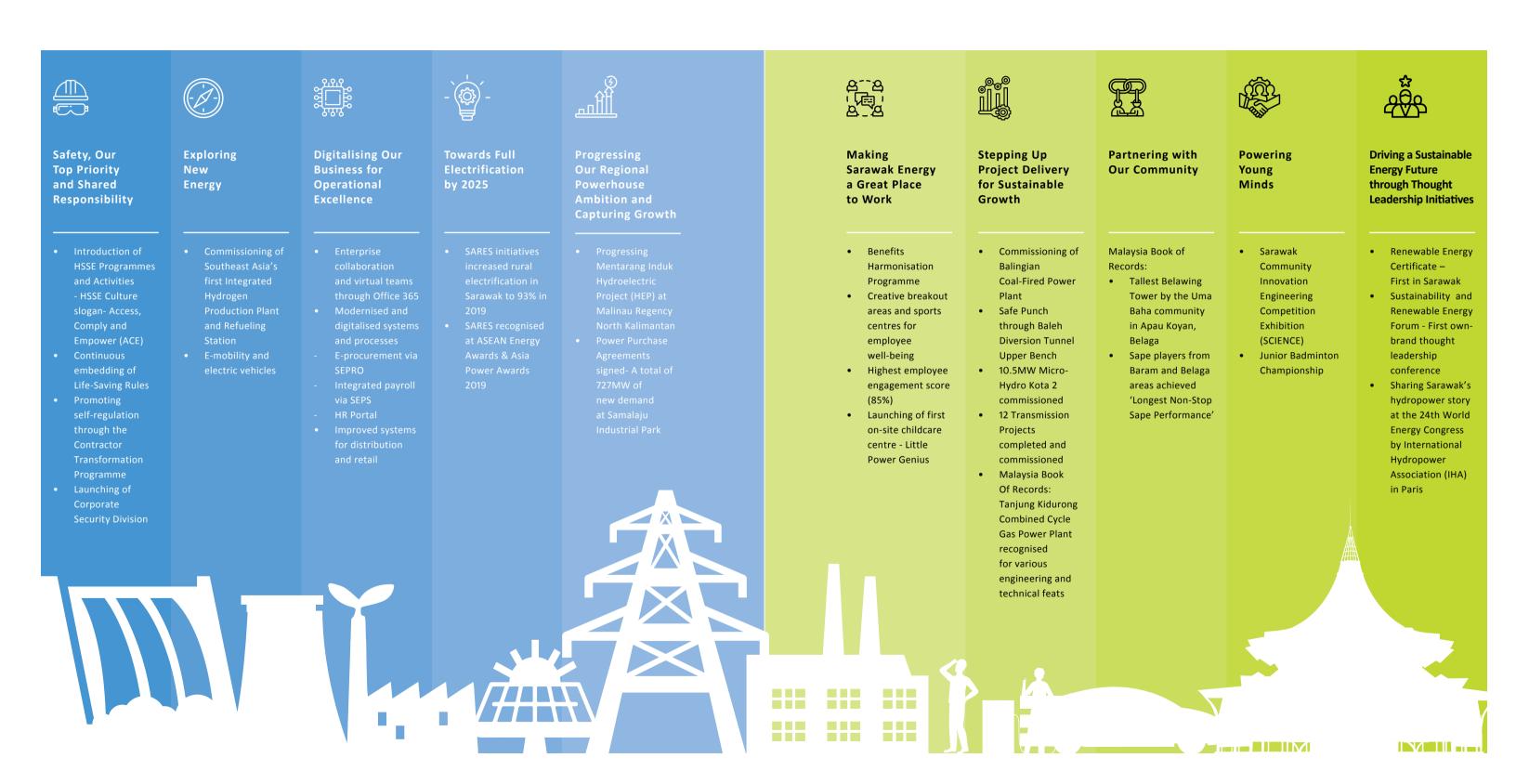
Sarawak Energy Group Debt Maturity Profile - Principal only as at 31 December 2019 (RM'mil)(1)



(1) Excluding interest and profit payments.

Our Key Highlights ○ ○ ○ ○ ● ○ ○ ○ ○ ○ ○ ○

2019 Year in Review



Strategy Aligned with Value Creation ○ ○ ○ ○ ○ ● ○ ○ ○ ○ ○ ○

103-2, 103-3, 403-9, EU28, EU29, EU30

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Our Strategic Roadmap

Sarawak Energy supports Sarawak in achieving sustainable growth and prosperity towards the State's goal of attaining developed status by 2030. In advancing this agenda, Sarawak Energy is creating new growth and value-added opportunities. Sarawak Energy retains the trust of both its external and internal stakeholders by continuously improving the delivery of business operations excellence. Towards this end, a strategic roadmap focused on five Key Focus Areas is in place to achieve Health, Safety, Security and Environment (HSSE) Excellence, Project Delivery Excellence, Operational Excellence, Talent Management Excellence and High Performance Culture.

PAST (2010 - 2016)

SIGNIFICANT GROWTH & VALUE CREATION

- Generation capacity increase > 3,000MW
- More than **2,500** manpower recruited
- Corporate restructuring

PRESENT (2017 - 2019)



- Capture growth: **579MW PPA** signed (~RM900 million p.a.)
- Bakun HEP Acquisition & Generation Capacity > **5,000MW**
- Secured **Upstream** Fuel **Resources**
- Energised 500kV Transmission Backbone

FUTURE (2020 & Beyond)



- Strengthening Sarawak Energy for further growth
- Supporting Sarawak's growth and development
- Realising Borneo Grid

SARAWAK ENERGY EXCELLENCE 2020

As we move towards becoming a top quartile utility and regional powerhouse, our strategic roadmap is focused on achieving Sarawak Energy Excellence 2020 by uniting all 5,200 of our staff to drive organisational growth through a common vision, goals, beliefs and

Safety is our top priority and shared responsibility. We introduced the Sarawak Energy Life-Saving Rules in 2017 as a mandatory set of safety rules that all our staff and contractors must comply with, to ensure that everybody goes home safely. HSSE Excellence demands all commitment towards embracing a disciplined safety culture as part of our daily practices.

Operational Excellence ensures that we deliver customer satisfaction by supplying Sarawak with safe, affordable and reliable power. To achieve this, we keep ourselves on par with the best utilities in the region by continuously fine tuning our technologies, systems and processes, besides comparing and monitoring our performance metrics with top quartile performers to bridge any gaps in performance delivery.

To achieve Project Delivery Excellence, projects must be completed safely, on-time and at-cost as promised to our stakeholders. We also see it as our social duty and obligation to deliver on the quality of the projects while minimising any negative impact on communities residing nearby. The implementation of the right processes with highly competent project teams are key to achieving delivery success.

People are our greatest asset and key enablers for the Company's sustainable growth. It is vital to achieve Talent Management Excellence to attract, nurture and retain new and existing talent. We are on constant lookout to enhance our working environment through better benefits and incentives, infrastructure upgrades and staff development

To ensure the successful delivery of targets for all the key focus areas, a progressive and high-performing corporate culture is essential. We strive to develop staff effectively through roles that maximise their potential. Each member of the staff is to embrace our five core values of courage, unity, respect, integrity and accountability, leveraging on our collective strengths to achieve excellence for Sarawak Energy.

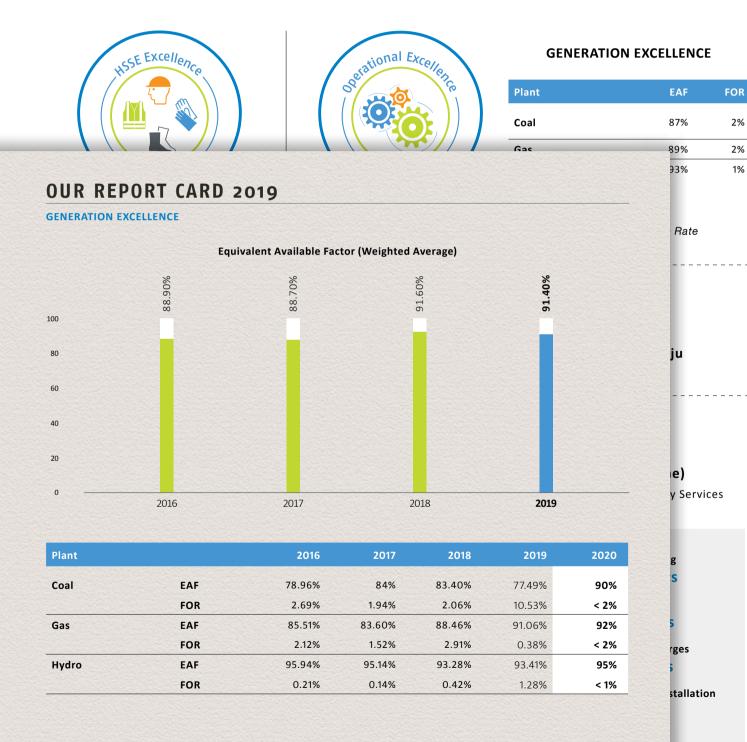
2019 marks the completion of our Sarawak Energy Excellence 2020 roadmap and we have experienced tremendous growth since it was first rolled out in 2017. I am optimistic, with our strong team synergy and our consistent focus on delivering our targets, we will continue to capture growth to become the best operator in the region.

Datu Haji Sharbini Suhaili

Group Chief Executive Officer

Delivering on Our Strategy

SARAWAK ENERGY EXCELLENCE 2020 AND TARGETS FOR 5 KEY FOCUS AREAS



Equivalent Available Factor (EAF) is weighted; 2019 is 12 months rolling average up to December. Forced Outage Rate (FOR) is simple average; 2019 is average January to December

FUTURE (2020 & Beyond)

Target 2019

Target 2020

Strategy Aligned with Value Creation ○ ○ ○ ○ ○ ● ○ ○ ○ ○ ○ ○

103-2, 103-3, 403-9, EU28, EU29, EU30

SARAWAK ENERGY BERHAD • Annual and Sustainability Report 2019

Our Strategic Roadmap

Sarawak Energy supports Sarawak in achieving sustainable growth and prosperity towards the State's goal of attaining developed status by 2030. In advancing this agenda, Sarawak Energy is creating new growth and value-added opportunities. Sarawak Energy retains the trust of both its external and internal stakeholders by continuously improving the delivery of business operations excellence. Towards this end, a strategic roadmap focused on five Key Focus Areas is in place to achieve Health, Safety, Security and Environment (HSSE) Excellence, Project Delivery Excellence, Operational Excellence, Talent Management Excellence and High Performance Culture.

ABOUT THIS

REPORT

PAST (2010)

NETWORK AND CUSTOMER SERVICE EXCELLENCE

	> 3,000M
•	More than recruited
•	Corporate

SIGNIFICAN'

VALUE CREA

Generatio

SARAWAK ENEF As we move to

powerhouse, ou Energy Excellent organisational g values.

Safety is our top Sarawak Energy rules that all our everybody goes towards embrac practices.

Operational Exce supplying Sarawa this, we keep ou continuously fin besides compari quartile perform

To achieve Proje safely, on-time a see it as our soc projects while m nearby. The imple project teams ar

54

Diant				

DDECENT

System Average Interruption Duration Index (SAIDI)	96.49 ¹ mins	100 mins	60 mins
System Average Interruption Frequency Index (SAIFI)	1.73¹ times	1.48 times	1 time
Age of Debtors > 42 days	24.98%	≤ 22%	< 20%
Non-Technical Losses	4.41%	≤ 3.97%	< 2%
Street Lighting Repair	94% ≤ 24 hours	92% ≤ 24 hours	90% < 24 hours
Release of Connection Charges	92% ≤ 14 days	92% ≤ 14 days	90% < 14 days
Service Call Attendance	88% ≤ 45 mins	90% ≤ 45 mins	90% < 45 mins
Service Line Installation	95% ≤ 7 days	90% ≤ 7 days	90% < 7 days
Service Cable Installation	80% ≤ 7 days	50% ≤ 7 days	90% < 7 days
Customer Satisfaction Index	95.08%	≥ 90%	> 90%

Actual 2019

HIGH PERFORMANCE CULTURE

Sarawak Energy Employee Survey (SEES) - employee engagement score of 85% in 2019 and an average score of 80% by 2020.

Include generation, transmission and distribution

Delivering on Our Strategy

SARAWAK ENERGY EXCELLENCE 2020 AND TARGETS FOR 5 KEY FOCUS AREAS



HEALTH



employees with **Body Mass Index** (BMI) < 30

SAFETY

ZERO

Lost Time Injury (LTI) & Zero Fatality

ENVIRONMENT



Regulatory Laws



GENERATION EXCELLENCE

Plant	EAF	FOR
Coal	87%	2%
Gas	89%	2%
Hydro	93%	1%

Notes:

EAF - Equivalent Availability Factor

FOR - Forced Outage Rate

NETWORK EXCELLENCE



total blackout at major load centres of Kuching, Sibu, Bintulu, Miri and Samalaju

CUSTOMER SERVICE EXCELLENCE

SAIDI (60 mins)

SAIFI (1 time)

90% Resolution of Key Services

Customer Satisfaction Index

> 90%

Age of Debtors > 42 days

< 20%

Non-Technical Losses < 1%

Street Lighting < 24 hours

> Service Call < 45 mins

Connection Charges < 14 days

Service Line/Cable Installation

< 7 days

nelivery Ex

Management

103-3

SARAWAK ENERGY BERHAD • Annual and Sustainability Report 2019

How We've Performed ○ ○ ○ ○ ○ ○ ● ○ ○ ○ ○ ○

102-8, 103-1, 103-2

TIMELY COMPLETION



of projects are completed on

QUALITY



of contractors are rated A and B

No malfunction/ major equipment failure during defect liability period

COST DISCIPLINE

Within 1st Quartile Benchmark

SUSTAINABLE TALENT BENCH STRENGTH



At least 2 "Ready Now" successors for critical positions











INDIVIDUAL DEVELOPMENT PLAN (IDP) FOR EVERY EMPLOYEE

For career growth and development

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WE KNOW THAT SARAWAK ENERGY IS A GREAT PLACE TO WORK THROUGH THE FOLLOWING **MEASURES:**

People demonstrate winning behaviours

Enabling the delivery of the targets for all Key Focus Areas

Employees sharing positive experiences as indicated by Sarawak Energy Employee Survey (SEES) score

Developing Our People



by the dedication, competency, teamwork and loyalty of its 5,200 multi-disciplinary talent. Sarawak Energy continues to invest in its people to build a progressive corporate culture with winning behaviours, underpinned by five core values of Courage, Unity, Respect, Integrity and Accountability.

Sarawak Energy recognises that

its sustainable value creation and

continuous growth agenda are driven

At the AIM 100 Leadership Conference 2019.

MAKING SARAWAK ENERGY A GREAT PLACE TO WORK

People are Sarawak Energy's most important asset and key to advancing the Company's sustainable success. Towards achieving organisational excellence, Sarawak Energy commits to two pillars of the Strategic Roadmap 2020 into people development - Talent Management Excellence and High Performance Culture. Both Key Focus Areas are developed with aims to build employees' competencies, sharpen their leadership skills, enhance employee experience and foster teamwork to enable the Company to tackle present and future market challenges.

sarawak

 This badge demonstrates the Company's commitment to drive High Performance Culture initiatives in making Sarawak Energy a Great Place to Work.

AGE 35 AND BELOW

ABOVE 35 YEARS

2,266 44%

TALENT MANAGEMENT EXCELLENCE **FRAMEWORK**

Sarawak Energy's Talent Management Excellence is based on the ADD framework - Acquire, Develop and Deploy and aims to identify and attract the right talent, develop them effectively, deploy them into roles that maximise their potential, give them a sense of job enrichment and belonging, as well as to retain them to meet current and future business needs.

Sarawak Energy maintains a holistic and agile view of its talent ecosystem to ensure its people are flexible, efficient and adaptable in meeting the changing needs of the Company. Talent management initiatives like Sarawak Energy Talent Council, Individual Development Plan and Young Professionals Network were introduced as key components of the ecosystem. A talent ecosystem allows employees to move between roles and functional areas as they desire or to benefit business goals. The borderless world of talent acquisition and management also supports a learning culture and a conducive environment for skills development.

HR STATISTICS 2019



* Total 5,207 manpower

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WE ARE SARAWAK ENERGY

LEADERSHIP STATEMENTS

A COMMITMENT TO GOVERNANCE **KEY HIGHLIGHTS**

STRATEGY ALIGNED WITH VALUE CREATION

HOW WE'VE **PERFORMED**

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TALENT MANAGEMENT EXCELLENCE FRAMEWORK (LET'S ADD)



- (demand & supply) Recruit Onhoard
- Identify HiPo Assess Competence Succession

Leadership

- Development



- Broadening Deepening Leadership Motivate & Retain
- A Sustainable **Talent Bench** Strength for delivering usiness growt
- Motivated highly effective and high performance talent

Working towards maintaining a balanced talent ecosystem, Sarawak Energy implements a structured talent managemen^{*} end-to-end process or the ADD framework to cover talen: Acquisition, Development Deployment, Its Internal Oper Resourcing facility allows to explore career opportunities in other functional areas for self-development with greate

SARAWAK ENERGY TALENT COUNCIL

Sarawak Energy believes in the importance of robust succession planning for the benefit of the Company's long-term business continuation. Sarawak Energy's Talent Council was set up in 2017 to identify talent within Sarawak Energy with the potential to contribute to the Company's forward-looking direction. Identified individuals are provided with differentiated trainings to enable them to assume leadership and technical roles in critical positions within the Company. The Talent Council also identifies talent gaps within the Company and takes the necessary measures to close them.

INDIVIDUAL DEVELOPMENT PLAN

The progression map for each employee in Sarawak Energy is guided by an Individual Development Plan (IDP) which is discussed and agreed upon with the respective supervisor. The IDP is intended as an assessment platform to drive and empower staff development through open and honest discussions with their supervisors. Besides monitoring and reviewing work performance, learning and development needs, the IDP offers deployment opportunities for staff to pursue new roles within the Company as part of their career progression plan.

RECRUITMENT

Benefitting Sarawakians - Bursaries and Scholarships

In efforts to identify and develop Sarawak's pool of young talent in the early stages of their lives, Sarawak Energy awarded 90 scholarships to students and employees in 2019 to pursue higher education. Sarawak Energy's scholarship programme also prioritises supporting high performing students from remote or rural areas to continue their studies.

Since its introduction in 2014, some 483 students including 68 staff have benefitted from the scholarship programme. For the past three years, Sarawak Energy's recruitment has also been successful in increasing the percentage of new female employees, particularly at the executive level, from 32% in 2016 to 44% in 2019.



At the Scholarship Award Ceremony 2019, 90 students and employees were awarded scholarships to pursue higher education

Collaboration with Educational Institutions

Sarawak Energy continues to collaborate with local educational institutions in a range of development activities to identify and acquire new talent besides building up staff capacity and improving skills of the local communities. In 2019, Sarawak Energy established collaborations with established educational institutions like University of Nottingham Malaysia, Curtin University Malaysia and Swinburne University of Technology, Sarawak Campus in areas including feasibility studies and consultancy work, research and development activities and industry knowledge transfer. Sarawak Energy's other collaboration initiatives to spot, attract and recruit potential young fresh graduates include internship placement, campus ambassador and scholarship programmes.

ONBOARDING AND NEW RECRUIT INTEGRATION

Sarawak Energy aims to set a positive impression amongst newly employees through a helpful onboarding experience. New hires are required to go through onboarding and additional structured programmes to learn more about their roles, workplace policies, procedures and expectations, allowing them to rapidly integrate into the Company's culture and perform their duties more effectively. A workplace buddy is also assigned to each recruit to provide them insights into day-today operations and help them to ease into their roles swiftly.



 At the launch of Young Professionals Network at Menara Sarawak Energy.

Young Professionals Network

Sarawak Energy Young Professionals Network (YPN) provides a structured framework for newly recruited executives to accelerate their development and growth in the Company. It was established as a networking platform to facilitate new recruits to better integrate into Sarawak Energy's corporate culture, bridge members of different departments and enable more inter-department collaboration opportunities. YPN also allows new talent to engage with Sarawak Energy's top management and other stakeholders through dialogue sessions and other engagement activities.

TRAINING AND DEVELOPMENT

Sarawak Energy believes that investing in staff development will contribute to both the personal growth of the staff and the Company's business growth. Sarawak Energy recognises the crucial role every employee plays in the Company's success and offers employees across all levels the support and training to grow and develop. Structured development programmes for technical, non-executive, executive, leading women and advanced trainings are also put in place to accelerate employee development.

LEADERSHIP DEVELOPMENT

Great leaders raise a stronger workforce and cohesively they drive organisational success. Sarawak Energy recognises that effective leadership is imperative to achieving maximum business efficiency and goals and prioritises leadership development. The Competence Assessment Framework was rolled out as a mandatory evaluation component to identify leadership competencies and address gaps for staff across all levels. The framework also encourages staff to build up their skills and capacity through relevant leadership and technical development programmes.

SARAWAK ENERGY LEADERSHIP LECTURE SERIES

The Sarawak Energy Leadership Lecture Series is part of the leadership development programmes designed to continuously upskill its employees by developing their leadership knowledge. The open-to-all lecture series, covering three broad areas of leadership in managing self, managing others and managing business, is sponsored by the Group CEO. The lectures are commonly delivered by external speakers recognised as experts in their individual fields and internal subject matter experts.

SARAWAK ENERGY PEOPLE SYSTEM

Sarawak Energy continues to enhance its digitalisation initiatives to achieve more efficient and cost-effective work processes. The Sarawak Energy People System (SEPS) initiative is designed to empower everyone in the Company to operate more efficiently and effectively by bringing employee information completely online. The one-stop centre is a repository for employee information and helps individuals and managers appraise performance and address development gaps in a structured way.

In 2019, Sarawak Energy completed the digitalisation process of its Human Resource system with the integration of its payroll function into SEPS in November to ease administration and enable employees to access e-payslips anytime and anywhere.



Staff interacting with Chief Operating Officer Lu Yew Hung during the "Business-Smart HR, HR-Smart Business" event.

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SARAWAK ENERGY HALL OF FAME

As part of the initiatives under High Performance Culture, the Sarawak Energy Hall of Fame was introduced in 2017 as a company-wide recognition scheme for super performers who are enabling the successful delivery of Sarawak Energy's Key Focus Areas and to motivate staff to continuously discover and maximise their potential. The GCEO Award allows individuals, teams or departments to be nominated if they have facilitated excellence in delivery of the Key Focus Areas. The best of the GCEO award winners wins the Chairman's Award.

In recognition of their outstanding performance to deliver strategic objectives of the business throughout the year 2019, the Chairman's Award for individual and team categories were conferred to Matthew Renang anak Nuri and the Hydro team for Bakun Hydroelectric Plant, respectively. GCEO Awards for individual categories went to Joseph Koh Sibat and Lai Choo Chek, while the team categories went to Bintulu Disconnection for Team Excellence, Murum Power Station for Zero Waste Programme, Information and Communication Technology for the Office 365 digitalisation initiative, Project Delivery for Tanjung Kidurong Combined Cycle Power Project, as well as Strategy and Corporate Development for the signing of a Power Purchase Agreement with Press Metal Holdings Aluminum Berhad.



Sarawak Energy's super performers under the Hall of Fame recognised for their outstanding performance during Townhall

LOYALTY SERVICE AWARDS

Sarawak Energy Loyalty Service Awards recognise employees who have shown their continued dedication, commitment and loyalty to the Company. In 2019, Sarawak Energy honoured 597 long-serving staff, including 78 retirees. Held in September in Kuching, Sibu and Miri, the Loyalty Service Awards celebrated employees who reached their career milestone years of 10, 15, 20, 25, 30, 35 and 40 years.



At Sarawak Energy's Loyalty Service Awards 2019.

HIGH PERFORMANCE CULTURE

For Sarawak Energy, a high performance culture means continuously improving the Company's core values and developing highly competent people, processes and systems to take Sarawak Energy to the next level of excellence. The high performance culture at Sarawak Energy encourages its people to reach for the best in class through two process enablers of continuous improvement and innovation.



At the launch of High Performance Culture as one of the Company's Key Focus Areas.

EMPLOYEE ENGAGEMENT INITIATIVES

Sarawak Energy views consistent employee engagement as the key towards building a high performance culture. The Company's employee engagement initiatives are set out with the objectives to align company-staff aspirations, provide staff with good career development opportunities and increase transparency in order to attract and retain its employees. Leadership workshops or conferences like AIM 100 are designed for Sarawak Energy to engage with industry experts and develop leadership skills to promote the Company's growth and address current and future challenges.

Staff engagement activities like 'turun padang' and 'teh tarik' sessions enable the management team to share with staff on Sarawak Energy's Key Focus Area targets and allow staff to provide constructive feedback for continuous improvement. Notes-to-Staff, internal advisories and newsletters are also issued regularly to provide updates on the Company's news and events.



At the AIM 100 leadership conference -Agility, Impact, Mindset.

CURIA CORE VALUES

Sarawak Energy champions the five core values of Courage, Unity, Respect, Integrity and Accountability or CURIA as the foundation towards building a high performance culture amongst its employees. The CURIA core values form the framework for Sarawak Energy to work towards becoming a company that is truly proactive on HSSE; value and bottom-line driven with strong cost discipline; keeps delivery promises; demonstrates urgency with speed and precision and conducts business with the highest level of integrity. The five CURIA core values are embedded within the Company's day-to-day operations, systems and processes to ensure staff live by these good practices while working towards shared goals, improve team cohesion and create a sense of belonging and commitment in the workplace.











The five CURIA core values as foundation towards building a High Performance Culture at Sarawak Energy.

EMPLOYEE EXPERIENCE – SARAWAK ENERGY EMPLOYEE SURVEY

The Sarawak Energy Employee Survey (SEES) is intended as Sarawak Energy's primary measure of employee engagement and positive experience to gauge a high performance culture. SEES measures employees' perception of the Company by obtaining feedback on organisational practices, processes, support systems and the management. SEES promotes strong employee engagement to enable the Company to understand the expectations, motivations, aspirations and opinions of its staff regarding work and career development and the expected level of compensation.

For 2019, employees gave Sarawak Energy an employee engagement score of 85%, the highest score recorded since its introduction in 2017. The results of the survey allow the Company to identify gaps and make improvements where possible.



Achieved an Employee Engagement score of 85% for 2019.

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EXTERNAL RECOGNITIONS

JobStreet - "Top 10 Preferred Companies in Sarawak" Award

Sarawak Energy was voted as one of Sarawakians' top three preferred companies in the Jobstreet.com Malaysia Survey 2019 to identify the top 10 most favoured companies in Sarawak. The recognition reflects the perception of Sarawakian job seekers towards the Company's positive reputation and good career development opportunities. The public's acknowledgement is also a result of Sarawak Energy's investment in enhancing and delivering Talent Management Excellence, High Performance Culture and other Key Focus Areas.

HR Asia Awards - Best Companies to Work for in Asia

In November, Sarawak Energy was recognised with the prestigious HR Asia "Best Companies to Work for in Asia" award for its high employee engagement and excellent workplace culture. The award uses the Total Engagement Assessment Model (T.E.A.M.) to measure and evaluate staff emotional engagement, motivation, advocacy and behaviour, collective consciousness, workplace sentiment and team dynamics. Out of the 49 Malaysian companies recognised, Sarawak Energy was the only recipient from Sarawak. The award was Sarawak Energy's second external recognition in 2019 for its talent management and high performance culture efforts.



Recognised as the one of Sarawakians' top three preferred companies in the Jobstreet.com Malaysia Survey 2019.



The only recipient from Sarawak at the 2019 HR Asia Awards ceremony in Kuala Lumour.

BENEFITS ENHANCEMENT AND HARMONISATION PROGRAMMES

Sarawak Energy attracts, motivates and retains new and existing talent by offering competitive benefits tailored to their needs. Incentives like leave benefits, health and wellness benefits, family benefits and financial aids are reviewed and enhanced regularly to improve employee morale and loyalty.

Sarawak Energy continues to enhance its employee benefits including offering attractive hardship allowances to encourage more employees to take up difficult postings or to serve at duty stations located at more remote areas. To reduce staff differentiation, Sarawak Energy ensures a harmony benefit system is put in place to standardise the benefits for employees across all levels.

DIGITALISATION AND ENTERPRISE MODERNISATION

To enable a high performance culture, Sarawak Energy continues its enterprise-modernisation initiatives and leverages on technology to digitalise and enhance its work processes for better efficiency. All staff are provided with protected access to digital collaboration tools like Office 365 that allows staff to get connected with anyone within the Company. Mobile working is made easier as staff are able to operate remotely or from their base locations, at any time via multiple devices.

DIVERSITY AND INCLUSIVENESS

Sarawak Energy recognises the value of workforce diversity and inclusiveness. Sarawak Energy believes that a working environment that provides equal opportunities to people irrespective of their gender, background and experience generates more honest discussions with all-rounded feedback, develops more innovative solutions and improves decision making. Sarawak Energy maintains a strong mix of seasoned professionals and a large population of young, educated talent who can challenge the traditional way of doing things. Sarawak Energy also encourages various inter-departmental collaborations to provide a working climate where people work as one team and move in the same direction. Staff are expected to support each other and move Sarawak Energy forward to be a top quartile energy company.

SARAWAK ENERGY LEADING WOMEN NETWORK



The Sarawak Energy
Leading Women
Network (SELWN)
is a professional
networking platform
in line with the United
Nations Sustainable

Development Goal 5 on Gender Equality and Women Empowerment, to enable female employees of Sarawak Energy to maximise their potential by facilitating and supporting their career development aspirations.

SELWN's objectives are aligned with achieving the national target of 30% women representation on boards and senior management teams. In efforts to retain female professional talent and to facilitate more participation of women in decision-making positions, Sarawak Energy acknowledges the challenges women face as they balance their career with domestic responsibilities. Women make up around 22% of Sarawak Energy's total workforce and the Company is pushing forward to enable more female employees to ascend to leadership positions through outreach and mentoring activities, networking and sharing sessions, forums and capacity building programmes. In December 2019, Sarawak Energy's Senior Vice President for Corporate Services Hajah Siti Aisah Adenan was appointed the new Executive Champion for SELWN.



SELWN's Women Mentoring Women programme.

FIRST WORKSITE CHILDCARE CENTRE

A significant portion of Sarawak Energy's workforce consists young working adults who are establishing families. As part of Sarawak Energy's commitment towards creating a more diverse and inclusive working environment for employees, Sarawak Energy has set up its first Little Power Genius worksite childcare centre at Menara Sarawak Energy to accommodate the requirements of working mothers and young working parents. Sarawak Energy plans to provide similar facilities in major locations throughout Sarawak over the next few years.

HEALTHY LIVING

In efforts to make Sarawak Energy a great place to work, Sarawak Energy commits to improving staff physical and mental health by introducing more recreational activities and upgrading its sports and recreational facilities across Sarawak. Sarawak Energy has set up creative breakout areas at Menara Sarawak Energy, Wisma SESCO, Western Region, Sibu and Miri regional offices. These spaces are intended to improve employee well-being, promote clear and innovative thinking for better productivity, facilitate employee interaction and collaboration, as well as to encourage positive communication in the workplace.



The creative breakout area at Miri regional office.

In addition to promoting an active lifestyle amongst staff, every Thursday has been designated as corporate sports day, a casual platform for staff to interact and bond outside of the work environment.

Sarawak Energy also introduced its first 'open office concept' workspace at Menara Sarawak Energy to encourage open discussions, interaction and teamwork. Designed to be more inclusive and friendly, the workspace offers a discussion pod with video conferencing technologies, a creative zone, small discussion rooms, meeting rooms and open workstations.



First 'open office concept' workspace at Menara Sarawak Energy.

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Health, Safety, Security and Environment

CHAMPIONING A HSSE CULTURE

Sarawak Energy places Health, Safety, Security and Environment (HSSE) as shared responsibilities in its business. Sarawak Energy ensures that its people are equipped with the best health benefits, enabling optimal performance and providing a safe, secure and environmental-friendly place to work. Building a culture of excellence in health and safety is one of the key contributors to Sarawak Energy's business sustainability and ability to become a best-in-class utility and a top-quartile corporation.

HEALTH

Sarawak Energy has established a culture that promotes workplace health and well-being by designing sports and recreational events such as corporate wellness programmes and outdoor activities to nurture a healthy and highly motivated workforce that can perform at their optimal level. These activities and events include sports carnivals, tournaments and runs, which are held all year round between the Health, Safety, Security and Environment (HSSE) department and the Recreation Club.

Reinforcing this culture, Sarawak Energy has set the Body Mass Index (BMI) programme as one of its KPIs and aims to achieve a BMI of less than 30 for 95% of its employees by 2020. In 2019, a total of 4.932 staff took part in the Company's health screening programme.

Sarawak Energy Utility Games 2019

The main objective of the Utility Games is to facilitate networking opportunities and relationship building between utilities companies in Southeast Asia through various sports activities.

Sarawak Energy Walkathon 2019

The Sarawak Energy Walkathon is a health initiative involving employees' submission of their steps count every month. Staff with the most accumulated steps are given special prizes for their dedication in creating a healthy lifestyle for themselves.

Sarawak Energy Recreational Centre

In line with the Company's Healthy Living initiative, the Sarawak Energy Recreational Centre (SERC) was established in June 2019 with the objective of encouraging a socially active and healthy lifestyle among Sarawak Energy's staff and retirees through sports and recreational activities, improving overall fitness, health and well-being.

Sarawak Energy Corporate Games 2019

Competing in the spirit of comradeship and community building, the Sarawak Energy Corporate Games is a biennial event aimed at bringing staff and management together in an informal and fun environment to build stronger bonds, enhance workplace culture and boost productivity. It is aligned with Sarawak Energy's CURIA core values of Courage, Unity, Respect, Integrity and Accountability.







Sarawak Energy Run 2019.

Sarawak Energy Cup 2019

Fostering friendship and sportsmanship through sports, the Sarawak Energy Cup aims to promote badminton in Sarawak and healthy lifestyle. At this year's event, a badminton clinic was also held to nurture interest among young talents and develop potential shuttlers.

Sarawak Energy Run 2019

Held in conjunction with the Sarawak Energy Utility Games, the Sarawak Energy Run targets to promote a healthy workforce by recognising the importance of work-life balance and giving back to the community.

Samalaju Sports Carnival 2019

A biennial event aimed at strengthening and sustaining relationships with Sarawak Energy's Samalaju customers, Sarawak Energy collaborated with eight other companies for the 2019 event which also promotes a healthy lifestyle and culture as an essential way to sustain business growth and development.

SAFETY

Sarawak Energy recognises the safety of its internal and external stakeholders as its priority and shared responsibility. A strong safety culture is crucial for the Company as it grows and takes on more activities in its operations and projects. Sarawak Energy's safety standards are to keep its staff, contractors and the communities in which it operates, safe from harm. Striving towards achieving the ultimate goal of Zero Lost Time Injury and Zero Fatality. Sarawak Energy partners with a range of external organisations including the National Institute of Occupational Safety and Health (NIOSH), the Department of Environment (DOE), the Natural Resources and Environment Board (NREB), the Department of Occupational Safety and Health (DOSH) and the National Anti-Drug Agency (NADA) to promote proactive safety standards in the workplace.

Sarawak Energy HSSE Culture Programme

As part of Sarawak Energy's continuous efforts to inculcate a strong workplace safety culture, the HSSE Culture Programme was rolled out in November 2019 to reinforce safety principles amongst its workforce through three key HSSE core behaviours - Assess, Comply and Empower (ACE).

Assess involves analysing potential hazards and pollutions, **Comply** consists adherence to laws, standards and procedures and **Empower** calls for staff to intervene and stop work in the event of any unsafe acts and conditions.

Life-Saving Rules

Sarawak Energy's Life-Saving Rules are a set of mandatory, easy-to-follow safety principles which all employees, its subsidiaries and its contractors must comply with whenever and



• 'Everybody Goes Home Safely' is Sarawak Energy's tagline to ensure safety remains everyone's top priority.









wherever they conduct Sarawak Energy's business. The Life-Saving Rules were launched in 2017 to create a more focused approach to reducing accidents, improve Sarawak Energy's overall safety performance and ensure that 'Everybody Goes Home Safely' at the end of the day. Since its introduction, safety-related cases recorded in the Company have declined as staff and contractors are adapting to the culture of compliance with safety rules. To further amplify and fully embed safety rules in the hearts and minds of staff and contractors, Sarawak Energy has designed the Life-Saving Rules Road Map and Masterplan.



Watch the 'Pesan Orang Tua' video about Arthur's personal safety journey. #EverybodyGoesHomeSafely

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HSSE Week at Menara Sarawak Energy with Tan Sri Lee Lam Thye, Chairman of NIOSH.

SARAWAK ENERGY LIFE-SAVING RULES

GENERAL SAFETY









SITE & FIELD SAFETY











Sarawak Energy's HSSE week serves as an essential platform to raise awareness amongst its employees and contractors on the importance of the Company's HSSE values with the slogan "Raising Standards, Nurturing Culture and Saving Lives". Sarawak Energy also promotes a range of safety aspects and practices that are important in daily activities through the HSSE Orientation Programme. The Company's safety mascot 'BOLT', an acronym incorporating Sarawak Energy's safety principles- Be Aware, Open your mind, Look at your surroundings and Take care of yourself and your co-workers, further reinforces the Company's safety culture. Regional offices and power stations organise their own HSSE Weeks at their premises.

Safety Passport Programme

The Safety Passport Programme is an initiative designed to complement the corporate policies, procedures and processes between Sarawak Energy and NIOSH to promote work safety amongst Sarawak Energy's contractors. Sarawak Energy and NIOSH also conduct a suite of safety and competency training modules for switching personnel and technicians working at heights or in transportation.

Top Management HSSE Walkabout and Turun Padang Programme

Sarawak Energy's Top Management HSSE Walkabout and 'turun padang' Programme provide the opportunity for management to lead by example and engage with workers to understand the HSSE challenges faced on the ground at major project sites and power stations.

In 2019, a total of 19 employee engagement activities were organised throughout Sarawak Energy's power stations, regional offices and project sites in Sarawak.



Celebrating HSSE Excellence with contractors during the Contractor Transformation Programme award ceremony.

Contractor Transformation Programme

The Contractor Transformation Programme (CTP) was introduced in 2017 as a platform to foster a strategic partnership between Sarawak Energy and its contractors by promoting self-regulation and continuous improvement in workplace safety. This initiative is in line with the Company's target of "Zero Harm to People" as well as the National Occupational Safety and Health (OSH) Master Plan 2016 - 2020, to transform OSH into a preventive culture.

The CTP also helps to identify the gaps in health and safety for Sarawak Energy and its contractors, allowing the establishment of remedial measures. The programme awards contractors who are outstanding in HSSE activities, particularly in self-regulation.

In 2019, a total of three contractors were awarded Gold; eight contractors were awarded Silver and nine contractors were awarded Bronze in recognition of their commitment to build a strong safety culture at their workplaces.

Routine Audits and Inspections

To further embed the health and safety culture throughout all levels of Sarawak Energy, the Company conducts regular checks and inspections at power stations and regional offices as well as performs site visits at ongoing projects to ensure that all operations comply with the highest HSSE standards.

Drug-Free Work Environment

Sarawak Energy takes an uncompromising approach to eliminate the illegal use of drugs at its workplace. The Company holds random drug tests and any employee, contractor, or third-party associate found to be using illegal drugs will face disciplinary actions.

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CORPORATE SECURITY

A new Corporate Security division was established in October 2019 to enhance the role of Sarawak Energy's security division through modernised security systems and structures. Formerly known as Security Services, the new portfolio of the division includes increasing involvement of security in the Company's business activities, particularly in project developments; conducting security risk assessments for critical premises such as substations, stations and offices and strengthening the Company's security intelligence for effective surveillance to protect its premises, assets and people.

The new division is guided by three principles, namely professionalism, visibility and confidentiality, to provide professional protection to Sarawak Energy's assets and personnel from threats that can jeopardise the Company's interests and reputation.

With the implementation of enhanced security roles, the 470 Auxiliary Police (AP) under the division and the retail AP team resolved nine cases that led to 13 arrests and conviction for metal theft this year.

2022 AND BEYOND - THREE-YEAR PLAN

In efforts to achieving HSSE Excellence by 2022 and beyond, Sarawak Energy has identified three key areas to drive Security Excellence.

Effective Resource Management With an effective resource management plan in place, Sarawak Energy's security team will be equipped with the necessary resources and capabilities to build a structured competency framework, develop the Company's competency level on security, perform consequence management and form an elite Emergency Response squad.



assurance, security risk assessment, security risk mitigation, crisis management and enhance the security awareness culture amongst its workforce to build the resilience of its operational management.

The Company will focus on governance and



Sarawak Energy plans to reinforce the positioning of Corporate Security division in the Company and change the mindset of its key stakeholders on the importance of Corporate Security. In line with this, Sarawak Energy plans to establish delivery of Corporate Security services and network through collaborations with external subject matter experts.



Launching of the new division during Corporate Security Day 2019.

KEY MILESTONES

Sarawak Energy aims to achieve the following five key milestones by



Ensuring full compliance to its security policy, procedures and guidelines

Establishing security plans at every guarded station

> Gazetting all key installations under the Protected Areas and Protected Place Act 1959

ISO:18788 certification



Ocrporate Security Auxillary Police keeps Sarawak Energy safe.

Auxiliary Police

The Auxiliary Police protects Sarawak Energy's assets and properties from intrusions and technicians from high-risk customers on-site during the raid of electricity theft operations and disconnections as well as performs surveillance on premises suspected of tampering of meters and electricity distribution systems.

The Auxiliary Police is also present on-site to manage the public, especially concerning land issues.

Security Risk Assessment

A Security Risk Assessment (SeRA) was initiated in August 2019 and completed for most of Sarawak Energy's assets, covering 10 power stations, 36 transmission substations and 13 offices around Sarawak.

ENVIRONMENT

Sarawak Energy aspires to become the leading company in environmental stewardship for Sarawak. Beyond 2020, the Company targets to achieve and maintain 100% Environmental Statutory requirements compliance, in line with its Key Focus Area in HSSE Excellence.

MoU Signing between Sarawak Energy and Forest Department on Baleh Watershed Wildlife Connectivity Project

Sarawak Energy's environmental stewardship extends to the preservation of important ecosystems. In 2019, the Company signed a Memorandum of Understanding (MoU) with Sarawak's Forest Department to collaborate on the Baleh Watershed Wildlife Connectivity Project for research and data gathering in the effort to conserve and protect its catchment area and ecosystem. This three-year project is part of Sarawak Energy's integrated catchment management initiative to support biodiversity conservation as well as build resilient hydropower resources by protecting catchment areas and water resources.



Sarawak Energy and Department of Environment MoU signing

MoU Signing between Sarawak Energy and Department of Environment

In compliance with the Environmental Quality Act 1974 and through direct engagement with the Department of Environment (DOE) in its operation, Sarawak Energy signed an MoU with the DOE to establish its commitment in environmental stewardship.

With the MoU, Sarawak Energy can further promote and implement various environmental awareness programmes and conservation initiatives in line with its Key Focus Area in Environmental Excellence as well as collaborate with other organisations.

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Complying with Environmental Legislation and Requirements

Sarawak Energy is committed to not only mitigate the impact of its activities on the environment but also to comply with environmental legislations and requirements that provide a basis for the protection of the environment. The Company coordinates regular environmental monitoring, assessments, documentation and maintenance at the rural and urban power stations. The Company also conducts scheduled waste disposal programmes and stack emission monitoring at power stations regularly in compliance with the environmental Act and regulations.

Sarawak Energy incorporates environmental policies in its business that complements the following environmental laws and regulations:

Environmental Quality Act 1974 This legislation is related to the prevention, abatement, control of pollution and enhancement of the environment in Malaysia. This Act restricts the discharge of wastes into the environment in contravention of the acceptable conditions.

Natural Resources and Environment Ordinance 1993 The Natural Resources and Environment Ordinance acts as a regulatory mechanism for a more robust sustainable management of natural resources and the protection of environmental quality.

Managing Sarawak Energy's Environmental Footprint

Sarawak Energy measures and manages its impact on the environment by monitoring the environmental footprint of its operations.

Noise Boundary Monitoring

The Company complies with the Environmental Quality Act 1974 (Section 23) which stipulates "No person shall, unless licensed, emit or cause or permit to be emitted any noise greater in volume, intensity or quality in contravention of the acceptable conditions." The Company also conducts boundary noise monitoring annually at a few points along the perimeter of power stations to align with approval conditions of Environmental Impact Assessments (EIA). The allowable emission of noise levels established by the Department of Environment for power stations is 65 dBA at all times.

Dark Smoke Observation

In 2011, Sarawak Energy started to observe dark smoke emission at rural and urban power stations. It is a legal requirement under the Sijil Kelulusan Bertulis Pemasangan/ Pembinaan Alat Pembakaran Bahanapi dan Cerobong di bawah Peraturan-Peraturan Kualiti Alam Sekeliling (Udara Bersih) 1978 that smoke emission limit should not be darker than shade No. 1 (20%) on the Ringelmann Chart, which measures the different shades of smoke emissions.

Dark smoke observation for generator sets at the rural and urban power stations is conducted annually; at major stations like Bintulu and Kuching Power Stations quarterly; and at Miri Power Station on an annual basis, together with stack emission monitoring. This initiative also complies with EIA requirements.



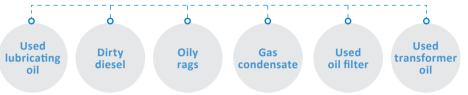
Boundary noise monitoring.



O Dark smoke observation.

Scheduled Waste Management

Scheduled waste is defined as any waste listed in the First Schedule of the Environmental Quality (Scheduled Wastes) Regulations 2005. Commonly produced scheduled waste generated from power generation activities are:



It is an offence under the Environmental Quality (Scheduled Wastes) Regulations 2005 for a waste generator to store scheduled waste for more than 180 days, or exceeding 20 tonnes, whichever comes first. Sarawak Energy assists all stations throughout the State with scheduled waste management, especially on monthly inventory reporting and waste disposal. Since July 2015, a scheduled waste contractor for disposal has been appointed for each station.

Wastes are stored properly before

Environmental Assessment

Sarawak Energy conducts an annual environmental assessment of the rural and urban power stations. The objectives of the assessment are to evaluate:

- Station's compliance with the applicable legal requirements
- Station's capability to achieve the Company's policy objectives
- Effective implementation of prevention measures at the station

The environmental assessment covers the operation, maintenance and general environmental conditions of the station. The assessment team conducts inspections on the drainage system, fuel farmyard, fuel loading area, waste storage area and the chemical storage area. The assessments at the rural and urban power stations are carried out together with the environmental monitoring and Environmental Management System (EMS) documentation

Water Quality Monitoring

Sarawak Energy conducts water quality monitoring at the Batang Ai, Bakun and Murum HEP reservoirs. Under the Sarawak Natural Resources & Environment Board (NREB), it is a legal requirement to perform water quality monitoring at the reservoirs every quarter. Unlike natural lakes, human-made reservoirs may have an environmental impact, as modifications to the natural flow of water create barriers to the mobility of water species and can change the composition of species upstream and downstream. The formation of deep reservoirs can also cause thermal stratification, which influences the chemical and biological processes in the waters. In addition, changes in the quality of the water retained in the reservoirs will eventually be discharged into the rivers downstream and may affect the receiving water body.

Water quality monitoring and assessment for reservoirs are therefore essential to study the changes in water quality and to mitigate the potential problems related to reservoir water quality. Ultimately, management programmes could be suggested to remediate the environmental impacts of reservoir water quality.



Water Quality Monitoring at Batang Ai Reservoir.

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How We've Performed ○ ○ ○ ○ ○ ○ ● ○ ○ ○ ○ ○

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Environmental Conservation Highlights

Sarawak Energy directly engages with various link-minded agencies to hold events and promote environmental awareness on environmental protection and biodiversity preservation.

State-Level National Environment Day 2019

Sarawak Energy and the Department of Environment (DOE) collaborated in organising the State-Level National Environment Day 2019 which serves as a platform to raise awareness among the community on current environmental issues to promote sustainable environmental protection.



Gaharu Tree Planting Programme at Rumah Manggat, Batang Ai.

Gaharu Tree Planting Programme

The Gaharu Tree Planting Programme at Rumah Manggat in Batang Ai is one of the conservation initiatives under the Forest Department Sarawak's (FDS) Ulu Sungai Menyang Orang Utan Strategic Action Plan (USMOSAP). Sarawak Energy first took part in this programme in 2018 with the main objective of conserving the Ulu Sungai Menyang forest to help improve the livelihood of the local communities, and helped to plant 1,500 seedlings. In 2019, Sarawak Energy participated again in the programme to perform tree maintenance and to monitor the growth of the gaharu seedlings.



PALS Club Conference for school students.

2nd PALS Club Conference 2019

Sarawak Energy and Natural Resources and Environment Board Sarawak (NREB) organised the Annual Pencinta Alam Sekitar (PALS) Club Conference which serves as a platform for PALS Club schools to share information, increase students' awareness and establish networking opportunities amongst students, teachers and environmental agencies.

State-Level Train-the-Trainers Programme for PALS Club 2019

Sarawak Energy and NREB jointly organised a State-level Train-the-Trainers Programme for PALS Club 2019 which aimed to provide a better understanding of the roles and activities of PALS Club to new school teachers responsible for PALS Club. The programme targets to enhance the teachers' technical skills to conduct impactful PALS Club activities through the application of environmental education modules, equips educators to raise environmental awareness and develop sustainable behaviours and strengthen the bond and fellowship between schools, the NREB and other stakeholders.

Beach Cleaning

Sarawak Energy organises beach cleaning activities in collaboration with various organisations to promote environmental awareness amongst participants and highlight the impact of improper waste disposal. Three beach cleaning activities involving volunteers from various organisations took place at Pantai Abang Amin in Sematan, Pantai Kala Dana in Mukah and Pantai Kampung Nelayan in Bakam, Miri in 2019.



Beach cleaning activity at Lundu

Exploring New Energy

SOUTHEAST ASIA'S FIRST INTEGRATED HYDROGEN PRODUCTION PLANT AND REFUELING STATION

Sarawak has a competitive advantage in affordable and renewable power generation as well as ample water supply through hydropower development. Under the stewardship of the Chief Minister of Sarawak, Datuk Patinggi (Dr) Abang Haji Rahman Zohari Bin Tun Datuk Abang Haji Openg in driving Sarawak's green energy agenda, Sarawak Energy commissioned Southeast Asia's first Integrated Hydrogen Production Plant and Refueling Station in May 2019 as part of a research and pilot

Undertaken in collaboration with Linde Malaysia, the pilot project harvests green hydrogen as the first step towards enabling a hydrogen-based economy and a hydrogen fuel-cell transportation system for Sarawak and the region. The research-based facility in Kuching includes a plant that produces hydrogen through an electrochemical process called electrolysis, and a refueling station for Sarawak's first hydrogen-powered buses under the ownership and management of Sarawak Economic Development Corporation. Through this facility, Sarawak Energy can now explore hydrogen's potential to be part of Sarawak's energy mix as a fuel as well as energy storage with export potential.

The production plant has the capacity to produce 130 kilogrammes of hydrogen per day at a purity of 99.999% and is capable of supporting and refueling up to five fuel cell buses and 10 fuel cell cars per day.



At Southeast Asia's first Integrated Hydrogen Production Plant and

GREEN MOBILITY - ELECTRIC VEHICLES AND HYDROGEN FUEL-CELL VEHICLES



At the launch of the electric buses

Sarawak Energy is the first company in Sarawak to incorporate electric vehicles (EV) and hydrogen fuel-cell vehicles in its corporate fleet. As part of its green mobility efforts aligned with SDG 11 to build sustainable cities and SDG 13 to mitigate the impact of climate change, Sarawak Energy has demonstrated its commitment in greening the transportation sector by acquiring two hydrogen-powered cars, the Hyundai Nexo, to add to its green fleet consisting four electric cars and 24 electric scooters.

Sarawak Energy also partnered with Malaysia Green Technology Corporation to install universal EV chargers in Kuching's main malls and at Menara Sarawak Energy to encourage more ownership of EV in Kuching. To further reduce the carbon footprint in Sarawak, the Company is exploring alternative technologies to make electric scooters more affordable and accessible to its people and the public.

FLOATING SOLAR

Sarawak Energy continues to explore technology advancements in alternative and renewable energy sources to light up Sarawak sustainably and cost-effectively. In addition to driving renewable hydropower generation, Sarawak Energy is exploring solar energy as an alternative to increase the proportion of renewable energy in Sarawak's generation mix. In line with this, Sarawak Energy plans to develop floating solar at the reservoir of its Batang Ai Hydroelectric Plant.

How We've Performed ○ ○ ○ ○ ○ ○ ● ○ ○ ○ ○ ○

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Lighting Up Communities

In 2009, the rural population in Sarawak with access to reliable 24/7 electricity supply stood at 56%. A decade later in 2019, the coverage has reached 93%. Sarawak Energy's target is to meet full electrification by 2025.

STRATEGISING FOR FULL RURAL **ELECTRIFICATION COVERAGE**

Aligning with SDG 7, providing affordable and clean energy, Sarawak Energy works closely with the Federal and State Governments to support the rural electrification plan to provide electricity to rural areas of Sarawak through the Accelerated Rural Electrification Masterplan.

In 2015, various Government-funded initiatives were introduced under the Masterplan to accelerate rural electrification in Sarawak. Key programmes of the Masterplan comprise the Rural Electrification Scheme or RES, which focuses on extending the existing grid line into the interior; Rural Power Supply Scheme or RPSS, which focuses on complementing RES by introducing new transmission lines and substations into rural areas; Sarawak Alternative Rural Electrification Scheme, or SARES, a fast track solution to provide remote households with the standalone solar power system in partnership with the community; and the Alternative Hybrid Rural Electrification Project, which utilises renewable alternative systems of both micro-hydro and solar technologies to provide reliable electricity supply to the most remote villages.

Through the implementation of these programmes, electricity coverage reached 93% in 2019. Subsequently, the Ministry of Utilities spearheaded the Accelerated Rural Electrification Masterplan with Sarawak Energy acting as its implementing agent,



Longhouses at Julau are lighted up at night.

targeting to deliver the State's vision of achieving full electrification by 2025.

Full access to electricity brings real benefits and opportunities for a better standard of living, more convenience, greater savings and enables businesses to operate in Sarawak's remote communities.

SARAWAK ALTERNATIVE RURAL **ELECTRIFICATION SCHEME – REACHING** THE MOST REMOTE COMMUNITIES

SARES is an innovative Governmentcommunity partnership initiative that utilises standalone alternative systems comprising renewable solar and micro-hydro technologies to supply electricity to villages that are too distant to connect to the main electricity grid. The SARES initiative mobilises Government machinery and agencies to help villages build, own and operate more sustainable and affordable electricity generating systems.

SARES replaces noisy and polluting generators that can only provide limited hours of supply with reliable electricity supply for each household's lighting, fans, television and refrigeration needs. Since the SARES project began in 2016, a total 277 villages, comprising 7.987 households, have gained access to 24/7 reliable electricity



SARES handover ceremony at Rumah Nading, Sungai Gaat in Kapit.

STANDALONE SOLAR HYBRID POWER STATIONS

In the interior of Sarawak, there are 31 solar hybrid power stations and one micro-hydro hybrid power station that is in operation

Six more stations are in various stages of implementation and are expected to be commissioned by the end of 2020. Sarawak Energy undertakes the operation and maintenance of these solar hybrid power stations.

THE WAY FORWARD

#LightingUpCommunities

With SDG 7 in mind, ensuring access to sustainable energy for all, Sarawak Energy commits itself to lighting up the off-grid communities as a catalyst for better health, employment and improved overall well-being. Working towards accelerating the rate of electrification in Sarawak, Sarawak Energy is focusing on exploring innovation, ideas and technologies.





SARES at Long Bedian, Baram.

Rural School Electricity Supply

The Rural School Electricity Supply initiative aims to extend the grid or provide renewable solar systems to 369 schools under a partnership with the Federal Ministry of Education, Ministry of Utilities Sarawak, Sarawak Education Department, Sarawak Public Works Department and Sarawak Energy.

By 2019. 125 schools had received access to a secure and reliable 24-hour electricity supply, displacing diesel generators that the schools previously depended on to create a more conducive learning and working environment for students and staff.

A total of 49 more rural schools will have access to 24-hour reliable electricity under Phase One and Phase Two of the scheme, targeted to be completed by December 2020.



MOU signing between Sarawak Energy and Korean Consortium in December

Microgrid Technology Research

To enhance the reliability of supply in Sarawak's energy system, Sarawak Energy leverages on innovative solutions and technology to strengthen the system. The company embarked on a collaboration with a Korean consortium consisting seven companies selected by Korean Energy Technology Evaluation and Planning to research microgrid technology in Sarawak.

A microgrid is a local energy grid that can operate independently and even disconnect from the main grid if a problem is detected in the upstream overhead line. The microgrid reduces congestion during peak load and generates energy from renewable energy sources, further decarbonising Sarawak's energy system.

Kampung Semadang in Padawan was unveiled as the research site for the microgrid system project. The system is anticipated to increase grid reliability and resilience aside from integrating the different energy resources of hydro and solar into the grid.

The collaboration includes a joint research and development association with microgrid technology as well as initiatives such as microgrid platform development, solar and hydro performance study, energy storage system application, energy efficiency, safety and regulation improvement, and knowledge transfer association with microgrid technology

How We've Performed ○ ○ ○ ○ ○ ○ ● ○ ○ ○ ○ ○



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Growing Our Brand



To strengthen Sarawak Energy's corporate reputation and to earn and maintain its licence to operate and achieve continuous growth, Signature Brand Programmes were conducted since 2018. The Company also sponsored relevant brand programmes as a long-term strategic plan to drive new opportunities and form strategic partnerships with relevant stakeholders.

Students taking part in a competition at

POWER TO GROW

International Hydropower Association (IHA) Sponsorship

Sarawak Energy supported the International Hydropower Association (IHA) at the World Hydropower Congress 2019 in Paris in highlighting hydropower's vital roles in meeting global carbon reduction targets, building a clean energy future and ensuring responsible freshwater management.

The three-day congress provided a platform for Sarawak Energy to share its journey in progressing hydropower development for sustainable, renewable and affordable energy for Sarawak. Both management and executives from Sarawak Energy participated as speakers in the congress focus sessions and presented on a variety of topics including hydropower safety, Sarawak Energy's methodology in measuring greenhouse gas emission at its hydropower plant reservoirs, the Company's sustainability journey and in humanising the digital transformation programme.

The biennial congress was organised by IHA in collaboration with more than 40 partner organisations and attended by more than 700 delegates from over 70 countries. Sarawak Energy has been a sustainability partner and platinum member of the IHA since 2010 with Group Chief Executive Officer Datu Haji Sharbini Suhaili serving as an elected member of the IHA Board since 2017.

POWERING YOUNG MINDS

Sarawak Community Innovation Engineering Competition Exhibition

To cultivate greater interest and innovative thinking in science, technology, engineering and mathematics (STEM) among students in Sarawak, Sarawak Energy held the second edition of the Sarawak Community Innovation Engineering Competition Exhibition in August.



Group COO Lu Yew Hung visiting the SCIENCE exhibition

Themed "Smart Home and Future Living", SCIENCE 2019 attracted over 300 students from Sarawak including Kuching, Betong, Mukah, Bintulu and Miri. The students from 36 primary and secondary schools formed 80 teams to participate in the various workshops, challenges and competitions.

In collaboration with The Learning Curve, this innovative format fosters teamwork among students as they collaborated over a span of six months to design, programme, assemble and showcase their engineering projects with the assigned theme. The students were able to showcase their creations during the exhibition and demonstrate its application in daily lives.

SCIENCE 2019 was held in conjunction with the National Science Week and was supported by the Federal Ministry of Education, Science and Technology Research Sarawak, Ministry of Energy, Science, Technology, Environment and Climate Change Malaysia, Sarawak Multimedia Authority and Education Department Sarawak.

Junior Badminton Championship

Sarawak Energy is also doing its part to contribute to the development of sporting talent and powering young minds for Sarawak through the annual Junior Badminton Championship. The championship's objective are to nurture interest and develop potential among young badminton players as well as provide an avenue to groom young shuttlers to compete at the local, regional and international levels.



Badminton tournament at Miri.

The tournaments were held in three locations this year; Kuching, Sibu and Miri, to ensure all Sarawakian talents can participate. The programme was well-received by the community.

Through these programmes, Sarawak Energy aspires to positively impact Sarawak's future generation while attracting young talents to join Sarawak Energy and become the employer of choice in Sarawak.



O Beach cleaning activity at Sematan

SARAWAK ENERGY COMMUNITY VOLUNTEER PROGRAMME

To internalise sustainability among Sarawak Energy employees and encourage them to play a part in this journey, Sarawak Energy has launched the Sarawak Energy Community Volunteer Programme (CVP) in April to provide all employees with the opportunity to volunteer for the community and to promote inclusiveness and respect.

The CVP provides an annual allocation of RM200,000 to fund activities organised by employees for charitable causes, social or environmental related initiatives which are in line with the Environmental, Social and Governance (ESG) or United Nations Sustainable Development Goals.

The programme serves as an additional platform for Sarawak Energy to earn its social licence to operate by giving back to the society beyond project-affected communities.

The programme has benefitted students at Tadika Sejati, Kampung Subang Padawan in an annual community sports day as well as a beach cleaning activity which saw bags of rubbish being cleared off Sematan Palm Beach.

How We've Performed ○ ○ ○ ○ ○ ○ ● ○ ○ ○ ○ ○

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SUSTAINABILITY & RENEWABLE ENERGY F RUM SAREF

The inaugural Sustainability and

Renewable Energy Forum (SAREF) 2019 marked the start of a 10-yearthought leadership campaign to lead the region in sustainable and renewable energy. Organised together with the Sarawak Ministry of Utilities, the key objective of SAREF is to drive a regional discourse on sustainability and the role of renewable energy providers in Southeast Asia in delivering the UN SDGs by 2030.

TOWARDS A SUSTAINABLE AND RENEWABLE ENERGY FUTURE

As the largest producer of hydropower electricity in Malaysia, Sarawak Energy amplifies the role of renewable hydropower encourage a shift towards a more sustainable hydropower development, carbon emissions from the Company's electricity system has declined significantly by 77% in the last delivered a special address. decade.



Sarawakians have reliable the Company aims to resources.





achieve 100% electrification for Sarawak by 2025. SAREF plays an important role to support this goal and also achieve its aspiration to become a regional powerhouse.

With an attendance of more than 700 international and local delegates, the two-day forum explored how the energy industry and various sectors of society can collaborate in building a sustainable energy future while helping to meet the UN in the regional renewable energy mix to SDGs, allowing energy players and stakeholders to explore potential collaborations.

energy future. Since embarking on renewable The event was officiated by Yang Amat Berhormat Datuk Patinggi Abang Haji Abdul Rahman Zohari bin Tun Abang Haji Openg, Chief Minister of Sarawak. Tan Sri Michelle Yeoh, Goodwill Ambassador of the United Nations Development Programme, also

> Besides plenary sessions on energy and sustainability-centric topics such as Sustainability and Renewable Energy, Renewable Energy Certificates and Sustainable 7 to ensure all Financing, Renewable Hydropower as Southeast Asia's Catalyst for Growth, Circular Economy, Driving Sustainability and Preparing the Workforce for 2030, the forum access to sustainable, also included an Energy Leaders Forum session led by Group CEO Datu Haji Sharbini Suhaili to drive conversations around renewable energy strategies and technologies affordable electricity, for the industry in delivering efficient and sustainable management of natural

SAREF 2019 featured notable speakers from key organisations and partner agencies such as United Nations Industrial Development Organisation, World Bank Group, Terracycle, ASEAN Global Energy Interconnection and the International Hydropower Association, UN Global Compact Network, Malaysia and Malaysia's Sustainable Energy Development Authority who shared ideas beyond traditional thinking to stimulate change, innovation and improvement.

Sarawak Energy commits itself to review the Company's sustainability and renewable energy progress against commitments made from the first conference.

















MEDIA PARTNERSHIP

Promoting SAREF 2019 required comprehensive media coverage and exposure to reach audience and stakeholders beyond Sarawak. With the appropriate public relations strategy and active engagements with media, Sarawak Energy was able to showcase the Company's efforts in championing sustainability and renewable energy in Sarawak.

In addition to engaging Astro Awani as the national media and content partner, Sarawak Energy invested in partnerships with top-tier international media companies such as CNBC Catalyst and South China Morning Post to ensure key discussion points from the forum reached a broader national and regional audience. Moderators for the plenary sessions were also members of the media partners.

For long-term global exposure, the SAREF 2019 articles, videos, interviews were featured on all media partners' websites and social media platforms.

National Media and Content Partner

astro

AWANI



International Media Partner

South China Morning Post



A Fireside Chat curated by CNBC Catalyst also featured Group CEO Datu Haji Sharbini Suhaili as he spoke on renewable hydropower.

RENEWABLE ENERGY CERTIFICATE

In line with the UN SDGs and Sarawak Energy's sustainable and renewable energy aspiration to be a leader in renewable energy, Sarawak's first Renewable Energy Certificate (REC) was introduced during the SAREF 2019.

Each green energy certificate or tradable renewable certificate represents the environmental benefits of 1MWh of renewable energy generated from the Batang Ai Hydroelectric Plant. RECs serve as proof that energy is generated from renewable sources.

The certificate is regulated by the Tradable Instrument for Global Renewable registry, an online platform for transparent, secure and reliable tracking of RECs. It was established to provide best practice guidelines and Carbon Disclosure Project standards for tracking and reporting of REC and to provide assurance to buyers of the integrity of each REC transaction.

During the launch of the REC, Sarawak Energy signed a Memorandum of Understanding (MoU) with Shell MDS (Malaysia) Sdn Bhd (Shell MDS) to undertake a study on certified renewable energy supply.



The MoU focuses on research into RECs as a mechanism for procuring and driving greater integration of renewable energy into energy supply chains. It also includes a study on the reliability of additional renewable electricity supply to support the commitment of Shell MDS to decarbonise their operation in At a lunch and learn session during the forum, representatives Bintulu, Sarawak.

Together with Shell MDS, the MoU explores the development of RECs for Shell MDS, which could potentially stimulate renewable energy deployment across Sarawak.



SUPPORTING CULTURAL HERITAGE PARTNERS

In organising its first large-scale international conference, Sarawak Energy provided exposure and opportunities to Sarawak's indigenous communities to share their story and showcase their culture and heritage to a global audience as part of community development and sustainable livelihood initiatives.

The SAREF 2019 conference pack consisted rattan bags woven by women from the Penan community in Murum and beaded lanyards handcrafted with indigenous motifs by women from the Iban community from Baleh and the Kenyah and Kayan women from Sungai Asap, Belaga. A community bazaar was also set up for the Company's cultural heritage partners and project-affected communities to showcase indigenous handmade products and demonstrate the making of their handicrafts.

Delegates and visitors to SAREF 2019 were also entertained by another cultural heritage partner, Warisan Sape Telang Usan musicians from Baram, who performed with traditional Orang Ulu musical instrument, the Sape. The musicians are record holders for the 'Longest Non-Stop Sape Performance' in the Malaysia Book of Records.

from Sarawak Energy's hydro-affected communities at Batang Ai, Bakun, Murum and Baleh shared their experiences on the hydropower journey which includes livelihood transformation following resettlement, how the respective communities are faring at present and on community investment and social contribution initiatives supported by Sarawak Energy.

How We've Performed $\circ \circ \circ \circ \circ \circ \bullet \circ \circ \circ \circ \circ \circ$

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#SAREF2019 At A Glance

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1,000Crowd Turnout



700
Participating Delegates from 12 Countries



45 Speakers from 10 Countrie

A Special Address by the

Tan Sri Michelle Yeoh, Goodwill Ambassador of the United Nations Development Programme

30 Participating Exhibitors



Received

National and International Media
Coverage

First Tier Media Partnership with

CNBC Catalyst, South China Morning Post, Astro Awani

In Recognition of Our Efforts

ASEAN ENERGY AWARDS

At the ASEAN Energy Business Forum (AEBF) 2019 in Bangkok, Thailand, the Sarawak Alternative Rural Electrification Scheme or SARES was the first runner up under the Off-Grid Power Category for the ASEAN Renewable Energy Project Award 2019. SARES is a Government-community partnership programme that utilises standalone alternative systems comprising renewable solar and micro-hydro technologies to light up remote communities.

ASIAN POWER AWARDS

At the Asian Power Awards 2019, held in conjunction with POWERGEN Asia & Asian Utility Week 2019, Sarawak Energy received recognition for SARES as Solar Power Project of the Year in the Malaysia category while Murum Hydroelectric Plant received a silver award for Hydro Power Project of the Year. Sarawak Energy participated as an exhibitor at POWERGEN Asia 2019 and shared Sarawak's aspirations and efforts in adopting new energy economy and digital utility during the Energy Capital Leaders Asia Summit.



ANUGERAH KUALITI PERKHIDMATAN AWAM NEGERI SARAWAK (AKPANS)

Sarawak Energy was recognised with a silver award for 'Anugerah Ketua Menteri Sarawak 2019' under the category of 'Agensi Utama Negeri' during the AKPANS 2019 presented on the Sarawak Civil Service Day in December. The Company also received a High Performance Team Award. AKPANS is the highest recognition given by the Sarawak Government to deserving public agencies who have achieved overall excellence in their organisational management, operation and customer services.



SUSTAINABLE BUSINESS AWARDS MALAYSIA 2019

In November, Sarawak Energy received five awards at the Sustainable Business Awards Malaysia 2019 in Kuala Lumpur, namely Best Overall for Sustainability Excellence, Strategy and Sustainability Management, Energy Management, Climate Change, as well as receiving Special Recognition in Stakeholder Engagement and Materiality. Earlier in the year, Sarawak Energy also received the Best Strategy and Sustainability Management Award, Best UN SDGs Award and special recognition for Sustainability in the Community at the Sustainable Business Awards Malaysia 2018.

Organised by Global Initiatives, this prestigious award recognises companies who are leading the way in sustainable business best practices and for their commitment to embedding sustainability into long-term business strategies. The awards have earned credibility and standing for the rigour in its process and prominence of the judging panel.



THE BRANDLAUREATE AWARDS

In July, Sarawak Energy's commitment to pursuing brand excellence was recognised with a Nation Branding Award 2018 - 2019 at The BrandLaureate Awards held in Kuala Lumpur. The award recognises Sarawak's primary power utility and energy development company's brand personality and presence and leadership in renewable energy generation, sustainability and its positive brand culture. Recipients of The BrandLaureate Nation Branding Award of the Year are noted for their brand leadership and influence of industry trends and standards with their innovative initiatives.

ASEAN PR CONFERENCE AND EXCELLENCE AWARDS

Sarawak Energy was awarded two Diamond Awards at the 2nd ASEAN PR Conference and Excellence Awards under the Best PR Programme Category for Mat Weavers Tale and Best PR Campaign ASEAN Category for Electrifying Sarawak and Beyond on 29 April. The awards presented were in recognition of outstanding PR and communication work at the ASEAN level through nominations by national PR associations with a selection panel led by Ibu Prita Kemal Gani, President of the ASEAN PR Network.





ANNUAL GLOBAL CSR SUMMIT AND AWARDS 2019

At the 11th Annual Global CSR Summit and Awards 2019 in Kuching, Sarawak Energy was awarded three platinum awards under the Best Community Programme for the Telang Usan Sape Heritage Programme and the Baleh Skills Training Programme; Empowerment of Women for Sarawak Energy Leading Women Network (SELWN) and CSR Leadership for driving the Company's CSR and sustainability efforts. Sarawak Energy also received a Gold Award under the Best Environmental Excellence Award for CSR solar projects at Tanjung Datu National Park, and two turtle islands, Talang-Talang Kechil and Talang-Talang Besar.

MALAYSIAN BOOK OF RECORDS

Sarawak Energy's 826MW Tanjung Kidurong Combined Cycle Gas Power Plant project made four entries into the Malaysia Book of Records for various engineering and technical feats. The power plant was recognised for the Longest Towing Distance for High-Density Polyethylene; Biggest Reinforced Concrete Cylinder Pipe Jacking; Biggest 'Open Caisson' Cooling Water Pump House and Longest High-Density Polyethylene Pipe Submersion. The certificate was presented in June and acknowledged the exceptional teamwork from all parties involved in the project. The Tanjung Kidurong power plant, which commenced construction in 2016, is set to be one of the most efficient combined cycle power plants of its class in the world when it is completed in 2021.



AUSTRALASIAN REPORTING AWARDS (ARA)

Sarawak Energy's Annual Report 2017 won a Silver award at the Australasian
Reporting Awards (ARA) ARA themed "Celebrating Excellence in Reporting".

The prestigious ARA provides organisations with the opportunity to benchmark their reports against global best practices. The awards have been organised for more than 62 years and are administered by Australasian

to be accredited the green building certification unde New Construction Category in 2013. The rating is issu Index Sdn Bhd, a wholly-owned subsidiary of Pertubution and the Association of Consulting Engineers Malaysia vaccreditation and trains GBI Facilitators and Certifiers.

Reporting Awards Limited, an independent non-profit organisation run by various volunteer professionals from the business, government and non-profit sectors. Distinct professional bodies concerned with the quality of financial and business reporting support the award recognition.



CONTRACTOR ENVIRONMENTAL IMPACT ASSESSMENT COMPLIANCE AWARDS (CECA) 2019

The inaugural Sarawak Energy Contractor Environmental Impact Assessment (EIA) Compliance Award was introduced in 2017 to promote commitment to environmental considerations within the contractor community. The ceremony took place on 8 March 2019 to recognise Sarawak Energy's contractors' effort in achieving a high level of compliance with EIA assessment requirements and standards. A total of nine gold and silver award recipients and 12 contractors were given certificates for their achievements in observing EIA standards.



GREEN BUILDING INDEX SILVER RATING

Menara Sarawak Energy, Sarawak Energy's headquarters, retained its Green Building Index silver rating after undergoing verification assessment for the renewal process in December. This rating has a validity period of three years. Menara Sarawak Energy was the first building in East Malaysia to be accredited the green building certification under the Non-Residential New Construction Category in 2013. The rating is issued by Green Building Index Sdn Bhd, a wholly-owned subsidiary of Pertubuhan Akitek Malaysia and the Association of Consulting Engineers Malaysia which administers GBI accreditation and trains GBI Facilitators and Certifiers.

Read more on SAREF here.

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Corporate Event Highlights

DIVERSITY AND INCLUSIVENESS



o Joint Gawai Raya celebration with Yang Amat Berhormat Chief Minister of Sarawak and his wife at Menara Sarawak Energy.



Celebrating Majlis Berbuka Puasa with Rumah Seri Kenangan residents and Rumah Amal Nur Murni



Lion dance performance at Menara Sarawak Energy to celebrate Chinese New Year.



Group Executive Committee members, GEC-1 and GEC-2 taking part in the Yee Sang or Prosperity Toss during the launching of Saradise Customer Service Counter.

STAKEHOLDER ENGAGEMENT



Our Group CEO holds townhalls to update staff across Sarawak on the Company's performance and the way forward in its strategy roadmap.



In supporting women empowerment and women leaders in the Company, Sarawak Energy Leading Women Network hosted a roundtable discussion with 30% Club Malaysia.



A delegation from PT Indonesia Asahan Aluminium (Persero) and Pratama Tax Service Office (KPP), Indonesia visited Menara Sarawak Energy in July.



 Utilities under the Sarawak Ministry of Utilities were briefed on best practices in Communication by the Corporate Communication team.



Utility companies from within Malaysia and other regions took part in the Utility Games in December.

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How We've Performed ○ ○ ○ ○ ○ ● ○ ○ ○ ○ ○

STAKEHOLDER ENGAGEMENT



Delegates from Chinese Aided Primary School Association Management Board (Tunglian) showed appreciation to Sarawak Energy for continuing to power young minds and support education programmes in Sarawak.



Sarawak Energy welcomed panel judges for the State Civil Service Key Focus Activities Award at the Western Region Technical Control Centre.



A Security Forum was held for Sarawak Energy's security team in March.



Sarawak Energy supports the yearly Kenyalang Journalism Awards to encourage excellence in journalism.

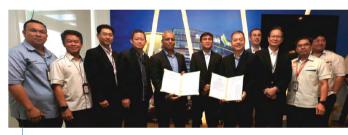


Sarawak Energy conducted a SEPRO briefing for contractors to familiarise with the new e-procurement system.

OPERATION AND PROJECT MILESTONES



Baleh HEP safely completed the upper bench breakthrough of the Baleh HEP diversion tunnels.



The Balingian Coal-Fired Power Plant Unit 2 Handover Ceremony.



RES earth-breaking at Kampung Berdaun Santubong by Yang Berhormat Minister for Utilities.

HEALTHY LIVING



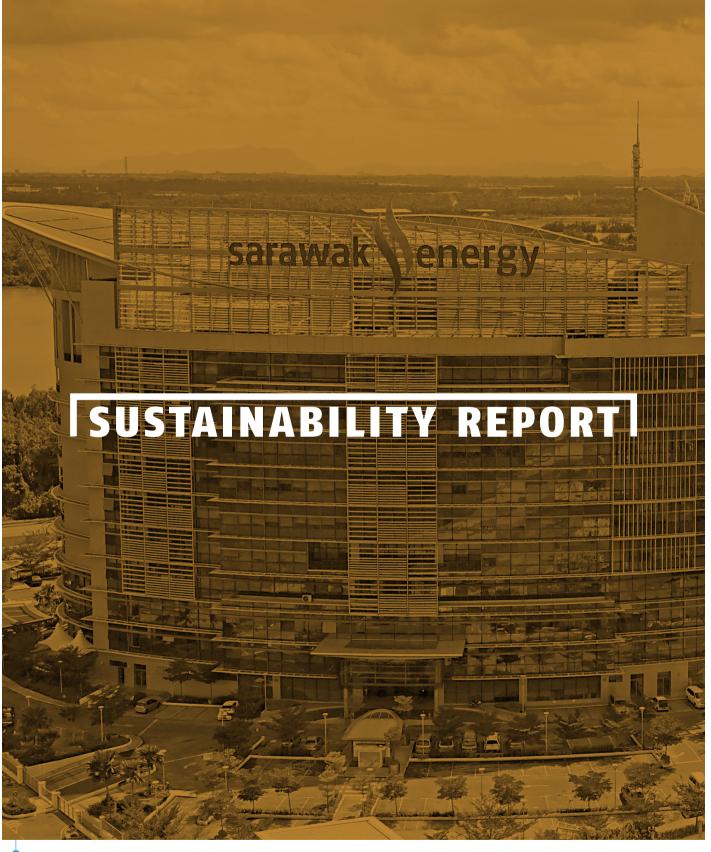
Friendly football match with the Malaysia Fire and Rescue Department Sarawak.



A simple stretching exercise before taking part in the Corporate Games Bowling tournament.



The Corporate Games 2019 was kickstarted with a football match.



Menara Sarawak Energy.

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Sustainability Key Highlights

PERFORMANCE AT A GLANCE

At Sarawak Energy, we measure our performance according to the triple bottomline. In addition to meeting our customers' energy needs, we also seek to deliver positive change for all our other stakeholders. By doing so, we believe we are able to achieve sustainable growth not only for our business, but also for Sarawak. As we provide reliable, renewable energy for the region, we see opportunities to achieve longevity and financial stability for our business while serving customer needs, contributing to environmental sustainability and uplifting society.

The following is a snapshot of our performance in 2019 based on these metrics.





Note:

Strategy

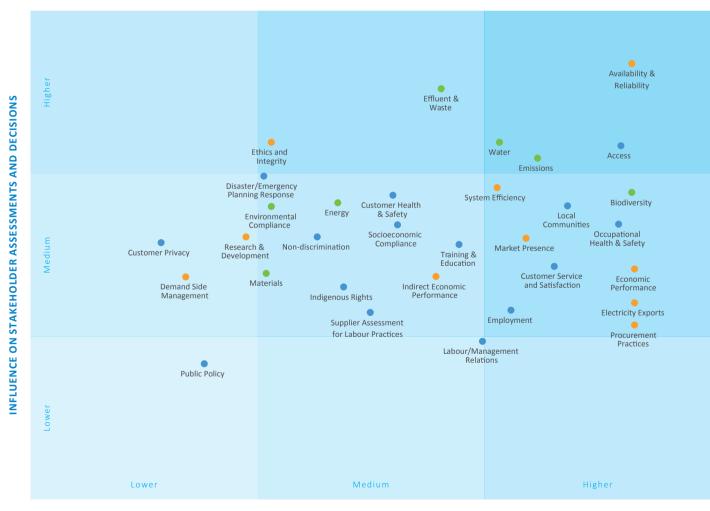
MATERIALITY ISSUES

Sarawak Energy conducts a materiality assessment every three years to understand the matters which are most important to the Company's stakeholders, as well as to anticipate its risks. The methodology of the Company's materiality assessment is guided by GRI Standards.

The Company's materiality assessment is undertaken through the following Processes:

- 1. **Review of material issues:** The Company reviews and updates its material issues in line with any development in its business landscape, risks, internal policies, Key Performance Indicators (KPIs), as well as local and global trends which may arise, changes in regulatory requirements as well as feedback from its stakeholders.
- 2. **Stakeholder engagement:** Stakeholders are prioritised and engaged with through continuous dialogue to provide the Company with insights needed to develop its strategies and initiatives, in addition to ensuring the Company addresses its stakeholders' needs.
- 3. **Prioritising material issues:** Following the identification of material issues, the issues are prioritised in line with the Company's business needs

The Company's materiality matrix for 2019 remained as follows:



SIGNIFICANCE OF ECONOMIC, ENVIRONMENTAL AND SOCIAL IMPACTS

• Economic • Environment • Social

These main grid CO₂ emission intensity, net energy generated and total value of tenders awarded to local Sarawakian companies data have been assured by a third party. Read the Independent Assurance Report on pages 154 - 156.

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INTERNALISING THE GLOBAL AGENDA (UNSDGS)

TAKING ACTION FOR THE FUTURE

In advancing Sarawak Energy's commitment to climate action, the Company plans to further explore disruptive technology concepts which minimise negative environmental impacts. These include solar hybrid, solar rooftop and smart technologies.

INTERNALISING THE GLOBAL AGENDA

Sarawak Energy continues to align its activities with the United Nations Sustainable Development Goals (UN SDGs). The Company has identified six SDGs which it currently has the capacity to contribute to, with the SDGs and indicators as follows:





Note:

^{*} These net energy generated, main grid CO₂ emission intensity data and scheduled waste generation intensity have been assured by a third party. Read the Independent Assurance Report on pages 154 - 156.



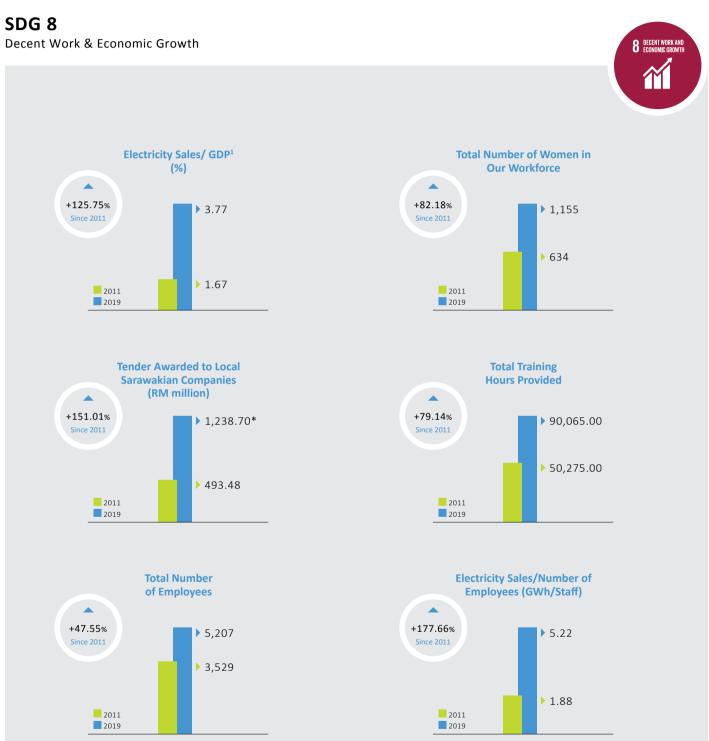
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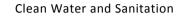
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- GDP for State of Sarawak in 2019 based on current price.
- * This total value of tenders awarded to local Sarawakian companies data has been assured by a third party. Read the Independent Assurance Report on pages 154 156.

SDG 6





Sarawak Energy is a member of the State's Integrated Watershed Management Committee that supports and contributes to the development of State policy, procedures and guidelines for Integrated Watershed Management.

SDG 15 Life on Land

- Sarawak Energy supports the Heart of Borneo (HoB) Initiative which seeks to protect and conserve the biodiversity and ecology of water bodies in Sarawak
- Baleh National Park 66,721 ha of Baleh National Park gazetted on 21.9.2017
- Conduct various workshops on watershed management
- Nurtured Flora Conservation Garden in Murum
- Batang Ai Enrichment Planting

SDG 17

Partnerships for the Goals

- Partnership in conservation and protection of HoB areas
- Collaboration with Government agencies, NGOs such as WWF and universities in developing an Integrated Catchment Management Policy, Procedures, Guidelines and Plan
- Collaboration with local universities on the Company's **Environmental Sustainability Programme**
- Partnership with IHA, UNGC Network Malaysia & GRI to champion the global sustainability at a local context

* This annual water volume for electricity generation data has been assured by a third party. Read the Independent Assurance Report on pages 154 - 156.

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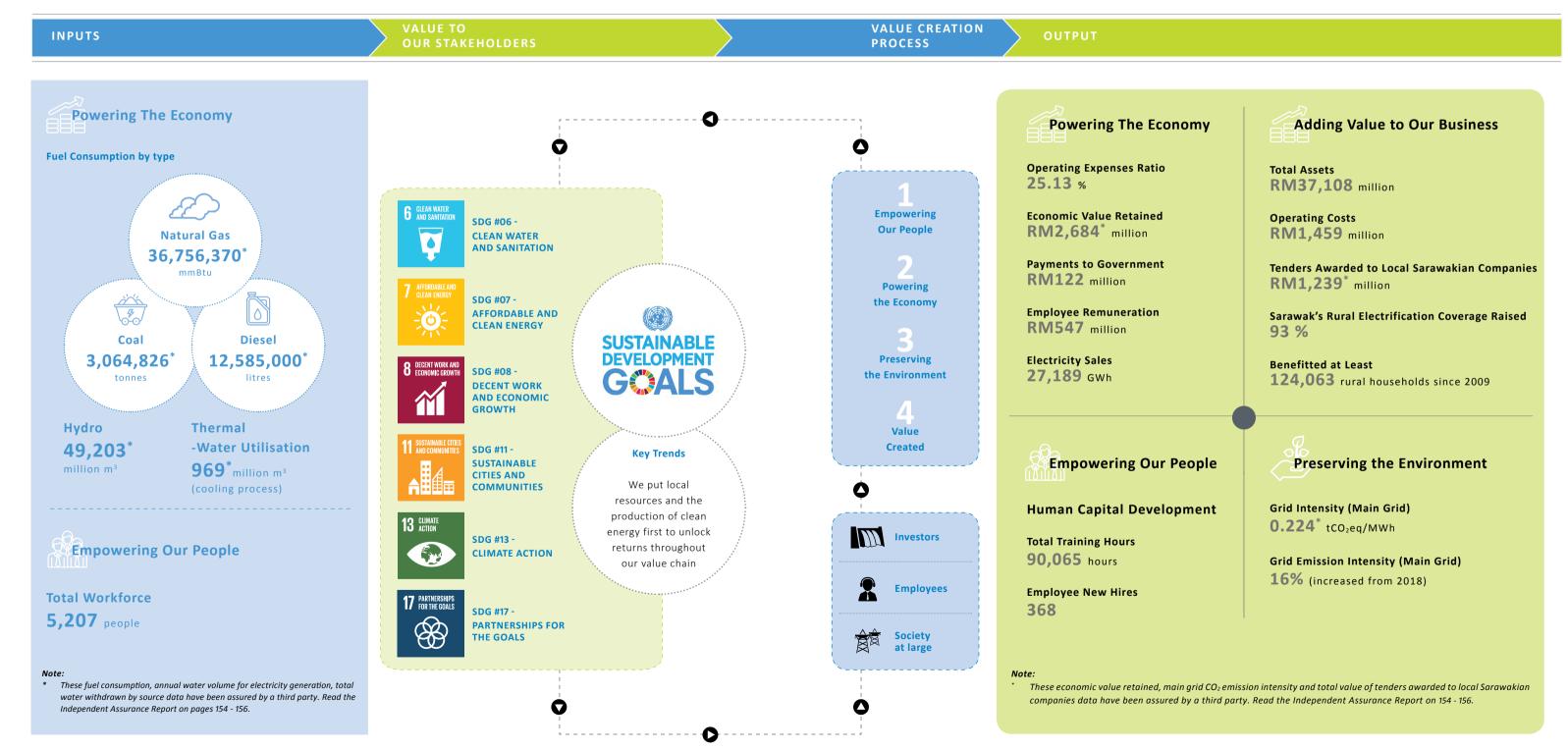
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CREATING LONG-TERM VALUE

Sarawak Energy delivers returns throughout its value chain by producing renewable energy using local resources. The Company further upholds the protection of stakeholders' interests and climate action to ensure sustainability not only of its business, but also of its communities and the planet.



SARAWAK ENERGY

BOARD

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Sustainability Governance

SUSTAINABILITY DIVISION

The Sustainability Division was formed in 2012 to oversee Sarawak Energy's sustainability efforts and to ensure these are integrated into the Company's strategic direction. The division is responsible for the processes for the implementation, measurement and verification of the Company's sustainability performance.

SUSTAINABILITY
DIVISION

CSR

& SUSTAINABILITY
DEPARTMENT

CORPORATE
SERVICES

GROUP EXECUTIVE
COMMITTEE

HYDROPOWER SUSTAINABILITY ASSESSMENT PROTOCOL (HSAP) INTERNAL ASSESSMENT

Sarawak Energy has adopted the Hydropower Sustainability Assessment Protocol (HSAP) within its processes in stages since 2012 and implemented its internal HSAP governing structure in 2014. The protocol is a globally recognised framework used to holistically assess hydropower projects against social, environmental, technical and economic considerations.

Sarawak Energy's internal HSAP governing structure has enabled the Company to firmly integrate sustainability practices into its hydropower development and operation processes. This ensures that its hydropower development and operations are fully aligned with the Company's sustainability agenda. Since adopting the protocol, it has served as a relevan model for guided self-assessments in attaining sustainable hydropower development based on recommendations from the World Bank.

The Sustainability Division manages the integration of sustainability practices in Sarawak Energy's hydropower project development and operations according to the following objectives:

Benchmarking our internal practices/processes against global best practices and processes	Identifying areas for future improvement							
Platform to enhance the adoption of HSAP at the project and corporate levels	Capacity development of the project team on the Protocol							
Sustaining our efforts to embed sustainability practices	Preparing projects for official assessment							
Enhancing the technical capabilities of Sarawak Energy's Internal Assessment Team								

ROLES & RESPONSIBILITIES



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Climate Action Through A Sustainable Energy Future

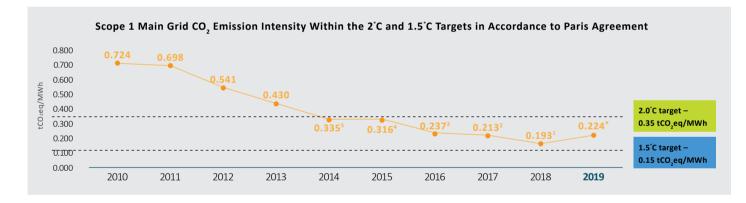
Sarawak Energy is committed to the United Nations Framework Convention on Climate Change's Paris Agreement, which aims to strengthen the global response to climate change by maintaining the rise in global temperature this century to well below 2° Celsius above pre-industrial levels, and to pursue efforts to limit the increase in temperature to 1.5° Celsius⁶.

In Sarawak, hydropower is delivering a clean, reliable and affordable source of energy to meet the State's targets for economic and social development, energy security, and affordable and reliable energy.

Renewable energy share in Sarawak has grown by 1,623% since 2011 which significantly contributes to the reduction of $\mathrm{CO_2}$ emission intensity. Sarawak's main grid $\mathrm{CO_2}$ emission intensity has shown a marked declining trend since 2011 due to the significant increase of renewable energy share in Sarawak's generation mix.

This quantum leap has seen the reduction of Sarawak $\mathrm{CO_2}$ grid emission intensity by 68% from 698 $\mathrm{gCO_2}$ /kWh (2011) to 224* $\mathrm{gCO_2}$ /kWh (2019) which is 50% lower than the global average of 450 $\mathrm{gCO_2}$ /kWh.





SHIFTING TOWARDS RENEWABLE ENERGY

Sarawak Energy has been on a journey of transformation into a renewable energy utility since 2011, focusing on harnessing Sarawak's energy resources sustainably and responsibly in its effort to create new opportunities for Sarawak and its stakeholders. In view of this, the Company has been diversifying its generation mix with more hydropower as a renewable energy source.

Upon completion, the Balingian Coal-Fired Power Plant will provide additional 624MW of generation capacity to the State's Grid. The facility will utilise indigenous Sarawak coal, found in the vicinity of the plant location to help meet demand from both our organic and bulk power Sarawak Corridor of Renewable Energy (SCORE) customers.

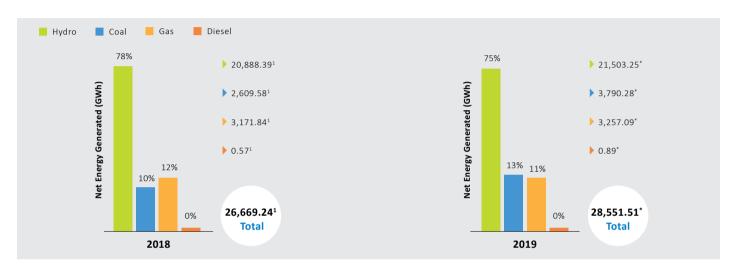
The Balingian Coal-Fired Power Plant is the first plant in Malaysia to use Circulating Fluidised Bed (CFB) boiler technology, allowing it to handle a wide range of coal types including high moisture coal commonly found in the Balingian region. It is also the largest of its kind in Southeast Asia and the last coal-fired power plant to be built in Sarawak.

Notes:

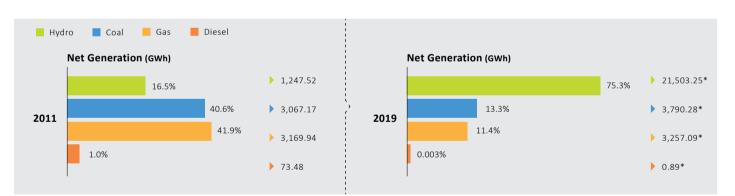
- This main grid CO, emission intensity data has been assured by a third party for Sustainability Report 2018.
- 2 This main grid CO, emission intensity data has been assured by a third party for Sustainability Report 2017.
- This main grid CO₂ emission intensity data has been assured by a third party for Sustainability Report 2016.
- This main grid CO₂ emission intensity data has been assured by a third party for Sustainability Report 2015.
- This main grid CO_2 emission intensity data has been assured by a third party for Sustainability Report 2014.
- https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement.
- This main grid CO, emission intensity has been assured by a third party. Read the Independent Assurance Report on pages 154 156.

With more efficient technology, the Company is taking a step further towards ensuring optimal utilisation of local coal resources. This new technology will reduce the emission of nitrogen dioxide and sulphur dioxide by more than 40%, improving the environmental footprint of the plant.

Sarawak Energy harnesses the State's indigenous coal resources to ensure security of supply in order to provide all Sarawakians with reliable and affordable power.



Following these efforts, from 2011 to 2019 Sarawak Energy's generation mix by category has evolved as follows:



Notes:

- This net energy generated data has been assured by a third party for Sustainability Report 2018.
- * This net energy generated data has been assured by a third party. Read the Independent Assurance Report on pages 154 156.

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Meeting Economic Needs

As the State's primary energy provider, Sarawak Energy recognises that its responsibility lies in supplying the power needed to enable economic activities.

Sarawak Energy, fully-owned by the State of Sarawak, is the largest hydropower developer and operator in Malaysia with a hydropower grid installed capacity of 3,452 MW followed by the Peninsular Malaysia grid with 2,536 MW and the Sabah grid with 73 MW. Its electricity sales alone account for 4% of the State's GDP and in terms of generation mix, Sarawak's grid hydropower generation constitutes about 75% or 21,503* GWh (2019) of the overall renewable energy generation in Malaysia.

The significant growth in electricity sales was supported by an increase in demand and renewable energy generated, which increased by 1,248 GWh (2011) to 21,503* GWh (2019). This relationship shows the capability of hydropower to meet the mass demand (baseload) of energy in Sarawak as compared with other renewable energy sources.

Responding to Climate Change in Sarawak

Climate change impacts are more severe in developing countries like Malaysia where it significantly affects sectors like agriculture, forestry and water resources. As the energy sector is identified as one of the major contributors to climate change, Malaysia has included hydropower and its reservoir as one of the mitigation and adaptation plans for climate change.

This is only possible through a resilient hydropower resource which can be achieved through leveraging on the real risks and opportunities from hydropower development and operation. To mobilise this, interdependent solutions and collaboration between various stakeholders must be approached holistically through a catchment management plan.

Resilient hydropower resources are achieved by safeguarding the upstream water catchment, thus ensuring good water quality and adequate water supply for the growing energy demand while continuing to deliver environmental services for downstream needs. This, in turn, increases the coping capacity of hydropower to mitigate and adapt to climate change.

Note:

This net energy generated data has been assured by a third party. Read the Independent Assurance Report on pages 154 - 156.

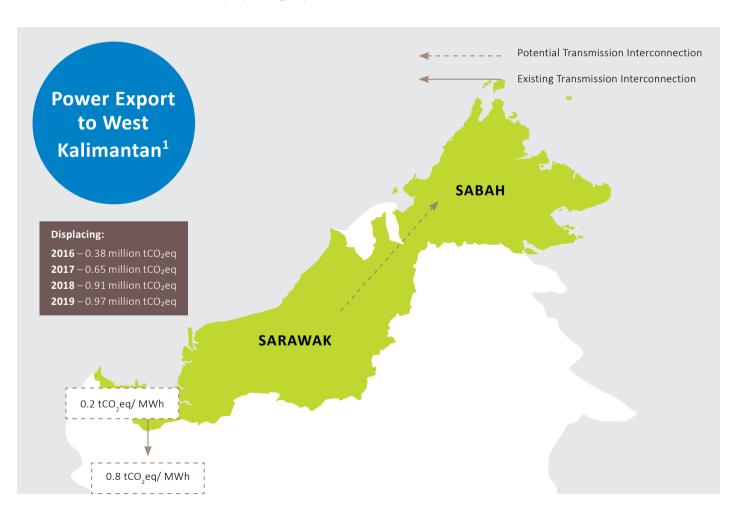
DECARBONISING BEYOND SARAWAK

With the Company targeting to become a regional powerhouse by providing renewable energy for the ASEAN region, Sarawak Energy has also set its sights on decarbonising its energy sources beyond Sarawak. From 2016 to 2019, the Company has exported 4,969 GWh of energy to West Kalimantan, Indonesia achieving displacement of 2.91 million tCO₂eq. This is equivalent to sequestration of 8,313 ha of tropical forest.

As discussed in the previous section, the Company has diversified its generation mix towards renewable energy since 2011, with hydropower now accounting for more than 70% of its net generation. Prior to Sarawak Energy's transformation, net generation from non-renewable sources accounted for 83.5% in year 2011.

Building on the Company's success in providing electrification to 96.9% of Sarawak as at 2019, Sarawak Energy has also expanded its presence to its regional neighbours. This has been achieved through the Sarawak-West Kalimantan Interconnection, a cross-border HVAC link connecting the Mambong 275kV substation in Sarawak to the Bengkayang 275kV substation in West Kalimantan. Since 2016, the Company has exported an average of 190MW to 200MW of power to Indonesia's national utility, Perusahaan Listrik Negara (PLN).

Together with neighbouring Sabah and Brunei, Sarawak Energy is also planning more interconnection projects with a vision of building the ASEAN Power Grid, which will also further the Company's energy exports.



Note:

 $West \ Kalimantan \ grid-using \ conservative \ estimation \ based \ on \ diesel \ emission \ factor \ of \ 0.8 \ tCO_2eq/MWh \ (IPCC \ 2016).$

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Advancing Climate Action 0 0 0 0 0 0 0 0 0 0 0 0

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Advancing Climate Action

EMBEDDING CLIMATE ACTION INTO THE BUSINESS'S STRATEGY

TASK FORCE FOR CLIMATE RELATED FINANCIAL DISCLOSURE (TCFD)



Upstream of Batang Ai catchment area.

As a responsible producer of energy focused on renewables, Sarawak Energy places emphasis on creating positive environmental outcomes not only for the good of the planet, but also for the sustainability and well-being of its business and all its stakeholders.

Internalise Climate Action into Business's Strategy & Governance

Transparency in Managing Climate Change Risks & Opportunities

For the first time in its sustainability reporting, Sarawak Energy has embarked into climate related financial disclosure for better access to data in managing climate-related risks as well as improving the

effectiveness in measuring and evaluating the climate-related risks pertaining to the Company's business and supply chain guided by the Task Force on Climate-related Financial Disclosures (TFCD).

Based on scientific projection, it is anticipated that there will be an increase of the physical impacts due to extreme climatic events in the future, as well as anticipated changes in regulatory and stakeholder expectations driving the transition towards a low carbon economic model. In addition, there is growing pressure from investors and financial institutions in understanding the way the Company manage the climate change risks and opportunities to enable informed decision-making among investors and other stakeholders.



- 1. Impact of climate change on power generation (Hydropower & Thermal)
- 2. Impact of climate change on power infrastructure (Transmission & Distribution)
- **3.** Impact of climate change on power delivery
- **4.** Financial impact of climate change

Opportunities

- Clear approach and planning toward GHG reduction, mitigation and adaptation
- Foster the adoption of low carbon technology (technical & policy)
- 3. Increase the adoption of disruptive technologies

- **4.** Improving the resilience of electricity infrastructure
- **5.** Increase the integration of other renewable energy sources with hydropower
- **6.** Increase other green generation
- 7. GHG mitigation and adaption beyond the power sector

 Table 1: High Level Strategic Risks and Opportunities arise from Climate Change.

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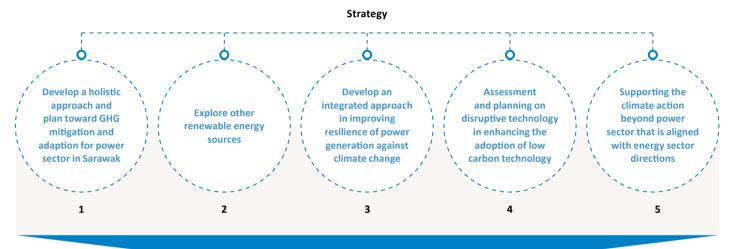
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CLIMATE ACTION STRATEGY

Climate action is about having a strategy, plan and process that aim to minimise greenhouse gas emission while accelerating economic development. Climate action strategy must address the risks associated with the physical impacts of climate change, including rising temperature, changes in weather pattern and increases in frequency and severity of extreme weather events. In addition, climate action must also address the opportunities in adaptation of climate change issues in long term perspectives.



Key Areas

- 1. GHG mitigation and adaptation for power sector in Sarawak
- 2. Integration of other renewable energy sources (Renewable and Variable Renewable Energy)
- 3. Small and large-scale green hydrogen production
- 4. Innovative energy extraction for future energy resources (Renewable & Alternative Energy)
- 5. State-wide Flood Modelling adaptation to climate change
- 6. River Basin Management Adaptation to Climate Change for Hydropower & Water Resource
- 7. Greenhouse gas (GHG) emissions' measurement from large-scale hydropower reservoirs
- 8. Improve the accuracy and method in GHG emissions' estimation
- 9. Integration of disruptive technology
- 10. Guidelines and policies on interconnection within the distributed resources into the local system
- 11. Establishing Energy Efficiency and Energy Management
- 12. Enhance energy sector's role in the adoption of Low carbon/Smart/Green City framework & Circular Economy
- 13. Conservation and Protection of Catchment/Operation Areas via Integrated Catchment Management and Carbon Sequestration

Table 2: High Level Strategy for Climate Action – GHG Mitigation & Adaptation for Power Sector in Sarawak.

CLIMATE SCENARIO ANALYSIS

In addition to the TCFD recommendations, Sarawak Energy has also started to conduct climate scenario analysis for Sarawak based on the World Bank's Climate Change Knowledge Portal. The Company has analysed four climate scenarios covering average daily temperatures and precipitation levels over four scenarios (low, medium-low, medium-high and high probabilities) and during four time periods (short, medium-short, medium-long, long).

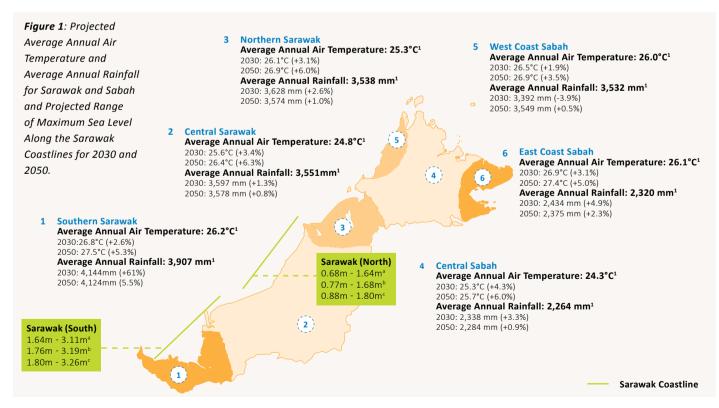
For the period up to the year 2030. Sarawak's average annual air temperature may increase, and is projected to have a significant increment of rainfall amount as well as maximum sea level rises¹ shown in **Table 3**. Dry spells are also projected to occur in Sarawak within year 2045 - 2055¹.

Parameter	Observed (1970 - 2000)	Projected for 2030	Projected for 2050
Average Annual Temperature	24.8 - 26.2 °C	25.6 - 26.8 °C	26.4 - 27.5 °C
		(0.6 to 0.8 °C increase)	(1.3 to 1.6 °C increase)
Average Annual Rainfall	3,551 - 3,907 mm	3,597 - 4,144 mm	3,574 - 4,124 mm
		(1 to 6 % increase)	(1 to 5 % increase)
Parameter	Observed Rate (1993 - 2010)	Projected for 2030	Projected for 2050
Sea Level Rise	3.82 - 5.11 mm/year	0.04 - 0.12 m	0.15 - 0.22 m

Table 3: Observed and Projected Climate Change and Sea Level Rise in Sarawak.

Note:

Source: Malaysia Third National Communication and Second Biennial Update Report to the UNFCCC.



Notes:

- ¹ Historical data (average annual air temperature & average annual rainfall: year 1970 2000).
- Current (year 2016) sea level, ^b year 2030 sea level, ^c year 2050 sea level.
 Source: Malaysia Third National Communication and Second Biennial Update Report to the UNFCCC.

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Perio	1986 - 2005			2020 -	- 2039			2040	- 2059			2060	2079			2080 -	2099	
Scena	rio	Historical	RCP 2.6	RCP 4.5	RCP 6.0	RCP 8.5												
Average Daily	Minimum	25.32	25.95	25.74	25.92	25.97	25.95	25.95	26.18	26.45	25.93	26.26	26.55	27.13	25.91	26.41	26.95	27.76
[°C]	Median	25.48	26.13	26.21	26.11	26.31	26.29	26.67	26.53	27.07	26.30	26.97	27.03	28.03	26.31	27.02	27.61	29.06
	Maximum	25.55	26.56	26.73	26.55	26.72	26.79	27.29	26.97	27.71	27.04	27.76	27.64	28.83	27.10	27.95	28.29	29.98
25-yr return	Minimum	148.20	150.48	153.03	146.99	150.05	152.26	154.22	148.20	154.83	151.69	158.43	153.30	151.30	151.04	156.61	148.68	148.38
level of 5-day precipitation	Median	253.01	262.23	267.59	281.87	251.53	284.11	249.02	295.46	243.69	267.03	260.07	311.60	255.15	256.58	272.11	320.49	279.99
[mm]	Maximum	574.62	561.20	602.69	541.35	609.76	551.78	604.01	579.26	694.44	571.82	651.63	645.51	717.07	575.02	646.80	631.05	866.56
10-yr return	Minimum	131.25	133.21	135.39	130.10	132.76	134.78	136.49	131.13	137.07	134.28	140.11	135.64	133.97	133.68	138.57	131.66	131.25
level of 5-day precipitation	Median	206.36	213.87	218.08	233.44	207.95	232.34	213.76	249.21	207.32	217.53	217.86	255.43	219.75	214.14	224.84	263.53	236.51
[mm]	Maximum	429.32	445.07	447.07	433.59	456.49	437.62	477.14	455.40	533.55	456.44	514.06	496.09	542.53	451.60	507.33	488.84	644.32

Table 4: Sarawak Climate Scenario Based on World Bank Climate Change Knowledge Portal (WBCCKP).

Using this climate scenario analysis, Sarawak Energy has been able to identify transition physical risks and opportunities related to the Company's assets and services in Generation, Transmission, Distribution & Retail over the short, medium and medium-to-long terms.

Transitio	n – Risks &	Opportunities					
Time	Type of	Strategy	y Response				
Scale	Risks	Risks & Opportunities	Impacts on business strategy and financial planning				
Short to Medium term (1 - 5 years)	Transition Risks	 Corporate Enhance carbon inventory (Scope 1, 2, 3) ¹ for better access to relevant data in managing climate-related risks for effectively measuring and evaluating the climate-related risks Quantifying the climate change impact risks Enhance carbon emission reporting, structure and governance of climate related risks and climate related financial disclosure Renewable energy incentives Access to new financing platforms Regulatory and policy frameworks to drive climate related initiatives Stringent legal/market requirements on climate change (cost of carbon) Cost to transition to low carbon technology Generation Hydropower & Thermal Generation (Development & Operation) Embedding climate change risks in hydropower & development at design stage Understanding and quantifying the risks of climate change Clear & practical approach and planning towards mitigation and adaptation to climate risks Technology advancement – efficiency improvement 	 Better assessment, reporting and governance of climate change risks Detached from non-renewable generation sources Integrated approach in improving the resilience of electricity assets and infrastructure against climate change risks (including upstream resources) Holistic and consolidated approach in investment in energy efficiency improvement and adoption of low-carbon technology that aligned with longer-term emissions reduction initiatives Resilience of electricity delivery system via efficient, smart, & flexible system infrastructure Advancement in development of flexible system infrastructure as platform in integrating other new renewable energy capacity Advocating best practices in managing climate risksahead of the regulatory frameworks Meeting the growing expectations of the stakeholders (e.g. shareholders, financial institutions, customers and general public) 				

Transition – Risks & Opportunities										
Time T	Type of	Strategy Response								
Scale	Risks	Risks & Opportunities	Impacts on business strategy and financial planning							
Short to Medium term (1 - 5 years)	Transition Risks	Other Renewable Energy Sources 13. Integration of other renewable energy sources with hydropower generation 14. Aligned with the global, national and state goals and targets in GHG emission reduction Transmission & Distribution 15. Assessment of climate change risks in hydropower & development at design stage 16. Climate change impacts on electricity infrastructures and delivery								

Table 5: Climate Related Transition Risks & Opportunities and Impacts on Business strategy and Financial Planning.

Note:¹ Guided by Task Force on Climate Related for Financial Disclosure (TCFD) and Science Based Targets (SBTi) Standards & Requirements.

Time Type of	Strategy	Strategy Response							
Scale Risks	Risks & Opportunities	Planning & Response							
Long term (> 5 years) Physical Risks	Corporate 1. Stringent legal/market requirements on climate change (cost of carbon) Generation 1. Extreme weather events impact generation assets 2. Extreme weather events impact hydropower generation 3. Rising sea levels impact the power assets and infrastructure 4. Rising of mean temperature impact the plant efficiency & reliability Transmission & Distribution 1. Extreme weather events impact electricity delivery system reliability and efficiency 2. Rising of mean temperature impact the power delivery efficiency Customer services 1. Shift in consumer preferences	 Improving the resilience of electricity assets, infrastructure and upstream resources Increase resilience of electricity delivery system toward climate change Integrating other new renewable energy capacity Detailed climate modelling studies to assess vulnerability for specific resilience-improvement plan Enhance the demand side management to better understand the changes in the demand pattern Established a clear linkage between financial planning and carbon intensity Establishment of solid governance of climate change issues Climate change as one of the core elements in corporate planning 							

Table 6: Climate Related Transition Risks & Opportunities and Strategic Response.

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Non-renewable Energy



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Batang Ai HEP.

CARBON INVENTORY

Metrics and targets – Forum members have been disclosing operational GHG emissions metrics (both absolute and intensity) for years and are increasingly disclosing climate-related financial metrics, as recommended by the TCFD.

Scope 1 Emission

Scope 1 Emission	Unit	2015	2016	2017	2018	2019
Main Grid	tCO₂eq	4,775,325.45	5,203,104.32	5,325,836.68	5,151,395.75	6,396,443.52
Northern Grid	tCO ₂ eq	96,174.21	103,730.92	98,042.77	102,837.43	109,853.90
Stand-alone Grid	tCO ₂ eq	12,022.59	11,285.76	11,033.58	13,812.44	15,198.07
Company-owned Vehicle	tCO ₂ eq	2,612.97	4,114.95	4,947.31	5,189.96	5,353.45
TOTAL	tCO ₂ eq	4,886,135.22	5,322,235.95	5,439,860.34	5,273,235.58	6,526,571.60

nput:		
Fuel Consumption	Unit	201
Coal Consumption	Tonne	3,064,825.6
Natural Gas Consumption	mmbtu	36,756,369.7
Diesel Consumption	Litre	53,544,416.
Fuel Consumption Intensity	Unit	20:
Coal Consumption Intensity	MJ/MWh	1,707.
Natural Gas Consumption Intensity	MJ/MWh	1,317.
Diesel Consumption Intensity	MJ/MWh	67.
Total Fuel Consumption Intensity	MJ/MWh	3,092.
Water Withdrawal Intensity by Source	Unit	20
Municipal Water Withdrawal Intensity	m³/MWh	0.
Sea Water or Other Natural Water Source Withdrawal Intensity	m³/MWh	33.
Water Regulated Intensity for Hydropower	Unit	20
Water Volume Regulated by Hydropower Plants for Electricity Generation	m³/MWh	2,271.
Output: Scope 1 Emission		
Scope of Emission	Unit	20
Scope 1 Emission	tCO ₂ eq	6,526,571.
Scope 1 Emission Intensity		
Scope of Emission	Unit	20
Scope 1 Emission Intensity	tCO ₂ eq/MWh	0.2
Scheduled Waste Generation Intensity		
Type of Waste	Unit	20
Fly Ash	MT/GWh	2.
Bottom Ash	MT/GWh	2.
	MT/GWh	0.
Others (Used Oil, Contaminated Items, E-Waste, Gas Condensate, Contaminated Soil and Chemicals) Total Scheduled Waste Generation Intensity	WII/GWII	0.

7,048* GWh **25**% Renewable Energy 21,503* GWh

2019 Generation Mix

Note:

* These fuel consumption, scheduled waste generation intensity and net energy generated data have been assured by a third party. Read the Independent Assurance Report on pages 154 - 156.

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Catalysing Growth

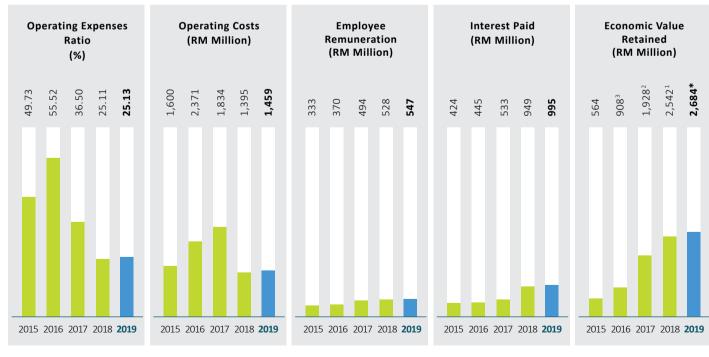
ANCHORED ON GROWTH

THE SUSTAINABILITY OF SARAWAK ENERGY'S BUSINESS IS ANCHORED ON ITS ECONOMIC PERFORMANCE, WHICH ENABLES THE COMPANY TO PURSUE LONG-TERM VALUE CREATION ACROSS THE SUPPLY CHAIN.

Sarawak Energy's RM15 billion Sukuk Musyarakah Programme had been upgraded to AAA/Stable in 2019 by RAM Rating Services Berhad (RAM), affirming the Company's sustained credit metrics improvement. RAM had also upgraded both the ratings for Mukah Power Generation Sdn. Bhd.'s RM665 million Senior Sukuk Mudharabah Programme and Sarawak Power Generation Sdn. Bhd.'s RM215 million Serial Sukuk Musharakah to AA1(s)/Stable and reaffirmed the AAA/Stable rating for Bakun Hydro Power Generation Sdn. Bhd.'s RM5.54 billion Sukuk Murabahah Programme.



Bakun HEP's reservoir.



Notes:

- This economic value retained data has been assured by a third party for Sustainability Report 2018.
- This economic value retained data has been assured by a third party for Sustainability Report 2017.
- This economic value retained data has been assured by a third party for Sustainability Report 2016.
- * This economic value retained data has been assured by a third party. Read the Independent Assurance Report on pages 154 156.

201-1 CATALYSING GROWTH **Operating Expenses Ratio Economic Value Distributed** Renewable Energy Generated 25.13 21,503 RM3,123 This net energy generated data has been assured by a third party. Read the Independent Assurance Report on pages 154 - 156.

Night view of Kuching City Waterfront with Sarawak State Legislative Assembly Building.

201-1

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During the year, RM3.12 billion was distributed through operating costs, employee remuneration, interest paid and taxes. This resulted in RM2.68* billion in economic value retained versus RM2.54¹ billion in 2018.

	2015	2016	2017	2018	2019
ECONOMIC VALUE DISTRIBUTED					
Operating costs	1,600.40	2,370.70	1,834.20	1,394.50	1,459.20
Employee remuneration	332.80	369.90	494.40	527.80	547.00
Payments to capital providers					
Dividends paid	142.70	-	-	-	-
Interest paid	424.00	445.30	532.50	949.30	995.10
Payments to government					
Income taxes paid (net of refunds)	154.00	175.80	236.10	140.70	121.80
ECONOMIC VALUE RETAINED	563.90	908.20 ³	1,928.20 ² (restated)	2,542.30 ¹	2,683.70*



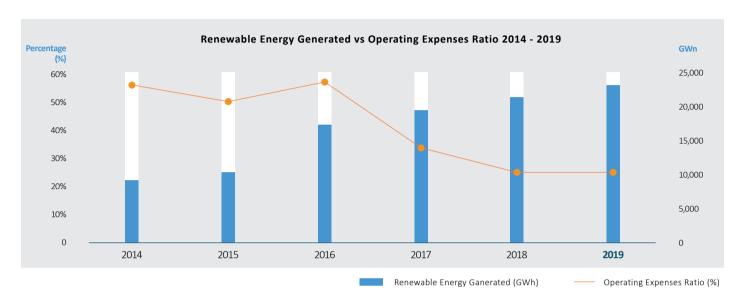


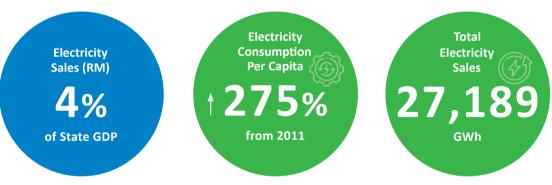


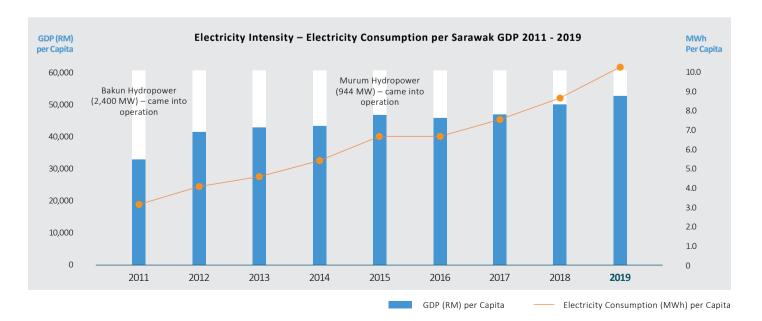




- This economic value retained data has been assured by a third party for Sustainability Report 2018.
- This economic value retained data has been assured by a third party for Sustainability Report 2017.
- ³ This economic value retained data has been assured by a third party for Sustainability Report 2016.
- * This economic value retained data has been assured by a third party. Read the Independent Assurance Report on pages 154 156.







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Sarawak continued to register robust growth of 2% in 2019 from previous year, with the State's GDP per capita growth rising in tandem with electricity consumption per capita. Renewable energy, driven by hydropower, remains an important enabler of economic growth. From 2011 to 2019, renewable energy grew at an average of 49% per annum.

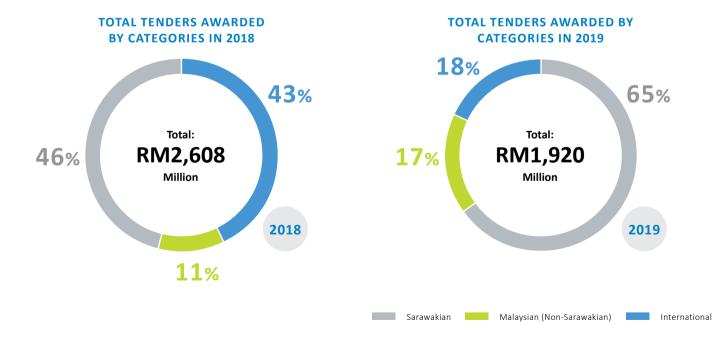
- 1. State of Sarawak GDP (2015 2019) at current price.
- 2. Department of Statistic Malaysia GDP (2015 2019).
- 3. Sarawak Energy Electricity Consumption (MWh).

CONTRIBUTING TO LOCAL BUSINESS

As one of Sarawak's leading corporations, Sarawak Energy values its role in supporting the growth of the State's local businesses. The proportion of the Company's tenders awarded to Sarawakian companies as well as other Malaysian companies continued to grow in 2019, reaching RM1,238.70* million and RM328.82 million, respectively, against RM1,189.98¹ million and RM292.28 million, respectively in 2018.

2018 VS 2019

Status	2018	2019
Sarawakian (Bumi & Non-Bumi)	1,189,983,943.53 ¹	1,238,701,902.57*
Malaysian (Non-Sarawakian)	292,284,978	328,819,029
International	1,126,203,298	352,144,759
OVERALL TOTAL	2,608,472,220	1,919,665,691



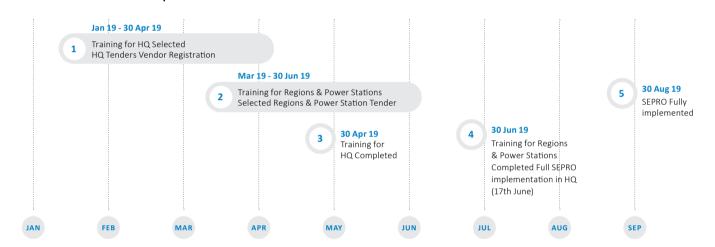
- This total value of tenders awarded to local Sarawakian companies data have been assured by a third party for Sustainability Report 2018.
- * This total value of tenders awarded to local Sarawakian companies data have been assured by a third party. Read the Independent Assurance Report on pages 154 156.

The Company also continued to support capacity-building for its contractors through engagement programmes including the Contractor's Briefing on Business Opportunities held throughout the State, which saw the participation of over 500 contractors during the year. Sarawak Energy also hosted the vegetation clearing gang leader training programme in the Western and Central regions as well as a briefing on SARES projects for the Bumiputera Business Chambers.

With the reduction of the performance bond and retention sums from 10% to 5%, the maximum exposure for both have decreased to 10% from 20%.

UPLIFT GOOD GOVERNANCE & TRANSPARENCY THROUGH DIGITALISATION – PROCUREMENT PROCESS

SEPRO Phase 1 Roll Out Roadmap



MEETING SARAWAK'S ECONOMIC DEVELOPMENT NEEDS

Sarawak's energy demand continued to grow in line with its economic needs in 2019, with Sarawak Energy recording 27,189 GWh in electricity sales for the year from 25,825 GWh in 2018. The Company also committed to delivering a total demand of 3,850 MW which include both organic and bulk customers during the year.

17,937 GWh

1,683 GWh

Bulk Customers Export Customers

The Company's total electricity sales by customer category for the year are as follows:

Electricity Sales (Gwh)

 By customer type 	2011	2012	2013	2014	2015	2016	2017	2018	2019
Domestic	1,424	1,584	1,722	1,817	1,940	2,102	2,149	2,368	2,401
Commercial	1,846	2,026	2,169	2,291	2,390	2,512	2,575	2,857	2,767
Industrial	1,779	1,743	1,694	1,820	1,867	1,871	2,027	2,367	2,297
Public Lighting	67	73	72	78	89	77	88	110	104
Bulk Customers	1,521	2,169	4,763	7,434	9,619	14,065	16,836	18,123	19,620
Total Electricity Sales	6,637	7,595	10,420	13,440	15,905	20,627	23,675	25,825	27,189

Sustainability Performance oooooooooooooo

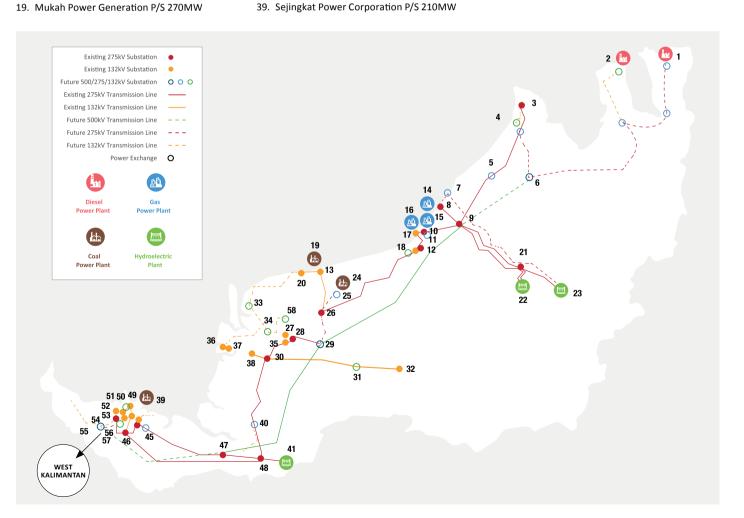
EU1, EU10

SARAWAK ENERGY GRID ELECTRICITY SYSTEM

- 1. Lawas 275/33kV S/S
- 2. Limbang Town 132/33kV S/S
- 3. Tudan 275/132/33kV S/S
- 4. Eastwood 132/33kV S/S
- 5. Niah 275/33kV S/S
- 6. Bunut 500/275/33kV S/S
- 7. Samalaju B 275/132/33kV S/S
- 8. Samalaju 275/132/33kV S/S 9. Similaiau 500/275/33kV S/S
- 10. Bintulu 275/132kV S/S
- 11. Bintulu B 275/132kV S/S
- 12. Kemena 275/33kV S/S
- 13. Matadeng 132/33kV S/S
- 14. New Tanjung Kidurong CCGT P/S 400MW (Future)
- 15. Tanjung Kidurong CCGT P/S 400MW (Future)
- 16. Sarawak Power Generation P/S 317MW
- 17. Tanjung Kidurong 132/33/11kV S/S
- 18. Sibiyu 132/33/11kV S/S

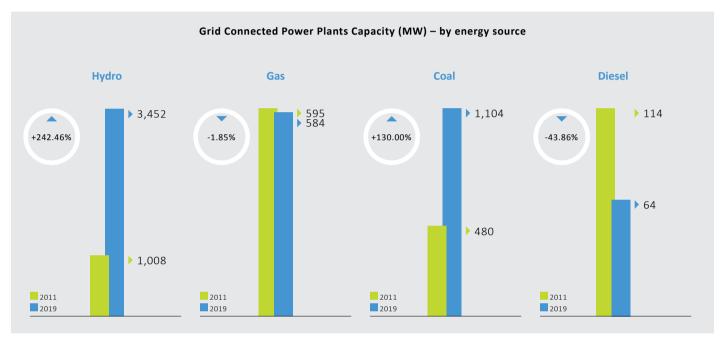
- 20. Petian 132/33kV S/S
- 21. Murum Junction 275/33kV S/S
- 22. Bakun HEP 2,400MW
- 23. Murum HEP 944MW
- 24. Balingian P/S 622MW (FUTURE)
- 25. Balingian 275/33kV
- 26. Selangau 275/132/33kV S/S
- 27. Deshon 132/33kV S/S
- 28. Oya 275/132/33/11kV S/S
- 29. Mapai 500/275/33kV S/S 30. Kemantan 275/132/33/11kV S/S
- 31. Song 132/33/11kV S/S
- 32. Kapit 132/33/11kV S/S
- 33. Daro 132/33kV S/S
- 34. Sg Maaw 132/33kV S/S
- 35. Salim 132/33kV S/S
- 36. Tanjung Manis B 132/33/11kV S/S
- 37. Tanjung Manis 132/33/11kV S/S
- 38. Sarikei 132/33/11kV S/S

- 40. Serudit 275/132/33kV S/S
- 41. Batang Ai HEP 108MW 42. Muara Tabuan 132/33kV S/S
- 43. Samajaya 132/33kV S/S 44. Etinggan 275/132/33kV S/S
- 45. Etinggan B 275/132/33kV S/S
- 46. Mambong 275/132/33kV S/S
- 47. Lachau 275/33kV S/S
- 48. Engkilili 275/33/11KV S/S 49. Sejingkat 132/33kV S/S
- 50. Astana 132/33kV S/S
- 51. Semariang 132kV S/S
- 52. Mendu 132/33kV S/S
- 53. Matang 275/132/33kV S/S
- 54. Transmitting 132/33kV S/S
- 55. Tondong 500/275kV S/S
- 56. Semenggo 132/33kV S/S
- 57. Stakan 132/33kV S/S
- 58. Sungai Merah 132/33kV S/S

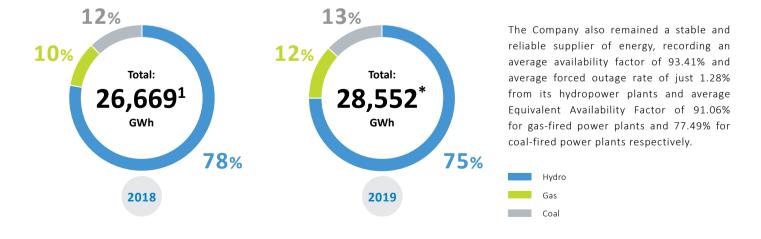


The capacity of the Company's grid connected power plants also continued to support customers' needs, with the total installed capacity of 5,204 MW in 2019, higher than 4,591 MW in 2018. Capacity of the Company's hydropower plants remained the highest at 3,452 MW, in line with its contribution to the grid energy mix of 75%, accounting for 21,503* GWh in net generation.

Grid Connected Power Plants Capacity (MW) - by energy source



Grid Energy Mix (GWh)



- This net energy generated data has been assured by a third party for Sustainability Report 2018.
- * This net energy generated data has been assured by a third party. Read the Independent Assurance Report on pages 154 156.

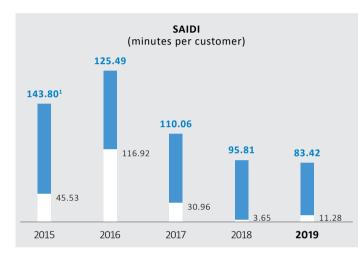
EU28. EU29

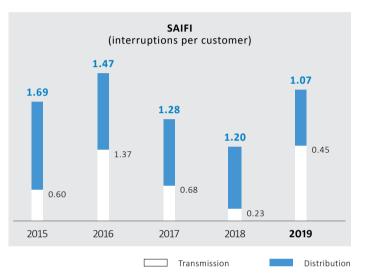
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103-2, EU12, EU27

RELIABLE POWER DELIVERY

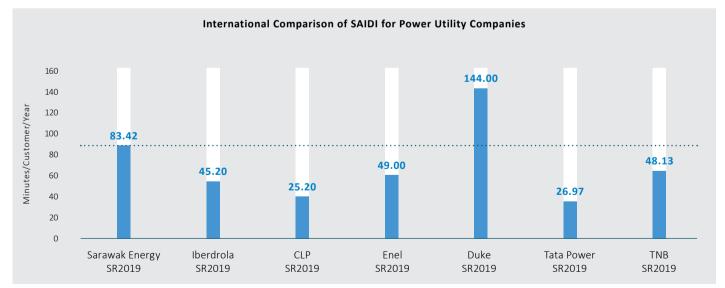
In a further measure of the Company's reliability, its System Average Interruption Duration Index (SAIDI) and System Average Interruption Frequency Index (SAIFI), which measures outage duration and supply interruptions, respectively, improving significantly through the years 2011 to 2019. In 2019, SAIDI was 83 minutes per customer and SAIFI stood at 1.07 interruptions per customer.





Notes:

- 1 This System Average Interruption Duration Index (SAIDI) data has been assured by a third party for Sustainability Report 2015.
- ** Marudi Junction MRJ Murum MUR Line2 tripped at both ends, causing Murum PS isolated on 15/03/2019. Broken conductor, joint and spacers at MRJ-MUR Line 2 Tower No. 88 Tower No. 89.



Noto

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Transmission and Distribution losses remained stable during the year as the Company continued to implement system efficiency improvement initiatives, including the use of amorphous transformers, re-instating capacitor banks upgrading and replacing transmission lines and transformers as well as introducing new injection points.

Additionally, the Company has undertaken electricity theft and executive action operations, customer profiling, public awareness programmes, in-house cleansing and enhancement of meters with tampering alarms to increase on-site detection of fraud in efforts to minimise non-technical losses.

Total Number of Transmission Tripping and Tripping Intensity at Transmission Level

	Year	2015	2016	2017	2018	2019
	Substation	44	56	21	22	29
Number of Transmission Tripping	Transmission	38	20	56	58	69
	Total	82	76	77	80	98
Transmission Tripping Intensity (Trip	0.049	0.044	0.035	0.036	0.041	



The Company recorded a significant reduction in account disconnections to 18,308 in 2019 for the Kuching, Sibu, Bintulu, Miri, Limbang & Lawas areas valued at RM88.38 million, from 23,042 accounts valued at RM85.59 million in 2018. 14,747 out of 18,308 disconnected accounts were reconnected following the receipt of RM54.29 million in payments, of which electricity was restored within 24 hours of receiving payment for 14,747 accounts.

BUSINESS CONTINUITY MANAGEMENT

Sarawak Energy's Business Continuity Management (BCM) Framework has been established since 2016 to build organisational resilience and provide an effective response to safeguard the interests of key stakeholders, the Company's reputation and value-creating activities and to collaborate with Government agencies during crisis or disasters. The framework is aligned to ISO 22301:2012, ISO22313:2012 and relevant Malaysian and international BCM standards and guidelines.

BCM POLICY STATEMENT

The Company's BCM policy statement highlights that the Company will maintain and ensure the continuity of its services to minimise the impact to its customers in the event of a service disruption.

To achieve this, the Company will:

- Maintain a BCM Programme which ensures that Sarawak Energy has the ability to respond and recover appropriately in line with its vision and mission.
- ii. Implement strategies for the resumption of business functions in line with recovery objectives.
- iii. Ensure appropriate business continuity plans are in place and procedures are established to manage a disruptive incident and for Sarawak Energy to continue its business functions based on identified recovery priorities.
- iv. Exercise and test Sarawak Energy's BCM Programme at defined intervals.
- v. Monitor and review Sarawak Energy's BCM Programme at planned intervals to ensure its adequacy and effectiveness.
- vi. Ensure BCM is embedded via effective communication and sustainable training activities.
- vii. Remain aligned with relevant standards, best practices and policies in BCM to continuously improve the Programme.

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— Sustainability Performance ○ ○ ○ ○ ○ ○ ○ ○ ● ○ ○

MILESTONES IN 2019

Some of the major BCM activities carried out in 2019 were as follows:



Date: 11th July 2019

Event: Crisis Simulation Exercise for Mukah Power Generation

Venue: Mukah Power Generation



Date: 1st Oct 2019

Event: Crisis Simulation Exercise for Bakun Hydroelectric Plant

Venue: Bakun HEP

Two BCM Crisis Simulation Exercises were also conducted in 2019. These included a key Crisis Simulation Exercise conducted in Bakun HEP in collaboration with several key Government Agencies such as MKN (Majlis Keselamatan Negara – National Security Council), PDRM (Polis Di-Raja Malaysia – Royal Malaysian Police), BOMBA, APM (Angkatan Pertahanan Malaysia – Armed Forces) and the Ministry of Health.

The objectives of the Simulation Exercise were:

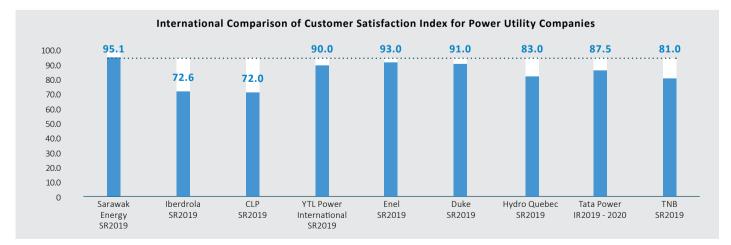
- a) To exercise Bakun HEP's Crisis Management Plan (CMP) and Business Continuity Plan (BCP), especially on the escalation and code declaration involving government agencies during crisis or disasters such as terrorist attack, hostage and bomb threat situation.
- b) To provide greater awareness on Sarawak Energy's BCM programme.
- To identify opportunities for improvements, if any, to the BCM documentation.

IMPROVING CUSTOMER EXPERIENCES

Year	2014	2015	2016	2017	2018	2019	
Customer Satisfaction Index	75.23%	77.29%	77.42%	80.57%	94.72%	95.08%	

The Company continued to record an improvement in customer experiences, as measured by an increase in its Customer Satisfaction Index to 95.08% in 2019 from 94.72% in 2018. In addition to the Company's efforts to excel in its overall dealings with customers, during the year it also undertook specific initiatives to improve customer outcomes. These included opening new customer service customers at Kuching (Saradise), Bintulu (Town Square) and Miri (Permyjaya) featuring a modern and fresh design concept. The SEB cares mobile app has also registered 98,974 subscribers as at the end of 2019, while the corporate internet banking service was introduced as an additional mode of bill payment for corporate customers.

Furthermore, the Company launched its smart metering pilot programme for 6,000 customers in Gita, Tabuan Jaya/Tabuan Laru/Kempas. It also held the Mini Karnival Sarawak Energy in Gita and the SEB App-reciation Day in conjunction with the introduction of smart meters to inform customers on its new projects, including smart metering and its advantages.



Note:

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DISASTER/EMERGENCY PLANNING AND RESPONSE

- Sarawak Energy has established close rapport with the Disaster Management Committee's Secretariat which is Angkatan Pertahanan Awam Malaysia (APM). The Company has conducted discussions on Sarawak Energy Emergency Preparedness to ensure that the Company is in line with the national standard i.e. Majlis Keselamatan Negara 20 (Natural Disaster) and Sendai Framework for Disaster Reduction (related to SDG 1, 11 and 13), in managing emergencies.
- The Emergency Preparedness is also in line with the Malaysian Dam Safety Management Guidelines (MyDAMS) published by Department of Irrigation and Drainage (DID) and ICOLD.
- Annual programme:
- Dam Safety Emergency Plan (DSEP)
 Drill Exercise for respective HEPs.
- New programme/initiatives:
 - March 2019: First outreach programme for community leaders of Lubok Antu and Engkilili on Dam Safety Awareness and Flood Warning System.
 - March 2019: The Early Warning System successfully tested and well-received by the public.
 - June 2019: First outreach programme for headmasters and teachers of Lubok Antu and Engkilili on Dam Safety Awareness and Flood Warning System.
 - August 2019: Bakun Spillway Gates Testing.
- Oct 2019: External Emergency Response Plan (EERP) for Batang Ai HEP: Documentation Workshop with the Kuching and Sri Aman's Disaster Management Agencies.
- Dec 2019: Community Engagement with Bui Panjai, Bui Ran and Skarok community.

DAM SAFETY EMERGENCY PLAN (DSEP) DRILL AT MURUM HEP

From 11 to 12 of November 2019, Civil Asset Infrastructure (CAI) hosted a DSEP drill at Murum HEP. The annual event aims to ensure that station personnel are fully cognisant of the procedures and actions required during an emergency condition. About 120 Murum HEP staff and contractors participated in the event.



O DSEP Drill at Murum HEP.

DAM SAFETY MANAGEMENT

- The overall Dam Safety Management i.e. Dam Surveillance, Dam Safety Review, Emergency Preparedness is in line with the Malaysian Dam Safety Management Guidelines (MyDAMS) published by Department of Irrigation and Drainage (DID) and also ICOLD.
- Sarawak Energy is now an official active member of the Malaysian National Committee on Large Dams (MYCOLD). MYCOLD was re-established in 2019 and is the Malaysia chapter of International Commission on Large Dams (ICOLD).
- Sarawak Energy also signed a Memorandum of Understanding (MoU) with Ontario Power Generation (OPG) to collaborate on Dam Safety Management.
- Sarawak Energy also works closely with Tenaga Nasional Berhad (TNB), especially with TNB
 Generation and TNB Research. The friendship has enabled the company to benchmark each
 other's practices, besides sharing knowledge and experiences in Dam Safety area.
- In 2019, Sarawak Energy's Batang Ai HEP was evaluated by the Flying Squad (a team consisting various agencies) and the findings were presented during meeting for Majlis Air Negara. It was found that Batang AI HEP is still performing well.

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Sustainability Performance oooooooooooooo

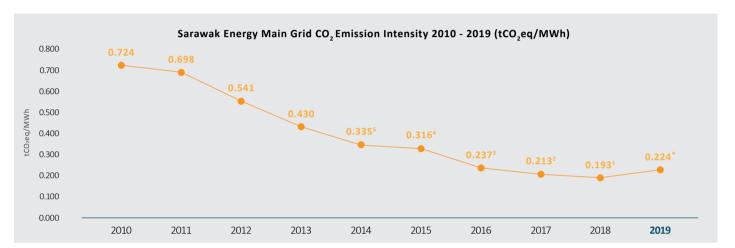
103-1, 103-3, 305-4



O Pristine forest at upper Baleh.

The Company's efforts in climate action begin internally through the responsible use of its resources. The data on Sarawak Energy's emissions, fuel consumption, water withdrawal and scheduled waste generation intensity for 2019 are reported in the following graphs.

For the year in review, the Company recorded an increase in emissions due to higher energy demand as well as the commencement of operations of the Balingian Coal-Fired Power Plant. The Company expects its CO, emission intensity trend to slightly increase until 2025 before it reduces again when the Baleh HEP starts to operate in 2026.



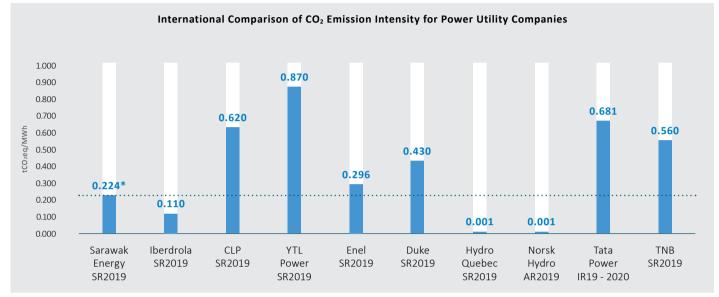


- This main grid CO₂ emission intensity data has been assured by a third party for Sustainability Report 2018.
- This main grid CO₂ emission intensity data has been assured by a third party for Sustainability Report 2017.
- This main grid CO, emission intensity data has been assured by a third party for Sustainability Report 2016.
- This main grid CO₂ emission intensity data has been assured by a third party for Sustainability Report 2015.
- This main grid CO, emission intensity data has been assured by a third party for Sustainability Report 2014.

 $These \ main \ grid\ CO_2\ emission\ intensity\ and\ northern\ grid\ CO_2\ emission\ intensity\ data\ have\ been\ assured\ by\ a\ third\ party.\ Read\ the\ Independent\ Assurance\ Report\ on\ pages\ 154-156.$

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Notes:

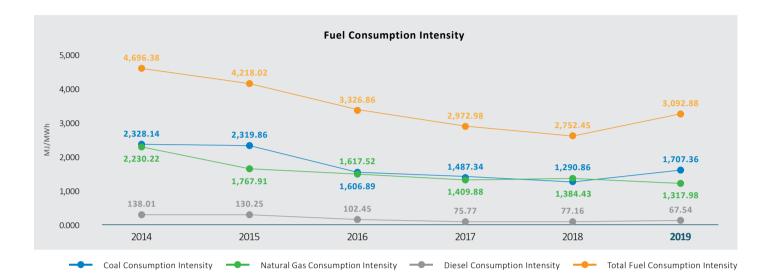
¹ Published Annual, Sustainability & Integrated Report 2019.

SCOPE 1 EMISSION

Scope 1 Emission	Unit	2014	2015	2016	2017	2018	2019
Main Grid	tCO₂eq	4,852,101.90	4,775,325.45	5,203,104.32	5,325,836.68	5,151,395.75	6,396,443.52
Northern Grid	tCO₂eq	92,097.60	96,174.21	103,730.92	98,042.77	102,837.43	109,853.90
Stand-alone Grid	tCO₂eq	17,791.24	12,022.59	11,285.76	11,033.58	13,812.44	15,198.07
Company-owned Vehicle	tCO₂eq	2,880.87	2,612.97	4,114.95	4,947.31	5,189.96	5,353.45
SUM	tCO₂eq	4,964,871.61	4,886,135.22	5,322,235.95	5,439,860.34	5,273,235.58	6,526,848.94
Scope 1 Emission Intensity	Unit	2014	2015	2016	2017	2018	2019
Normalised by Gross Energy	tCO₂eq/MWh	0.330	0.310	0.236	0.212	0.193	0.222
Normalised by Net Energy	tCO₂eq/MWh	0.339	0.320	0.241	0.216	0.196	0.227

Note:

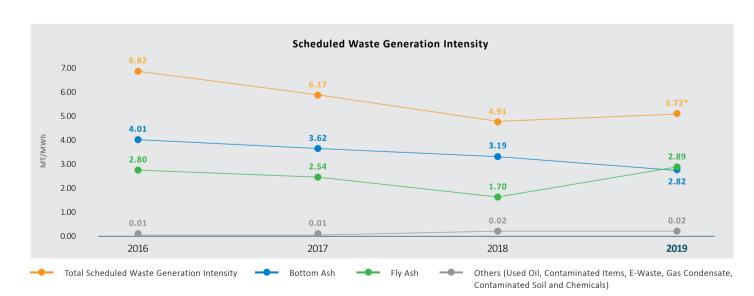
Scope 1 Emission Intensity normalized by gross and net energy include Main, Northern and Stand-alone Grid and company-owned vehicle.



SCHEDULED WASTE MANAGEMENT

Scheduled waste is defined as any waste listed in the First Schedule of the Environmental Quality (Scheduled Wastes) Regulations 2005.

It is an offence under the Environmental Quality (Scheduled Wastes) Regulations 2005 for a waste generator to store scheduled waste for more than 180 days, or exceeding 20 tonnes, whichever comes first. Sarawak Energy assists all its stations throughout the State with scheduled waste management, especially on monthly inventory reporting and waste disposal. Since July 2015, a scheduled waste contractor for disposal has been appointed for each station.



This main grid CO2 emission intensity data has been assured by a third party. Read the Independent Assurance Report on pages 154 - 156.

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TOTAL WATER WITHDRAWAL BY SOURCE, 2014 - 2019

Total Water Withdrawal by Source 2014 - 2019

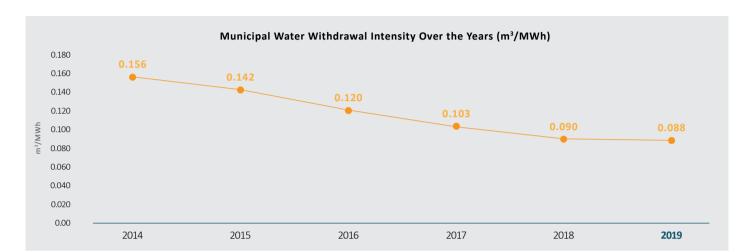
			Total 2017	Total 2016	Total 2015	Total 2014				
meter cubic (m³)										
Municipal Sea Water or	2,204,029.00* 724,178,991.74*	2,186,120.00 ¹ 739,325,453.18 ¹	2,457,930.00 ² 820,813,896.00 ²	2,525,529.00 812,784,320.00	2,101,160.00 870,393,600.00	2,191,414.00 847,968,000.00				
vater source	252 242 22*	222 225 221	457 777 001	100 110 00						
Municipal Sea Water or	353,319.00° 241,935,030.72*	229,836.00 ¹ 227,489,565.60 ¹	15/,///.00 ² 212,876,380.80 ²	132,442.00 249,789,230.68	99,074.00	122,359.08 172,075,998.60				
other natural water source										
Municipal	6,896.13*	13,952.50 ¹	21,192.00 ²	22,402.14	9,196.72	11,961.09				
other natural	-	69,650.00 ¹	1,171,360.00 ²	2,143,090.00	1,590,050.00	1,286,420.00				
	ea Water or ther natural vater source Municipal ea Water or ther natural vater source Municipal ea Water or	ther natural vater source Municipal 353,319.00* ea Water or 241,935,030.72* ther natural vater source Municipal 6,896.13* ea Water or ther natural	rea Water or ther natural vater source Municipal 353,319.00* 229,836.00¹ 241,935,030.72* 227,489,565.60¹ 241,935,030.72* 227,489,565.60¹ 241,935,030.72* 327,489,565.60¹ 327,489,565.60² 327,	rea Water or ther natural vater source Municipal 353,319.00* 229,836.00¹ 157,777.00² 241,935,030.72* 227,489,565.60¹ 212,876,380.80² 341,935,030.72* 227,489,565.60¹ 212,876,380.80² 341,935,030.72* 227,489,565.60¹ 212,876,380.80² 341,935,030.72* 227,489,565.60¹ 212,876,380.80² 341,935,030.72* 227,489,565.60¹ 212,876,380.80² 341,935,030.72* 241,935,	ea Water or ther natural vater source Municipal 353,319.00* 229,836.00¹ 157,777.00² 132,442.00 ea Water or 241,935,030.72* 227,489,565.60¹ 212,876,380.80² 249,789,230.68 ther natural vater source Municipal 6,896.13* 13,952.50¹ 21,192.00² 22,402.14 ea Water or 69,650.00¹ 1,171,360.00² 2,143,090.00 ther natural	ea Water or ther natural vater source Municipal 353,319.00* 229,836.00¹ 157,777.00² 132,442.00 99,074.00 ea Water or 241,935,030.72* 227,489,565.60¹ 212,876,380.80² 249,789,230.68 180,623,764.80 ther natural vater source Municipal 6,896.13* 13,952.50¹ 21,192.00² 22,402.14 9,196.72 ea Water or 69,650.00¹ 1,171,360.00² 2,143,090.00 1,590,050.00 ther natural				

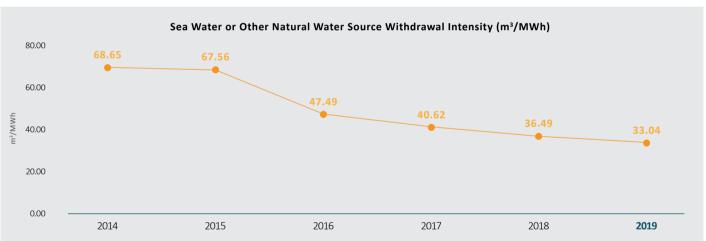
- This total water withdrawn by source data has been assured by a third party for Sustainability Report 2018.
- This total water withdrawn by source data has been assured by a third party for Sustainability Report 2017.
- These total water withdrawn by source and scheduled waste generation intensity data have been assured by a third party. Read the Independent Assurance Report on pages 154 - 156.

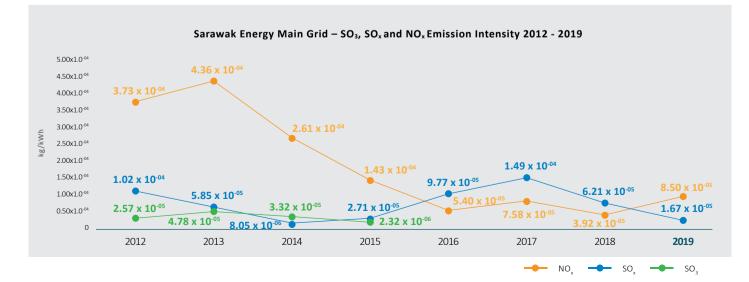
Water Withdrawal Intensity by Source

(Thermal Plants MWh)	Unit	2014	2015	2016	2017	2018	2019
Municipal Water Withdrawal Intensity	m³/MWh	0.156	0.142	0.120	0.103	0.090	0.088
Sea Water or Other Natural Water Source Withdrawal Intensity	m³/MWh	66.65	67.56	47.49	40.62	36.49	33.04

Sarawak Energy has low water intensity (water withdrawal for cooling and non-cooling purposes) in 2019 as a result of a higher percentage of hydropower in generation portfolio compared to generation in coal, natural gas and diesel-fired power stations.







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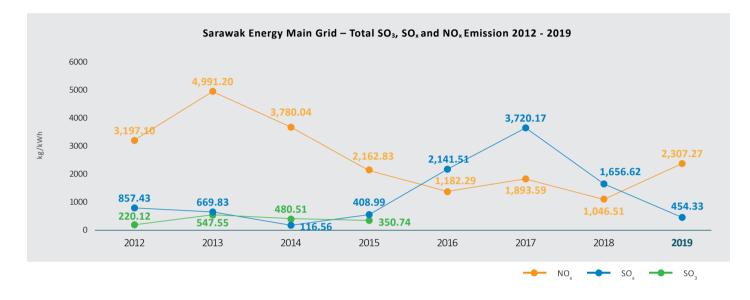


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Notes

- For reporting purposes, CO2 emission is calculated based on the amount of fuel used. NO_x,SO₃ & SO_x are calculated based on monthly Stack Emission Monitoring.
- Reports are conducted by third party consultants. In addition, these monthly stack emission reports will also be used to verify the CEMS measurements.
- Continuous Emission Monitoring System (CEMS) is only available at our SPC, PPLS, Bintulu, SPG and MPG power plants and the measurement results are directly connected to the Department of Environment.
- Starting in year 2016, all of the main grid thermal power plants are using SO_v parameter instead of SO_s.
- NO_v parameter is applicable for Bintulu, SPG, Miri, Sg. Biawak, PPLS, SPC & MPG power plants.

INTEGRATED WATERSHED MANAGEMENT

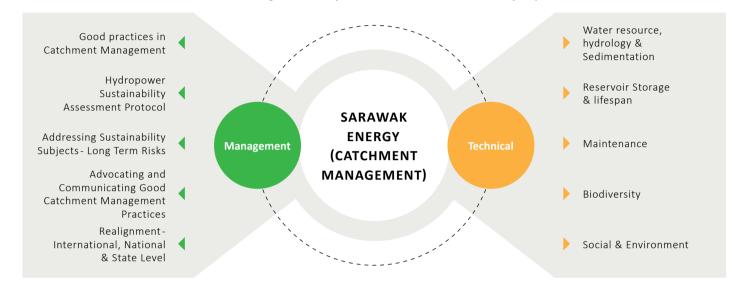
The energy sector in Sarawak is undergoing significant transformation, increasing its hydropower generation from 7.6% (2010) of the State's energy generation mix to 75% in 2020 to meet the demand from the Sarawak Corridor of Renewable Energy (SCORE) where it is projected that demand will reach 5,800MW by 2020.

The viability and long-term sustainability of hydropower operation is heavily dependent on land within the catchment areas. Catchment areas play a vital role in power generation as well as contributing to the livelihoods of local communities, biodiversity, commercial activity, water supply, and eco-tourism. In managing these areas, there are linkages and interdependent issues that involve various stakeholders and associated activities. Hence, catchment management must be viewed in a holistic manner to ensure the management approach addresses all critical issues in managing the catchment areas.

However, there are currently no specific policies, procedures and guidelines on catchment management for hydropower in Sarawak. Therefore, there is a need for Sarawak Energy as a hydropower developer and operator in Sarawak to be proactively involved in providing support and assistance in formulating the draft policy, procedures and guidelines to be proposed to the State Government and continuously advocate the importance of good catchment management practices in meeting power generation, social and environmental needs. In view of this, the Company plans to undertake a Catchment Management Study to help develop the appropriate policy, procedures and guidelines for catchment management.

WHY SARAWAK ENERGY NEEDS TO BE INVOLVED

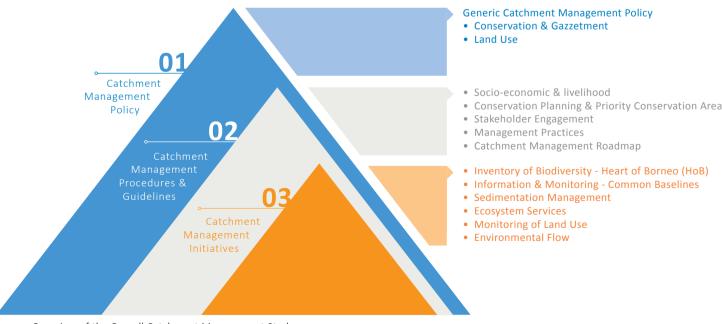
Catchment Management Policy, Procedures and Guidelines for Hydropower



The proposed scope of works for the Catchment Management Study are divided into three main components:

- 1. Catchment Management Policy
- 2. Catchment Management Procedures & Guidelines
- 3. Catchment Management Initiatives

SAFEGUARD UPSTREAM WATER RESOURCE SUPPLY "Resilient Hydropower Resource"



Overview of the Overall Catchment Management Study

103-3, 301-1

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WATER QUALITY MONITORING

Sarawak Energy conducts water quality monitoring at the Batang Ai, Bakun and Murum HEP reservoirs. Under the Sarawak Natural Resources & Environment Board (NREB), it is a legal requirement to perform water quality monitoring at the reservoirs every quarterly. Unlike natural lakes, human-made reservoirs may have an environmental impact, as modifications to the natural flow of water create barriers to the mobility of water species and can change the composition of species upstream and downstream. The formation of deep reservoirs can also cause thermal stratification, which influences the chemical and biological processes in the waters. In addition, changes in the quality of the water retained in the reservoirs will eventually be discharged into the rivers downstream and may affect the receiving water body.

Water quality monitoring and assessment for reservoirs are therefore essential to study the changes in water quality and to mitigate the potential problems related to reservoir water quality. Ultimately, management programmes could be suggested to remediate the environmental impacts of reservoir water quality.

FLOOD WARNING SYSTEM

Three flood warning stations were installed in 2019 at upstream and downstream flood vulnerable areas such as Lubok Antu town, Engkilili town and Sekolah Kebangsaan Nanga Delok. Lubok Antu is a district in

the Sri Aman Division while Engkilili is a sub-district of Lubok Antu, which is located downstream of the Batang Ai HEP. Both towns are flood-prone areas due to their shallow and flat topography. These stations not only serve to alert the communities but also record local water level data which is transmitted to Sarawak Energy's server for inflow analysis.

The installation of flood warning stations is aligned with the requirement to ensure the safety of communities along the river. The stations also function to record water levels downstream (Lubok Antu and Engkilili) and upstream (Nanga Delok) of the Batang Ai dam as part of hydrometric network monitoring.

The installation of the flood warning stations in the Batang Ai area was completed in March 2019.

No.	Name of Station
1	Nanga Delok
	Nanga Delok
2	Lubok Antu
3	Engkilili

The flood warning system will be triggered when there is a warning from the Batang Ai HEP, high water level at the station itself or when it receives a trigger from the Batang Ai HEP control room or Master Admin at Sarawak Energy Headquarters.

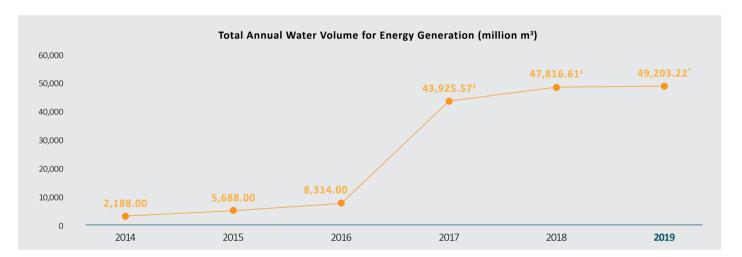
Plant Type	Plant	Data	Unit	2014	2015	2016	2017	2018	2019
Hydro	Batang Ai	Annual Inflow	million m³	2,408.00	3,100.00	3,802.00	3,658.00	3,576.00	2,852.00
		Annual Water Volume for Energy Generation	million m ³	2,188.00	2,755.00	3,881.00	3,396.73 ²	3,646.50 ¹	2,844.00*
		Annual Energy Generated	GWh		316.00	445.00	442.32	481.00	391.00
Hydro	Murum	Annual Inflow	million m ³		7,840.00	8,663.00	10,933.00	7,737.00	8,183.00
	Annual Water Volume Energy Generation	Annual Water Volume for	million m³		2,933.00	4,433.00	7,503.32	7,932.00	7,482.00
		Energy Generation	million m ³ (include EPS)				7,567.19²	8,022.00 ¹	7,532.00*
		Annual Energy Generated	GWh		2,093.00	3,390.00	5,717.39	6,094.00	5,714.00

Notes:

- This annual water volume for electricity generation data has been assured by a third party for Sustainability Report 2018.
- This annual water volume for electricity generation data has been assured by a third party for Sustainability Report 2018.

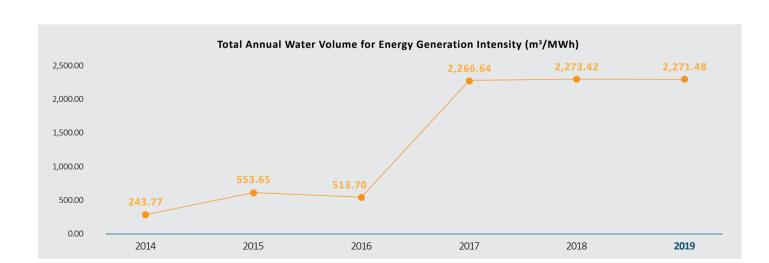
 This annual water volume for electricity generation data has been assured by a third party for Sustainability Report 2017.
- This annual water volume for electricity generation data has been assured by a third party . Read the Independent Assurance Report on pages 154 156.

Plant Type	Plant	Data	Unit	2014	2015	2016	2017	2018	2019
Hydro	Bakun	Annual Inflow	million m³				49,794.00	40,481.00	40,373.00
		Annual Water Volume for Energy Generation	million m ³				32,961.65²	36,148.11 ¹	38,827.10*
		Annual Energy Generated	GWh				13,078.27	14,482.00	15,544.00
Total Annual Water Volume for Energy Generation			million m ³	2,188.00	5,688.00	8,314.00	43,925.572	47,816.61 ¹	49,203.22*
Total Annual Water Volume Intensity for Energy Generation (Hydro Main Grid gross energy)			m³/MWh	243.77	553.65	513.70	2,266.64	2,273.42	2,271.48



Notes:

- This annual water volume for electricity generation data has been assured by a third party for Sustainability Report 2018.
- This annual water volume for electricity generation data has been assured by a third party for Sustainability Report 2017.
 This annual water volume for electricity generation data has been assured by a third party. Read the Independent Assurance Report on pages 154 156.



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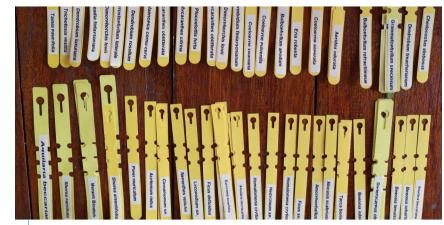
BIODIVERSITY CONSERVATION

In recognising the importance of sustaining the biodiversity of flora and fauna affected by the development of Sarawak Energy's projects, the Company has spearheaded several initiatives aimed at addressing emerging issues by working with local communities as well as Government and private

MURUM PLANT CONSERVATION GARDEN ISLAND

The Murum Plant Conservation Garden Island was established in 2015, enabling monitoring and tagging of the survival and diversity of plant species. Working with the Sarawak Forestry Corporation, an assessment of the plant survival rate is conducted annually to determine the survival rate of plants which have been planted and to identify plants which need to be re-tagged or re-labelled and maintained in the Garden.

Through engagements with local community workers from the Murum Resettlement, routine maintenance is also conducted on a monthly basis to manage and keep track of the biodiversity health of the protected species. The workers also receive regular training as part of Sarawak Energy's knowledge transfer initiatives.



The different flower species planted at the garden.

The following table discloses the type and number of plants planted in 2019 and targeted for 2020:



One of the Mycaranthes sp. orchid flowers planted at the garden.

No of	nlante	in	+ha	Gardon	25.06	
NO.OI	piants	ın	τne	Garden	as or	

		-			
		Planted	Current	Target	
Type of Plants	2018	2019	Total	planted in 2020	
Gaharu (Aquilaria spp.)	263	20	283	20	
Ensurai (Dipterocarpus oblongifolius)	33	15	48	30	
Orchids (Orchidaceae)	344	20	364	20	
Ethno – Botanical Plants	164	20	184	10	
Bamboo	32	20	52	20	
Other species (gingers, aroids, pitcher plant, etc.)	240	25	265	15	

From time to time, the planting of native plant species is also conducted to conserve and diversify plant species in the garden. All orchids planted in the garden are protected species and native to Murum.

COMMUNITY-BASED TAGANG SYSTEM FISHERY PROJECT FOR PENAN TEGULANG RESETTLEMENT

At the beginning of 2019, the Sg. Lekasi Tagang System action plan was developed together with the Tagang System committee members and Sarawak Energy's CSR team. The plan was executed accordingly during the year, with programmes including gotong-royong with the Long Wat & Long Malim community organised to maintain the facilities of the Sg. Lekasi Tagang System. The event was joined by Inland Fisheries officers from the Department of Agriculture (DOA). An assessment of fish stock assessment was also conducted at Sg. Lekasi to determine the river's health and population diversity.



Fish Stock Assessment conducted at Sg. Lekasi by EIA and DOA to determine the fish population density and diversity.

ENVIRONMENTAL IMPACT ASSESSMENT (EIA)

EIA approval is required prior to any power project development by Sarawak Energy, During the year, the Company secured EIA approval from the Natural Resources and Environment Board for the Lawas -Sabah 275KV Transmission Line Project.

The Company also conducted EIAs to identify the impact of thermal plumes on water quality and biological communities at the Tg. Kidurong coastal area. The study is conducted twice every year during the dry and wet seasons.

Sarawak Energy has also outlined 100% environmental compliance by 2020 as part of HSE Excellence under its Key Focus Area (KFA). In line with this, Sarawak Energy has initiated an Internal Environmental Compliance Audit (IECA) for all its 13 major projects development with EIA approval. The IECA supports self-regulation in EIA compliance

and overall environmental management to achieve outstanding environmental excellence in power project development. In 2019, none of Sarawak Energy's power project development (13 EIA projects) received any penalties or fines from Federal or State Environmental Authorities for environmental non-compliance. However, the Company was fined RM2,000 for violating Environmental Quality (Scheduled Wastes) Regulation 2005 at Limbang Power Station and RM2.000 for violating Environmental Quality (Control of Emission from Diesel Engines) Regulation 1996 in Limbang.

ENVIRONMENTAL TRAINING FOR SARAWAK ENERGY POWER DEVELOPMENT PROJECT CONTRACTORS

Environmental training is one of the mechanisms the Company undertakes to inculcate self-regulation among the Company's power development project contractors. In 2019, environmental training and workshops on erosion and sediment control, scheduled waste management, environmental mainstreaming tools, industrial effluent management, clean air management, Biomass Removal Plan (BRP) and Wildlife Monitoring and Rescue (WiMoR) were successfully conducted on the following thermal, hydro, transmission and substation projects:

1	500kV Similajau — Bunut Transmission Line Project;	2	alingian Energy Mineral (BEM) Coal Mining;
3	Balingian Coal-Fired Power Plant (operator Village – C5);	_	75 kV Marudi Junction Bunut Transmission Line Project;
5	275 kV Murum Samalaju B Transmission Line Project;		g. Kidurong Combined Cycle Power Plant; and
7	Baleh HEP BRP	and (V	ViMOR).

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LEAVING NO ONE BEHIND **Total Training Hours** Total Number of Staff Lost Time Injury Frequency Rate (Corporate) 90,065 hours 5,207 0.234 Total Electrification Coverage in 2019 **CSR Spending** 96.9% RM17.00 million * This loss time injury frequency rate data has been assured by a third party. Read the Independent Assurance Report on pages 154 - 156.

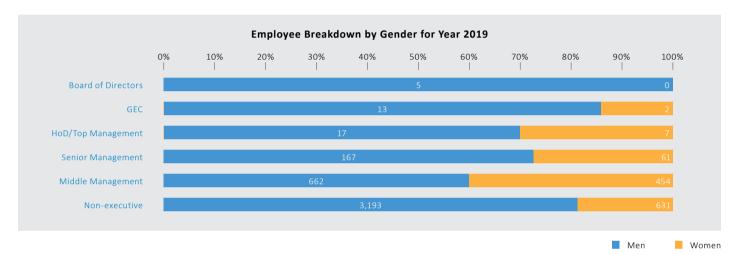
A Penan artisan weaving a rattan mat.

Leaving No One Behind

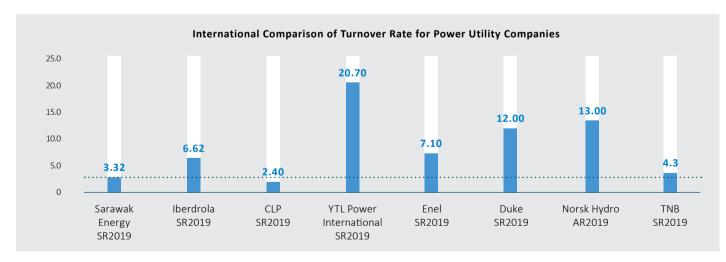
The Company takes pride in being a part of the everyday lives of the people of Sarawak. From fulfilling its role as a leading employer and caring for all aspects of its employees' well-being, to lighting up communities in the State's most remote areas, Sarawak Energy continues to invest in all levels of society to ensure no one is left behind.

SARAWAK'S TOP EMPLOYER

The Company continued to grow in 2019, with its staff strength to 5,207 from 5,023 in 2018. Diversity remains an integral component of the Company's workforce. For 2019, the breakdown of the Company's employees by gender and employment level are as follows:



The Company added 368 new employees during the year, of which 110 were women and 258 were men. The majority of these new hires were aged 30 years or younger. The total staff turnover for the year was 173. The detailed breakdown of new hires and staff turnover by gender and age can be referred on pages 174 - 176 of the GRI Content Index.



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102-8, 103-1, 103-2, 403-9, 404-2

As part of the Company's continuous commitment to invest in the career development of its employees, during the year, its workforce logged 90,065 hours of training. The total and average hours of training received by employee category and gender were as follows:

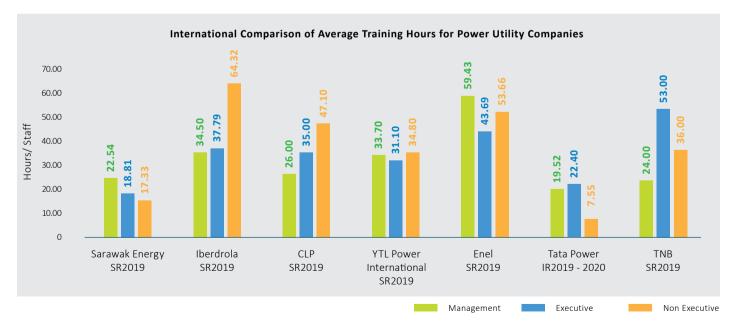
TOTAL AND AVERAGE TRAINING HOURS RECORDED BY CATEGORY AND GENDER FOR YEARS 2017 - 2019

Year	2017			2018			2019			
Total Number of Employees by Category	Male	Female	Total	Male	Female	Total	Male	Female	Total	
Management	158	64	222	331	146	477	95	50	145	
Executive	1,613	931	2,544	1,370	769	2,139	995	543	1,538	
Non Executive	4,424	705	5,129	4,782	643	5,425	2,933	405	3,338	

Total Hours of Training by Category	Male	Female	Total	Male	Female	Total	Male	Female	Total
Management	673	283	956	5,607	2,387	7,994	1,713	1,556	3,269
Executive	19,040	10,514	29,554	20,608	10,865	31,473	19,219	9,713	28,932
Non Executive	63,803	6,877	70,680	66,241	7,623	73,864	51,316	6,548	57,864

Average Hours of Training by Category	Male	Female	Avg.	Male	Female	Avg.	Male	Female	Avg.
Management	4.26	4.42	4.31	16.94	16.35	16.76	18.03	31.12	22.54
Executive	11.80	11.29	11.62	15.04	14.13	14.71	19.32	17.89	18.81
Non Executive	14.42	9.75	13.78	13.85	11.85	13.62	17.50	16.17	17.33

According to employee category, the Company has recorded internal, in-house, external and leadership trainings for 2019. For full details on these, please refer to pages 179 - 180 of the GRI Content Index.



Note:Published Annual, Sustainability & Integrated Report 2019.

SUMMARY OF COURSES CONDUCTED IN 2019 BY COURSE CATEGORY (INTERNAL, INHOUSE, EXTERNAL & LEADERSHIP COURSE)

Internal Courses by Category

3 First Aid 3 4 Mechanical 5 Other Electrical Courses 6 Safety Awareness 7 Switching 3	No	Course Category	No. of Courses
2 Chargeman 3 First Aid 4 Mechanical 5 Other Electrical Courses 6 Safety Awareness 7 Switching 3	1	A dissipated and	2
3 First Aid 4 Mechanical 5 Other Electrical Courses 6 Safety Awareness 7 Switching		Administration	2
4 Mechanical 5 Other Electrical Courses 6 Safety Awareness 7 Switching	2	Chargeman	25
5 Other Electrical Courses 6 Safety Awareness 7 Switching	3	First Aid	14
6 Safety Awareness 2 7 Switching 3	4	Mechanical	4
7 Switching	5	Other Electrical Courses	22
	6	Safety Awareness	21
8 Wiring Installation	7	Switching	36
	8	Wiring Installation	11
Total 13		Total	135

Inhouse Courses by Category

No	Course Category	No. of Courses
1	Finance	1
2	Health, Safety & Environment	8
3	Information Technology	5
4	Quality Management	3
5	Others (Project Management)	1
	Total	18

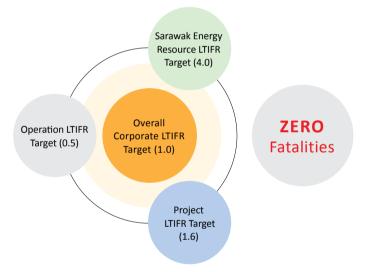
External Courses by Category

No	Course Category	No. of Courses
1	Administration	164
2	Audit	3
3	Civil	28
4	Electrical	26
5	Finance	21
6	Health, Safety & Environment	55
7	Information Technology	32
8	Leadership Management	18
9	Legal	11
10	Mechanical	20
11	Others	31
	Total	409

Leadership Courses by Category

No	Course Category	No. of Courses	
1	Laadayahin	0	
	Leadership	8	
2	Communication	2	
3	Women Leadership	1	
	Total	11	

CORPORATE KPI TARGET 2019 (FATALITY & LTIFR – LOST TIME INJURY FREQUENCY RATE)



Lost time injury frequency rate (LTIFR) is the number of lost-time injuries per million hours worked and it is the standard safety measurement across various industries. As of 2019, the Company has decided to measure its LTIFR in three categories (Operation, Project Delivery and Sarawak Energy Resources). The total LTIFR across the three categories results in the overall corporate LTIFR. Operations cover the Company's existing core business operations from Corporate Functions to Generation (thermal and hydropower), Distribution, Transmission and Retail; Sarawak Energy Resources covers the Company's coal mining operation, and Project Delivery refers to any ongoing projects.

As a result of the Company's efforts in occupational safety and health, it has continued to improve the LTIFR, with the overall corporate LTIFR result at 0.234* in 2019, outperforming the Company's overall corporate LTIFR target of 1.0 for the year.

Vote:

^{*} This loss time injury frequency rate data has been assured by a third party. Read the Independent Assurance Report on pages 154 - 156.

ABOUT THIS REPORT

WE ARE SARAWAK ENERGY

LEADERSHIP STATEMENTS

A COMMITMENT TO GOVERNANCE

OUR KEY HIGHLIGHTS STRATEGY ALIGNED WITH VALUE CREATION

HOW WE'VE PERFORMED

SUSTAINABILITY REPORT

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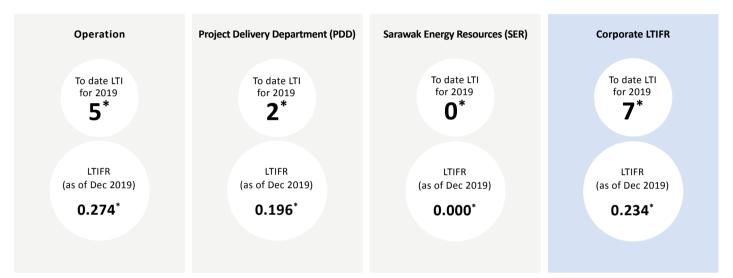


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Sarawak Energy has also set a stringent fatality target in 2019 and beyond of zero fatalities. Unfortunately, the Company did not meet the target as there had been three fatalities, all involving contractors' workers, recorded in 2019. The Company takes any incident of injury, and especially fatalities, seriously and will continue to ensure compliance with the strictest safety standards to avoid further loss of life.



RE-ENERGISING LIFE-SAVING RULES



Sarawak Energy
Life-Saving Rules
Programme
Culture of Awareness
to Compliance

Re-Energising Sarawak Energy Life-Saving Rules Programme Culture of Compliance to Commitment

Empowering Sarawak Energy Life-Saving Rules Programme Culture of Commitment to

Ownership

Note:

This total loss time injury cases and loss time injury frequency rate data have been assured by a third party. Read the Independent Assurance Report on pages 154 - 156.

HEALTH PROGRAMME

HEARING CONSERVATION PROGRAMMES (AUDIOMETRIC TEST / NOISE MONITORING AND MAPPING)

In compliance with the Occupational Safety and Health Act 1994 (Noise Exposure) Regulation 2019, Occupational, Health and Safety Division regularly conducts hearing conservation programmes such as noise monitoring/mapping and audiometric testing at all regions and power stations which may be exposed to excessive noise levels.

LIGHTING MEASUREMENT PROGRAMME

Trends in the past shows a significant amount of accidents was directly related to a dark workplace. With the concept of zero harm for all employees, Sarawak Energy takes a forward-thinking approach to ensure critical workplaces in the company are properly lit through the launch of the Lighting Measurement Programme. This programme helps the management of the workplace to identify areas where additional lighting is required thus reducing workplace accidents.



Stations conducted: Bintulu Power Station, Mukah Power Station, Limbang Power Station, Lawas Power Station.

IN-HOUSE ERGONOMIC RISK ASSESSOR

Sarawak Energy envisions a workplace where employees can work freely and comfortably. With a handful of handpicked personnel, Sarawak Energy currently has a team of competent Initial Ergonomic Risk Assessors who can be mobilised across the State to conduct ergonomics risk assessments and provide additional value added services for the Company in determining and recommending work adjustments that may improve the overall working conditions for Sarawak Energy.

BODY MASS INDEX (BMI) PROGRAMME 2019 RESULT

Data Summary	2018 (Baseline)	Year 2018	Year 2019
Nett Sarawak Energy Data Collected	4,396	4,851	4,932
Department achieving Year KPI	-	17 out of 20	9 out of 21
Department improved after 2018			12
Sarawak Energy Overall Total (%)	78.26%	77.65%	80.24%

Sarawak Energy Group's BMI improved in overall total percentage by 2.59%. However, the total percentage did not achieve for Y2019 with KPI Target of 85%.

PROJECT DELIVERY (PD)

- PD project team together with contractors have made a great effort
 in organising various health, safety and environment activities for
 all workers to prevent any untoward incidents. These activities, like
 toolbox briefing and HSE related courses, have proven to be effective
 in creating awareness among the members.
- PD HSE Team together with all contractors working for PD projects has planned comprehensive HSE programmes for their respective projects.
- From 27 28 November, a total of 43 Baleh HEP Project Team completed their baseline health screening process. This will be followed by an annual health screening for all Baleh HEP site personnel as an ongoing effort in monitoring fitness and good health of all who involved in delivering Baleh HEP by 2026.
- From 3 4 December 2019, the Baleh HEP Project Team conducted Health and Safety Awareness Programme for all the Contractors involved in the Baleh HEP Project. The training session covered topics on the dangers of drug abuse, urine test, the prevention of infectious diseases and Sarawak Energy Life Saving Rules among others.

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LIGHTING UP SARAWAK

Electricity Coverage in Sarawak grew to 96.9% in 2019 from 96% in 2018, with rural electrification coverage rising to 93% from 91%.

Year	2013	2014	2015	2016	2017	2018	2019
Sarawak Electricity Coverage (%)	88.2	90.4	92.3	94.3	95.5	96.0	96.9
Urban (%)	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Rural (%)	74.5	79.0	82.8	87.0	89.8	91.0	93.0



Rh. Kana.

The 2% increase in rural electricity coverage was achieved through various rural electrification initiatives, where 8,844 households were electrified in 2019. These comprised 5,239 households connected to the grid and 3,605 households connected through off-grid solutions.

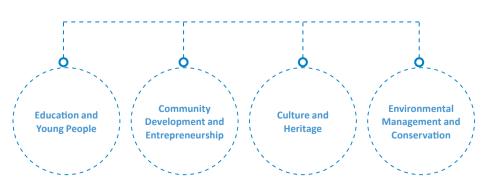
The Sarawak Government allocated an additional RM2.37 billion at the end of 2018 to accelerate rural electrification to accelerate towards 99% by 2020 and full electrification by 2025 under the Projek Rakyat initiative. Subsequently, Sarawak Energy (RES) Sdn Bhd, a subsidiary of Sarawak Energy, was established to implement the Projek Rakyat.

Between 2019 and 2021, around 14,000 rural households will be connected to the grid through two EHV and 10MV new substations

in strategic locations. RM80 million in additional funding was also allocated to electrify new rural households in already electrified villages from 2019 until 2020.

INVESTING IN SOCIETY

Corporate Social Responsibility (CSR) remains a vital component of Sarawak Energy's operations. During the year, the Company invested RM16.99 million in CSR, with the Company's CSR initiatives remain focused on the following four areas:



EDUCATION AND YOUNG PEOPLE

Baleh Youth Capacity Development – Skills and Technical Trainings

Preparation for Participation in the Project and Employability

In 2019, another batch of 160 youths were enrolled in various skills training programmes for operating heavy machineries such as truck, excavator, dozer and roller and scaffolding.

The training programme is to equip local communities, particularly the project affected people, with the skills necessary for them to participate in the project development. It is considered necessary that after the training, proper certifications are provided and these certifications are recognized in the industry. This will enhance their employability whether with the Baleh HEP or elsewhere.

Women Empowerment

The Baleh Women Entrepreneurship Training Programme continues its third-year implementation to attract another 85 trainees in 2019. The training programme is intended to promote women empowerment in career advancement or a transition into entrepreneurial practice. This is a step towards having a diverse capability and brings socio-economic benefits to the local community.

These efforts are aligned with Sarawak Energy's CSR social investment initiatives and the Hydropower Sustainability Assessment Protocol (HSAP P-10 Project Benefits) in terms of providing opportunities for local capacity development and employment.

BAKUN RESETTLEMENT SCHEME EDUCATION FUND

Sarawak Energy signed a MoU with the Bakun Charitable Trust for the Bakun Resettlement Scheme Education Fund which will be used to provide educational incentives to encourage academic excellence for primary and secondary students from the area as well as financial aid for further studies at higher learning institutions. The fund will also be used for other educational development programmes as well as to improve learning facilities for the benefit of the Kayan, Kenyah, Kajang and Penan communities in 15 longhouses in the Bakun Resettlement Scheme.

EDUCATIONAL PROGRAMME FOR PRIMARY SCHOOLS IN LUBOK ANTU

Sarawak Energy organised a motivational and educational workshop for 500 students from primary and secondary schools in Lubok Antu from April to July 2019. The programme was conducted in collaboration with Sarawak Dayak Iban Association (SADIA)-APAN and Lubok Antu District Education Office.

Held at the Batang Ai Hydroelectric Power Station, the programme was attended by SMK Lubok Antu, SK Nanga Delok, SK Nanga Menyebat, SK Ulu Engkari, SK Nanga Tibu and SK Ulu Lemanak, SK Batang Ai, SK Melaban, SK Sbangki, SK Ng Kumpang, SK Skarok. Targeted at pupils sitting for the Ujian Peperiksaan Sekolah Rendah (UPSR), Pentaksiran Tingkatan 3 (Form 3 Assessment) and Sijil Pelajaran Malaysia (SPM), the motivational programme also focused on proper techniques for answering examination questions.

Since 2013, Sarawak Energy has made annual contributions to five primary schools in Batang Ai namely; SK Nanga Delok, SK Ulu Engkari, SK Nanga Tibu, SK Skarok and SK Batang Ai, for their annual activities and educational enhancement programmes.

In 2019, Sarawak Energy included five additional schools from the downstream Batang Ai and hosted communities in Batang Ai to receive annual contributions. These schools are SMK Lubok Antu, SK Melaban, SK Nanga Kumpang, SK Sbangki and SK Lubok Antu. The total annual support for these schools amounts to RM45,000.



A facilitator has all the pupils' attention in one of the sessions.

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SOCIAL AWARENESS PROGRAMME FOR STUDENTS IN KAPIT

A social awareness programme on teenage pregnancy and the effects of drug abuse for students from primary and secondary schools in Kapit was organised on 3 August 2019, in collaboration with the Kapit District Education Office and SMK Kapit No. 2. The programme was attended by students from 10 schools: SMK Kapit No.2. SMK Kapit No.1, SMK Selirik, SK Kapit, SK Kampung Baru, SK Methodist, SK Lepong Balleh, SK Sg. Kapit, SK Sg. Amang and SJKC Hock Lam.

Among the speakers were officers from the National Anti-Drugs Agency - Sibu Branch, Royal Malaysian Police - Narcotics Criminal Investigation Division Kapit Branch, Sarawak Welfare Department Kapit Branch as well as Kapit Hospital.

The programme was organised following requests from the community to create greater awareness on social issues. The objective of the programme is to contribute towards better understanding of the consequences of both drug abuse and teenage pregnancy cases in schools, especially in the Kapit area and to support the collective efforts by the agencies in minimising the issues as these problems not only affect the youth but the community in general.

During the programme, both teachers and parents also discussed their roles and responsibilities in combating social problems with the Kapit community leader Pemancha Steward Sawing.



Students actively participating in discussions.

EDUCATIONAL ENHANCEMENT PROGRAMME IN BALEH

For the third consecutive year, Sarawak Energy, in collaboration with the Institut Pendidikan Guru Kampus Sarawak, Miri and Kapit District Education Offices, successfully organised the 'Program Jalinan Mesra Peribumi Zon Baleh/Kapit 2019', an educational enhancement programme for the Kapit communities.

Previously held at SK Temenggong Koh in 2018, this year, the programme was held at SK Sungai Tunoh from 15 to 19 April 2019, where six different primary schools from the Tunoh area participated, namely SK Sg. Meluan, SK Sg. Paku, SK Lubok Baya, SK Ng. Oyan Tengah, SK Sg. Bebangan, and SK Lubok Mawang.

The programme was attended by 300 students, teachers and parents from nearby villages.

The module featured interactive learning, whereby students were given hands-on exercises on public speaking training while maintaining its focus on the four core subjects of Mathematics, Science, Bahasa Malaysia and English.

The 'Program Jalinan Mesra Peribumi' has met its objective as the number of students passing the four core subjects has been steadily increasing for all schools in Baleh/Kapit since the programme started in 2017 at SMK Balleh.

The programme also contributed to the increasing in the UPSR passing rate of the participating schools. Overall, the Kapit-District Regional Average Grade (GPD) has been increasing from 60.62% in 2017 to 63.83% in 2018. It further increased to 64.43% in 2019.

Besides providing academic guidance and motivational support to students preparing for their upcoming UPSR examinations this year, the workshop also included motivational talks for parents and teachers on educational awareness and tertiary education opportunities.



Students participating in a public speaking exercise during the

EDUCATION ENHANCEMENT CAMP IN BALINGIAN

Sarawak Energy, in collaboration with Mukah and Selangau District Education Offices organised the English Camp II from 15 to 17 November 2019 at SK Sungai Duan, Mukah.

The programme was attended by 101 Primary 5 students from nine schools, namely SK Sungai Duan, SK SLDB Ladang 3, SK Sungai Bayan, SK Lubok Bemban, SK Kuala Lemai, SK Kemena, SK Sungai Bawang, SK Sungai Tau and SK Sungai Buloh.

The programme was designed and conducted by English teachers from Mukah and Selangau to expose students to fun learning and to build up their confidence and interest in the English language through frequent practices.

The programme was divided into several categories including Small Circle Big Circle, Spell it Right, Language Game, Treasure Hunt, Fun Quiz and Group Presentation.

PENAN STUDENT INCENTIVE PRESENTATION

A total of 419 students from SK Tegulang and SK Metalun received certificates and incentives for excellent academic performance and attendance under the education initiatives provided by the Belaga Penan Education Fund. The number of those receiving the incentives has increased from 340 students in 2018.

The fund also supports Penan students in recognised skills development centres or institutions of higher learning in Malaysia. It has funded 45 Penan youths in training centres and higher learning institutions. 29 youths have successfully completed their courses and are employed in the construction, oil and gas, palm oil plantation and fabrication industries.



Students from SK Tegulang receiving their academic incentives.

COMMUNITY DEVELOPMENT AND **ENTREPRENEURSHIP**

BAKUN RESETTLEMENT - SOCIAL INVESTMENTS TO CATER FOR THE GROWING COMMUNITY

Sarawak Energy has been working closely with the 15 longhouses of the Bakun Resettlement Scheme at Sungai Asap and Sungai Koyan on projects to enhance their social well-being following the acquisition of Bakun HEP in 2017 from Sarawak Hidro, the owner and operator appointed by Ministry of Finance Malaysia.

Located about two hours by road from Bintulu and one hour from the Bakun HEP, the community was established in 1998 when 15 longhouses comprising Kayan, Kenyah, Kajang and Penan communities relocated from Balui River in the Upper Rajang to make way for the 2,400MW Bakun HEP.

Based on the philosophy that project-affected communities should benefit positively from its presence, Sarawak Energy's new social investment programmes in the area are focused on education, cultural heritage and safety as well as entrepreneurship development and capacity building.

Following continuous engagements and dialogues with the community, the CSR projects have expanded to include assistance on infrastructure upgrades as the resettlement community is growing and thriving with longhouses recording increases in the number of households

Sarawak Energy is partnering the community through committees such as Balui Lake Native Association (BLNA), and Peng Maren-Maren Uma (Longhouse Chiefs Association) on programmes to benefit the communities

New community projects with Sarawak Energy include land-levelling works to expand the traditional burial grounds as well as to extend the "tanah payung" (communal land) to cater for the growing longhouse populations.

EXPANDING BURIAL GROUNDS

Since the community resettled in 1998, the two burial grounds at Sungai Asap and Sungai Koyan have reached full capacity with the 15 longhouses in the resettlement area sharing the sites.

Land levelling works at the Sungai Asap burial grounds were completed in September 2019 to level the terrain and create a terrace system to maximise the cemetery site and protect the area from erosion by building a drainage system. The next phase involves expanding the Sungai Koyan burial grounds.

EXPANDING LONGHOUSE GROUNDS

Sarawak Energy is also assisting the communities in land levelling works to cater for longhouse expansion. First on the list is the "tanah payung" or communal land for Uma Kulit which has seen an increase in its household population since the resettlement. Once the levelling work is completed, the residents are planning to build another 50 units of houses next to the existing longhouse.

When the residents first resettled from upstream of Balui River to Sungai Asap, there were 104 units of houses with a population of 477 residents. As of last year, the number had doubled.

The overall plan for the Bakun Resettlement Scheme includes landworks for the remaining longhouses in the Bakun Resettlement Scheme with Uma Ukit longhouse and follow by Uma Kelap. Previously, land levelling was carried out at Uma Baha in 2015 and Uma Balui Liko

WE ARE

No Data Summary

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Sarawak Energy works closely with the Belaga District Office and the community leaders to monitor the progress of the projects.

LONGHOUSE ADOPTION PROGRAMME

In 2019, Sarawak Energy implemented a longhouse adoption programme at the Bakun Resettlement Scheme. The five-year programme will cover all the 15 resettled longhouses which house around 15,600 residents. The longhouses will be adopted on a rotation basis to streamline efforts in improving support to the individual longhouses.

The programme focuses on improving the longhouse environment through beautification on a gotong-royong basis and improving basic facilities and infrastructure, supporting villagers in their cultural activities for heritage preservation as well as community development and entrepreneurial activities.

The first three longhouses of 1,700 villagers adopted for 2019 were Uma Ukit (650 villagers, 79 households), Uma Lahanan (800 villagers, 101 households) and Uma Penan Talun (300 villagers, 94 households). Sarawak Energy partnered with the resettlement's respective longhouse security and development committee or Jawatankuasa Kemajuan dan Keselamatan Kampung (JKKK) in arriving at communityoriented solutions for some of the challenges the longhouses continue to face post-resettlement.

MURUM RESETTLEMENT - COMMUNITY STRENGTHENING

CSR EYE VISION PROGRAMME FOR RESETTLED COMMUNITIES AT SUNGAI ASAP, MURUM AND BALINGIAN

A total of 707 villagers from the resettled communities of Sungai Asap and Murum and 277 villagers from Balingian and Mukah successfully underwent preliminary screenings to assess for cataracts requiring

The screenings were held from 8 to 9 March 2019 for the Sungai Asap community, 11 to 12 March 2019 for the Murum community and 13 to 14 April 2019 and 9 to 11 July 2019 for the Balingian and Mukah community. This was conducted by a mobile team of volunteers from Sarawak Health Department, Klinik Katarak Malaysia under the Ministry of Health and Sarawak Energy staff.

By going to the community, the outreach programme shortened waiting time for those requiring the operation. Subsequently, a total of 14 patients from Sungai Asap successfully underwent cataract operations from 14 to 16 June 2019 at Miri Hospital, while 78 patients from Balingian and Mukah successfully underwent cataract operation and 11 patients underwent pterygium surgery at Hospital Mukah from 18 to 20 July.

The surgeries allowed the patients to regain their eyesight, with many commenting that they look forward to practicing their former socioeconomic activities mainly farming, fishing, hunting, tailoring and handicraft making. Previously, these activities presented risks such as falling, injuries and accidents due to their poor eyesight.

Outcomes of the programme for Murum and Sungai Asap:

No.	Data Summary	Date	Outcomes
1	First Screening for Sg. Asap community	8 - 9 March 2019	 No. of individuals screened: 613 Recommended for 2nd screening: 47
2	First Screening for Murum community	11 - 12 March 2019	 No. of individuals screened: 94 Recommended for 2nd screening: 5
3	Second screening at Sg Asap Health Clinic	29 March 2019	28 recommended for surgery: i. 27 from Sg. Asap ii. 1 from Lg. Malim, Murum
4	Surgery at Miri Hospital	14 - 16 June 2019	i. 14 patients from Sg. Asap ii. Nil from Murum
5	One-week post surgery follow up	24 June 2019	14 patients from Sg. Asap
6	One-month post surgery follow up	13 August 2019	14 patients from Sg. Asap

Outcomes of the programme for Balingian and Mukah:

No.	Data Summary	Date	Outcomes
1	Preliminary Eye Screening at 20 longhouses along Jalan Bukut, Balingian	13 & 14 April 2019	 No. of individuals screened: 130 Recommended for 2nd screening: 39
2	Second Screening at Admin Building, Balingian Power Generation	9 - 11 July 2019	 No. of individuals screened: 186 Recommended for Cataract Operation: 80 Recommended for Ptervgium Operation: 12

NO.	Data Sullillal y	Date	Outcomes
3	Cataract and	18 - 20	 78 patients undergoing
	Pterygium	July	Cataract Operation,
	Operation at	2019	2 withdrew
	Hospital Mukah		
4	Post Operation Review – 1 week	24 & 25 July 2019	 89 patients have attended for Post Operation Review- 1 week at Hospital Mukah. 5 patients referred to Hospital Bintulu for further examination.
5	Post Operation Review – 1 Month	26 & 27 August 2019	78 patients have attended for Post Operation Review-1 Month at Hospital Mukah.
			 9 patients have attended for Post Operation Review-1 Month at Hospital Bintulu. 1 patient absent

Date

Outcomes



Group photo with last two patient at operation theatre room.



Group photo with cataract patients from Bakun.

Community Relations officer explains and translates local language to community regarding her eyes conditions and next appointment with Klinik Mata, Mukah.



Eyes screening in progress.

COMMUNITY BOMBA TRAINING FOR BALINGIAN COMMUNITY

Sarawak Energy, in collaboration with the Mukah Fire and Rescue Department, organised a Community Bomba training at the Mukah Fire and Rescue Station from 19 - 20 October 2019.

The programme was attended by 64 local community members from Sungai Duan, Lubuk Bukut and Sungai Begeri, Mukah.

During the programme, participants were taught basic knowledge and skills on preventing, handling and assisting the Fire and Rescue Department during emergencies. At the end of the training, all participants received their certificates of participation from Pemangku Ketua Balai Zon 4 Sibu, PgKB II Wan Kamarudin Bin Wan Ahmad.

The existence of Community Bomba is important in firefighting and prevention due to the long distance between the longhouses and the fire department station.



Fireman demonstrate the basic skills on handling fire extinguisher when emergency occurs.

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CULTURE AND HERITAGE

BATU TUNGUN RITUAL CEREMONY AND MURUM PENAN FESTIVAL

Sarawak Energy and the villages of the Murum Resettlement Area continue to work together on cultural programmes under the principle that as the communities progress, their traditional heritage would be preserved.

The 2019 Batu Tungun Blessing Ceremony was held on 15 November 2019 at a special site constructed specifically for the annual consecration of the rock formation held sacred by the Penan resettled community of Murum.

The event was organised and supported by Sarawak Energy in collaboration with the Murum Penan Development Committee (MPDC). The blessing was performed by community elder Saran Joo according to the traditional sacred rites of the Bungan religion.

Earlier this year, Sarawak Energy had upgraded the site with the installation of a new information panel adjacent to the Batu Tungun Lookout Point to reflect the lifestyle transformation of the resettled community.

In conjunction with the Batu Tungun Ritual Ceremony, the biennial Pesta Penan Murum 2019 was held at Metalun from 12 - 13 November 2019. The festival brought together communities from four villages of Metalun: Long Singu, Long Tangau, Long Manapa and Long Luar.

Activities and programmes organised included cultural dance performances, a football competition, tele-match as well as a karaoke competition to foster a closer bond among the communities, promote culture and positive communal values.

The 'Pesta Penan Murum', also known as the Penan games, is a carnival initiated by Sarawak Energy and the Sarawak Government with the objective to unite people and share cultures while enjoying the healthy benefits of sports and games.



Cultural dance performances.



Group photo with Murum Penan Development Committee

SARAWAK ENERGY'S WARISAN SAPE TEAM ENTERS MALAYSIA **BOOK OF RECORDS WITH LONGEST NON-STOP SAPE** PERFORMANCE

Sarawak Energy continues to work with indigenous communities to preserve Sarawak's unique cultural heritage in music and handicraft. As part of this collaboration, the Company initiated the Warisan Sape Telang Usan programme in 2016 to train 20 youths from Telang Usan, Baram in the art and skill of playing the Orang Ulu traditional lute or Sape.

To showcase the programme's success and the skill of the Sape players under the programme, Sarawak Energy organised the Longest Non-stop Sape Performance in partnership with RTM with a view to enter into the Malaysia Book of Records

They were joined by Sape players from Baram and Belaga to make up a team of about 54 Sape musicians who performed for 50 hours from 15 February until 17 February 2019. They played individually or in groups in a non-stop continuous musical relay.

Held at the RTM Auditorium in Miri, the event saw Warisan Sape Telang Usan leading the non-stop performance supported by additional Sape musicians from Baram and Belaga. The event was aired live over some of RTM's channels, showcasing different traditional and new Sape tunes or melodies by both veterans and young players.

Warisan Sape Telang Usan was organised in partnership with the Village Development and Safety Committee of Long San in Baram and supported by two schools in the area, SMK Dato Temenggong Lawai Jau and SK St. Pius. The first batch of trainee musicians enrolled for the 18-month training programme in 2016 and successfully completed the programme in 2017. They have played at various cultural events including at the Rainforest World Music Festivals in 2017 and 2018 and released an album, Warisan Sape Telang Usan Recording, in 2018. They continue to be in demand at cultural events



 Warisan Sape team enters Malaysia Book of Records for longest non-stop Sape' performance.

SARAWAK ENERGY SPONSORS WARISAN SAPE TELANG USAN CD

Warisan Sape Telang Usan's acclaimed performances of traditional lute or Sape melodies have been recorded for limited non-commercial release in CD form.

The CD is sponsored by Sarawak Energy as part of a collaboration with Baram communities to preserve their musical heritage. The CD was launched at Menara Sarawak Energy on 5 April 2019.

The production of the Sape CD builds on the Company's CSR and Sustainability efforts, pairing development with communities at its heart in a measure to preserve and promote Sarawak's unique culture and

Featuring 11 songs, the CD was recorded at RTM Miri in November 2018. The first batch of 150 CDs will be distributed by Sarawak Energy as corporate gifts pending approval from the National Film Development Corporation Malaysia (FINAS) for commercial release of the CDs.



The Warisan Sape Telang Usan CD.



O Sarawak Energy Executive Vice President for Corporate Services Aisah Eden (third from right) symbolically launched the Warisan Sape Telang Usan CD along with from right; Manager for Community Relations Augustine Supen Taja, Group Chief Operating Officer Lu Yew Hung, Miss Malaysia World 2018 Larissa Ping, internationally acclaimed musician Matthew Ngau, Long San community leader Lucia Paya, General Manager for CSR and Sustainability Jiwari Abdullah, Vice President for Internal Audit Rafiuddin Yeo Bin Abdullah and village headman KK Mattius Erang

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SARAWAK ENERGY PARTNERS LONGHOUSE FROM BAKUN RESETTLEMENT COMMUNITY ON TALLEST BELAWING TOWER IN MALAYSIA BOOK OF RECORDS

The Company earned another entry into the Malaysia Book of Records when the "Tungun Belawing Pebeka Tawai" of the Uma Baha community in Apau Koyan, Belaga set a new record as the tallest Belawing Tower in Malaysia.

The record-breaking entry was delivered in partnership with Sarawak Energy as part of the Company's continuing support for the Bakun Resettlement community of Apau Koyan, who were relocated from their original villages upstream of the Balui River to make way for the Bakun hydropower plant. Sarawak Energy partnered with Bakun Resettlement's respective longhouse development committee or Jawatankuasa Kemajuan dan Keselamatan Kampung (JKKK) to support the community's effort to preserve its cultural heritage.

The event to commemorate the record-breaking tower was held in conjunction with the Apau Koyan Festival 2019, held from 25 to 27 October 2019. Both aimed to promote Sarawak's indigenous cultural identity and were primarily funded by Sarawak Energy.

Officiated by the Minister of Tourism, Arts, Culture, Youth and Sports Sarawak Datuk Haji Abdul Karim Rahman Hamzah, the day saw a turnout of over 500 villagers from Apau Koyan.

Other guests witnessing the event were Assistant Minister of Utilities Sarawak (Rural Electricity) Datuk Liwan Lagang, Member of Parliament for Hulu Rajang Datuk Wilson Ugak and Murum Assemblyman Kennedy Chuk Pai Ugon.

Sarawak Energy's Group Chief Executive Officer Datu Haji Sharbini Suhaili and members of the management team were also present. They were joined by the Malaysia Book of Records' Chief Operating Officer Christopher Wong as well as various community leaders and longhouse chiefs.

Initiated by Kenyah Community Leader Pemanca Tony Kulleh and his team, the Belawing Tower embellished with ethnic motifs is a heritage landmark symbolising the strength in unity of the community. At 80 feet tall, the record-setting tower made of belian tree (ironwood) took about three months of communal efforts to complete. The achievement is expected to enhance Apau Koyan's appeal as one of Sarawak's tourist attractions.



Minister of Tourism, Arts, Culture, Youth and Sports Sarawak Datuk Haji Abdul Karim Rahman Hamzah (centre), Sarawak Energy's Group Chief Executive Officer Datu Haji Sharbini Suhaili (third left), Assistant Minister of Utilities Sarawak (Rural Electricity) Datuk Liwan Lagang (left) and Murum Assemblyman YB Kennedy Chuk Pai Ugon (second right) witness the handover of the Malaysia Book of Records Certificate from its Chief Operating Officer Christopher Wong (third right) to Kenyah Community Leader Pemanca Tony Kulleh (second left).



Sarawak Energy's Group Chief Executive Officer Datu Haji Sharbini Suhaili hands over a contribution to Sungai Asap Persatuan Bomba Sukarela's Advisor Pemanca Umek Jeno in conjunction with Apau Koyan Festival 2019.

SARAWAK ENERGY BRINGS ARTISANS TO HANDICRAFT EXHIBITIONS AND SALES

In 2019, authentic handmade handicrafts of the artisans from Murum, Baleh, Sungai Asap produced under Sarawak Energy's CSR Handicraft Development Programme garnered overwhelming response at nine handicraft sales and exhibition events across the country.

Their crafts and textile designs were showcased alongside products from both international and local artisans and this provided the artisans a platform for networking. The artisans also benefited from the exposure which can further enhance their craft making skills and develop their marketing techniques. The events, which garnered RM212,687 in sales for the artisans, were as follows:

No. Event

- 1 Hari Kraft Kebangsaan, KL, 27 Feb 11 March 2019
- 2 Longest Sape' Performance, Miri, 15 17 Feb 2019
- 3 The 11th Global CSR Summit & Awards, Kuching, 4 April 2019
- 4 International Women's Day, Menara Sarawak Energy in Kuching, 5 April 2019
- 5 Rainforest World Craft Bazaar 2019, Sarawak Cultural Village at Kuching, 12 14 July 2019
- 6 Festival Kraft Borneo Sarawak, Kuching Waterfront in Kuching, 25 Oct - 3 Nov 2019
- 7 Sustainability & Renewable Energy Forum (SAREF) Community Market, in Kuching, 10 11 Dec 2019
- 8 Beads Abuzz Bazaar, Kuching, 3 6 Oct 2019
- 9 Handicraft Sales, Menara Sarawak Energy in Kuching, 12 Dec 2019

HANDICRAFT TRAINING & WORKSHOPS

In addition to the handicraft exhibition and sales, a handicraft development workshop was held in partnership with UNIMAS for Murum, Baram and Baleh artisans from 2 - 3 June 2019 to encourage brainstorming of handicraft product development, introduction of new designs and exchange skills and knowledge between each other. This two-day workshop was divided into two sessions — Session 1: Introduction to new handicraft product designs and Session 2: Production of the new handicraft product designs. Throughout Session 2, the participants were guided by the facilitators on how the handicraft products made can be aesthetically improved.

From 4 - 6 October 2019, eight artisans from Sungai Asap and Baleh participated in the 6th Borneo International Beads Conference (BIBCO) that was held at The Waterfront Hotel Kuching.

During the conference, the artisans attended hands-on beads workshops by local and international artisans, acquiring new handicraft techniques, exposure to new designs and knowledge in the process.



Murum and Baleh artisans in a group photo with Sarawak Minister of Tourism, Arts, Culture, Youth and Sports YB Datuk Abdul Karim Rahman Hamzah (centre), Assistant Minister of Native Laws and Customs YB Datuk John Sikie Tayai (10th from left), Sarawak Energy General Manager for CSR & Sustainability Jiwari Abdullah (11th from left) and Malaysian Handicraft Development Corporation (MHDC) Sarawak Director Azran Arip (right).

SARAWAK ENERGY COMMUNITY PARTNERS SHOWCASE CULTURE AND HERITAGE AT RWMF 2019

Sarawak Energy's partners in cultural heritage, the Warisan Sape Telang Usan as well as artisans under the Company's Handicraft Development Programme from Murum, Baleh and Baram showcased their music and crafts at the Rainforest World Music Festival 2019.

As a gold sponsor of the event, the Company was able to support their partner communities to showcase their culture and heritage at the internationally acclaimed music festival.

Talented 18-strong musical ensemble Warisan Sape Telang Usan, who were joined by Sape maestro and living legend, Matthew Ngau, and Miss Malaysia World 2018, Larissa Ping, enchanted audiences with Sape performances and participated in the traditional cultural performances at the Indigenous Stage and Big Tent Stage, with receptive audiences joining them in traditional dances.

Meanwhile, six artisans from Murum, Baleh and Baram demonstrated their skills and displayed their handicraft at the Rainforest World Craft Bazaar, which was held concurrently within the festival grounds.



GM, CSRS Jiwari Abdullah with Sape performers at the Rainforest World Music Festival 2019.

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Sape' and traditional cultural performances at the Rainforest World Music Festival 2019.

ENVIRONMENTAL MANAGEMENT AND CONSERVATION

CAPACITY BUILDING FOR TEGULANG TAGANG COMMITTEE TO TAGANG SYSTEM AT KUCHING

The Corporate Social Responsibility and Sustainability (CSRS) Department together with Health, Safety, Security & Environment (HSSE) Department have implemented a programme to improve the Tegulang Tagang system at Sungai Lekasi in collaboration with the Department of Agriculture (Inland Fisheries Division).

The implementation of the programme kicked off in 2018 with a dialogue conducted at Long Wat, Tegulang where a new committee was set up, led by chairman Lagan Alung from Long Wat.

Following this, the first gotong-royong activity was conducted from 16 - 17 April 2019 at Sungai Lekasi.

About 100 people including the villagers of Long Wat and Long Malim Penan, staff from Sarawak Energy and Belaga Agriculture Office participated in the activity which involved repairs on all the facilities at site and refurbishment of the pathway leading to the Sungai Lekasi waterfall.

From 22 - 23 May 2019, Sarawak Energy's CSRS Department organised a study-visit for the Tegulang Tagang System committee to expose the team to more knowledge and experience on the Tagang system. The group of 14 visited three successful Tagang system sites along Kuching-Serian road namely Kampung Danu, Kampung Praya and Kampung Terbat. Murum HEP Station Manager Encharang Ngtingih was also present during the two-day study visit.

During the trip, an officer from the Sarawak Inland Fisheries conducted a short seminar introducing Tagang System and the assistance available for the committees to apply from Inland Fisheries to further boost their Tagang System.



Officer from Sarawak Inland Fisheries conducted a short briefing introducing Tagang System.

TRANSPARENCY & COMMUNITY ENGAGEMENT

SARAWAK ENERGY ENGAGES STAKEHOLDERS ON BALEH HEP

Sarawak Energy recognises that project stakeholders are co-partners in any development initiative. The Company upholds the principle of giving its stakeholders the information they need in order to participate in an informed manner. During the year, the Company continued to hold regular dialogues and briefing sessions for Government and community stakeholders with the intent to disseminate information and to gather their views or concerns regarding the project. Through Sarawak Energy's existing project liaison team in Kapit, the Company is constantly updated on issues on the ground, providing communities with an accessible channel to voice their concerns.

Sarawak Energy also held a briefing and dialogue session in Kapit to update Government officials and community leaders on community investment initiatives, community engagement activities and the current progress of Baleh HEP.

This formed part of Sarawak Energy's efforts to ensure stakeholders in Baleh and Kapit affected by the Baleh HEP are informed of the project. The session was a continuation of Sarawak Energy's commitment to international best practices for hydropower development, under which regular engagements and dialogue sessions with the Baleh community and stakeholders have been held since 2012.

The session was co-chaired by Kapit Resident, Nyurak Keti and Sarawak Energy's General Manager for Corporate Social Responsibility and Sustainability, Jiwari Abdullah.

At the session, Sarawak Energy shared progress updates of Baleh HEP with the attendees and discussed its ongoing engagement activities and community investment initiatives for Baleh and Kapit.

Throughout 2019, Sarawak Energy also held various dialogues and briefing sessions with community representative groups such as the Persatuan Kebajikan Penduduk Baleh (PKPB) and the Pertubuhan Kebajikan Nanga Antawau Kapit (PKNAK) to foster better relationships with community stakeholders. The engagements have always focused on issues that matter most to the communities and ensure that the Company's initiatives minimise any adverse impacts, while exploring opportunities to enhance the positive impacts of our initiatives to the communities.

Sarawak Energy's community development initiatives are planned and implemented in alignment to the International Hydropower Association's (IHA) Hydropower Sustainability Assessment Protocol (HSAP), International Finance Corporation (IFC), Equator Principles, United Nations Declaration on the Rights of Indigenous People (UNDRIP), the principles of Free, Prior and Informed Consent (FPIC), and the World Commission on Dams (WCD).

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Independent Third Party Assurance Statement



energy

Independent Assurance Report To Management of Sarawak Energy Berhad

We have been engaged by Sarawak Energy Berhad ("SEB") to perform an independent limited assurance engagement on selected Sustainability Information (hereon after referred to as "Selected Information" comprising the information set out in the Subject Matter) as reported in its Advancing Towards Climate Action Sustainability Report for financial year ended 31 December 2019 ("SEB Sustainability Report 2019").

Management's Responsibility

Management of SEB is responsible for the preparation of the Selected Information included in the SEB Sustainability Report 2019 in accordance with the SEB's internal sustainability reporting guidelines and procedures.

This responsibility includes the selection and application of appropriate methods to prepare the Selected Information reported in the SEB Sustainability Report 2019 as well as the design, implementation and maintenance of processes relevant for the preparation. Furthermore, the responsibility includes the use of assumptions and estimates for disclosures made by SEB which are reasonable in the circumstances.

Our Responsibility

Our responsibility is to provide a conclusion on the Subject Matter based on our limited assurance engagement performed in accordance with the approved standard for assurance engagements in Malaysia, International Standard on Assurance Engagements (ISAE) 3000 "Assurance Engagements Other Than Audits or Reviews of Historical Financial Information". This standard requires that we comply with ethical requirements, and plan and perform the assurance engagement under consideration of materiality to express our conclusion with limited assurance.

Our Responsibility (continued)

The accuracy of the Selected Information is subject to inherent limitations given their nature and methods for determining, calculating and estimating such data.

Our limited assurance report should therefore be read in connection with SEB's internal sustainability reporting guidelines and procedures on the reporting of its sustainability performance.

In a limited assurance engagement, the evidencegathering procedures are more limited than for a reasonable assurance engagement, and therefore less assurance is obtained than in a reasonable assurance engagement.

The following information collectively known as Selected Information on which we provide limited assurance consists of the management and reporting processes with respect to the preparation of the following eight (8) Selected Information reported and marked with asterisks (*) in SEB Sustainability Report 2019 as follows:

- 1. Main Grid CO2 Emission Intensity (tCO2/MWh) for the financial year 2019:
 - · Fuel consumption (FCj);
 - · Net energy generated (NEGj);
 - Net calorific value (NCVi):
- 2. Northern Grid CO2 Emission Intensity (tCO2/MWh) for the financial year 2019:
- Fuel consumption (FCi);
- · Net energy generated (NEGj);
- · Net calorific value (NCVj);
- 3. Scheduled Waste Generation Intensity (MT/GWh) for the financial year 2019:
- · Volume of waste generated (MT);
- · Gross electricity generated (GEGj);

PricewaterhouseCoopers PLT (LLP0014401-LCA & AF 1146), Chartered Accountants, Level 10, 1 Sentral, Jalan Rakyat, Kuala Lumpur Sentral, P.O. Box 10192, 50706 Kuala Lumpur, Malaysia T: +60 (3) 2173 1188, F: +60 (3) 2173 1288, www.pwc.com/my



Subject Matter (continued)

- 4. Total Water Withdrawal by Source (m3) for the financial year 2010:
 - Municipal water (m³);
 - · Natural water (m3) and Operating hours
- 5. Annual Water Volume for Electricity Generation (million m3) for the financial year 2019:
- · Operating hours (Hrs);
- 6. Economic Value Retained (RM) for the financial vear 2019:
- 7. Total Value of Tenders Awarded to Local Sarawakian Companies (RM) for the financial year 2019:
- · Operations (RM);
- · Capital works (RM); and
- 8. Loss Time Injury Frequency Rate (LTIFR) for the financial year 2019:
- · Total loss time injury cases;
- · Total man hours (Hrs).

Criteria

SEB's internal sustainability reporting guidelines and procedures by which the Selected Information is gathered, collated and aggregated internally.

Main Assurance Procedures

Our work, which involved no independent examination of any of the underlying financial information, included the following procedures:

- · Inquiries of personnel responsible for the Selected Information reported in SEB Sustainability Report 2019 regarding the processes to prepare the said report and the underlying controls over those processes;
- · Inquiries of personnel responsible for data collection at the corporate, division and operation unit level for the Selected Information:

Main Assurance Procedures (continued)

Our work, which involved no independent examination of any of the underlying financial information, included the following procedures: (continued)

- · Inspection on a sample basis of internal documents, contracts, reports, data capture forms and invoices to support the Selected Information for accuracy including observation of management's controls over the processes;
- · Inquiries of personnel on the collation and reporting of the Selected Information at the corporate, division and operation unit level; and
- · Checking the formulas, proxies and default values used in the Selected Information against SEB's sustainability reporting guidelines and procedures.

Independence and Quality Control

We have complied with the relevant independence requirements and other ethical requirements of the International Ethics Standards Board for Accountants' Code of Ethics for Professional Accountants, which are founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

We apply International Standard on Quality Control 1 "Quality Control for Firms that Perform Audits and Reviews of Financial Statements, and Other Assurance and Related Services Engagements", and accordingly maintain a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

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TCFD



Conclusion

Based on our limited assurance engagement, in all material aspects, nothing has come to our attention that causes us to believe that the Selected Information in the Subject Matter has not been fairly stated in accordance with SEB's internal sustainability reporting guidelines and procedures.

Restriction of use

This report, including our conclusions, has been prepared solely for the Board of Directors and management of SEB in accordance with the agreement between us, in connection with the performance of an independent limited assurance on the Selected Information in the Subject Matter as reported by SEB in its SEB Sustainability Report 2019. Accordingly, this report should not be used or relied upon for any other purposes. We consent to the inclusion of this report in the SEB Sustainability Report 2019 and to be disclosed online at www.sarawakenergy.com.my, in respect of the 2019 financial year, to assist the Directors in responding to their governance responsibilities by obtaining an independent assurance report in connection with the Selected Information. As a result, we will not accept any liability or assume responsibility to any other party to whom our report is shown or into whose hands it may come. Any reliance on this report by any third party is entirely at its own risk.

Pricewaterhousecoopers plt

Kuala Lumpur 18 September 2020

LLP0014401-LCA & AF 1146 Chartered Accountants

GRI CONTENT INDEX FOR 'IN ACCORDANCE' - CORE

Number	Disclosure little	Page/Direct Reference	Assurance	Disclosure	ICFD
	undation 2016				
General Disc	neral Disclosures 201	c			
		0			
Organisation		Carry of Francis Dark of (Carry of Francis and the Carry on A			
102-1	Name of the organization	Sarawak Energy Berhad (Sarawak Energy or the Company)			
102-2	Activities, brands,	Chairman's Statement, p. 14 - 18;			
	products, and	Group CEO's Statement, p. 19 - 27;			
	services	About Sarawak Energy, p. 5;			
		Our Corporate Structure, p. 32;			
		Energy for Sarawak, p. 10 - 13			
102-3	Location of headquarters	Menara Sarawak Energy, No. 1, The Isthmus, 93050 Kuching, Sarawak.			
102-4	Location of operations	Sarawak, Malaysia			
102-5	Ownership and	The principal activity of the Company is that of an investment			
	legal form	holding company and information on the Company's structure			
		can be found on p. 32			
102-6	Markets served	In general, the Company serves two types of customers:			
		 a) Organic – domestic, commercial, industrial and public lighting; b Bulk – SCORE customers and interconnection 			
		See Sustainable Energy Future for Sarawak and Beyond, p. 8			
102-7	Scale of the organization	Our Corporate Structure, p. 32	•		
102-8	Information on	Developing Our People, p. 59 - 65;	Ν	lo 8 – Promote	
	employees and	Health, Safety, Security and Environment, p. 66 - 69	ir	nclusive and	
	other workers	Leaving No One Behind, p. 137 - 141	S	ustainable economic	
				rowth, employment	
			a	nd decent work for all	
102-9	Supply chain	About Sarawak Energy, p. 5, Sustainable Energy Future for Sarawak and Beyond, p. 8 - 9			
102-10	Significant changes to the organisation and its supply chain	Changes are highlighted under Our Corporate Structure p. 32			
102-11	Precautionary Principle or approach	Chairman's Statement, p. 14 - 18; Group CEO's Statement, p. 19 - 27	•		



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Disclosure Number	Disclosure Title	Page/Direct Reference	External Assurance	SDG linkage to Disclosure	TCFD
102-12	External initiatives	The following is a list of externally developed economic, environmental and social charters, principles or other initiatives to which the Company subscribes to or endorses: • Hydropower Sustainability Assessment Protocol (HSAP) • United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) • Global Reporting Initiative (GRI) • Equator Principles • International Finance Corporation (IFC) • UN Global Compact (UNGC) • World Commission on Dams • ISO14001 • OSHA			
102-13	Membership of associations	As part of the Company's commitment towards sustainability, Sarawak Energy signed a "Sustainability Partnership" with the International Hydropower Association (IHA) in early 2011, which requires the company to use the Hydropower Sustainability Assessment Protocol as a tool to assess its performance against criteria concerning the project management of social, economic and environmental issues, as well as putting into place adequate and appropriate mitigation measures. Sarawak Energy is a GRI Gold Community Member and also on the Board of Advisory for the UN Global Compact Network Malaysia.			
Strategy		maayoa.			
102-14	Statement from the most senior decision-maker	Chairman's Statement, p. 14 - 18			
102-15	Key impacts, risks, and opportunities	Group CEO's Statement, p. 19 - 27 Statement on Risk Management and Internal Control, p. 47 - 49; Board Audit and Risk Committee Report, p. 50; Advancing Climate Action, p. 105 - 111			
Ethics And Ir	itegrity				
102-16	Values, principles, standards, and norms of behavior	Chairman's Statement, p. 14 - 18; Vision, Mission and Living Our Values, p. 6 - 7; Group CEO's Statement, p. 19 - 27	i 1 0 6 6	No 16 – Promote peaceful and nclusive societies for sustainable development, provide access to justice for all and build effective, accountable and nclusive institutions at all levels	
Governance					
102-18	Governance	Group Organisation Structure, p. 33; Sustainability Governance, p. 98 - 99			

Disclosure Number	Disclosure Title	Page/Direct Reference	External Assurance	SDG linkage to Disclosure	TCFD
Stakeholder	Engagement				
102-40	List of stakeholder groups	About This Report, p. 3			
102-41	Collective bargaining agreements	Terms as agreed in Collective Agreement are extended to all nonexecutive staff under Sarawak Energy Group (except for Bakun HEP – parented staff).		No 8 – Promote inclusive and sustainable economic growth, employment and decent work for all	
102-42	Identifying and selecting stakeholders	About This Report, p. 3; Materiality Issues, p. 91			
102-43	Approach to stakeholder engagement	Corporate Event Highlights, p. 86 - 87; Materiality Issues, p. 91; Contributing to Local Business, p. 117; Investing in Society, p. 144 - 145; Transparency & Community Engagement, p. 153			
102-44	Key topics and concerns raised	Materiality Issues, p. 91			
Reporting P	ractice				
102-45	Entities included in the consolidated financial statements	Our Corporate Structure, pg. 32			
102-46	Defining report content and topic Boundaries	About This Report, p. 3			
102-47	List of material topics	Materiality Issues, p. 91			
102-48	Restatements of information	No restatements have been made.			
102-49	Changes in reporting	Materiality Issues, p. 91			
102-50	Reporting period	From 1 January 2019 until 31 December 2019. See About This Report, p. 3			
102-51	Date of most recent report	The Company's 2018 Sustainability Report.			
102-52	Reporting cycle	The Company plans to publish its Sustainability Report on an annual basis.			
102-53	Contact point for questions regarding the report	General questions regarding this report can be addressed to Corporate Communication Department and Sustainability Division at:			
		Menara Sarawak Energy, Level 8, No. 1, The Isthmus, 93050 Kuching, Sarawak. Tel: 082-388 388 (ext. 8164/8165)			



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102-54	Claims of reporting in accordance with the GRI Standards	This report has been prepared in accordance with the GRI Standards: Core option			
102-55	GRI content index	See p. 157 - 189			
102-56	External assurance	Disclosures within this year's edition of the Sarawak Energy Sustainability Report that are subjected to external assurance are: (p. 154 - 156) Main Grid CO ₂ Emission Intensity Northern Grid CO ₂ Emission Intensity Scheduled Waste Generation Intensity Annual Water Volume for Electricity Generation Total Water Withdrawal by Source Economic Value Retained Total Value of Tenders Awarded to Local Sarawakian Companies Loss Time Injury Frequency Rate (LTIFR)	Yes		
Material Top	pics				
Economic Po	erformance				
GRI 103: Ma	nagement Approach :	2016			
103-1	Explanation of the material topic and its Boundary	Our Strategic Roadmap, p. 54; Catalysing Growth, p. 113			
103-2	The management approach and its components	Delivering on Our Strategy, p 57; Catalysing Growth, p. 113			
103-3	Evaluation of the management approach	Delivering on Our Strategy, p 57; Catalysing Growth, p. 113			
GRI 201: Ecc	nomic Performance 2	2016			
201-1	Direct economic value generated and distributed	Catalysing Growth, p. 112 - 114	Yes	No 2 – End hunger, achieve food security and improved nutrition and promote sustainable agriculture	
Indirect Eco	nomic Impacts				
GRI 103: Ma	nagement Approach 2	2016			
103-1	Explanation of the material topic and its Boundary	Our Strategic Roadmap, 54; Investing in Society, p. 142			
103-2	The management approach and its components	Delivering on Our Strategy, p 57; Energy for Sarawak, p. 10 - 13; Leaving No One Behind, p. 136 & 142 (see CSR Spending); Investing in Society, p. 142 - 152; Transparency & Community Engagement, p. 153			

Disclosure Number	Disclosure Title	Page/Di	rect Refere	ence			ternal surance	SDG linkage to Disclosure	TCFD
103-3	Evaluation of the management approach	Sustainable Energy Future for Sarawak and Beyond, p. 8 - 9; Leaving No One Behind, p. 136 & 142 (see CSR Spending); Lighting Up Sarawak, p. 142; Investing in Society, p. 142 - 143, 145 - 147 & 151							
GRI 203: Ind	irect Economic Impac	ts 2016							
203-1	Infrastructure investments and services supported	Sustainable Energy Future for Sarawak and Beyond, p. 8 - 9; Energy for Sarawak, p. 10 - 13; Leaving No One Behind, p. 136 & 142 (see CSR Spending); Lighting Up Sarawak, p. 142; Investing in Society, p. 142 - 143, 145 - 147 & 151						No 7 – Ensure access to affordable, reliable, sustainable and modern energy for all	
		Average Tariff (sen/kWh) (Yea	r 2015 - 20)19) by Cus	tomer Typ	pe		No 9 – Build resilient infrastructure,	
			Year 2015	Year 2016	Year 2017	Year 2018	Year 2019	promote inclusive and sustainable	
		Average Organic	28.50	28.20	28.04	27.96	28.22	industrialisation and foster innovation	
		Domestic	28.24	28.30	28.21	28.27	28.47	loster innovation	
		Commercial	31.15	30.53	30.54	30.50	30.65	No 11 – Make cities	
		Public Lighting	47.09	47.12	47.18	47.17	47.20	and human settlements	
		Industrial	24.48	24.15	23.86	23.69	24.16	inclusive, safe, resilient and sustainable	
203-2	Significant indirect economic impacts	Leaving No One Behind, p. 13 Lighting Up Sarawak, p. 142; Investing in Society, p. 142 - 1						No 1 – End poverty in all its forms everywhere No 2 – End hunger, achieve food security and improved nutrition and promote sustainable agriculture No 8 – Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all No 10 – Reduce inequality within and among countries	

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Materials

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GRI 103: Management Approach 2016

material topic and its Boundary

Explanation of the Managing Our Environmental Footprint, p. 125

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						No 17 – Strengthe	en
						the means of	
						implementation	
						and revitalise the	
						global partnership)
						for sustainable	
						development	
Procuremen							
3RI 103: Ma	nagement Approach 2						
103-1	Explanation of the	Contributing to Loca	l Business, p. 116	- 117			
	material topic and its Boundary						
103-2	The management	Contributing to Loca	l Business, p. 116	- 117			
	approach and its						
	components						
103-3	Evaluation of the	Contributing to Loca	l Business, p. 116	- 117			
	management						
	approach						
GRI 204: Pro	curement Practices 20	016					
204-1	Proportion of	Performance at a Gla	ance, p. 90;		Yes	No 12 – Ensure	
	spending on local	Internalising The Glo	bal Agenda (UNS	sustainable			
	suppliers	Creating Long-Term	Value, p. 97;	consumption and			
		Contributing to Loca	l Business, p. 116	- 117		production patter	ns
		Tenders Awarded	Status	Year 2016	Year 2017	Year 2018	Year 2019
		Capital Works	Sarawakian	445,710,032.50	1,620,376,421.35 ²	625,917,773.91 ¹	416,366,166.99
			Malaysia	138,620,455.11	501,190,506.73	266,245,214.38	274,575,584.00
			(Non-				
			Sarawakian)				
			International	1,565,861,871.58		1,095,210,392.28	299,412,243.00
		Operations and	Sarawakian	576,656,517.32	424,381,685.99 ²	564,066,169.62 ¹	822,335,735.58
		Maintenance	Malaysia	02 265 176 00	60 JEE JE2 22	26.020.762.67	EA 2A2 444 02
			Malaysia (Non	83,265,176.00	60,255,353.33	26,039,763.67	54,243,444.92
			(Non-				
			Sarawakian) International	86,858,228.00	67,673,539.04	30,992,905.85	52,732,516.13
			michialional	00,000,220.00	01,013,333.04	50,552,505.05	52,132,310.13

Disclosure Number	Disclosure Title		Page/Dire	ct Referenc	e		External Assurance	SDG linkage to Disclosure	TCFD
103-2	The management approach and its components	Energy for Sarawal Creating Long-Terr Climate Action Thr Advancing Climate Managing Our Env	n Value, p. 96 ough A Sustai Action (see i	; inable Energ nput), p. 11	gy Future, p. 1;				
103-3	Evaluation of the management approach	Creating Long-Terr Advancing Climate Managing Our Env	n Value, p. 97 Action (see c	; output), p. 1	11;				
GRI 301: Mat	terials 2016								
301-1	Materials used by weight or volume	Internalising The G Creating Long-Tern Advancing Climate Managing Our Env Category: Non-Re	n Value, p. 96 Action (see ii ironmental Fo	; nput), p. 11: potprint, p. 1	" 1; 132 - 133	p. 95;	Yes	No 8 – Promote sustained, inclusive and sustainable economic growth, full and productive	TCFD
		Plant Type	IICWUDIC IVIU	teriais Osco	Volume	Volume	Unit	employment and	
		Coal			(Year 2018) 2,038,842.21 ¹	(Year 2019) 3,064,825.62*	Unit	decent work for all	
		Diesel ³			20,393,035.80 ¹	12,584,999.55*	Litre	No 12 – Ensure	
		Natural Gas			35,891,301.46 ¹	36,756,369.74*	mmbtu	sustainable	
			2015	2016	2017	2010	2010		
		Coal	2,166,911.46	2,136,639.32	2,228,768.01	2018 2,038,842.21 ¹	2019 3,064,825.62*	consumption and	
		Diesel ³	19,194,869.94	23,425,847.71	15,675,168.40	20,393,035.80 ¹	12,584,999.55*	production patterns	
		Natural Gas 3 Diesel - excluding L Category: Renewa	imbang & Lawas	34,622,745.43 <u>S</u>	34,262,495.10	35,891,301.46 ¹	36,756,369.74*		
		Major Plant	Year	Annual Inflow	Annual water	Annual energy	Annual water		
				(million m³) (annual inflow from catchment)	volume for energy generation (million m³)	generated (GWh)	consumption (million m³) (Spillway discharge)		
			2019	m³) (annual inflow from catchment) 2,852	volume for energy generation (million m³) 2,844*	(GWh)	(million m³) (Spillway		
		Batang Ai	2019 2018	m³) (annual inflow from catchment) 2,852 3,576	volume for energy generation (million m³) 2,844* 3,647¹	(GWh) 391 481	(million m³) (Spillway discharge)		
			2019 2018 2017	m³) (annual inflow from catchment) 2,852 3,576 3,658	volume for energy generation (million m³) 2,844* 3,647¹ 3,397²	391 481 442	(million m³) (Spillway		
			2019 2018	m³) (annual inflow from catchment) 2,852 3,576	volume for energy generation (million m³) 2,844* 3,647¹	(GWh) 391 481	(million m³) (Spillway discharge)		
		Batang Ai	2019 2018 2017 2019	m³) (annual inflow from catchment) 2,852 3,576 3,658 8,183	volume for energy generation (million m³) 2,844° 3,647¹ 3,397² 7,532°	(GWh) 391 481 442 5,714	(million m³) (Spillway discharge)		
		Batang Ai	2019 2018 2017 2019 2018 2017 2019	m³) (annual inflow from catchment) 2,852 3,576 3,658 8,183 7,737 10,933 40,373	volume for energy generation (million m³) 2,844* 3,647¹ 3,397² 7,532* 8,022¹ 7,567² 38,827*	391 481 442 5,714 6,094 5,717 15,544	(million m²) (Spillway discharge) - - - - 432 3,588		
		Batang Ai	2019 2018 2017 2019 2018 2017 2019 2018	m³ (annual inflow from catchment) 2,852 3,576 3,658 8,183 7,737 10,933 40,373 40,481	volume for energy generation (million m³) 2,844* 3,647¹ 7,532* 8,022¹ 7,567² 38,822* 36,148¹	391 481 442 5,714 6,094 5,717 15,544	(million m³) (Spillway discharge) - - - - - - - - - - - - - - - - - - -		
		Batang Ai Murum Bakun	2019 2018 2017 2019 2018 2017 2019	m³) (annual inflow from catchment) 2,852 3,576 3,658 8,183 7,737 10,933 40,373	volume for energy generation (million m³) 2,844* 3,647¹ 3,397² 7,532* 8,022¹ 7,567² 38,827*	391 481 442 5,714 6,094 5,717 15,544	(million m²) (Spillway discharge) - - - - 432 3,588		
		Batang Ai Murum	2019 2018 2017 2019 2018 2017 2019 2018 2017 2019 2018 2017 colume for electricit inability Report 20 colume for electricit colume for electricit colume for electricit	m³i (annual inflow from catchment) 2,852 3,576 3,658 8,183 7,737 10,933 40,481 49,794 y generation dat 18. y generation dat	volume for energy generation (million m') 2,844* 3,647* 3,397* 7,532* 8,022* 7,567* 38,827* 36,148* 32,962* a and fuel consure that seen assure that seen assure that a day and fuel consure that and	391 481 442 5,714 6,094 5,717 15,544 14,482 13,078	(million m³) (Spillway discharge)		
Water and E	ffluents	Batang Ai Murum Bakun Notes: 1 This annual water v third party for Susta 2 This annual water v Report 2017. 1 This annual water v	2019 2018 2017 2019 2018 2017 2019 2018 2017 2019 2018 2017 colume for electricit inability Report 20 colume for electricit colume for electricit colume for electricit	m³i (annual inflow from catchment) 2,852 3,576 3,658 8,183 7,737 10,933 40,481 49,794 y generation dat 18. y generation dat	volume for energy generation (million m') 2,844* 3,647* 3,397* 7,532* 8,022* 7,567* 38,827* 36,148* 32,962* a and fuel consure that seen assure that seen assure that a day and fuel consure that and	391 481 442 5,714 6,094 5,717 15,544 14,482 13,078	(million m³) (Spillway discharge)		
	ffluents nagement Approach 2	Batang Ai Murum Bakun Notes: 1 This annual water v third party for Susta 2 This annual water v Report 2017. 1 This annual water v third party. Read the	2019 2018 2017 2019 2018 2017 2019 2018 2017 2019 2018 2017 colume for electricit inability Report 20 colume for electricit colume for electricit colume for electricit	m³i (annual inflow from catchment) 2,852 3,576 3,658 8,183 7,737 10,933 40,481 49,794 y generation dat 18. y generation dat	volume for energy generation (million m') 2,844* 3,647* 3,397* 7,532* 8,022* 7,567* 38,827* 36,148* 32,962* a and fuel consure that seen assure that seen assure that a day and fuel consure that and	391 481 442 5,714 6,094 5,717 15,544 14,482 13,078	(million m³) (Spillway discharge)		
		Batang Ai Murum Bakun Notes: 1 This annual water v third party for Susta 2 This annual water v Report 2017. 1 This annual water v third party. Read the	2019 2018 2017 2019 2018 2017 2019 2018 2017 2019 2018 2017 colume for electricit inability Report 20 colume for electricit et Independent Assultation (Proposition of Proposition of Proposition of Proposition of Proposition of Proposition (Proposition of Proposition of Propos	m³ (annual inflow from catchment) 2,852 3,576 3,658 8,183 7,737 10,933 40,373 40,481 49,794 by generation datase of generation datase o	volume for energy generation (million m³) 2,844* 3,647¹ 3,397² 7,532* 8,022¹ 7,567² 38,827* 36,148¹ 32,962² a and fuel consurt a has been assured a and fuel consurt pages 154 - 156.	391 481 442 5,714 6,094 5,717 15,544 14,482 13,078 nption have been and a third party	(million m³) (Spillway discharge)		

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103-3	Evaluation of the management approach	_	ng-Term Valu)ur Environm		nt, p. 129 & 133				
GRI 303: Wa	ter and Effluents 2018	3							
303-3	Water withdrawal	Advancing (n (see input),	p. 111; nt, p. 128 - 129		availi susta mana	– Ensure ability and inable agement of wate sanitation for all	r
		Plant Type	Major Plant	Source	Total 2019	Total 2018	Total 2017	Total 2016	Total 2015
		Coal	Sejingkat Power Corp + PPLS	Municipal Sea water or other natural	1,140,932.00* 331,568,280.00*	1,386,373.00 ¹ 353,454,413.18 ¹	meter cubic (m³) 1,603,264.00² 366,695,496.00²	1,750,284.00 416,275,200.00	1,574,620.00 416,275,200.00
				water source	1 000 007 008	700 747 001	25.4.656.003		500 540 00
		Coal	Mukah Power Generation	Municipal Sea water or other natural water source	1,063,097.00* 392,610,711.74*	799,747.00 ¹ 385,871,040.00 ¹	854,666.00 ² 454,118,400.00 ²	775,245.00 396,509,120.00	526,540.00 454,118,400.00
		Combined Cycle - Natural Gas	SPG + Bintulu SESCO	Municipal Sea water or other natural water source	329,516.00* 241,935,030.72*	220,611.00¹ 227,489,565.60¹	145,623.00 ² 212,876,380.80 ²	122,406.00 249,789,230.68	80,096.00 180,623,764.80
		Open Cycle - Natural Gas	Miri SESCO	Municipal Sea water or other natural water source	23,803.00* N/A	9,225.00 ¹ N/A	12,154.00 ² N/A	10,036.00 N/A	18,978.00 N/A
		Diesel	Sg Biawak SESCO	Municipal Sea water or other natural water source	6,896.13* -	13,952.50¹ 69,650.00¹	21,192.00 ² 1,171,360.00 ²	22,402.14 2,143,090.00	9,196.72 1,590,050.00
		Diesel	Non Grid- Limbang	Municipal	40,859.00	22,992.00	19.44	30.52	34.84
		Diesel	Non Grid- Lawas	Municipal	2,837.00	656.00	299.00	239.00	247.00
		² This total v	vater withdrawal b	y source data has	been assured by a third been assured by a third been assured by a third	party for Sustainabilit	y Report 2017.	rt on pages 154 - 156.	
Biodiversity									
GRI 103: Ma	nagement Approach 2	2016							
103-1	Explanation of the material topic and its Boundary	Managing (Our Environm	ental Footpri	nt, p. 134				
103-2	The management approach and its components	p. 71 - 74;	Our Environm		ent (see Environi nt, p. 130 - 131 8				
103-3	Evaluation of the management approach	•		ental Footpri	nt, p. 134 - 135				

Disclosure Number	Disclosure Title	Page/Direct Reference	External Assurance	SDG linkage to Disclosure	TCFD
GRI 304: Bio	diversity 2016				
304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	Health, Safety, Security and Environment (see Environment), p. 71 & 73; Internalising The Global Agenda (UNSDGs) (see SDG 15), p. 95; Managing Our Environmental Footprint, p. 130 - 132 & p. 134 - 135		No 6 – Ensure availability and sustainable management of water and sanitation for all No 14 – Conserve and sustainably use the oceans, seas and marine resources for sustainable development No 15 – Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss	
304-2	Significant impacts of activities, products, and services on biodiversity	Health, Safety, Security and Environment (see Environment), p. 71 & 73; Internalising The Global Agenda (UNSDGs) (see SDG 15), p. 95; Managing Our Environmental Footprint, p. 130 - 132 & p. 134 - 135		No 6 – Ensure availability and sustainable management of water and sanitation for all No 14 – Conserve and sustainably use the oceans, seas and marine resources for sustainable development No 15 – Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss	



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Disclosure Number	Disclosure Title		Page/Di	rect Referen	ce		External Assurance	SDG linkage to Disclosure	TCFD
Emissions									
GRI 103: Mai	nagement Approach 2	2016							
103-1	Explanation of the material topic and its Boundary	Climate Action T Managing Our En	_			. 103;			
103-2	The management approach and its components	Climate Action T p. 100 - 101 & p. Advancing Clima	103;		rgy Future,				
103-3	Evaluation of the management approach	Advancing Clima Managing Our Er			. 124 - 127				
GRI 305: Emi	ssions 2016								
305-1	Direct (Scope 1) GHG emissions	Advancing Clima Managing Our Er	nvironmental	Footprint, p	. 126		Yes	No 3 – Ensure healthy lives and promote well-being for all at all	TCFD
		Gross direct (Sco	pe 1) GHG e	missions in n	netric tonnes	of CO ₂ equi	valent	ages	
		Grid		missions	Total Emiss	ions To	tal Emissions		
			(tCO ₂ ec	q) (2017)	(tCO ₂ eq) (20	018) (to	CO ₂ eq) (2019)	No 12 – Ensure	
		Main	5,32	5,836.68	5,151,39	5.75	6,396,443.52	sustainable	
		Northern	9	8,042.77	102,83	7.43	109,853.90	consumption and	
		Stand-Alone	1	1,033.58	13,81	2.44	15,198.07	•	
		Total tCO ₂ eq Emission	5,43	4,913.03	5,268,04	5.62	6,521,495.49	production patterns	
		Total CO ₂ Emissi	ion (Main Gr	id)				No 13 – Take urgent action to combat	
		POWER STATION (MAIN GRID)	2015	2016	2017	2018	2019	climate change and its	
		PPLS Power Generation	770,033.30	828,257.76	848,625.75	707,251.87	696,414.64	impacts	
		Sejingkat Power Corp.	836,758.64	889,123.60	916,769.06	854,293.99	679,102.24	No 14 – Conserve and sustainably use	
		Mukah Power Sdn. Bhd.	1,678,345.18	1,572,390.67	1,658,355.86	1,609,253.91	1,583,760.57	the oceans, seas and marine resources	
		Balingian Power Generation	-	-	-	-	1,421,849.38	for sustainable development	
		Sarawak Power Generation	501,310.17	928,015.97	825,960.98	950,543.09	950,176.27	,	
		Bintulu PS	446,329.02	407,590.29	526,667.34	545,729.43	520,204.55		
		Miri PS	521,034.44	547,229.20	533,748.96	483,172.32	542,358.24		
		Sg Biawak PS	21,514.69	30,496.82	15,708.73	1,151.14	2,577.62		
		Total tCO ₂ eq Emission (Main Grid)	4,775,325.45	5,203,104.31	5,325,836.68	5,151,395.75	6,396,443.52		

Disclosure Number	Disclosure Title		Page/Dir	ect Referenc	e		External Assurance	SDG linkage to Disclosure	TCF
		Total CO ₂ Emission	on (Northerr	n Grid)			Yes	No 15 – Protect,	TCF
		POWER STATION (NORTHERN GRID)	2015	2016	2017	2018	2019	restore and promote sustainable use of terrestrial ecosystems,	
		Limbang PS	60,939.51	63,859.92	61,989.99	64,433.37	67,024.79	sustainably manage	
		Lawas PS	35,234.70	39,870.99	36,052.77	38,404.06	42,829.11	forests, combat	
		Total tCO ₂ eq Emission (Northern Grid	96,174.21	103,730.91	98,042.76	102,837.43	109,853.90	desertification, and halt and reverse land degradation and halt	
		Total Overall Star	nd-alone Gri		biodiversity loss				
		POWER STATION (STAND-ALONE GRID)	2015	2016	2017	2018	2019		
		Kapit PS	0.00	55.35	30.09	119.98	0.00		
		Belaga PS	3,636.68	3,700.47	3,505.23	3,632.72	3,891.50		
		Song PS	0.00	0.00	0.00	3,066.06	4,986.42		
		Ng Mujong PS	185.23	220.55	218.59	221.73	165.78		
		Ng Ngungun PS	933.79	1,095.53	1,118.42	748.49	0.00		
		Ng Jagau PS	178.61	214.01	226.73	233.08	248.29		
		Ng Entawau PS	247.75	293.29	295.67	303.40	294.58		
		Mulu PS	2,177.35	2,111.50	2,033.42	1,671.70	1,602.54		
		Long Lama PS	2,518.51	2,721.80	2,762.67	2,933.86	3,078.09		
		Banting PS	238.22	246.50	264.05	288.33	314.20		
		Paloh PS	544.46	570.85	578.71	593.11	616.67		
		Kg Bruit PS	966.12	8.92	0.00	0.00	0.00		
		Kg Saai PS	268.97	1.82	0.00	0.00	0.00		
		Bakun- Sg Asap PS	126.89	45.18	0.00	0.00	0.00		
		Total tCO ₂ eq Emission (Stand- Alone Grid)	12,022.58	11,285.77	11,033.58	13,812.44	15,198.07		

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Disclosure Number	Disclosure Title		Page/Direct Reference	e	Exte		G linkage to Disclosure	TCFD
- Trumber		Total Net Energy G	enerated for Main Grid	ds	Ye		Jisciosui C	TCFD
		Plant Type	POWER STATION	2015	2016	2017	2018	2019
		Coal	PPLS Power Generation	700,422.90	722,881.10	673,687.00	614,127.50 ¹	518,672.85*
		Coal	Sejingkat Power Corp.	702,452.10	720,113.20	684,111.00	593,489.90¹	505,914.49*
		Coal	Mukah Power Sdn. Bhd.	1,478,459.86	1,328,886.32	1,494,404.00	1,401,963.65 ¹	1,343,966.90*
		Coal	Balingian Power	-	-	-	-	1,421,724.40*
			Generation					
		BTU-Combined Cycle	Sarawak Power Generation	1,026,084.62	2,088,595.82	1,738,199.00	2,023,026.021	2,106,253.75*
		BTU-Open Cycle	Bintulu PS	486,779.46	405,355.13	614,311.00	661,306.76¹	615,465.59*
		Miri-Open Cycle	Miri PS	509,402.69	562,562.83	516,563.00	487,506.50¹	535,371.43*
		Diesel-Standby	Sg Biawak PS	22,737.11	33,584.08	16,183.00	-567.91 ¹	887.78*
		Total MWh		4,926,338.74	5,861,978.48	5,737,458.00	5,780,852.421	7,048,257.18*
		Plant Type	Plant	2015	2016	2017	2018	2019
		Hydropower	Batang Ai	315,331.46	444,514.18	442,324.00	480,586.75 ¹	386,993.39*
		Hydropower	Bakun	7,721,996.75	12,161,263.00	13,078,267.00	14,351,890.00¹	15,424,402.00*
		Hydropower	Murum	2,129,021.85	3,437,479.87	5,717,385.00	6,053,056.70 ¹	5,688,832.30*
		Hydropower	Lundu PS	3,965.96	3,236.00	2,618.21	2,852.54 ¹	3,024.10*
		Total MWh		10,170,316.02	16,046,493.05	19,240,594.21	20,888,385.98 ¹	21,503,251.79*
		Total Net Energy G	enerated for Stand-Alo	one Grids				
		Plant Type	Plant	2015	2016	2017	2018	2019
		Diesel	Kapit PS		_	-	96.78	-
		Diesel	Belaga PS	4,054.91	4,144.13	3,969.62	4,238.20	4,256.13
		Diesel	Song PS	=	-	-	3,816.98	6,222.96
		Diesel	Ng Mujong PS	205.38	243.70	244.37	250.40	177.63
		Diesel	Ng Ngungun PS	1,084.81	1,262.96	1,292.73	858.68	0.00
		Diesel	Ng Jagau PS	123.31	155.97	210.12	210.37	218.24
		Diesel	Ng Entawau PS	278.93	330.61	319.70	343.93	328.64
		Diesel	Mulu PS	2,423.58	2,262.76	2,110.91	1,877.34	1,641.00
		Diesel	Long Lama PS	3,069.97	3,301.29	3,283.94	3,519.90	3,628.99
		Diesel	Banting PS	244.52	263.54	293.73	319.15	342.47
		Diesel	Paloh PS	616.39	641.65	633.83	662.52	699.00
		Diesel	Kg Bruit PS	1,064.10	5.56	-	-	-
		Diesel	Kg Saai PS	289.88	-	=	-	-
		Diesel	Bakun- Sg Asap PS	56.00				
		Total MWh		13,511.78	12,612.17	12,358.95	16,194.25	17,515.05
			enerated (Northern Gi	rids)				
		Total Net Energy G	,	•	2016	2017	2012	2019
		Total Net Energy Go	Plant	2015	2016 86 650 77	2017 84 837 18	2018 87 494 23 ¹	2019
		Total Net Energy Go Plant Type Diesel	Plant Limbang PS	2015 85,331.79	86,650.77	84,837.18	87,494.23 ¹	90,569.93*
		Total Net Energy Go	Plant	2015				

This net energy generated data has been assured by a third party for Sustainability Report 2018.

* This net energy generated data has been assured by a third party. Read the Independent Assurance Report on pages 154 - 156.

Disclosure Number	Disclosure Title	Page/Direct Reference				External SDG linkage to Assurance Disclosure		_		
						Yes				
		Plant Type	Plant	2015	2016	2017	2018	2019		
		Mini Hydro	Lawas M/H (Kalamuku)	-	2,388.01	2,378.72	2,549.86 ¹	2,012.81*		
		Mini Hydro	Lawas M/H (Sg.Kota)	-	4,698.30	8,916.80	8,508.60 ¹	5,843.57*		
		Mini Hydro	Sg. Kejin	-	0.02	-	-	-		
		Total MWh		-	7,086.33	11,295.52	11,058.46¹	7,856.38*		
		_	Notes: This net energy generated data has been assured by a third party for Sustainability Report 2018. This net energy generated data has been assured by a third party. Read the Independent Assurance Report on pages 154 - 156.							
		2. Net Energy Ge	 Fuel consumption, fuel Calorific Value & fuel Specific Density (for CO₂ emission calculations) data obtained from OpX Net Energy Generated for main grid connected power plants (using OpX data) – Request for both grid Thermal & Hydro (Batang Ai, Bakun & Murum) 							

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Disclosure Number	Disclosure Title	Page/Direct Reference	External Assurance	SDG linkage to Disclosure	TCFD
Number 305-4	GHG emissions intensity	Sustainable Energy Future for Sarawak and Beyond, p. 8; Sustainability Key Highlights (see Performance at a Glance), p. 90; Internalising The Global Agenda (UNSDGs) (see SDG 13), p. 93; Creating Long-Term Value, p. 97; Climate Action Through A Sustainable Energy Future, p. 100; Advancing Climate Action, p. 111; Managing Our Environmental Footprint, p. 124 - 127 Sarawak Energy CO ₂ Intensity for Northern Grid (2010 - 2019) 0.710 0.700 0.690 0.680 0.690 0.680 0.659 0.660 0.650 0.650 0.660 0.650 0.660 0.650 0.660 0.650 0.660 0.650 0.660 0.650 0.660 0.650 0.670 0.680 0.680 0.670 0.680 0.678 0.680 0.678 0.680 0.678 0.680 0.678 0.680 0.678 0.680 0.678 0.680 0.678 0.680 0.678 0.680 0.678 0.680 0.678 0.680 0.678 0.680 0.679 0.680 0.679 0.680 0.679 0.680 0.670 0.670 0.678 0.678 0.680 0.670 0.678 0.678 0.678 0.678 0.680 0.679 0.680 0.679 0.680 0.679 0.680 0.670 0.680 0.680 0.680 0.680 0.680 0.680 0.680 0.680 0.680 0.680 0.690 0.6	Yes	No 3 – Ensure healthy lives and promote well-being for all at all ages No 12 – Ensure sustainable consumption and production patterns No 13 – Take urgent action to combat climate change and its Impacts No 14 – Conserve and sustainably use the oceans, seas and marine resources for sustainable development No 15 – Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat	TCFD
		0.900 0.913 0.876 0.882 0.890 0.893 0.868 0.850 0.816 0.750 0.700 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019		desertification, and halt and reverse land degradation and halt biodiversity loss	

Disclosure Number	Disclosure Title		Page,	/Direct Reference		External Assurance	SDG linkage to Disclosure	TCFD
		Plant	ts CO ₂ Intensity (tCO ₂	eq/MWh) – Main Gi	Yes		TCFD	
		Year	Plant (Main Grid)	Total CO ₂ Emission	Gross Energy Generated from Thermal	CO ₂ Intensity (tCO ₂ eq/ MWh)		
			Sejingkat Power Corp	916,769.06	727,761.85	1.260		
			PPLS	848,625.75	767,523.86	1.106		
			MPG	1,658,355.86	1,666,942.34	0.995		
		2017	SPG	825,960.98	1,772,772.00	0.466		
			Bintulu SESCO	526,667.34	621,355.60	0.848		
			Miri SESCO	533,748.96	523,907.27	1.019		
			Sg Biawak SESCO	15,708.73	18,255.47	0.860		
			Sejingkat Power Corp	854,293.99	673,672.50	1.268		
			PPLS	707,251.87	675,296.00	1.047		
			MPG	1,609,253.91	1,573,521.05	1.023		
		2018	SPG	950,543.09	2,059,519.80	0.462		
			Bintulu SESCO	545,729.43	670,339.06	0.814		
			Miri SESCO	483,172.32	493,843.86	0.978		
			Sg Biawak SESCO	1,151.14	1,044.31	1.102		
			Sejingkat Power Corp	679,102.24	553,289.86	1.227		
			PPLS	696,414.64	637,196.85	1.093		
			MPG	1,583,760.57	1,515,106.28	1.045		
		2019	BPG	1,421,849.38	1,562,639.57	0.910		
		2013	SPG	950,176.27	2,145,919.00	0.443		
			Bintulu SESCO	520,204.55	625,274.14	0.832		
			Miri SESCO	542,358.24	541,988.30	1.001		
			Sg Biawak SESCO	2,577.62	2,127.20	1.212		
305-5	Reduction of GHG	Intern	nalising The Global Ag	enda (UNSDGs) (see	SDG 13), p. 93;		No 13 – Take urgent	
	emissions		ging Our Environmen				action to combat	
			0 0	1 /1			climate change and its	
							impacts	
							No 14 – Conserve	
							and sustainably use	
							the oceans, seas and	
							marine resources	
							for sustainable	
							development	
							No 15 – Protect,	
							restore and promote	
							· · · · · · · · · · · · · · · · · · ·	
							sustainable use of	
							terrestrial ecosystems,	
							sustainably manage	
							forests, combat	
							iorests, combat	
							desertification, and	
							desertification, and halt and reverse land	
							desertification, and	

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Disclosure Number	Disclosure Title		Page/[Direct Reference		External Assurance	SDG linkage to Disclosure	TCFD
305-7	Nitrogen oxides (NO _x), sulfur oxides (SO _x), and other significant air emissions	Mana	ging Our Environmenta	al Footprint, p. 124, p. 129			No 3 – Ensure health lives and promote we being for all at all agen No 12 – Ensure sustainable consumption and production patterns No 14 – Conserve and sustainably use the oceans, seas and marine resources for sustainable development No 15 – Protect, restore and promote sustainable use of terrestrial ecosystem sustainably manage forests, combat desertification, and halt and reverse land degradation and hall biodiversity loss	esll- es d
		Year	Plant (Main Grid)	Gross Energy	Total SO _x	Total	^ ^	NO _x Intensity
				Generated from Thermal (kWh)	Emission (kg)	Emission	(kg) (kgSO _x / kWh)	(kgNO _x / kWh)
			Sejingkat Power Corp	727,761,852.00	1,267,457.84	250	0.19 1.74 x 10 ⁻³	3.44 x 10 ⁻⁷
			PPLS	767,523,858.00	763,044.42		5.21 9.94 x 10 ⁻⁴	2.93 x 10 ⁻⁷
			MPG	1,666,942,336.00	1,528,744.32		1.90 9.17 x 10 ⁻⁴	
		2017	SPG	1,772,772,000.00	3,299.93	1,841,892	·	
			Bintulu SESCO	621,355,600.00	152,755.93	858	3.34 2.46 x 10 ⁻⁴	1.38 x 10 ⁻⁶
			Miri SESCO	523,907,270.00	4,446.65	49,716		9.49 x 10 ⁻⁵
			Sg Biawak SESCO	18,255,470.00	417.42		2.54 2.29 x 10 ⁻⁵	1.39 x 10 ⁻⁷
			Sejingkat Power Corp	673,672,500.00	614,470.31		9.67 9.12 x 10 ⁻⁴	
			PPLS	675,296,000.00	479,441.87		1.42 7.10 x 10 ⁻⁴	
		2010	MPG SPG	1,573,521,047.00	495,377.29		2.41 3.15 x 10 ⁻⁴	
		2018		2,059,519,800.00	35,473.30	1,036,442		
			Bintulu SESCO Miri SESCO	670,339,060.00 493,843,860.00	31,551.82 306.44	8,190		1.46 x 10°
			Sg Biawak SESCO	1,044,310.00	0.00		0.00 0.00	0.00
		Va - ::						
		Year	Plant (Main Grid)	Gross Energy	Total SO _x	Total		NO _x Intensity
				Generated from Thermal (kWh)	Emission (kg)	Emission	(kg) (kgSO _x / kWh)	(kgNO _x / kWh)
			Sejingkat Power Corp	553,289,860.00	89,848.99	16	5.42 1.62 x 10 ⁻⁴	2.97 x 10 ⁻⁸
			PPLS	637,196,850.00	91,591.63		0.50 1.44 x 10 ⁻⁴	
			MPG	1,515,106,278.00	251,154.40		9.96 1.66 x 10 ⁻⁴	
		2019	SPG	2,145,919,000.00	8,765.45	2,305,925		
			Bintulu SESCO	625,274,140.00	12,003.51	130	0.25 1.92 x 10 ⁻⁵	2.08 x 10 ⁻⁷
			Miri SESCO	541,988,300.00	965.92	83	3.38 1.78 x 10 ⁻⁶	1.54 x 10 ⁻⁷
				- : = / /				

Disclosure Number	Disclosure Title		Page/Dir	ect Referenc	e		External Assurance	SDG linkage to Disclosure	TCFD
Waste									
GRI 103: Mai	nagement Approach 2	2016							
103-1	Explanation of the material topic and its Boundary	Health, Safe p. 72 - 73	ety, Security and En	vironment (s	ee Environm	ent),			
103-2	The management approach and its components	Health, Safe p. 72 - 73	ety, Security and En	vironment (s	ee Environm	ent),			
103-3	Evaluation of the management approach	_	Climate Action, p. 1 Our Environmental F	*	128 - 129				
GRI 306: Was	ste 2020								
306-3	Waste generated	p. 73; Advancing (Managing (ety, Security and En Climate Action, p. 1 Our Environmental F	11; Footprint, p.	127 - 128 Waste Quantity	by Year (MT)	Yes	No 12 – Ensure sustainable consumption and production patterns	
		Lludes	Used Oil	2016 9.81	2017 16.06	2018	2019		
		Hydro	Contaminated Items	7.73	3.63	56.53 5.33	127.13 8.34		
			E-Waste	7.73	0.08	0.38	1.77		
			Chemicals		0.05	0.14	0.73		
			Total	17.54	19.82	62.96	137.98*		
		Thermal	Used Oil	180.08	233.01	274.86	276.00		
			Fly Ash	63,159.42	65,152.64	46,552.92	80,394.56		
			Bottom Ash	90,614.83	92,723.06	87,253.96	78,636.51		
			Others (Contaminated Items, E-Waste, Gas Condensate, Contaminated Soil and Chemicals)	32.27	50.45	75.75	59.74		
			Total	153,986.60	158,159.16	134,157.50	159,366.81*		
			Grand Total Juled waste generation inte Report on pages 154 - 156		158,178.98 In assured by a thin	134,220.12 rd party. Read the	159,504.78* e Independent		

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Disclosure Number	Disclosure Title	Page/Direct Reference	External Assurance	SDG linkage to Disclosure	TCFD
Environmen	tal Compliance				
GRI 103: Mai	nagement Approach 2	2016			
103-1	Explanation of the material topic and its Boundary	Health, Safety, Security and Environment (see Environment), p. 71 - 72			
103-2	The management approach and its components	Health, Safety, Security and Environment (see Environment), p. 72 - 73; In Recognition of Our Efforts (see Contractor EIA Compliance Awards 2019), p. 83; Managing Our Environmental Footprint, p. 135			
103-3	Evaluation of the management approach	In Recognition of Our Efforts (see Contractor EIA Compliance Awards 2019), p. 83			
GRI 307: Env	ironmental Complian	ce 2016			
307-1	Non- compliance with environmental laws and regulations	 The Company was fined RM 2,000 for violating Environmental Quality (Scheduled Wastes) Regulation 2005 at Limbang Power Station on 6 September 2019. The Company was fined RM 2,000 for violating Environmental Quality (Control of Emission from Diesel Engines) Regulation 1996 in Limbang on 30 September 2019. 		No 16 – Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels	
Employment					
	nagement Approach 2	2016			
103-1	Explanation of the material topic and its Boundary	Developing Our People, p. 59			
103-2	The management approach and its components	Developing Our People, p. 59 - 63 & p. 65	•		
103-3	Evaluation of the management approach	Health, Safety, Security and Environment, p. 58; Developing Our People, p. 64			
GRI 401: Em	oloyment 2016				
401-1	New employee hires and employee turnover	Creating Long-Term Value, p. 97; Leaving No One Behind, p. 137		No 5 – Achieve gender equality and empower all women and girls	
				No 8 – Promote sustained, inclusive and sustainable economic growth, full and productive employment	

Disclosure Number	Disclosure Title			Page	/Direct	t Refei	ence				Extern Assurar			linkage sclosur		Т	CFD
		New Hires a	and Tu	ırnover	by Gen	der ar	nd Age										
		New Hires (by		2015			2016			2017			2018			2019	
			Men	Women	TOTAL	Men	Women	TOTAL	Men	Women	TOTAL	Men	Women	TOTAL	Men	Women	TOTAL
		Gender) Total number	172	70	242	190	68	258	278	70	348	227	77	304	258	110	368
		By age, in	1/2	70	242	190	00	230	2/0	70	340			304	230	110	300
		numbers															
		Up to 30 years	145	54	199	167	56	223	244	59	303	158	58	216	159	67	226
		old	143	24	155	107	50	223	244	33	303	136	20	210	133	07	220
		Between 31	27	16	43	20	12	32	20	10	30	51	17	68	99	43	142
			21	10	45	20	12	32	20	10	30	31	17	00	33	43	142
		and 50 years															
		old									45						
		Over 50 years	0	0	0	3	0	3	14	1	15	18	2	20			
		old															
		Staff Turnover		2015			2016			2017			2018			2019	
			Mari		TOTAL	Mari		TOTA	N.4		TOTA	Mari		TOTA	Mari		TOTAL
		(by Gender)	Men	Women	TOTAL	Men	Women	TOTAL	Men	Women	TOTAL	Men	Women	TOTAL	Men	Women	TOTAL
		Total number By age, in	84	25	109	86	28	114	95	42	137	128	32	160	147	26	173
		numbers Up to 30 years	27	11	38	25	16	41	28	21	49	18	19	37	76	23	99
			21	11	30	23	10	41	20	21	49	10	15	3/	70	23	33
		old Between 31	29	7	36	34	10	44	19	8	27	21	7	28			
			29	,	30	34	10	44	19	٥	21	21	/	20			
		and 50 years															
		old								40	64						
		Over 50 years	28	7	35	27	2	29	48	13	61	89	6	95	71	3	74
		old															
		New Hires	and Tu	ırnover	by Con	npany											
		New Hires (by		2015	,		2016			2017			2018			2019	
		Gender)	Men		TOTAL	Men	Women	TOTAL	Men	Women	TOTAL	Men	Women	ΤΟΤΔΙ	Men	Women	TOTAL
		Total	172	70	242	190	68	258	278	70	348	227	77	304	258	110	368
		By company, in															
		numbers															
		Sarawak Energy	2	0		82	37		254	61		227	77	304	258	110	368
		Berhad															
		Sejingkat Power	1	1		-	-			-							
		Mukah Power SESCO	7 93	1 51		- 51	- 21		1	-							
		Headquarters	93	51		51	21		'	4							
		SESCO Kuching	10	5		3	4		10	1						-	
		SESCO Sri Aman	2	0		1	0		0	2							
		SESCO Sarikei	0	0		1	0		2	1							
		SESCO Sibu	13	5		16	1		2	2							
		SESCO Bintulu	18	2		23	1		-	-							
		SESCO Miri	12	1		8	3		3	2							
		Balingian Power	14	4		5	1		1	2							
		Generation															
		Sarawak Hidro	-	-		-	-		0	0							
		Sdn Bhd															

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Disclosure Number	Disclosure Title			Page	/Direc	t Refer	ence				Extern Assuran			linkag isclosui		٦	rcfd
		Staff Turnover		2015			2016			2017			2018			2019	
		(by Company)	Men	Women		Men	Women	TOTAL	Men	Women		Men	Women		Men	Women	
		Total By company,	84	25	109	86	28	114	95	42	137	128	32	160	147	26	173
		in numbers															
		Sarawak	4	2		6	1		13	8		16	15		34	12	
		Energy Berhad															
		Sejingkat	3	1		3	1		2	0		3			11		
		Power Mukah Power	4	0		4	0		2	0		2			3		
		SESCO	24	16		37	17		45	17		52	8		37	10	
		Headquarters															
		SESCO Kuching SESCO Sri	7	0		13	<u>3</u> 0		11 0	9		18 6	2		14	1	
		Aman	O	O		'	Ü		O	O		Ü			,		
		SESCO Sarikei	1	0		3	1		2	0		2	1		11		
		SESCO Sibu	12	2		9	1		7	4		12	2		14		
		SESCO Bintulu SESCO Miri	13 16	1		5 3	0 4		<u>4</u> 8	<u>0</u>		7 10	2	-	7 12	1 1	
		Balingian	-	-		2	0		1	0		-	-		IZ	1	
		Power															
		Generation								-							
		Sarawak Hidro	-	-		-	-		0	0		40	15		1		
		Sdn Bhd	2045	2 520/													
		% Turnover rate % Turnover rate															
		% Turnover rate															
		% Turnover rate															
		% Turnover rate	2019 = 3	3.32%													
401-2	Benefits provided	Types of Leave			De	scription				Remarks	•	1	No 8 – Pi	romote			
	to full-time	Annual		Sarvice			0 days per	م ال۸	mnlovee	s received :		i	nclusive	and			
	employees that	Ailliuai		annum		, years = 2	o days per				of salary g	rade o	sustainal	ole eco	nomic		
	are not provided										, 0		growth,				
	•			Service	e 10 years	and above	e = 25 days						and dece			п	
	to temporary			per an	num								and dece	ent wor	K IOI a	11	
	or part-time	Maternity		90 cale	endar days	i		Limit	ted to 5 s	urviving ch	nildren						
	employees	Nursing		Maxim	um 60 cal	endar day	S	Unpa	aid								
		Paternity		7 cont	inuous cal	endar day	s	Limit	ted to 5 c	occasions							
		Hajj		40 day	S						uld serve fo	r					
										5 continuo	ous years	_					
		Unrecorded		30 woi	rking days	per annui	n- maximu	m Fort	he purpo		nina						
								:		Forces Trai	ning al Activities						
								•		si SESCO							
								•	Examin	ation							
								•		ali – 1 day							
								•	Charity								
				6.1:				•	Pilgrima	age		_					
		Study			t to terms ermined b												
		Compassionate			ing days	, соп	1	For r	nurnose	of attending	g the funera	al .					
		Compassionate		2 WOLK	ı _b uays						ing relatives						
								•	Spouse								
								•			natural, law	fully					
										d or stepch	ildren						
								•	Parents								
									Dar	in law							
								•	Parents								
		Overtime		Mavim	um of 15	working d	ave	• •	Childre	n's Spouse	E4 only and						

Disclosure Number	Disclosure Title	Pa	age/Direct Refere	nce	External Assurance	SDG linkage to Disclosure	TCFD
		Types of Leave	Description	Remark	rc		
			n-hospitalized = 22 days	Aggregate 60 days paid			
			spitalized = 60 days	leave per annum			
		Prolonged Illness •	On full salary for a ma period of 6 consecutiv On half salary for a fur of 6 consecutive mon Unpaid prolonged illn- a further period of 6 c	re months rther period ths ess leave for			
			months	onsecutive			
		Blood donors privilege 1 d	ay				
		Benefits					
		Type of Loan & Subsidies	Entitlement (RM)	Remarks			
		Housing (Interest Subsidy)	400,000.00	Same entitlement irrespective of sal	ary grade		
		Car (Interest Subsidy)	170,000.00	Top Management (SG1- SG5-B)			
			80,000.00	Managers (E5- E8) Executives (E1- E4)			
			50,000.00	Non-Executives (NE1- NE6)			
		Motorcycle Loan	7,000.00	All Staff			
		Computer Loan	3,000.00	All Staff			
		House Moving Expenses Subsid	y 1,500.00	Same entitlement irrespective of sal	ary grade		
		Welfare Funeral Financial Assist	ance				
		Deceased Person	Rate (RM)	Remarks			
		Serving Employee	3,000.00				
		Spouse & Children < 21 years of					
		Parents Retiree	3,000.00	Employees joined employment on o	r after 1st		
		New Benefits		September 2019 are not entitled			
		Reimbursement Subsidy	Rate (RM)				
			per year and per family				
		Healthy Living 500 per	year and per family				
		Notes: As of 1st September 2019, 4 new but the properties of the	ed) vised) ssidy (Revised) (Revised)	benefits have been revised and 1 has b	een discontinued.		
-	al Health and Safety						
	nagement Approach						
103-1	Explanation of the material topic and	Health, Safety, Security Leaving No One Behind		, p. 66;			

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Disclosure Number	Disclosure Title	Page/Direct Reference	External Assurance	SDG linkage to Disclosure	TCFD
103-2	The management approach and its components	Health, Safety, Security and Environment, p. 66 - 71; Leaving No One Behind, p. 140 - 141			
103-3	Evaluation of the management approach	Leaving No One Behind, p. 140 - 141;			
GRI 403: Occ	upational Health and	Safety 2018			
403-9	Work-related injuries	Management Discussion and Analysis, p. 28; Delivering on Our Strategy, p. 57; Leaving No One Behind, p. 136, p. 139 - 140	Yes	No 3 – Ensure healthy lives and promote wellbeing for all at all ages No 8 – Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	
403-10	Work-related ill health	Health, Safety, Security and Environment, p. 72; Leaving No One Behind, p. 140 - 141		No 3 – Ensure healthy lives and promote wellbeing for all at all ages No 8 – Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	
Training and	Education				
GRI 103: Ma	nagement Approach 2	2016			
103-1	Explanation of the material topic and its Boundary	Developing Our People, p. 61			
103-2	The management approach and its components	Developing Our People, p. 61; Leaving No One Behind, p. 139			
103-3	Evaluation of the management approach	Creating Long-Term Value, p. 97; Leaving No One Behind, p. 138			

				_						
Disclosure	Disclosure Title	Page/	Direct R	eference			E	ternal	SDG linkage to	TCFD
Number							As	surance	Disclosure	
GRI 404: Trai	ning and Education 2	016								
404-1	Average hours of	Leaving No One Behind,	p. 138						No 4 – Ensure	
.0.1	training per year		•	rs Record	ded by (ategory			inclusive and	
	• · ·		_		•	Lategory				
	per employee	and Gender (Internal Co	urses) t	01 201/	- 2019				equitable quality	
		Year		017		018		019	education	
		Total Number of employees by	Male	Female	Male	Female	Male	Female	and promote	
		Category Management	38	4	55	11	8	1	lifelong learning	
		Executive	385	188	362	134	251	88	opportunities for all	
		Non Executive	2,569	216	1,908	126	1,734	121		
		Total hours of training by	Male	Female	Male	Female	Male	Female	No 5 – Achieve	
		category							gender equality and	
		Management	371	70	574	119	112	14	<u> </u>	
		Executive Non Executive	5,870 36,855	2,811	5,579 26,916	2,045 1,420	5,303 32,273	1,903 2,521	empower all women	
		Average hours of training by	Male	Female	Male	Female	Male	Female	and girls	
		category								
		Management	9.76	17.50	10.44	10.82	14.00	14.00	No 8 – Promote	
		Executive	15.25	14.95	15.41	15.26	21.13	21.63	- sustained, inclusive	
		Non Executive	14.35	12.64	14.11	11.27	18.61	20.83	and sustainable	
		Total and Average Training	Hours I	Recorded	by Cate	gory and	Gender			
		(In-House Courses) for 20			, 50.00	J , ww			economic growth,	
		(iii-iiouse courses) ioi 20.	., - 2013						full and productive	
		Year	20	017	20	018	20	019	employment and	
		Total Number of employees by	Male	Female	Male	Female	Male	Female	decent work for all	
		category	_	_	41	1.4	1.5	9		
		Management Executive	528	259	41 569	283	15 179	64	-	
		Non Executive	1,406	202	2,632	285	955	72	-	
		Total hours of training by	Male	Female	Male	Female	Male	Female		
		category								
		Management	-		441	294	210	140		
		Executive Non Executive	8,531	3,920	7,119	3,157	3,618	1,599	-	
		Non Executive Average hours of training by	22,845 Male	2,893 Female	35,622 Male	3,046 Female	14,692 Male	1,078 Female		
		category	ie	· amaie	·Fiule	· Sindle	mule	· cinaic		
		Management	-	-	10.76	21.00	14.00	15.56		
		Executive	16.16	15.14	12.51	11.16	20.21	24.98		
		Non Executive	16.25	14.32	13.53	10.69	15.38	14.97		
		Total and Average Train	ing Hou	rs Recor	ded by	Category	and G	ender		
		(External Courses) for 2	-			-310g0i y	J U			
		(LALEITIAI COUISES) for 2	017 - 20	,13						
		Year	20	017	20	018	20	019		
		Total Number of employees by	Male	Female	Male	Female	Male	Female		
		category			_					
		Management	120	55	77	32	31	10		
		Executive Non Executive	444 197	286	330 227	263	465 193	330 211	-	
		Total hours of training by	Male	Female	Male	Female	Male	Female		
		category	iviale	Telliale	iviale	Tentale	iviale	Telliale		
		Management	302	108	1,463	427	567	210		
		Executive	1,091	1,024	5,775	4,039	8,162	4,907		
		Non Executive	575	442	3,493	3,031	3,535	2,933		
		Average hours of training by	Male	Female	Male	Female	Male	Female		
		category								
		Management	2.52	1.96	19.00	13.34	18.29	21.00		
		Executive	2.46	3.58	17.50	15.36	17.55	14.87		
		Non Executive	2.92	1.93	15.39	13.59	18.32	13.90		



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Number		Total and Average Train (Leadership Courses) fo	ing Hou					surance	Disclosure	
				rs Recor	ded by	Category				
		(,,,,,,,,,			ucu by	catego: y	una o	uci		
		Year		017	20	018	20	019		
		Total Number of employees by category	Male	Female	Male	Female	Male	Female		
		Management	0	5	158	89	41	30		
		Executive Non Executive	256 252	198 58	109 15	89 9	100 51	61		
		Total hours of training by category	Male	Female	Male	Female	Male	Female		
		Management	0	105	3,129	1,547	824	1,192		
		Executive	3,548	2,759	2,135	1,624	2,136	1,304		
		Non Executive Average hours of training by	3,528 Male	812 Female	210 Male	126 Female	816 Male	16 Female		
		category	0.00	21.00	10.00	17.20	20.10	20.72		
		Management Executive	0.00	21.00 13.93	19.80 19.59	17.38 18.25	20.10	39.73 21.38		
		Non Executive	14.00	14.00	14.00	14.00	16.00	16.00		
404-2	Programs for upgrading employee skills and transition assistance programs	Developing Our People, p. Leaving No One Behind, p.							No 8 – Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	
404-3	Percentage of employees receiving regular performance	100%							No 5 – Achieve gender equality and empower all women and girls	
	and career development reviews								No 8 – Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	
Indigenous F	Rights									
=======================================	nagement Approach 2	2016								
103-1		Leaving No One Behind (se	ee Invest	ing in Soci	ety), p. 1	142				
103-2	The management approach and its components	Growing Our Brand, p. 81; Leaving No One Behind (se (see Transparency & Comr	ee Cultur				0 &			
103-3	Evaluation of the	Growing Our Brand, p. 81;		3 031	// 1 · = 0		······································			
103 3	management approach	Leaving No One Behind (see See Transparency & Comr	ee Cultur				0 &			
GRI 411: Riøł	nts of Indigenous Peo		, _	5 5	77.1					
411-1	Incidents of violations involving rights of indigenous peoples	There were no identified in rights of indigenous people							No 2 – End hunger, achieve food security and improved nutrition and promote sustainable agriculture	

Disclosure Number	Disclosure Title	Page/Direct Reference	External Assurance	SDG linkage to Disclosure	TCFD
Local Commu	ınities				
GRI 103: Man	agement Approach 2	2016			
103-1	Explanation of the material topic and its Boundary	Leaving No One Behind, p. 137			
103-2	The management approach and its components	Growing Our Brand, p. 81; Leaving No One Behind, p. 142 - 153			
103-3	Evaluation of the management approach	Growing Our Brand, p. 81; Leaving No One Behind, p. 142 - 153			
GRI 413: Loca	Il Communities 2016				
413-1	Operations with local community engagement, impact assessments, and development programs	100% of Sarawak Energy's operations involves and includes local community engagement, impact assessments and development programmes, particularly projects categorised under "prescribed activities" by the Natural Resources and Environment Board, Sarawak and Department of Environment.		No 16 – Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels	
Customer Pri	*				
GRI 103: Man	agement Approach 2	2016			
103-1	Explanation of the material topic and its Boundary	Our Strategy Roadmap, p. 56			
103-2	The management approach and its components	Delivering on Our Strategy, p. 57			
103-3	Evaluation of the management approach	Delivering on Our Strategy, p. 57			
GRI 418: Cust	omer Privacy 2016				
418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	There were no substantiated complaints regarding breaches of customerivacy and losses of customer data in 2019. Number of Calls Handled by Sarawak Energy Call Centre and Overs Service Level by Sarawak Energy Call Centre At Customer Care Centre, we aim to give our customers the optimal that they may feel valued and fairly treated. In line with that, our exe are trained to handle both billing and technical enquiries that meet to various needs of our customers. In terms of billing, we offer assistance to customers that covers new applications, billing and meter-related issues and general enquiries.	all services ecutives the	No 16 – Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels	
		Similarly, we also attend to technical enquiries such as outages, fault lights and other technical issues.	ry street		

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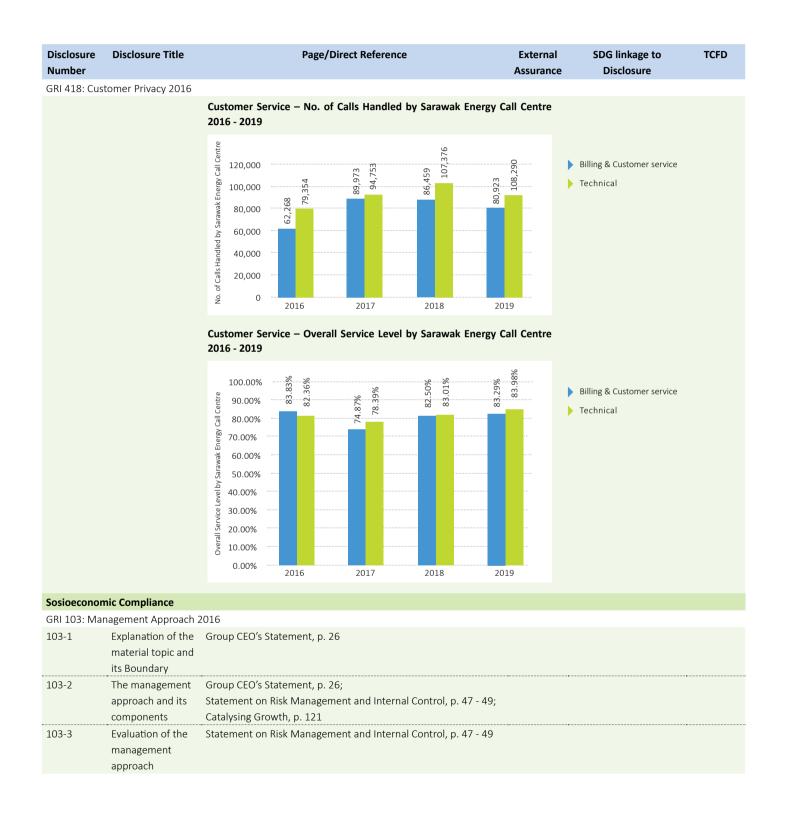
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Disclosure	Disclosure Title	Pa	ge/Direct Refer	ence		External	SDG linkage to	TCFD
Number						Assurance	Disclosure	
GRI 419: Soc	ioeconomic Complian	ce 2016						
419-1	Non-compliance with laws and regulations in the social and economic area	During the year under r fines for non-compliance i. Products and service ii. Marketing communand sponsorships However, an on-going of fatality involving a pede	ee with: les on informatio lications includin ourt case against		No 16 – Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels			
		24.12.2019 by the dece	•					
		Writ and Statement of C						
		came into contact with belonging to SESCO. The						
		bereavement.		ianni are aannae	500 4114			
ELECTRIC UT	ILITIES SECTOR DISCL	OSURES .						
Organisation	nal Profile							
	nagement Approach 2							
103-1	Explanation of the material topic and its Boundary	About Sarawak Energy, Sustainable Energy Fut	•	and Beyond, p.	8 - 9			
103-2	The management	Energy for Sarawak, p.	10 - 13;		•		•	
	approach and its components	Climate Action Throug	h A Sustainable E	nergy Future, p	p. 100 - 103			
103-3	Evaluation of the management	Advancing Climate Act	ion, p. 105 - 111					
Sector Disclo	approach sure: Organisational F	Profile						
EU1	Installed Capacity,	Energy for Sarawak, p.	11 - 12:				No 7 – Ensure access to	TCFD
	Broken Down by Primary Energy Source and by	Catalysing Growth, p. 1					affordable, reliable, sustainable and modern energy	
EU2	Regulatory Regime Net Energy Output	Maior Cald Community has	2047	2040	2040	Yes	for all No 7 – Ensure access	TCFD
202	Broken Down by Primary Energy	Major Grid Generation by Plants (GWh), by Energy Source	2017	2018	2019	103	to affordable, reliable,	1015
	Source and by	Hydro	442.22	400 501	205.00*		energy for all	
	Regulatory Regime	Batang Ai HEP Bakun HEP	442.32 13,078.27	480.59 ¹ 14,351.89 ¹	386.99* 15,424.40*		07	
		Murum HEP	5,717.39	6,053.06 ¹	5,688.83*		No 14 – Conserve	
		Lundu PS Coal	2.62	2.851	3.02*		and sustainably use	
		Sejingkat Power Corp.	684.11	593.49¹	505.91*		the oceans, seas and	
		PPLS Power Generation Mukah Power Sdn. Bhd.	673.69 1,494.40	1,401.96 ¹	518.67* 1,343.97*		marine resources	
		Balingian Power Generation	-	-	1,421.72*		for sustainable	
		Gas Miri PS	516.56	487.51 ¹	535.37*		development	
		Bintulu PS	614.31	661.311	615.47*			
		Sarawak Power Generation Diesel	1,738.20	2,023.031	2,106.25*			
		Sg Biawak PS	16.18	-0.571	0.89*			
		TOTAL ENERGY GENERATED Notes:	24,978.05	26,669.24 ¹	28,551.51*			
		This net energy generated 2018. This net energy generated Assurance Report on pages	data has been assured					



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Disclosure	Disclosure Title		Page	e/Direct Re	ference			External	SDG linkage to	TCFD
Number								Assurance	Disclosure	
EU3	Number of	Sustainable Er	ergy Future	for Sarawa	ak and Bey	ond, p. 8				
	Residential,		Grid	l / Non Grid No	o of Customer	s Ending 20	19			
	Industrial,	Grid	· · · ·	Tariff	No. of Act	•	of Inactive	Total No. of		
	Institutional				Custome	ers' (Customers'	Customers'		
					Acco	ınt	Account	Account		
	and Commercial	Grid		C1	95,7	'35	6,625	102,360		
	Customer Accounts	Grid		C2		18	1	19		
		Grid		C3		38	1	39	-	
		Grid		DOM	564,4	61	23,335	587,796		
		Grid		I1	9	001	24	925		
		Grid		12		36	3	39		
		Grid		13		87	4	91	-	
		Grid		14		13	0	13		
		Grid		PL	10,8	58	266	11,124		
		Non Grid		C1	3,9		235	4,221	_	
		Non Grid		DOM	19,1		1,051	20,203		
		Non Grid		I1 PL		23	3	23 291		
		Grand Total		PL	695,5		31,548	727,144	-	
		•						,-,,	•	
EU4	Length of Above	Internalising T		genda (UNS	SDGs) (see	SDG 7), p). 92		No 7 – Ensure access	
	and Underground	<u>Distribution L</u>	<u>ines</u>						to affordable, reliable,	
	Transmission and		To	Total Length of Distribution Lines in 2019					sustainable and modern	
	Distribution Lines	Region	33kV Dis	stribution	11kV Dis	tribution	415V D	istribution	energy for all	
	by Regulatory		O/H (km)	U/G (km)	O/H (km)	U/G (km)) O/H (km)	U/G (km)		
	Regime	WR Kuching	1,168.99	628.05	2,248.97	1,873.31	5,405.98	1,697.65		
		WR Sri Aman	860.14	65.76	1,589.59	180.60	1,425.37	98.21		
		CR Sarikei	303.58	60.35	653.82	99.52	1,251.02	117.16		
		CR Sibu	923.60	295.74	1,267.79	828.19	2,986.66	742.39	_	
		NR Bintulu	707.32	189.21	192.26	356.63	593.75	233.06	-	
		NR Miri NR Limbang	420.98 109.77	249.65 16.10	781.03 683.45	78.66	2,698.26 578.19	636.10 39.04	-	
		Total	4,494.37	1,504.86	7,416.89	4,029.11		3,563.61	-	
		Transmission	Lines							
		1141131111331011	Lines							
				tal Length of T						
			500k	V energized	275	kV	132kV	Total		
		Overbood (km)		at 275kV	1 542	20	461.40	2 201 20		
		Overhead (km) Underground (km))	376.5 0	1,543	0	461.40 23.47	2,381.29		
		Total (km)	,	376.5	1,543		484.87	2,404.76		
					,			·		
Availability	and Reliability									
GRI 103: Ma	nagement Approach 2	016								
103-1	Explanation of the	Group CEO's S	tatement, p	. 20						
	material topic and									
	its Boundary									
	The management	Group CEO's S	tatement n	. 20			.			
103-2	. The management	5.04P CEO 3 3	taternerit, p	. 20						
103-2										
103-2	approach and its									
	approach and its components	Our Donart C	rd 2010 =	E C						
103-2	approach and its components Evaluation of the	Our Report Ca	rd 2019, p.	56			.			
	approach and its components	Our Report Ca	rd 2019, p.	56						

ure r	Disclosure Title		Page/Direct	Reference		External Assurance	SDG linkage to Disclosure	
Disclos	sure: Availability & Re	liability						
10	Planned capacity	Peak demand is ex Energy for Sarawa Catalysing Growth	к, р. 11 - 12;	e to 4,755 MW	/ in 2022.		No 7 – Ensure access to affordable, reliable, sustainable and modern energy for all	
stem Efficie	ency							
	nagement Approach 2	2016						
103-1 103-2	Explanation of the material topic and its Boundary The management	Our Strategic Roadn Advancing Climate A	ction, p. 106;					
	approach and its components	Catalysing Growth, p	, 1Z1					
103-3	Evaluation of the management approach	Our Strategic Roadn	nap, p. 54					
Sector Disclos	sure: System Efficienc	CV						
EU11	Average generation	Plant Type	Major Plant	Total Average Energy Efficiency ¹ (%) – Year 2017	Total Average Energy Efficiency ¹ (%) – Year 2018	Total Average Energy Efficiency ¹ (%) – Year 2019	No 7 – Ensure access to affordable, reliable, sustainable and modern	
	efficiency of thermal plants	Coal	Sejingkat Power Corp	26.42%	26.39%	27.25%	energy for all	
	by energy source	Coal	PPLS	30.19%	31.80%	30.72%		
	and by regulatory	Coal	MPG	33.49%	32.70%	31.90%	No 8 – Promote	
	regime	Coal Combined Cycle- Natural Gas	SPG	38.22%	38.59%	35.57% 40.25%	sustained, inclusive and sustainable economic	
		Open Cycle- Natural Gas	Bintulu SESCO	20.94%	21.70%	21.22%	growth, full and	
		Open Cycle- Natural Gas	Miri SESCO	20.89%	21.89%	21.28%	productive employment	
		Diesel- Standby	Sg Biawak SESCO	31.19%	24.05%	22.14%	and decent work for all	
		Diesel- Non Grid	Limbang SESCO	37.08%	34.88%	34.69%		
		Note: Total average energy Northern grids.	Lawas SESCO efficiency for Sard	36.30% awak Energy therma	34.69% I power plants conr	34.40% nected to Main and	No 12 – Ensure sustainable consumption and production patterns	
							No 13 – Take urgent	
							action to combat	
							climate change and its	
							impacts	
							No 14 – Conserve	
							and sustainably use	
							the oceans, seas and	
							marine resources	
							for sustainable	
							development	

material topic and Group CEO's Statement, p. 26

The management Lighting Up Communities, p. 76 - 77; approach and its Leaving No One Behind, p. 142

Evaluation of the Management Discussion and Analysis, p. 29

its Boundary

components

management approach

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Disclosure Number	Disclosure Title		Pag	e/Direct R	eference			External Assurance	SDG linkage to Disclosure	TCFD
EU12	Transmission and distribution losses as a percentage of total energy	Total Numl	rowth, p. 121 per of Transm on (Year 2015 ace of Distribu		No 7 – Ensure access to affordable, reliable, sustainable and modern energy for all					
		Distribution- 33kV, 11kV, 4 (km)	31,71	2015 9.87 32	2016 ,802.64	2017 34,421.06	2018 35,095.00	2019 35,948.05	No 8 – Promote sustained, inclusive and sustainable economic	
	Transmission (km) 1,678.65 1,743.90 2,187.59 2,224.80 2,404.76 growth, full and productive employments Total 33,398.52 34,546.54 36,608.65 37,319.80 38,352.81 productive employments							growth, full and productive employment and decent work for all		
		Total Distance	Year	2015	2016		2018	2019	No 12 – Ensure sustainable consumption and	
		Number of Transmission Tripping	Substation Transmission Total	38 82	56 20 76	56	58 80	29 69 98	production patterns No 13 – Take urgent	
		Transmission Intensity (Trip	Tripping	0.049	0.044		0.036	0.041	action to combat climate change and its	
		Transmissi	on Tripping In	ntensity 20) 15 - 201 9				impacts	
		0.05 0.04 0.03 14 0.00 0.00	0	2016	20		036	2019	No 14 – Conserve and sustainably use the oceans, seas and marine resources for sustainable development	
Access	nagement Approach 2	2016								
GRI 103: Mai 103-1	Explanation of the		arawak, p. 10)						

Disclosure Number	Disclosure Title	Page/	SDG linkage to Disclosure	TCFD				
Sector Disclo	sure: Access							
EU26	Percentage of population unserved in licensed distribution or service areas	Sustainable Energy Future f Group CEO's Statement, p.: Lighting Up Communities, p. Internalising The Global Age Leaving No One Behind, p.: • State electricity coverage households electrified in	No 1 – End poverty in all its forms everywhere No 7 – Ensure access to affordable, reliable, sustainable and modern energy for all					
			NEW HOUSEHOLDS	CONNECTED				
		YEAR	2016	2017	2018	2019		
		Normal Rural Electrification Scheme (RES)	12,697	5,409	3,990	5,239		
		Hybrid Programmes	1,224	966	270	483		
		SARES	719	1,124	1,448	3,122		
		TOTAL	14,640	7,499	5,748	8,844		
EU27	Number of	Catalysing Growth, p. 121			······································		No 1 – End poverty in	
	residential disconnections for						all its forms everywhere	
	non-payments,						No 7 – Ensure access	
	broken down						to affordable, reliable,	
	by duration of disconnection						sustainable and modern energy for all	
	and by regulatory regime						energy for all	
EU28	Power outage	Group CEO's Statement, p. 2	20;				No 7 – Ensure access	
	frequency	Delivering on Our Strategy,	p. 57;				to affordable, reliable,	
		Catalysing Growth, p. 120					sustainable and modern	
		•					energy for all	
EU29	Average power	Energy for Sarawak, p. 13;					No 1 – End poverty in	
	outage duration	Group CEO's Statement, p. 1					all its forms everywhere	
		Delivering on Our Strategy,			-) 00		N. 7. Farmer	
		Sustainability Key Highlights					No 7 – Ensure access to affordable, reliable,	
		Internalising The Global Age Catalysing Growth, p. 120	enda (UNSDGS) i	(see SDG 7), p). 92;		sustainable and modern	
		Catalysing Glowth, p. 120					energy for all	
EU30	Average plant	Group CEO's Statement, p. 3	20:				No 1 – End poverty in	
	availability factor	Our Strategic Roadmap, p. 5					all its forms everywhere	
	by energy source	Internalising The Global Age	•	(see SDG 7), p	. 92		,	
	and by regulatory	-	,	,, ,			No 7 – Ensure access	
	regime						to affordable, reliable,	
							sustainable and modern	
							energy for all	

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Disclosure Title		Page,	Direct Referer	nce		External Assurance	SDG linka Disclos	_
			availability fac source (Therm					
			Year 20	17	Year 20)18	Year 20)19
	Plant Type	Major Plant	Equivalent Availability (%)	Forced Outage (Hours)	Equivalent Availability (%)	Forced Outage (Hours)	Equivalent Availability (%)	Forced Outage (Hours)
	Coal	Sejingkat Power Corp	85.91	62.01	88.45	340.77	73.32	3,998.20
	Coal	PPLS	90.48	217.80	88.63	433.95	89.56	1,191.70
	Coal	MPG	80.63	784.57	79.33	547.42	75.43	519.98
	Coal	BPG	-	-	-		41.48	5.88
	Combined Cycle – Natural Gas	SPG	71.88	1,050.09	88.61	87.63	88.25	252.24
	Open Cycle – Natural Gas	Bintulu SESCO	87.58	963.93	91.17	196.93	91.10	642.26
	Open Cycle – Natural Gas	Miri SESCO	75.47	1,365.65	77.96	712.03	93.48	273.45
	Diesel – Standby	Sg Biawak SESCO	92.24	992.93	87.12	4,106.30	99.06	32.29
	Diesel – Non Grid	Limbang SESCO	97.87	145.50	95.08	1,336.00	97.05	221.00
	Diesel – Non Grid	Lawas SESCO	72.30	29.00	76.26	0.00	74.57	1,560.00
			Year 20	117	Year 20	118	Year 20	119
	Plant Type	Major Plant	Availability	Forced	Availability	Forced	Availability	Forced
	, , , ,	,	(%)	Outage (Hours)	(%)	Outage (Hours)	(%)	Outage (Hours)
	Hydro	Batang Ai HEP	94.80	35.97	92.10	3.90	83.83	172.22
	Hydro	Murum HEP	95.19	48.24	96.08	170.94	85.09	1,076.91
	Hydro	Bakun HEP	93.56	1,662.82	92.23	23.37	97.13	482.17

Disclosure Number	Disclosure Title		Page/Direct Reference	External Assurance	SDG linkage to Disclosure	TCFD
Research an	d Development					
GRI 103: Ma	nagement Approach 2	2016				
103-1	·	Sustai	nable Energy Future for Sarawak and Beyond, p. 8	- 9		
	material topic and					
	its Boundary					
103-2	The management		ring New Energy, p. 75;			
	approach and its	Lighti	ng Up Communities, p. 77			
	components					
103-3	Evaluation of the		man's Statement, p.15;			
	management	Group	o CEO's Statement, p. 25			
Contan Dinala	approach osure: Research & Dev	. مد مد ما م				
(Former	Research and		ring New Energy, p. 75;		No 7 – Ensure access	
EU8)	development		ng Up Communities, p. 77		to affordable, reliable,	
EU8)	activity and expenditure	_	arch and Development Projects for 2019	sustainable and modern		
			• •		energy for all	
	aimed at providing	No.	Name of Project 2019	Approved Budget (RM)	chergy for un	
	reliability	1	Transformer Oil Laboratory	2,800,000.00	No 9 – Build resilient	
	electricity and	2	Refurbishment of Kalamuku MH- E&M Works	1,000,000.00	infrastructure,	
	promoting	3	Performance Monitoring System for SPC	1,000,000.00	promote inclusive	
	sustainable	4	Purchase of LIMS Software	800,000.00	and sustainable	
	development	5	Transformer Oil & Lubricating Oil Laboratory-Instruments, Equipment & Facilities	520,000.00	industrialisation and	
		6	Refurbishment of Sg Kejin Mini Hydro(CP)	332,041.07	foster innovation	
		7	GHG Monitoring of HEPs (CP)	150,000.00		
		8	Balingian Raw Water Monitoring	112,598.00	No 17 – Strengthen	
		9	Purchase of Equipment for Weather Monito	100,000.00	the means of	
		10	Hyd Env Sci Research Programmes	100,000.00	implementation and revitalise the	
		11	Gasification Plant at Paloh Power Station	88,537.50	global partnership	
		12	Covered Conductor Pilot Project	36,000.00	for sustainable	
		13 Remote Monitoring System 15,0		15,000.00	development	
		14	Soil Investigation Equipment	6,000.00	development	
			TOTAL	7,060,176.57		



ABOUT THIS REPORT

WE ARE SARAWAK ENERGY

LEADERSHIP STATEMENTS

A COMMITMENT TO GOVERNANCE

OUR KEY HIGHLIGHTS STRATEGY ALIGNED WITH VALUE CREATION

HOW WE'VE
PERFORMED

SUSTAINABILITY REPORT







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