

■  
To achieve **sustainable growth and prosperity** for Sarawak

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It became clear that the most compelling strategy for the State economic survival was to develop Sarawak's abundant energy resources. Estimated at 20,000 megawatts, Sarawak's hydropower potential alone, could drive economic growth and GDP (Gross Domestic Product) to Sarawak.

The Sarawak Corridor of Renewable Energy or SCORE concept was developed as a proactive initiative, to reflect the Government's determination to ensure a long term future for our economy and future generations.

Unlike fossil fuels, hydropower is clean and truly 'renewable'. The hydropower projects that Sarawak Energy builds today should last for a hundred years or more, providing not only an abundant supply of affordable and reliable electricity, but also the capacity for flood mitigation and opportunities in aquaculture and tourism.

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*Chairman - Datuk Amar Abdul Hamed bin Sepawi  
Sarawak Energy Berhad*

# TOWARDS SUSTAINABLE ENERGY

SUSTAINABILITY REPORT 2014

*The Penan kids at their Murum resettlement housing (2014)*







## KEY SUSTAINABILITY HIGHLIGHTS



TOTAL REVENUE

**RM2,826.3 mil**



TOTAL ELECTRICITY SALES

**13,440 GWh\***



SUSTAINABLE AND RENEWABLE ENERGY

**HYDROPOWER**

**8,957 GWh**

ELECTRICITY GENERATED

**2,744 MW**

INSTALLED CAPACITY

**CO<sub>2</sub>**

GRID CARBON EMISSION INTENSITY

**0.335\***

CO<sub>2</sub>-eq kg/kWh



TOTAL NUMBER OF SARAWAK ENERGY'S CUSTOMERS

CITY COUNCILS/MUNICIPALITY  
(PUBLIC LIGHTINGS)

**8,321**

ENERGY INTENSIVE  
CUSTOMERS (SCORE)

**8**

DOMESTIC/ COMMERCIAL/  
INDUSTRIAL

**606,673**

\* These total electricity sales and grid carbon emission intensity data have been independently verified. Read the Independent Assurance Report on pages 52 and 53

# TOWARDS SUSTAINABLE ENERGY

SUSTAINABILITY REPORT 2014

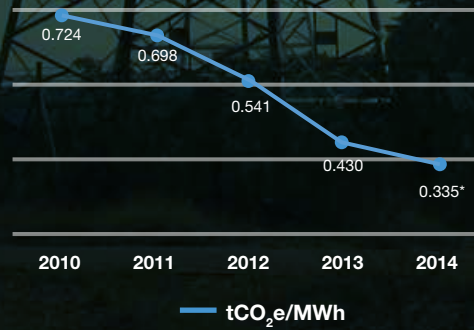
*The Penan kids at their Murum resettlement housing (2014)*





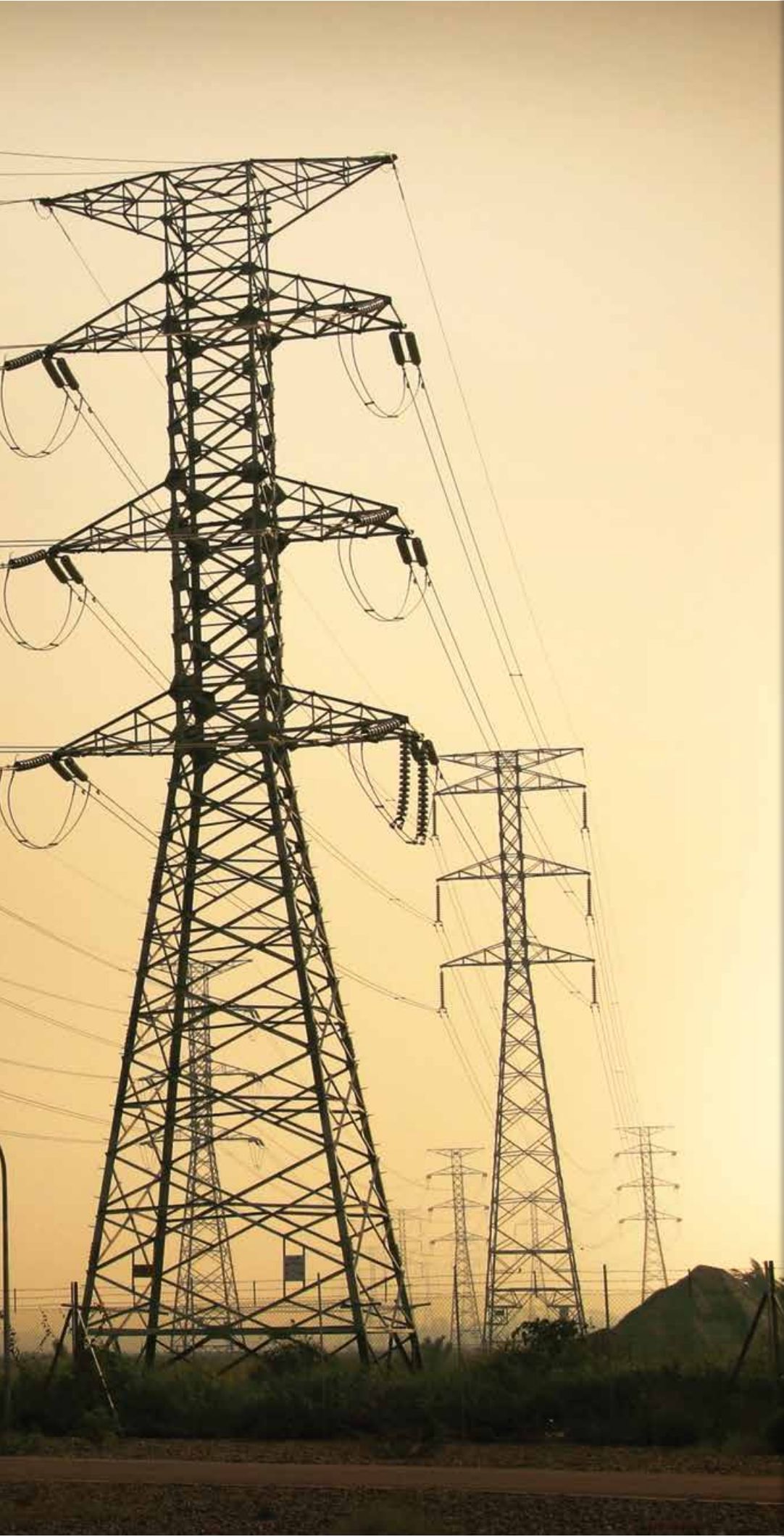


### Sarawak Energy CO<sub>2</sub> Grid Emission Intensity 2010 - 2014



\* This grid carbon emission intensity data has been independently verified. Read the Independent Assurance Report on pages 52 and 53





# OUR COMMITMENT TO THE ENVIRONMENT

For our children's future.

Caring for the environment is a key component of our business strategy, and an integral part of our vision to achieve sustainable growth for Sarawak by meeting the region's need for reliable, renewable energy.

## ENVIRONMENT HIGHLIGHTS

TOTAL CO<sub>2</sub>  
REDUCTIONS



# 2,008

(<sup>'000</sup> ton CO<sub>2</sub>)

*Only for Bintulu Gas Combined Cycle Power Plant*

TOTAL VOLUME OF  
CARBON EMISSION  
(<sup>'000</sup> ton CO<sub>2</sub>)

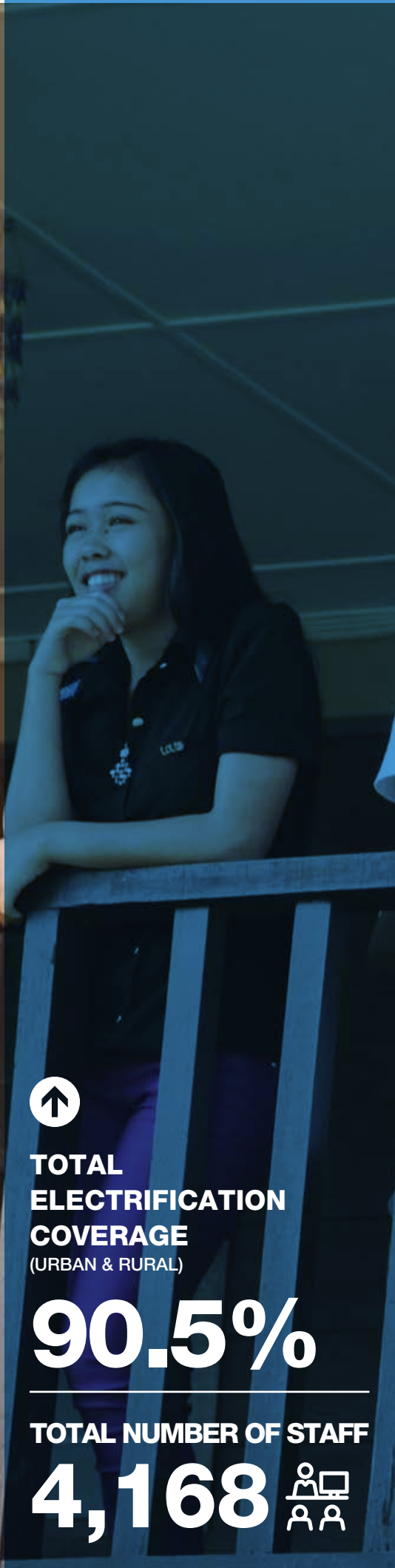
# 4,852

CARBON EMISSION  
INTENSITY  
(kg/kWh)

# 0.3335\*

\* This grid carbon emission intensity data has been independently verified. Read the Independent Assurance Report on pages 52 and 53





**TOTAL  
ELECTRIFICATION  
COVERAGE**  
(URBAN & RURAL)

**90.5%**

**TOTAL NUMBER OF STAFF**

**4,168**





# OUR SOCIAL COMMITMENT

Giving back to society.

Sarawak Energy is responsible towards the communities which are directly impacted by our development projects.

## SOCIAL HIGHLIGHTS

### LITERACY PROGRAMME



**476**  
PARTICIPANTS



**341**  
ARE NOW LITERATE

### TOTAL HOURS OF TRAINING



**2,891.5\***

HOURS

MANAGEMENT



**42,920\***

HOURS

EXECUTIVE



**110,017\***

HOURS

NON-EXECUTIVE

\* These total hours of training data have been independently verified. Read the Independent Assurance Report on pages 52 and 53





# System Average Interruption Duration Index (SAIDI)

(MINS/YR)

**189\***

# System Average Interruption Frequency Index (SAIFI)

(INTERRUPTION/YR)

**2.0**

\* This System Average Interruption Duration Index (SAIDI) data has been independently verified. Read the Independent Assurance Report on pages 52 and 53



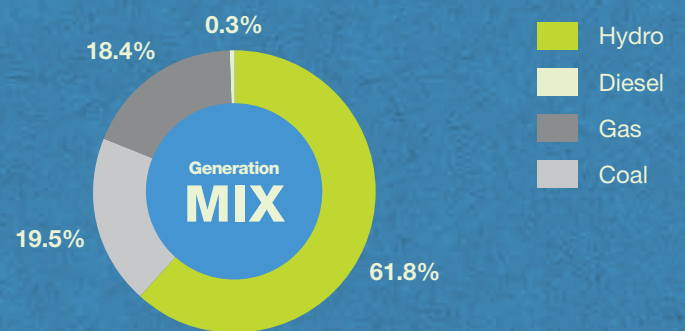


# HOW WE ENSURE ECONOMIC SUSTAINABILITY

Sustainable business practices.

Sarawak Energy adopts the Hydropower Sustainability Assessment Protocol (HSAP) in the development of its hydropower projects to ensure the projects are developed in a sustainable manner.

## ECONOMIC HIGHLIGHTS



TOTAL GENERATION CAPACITY

**3,933 MW**



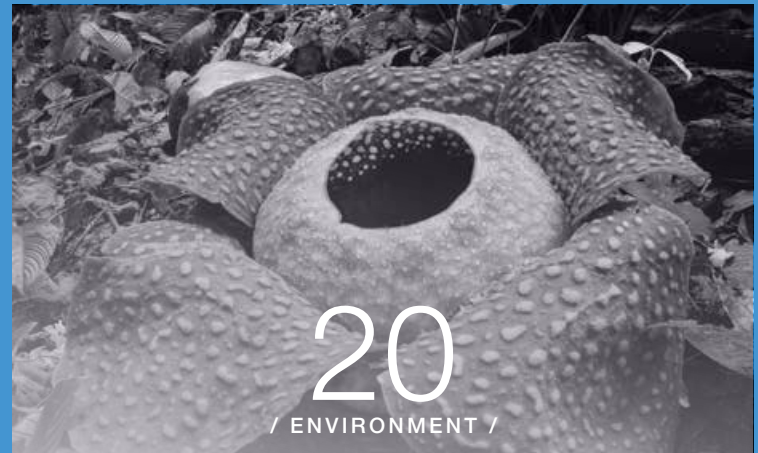
ECONOMIC VALUE RETAINED

**RM 710.5 mil**



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## ABOUT THIS REPORT

### SCOPE OF THE REPORT

This is Sarawak Energy's first Sustainability Report covering the role that we play as the key driver for Sarawak's economy, our business activities, and our impacts on the social, economic and environment. The report describes our approach to sustainability and the actions we have taken during 2014. Data in this report relates to the 2014 calendar year unless otherwise stated. It covers our entire operations in Sarawak, including our subsidiaries. We intend to publish the sustainability report annually.

This report has been written in accordance with the Global Reporting Initiative (GRI) G4 reporting guidelines, by Core option.

### STAKEHOLDER INCLUSIVENESS AND MATERIALITY

In developing this report, we considered inputs from our stakeholders, gathered through a wide range of interactions during the course of the reporting period. The selection of content for this report was based on a materiality analysis to identify and prioritise topics that will significantly impact Sarawak Energy's business and stakeholders.

A comprehensive scan of all potential material topics, including those specifically affecting our sector were derived based on a wide range of sources including the UN Millennium Development Goals (which has since been expanded and renamed as the UN Sustainability Development Goals), the Global Reporting Initiative as well as an internal stakeholder survey which was conducted to obtain an understanding of topics material to them.

These topics were validated and prioritised based on inputs from senior management, a stakeholder engagement workshop, and analysed on their relevance and impact on Sarawak Energy's business and stakeholders. This exercise yielded a list of 34 topics.

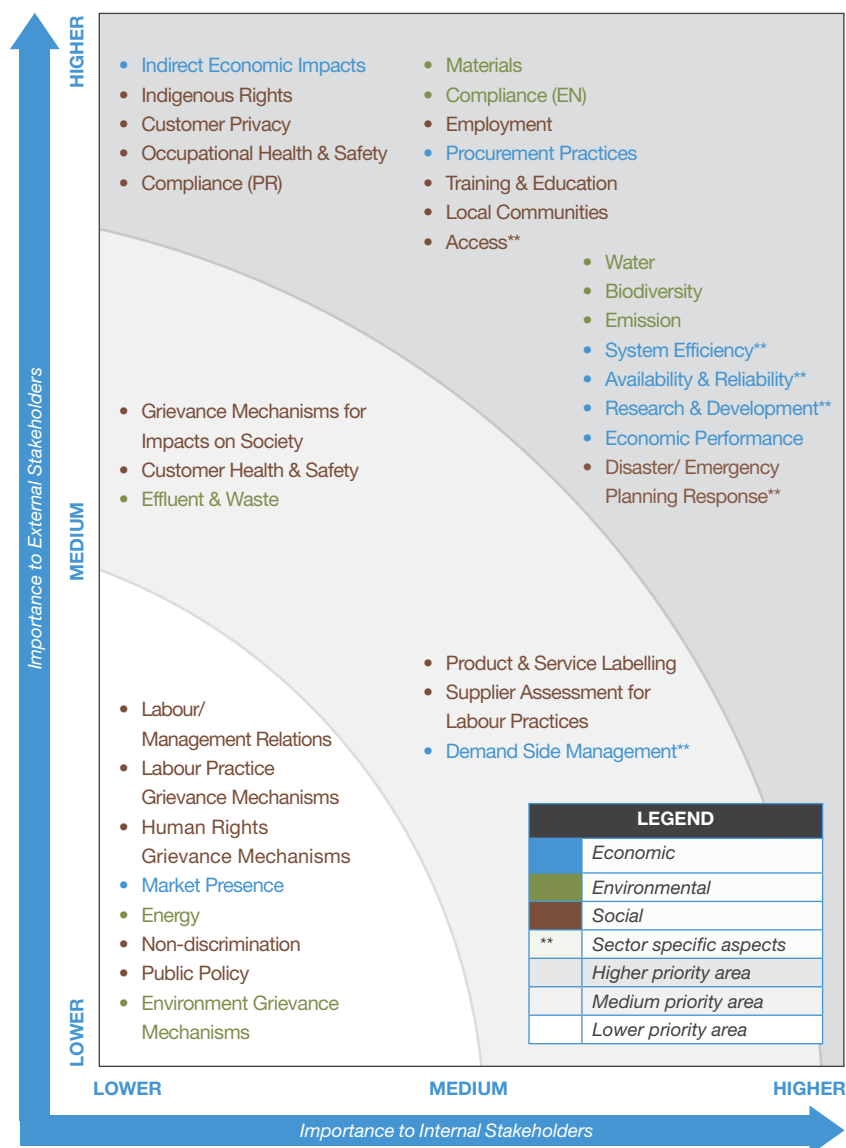
These 34 topics were approved by the Executive Management Committee in the context of sustainability drivers, stakeholder interests and business strategy. More than 9 top priority sustainability topics were obtained, which forms part of our sustainability strategy and contribute to our understanding of stakeholder concerns.



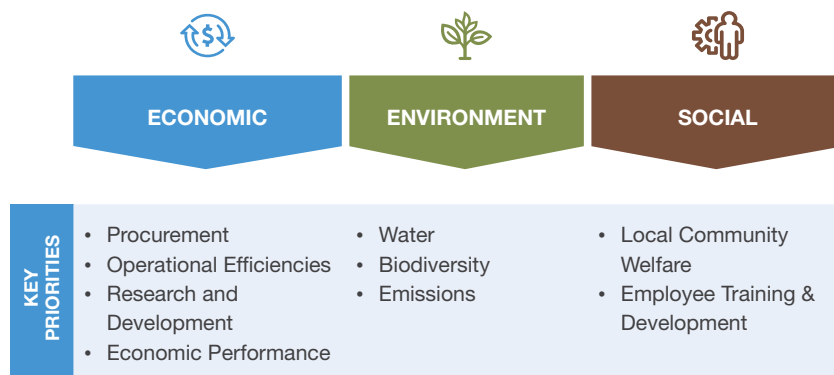
### FEEDBACK

This report also serves to encourage dialogue between ourselves and our stakeholders, especially our customers, suppliers and employees. We welcome your feedback, queries and suggestions on any aspect of our sustainability impacts and performance.

Please contact us at 082-388 388 or via email at [sustainability@sarawakenergy.com.my](mailto:sustainability@sarawakenergy.com.my)



Materiality Matrix





G4-4  
G4-12

## WHAT WE'RE ABOUT

Sarawak Energy is an integrated energy utility which is wholly-owned by the Sarawak State Government. We are involved in the generation, transmission and distribution of electricity in the State of Sarawak, and responsible for the provision of clean and sustainable energy to power the State's economic and social growth. We have a proud history of more than 70 years of service to the Sarawak community, and we remain committed to providing a reliable supply of electricity to our domestic and commercial customers. In the context of the State's economic development, our focus is to harness our local resources, specifically our hydropower potential, to fuel the State's growth. Our high level objectives are:

- Delivering a reliable and affordable electricity supply to more than 600,000 customers both domestic and commercial
- Ensuring the success of the Sarawak Corridor of Renewable Energy (SCORE) by maximising its scale, investment and employment opportunities
- Financing our investment programme without State Government funding or guarantees
- Building our employees' capacity to transform Sarawak Energy into a modern, professional and agile corporation

In recent years, we have made strong progress on this exciting transformation journey, as we focus on harnessing the State's abundant energy resources in a sustainable and responsible way and to create new opportunities for Sarawak and its communities.



## OUR VISION

**To achieve sustainable growth and prosperity for Sarawak by meeting the region's need for reliable, renewable energy**



## OUR MISSION

- 1 Pursue opportunities for growth by fully developing the Sarawak Government's SCORE agenda.
- 2 Ensure our own safety and the safety of others with a commitment to do 'no harm to anyone at any time'.
- 3 Provide a reliable supply of clean, competitively priced energy to support the economic and social development of Sarawak and our partners in the region.
- 4 Operate as a business, based on principles that reward our owners and employees, and delight our customers.
- 5 Honour the trust placed in us by the people of Sarawak, by acknowledging and respecting them and contributing to their well-being.
- 6 Set and achieve high ethical and corporate standards that are a source of pride for our employees.
- 7 Develop our people, leadership and teamwork to build an agile, open, corporate and customer focused culture that responds to challenges and the need for change with innovation and cooperation.
- 8 Harness and utilise natural resources in a sustainable and responsible way.
- 9 Achieve operational excellence through a commitment to continual improvement and best practices.

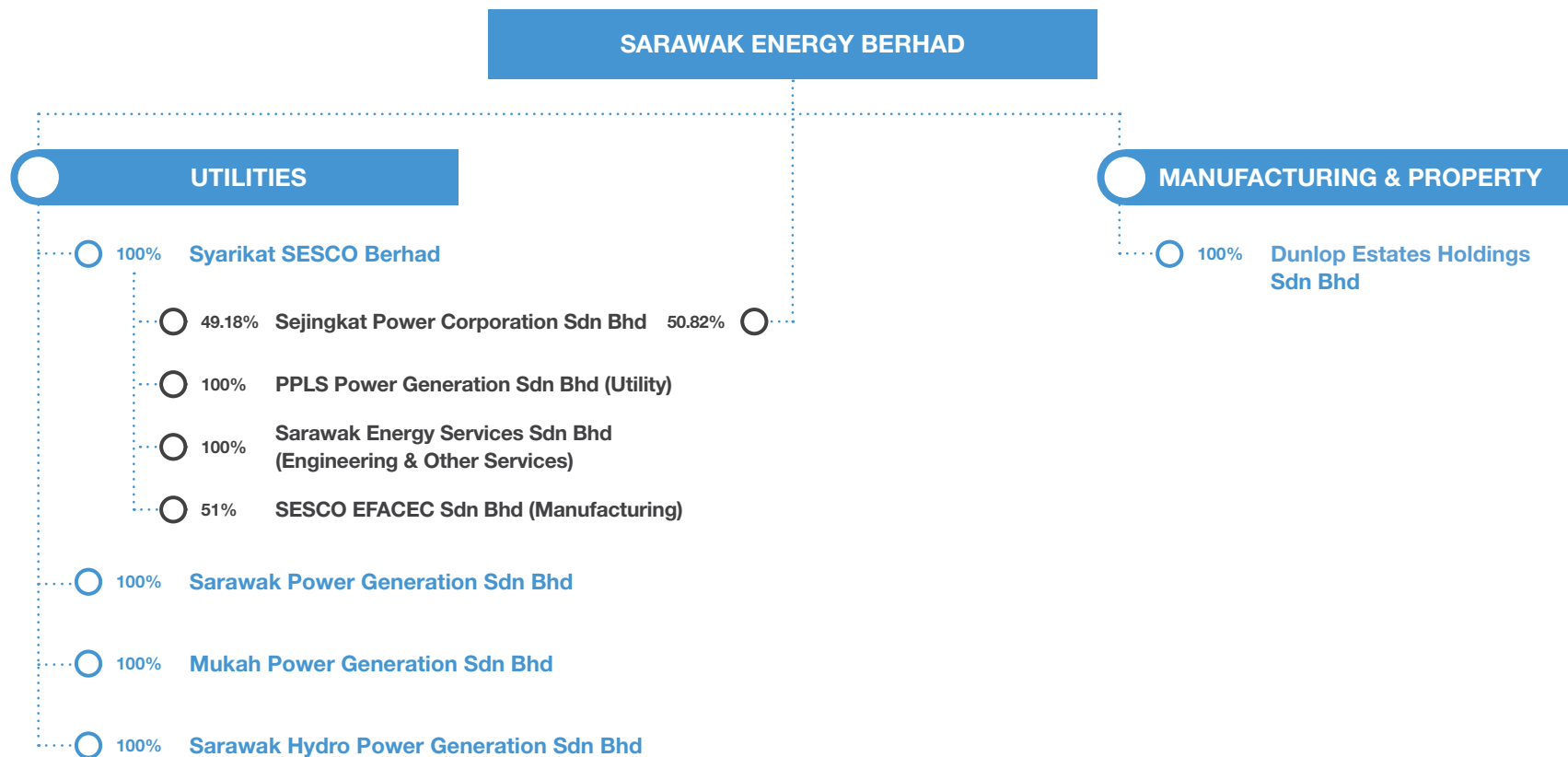


WHAT WE'RE ABOUT



Batang Ai Hydroelectric Plant

OUR CORPORATE ORGANISATION



Note: Companies that are not shown include associates, those have yet to commence operations, dormant, inactive, struck off or in the process of being struck off during the 2014 financial year.



G4-EU1  
(Former EU6)

WHAT WE'RE ABOUT

OUR SERVICES

Sarawak Energy is principally involved in the generation, transmission and distribution of electricity. We generate power through hydro, coal and gas, mostly capitalising on the State's abundant indigenous resources; and supply to our customers throughout the State through an extensive network system. A balanced generation mix is necessary to facilitate the effective development of Sarawak's energy future – while we look to fully harness our hydro potential, we need to balance it with coal and gas plants to protect the State's energy security.

GENERATION

The harnessing of renewable energy through hydropower development is a logical choice for us given the State's vast water resources. Currently, our main source of hydro power are from the 108MW Batang Ai facility commissioned in 1984, as well as through the Power Purchase Agreement for the entire output from Bakun Hydropower Plant (2,400MW). This will be further complemented by the Murum Hydroelectric Project (944MW) which is anticipated to be fully commissioned in the second quarter of 2015.

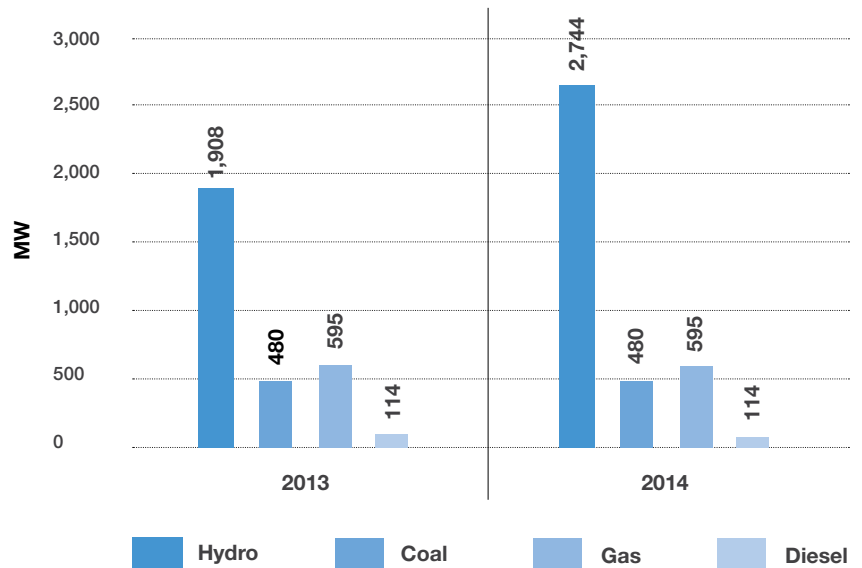
A further twelve prospective sites have been identified for the construction of hydroelectric projects, which has the potential to generate over 4,000MW. In addition to these large hydroelectric projects, small hydropower potential has also been identified for development to support rural electrification in remote areas in the interior parts of the State.

Although our focus is on hydro, thermal plants are still an essential part of our generation mix in the interest of the State's energy security. Our strategy is to use local resources – natural gas and coal, and to optimise our operations through combined cycle gas plants and efficient coal-fired steam-turbines to minimise emissions.

Sarawak Energy conducts thermal power generation through its wholly-owned subsidiaries, Syarikat SESCO Berhad (SESCO), Sarawak Power Generation Sdn Bhd (SPG), Sejangkat Power Corporation Sdn Bhd (SPC), PPLS Power Generation (PPLS) and Mukah Power Generation Sdn Bhd (MPG). As at the end of 2014, the total installed capacity within the Thermal Department exceeded 1,200MW, with seven major power plants connected to the Sarawak State Grid.

We currently operate a 210MW coal-fired steam-turbine power plant located at Kampung Goebilt, Kuching as well as in Matadeng, Mukah with a capacity of 270MW. We also operate gas-fired power plants, both open and combined cycle, with a total capacity of 595MW, located in Tg. Kidurong, Bintulu and Pujut, Miri.

The Bintulu Combined Cycle Plant, meanwhile, is registered with the United Nations under the Clean Development Mechanism (CDM). This is part the Kyoto Protocol (global treaty) that aims to reduce greenhouse gas emission globally. Bintulu Combined Cycle Project is the first CDM project for thermal power plant in Malaysia.



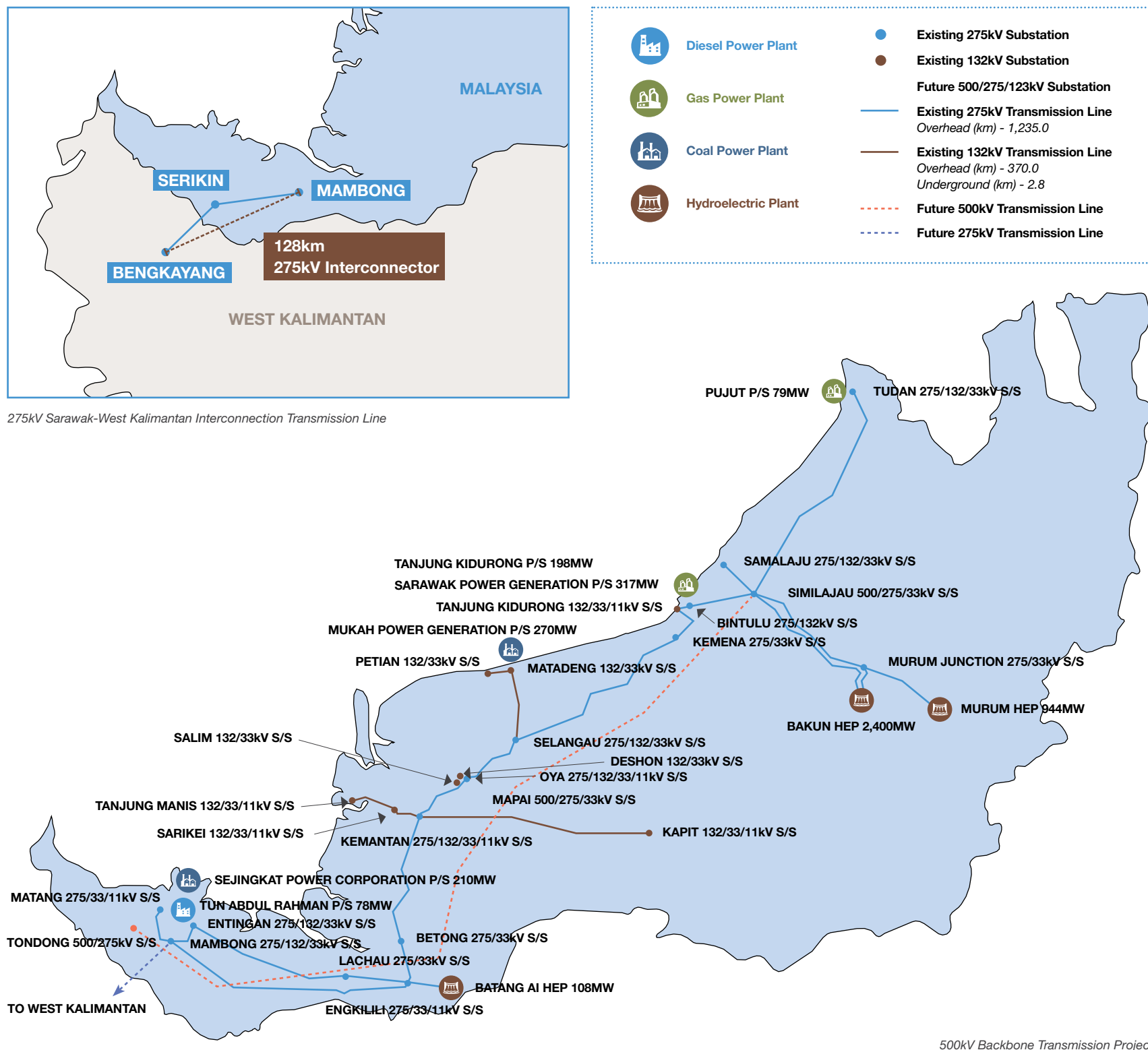
Grid Connected Installed Capacity (MW) by energy source

WHAT WE'RE ABOUT

TRANSMISSION

Sarawak Energy's Transmission Department operates the Sarawak State Grid. As the appointed Grid System Operator (GSO), it operates and controls the Sarawak power system, including power generation scheduling and dispatch. It is also the Transmission Network Service Provider (TNSP), responsible for the maintenance and operation of the network as well as the planning and development of the State Grid to meet the State's future power requirements.

To strengthen our network system, we have embarked on the construction of a 500kV backbone to complement the existing 275kV State Grid Transmission Lines. This is expected to be completed in 2016.



275kV Sarawak-West Kalimantan Interconnection Transmission Line

500kV Backbone Transmission Project



G4-EU4  
(Former EU6)

## WHAT WE'RE ABOUT

### DISTRIBUTION

The Distribution Department consists of Distribution Network and Distribution Asset Management, and together they are responsible for efficient distribution of power throughout the State. Distribution operation is divided into three regions, namely Western Region, Central Region and Northern Region. Each region is responsible for operating and maintaining its own distribution assets to ensure optimum output. One of the main tasks of the regions is to connect new customers, including small and medium-sized enterprises (SMEs) large industrial customers, in a timely manner.

Distribution Planning works closely with Transmission Planning and Non-Grid Generation Planning to ensure a holistic planning process for networks up to and including 33kV, while Distribution Asset Management maintains and ensures the efficient operation of the distribution network's database systems, and other assets and processes.

REGION	2014					
	33kV		11kV DISTRIBUTION		415V DISTRIBUTION	
	0/H (km)	U/G (km)	0/H (km)	U/G (km)	0/H (km)	U/G (km)
<b>WR Kuching</b>	1,164.59	317.82	2,078.52	1,556.13	5,017.92	1,396.81
<b>WR Sri Aman</b>	477.93	24.91	1,166.39	149.43	1,105.86	89.34
<b>CR Sarikei</b>	221.38	41.08	646.75	67.86	1,139.54	93.87
<b>CR Sibul</b>	723.66	169.63	1,249.31	735.52	2,792.21	602.31
<b>NR Bintulu</b>	434.84	165.34	157.25	325.94	330.04	195.83
<b>NR Miri</b>	416.52	165.16	747.25	523.23	2,238.47	541.03
<b>NR Limbang</b>	37.50	1.90	499.82	74.36	563.83	39.05
<b>TOTAL</b>	<b>3,476.42</b>	<b>885.84</b>	<b>6,545.29</b>	<b>3,429.47</b>	<b>13,187.87</b>	<b>2,958.24</b>

*Distribution Lines Total Length*

## WHAT WE'RE ABOUT

## OUR PERFORMANCE AT A GLANCE

<b>ECONOMIC</b>	<b>2013</b>	<b>2014</b>
<b>OPERATIONS FOOTPRINT</b>		
Total Grid Generation Capacity (MW)	3,097	3,933
Total Electricity Sales (GWh)	10,420	13,440*
<b>ECONOMIC PERFORMANCE</b>		
Direct Economic Value Generated	2,323.2	2,826.3
Economic Value Distributed	1,741.3	2,115.8
Economic Value Retained	581.9	710.5
<b>TECHNICAL PERFORMANCES</b>		
Customer interruption - SAIDI (Duration in minutes/customer)	168.0	189.0*
Customer Interruption Frequency - SAIFI (Interruptions/customer)	2.08	2.00
<b>CUSTOMERS</b>		
Domestic/ Commercial/ Industrial	586,161	606,673
City Councils/Municipality (Public Lightings)	7,846	8,321
Energy Intensive Customers (SCORE)	5	8
<b>ENVIRONMENT FOOTPRINT</b>		
Total Volume of Carbon Emission ('000 ton CO <sub>2</sub> )	4,918	4,852
Carbon Emission Intensity (CO <sub>2</sub> -eq kg/kWh)	0.430	0.335*
Total Volume of NO <sub>x</sub> Emission (ton)	1,886	1,140
NO <sub>x</sub> Emission Intensity (kg/kWh)	0.00048	0.00029
<b>OUR PEOPLE</b>		
Total Number of Employees	4,039	4,168
<b>Permanent Staff, by Gender</b>		
Male	3,106	3,179
Female	770	823
<b>Contract Staff, by Gender</b>		
Male	137	130
Female	26	36
<b>Total Hours of Training, by Category</b>		
Management		2,891.5*
Executive		42,920*
Non-Executive		110,017*

\* These total electricity sales, SAIDI, grid carbon emission intensity and total training hours data have been independently verified. Read the Independent Assurance Report on pages 52 and 53



G4-1  
G4-56

## OUR MESSAGE TO STAKEHOLDERS

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It gives me great pleasure to present Sarawak Energy's 2014 Sustainability Report which catalogues what we have done in 2014 to benefit society and to instil pride in our workforce. We remain the brand that cares and aspire to make Sarawak a better place.

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The challenge for developing countries today is to be able to meet the future demand for energy at affordable prices to fuel the growth of their respective economies. At the global level, we are already seeing how resource scarcity and the growing awareness on the benefits of clean and affordable energy is driving the push towards developing renewable sources of energy.

As a key player in developing Sarawak's economy, Sarawak Energy is capitalising on these global trends in building the State's capacity for renewable energy, by driving the State's Sarawak Corridor of Renewable Energy (SCORE) agenda. This shift towards renewable energy is the solution for Sarawak's future, and it forms the foundation on which our sustainability strategy is based on.

Our strategy calls for a generation mix skewed towards the development of hydropower capacity – this is crucial to realise a future driven by sustainable energy sources. Based on current forecasts, our existing and planned

hydropower developments will result in a generation mix of 60% hydro, 20% coal, and remaining from gas by 2020.

Further to that, our pursuance of innovation and being on pace with regional and global trends will also serve to advance the sustainability and power security of Sarawak.

The element of sustainability is embedded into the core of our business, from the corporate level through to our projects and operations. It expands beyond our operations and is locked in to our Corporate Values.

In this first Sustainability Report for Sarawak Energy, we focus on the topics and issues that concern to our three key stakeholder groups – our customers to whom we are committed to ensure uninterrupted, reliable and affordable energy; local communities, because they are greatly impacted by our projects and to ensure that they, too, will reap the benefits of development; and our employees, because they play a critical role in driving the Company forward.

### INTEGRITY

We do what is right in every aspect of our business, and in every contact with our people, customers, contractors and the community.

### UNITY

We are one business working together - sharing information and expertise to achieve our common vision for the future.

### RESPECT

We value our diversity, listen well, involve others, use our best judgement in all situations and actively care for our relationships.

### ACCOUNTABILITY

We work hard, take responsibility for our performance and deliver on our commitments.

### COURAGE

We respect and support each other to do what is right, and in the best interests of our company and the community, even if it is not easy to do so.

Our Corporate Values

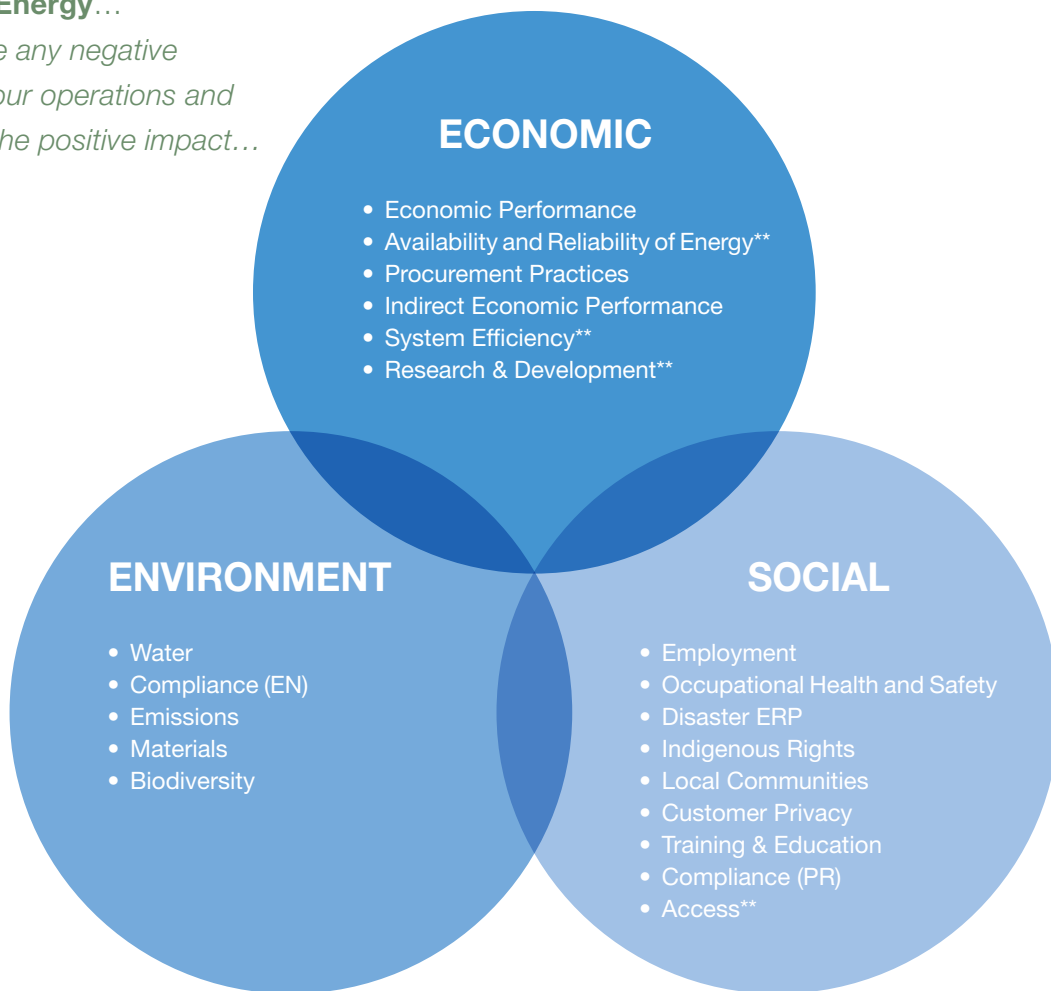
OUR MESSAGE TO STAKEHOLDERS

66

**Sustainability in Sarawak Energy...**

*to minimise any negative impact of our operations and maximise the positive impact...*

99



*Sustainability topics for Sarawak Energy*

*\*\* sector specific aspects*

66

Sustainability is the key to any business. A business must be economically, environmentally and socially sustainable to thrive in today's business environment.

99

On a broader perspective, our responsibility goes beyond these three groups. Ultimately, we have a responsibility towards all stakeholders and our success hinges on how we move forward together. Our corporate objectives and sustainability performance are symbiotic in that our business success should mutually benefit our stakeholders.

Our goal is to transform Sarawak Energy from a traditional local utility to one that is subscribe to sustainability mindset. We aspire to be the best in class in sustainability practices and have put in plans for the immediate future. These include rolling out sustainability awareness training to all our regional offices; embedding sustainability

elements into our corporate KPIs - putting in place processes to measure our impacts; and ensuring that our sustainability initiatives and activities are focused on generating lasting value and positive impacts to all our stakeholders.

We want you to be a part of our sustainability journey, and welcome your feedback and input on the activities reported in the following pages of this book.

**DATUK TORSTEIN DALE SJØTVEIT**  
*Chief Executive Officer*



**Lu Yew Hung**  
*Chief Operating Officer*

66

*We have come up with short, medium and long term strategies in the planning of our operations to provide reliable, affordable energy as well as quality customer service experience for Sarawak.*

99



**Aisah Eden**  
*Chief of Corporate Services*

66

*As Sarawak Energy gears up to become a modern, and agile corporation, our performance is not only measured by our financial and technical performance but also by our efforts in being environmental and socially responsible.*

99



**Alexander Chin**  
*Chief Financial Officer*

66

*Through the proper management of our key sustainability issues, Sarawak Energy can achieve sustainable growth, strong financial performance, and improved risk management that will in turn maximise shareholder value.*

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G4-24  
G4-25  
G4-26  
G4-27

## HOW WE ENGAGE OUR STAKEHOLDERS



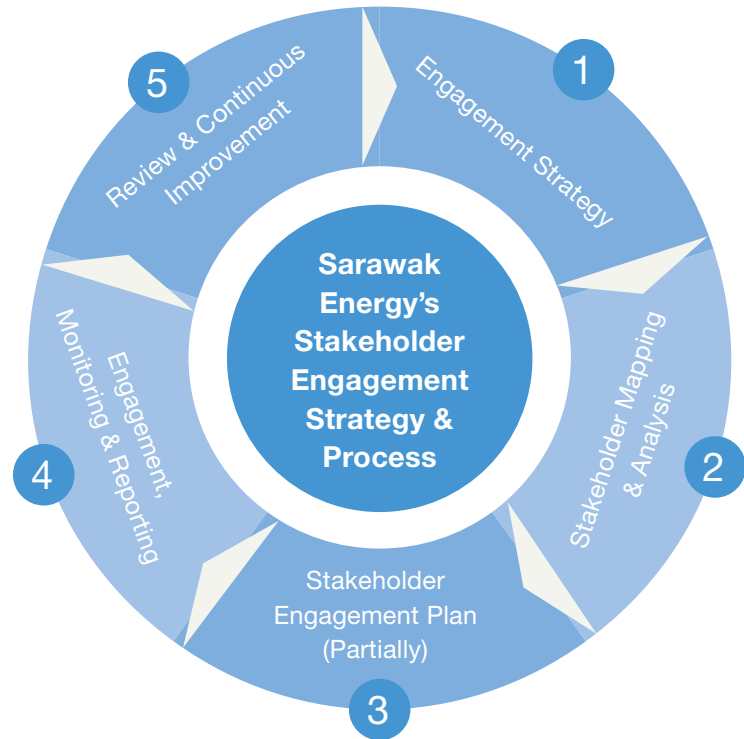
Engaging with our stakeholders is an important process as it helps us to understand better our role and impact on Sarawak. This is even more so given the nature of our business as an energy company, where the development of the State and the well-being of the people is dependent on the products and services we provide.

Internally, we have conducted an internal survey with our employees to understand the social, environmental, and governance topics important to Sarawak Energy and their stakeholders.

From the materiality process conducted for the purpose of determining our priority areas, we have correspondingly identified three key stakeholder groups – employees, local communities, and our customers. We utilise various methods of engagement, which include town halls, training sessions, customer hotlines, newsletters, and workshops.

We also understand the needs and influence of our external stakeholders, which include the public, investors, and the State government. We have communicated with them through dialogues and one-on-one meetings.

Through these engagements, we now have a better understanding of their concerns and this will help us to provide solutions to alleviate potential issues. At the same time, the engagements allow our stakeholders to understand our future directions, which will create mutual trust between our stakeholders and us.



Overview of Sarawak Energy's Stakeholder Engagement Strategy and Process (on-going process)

STAKEHOLDER GROUP	TOPICS OF DISCUSSION	COMMUNICATIONS
Employees	Career Training	<ul style="list-style-type: none"> <li>· Newsletters/emails</li> <li>· Surveys</li> <li>· Reviews</li> <li>· Dialogues</li> </ul>
Local Communities	Resettlement CSR Activities Electrification	<ul style="list-style-type: none"> <li>· Consultation</li> <li>· Activities</li> <li>· Public Disclosures</li> <li>· Media</li> </ul>
Customers	Availability Reliability	<ul style="list-style-type: none"> <li>· Hotlines</li> <li>· CRM</li> <li>· Retail Outlets</li> <li>· Mail</li> <li>· Media</li> </ul>



## HOW WE'RE GOVERNED



The overall sustainability agenda falls under the purview of our Sustainability Division, reporting directly to Head of Department, Corporate Social Responsibility. This Division is also responsible for the coordination, monitoring and reporting of the Company's sustainability activities; training of staff on sustainability topics; ensuring compliance to sustainability principles and HSAP guidelines; and providing input from global best practices on sustainable development.

Sarawak Energy's sustainability strategy is embedded in our corporate DNA. The processes involved in the formulation and implementation of policies and strategies are guided by the Company's Corporate Governance Policy, and as such the accountability and governance of our sustainability activities lie with the Executive Management Committee and Board of Directors.

The Board of Directors of Sarawak Energy 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, corporate accountability and safeguarding the interests of the shareholders. Principles of good governance and compliance of the best practices set out in the Malaysian Code of Corporate Governance are applied by the Company.

### THE BOARD OF DIRECTORS

The Board's principal responsibilities are to set out the strategic direction of the Group, establishing the objectives and achievement of the objectives and goals. The Directors collectively have a wide range of experience and expertise drawn from the area of business, accounting, legal and economics as well as public administration. Their expertise, experience and background are vital for the strategic direction of the Group.

The Chairman's responsibility is to ensure the effectiveness of the Board and conduct, while the independent non-executive directors play an important role to ensure the views provided are professional and independent and that the advice and judgment made on issues and decisions are to the best interest of the stakeholders and the Group.

### EXECUTIVE MANAGEMENT COMMITTEE (EMC)

The role of the EMC is to ensure that corporate-level policies is well developed before adoption, as well as to review, decide and endorse current and future strategic directions of the company.

EMC members comprise of Senior Vice Presidents, Vice Presidents, General Managers and Heads of each department. They report directly to the Chief Executive Officer (CEO) who is the Chairman of the Committee.

The profiles of the members of the Executive Management Committee and Board of Directors can be viewed at our website [www.sarawakenergy.com.my](http://www.sarawakenergy.com.my).



## BOARD OF DIRECTORS & MANAGEMENT TEAM

### BOARD OF DIRECTORS



**YBHG.  
DATUK  
AMAR ABDUL  
HAMED BIN  
SEPAWI**

CHAIRMAN/  
INDEPENDENT  
NON-EXECUTIVE  
DIRECTOR



**YB TAN SRI  
DATUK AMAR  
HAJI MOHAMAD  
MORSHIDI  
BIN HAJI ABDUL  
GHANI**

NON-  
INDEPENDENT  
NON-EXECUTIVE  
DIRECTOR



**YBHG.  
TAN SRI DATO  
SRI MOHD  
HASSAN BIN  
MARICAN**

INDEPENDENT  
NON-EXECUTIVE  
DIRECTOR



**YBHG.  
DATUK FONG  
JOO CHUNG**

NON-  
INDEPENDENT  
NON-EXECUTIVE  
DIRECTOR



**YBHG. DATO'  
HAJI IDRIS BIN  
HAJI BUANG**

SENIOR NON-  
INDEPENDENT  
NON-EXECUTIVE  
DIRECTOR

### EXECUTIVE MANAGEMENT COMMITTEE

**HJ WAN MAHMUD**

VP, INTERNAL AUDIT



**LU YEW HUNG**

CHIEF OPERATING  
OFFICER



**DATUK  
TORSTEIN DALE  
SJØTVEIT**

CHIEF EXECUTIVE  
OFFICER



**AISAH EDEN**

CHIEF OF CORPORATE  
SERVICES

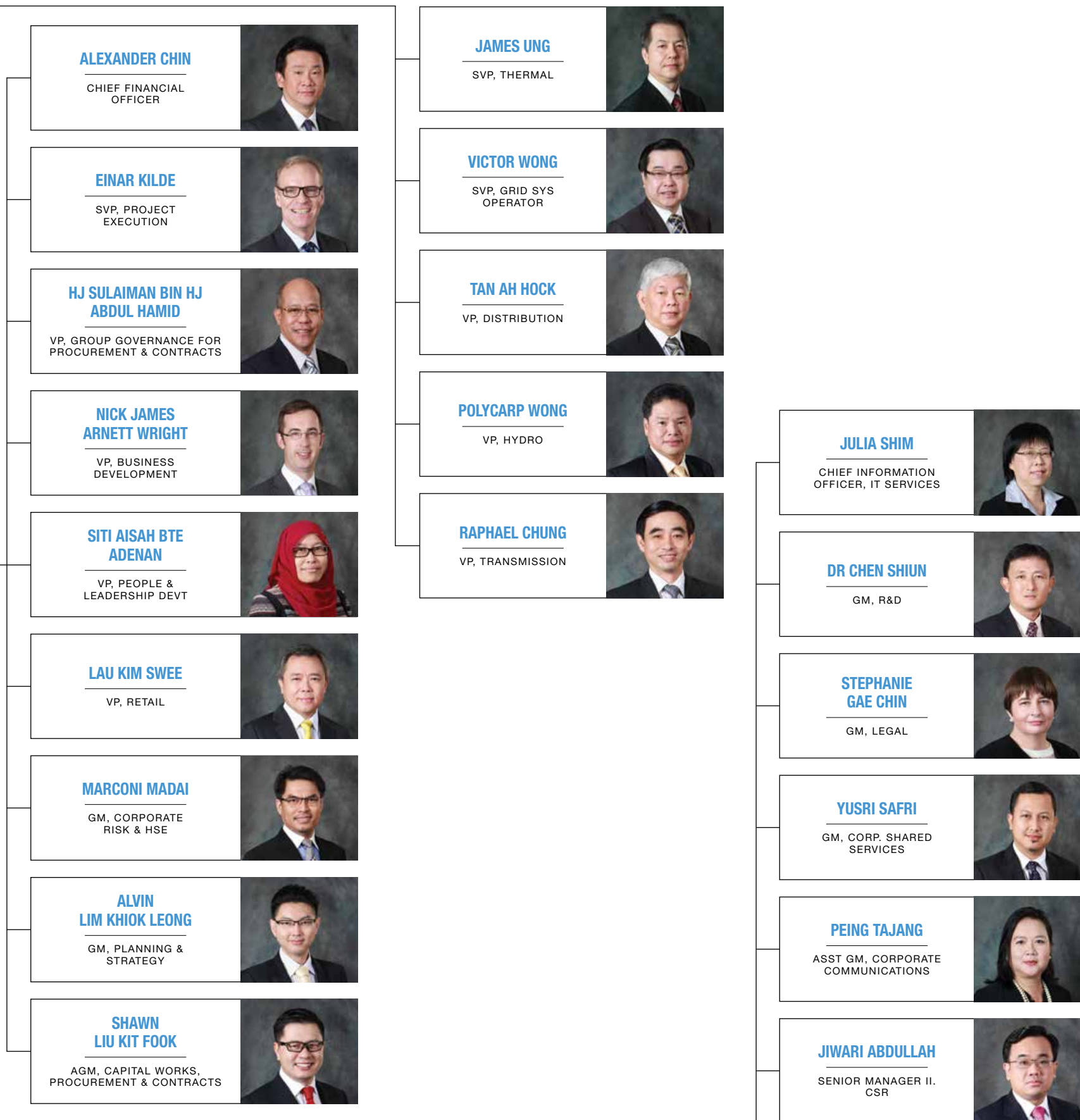


**LIM LI NA**

GROUP COMPANY  
SECRETARY



BOARD OF DIRECTORS & MANAGEMENT TEAM





# OUR COMMITMENT TO THE ENVIRONMENT



Mitigating Climate Change Issues -  
Reducing Emissions



Adapting New Technology to Reduce Our  
Environmental Footprint



Menara Sarawak Energy, the First Green Building  
in Sarawak



Biodiversity - Protecting Our Flora and Fauna



Murum Wildlife Monitoring & Rescue (WIMOR) -  
Areas of Focus



Batang Ai Regeneration



Preserving Our Biodiversity through WIMOR  
Activities



Water Management



Moving Forward



*Rafflesia tuan-muda*



*Pongo pygmaeus*



*Batang Ai Reservoir*



*Aceros corrugatus*

## OUR COMMITMENT TO THE ENVIRONMENT



Mooted in 2009, the Sarawak Corridor of Renewable Energy (SCORE) is one of Malaysia’s five economic corridors. SCORE was developed to help reduce our dependency on oil and gas, and to harness the State’s abundant energy resources, the most compelling of which is Sarawak’s hydropower potential.

We have been working closely with the State government to drive the SCORE initiative, as this will not only allow us to harness the potential of our natural resources but will also help us reduce our overall greenhouse gas (GHG) emissions. This is also in line with Malaysia’s commitment toward climate change to reduce the carbon emissions intensity per Gross Domestic Product (GDP) by 40 per cent by 2020.

We go beyond the State’s statutory requirements by incorporating the global Hydropower Sustainability Assessment Protocol (HSAP) guidelines in the Social and Environmental Impact Assessment (SEIA) for our hydropower projects. We have also adopted the same principles for non-hydro projects.

The HSAP encompasses the technical, environmental, social, economic & financial, and integrative aspects of sustainability which are assessed against basic good practices and proven best practices. Currently, we are targeting to achieve basic good practices for each aspect but aim to achieve proven best practices in the near future.

By embedding sustainability elements into our corporate strategy, we aim to minimise our impact on the environment, specifically in terms of compliance, emissions, biodiversity and water. This is a high priority for us based on the outcome of the materiality process described earlier on page 7 of this report.

TECHNICAL	ENVIRONMENTAL	SOCIAL	ECONOMIC AND FINANCIAL	INTEGRATIVE
Siting and design	Downstream flows	Project affected communities and livelihoods	Economic viability	Demonstrated need and strategic fit
Hydrological resource	Erosion and sedimentation	Resettlement	Financial viability	Communications and consultation
Reservoir planning; filling and management	Water quality	Indigenous peoples	Project benefits	Governance
Infrastructure safety	Biodiversity and invasive species	Cultural heritage	Procurement	Integrated project management
Asset reliability and efficiency	Waste, noise and air quality	Public health		Environmental and social issues management

In addition to the above, HSAP also addresses cross-cutting issues such as climate change, grievance mechanisms, livelihoods, human rights, integrated water resource management, transboundary issues, legacy issues and transparency.

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During the United Nations Climate Change Conference 2009 in Copenhagen, Denmark. Malaysia Government has committed to cut down the carbon emissions intensity per Gross Domestic Product (GDP) by 40 per cent based on 2005 levels by 2020.

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G4-DMA  
G4-EN18  
G4-EN19  
G4-EN21

OUR COMMITMENT TO THE ENVIRONMENT

66 MITIGATING CLIMATE CHANGE ISSUES - REDUCING EMISSIONS

In 2014, we surpassed our 2020 target of sourcing 60% of our energy through hydro and aim to reach 70% by 2035.

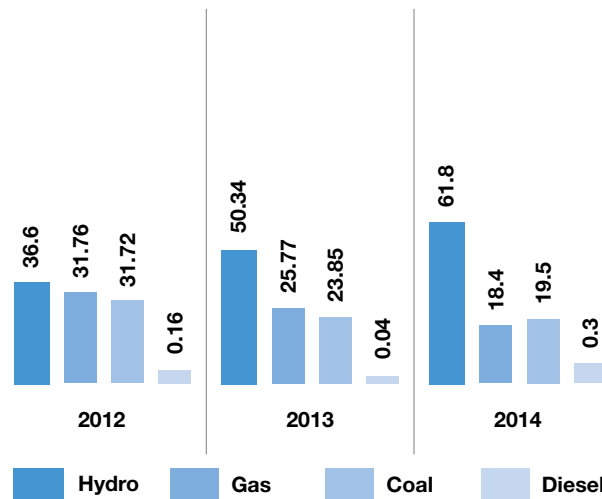
The nature of our business as a power producer inevitably impacts the environment, especially through emissions from our thermal plant operations. As thermal plants burn fuel – be it natural gas, oil, diesel or coal – they produce emissions in the form of GHG such as Carbon Dioxide (CO<sub>2</sub>), and pollutants such as Nitrous Oxide (NO<sub>x</sub>) and Sulfur trioxide (SO<sub>3</sub>).

Given that these emissions are from our thermal plants, we aim to minimise long term emissions through our generation mix strategy by sourcing the bulk of our energy through hydro power generation and an internal operation excellence initiative. In 2014, we surpassed our 2020 target of sourcing 60% of our energy through hydro power generation.

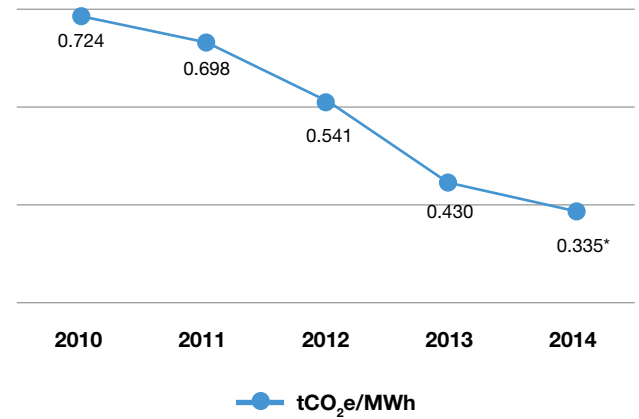
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The increased share of renewable energy in our generation mix has resulted in reduction of our grid emission intensity, which has reduced by 22% from the previous year. SO<sub>3</sub> and NO<sub>x</sub> grid emissions have also reduced by 72% and 40% respectively from the previous year. Nevertheless, we are continuing our efforts to reduce emissions from our thermal plants via energy efficiency initiatives.

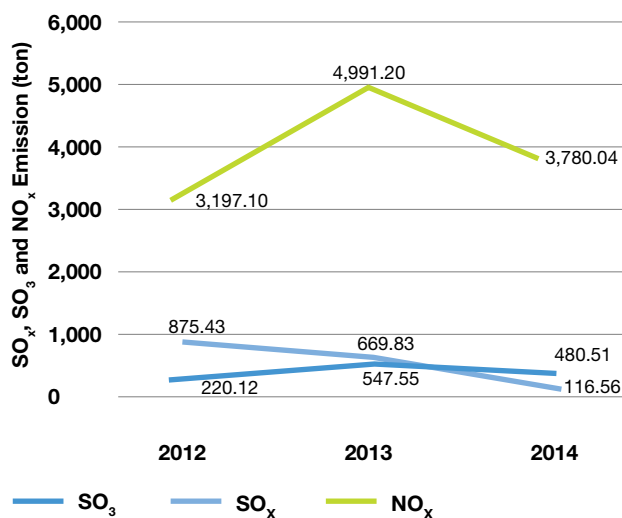
Grid Generation Mix (%) 2012 - 2014



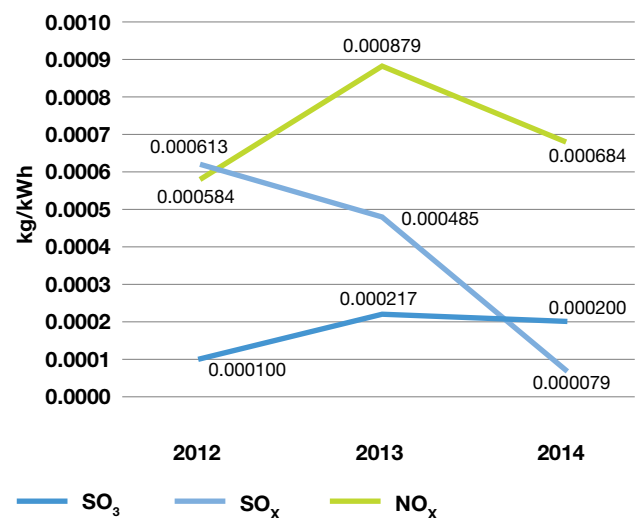
Sarawak Energy CO<sub>2</sub> Grid Emission Intensity 2010 - 2014



Sarawak Energy Grid (Thermal) - Total SO<sub>3</sub>, SO<sub>x</sub> and NO<sub>x</sub> Emission 2012 - 2014



Sarawak Energy Grid (Thermal) - SO<sub>3</sub>, SO<sub>x</sub> and NO<sub>x</sub> Emission Intensity 2012 - 2014



Notes:

- For reporting purposes, CO<sub>2</sub> emission is calculated based on the amount of fuel used. For NO<sub>x</sub>, SO<sub>3</sub> & SO<sub>x</sub> are calculated based on monthly Stack Emission Monitoring.
- Reports conducted by third party consultants. In addition, this monthly stack emission reports will also be used to verifying the CEMs measurements.
- Continuous Emission Monitoring System (CEMS) is only available at our SPC, PPLS, Bintulu Power Plant, SPG and MPG power plants and the measurement results are directly connected to the Department of Environment Headquarters in Putrajaya.
- For SO<sub>x</sub> emission calculation only includes MPG Power Plant (Coal Fired Power Plant).
- For SO<sub>x</sub> emission calculation only includes PPLS, SPC (Coal Fired Power Plant), Bintulu Power Plant, Miri Power Plant (Gas Fired Power Plant), SPG (Gas Fired Combined Cycle Power Plant) and Biawak Power Plant (Diesel Fired Power Plant).
- For NO<sub>x</sub> emission calculation includes Bintulu Power Plant, SPG, Miri Power Plant, Biawak Power Plant, PPLS, SPC & MPG.
- For SPG SO<sub>3</sub> and NO<sub>x</sub> emission intensity year 2012 – 2014 calculations are based on the emission factor that was derived from 2015 data.

\* This grid carbon emission intensity data has been independently verified. Read the Independent Assurance Report on pages 52 and 53

OUR COMMITMENT TO THE ENVIRONMENT

ADAPTING NEW TECHNOLOGY TO REDUCE OUR ENVIRONMENTAL FOOTPRINT

Further to our core strategy of reducing our GHG emissions through renewable energy, we have also initiated several projects to further reduce these emissions. These include the installation of a circulating fluidised bed (CFB) boiler at the Balingian Coal-fired Power Project, the Clean Development Mechanism (CDM) for our Bintulu Combined Cycle Plant, and our energy efficient headquarters in Kuching.

Our Balingian Coal-fired Power Project will be the first coal-fired plant in its capacity in Malaysia to adopt a circulating fluidised bed (CFB) boiler. Compared to conventional Pulverised Coal (PC) boiler technology, CFB boilers have the ability to handle a wide range of coal variants, including the high moisture coal commonly found in Balingian. This will ensure total utilisation of the resource, and improve the environment footprint of the plant significantly.

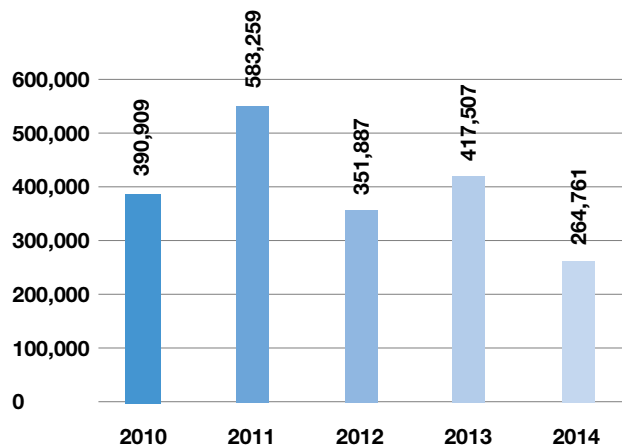
**Bintulu Combined Cycle Plant – the first thermal power plant CDM project in Malaysia**

Commissioned in early 2010, the Bintulu Combined Cycle Plant project has a combined capacity of 330MW and is registered with the United Nations Framework Convention on Climate Change (UNFCCC) under the CDM scheme. The CDM allows emission-reduction projects in developing countries to earn certified emission reduction (CER) credits, each equivalent to one ton of CO<sub>2</sub>.

Essentially, the project involved the conversion of two existing open-cycle gas turbines to one block of Combined-cycle Power Generation Plant, resulting in a new total capacity of about 330MW.

Since 2010, the project recorded total cumulative CO<sub>2</sub> reductions of 2,008,323 ton.

Emission Reductions (ton CO<sub>2</sub>)  
2010 - 2014



Bintulu Gas Fired Combined Cycle Power Plants



OUR COMMITMENT TO THE ENVIRONMENT

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Upon completion in 2012, the Green Building Index certified Menara Sarawak Energy as a green building, based on Energy Efficiency, Indoor Environment Quality, Sustainable Site Planning & Management, Materials & Resources, Water Efficiency and Innovation Criteria. The building was subsequently awarded a Final GBI Silver Rating by Green Building Index Accreditation Panel (GBIAP) in 2013.



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**MENARA SARAWAK ENERGY, THE FIRST GREEN BUILDING IN SARAWAK**

Menara Sarawak Energy was designed to minimise energy consumption through energy efficient features which include shape and orientation of the building and the materials used for the various parts of the building. The use of innovative insulation methods and water features keeps the building cool resulting in less energy consumed for air-conditioning while the clever use of skylights and reflectors makes full use of natural lighting to illuminate the various parts of the building right down to the car park.

Upon completion in 2012, the Green Building Index certified Menara Sarawak Energy as a green building, based on Energy Efficiency, Indoor Environment Quality, Sustainable Site Planning & Management, Materials & Resources, Water Efficiency and Innovation Criteria. The building was subsequently awarded a Final GBI Silver Rating by Green Building Index Accreditation Panel (GBIAP) in 2013.

In terms of energy savings, Menara Sarawak Energy has recorded annual savings of 13,000MWh - equivalent to 11,000 ton CO<sub>2</sub> or 80% reduction in electricity consumption as compared to the Company's old premises.

Sarawak Energy is aspired to use Electric Vehicles (EV) for its corporate use. As a pilot project, Electric Vehicles (EV) will be introduced in 2015. The EVs, manufactured by Nissan, will play an integral part in the company's learning curve to showcase the advancement of EV technology. Their suitability for daily usage in Sarawak is especially relevant given that the bulk of the State's energy is derived from clean hydropower.



*Launching of Sarawak Energy's Electric Vehicles (EV) Pilot Project at Borneo Convention Centre Kuching*

OUR COMMITMENT TO THE ENVIRONMENT

**BIODIVERSITY - PROTECTING OUR FLORA AND FAUNA**

At Sarawak Energy, we are committed to ensure that our projects do not have an adverse impact on the sustainability of the State's rich biodiversity.

As guided by the HSAP, we are continuously working together with relevant stakeholders to manage the biodiversity in and around our projects.

In early 2014, Sarawak Energy conducted a workshop on the sustainable development of hydropower projects. Titled "Heart of Borneo Sustainable Hydropower Development Workshop: Watershed Management", the workshop was attended by stakeholders from Forest Department Sarawak (FDS); World Wide Fund for Nature (WWF-Malaysia); Malaysia Nature Society (MNS-Malaysia); Land & Surveys Sarawak Department; Nature Resources & Environment Board Sarawak (NREB); Ministry of Resource Planning and Environment (MPRE); and the State Planning Unit (SPU).

Further to that, we signed a Collaboration Agreement with the Sarawak Forestry Corporation to undertake the Murum Wildlife Monitoring & Rescue (WIMOR) operation in 2013, in compliance with the requirements stipulated by the Natural Resources and Environment Board (NREB). The initiative is part of the reservoir preparatory work for the Murum hydroelectric project (HEP) and include habitat suitability assessment for animals, phenology monitoring for plants and the construction of suitable aquatic fauna holding facilities.

Through the collaboration, we jointly manage biodiversity issues such as losses of habitat, spawning ground, habitat connectivity, and loss or declines in important food chain species. The key areas of focus include monitoring and rescuing animals, plants and fauna at various stages of the reservoir preparation and relocating them into pre-assessed suitable locations.

Plant/Orchid Garden has been established at one of the permanent island within the reservoir, mainly to conserve the wild, rare or endangered orchid's species and some commercial and ornamental value plant species found in Murum Catchment area with Sarawak Forestry Corporation (SFC) support.



Signing ceremony of Collaboration Agreement between Sarawak Energy represented by Puan Aisah Eden (second left) Chief of Corporate Services and Mr. Oswald Braken Tisen (second right) Deputy General Manager (Protected Areas, Biodiversity and Conservation) for Sarawak Forestry Corporation to undertake the Murum WIMOR operation.



Tn. Haji Sapuan Haji Ahmad (Center) Director for Forest Department Sarawak, Dr. Sundari Ramakrishna, Conservation Director, WWF-Malaysia (second from right) and Mohamad Irwan Aman, Sustainability Manager, Sarawak Energy (far right), with the workshop participants.



## OUR COMMITMENT TO THE ENVIRONMENT

## MURUM WILDLIFE MONITORING &amp; RESCUE (WIMOR) - AREAS OF FOCUS

	INFRASTRUCTURE	ANIMALS	PLANTS	FISH
<b>PRE- IMPOUNDMENT</b>	Communication facility	Rapid Wildlife Assessment	Assessment of plants	Construction of suitable holding facilities for aquatic fauna (AF)
	Floating camp and floating store	Habitat Suitability Assessment	Phenology monitoring	Rescue selected AF
	Rescue equipment	Priority sites	Temporary nursery	Transfer of AF to Tarat Agriculture Centre
		Awareness on wildlife and conservation	Raise and maintain rescued plants	Manage and monitor rescued AF
<b>DURING IMPOUNDMENT</b>		Monitor and rescue priority species at priority sites at various stages of impoundment	Rescue and collect plant materials at various stages of impoundment	Rescue selected AF
		Active rescue & passive rescue	Raise and tend planting materials	Breed selected aquatic species (Tarat Agricultural Centre)
		Assess well-being of rescued animals before release at selected sites	Carry out habitat assessment for replanting site	Manage holding facilities (Murum and Tarat)
		Monitor movement and wellbeing of released animals	Construct permanent nursery for selected non-tree species	
<b>POST- IMPOUNDMENT</b>		Survey and monitor priority species marooned on permanent islands	Re-planting of rescued plants	Release AF into selected sections of river
			Establishment of Plant/Orchid Garden at the newly created permanent island in Murum reservoir	
		Relocate some of the animals to reduce overpopulation and distress	Monitoring and maintenance of replanted plants	Establish 'Tagang System' with local communities along selected sections of the river between main dam and the power house

OUR COMMITMENT TO THE ENVIRONMENT

BATANG AI REGENERATION



Going up-stream into Batang Ai National Park

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Citing the Batang Air Hydropower as an example, the project area was largely used for shifting agriculture with some areas maintained as primary forest for ecotourism activities, biodiversity conservation, and community uses.

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Tourism Activities in Batang Ai Reservoir

Notwithstanding the potential impact of our HEPs on the environment, they have the potential to create new ecosystems and act as a catalyst for rural and agricultural development. Citing the Batang Air Hydropower as an example, the project area was largely used for shifting agriculture with some areas maintained as primary forest for ecotourism activities, biodiversity conservation, and community uses.

Most of the area studied was secondary forest with associated wildlife and plant species. This led to the subsequent establishment of the Batang Ai National Park, the adjacent Lanjak Entimau Wildlife Sanctuary and Bentuang Karimun Nature Reserve, which have further contributed to the conservation of biodiversity and development of ecotourism.



Wild Orang Utan in Lanjak Entimau Wildlife Sanctuary Upstream of Batang Ai Reservoir

We engaged with our partners on awareness programmes to highlight the impact of HEPs, and how compliance to the SEIA and HSAP protocols is important to the sustainability of the environment.

Moving forward, we will continue to work with our stakeholders to improve the management of biodiversity in our HEPs.



OUR COMMITMENT TO THE ENVIRONMENT

PRESERVING OUR BIODIVERSITY THROUGH WIMOR ACTIVITIES



*Asian Black Hornbill*



*Viverra tangalunga*



*Nycticebus kayan*



*Grammatophyllum kinabaluense*



*Bulbophyllum kubahense*



*Rhododendron stenophyllum angustifolium*



## OUR COMMITMENT TO THE ENVIRONMENT



Murum Hydropower Plant

## WATER MANAGEMENT

Prior to any project development, Sarawak Energy conducts assessments on water quality based on the criteria under the HSAP Protocol. Plans and processes to address identified water quality issues are put in place for implementation based on avoidance, minimisation and mitigation of potential negative impacts.

As with all our projects, management and monitoring are done in accordance with Social and Environmental Impact Assessment (SEIA) study, consistent with global norms relating to the construction and operation of dams.

For example, we have taken into consideration the need to balance social, economic and environmental requirements for the Baleh HEP. Currently there are no specific regulations on environmental flow requirements for Sarawak waterways, but we have adopted widely used global standards to come up with the recommended environmental flow of about 250m<sup>3</sup>/s to minimise impact to downstream users and the overall health of the river ecosystem.

Based on this, with input from our ongoing environmental study for the project area and stakeholder consultation, it will take about 12 months to achieve the minimum operating level and 24 months to achieve full supply level for the dam.

HEPs also impact water in other ways if not managed properly. These include deterioration of water quality, inconsistent river flows and sedimentation in the rivers or reservoirs, all of which can impact wildlife in and around the area. We

are mindful of these factors and have in place various initiatives to mitigate their impact on the environment. These include maintaining minimum flow levels, and sediment sampling:

- In managing minimum flow levels, we take into consideration social, economic and environmental requirements in order to establish optimal environmental flows. While there are no specific rules regarding environmental flow requirements in waterways in Sarawak, we have adopted international practices to manage the flow from our dams.
- Sarawak Energy has a dedicated hydrometric team to collect and process the data and carry out flow measurements for the long term assessment of the hydropower potential. Hydrographic teams carry out river flow measurements using Acoustic Doppler Current Profile (ADCP) for deep flowing rivers and Flow Trackers for shallow rivers. Suspended sediment and bed load sampling are also carried out frequently to analyse the sediment yield at our various project sites.



Batang Ai Hydropower Plant



OUR COMMITMENT TO THE ENVIRONMENT

- At the Murum HEP, we have an Ecological Power Plant to ensure that the ecosystem of the upper reach of Murum River remains active by enabling a controlled and continuous discharge of water.



Ecological Power Plant



Bakun Hydropower Plant owned by Ministry of Finance Malaysia. (Sarawak Energy is the off-taker of electricity generated by Bakun Hydropower Plant)

In addition to these efforts, we carry out regular inspections for landslides and illegal activities within our catchment – and should any of these occur, a report together with photographs will be made available to the local authorities for their action. Water quality is also monitored regularly by our hydro department – water quality samples are collected from our reservoirs once a year and measured for temperature, dissolved oxygen, salinity, turbidity, conductivity, total dissolved solids and acidity.



Methane gas measurement by R&D Department at Batang Ai Reservoir

Aligned to the Company’s vision, we aim to harness and utilise natural resources in a sustainable and responsible way and thus, ensure that all projects or activities respect local water resources where applicable. Where possible we aim to minimise water withdrawal, and among the initiatives we have taken include:

1. Minimising water consumption at our power plants by adopting new technologies – an example would be at the Balingian Coal-fired Power Project where a close loop cooling system results in low consumption of water for cooling purposes (only requiring 1,520 m<sup>3</sup>/hr of raw water). It anticipated that there will zero discharge from the plant with the adoption of the close loop cooling system.
2. Where practical, seawater is used for cooling purposes, and released back into the environment at the appropriate temperature.
3. Installation of a 10,000 gallon rainwater harvesting tanks in Menara Sarawak Energy, to collect and store rainwater for landscape and irrigation purposes.



Artist Impression of Balingian Coal Fired Power Plant using Circulation Fluidised Bed (CFB) Technology, which is first of its kind in Malaysia.



## OUR COMMITMENT TO THE ENVIRONMENT

The following illustrates Sarawak Energy's total water withdrawal from various sources in 2014:

PLANT	PLANT TYPE	SOURCE	TOTAL
<b>SEJINGKAT POWER CORPORATION &amp; PPLS POWER GENERATION</b>	Coal	Municipal	1,602,338.00m <sup>3</sup>
		Sea water or other natural water source	394,200,000.00m <sup>3</sup>
<b>MUKAH POWER GENERATION</b>	Coal	Municipal	589,076.00m <sup>3</sup>
		Sea water or other natural water source	453,768,000.00m <sup>3</sup>
<b>SPG + BINTULU POWER PLANT</b>	Combined Cycle - Natural Gas	Municipal	115,095.00m <sup>3</sup>
		Sea water or other natural water source	172,075,998.60m <sup>3</sup>
<b>MIRI POWER PLANT</b>	Open Cycle - Natural Gas	Municipal	7,264.08m <sup>3</sup>
		Sea water or other natural water source	Not applicable as the plant does not withdraw water from natural sources
<b>BIAWAK POWER PLANT</b>	Diesel	Municipal	11,961.09m <sup>3</sup>
		Sea water or other natural water source	1,286,420.00m <sup>3</sup>

## MOVING FORWARD

While electricity produced by hydropower does not generate GHG emissions, it does have a residual impact on biodiversity and water quality. With that in mind, we conduct SEIA studies prior to the implementation of our projects and incorporate within them HSAP as part of our commitment to mitigate these impacts as well as to protect the environment.



Sejingkat Coal Fired Power Plant



# OUR SOCIAL COMMITMENT



Ensuring the Well-Being of Impacted Communities



Improving the Quality of Life of the Resettled Communities



Preserving Sarawak Cultural & Heritage



Moving Forward



Bringing Electricity to Rural Communities



Human Capital Development



Local Handicraft



Murum Resettlement



House Key Handover Ceremony



Penan Artisans with their handicrafts

## OUR SOCIAL COMMITMENT

G4-DMA  
G4-SO1  
(Former 19)  
(Former 20)



A Penan artisan weaving a rattan mat

### ENSURING THE WELL-BEING OF IMPACTED COMMUNITIES

We engage communities to ensure that we add value to their lives. At the completion of each project, we will not only be judged by our contribution to the State, but also by the company's efforts in advancing the communities that are directly affected by our projects.

Prior to the implementation of our projects, we determine the impact on local communities through a comprehensive SEIA study, and adopting HSAP best practices for the different stages of HEP development (preparation, implementation and operation) which focuses on social impacts, resettlement, welfare of indigenous people, cultural heritage and public health.

The completed SEIA reports are submitted to the Sarawak Natural Resources and Environment Board (NREB) to seek approval prior to project implementation. The report is made public for the public to review and provide comments as part of the requirements by Sarawak environmental laws.

This is also aligned with HSAP standards and International Finance Corporation's (IFC) "Handbook on the Preparation of a Resettlement Action Plan"<sup>1</sup> for stakeholder engagement, which prescribes the "Free, Prior and Informed" principle to allow communities the right to give their opinion and grievances on the proposed projects that may affect them directly or indirectly. The community engagements carried out is an integral part of Sarawak Energy's overall stakeholder engagement strategy.

The SEIA report and the feedback obtained from the relevant stakeholders form the basis for the development of a Resettlement Action Plan (RAP), which outlines the strategies, procedures and timeline for the resettlement of the affected communities.

### Resettlement of Affected Communities

In developing the proposed hydropower projects, Sarawak Energy is fully aware of the impact to various indigenous communities and our responsibility is to ensure that these communities are not left behind as the State continues to develop.

Sarawak Energy believes that as a responsible and sustainable operator, there is a requirement to meet local legislation as well as basic good practices based on international standards. We are guided by the following principles:

- Where it is viable, options assessment to avoid involuntary resettlement will be taken.
- Where resettlement is unavoidable, resettlement plans will be developed following transparent consultation and partnership with Project Affected People (PAP) and relevant State institutions.
- Compensation and resettlement will be carried out in a fair and equitable manner and Social and Environmental Impact Assessment (SEIA) and Resettlement Action Plan (RAP) will take place prior to a project going in for Final Investment Decision (FID).
- Where resettlement is unavoidable, the opportunity will be taken to develop and improve the livelihood of communities directly affected so that they should be no worse off. Where it is feasible, these communities should be reasonably better off than their current situation.

### Lack of access to basic amenities (Pre-resettlement)



### Uplifting the quality of life of the resettled communities (Post-resettlement)



<sup>1</sup> IFC Handbook on the Preparation of a Resettlement Action Plan is a document that provides essential steps based on best practices in designing and implementing resettlement action plans. Source: <http://www.ifc.org>



G4-SO1

OUR SOCIAL COMMITMENT

A stakeholder engagement plan is developed and implemented to engage with the communities directly affected for the development of a Resettlement Action Plan (RAP). We want to ensure that the affected communities are compensated and their standard of living is better than pre-project.

Strategies and mechanisms proposed in the plan – such as identification of the affected people, addressing displacement, assessing impacts, consultation and budget – are addressed in accordance to the State and Federal Laws and guided by international best practices.

The current Murum hydropower development, saw the resettlement of 353 Penan families consisting of 1,415 individuals from seven longhouse communities to two locations in Tegulang and Metalun during the reporting period. The families were first approached and asked their views on resettlement and choice of sites. Upon approval by the State Government, they then confirmed their acceptance of the locations subject to a final survey and detailed site planning.

Besides giving feedback on the resettlement sites, they also provided input on the longhouses to be built and the communal facilities required.



Consultation with the directly affected community on the resettlement site



Choosing the resettlement sites together with the directly affected community



Stakeholder engagement on the house design



OUR SOCIAL COMMITMENT



Murum Resettlement Area

IMPROVING THE QUALITY OF LIFE OF THE RESETTLED COMMUNITIES

All 353 families were successfully relocated into their new longhouses at the end of 2013, which are equipped with proper living, cooking and toilet/shower spaces. These families are given access to modern infrastructure such as electricity, clean water supply and other amenities.



Penan kids at their school



Penan kids at their pre-school

Sarawak Energy also worked in partnership with the Society for the Advancement of Women and the Family, Sarawak (SAWF) on a Murum Penan Literacy Programme aimed at improving literacy in the Penan communities.

The programme is divided into three stages, beginning with the basics of reading, writing, numeracy and simple arithmetic; and vegetable farming.

The Literacy programme saw 476 participants, out of which 341 are now literate.

The second stage of the programme consists of two modules. One module focused on personal development and provided participants with insights on motivation, vision, values, communication and change; while the other module focused on basic hygiene and health at home.



Access to clean water



Access to 24 hours of electricity



Primary School in Tegulang



MURUM PENAN LITERACY PROGRAMME

476

PARTICIPANTS



341

ARE NOW LITERATE



G4-EC8

OUR SOCIAL COMMITMENT



Literacy Programme in partnership with Society for the Advancement of Women and the Family, Sarawak (SAWF)

PRESERVING SARAWAK CULTURAL HERITAGE

In partnership with Sarawak Museum Department, Sarawak Energy rejuvenated the gallery at the Limbang Museum that features informative displays depicting the history and cultures of the Limbang Division's multi-ethnic population. It aims to raise public awareness towards cultural heritage and emphasise that cultural preservation is an essential aspect that shapes the Sarawakian identity.



Rejuvenation of Limbang Museum



A Penan girl reading a book



Sarawak Energy Corporate Souvenir - Uplifting of local Penan's handicraft as corporate souvenir

Stage three, meanwhile, provided continuous learning and development to the community, complementing the livelihood restoration aspect of the Resettlement Action Plan. The programme, which is currently on-going, covers essential topics such as home economics and parenting.

With the new communal facilities in place, the families are also now able to celebrate culture and heritage by hosting gatherings during the festive seasons such as the Murum Penan Festival, where they get together and perform traditional music and dance.



The dam crest of Murum HEP was redesigned to preserve the Batu Tungun which is sacred to the local Penan



OUR SOCIAL COMMITMENT

**BRINGING ELECTRICITY TO RURAL COMMUNITIES**

As the State of Sarawak progresses, we do not want any community to be unable to obtain access to basic amenities such as electricity and water. Under the Government’s Rural Electrification Scheme (RES), Sarawak Energy has made concerted efforts to provide solutions for communities that do not have electricity.

Due to the wide expanse of Sarawak (equivalent in size to Peninsular Malaysia) and the demographic spread of the people, providing electricity to all the communities in the State is a major challenge for Sarawak Energy, especially to the communities located in the interior areas.

Essentially, Sarawak Energy supplies electricity to rural areas under the Rural Electrification Scheme (RES) through:

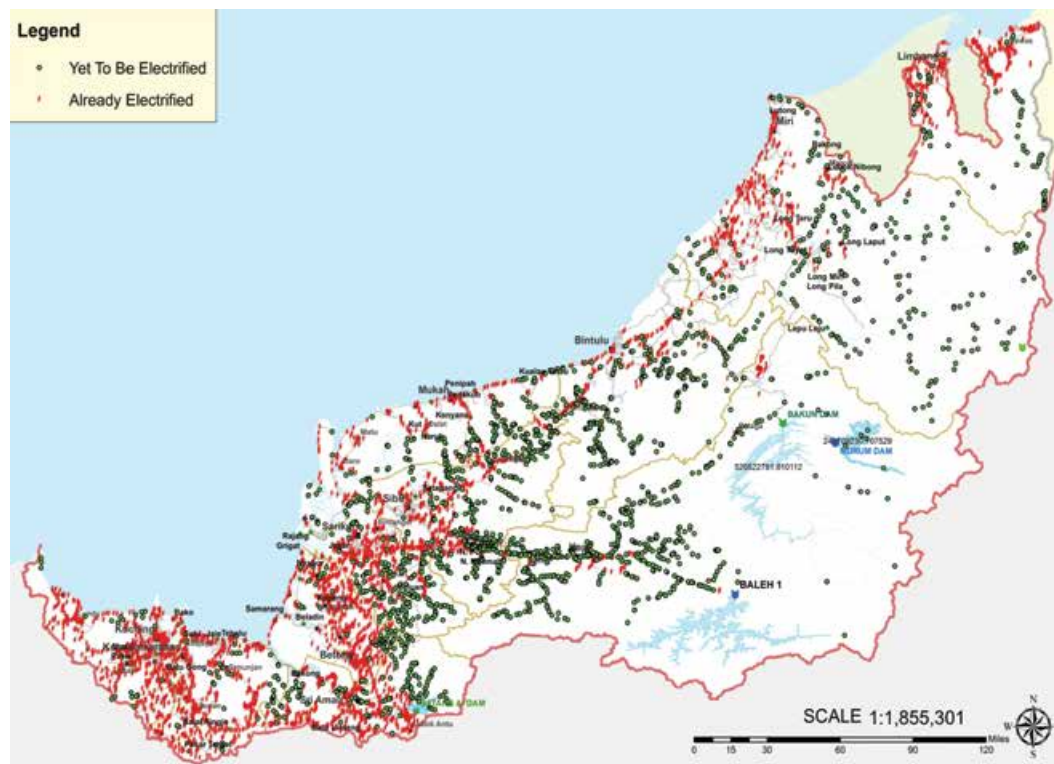
1. Extensions of existing Medium Voltage (33/11kV) distribution lines in cities and towns. Since 2009, 73,925 rural households have been electrified by end 2014.

2. The Rural Power Supply Scheme (RPSS), with the construction of Extra High Voltage (EHV) and zone substations at rural locations as power source points for further continuation of RES. This ties in with Sarawak Energy’s grid enhancement programmes, SCORE projects and State rural economic development agenda. The scheme is designed to provide reliable and quality electricity supply for economic development of rural areas and long-term sustainability.

3. Mini and micro hydro projects for remote villages in the interior of Sarawak.

Where possible, we will also be deploying Covered Conductor (CC) systems to improve the reliability of the distribution of electricity. CC systems make it possible to construct electricity networks with a low failure frequency, and is suitable for rural environments as the conductor is covered by an insulating material to protect against accidental contacts with other covered conductors and with grounded parts such as tree branches.

**SARAWAK RURAL ELECTRIFICATION MAP**





(Former EU23)  
G4-EC8

OUR SOCIAL COMMITMENT



Solar hybrid at Rh Dau, Lubok Antu

Two RES sites - at Belaga and Telok Melano - have been identified for CC pilot projects, with the Belaga site expected to commence in the middle of 2016.

At the user end, Sarawak Energy offers RES applicants options for the installation of internal wiring at their premises, namely

1. Assisted Wiring Scheme (AWS) - RES applicants has appoint their own internal wiring contractor to carry out the installation of internal wiring at their premises, and Sarawak Energy provide a credit facility up to a maximum amount of RM800 to assist with the installation costs. This will allow them control over the application process for electricity supply up to connection, materials used, workmanship and completion time. The AWS credit facility will also be extended to applicants under the Programme Bantuan Rumah (PBR) scheme who do not have existing internal wiring.

2. Internal House Wiring (IHW) for PBR applicants - In addition to extending the AWS credit facility to PBR recipients and in parallel with promoting safety in electrical installation and use to the rural communities, Sarawak Energy also provides free IHW for rural applicants under the PBR programme where the existing wiring is deemed unsafe and in need of repair.

**Extending the Rural Electrification Scheme - Renewable Hybrid System**

Rural electrification scheme has been extended to supply electricity to traditional villages which are outside the operational areas of Sarawak Energy under the BELB (Bekalan Elektrik Luar Bandar) programme.

1. Grid-connection from Sarawak Energy’s existing power lines where regular access roads are available.
2. An alternative hybrid system utilising renewable energy resources - such as solar and micro/mini hydro - as the primary energy source, with diesel generator sets as back-up power systems. These systems are intended for the provision of electricity supply to remote villages located in areas where there is no possibility of being connected to the grid within the next five years. To date, there are over 60 villages under various stages of planning, design and construction of the hybrid systems.

Among the micro/mini-hydro projects that have been implemented is the 2x160kW Long Banga Micro Hydro Project at Baram. Our Renewable Energy Division has also identified another potential site at Sungai Sengayan in Baram, which will be able to provide electricity supply to three villages in the area.

At the end of the reporting period, the total installed capacity for micro/mini hydro projects in the State stand at 7,180kW.



Power Plant (top)



Long Banga Mini Hydro

## OUR SOCIAL COMMITMENT

G4-DMA  
G4-10  
G4-LA1  
G4-LA10

## HUMAN CAPITAL DEVELOPMENT

At Sarawak Energy, it is our people that will drive the business forward and we are committed to providing a safe and conducive working environment that promotes opportunities for professional and personal growth. It is important to us to attract and retain the right people for our existing and future business needs.

Sarawak Energy employs over 4,000 Sarawakians making it one of the largest employers of local talent in the State. We strongly advocate equal opportunity in employment, and hire the best talents available.

	2013	2014
<b>Total Number of Employees</b>	4,039	4,168
<b>Permanent Staff, by Gender</b>		
Male	3,106	3,179
Female	770	823
<b>Management, by Gender</b>		
Male	135	138
Female	32	34
<b>Contract Staff, by Gender</b>		
Male	137	130
Female	26	36
<b>New Hires</b>		
Male	266	153
Female	100	85
<b>Turnover</b>		
Male	121	92
Female	21	22

In terms of employee retention, we have a turnover rate of 2.7% in 2014. This is offset by the higher number of new hires during the year which effectively gives us an overall zero attrition rate.

The high retention rate can be attributed to various factors which include employee benefits; a safe and conducive working environment; and staff training and development.

**Training and Development**

We believe in training and developing our personnel through formal programmes and on the job training, with the aim of developing a skillful and committed workforce to meet our future needs and challenges.

To fulfil this, we run a Training Centre unit under the Competency Development Division, which is led by the People and Leadership Development (PLD) Department. The unit has been running for more than 20 years and has trained an estimated 28,500 people.

The unit manages and facilitates various workshops relevant to the business including electrical and mechanical workshops; a generator and 11kV switching simulators; as well as a motor and computer laboratory. Over 80 training courses were successfully conducted in 2014 covering categories such as administration, electrical, information technology and mechanical safety.



G4-DMA  
G4-LA10  
(Former EU14)

## OUR SOCIAL COMMITMENT

Some of our notable training and development programmes carried out in 2014 are:

### i. Leadership Training

In 2014, selected Sarawak Energy management personnel participated in a two-day training programme, as part of the Sarawak Energy Generic Leadership Programme initiated through the Company's Talent Management Division the year before. The training focused on two Core Competencies namely Problem Solving & Decision Making and Team Leadership. In addition, participants also received training on coaching skills and were later asked to apply what they have learned in an action-learning project with selected subordinates.

### ii. Career Ladder

Sarawak Energy has in place a Career Ladder Framework which is a structured sequence of job positions through which a person progresses in the Company. Since the Career Ladder spells out the skills, competencies, experience and accountabilities to be met/achieved at each and every grade levels, it also allows the employees to determine their present development needs and address them through relevant training/learning efforts.



### iii. On-The-Job Competency (OJC)

Sarawak Energy is currently developing On The Job Competency Program at corporate wide. This project includes identification of relevant competencies required by the job holder to perform the job competently. Once done, job holder will be objectively assess based on 3 perspectives e.g. knowledge, process and product. The outcome of the assessment will determine the job holder's competency level as well as the competency gaps (if any). Appropriate actions, for example training, mentoring, supervision and etc., will have to be developed to reduce the competency gap accordingly.



*Certificate giving ceremony for the successful completion of Hydropower Sustainability Assessment Protocol Training for Sarawak Energy's Internal Assessors*

### iv. Non-Executive Development Programme

This programme prepares supervisory level staff such as senior clerks, senior technicians and engineering assistants for bigger roles and responsibilities as part of their career development. This two-day training focuses on Positive Thinking Skills, Embracing Change, Analytical and Communication Skills, all of which are essential to enable them to perform their supervisory duties more effectively.

### v. Change Agents Programme

To ensure that the identified transformation agenda is present across all divisions, the Company appointed 84 "Change Agents" in 2014, consisting of line supervisors from various departments to be the champions responsible for leading all efforts and initiatives, as well as influencing, guiding and helping all employees to positively deal with changes affecting the company. This year's programme saw the agents learn about personality profiling as they participated in group games and activities to help them better understand their roles.

Agents are selected by People and Leadership Development (PLD) upon recommendation by respective heads of departments. Candidates selected are those who excel at their jobs.

## OUR SOCIAL COMMITMENT

G4-DMA  
G4-LA2  
G4-LA10  
(Former EU14)

#### vi. Sarawak Energy's Internal Hydropower Sustainability Assessment Protocol (HSAP) Assessment Team Capacity Development

The fourth quarter of 2014 saw 18 internal staff from various developments undergo a three-day training course on the application of the HSAP, which provided insight on assessment planning, scoring methodology and key concepts included in selected Protocol topics. These Internal Assessors play a critical role in Sarawak Energy's sustainability journey as they become the Change Agents in their respective departments to ensure that HSAP is embedded into the Sarawak Energy Business Process.

#### vii. Get-Together Sessions

The Get-Together Sessions were initiated in 2014 with the aim of achieving and enhancing a harmonious working environment. During the sessions, employees are given the opportunity to better understand the importance of strong teamwork by learning more about the Company's definition of Respect and Unity through case studies. All departments were required to attend the sessions with at least 80% representation from each department.

#### Employee Welfare

##### i. Measuring Performance

To ensure progress and on-going performance, all employees are assessed annually based on set Key Performance Indicators (KPIs). Each employee is evaluated on their contributions to the Company and Department KPIs, as well as their achievements on their individual performance indicators.

##### ii. Providing Benefits

In an effort to make Sarawak Energy a great place to work and to meet the diverse needs of its full-time employees, the Company offers a wide range of benefits.

Depending on the number of service years, employees are entitled for a number of leave for various situations which covers annual leave, maternity, nursing, paternity, Hajj, studies, compassionate/sick leave, prolonged illness and treatment and quarantines. Employees are also allowed to claim in the case of a natural calamity.



G4-DMA  
G4-LA9  
G4-LA10  
(Former EU14)

## OUR SOCIAL COMMITMENT

**Total Hours of Training Recorded by Category and Gender****Internal courses organised and conducted internally**

	2014	
	Male	Female
<b>Total Number of Employees, by Category</b>		
Management	9	1
Executive	279	125
Non-Executive	1,970	239
<b>Total Hours of Training, by Category</b>		
Management	126*	14*
Executive	6,040*	2,547*
Non-Executive	40,124*	4,410*
<b>Average Hours of Training, by Category</b>		
Management	14	14
Executive	22	20
Non-Executive	20	18

**HR recognised in-house courses conducted by external parties**

	2014	
	Male	Female
<b>Total Number of Employees, by Category</b>		
Management	8	3
Executive	881	557
Non-Executive	3,054	759
<b>Total Hours of Training, by Category</b>		
Management	86*	42*
Executive	12,272*	7,599*
Non-Executive	42,418*	8,588*
<b>Average Hours of Training, by Category</b>		
Management	11	14
Executive	14	14
Non-Executive	14	11

\* These total training hours data have been independently verified. Read the Independent Assurance Report on pages 52 and 53

## OUR SOCIAL COMMITMENT

G4-DMA  
G4-LA9  
G4-LA10  
(Former EU14)  
(Former EU21)

## External courses

	2014	
<b>Total Number of Employees, by Category</b>	<b>Male</b>	<b>Female</b>
Management	37	3
Executive	518	234
Non-Executive	207	143
<b>Total Hours of Training, by Category</b>	<b>Male</b>	<b>Female</b>
Management	651*	84*
Executive	10,318*	4,081*
Non-Executive	4,480*	1,869*
<b>Average Hours of Training, by Category</b>	<b>Male</b>	<b>Female</b>
Management	18	28
Executive	20	17
Non-Executive	22	13

## Disaster and Emergency Response

Having a reliable and uninterrupted power supply is a key driver for the development of the State, and as such we have in place emergency response plans for all our generation, transmission and distribution operations. The main objective of the ERP is to provide a basis for the coordination and direction for the Company to refer to, if and when we have to manage unusual operational and natural hazards, in which there is potential for disruption, destruction and injuries.

To ensure the safety of its Batang Ai and Murum HEP projects, Sarawak Energy's Hydro Department has been practicing its dam surveillance programme in line with the world's best practices since 1985 to ensure that all dams are safe at all times. The standard procedure was established in accordance with guidelines set by the International Commission on Large Dam (ICOLD)<sup>1</sup>, the Australian National Committee on Large Dam (ANCOLD)<sup>2</sup> and the Malaysian Inter-Departmental Committee on dam safety.



**INTERNATIONAL COMMISSION  
ON LARGE DAMS**

ICOLD is an international organisation including more than 90 member countries. ICOLD leads the profession in setting standards and guidelines to ensure that dams are built and operated safely, efficiently, economically, and are environmentally sustainable and socially equitable. (Source – [www.icold-cigb.org](http://www.icold-cigb.org))



ANCOLD was formed in 1937 as the Australian national committee of the ICOLD. ANCOLD's mission is to be the industry body, representing its Members and Associates, disseminating knowledge, developing capability and providing guidance in achieving excellence for all aspects of all aspects of dam engineering, management and associated issues. (Source – [www.ancold.org.au](http://www.ancold.org.au))

A bi-annual inspection is conducted by Sarawak Energy. The dam safety review of the Batang Ai dam and its appurtenant structure(s) is carried out every five years by an appointed international consultant consistent with Dam Safety Management guidelines set by ANCOLD.

We have conducted in-house dam safety training programmes in our efforts to ensure that knowledge on dam safety is cascaded down to all employees.

In addition to the ERP for Hydro, the Company also has emergency response plans for its thermal power plants namely Sejingkat Power Corporation, Mukah Power Generation, Biawak Power Plant (TAR), Bintulu Power Plant, Miri Power Plant, Limbang Power Plant, Lawas Power Plant and Sibul Outstation.

\* These total training hours data have been independently verified. Read the Independent Assurance Report on pages 52 and 53



G4-DMA  
G4-PR8  
G4-PR9

OUR SOCIAL COMMITMENT

66

At Sarawak Energy, powering Sarawak is not only our job, it is our commitment to our valued customers.

99



Wisma SESCO

**Product Responsibility**

The Personal Data Protection Act 2010 was enacted in November 2013. Sarawak Energy and its subsidiary, Syarikat SESCO Berhad, have taken into account certain measures particularly when dealing with SESCO customers. This includes the following:

- Dissemination of Privacy Notice in two (2) languages attached with bills to existing state-wide customers (the notice is also uploaded onto the Company website);
- Making it compulsory for new customers to sign the Privacy Notice when signing a contract document;
- The need of a centralised Application Form storage room in each Region with limited access to protect our customers' personal data;
- To classify a "CONFIDENTIAL" stamp on every documents and correspondences that contains SESCO customers Personal Data.

During our reporting period, we have not received any complaints nor have we received any fines related to breaches of customer privacy and losses of customer data. There were also no significant fines for non-compliance with laws and regulations concerning the provision and use of products and services were reported during the period under review.



Customer Service Centre at Wisma SESCO

OUR SOCIAL COMMITMENT



Safety Talk at MPG Power Plant

**Safety at the Workplace**

Occupational safety and health is a key priority for the Company, and each regional office and power plant (ten regions and seven main power plants) has its own safety and health committee to monitor safety and health performance. In order to standardise reporting of safety performance statistics, Sarawak Energy Corporate Risk & HSE Department has established a Main Safety Performance Statistic Database.

The committee members consist of a chairman, secretary, and representatives from both the employer and employees, in accordance with the Occupational Safety and Health (Safety and Health Committee) Regulations 1996, Part II, Regulation 5. The total members of all the committees are as follows:

Chairmen	17
Secretaries	17
Employer Representatives	122
Employee Representatives	187

The committee members function in accordance to the Occupational Safety and Health (Safety and Health Committee) Regulations 1996, Part III (Functions of Safety and Health Committee) under regulation 11. In compliance with Part IV Occupational Safety and Health regulation 1996 (Safety and Health Committee) regulation 21, committee meetings are held as often as necessary commiserating with the risks attendant on the nature of work at the place of work. These are normally held at least once every quarter and not less than once in every three months.

Essentially, all regional offices and power plants are required to upload their safety performance numbers by the first week of the month to the Database (Standard reporting). For short term contracts, all contractors are required to submit their safety performance statistics at the end of their project while for long term projects, these have to be submitted monthly. Standard forms for submission are provided to the contractors in order to ensure standardisation of the reporting process. Health and safety performance is measured by 'Lost Time Injury Frequency Rate' (LTIFR), and is reported by the Corporate Risk & HSE Department as follows:

2014 Target	2014 Achievement	2015 Target
<2.0	1.08	<1.0

The Lost Time Injury Incident Rate (LTIIR), meanwhile, was recorded at 6.1 incident per one thousand employees in 2014.

**Workers with high incidence or high risk of diseases related to their occupation**

At Sarawak Energy we also monitor the health of our employees for prevention purposes. All new staff are required to undergo a full medical check-up before reporting for duty, while those working in power plants are required to undergo annual medical check-ups.

Inculcating safety culture in SEB, HSE Weeks Campaign, Safety Audit & Inspection and HSE Promotion involving staff's, contractors, government agencies and publics are also carried out at all regions and power plants once a year.

To comply with Factory and Machinery (Noise Exposure) Regulation 1989, we have also conducted hearing conservation programmes such as noise monitoring and audiometric testing at all regions and power plants to reduce excessive noise levels in the workplace.



# HOW WE ENSURE ECONOMIC SUSTAINABILITY



Direct Contributions



Indirect Economic Impacts



Accessibility and Reliability



Thermal Asset Management Plan



Transmission and Distribution Losses



Customer Interruptions and Outages



Procurement Practices



*Kuching City*



*Samalaju Industries*



*Bintulu Port*



*Power Purchase Agreement Signing Ceremony with SCORE Customer*

## HOW WE ENSURE ECONOMIC SUSTAINABILITY

G4-DMA  
G4-EC1  
G4-EC7  
G4-EU10  
(Former EU6)

### DIRECT CONTRIBUTIONS

In 2014, our revenue increased by 21.7% and this was achieved by the provision of electricity to regulated tariff customers (both domestic and commercial) and major industries established through the SCORE initiative. Operating profit, meanwhile, increased from RM581.9m in 2013 to RM710.5m in 2014.

We contributed to the Nation's and State's economy through RM255.6m in employee remuneration; RM233.7m in payments to capital providers in the form of dividends and interest; and RM41.3m in taxes.

### INDIRECT ECONOMIC IMPACTS

We take on greater responsibility as the State's growth engine to contribute to the socio-economic development of the people especially in areas affected by our development projects.

Sarawak Energy delivers this through Corporate Social Responsibility (CSR) activities, focussing on four key areas - education and young people; culture and heritage; environment management and conservation; community development and entrepreneurship.

We contribute to rural development, where we have conducted education and livelihood improvement programmes, and rural electrification, where we have provided electricity to communities in the remote interiors of the State.

We also go beyond the regulatory requirements for the resettlement of local communities impacted by our HEP projects by introducing skills training and economic opportunities to improve their livelihoods.

Details of these initiatives can be found in the sections on Local Communities on page 32, and the Environment on page 20.

	2013 (RM)	2014 (RM)
<b>DIRECT ECONOMIC VALUE GENERATED</b>		
Revenues	2,323.2	2,826.3
<b>ECONOMIC VALUE DISTRIBUTED</b>		
Operating costs	1,242.7	1,585.2
Employee remuneration	239.5	255.6
<b>Payments to capital providers</b>		
Dividends paid	66.4	88.6
Interest (net of amount capitalised)	172.8	145.1
<b>Payments to the government</b>		
Income Taxes Paid (net of refunds)	19.9	41.3
<b>ECONOMIC VALUE RETAINED</b>	<b>581.9</b>	<b>710.5</b>

Note: Economic value retained (calculated as 'Direct economic value generated' less 'Economic value distributed')

### ACCESSIBILITY AND RELIABILITY

For long term generation planning, Sarawak Energy practices scenario planning and utilises established probabilistic applications to ensure an optimal supply-demand balance within regulatory criteria and guidelines. A 5-year generation and transmission plan is submitted yearly to the Director of Electricity Supply.

Our strategy is to utilise local resources, and we aim to harness the bulk of our energy from the potential of hydropower to generate affordable and clean electricity. This is in line with the 10th Malaysia Plan which promotes greater use of renewable energy for power generation and for use by industries. Currently our generation mix stands at 61.8% hydro, 19.5% coal and 18.4% gas. We expect to generate 70% of our requirements from hydro by 2035.

While the bulk of our generated capacity will come from hydropower, it is still necessary to maintain a portion of our energy from thermal plants as part of our risk mitigation strategy. Where possible, we will utilise local resources such as coal and natural gas, in line with the national policy on energy to reduce dependency on imported fuel. For our Balingian Coal-fired Power Project, we are adapting new technology and building the plant next to the mine mouth which will reduce the environmental impact.

As of 31 December 2014, the committed demand for Sarawak Energy was at 2,820MW with the grid generation firm capacity at 3,244MW. Demand is projected to increase to 5,000MW by 2020 while the firm generation capacity is expected to increase to 5,200MW correspondingly - we will have ample capacity to meet this rising demand with the Bakun HEP already fully commissioned and Murum HEP coming on line at the end of 2014. Nevertheless, the operational optimisation of our plants are carried out a year in advance to ensure efficiency & sufficient margins at all times.

A 500kV backbone is also under construction and expected to be completed in 2016. This will enhance transmission capacity and reliability for the network from Similajau to Kuching. Regional distribution plans are reviewed annually to ensure our distribution network caters for future growth.





G4-EU12  
G4-EU28  
G4-EU29

HOW WE ENSURE ECONOMIC SUSTAINABILITY

**THERMAL ASSET MANAGEMENT PLAN**

The Thermal Asset Management Plan is aimed towards the integration and consolidation of all our existing Thermal Asset Management programmes under the Enterprise Asset Management (EAM). Planned for implementation by Sarawak Energy’s Operation Department, EAM will lead towards ISO 55000/PAS 55 certification, which specifies requirements for the establishment, implementation, maintenance and improvement of a management system for asset management.

Asset management is important as it helps us to optimise and sustainably manage our thermal assets and asset systems, and their associated performance, risks, and expenditures over their lifecycles for the purpose of achieving the Company’s overall organisational strategic plan.

It also helps us evaluate existing plants and manage the shift towards higher-efficiency, cleaner energy, for example by retiring expensive diesel plants and replacing them with combined cycle gas turbines.

Currently, the Thermal Asset Management Plan covers the Asset Lifecycle Activities, Asset Systems and The Asset Portfolio. This management plan will be embedded into the Corporate Asset Management Plan which will be initiated in 2015.



**TRANSMISSION AND DISTRIBUTION LOSSES**

In terms of transmission and distribution losses, we have recorded improvements over the past three years.<sup>1</sup>

Description	2012	2013	2014
Transmission Loss %	2.3	1.9	1.65
Distribution Loss (Technical) <sup>2</sup> %	10.87	10.87	10.87
Distribution Loss (non-Technical) %	3.7	3.5	2.08

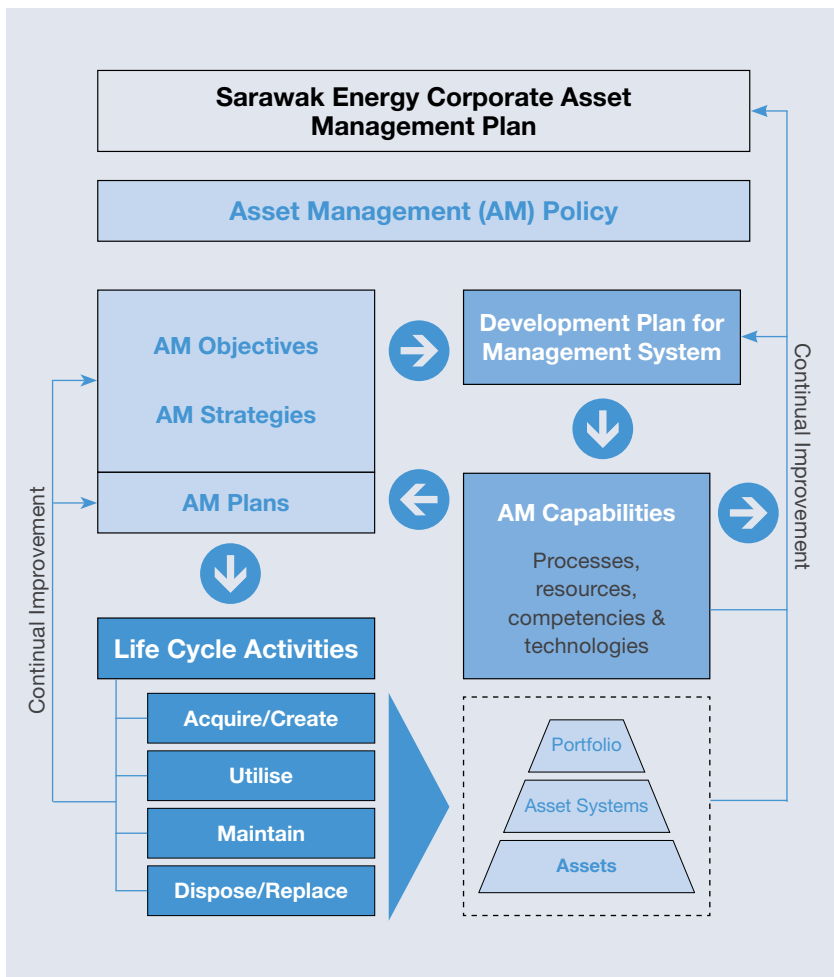
**CUSTOMER INTERRUPTIONS AND OUTAGES**

The total cumulative outage duration per customer increased from 168 minutes in 2013 to 189 minutes in 2014 - due to the occurrence of major incidents in Miri (cable fault) and Kuching (cable termination fault).

There was a slight improvement in the number of power outages during the year, with the average number of interruptions experienced by a customer improving to 2.0 in 2014 from 2.08 in 2013.

System Average Interruption Duration Index (SAIDI) and System Average Interruption Frequency Index (SAIFI) are as follows:

Description	2012	2013	2014
SAIDI (mins/yr)	137	168	189*
SAIFI (interruptions/yr)	1.77	2.08	2.0



<sup>1</sup> The task force study on Technical Distribution Losses was conducted in 2012. Based on this study, the Technical Distribution Losses figures for 2012-2014 were derived. A separate losses study shall be conducted in 2016 to review the Technical Distribution Losses figure for 2015 onwards.

<sup>2</sup> Technical losses occur naturally and consist mainly of power dissipation in electricity system components such as transmission and distribution lines, transformers, and measurement systems. Non-technical losses are caused by actions external to the power system and consist primarily of electricity theft, non-payment by customers, and errors in accounting and record-keeping.

\* This System Average Interruption Duration Index (SAIDI) data has been independently verified. Read the Independent Assurance Report on pages 52 and 53

HOW WE ENSURE ECONOMIC SUSTAINABILITY

**PROCUREMENT PRACTICES**

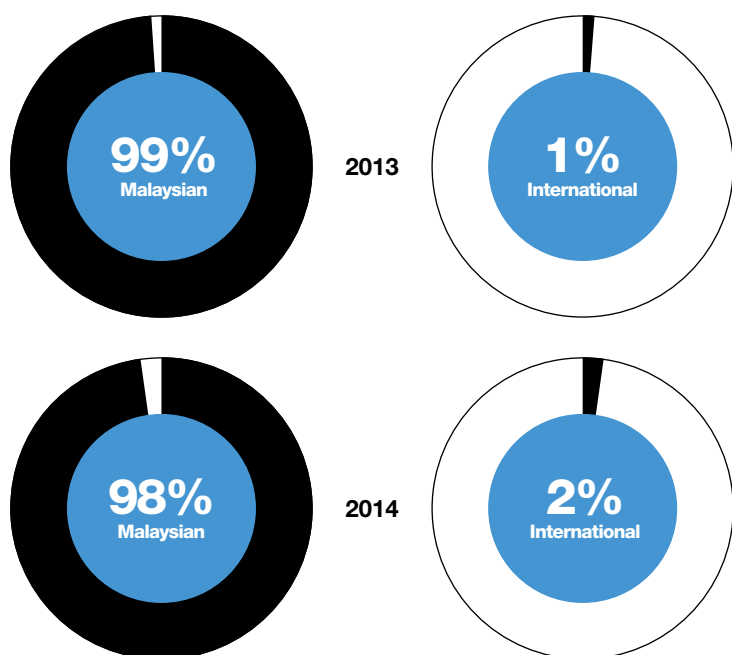
Sarawak Energy’s presence has helped stimulate the local economy giving priority to local businesses to tap the opportunities arising from the Company’s operational needs. Nevertheless, potential vendors wanting to contribute to our operations must first meet the stringent procurement process we have in place.

We have developed a set of comprehensive procurement procedures in alignment with recognised industry best practices and policies, and based on the following four guiding principles:

- Best Value for Money – all decisions must consider the central objective of achieving best value for money for the Company and the people of Sarawak;
- Open and Effective Competition – Through clearly documented systems, processes and procedures, all contract and procurement activities will be conducted on a consistent and fair basis so as to encourage open and effective competition;
- Impartiality and Transparency of Process – all contract and procurement activities are conducted on an impartial, transparent and ethical basis, without internal or external influence;
- Enhance Opportunity for Local Content – In all contract and procurement activities, the Company will seek to enhance opportunities for Local Content.

Where possible, we look to provide opportunities for local businesses – first within the State and then throughout the rest of Malaysia.

**Overall Tenders Awarded by Sarawak Energy (Malaysian vs International)**



**Overall Tenders Awarded by Sarawak Energy (Malaysian vs International)**

Status	Value (RM)	
	Year 2013	Year 2014
Malaysian	1,775,762,374	2,950,738,132
International	25,256,863	57,395,043
<b>Total</b>	<b>1,801,019,237</b>	<b>3,008,133,175</b>

**Tenders Awarded by Sarawak Energy (Sarawakian)**

Status	Value (RM)	
	Year 2013	Year 2014
Sarawakian	1,155,661,906	1,036,485,969
<b>Total</b>	<b>1,155,661,906</b>	<b>1,036,485,969</b>

Data Source: Sarawak Energy SAP MM Module, extracted in January 2015



HOW WE ENSURE ECONOMIC SUSTAINABILITY

Sarawak Energy's Tender Process

1

**Procurement Planning and Requisition**

- Annual procurement planning, requisition and setting specifications
- Selecting one or two-envelope system (need to be justified)

2

**Sourcing and Tendering**

- Shortlisting, developing RFP for consultancy services
- Selecting to opt for Open or Invited/ Selective Tenders
- Publication of tender notices
- Briefings and site visits
- Clarification of tender documents
- Modifications and withdrawals to tenders
- Extension of tendering period and tender validity period

3

**Opening of Tender**

One-envelope System

- Involves Tender Opening Committee and Procuring Department
- The Tender submission comes in one envelope (both Technical and Commercial offers)

Two-envelope System

- Involves Commercial Evaluation Committee and Technical Evaluation Committee
- The Tender submission comes in separate envelopes (Technical and Commercial envelopes)
- Commercial envelope will only be opened after the technical evaluation has been made

4

**Evaluation**

- Various aspects are evaluated including roles and responsibilities of the committee; area and access to offers/proposals; criteria and weightings; award criteria; grading/ scoring; clarification meetings; recommendations/ rejections/ cancellations/re-tendering and negotiations
- One-envelope System – Both Technical and Commercial aspects are evaluated together
- Two-envelope System – Technical evaluation must be opened and evaluated first before proceed with commercial evaluation

5

**Award**

- Issuance of notification of award/ contract and PO; non-PO/ contract procurement; collection of securities; announcement/rejection of award; as well as debriefing for unsuccessful tenderers

6

**Post Award**

- Enforcement of contracts and POs and also variation order














7

**Vendor Management**

- Vendor application for registration; evaluation of vendor's background; approval of vendor application for registration; evaluation of vendor performance; removal of vendor from AVL; handling vendor appeal for reinstatement; and blacklisting of vendors (not on the AVL)

## AWARDS AND RECOGNITION

During the reporting period, Sarawak Energy received a number of awards and recognition. These were for:

- |   |   |  |  |
|---|---|--|--|
| 1   | 2   | 3  | 4  |
|    |   |   |   |
| 5   | 6   | 7  | 8  |
|   |   |   |  |
|   |   |  |  |
| 7   | 8   |  |  |
|  |  |  |  |
| 9   |   |  |  |
|  |   |  |  |

1. Winner of the 6th Chief Minister Environmental Award (CMEA) 2014 for the Category of Large Industries (Services and Other Sectors - Telecommunication, Electricity Supply, Waste Disposal & Water Supply) for Sejangkat Power Corporation
2. Gold Award of the 6th Chief Minister Environmental Award (CMEA) 2014 for the Category of Large Industries (Services and Other Sectors - Telecommunication, Electricity Supply, Waste Disposal & Water Supply) for Mukah Power Generation
3. Gold Award of the 6th Chief Minister Environmental Award (CMEA) 2014 for the Category of Medium Industries (Services and Other Sectors - Telecommunication, Electricity Supply, Waste Disposal & Water Supply) for Batang Ai Power Plant
4. CSR Excellence Award - at Sin Chew Business Excellence Awards 2014
5. Limbang Power Plant receiving Gold Class I Award 2013 on the 4th November 2014 by MSOSH
6. ISMS, ISO9001, ISO14001, MPC, OHSAS18001 for Batang Ai Power Plant
7. ISMS for Biawak Power Plant
8. Outstanding Entrepreneurship Award (Oil & Gas, Mining and Energy Category) - at Asia Pacific Entrepreneurship Awards 2014 BIMP-EAGA
9. Power Utility of the Year Malaysia - at Asian Power Awards 2014



## INDEPENDENT THIRD PARTY ASSURANCE STATEMENT



### Independent Assurance Report

#### To Management of Sarawak Energy Berhad (2014)

(Incorporated in Malaysia)  
(Company No. 007199-D)

We have been engaged by Sarawak Energy Berhad ("SEB") to perform an independent limited assurance engagement on selected Key Performance Indicators (hereon after referred to as "KPIs") as reported by SEB in the "What We're About" and "How We Ensure Economic Sustainability" chapters of its Towards Sustainable Energy Sustainability Report 2014 for the year ended 31 December 2014 ("SEB Sustainability Report 2014").

#### Management's Responsibility

Management of SEB is responsible for the preparation of SEB Sustainability Report 2014 in accordance with the Global Reporting Initiative's G4 Sustainability Reporting Guidelines ("GRI G4").

This responsibility includes the selection and application of appropriate methods to prepare the SEB Sustainability Report 2014 as well as the design, implementation and maintenance of systems and 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 evidence-gathering procedures 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.

The accuracy and completeness of the KPIs are subject to inherent limitations given their nature

and methods for determining, calculating and estimating such data.

Our assurance report should therefore be read in connection with SEB's procedures on the reporting of its sustainability performance.

In a limited assurance engagement, the evidence-gathering procedures are more limited than for a reasonable assurance engagement, and therefore less assurance is obtained than in a reasonable assurance engagement.

#### Subject Matter

The following information collectively known as KPIs on which we provide limited assurance consists of:

- The management and reporting processes with respect to the preparation of the following four (4) KPIs reported and marked in SEB Sustainability Report 2014 as follows:
  1. Grid Carbon Emission Intensity (Main grid only) for the financial year 2014;
  2. System Average Interruption Duration Index (SAIDI) for distribution level for the financial year 2014;
  3. Total Electricity Sales for the financial year 2014; and
  4. Total Hours of Training for management, executives and non-executives for the financial year 2014.

#### Criteria

- SEB's internal sustainability reporting guidelines and procedures by which the KPIs are 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:

*PricewaterhouseCoopers (AF 1146), Chartered Accountants,  
Level 10, 1 Sentral, Jalan Travers, 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*

INDEPENDENT THIRD PARTY ASSURANCE STATEMENT



- Inquiries of personnel responsible for the preparation of the KPIs reported in SEB Sustainability Report 2014 regarding the process to prepare the said report and the underlying internal control system;
- Inquiries of personnel responsible for internal reporting, and data collection at the corporate level for the KPIs;
- Inspection on a sample basis of internal documents and invoices/reports from SEB supporting the KPIs for completeness and accuracy; and
- Reviewing the appropriateness of the management and reporting processes for the KPIs and assessing the collation and reporting of data at the corporate level.

**Conclusion**

Based on our limited assurance engagement, in all material aspects, nothing has come to our attention that causes us to believe that, for the year ended 31 December 2014, the KPIs have not been fairly stated in accordance with SEB's internal sustainability reporting guidelines.

**Other matters**

This report is addressed to Sarawak Energy Berhad in connection with the performance of an independent limited assurance on KPIs as reported by Sarawak Energy Berhad for financial year 2014 and should not be used or relied upon for any other purposes. Our report is not to be disseminated to any third party in whole or in part. Accordingly, we will not accept any liability or responsibility to any other party to whom our report is shown or into whose hands it may come.

A handwritten signature in black ink, appearing to read 'Pricewaterhousecoopers', is written over a faint, larger version of the same signature.

PRICEWATERHOUSECOOPERS  
(No. AF: 1146)  
Chartered Accountants  
Kuala Lumpur

13 September 2016



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## GRI CONTENT INDEX



This report is “In Accordance” with the GRI G4 Guidelines – Core option. This table shows where specific GRI disclosures can be found in this online report. This report was submitted for the GRI Content Index Service, and GRI confirmed the accuracy of the GRI G4 Content Index.

GENERAL STANDARD DISCLOSURES			
General Standard Disclosures	Page	External Assurance	Description
<b>Strategy and Analysis</b>			
G4-1	Our Message to Stakeholders on p.14		Statement from the most senior decision-maker of the organisation
<b>Organisational Profile</b>			
G4-3	Sarawak Energy Berhad		Name of the organisation
G4-4	This information can be found under “What We’re About” on p.8		Primary brands, products and services
G4-5	Menara Sarawak Energy, No. 1, The Isthmus, 93050 Kuching, Sarawak.		Company Headquarters
G4-6	Sarawak, Malaysia		Countries of operation
G4-7	The principal activity of the Company is that of an investment holding company, and information on the Company’s organisation structure can be found on p.9		Nature of ownership and legal form
G4-8	The Company provides services to the following customers in the State of Sarawak: a. Organic – domestic, commercial, industrial and public lighting; b. Bulk – SCORE customers and interconnection		Markets served
G4-9	The Corporate structure of the Company is reported under “What We’re About” on p.13		Scale of the organisation
G4-10	The total number of employees is reported under “Our Social Commitment - Human Capital Development” on p.39		Organisation’s workforce
G4-11	All of Sarawak Energy’s non-executive staff are covered by collective bargaining agreements.		Total employees covered by collective bargaining agreements
G4-12	What We’re About on p.8		Supply Chain
G4-13	There were no significant changes during the reporting period regarding the Company’s size, structure, ownership and/or supply chain.		Significant changes during the reporting period regarding size, structure, ownership or its supply chain

## GRI CONTENT INDEX

GENERAL STANDARD DISCLOSURES			
General Standard Disclosures	Page	External Assurance	Description
G4-14	How We're Governed, p.17 HSAP Compliance, p.17		Explanation of whether and how the precautionary approach or principles is addressed by the organisation
G4-15	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: <ul style="list-style-type: none"> <li>• Hydropower Sustainability Assessment Protocol (HSAP)</li> <li>• UNDRIP</li> <li>• Global Reporting Initiative (GRI)</li> <li>• IFC</li> <li>• UN Global Compact (UNGC)</li> <li>• World Commission on Dams</li> <li>• ISO14001</li> <li>• OSHA</li> </ul>		Externally developed economic, environmental and social charters, principles or other initiatives
G4-16	The Company signed a "Sustainability Partnership" with the International Hydropower Association (IHA) in early 2011, which requires it to use the Hydropower Sustainability Assessment Protocol as a tool to access 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.		Memberships of associations and national/international advocacy organisations
<b>Identified Material Aspects and Boundaries</b>			
G4-17	The list of entities is reflected in the Company's organisation structure, which can be found on p.9		Entities included in the organisation's consolidated financial statements or equivalent documents
G4-18	Information about this is elaborated under "About this Report" on p.7		Process for defining report content and the Aspect Boundaries
G4-19	The list of material aspects can be found under "About this Report" on p.7		Material Aspects identified in the process for defining report content
G4-20	This information can be found under "About this Report" on p.7		Aspect Boundary within the organisation
G4-21	This information can be found under "About this Report" on p.7		Aspect Boundary outside the organisation
G4-22	No restatements have been made, as this is the Company's first Sustainability Report.		Restatements of information provided in previous reports
G4-23	None, as this is the Company's first Sustainability Report.		Significant changes from previous reporting in the Scope and Aspect Boundaries



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## GRI CONTENT INDEX

GENERAL STANDARD DISCLOSURES			
General Standard Disclosures	Page	External Assurance	Description
<b>Stakeholder Engagement</b>			
G4-24	The list of stakeholder groups engaged by the Company is stated under “How We Engage Our Stakeholders” on p.16		List of stakeholder groups engaged by the organisation
G4-25	Basis for identification and selection of stakeholders with whom the Company engages with is elaborated under “How We Engage Our Stakeholders” on p.16		Basis for identification and selection of stakeholders with whom to engage
G4-26	Approach to stakeholder engagement, including frequency of engagement by type and by stakeholder group is elaborated under “How We Engage Our Stakeholders” on p.16		Approach to stakeholder engagement, including frequency of engagement by type and by stakeholder group
G4-27	This information can be found under “How We Engage Our Stakeholders” on p.16. Key topics and concerns particular those that are of primary concern are addressed throughout this Sustainability Report.		Key topics and concerns that have been raised through stakeholder engagement, and how the organisation has responded to those key topics and concerns, including through its reporting
<b>Report Profile</b>			
G4-28	From 1 January until 31 December 2014.		Reporting period
G4-29	This is the Company’s first Sustainability Report.		Date of most recent previous report
G4-30	The Company plans to publish it on an annual basis.		Reporting cycle
G4-31	General questions regarding this report can be addressed to the Sustainability Division at:  Menara Sarawak Energy, Level 8, No. 1, The Isthmus, 93050 Kuching, Sarawak. Tel: 082-388 388 (ext. 8816/8165)		Contact point
G4-32	This report has been prepared in accordance with the GRI G4 “Core” option and the general standard and specific standard disclosures are available on p.52-71		GRI content index
G4-33	Indicators that are subjected to external assurance and represented in SEB’s Towards Sustainable Energy Sustainability Report 2014 for year ended 31 December 2014: - Grid CO <sub>2</sub> Emission Intensity (Main grid only) - SAIDI (Distribution level) - Total Electricity Sales - Total Hours of Training		External assurance
<b>Governance</b>			
G4-34	Information can be found on p.18 & p.19		Organisation’s governance structure
<b>Ethics and Integrity</b>			
G4-56	The organisation’s values, principles, standards and norms of behaviours are listed under “Our Message to Stakeholders” on p.14		Organisation’s values, principles, standards and norms of behaviours

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SPECIFIC STANDARD DISCLOSURES								
Material Aspects	DMA and Indicators	Omission	External Assurance	Description				
<b>ECONOMIC</b>								
<b>Economic Performance</b>								
G4-DMA	p.47							
G4-EC1	p.47			Direct economic value generated and distributed  This information can be found under "How We Ensure Economic Sustainability" on p.47				
<b>Indirect Economic Aspects</b>								
G4-DMA	p.47, 32, 37							
G4-EC7	This information can be found under "How We Ensure Economic Sustainability" on p.47			Development and impact of infrastructure investments and services supported				
<b>Corporate Social Responsibility (CSR) Total Expenses (RM)</b>								
		<table border="1"> <thead> <tr> <th>2013</th> <th>2014</th> </tr> </thead> <tbody> <tr> <td>1,322,030.58</td> <td>1,734,207.30</td> </tr> </tbody> </table>			2013	2014	1,322,030.58	1,734,207.30
2013	2014							
1,322,030.58	1,734,207.30							
G4-EC8	p.35, 36, 37, 38			Significant indirect economic impacts, including the extent of impacts  Information on this, particularly the Murum resettlement project is elaborated under "Our Social Commitment – Improving the quality of life of the resettled communities" on p.35				
<b>Procurement Practices</b>								
G4-DMA	p.49							
G4-EC9	p.49			Proportion of spending on local suppliers at significant locations of operation  Information on this can be found in "How We Ensure Economic Sustainability" on p.49				





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SPECIFIC STANDARD DISCLOSURES				
Material Aspects	DMA and Indicators	Omission	External Assurance	Description

**Compliance**

G4-DMA	p.21			
G4-EN29	<p>i. Fines relating to non-compliance to the EQA 1974 and its regulations: In 2014, the Company was fined RM1,500 for violating Environmental Quality (Scheduled Wastes) Regulations 2005 at the Miri Power Plant.</p> <p>ii. Number of non-conformities reported during the year under review: Four (4) – ISO14001 EMS Surveillance Audit; Four (4) – Murum HEP Independent Environmental Compliance Audit Performance.</p>			Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations

**SOCIAL****Labour Practices and Decent Work****Employment**

G4-DMA	p.39, 40, 41, 42, 43			
G4-LA1	Information on this can be found under “Our Social Commitment – Human Capital Development” on p.39			Total number and rates of new employee hires and employee turnover by age group, gender and region

**New Hires and Turnover by Gender and Age**

New Hires (by Gender)	2014			2013		
	Men	Women	TOTAL	Men	Women	TOTAL
Total number	153	85	238	266	100	366
<b>By age, in numbers</b>						
Up to 30 years old	134	66	200	235	85	320
Between 31 and 50 years old	15	19	34	28	15	43
Over 50 years old	4	0	4	3	0	3

Staff Turnover (by Gender)	2014			2013		
	Men	Women	TOTAL	Men	Women	TOTAL
Total	92	22	114	121	21	142
<b>By age, in numbers</b>						
Up to 30 years old	32	14	46	35	14	49
Between 31 and 50 years old	30	7	37	36	5	41
Over 50 years old	30	1	31	50	2	52



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## SPECIFIC STANDARD DISCLOSURES

Material Aspects	DMA and Indicators	Omission	External Assurance	Description																																																																																																	
G4-LA1	<b>New Hires and Turnover by Company</b>			Benefits provided to full-time employees that are not provided to temporary or part-time employees, by significant locations of operation																																																																																																	
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## SPECIFIC STANDARD DISCLOSURES

Material Aspects	DMA and Indicators	Omission	External Assurance	Description
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G4-LA2 Information on this is elaborated under “Our Social Commitment – Human Capital Development, Employee Welfare” on p.41

## Sarawak Energy provide the following Welfare &amp; Benefits

Benefits provided to full-time employees that are not provided to temporary or part-time employees, by significant locations of operation

Welfare	
Natural Calamity:	
Deceased Person	Rate (RM)
Serving Employee	3,000.00
Spouse & Children<21yrs	1,000.00
Biological Parent	500.00
Pensioner	500.00
Wreath / Delicacies	150.00
Hospital Visit	
Fruits Basket or Baby's Gift	150.00

Benefits		
Type of Loan	Entitlement	Remarks
(a) Housing (Subsidy)	RM360,000	SG1-SG4
	RM300,000	E5-E8
	RM250,000	E1-E4
	RM200,000	NE1-NE6
(b) Car (Subsidy)	RM170,000	SG1-SG4
	RM130,000	E5-E8
	RM80,000	E1-E4
	RM50,000	NE1-NE6
(c) Motorcycle (Subsidy)	RM7,000	For technical staff, meter reader, office assistant, security, etc.
(d) Computer	RM3,000	All staff

House Moving Expenses Subsidy		
Salary Grade	Single	Married
SG1-SG4	RM1,950	RM2,600
E5-E8	RM1,425	RM1,900
E1-E4	RM1,125	RM1,500
NE1-NE6	RM750	RM1,000



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SPECIFIC STANDARD DISCLOSURES				
Material Aspects	DMA and Indicators	Omission	External Assurance	Description
G4-LA2	<b>Types of Leave</b>	<b>Description</b>	<b>Remarks</b>	Benefits provided to full-time employees that are not provided to temporary or part-time employees, by significant locations of operation
	(a) Annual	E1-SG1 = 20 days per annum NE1-NE6 = 15 days per annum	Service below 10 years	
		E1-SG1 = 25 days per annum NE1-NE6 = 20 days per annum	Service 10 years and above	
	(b) Maternity	60 days - continuous		
	(c) Nursing	90 days - maximum		
	(d) Paternity	7 days - continuous	Limited to 5 occasions	
	(e) Hajj	40 days	<ul style="list-style-type: none"> <li>Granted only once</li> </ul>	
			Should serve for not less than 5 continuous years	
	(f) Unrecorded	30 days per annum - maximum	For the purpose of; <ul style="list-style-type: none"> <li>Armed Forces Training</li> <li>Sporting &amp; Cultural Activities</li> <li>Koperasi SESCO</li> <li>Examination</li> </ul>	
	(g) Study	Subject to terms and conditions as determined by Company		
	(h) Compassionate	3 days – continuous	For purpose of attending the funeral of any one of the following relatives; <ul style="list-style-type: none"> <li>Spouse</li> <li>Children who are natural, lawfully adopted or step-children</li> <li>Parents</li> </ul>	
	(i) Sick	<ul style="list-style-type: none"> <li>Non-hospitalised = 22 days</li> <li>Hospitalised = 60 days</li> </ul>	60 days paid leave per annum	
	(j) Prolonged Illness & Treatment	<ul style="list-style-type: none"> <li>On full salary for a maximum period of 2 consecutive months</li> <li>On half salary for a further period of 2 consecutive months</li> <li>Unpaid prolonged illness leave for a further period of 2 consecutive months</li> </ul>		
(k) Quarantine	Paid quarantine leave	Employee who is required by the relevant Government authority		
(l) Blood donors privilege	1 day			

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SPECIFIC STANDARD DISCLOSURES														
Material Aspects	DMA and Indicators	Omission	External Assurance	Description										
G4-LA5	Information on this is elaborated under “Our Social Commitment – Human Capital Development, Safety at the Workplace” on p.45			Percentage of total workforce represented in formal joint management-worker health and safety committees that help monitor and advise on occupational health and safety programmes										
G4-LA6	p.45			Type of injury and rates of injury, occupational diseases, lost days, and absenteeism, and total number of work-related fatalities, by region and by gender										
G4-LA7	p.45			Workers with high incidence or high risk of diseases related to their occupation										
<b>Occupational Health and Safety</b>														
G4-DMA	p.45													
G4-LA6	Information on this is elaborated under “Our Social Commitment – Human Capital Development, Safety at the Workplace” on p.45			Type of injury and rates of injury, occupational diseases, lost days, and absenteeism, and total number of work-related fatalities, by region and by gender										
G4-LA7	Information on this is elaborated under “Our Social Commitment – Human Capital Development, Safety at the Workplace” on p.45			Workers with high incidence or high risk of diseases related to their occupation										
<b>Training and Education</b>														
G4-DMA	p.39													
G4-LA9	Information on this is elaborated under “Our Social Commitment – Human Capital Development, Training and Development” on p.42-43		Yes	Average hours of training per year per employee by gender, and by employee category										
G4-LA10	Information on this is elaborated under “Our Social Commitment – Human Capital Development, Training and Development” on p.39-43			Programmes for skills management and life-long learning that support the continued employability of employees and assist them in managing career endings										
G4-LA11	Performance Appraisal (annually)			Percentage of employees receiving regular performance and career development reviews, by gender and employee category										
	<table border="1"> <thead> <tr> <th>by Gender</th> <th>by Category</th> </tr> </thead> <tbody> <tr> <td>Male =100%</td> <td>Top Management=100%</td> </tr> <tr> <td>Female =100%</td> <td>Managers=100%</td> </tr> <tr> <td></td> <td>Executives=100%</td> </tr> <tr> <td></td> <td>Non-Executives=100%</td> </tr> </tbody> </table>	by Gender	by Category	Male =100%	Top Management=100%	Female =100%	Managers=100%		Executives=100%		Non-Executives=100%			
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G4-32

GRI CONTENT INDEX

SPECIFIC STANDARD DISCLOSURES				
Material Aspects	DMA and Indicators	Omission	External Assurance	Description
<b>Society</b>				
<b>Local Communities</b>				
G4-DMA	p.33			
G4-SO1	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 on p.33			Percentage of operations with implemented local community engagement, impact assessments, and development programmes
<b>Product Responsibility</b>				
<b>Customer Privacy</b>				
G4-DMA	p.44			
G4-PR8	This information can be found under "Our Social Commitment" on p.44			Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data
<b>Compliance</b>				
G4-DMA	p.44			
G4-PR9	This information can be found under "Our Social Commitment" on p.44			Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services

## GRI CONTENT INDEX

## SECTOR SPECIFIC DISCLOSURES

Material Aspects	DMA and Indicators	Omission	External Assurance	Description
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G4-EU1 The information can be found in the “What We’re About” section on p.10

Describe the fuels used and the capacity of multi-fuel plants.

G4-EU2 See table below:

Describe net energy generated by the utility in GWh or GJ. This should be broken down by primary energy source and by regulatory regime.

Energy Source	2013*		2014*	
	GWh	% Energy MIX	GWh	% Energy MIX
<b>Diesel</b>	5	0.04%	38	0.3%
Sg Biawak	5		38	
<b>Gas</b>	2,953	25.77%	2,654	18.4%
Pujut Miri - Open Cycle GT	493		445	
Bintulu 1-6 Open Cycle GT	694		573	
SPG (Combined Cycle 7-8-9)	1,766		1,637	
<b>Coal</b>	2,733	23.85%	2,821	19.5%
SPC 1 (Sejingkat2 x 50MW)	614		685	
SPC 2 (Sejingkat2 x 55MW)	736		664	
Mukah 1 (2 x 135MW)	1,383		1,472	
<b>Hydro</b>	5,768	50.34%	8,923	61.8%
Batang Ai	355		315	
Murum	0		133	
Bakun	5,414		8,475	
<b>Total (incl Bakun HEP)</b>	<b>11,459</b>	<b>100.0%</b>	<b>14,436</b>	<b>100.0%</b>



G4-32

## GRI CONTENT INDEX

SECTOR SPECIFIC DISCLOSURES																																																																																						
Material Aspects	DMA and Indicators	Omission	External Assurance	Description																																																																																		
G4-EU3	See table below:			Report the total number of accounts by type and by point of connection and customers who are also producers.																																																																																		
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G4-EU4	Information disclosed in "What We're About" on p.11 & p.12			Report aggregated circuit lengths in km, by regulatory regime, voltage category, and overhead and/or underground.																																																																																		
G4-EU5	Bintulu Combined Cycle Plant - the first thermal power plant CDM project in Malaysia			Report on the emissions trading schemes or alternative requirements for managing CO <sub>2</sub> e emissions																																																																																		
<b>Availability and Reliability</b>																																																																																						
G4-EU10	Information on this is disclosed under "How We Ensure Economic Sustainability" on p.47			Planned capacity against projected electricity demand over the long term, broken down by energy source and regulatory regime																																																																																		
(Former EU6)	Information on this is elaborated under "What We're About" - p.10-12 & p.47			Management approach to ensure short and long-term electricity availability and reliability																																																																																		

## GRI CONTENT INDEX

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Material Aspects	DMA and Indicators	Omission	External Assurance	Description																							
<b>System Efficiency</b>																											
G4-EU11	See table below:			Average generation efficiency of thermal plants by energy source and by regulatory regime																							
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G4-EU12	Information on this is elaborated under "How We Ensure Economic Sustainability" on p.48			Transmission and distribution losses as a percentage of total energy																							
<b>Access</b>																											
G4-EU26	Information on this is elaborated under "Our Social Commitment" on p.37			Percentage of population unserved in licensed distribution or service areas																							
(Former EU23)	Information on this is elaborated under "Our Social Commitment - Rural Electrification Scheme" on p.37 & p.38			Programmes, including those in partnership with government, to improve or maintain access to electricity and customer support services																							
G4-EU28	Information on this is elaborated under "How We Ensure Economic Sustainability" on p.48			Power outage frequency																							
G4-EU29	Information on this is elaborated under "How We Ensure Economic Sustainability" on p.48		Yes	Average power outage duration																							
G4-EU30	See table below:			Average plant availability factor by energy source and by regulatory regime																							
	<u>Average Plant Availability Factor Year 2014 by Categories</u>																										
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## SECTOR SPECIFIC DISCLOSURES

Material Aspects	DMA and Indicators	Omission	External Assurance	Description
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## Research and Development

(Former EU8)

## R&amp;D Project 2014

Year 2014

No.	Name of Project	Amount (RM)
1	Plug-in Electric Vehicle (EV) Pilot	1,100,000.00
2	Purchase of 3 units of ARGO 8x8 AATV.	565,200.00
3	Research Lab Operation 2014	214,000.00
4	Purchase of fixed wing UAS	200,000.00
5	Purchase of UAS Components	50,000.00

Research and development activity and expenditure aimed at providing reliability electricity and promoting sustainable development

## Consultancy BV 2014

No.	Name of Project	Amount (RM)
1	Sarawak Greenhouse Gas Inventory Study	350,000.00
2	Hydropower Greenhouse Gas Physical Dynamics	150,000.00

## Employment

(Former EU14)

Information on this is elaborated under "Our Social Commitment – Human Capital Development, Training and Development" on p.39-43

Programmes and processes to ensure the availability of a skilled workforce

(Former EU19)

Information on this is elaborated under "Our Social Commitment – Ensuring the well-being of impacted communities" on p.33

Stakeholder participation in decision making processes related to energy planning and infrastructure development

(Former EU20)

Information on this is elaborated under "Our Social Commitment – Ensuring the well-being of impacted communities" on p.33

Approach to managing the impacts of displacement

## Disaster/Emergency Planning and Response

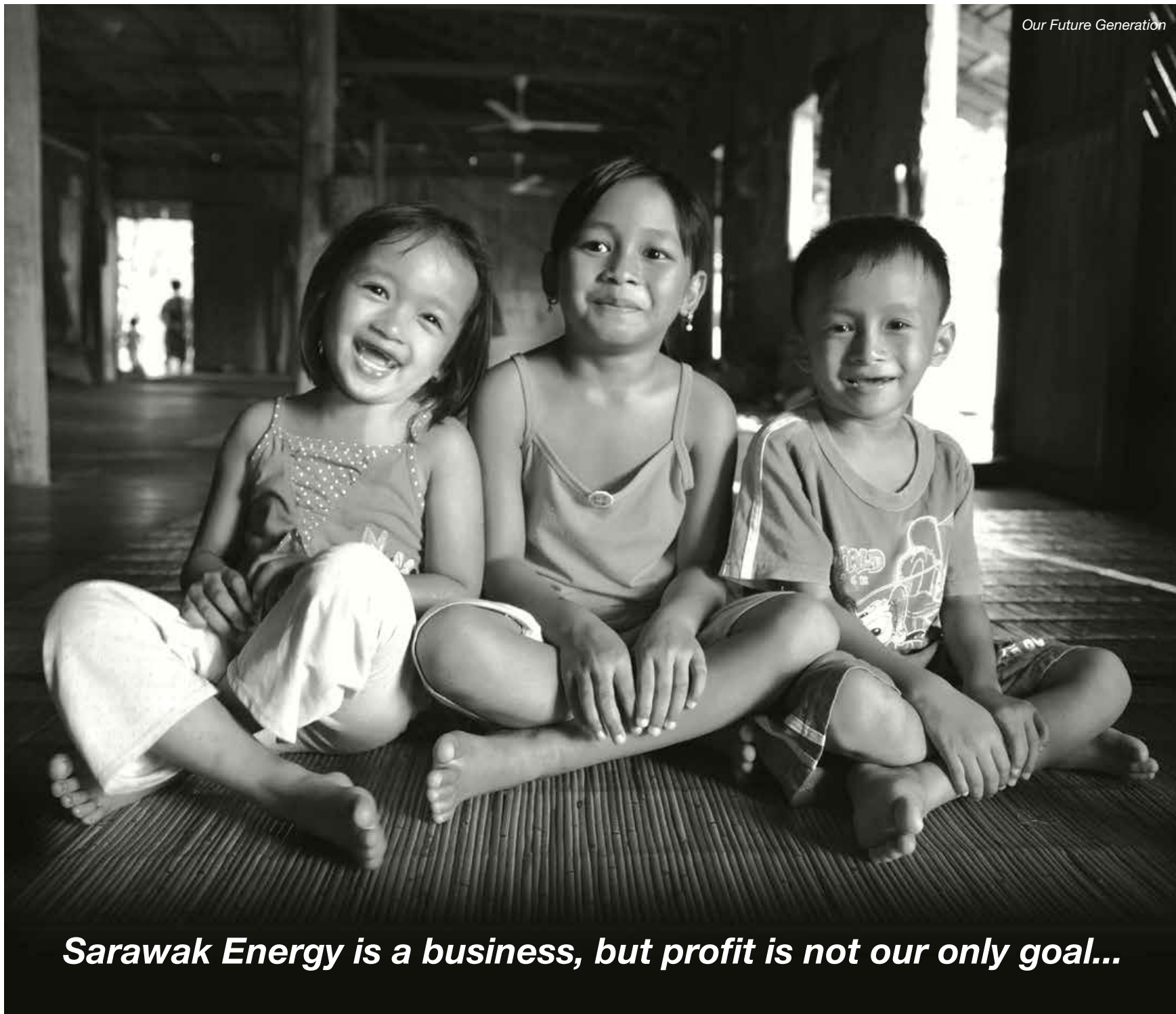
(Former EU21)

Information on this is elaborated under "Our Social Commitment – Disaster and Emergency Response Planning" on p.43

Contingency planning measures, disaster/emergency management plan and training programmes, and recovery/restoration plans







***Sarawak Energy is a business, but profit is not our only goal...***

**Sarawak Energy Berhad**  
Menara Sarawak Energy,  
No. 1, The Isthmus,  
93050 Kuching,  
Sarawak, Malaysia.

[www.sarawakenergy.com.my](http://www.sarawakenergy.com.my)

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