2013
SUSTAINABILITY REPORT

ENSURING SUSTAINABLE GROWTH

PERTAMINA
GEOTHERMAL ENERGY

starenergy
Star Energy Geothermal
(Wayang Windu) Ltd

ENSURING SUS GROWTH

We have chosen the theme of this report to ensure that readers immediately understand our determination and commitment to implementing business development concurrent with a variety of relevant programs in the fields of environmental and social sustainability.

The bestowing of the Aditama award and green-rank Proper award in 2013, and the rise in the Human Development Index in our operational area proves that our environmental and social programs can run harmoniously with business development and ensure sustainable business growth into the future.

TAINABLE

ENVIRONMENT

RECORDING ENERGY EFFICIENCY OF 132.75 GWH, EQUIVALENT TO 477.9 THOUSAND GJOULES

- Making efforts to reduce air pollution, including through the use of the Clean Development Mechanism and operating a Geothermal Power Plant with the potential to reduce emissions (globally) and reduce air pollution by 794,832 MTCO2e/ annually.
- Implementing engineering design and maintenance to optimize energy as part of the work to conserve energy. A total of 132.75 GWh (in 2013) was saved through engineering and maintenance. The range of energy conservation programs implemented by SEGWWL has seen the company attain the Primary Energy Award from the Energy and Mineral Resources Ministry.
- As a pioneer, since 2003, in the use of condensate in the drilling process, we have saved 1,858,511.37 m3 of surface water by using condensate water between 2006-2013.

COMMUNITY DEVELOPMENT

SINERGITAS CSR WAYANG WINDU

- Increased the activities of MSME Nurkayana Cooperative
- Developed creative economy potential through TBM Saba Desa
- Assisted in the provision of education, built a Knowledge House and provided scholarships to students from elementary school to university level, as well as improving teacher competencies
- Constructed village/district government buildings and other basic infrastructure
- Developed Alert Village areas

HUMAN RESOURCES

CONDUCTED TRAINING PROGRAMS FOR EMPLOYEES AT AN AVERAGE OF 31 HOURS TRAINING/EMPLOYEE

- Fulfilled local recruitment quotas
- Implemented all Human Resource Development Programs

OCCUPATIONAL HEALTH & SAFETY

1,421,524 WORKING HOURS WITHOUT LOSS OF WORK TIME

- Completed and fulfilled all requirements in the audit surveillance for OHSAS 18001:2007 certification
- Realized the Free Health Check-up Program
- Implemented Health Workshops and Preventative Health programs for employees, their families and the local community

GOVERNANCE

COMPLETED THE STUDY, COMPILATION AND ENACTMENT OF THE CODE OF CONDUCT

Completed the compilation and enactment of the Whistleblower System

2013 HIGHLIGHTS

MARCH 2013

- Implemented re-financing of US$350 million in bonds with coupons at 6.125%.
- Completed the WW Well Intervention program, consequently steam production rose to 59 kg/s from the targeted 35 kg/s.

OCTOBER 2013

WWT 2 Tie-in pipeline program completed for an additional steam supply of 25 kg/s, equivalent to ±13 MWe.

NOVEMBER 2013

- Completed the Reserve Assessment Program, which, in summary, shows available steam reserves have the potential to produce an additional 60MW electricity.
- Star Energy Geothermal (Wayang Windu) Ltd attained Green rank in the PROPER awards for 2012-2013 from the Environment Ministry.

AWARDS AND CERTIFICATION

AWARDS

Best Community Programme – Bronze Award on 5th Annual Global CSR Summit 2013

Granted by: Global CSR

Raksa Prasada Award in the Environmentally Friendly Industry Category in West Java Province

Granted by: Governor of West Java

Sabilulungan Award for The Best Community Development program in Bandung Regency

Granted by: Bandung Regent

Aditama Award for Environmental Management in Geothermal Energy 2013

Granted by: Energy and Mineral Resources Ministry - Directorate General of Minerals, Coal and Geothermal Energy

Aditama Award for Occupational Health and Safety 2013

Granted by: Energy and Mineral Resources Ministry - Directorate General of Minerals, Coal and Geothermal Energy

Proper Green Award

Granted by: Environment Ministry

Runner up Sustainability Reporting Category Environmental Services

Granted by: National Center for Sustainability Reporting

CERTIFICATION

- ISO 14001:2004 Environmental Management from LRQA 10 Feb 2013 – 14 Jan 2015
- OHSAS 18001:2007 – OHS Management

CONTENTS

ABOUT THE 2013 STAR ENERGY GEOTHERMAL (WAYANG WINDU) LTD SUSTAINABILITY REPORT

Welcome to the 2013 sustainability report ("Report") from Star Energy Geothermal Wayang Windu Ltd ("Wayang Windu"). This is our fifth annual report since we published our first Sustainability Report in 2009.

This report is aimed at stakeholders such as the government, labour unions, suppliers, customers, investors and others to provide a source of information they can use for their own interests. Through this report, stakeholders will be able to assess the company's commitment and participation in achieving sustainable development, namely meaningfully improving quality of life and the environment for Wayang Windu itself, the local communities and for society in general.

REPORT REFERENCES

This report has been prepared based on fourth generation (G4) Sustainability Reporting Guidelines, as issued by Global Reporting Initiative (GRI). These guidelines offer two options for reporting criteria in a sustainability report, i.e. Core and Comprehensive.

This year's report has been prepared differently from those of previous years in that we are now applying G4-Core criteria. Even though this year's reporting standard has changed from G3.1 to G.4, there is no significant change affecting the comparability of data from previous years and there has been no need for restatement.

To ensure GRI G4-Core indicators are easily found in this report, we have marked indicators on each relevant page. The GRI G4-Core index used in this report is presented on page 113.

REPORT CONTENT PRINCIPLES

The contents of this report have been determined based on 4 (four) principles, in accordance with GRI G4.

1. Stakeholder inclusiveness; this principle requires that stakeholders are involved in the process of preparing this report, from determining report content to providing advice/input/opinions on previously published reports.
2. Materiality; this principle requires that the report must contain material/important matters, or aspects, required by stakeholders in the decision-making process.
3. Sustainability context; this principle requires that the report contains sustainability-related issues that are relevant to the report issuer.
4. Completeness; this principle requires that the report covers a clear scope for a defined reporting period and is supported by complete data for that scope and reporting period.

REPORTING PERIOD

This report contains sustainability information and data comprising 3 (three) aspects: economy, environment and social. The social aspect is then divided into 4 sections, namely: employment, human rights, society and product responsibility.

We issue a sustainability report annually. This year's report covers the period 1 January 2013 to 31 December 2013. The previous year's report (2012) was issued in August 2013.

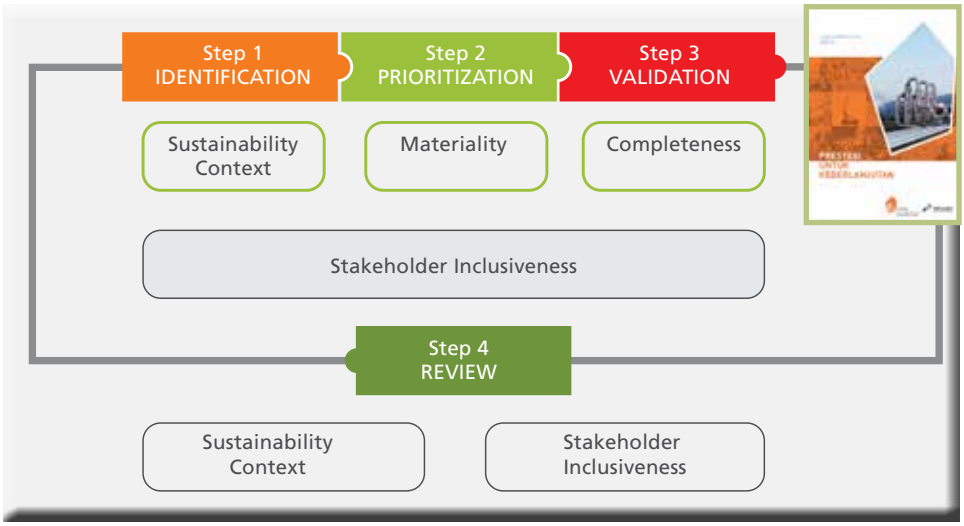
REPORT BOUNDARY

Wayang Windu does not have any subsidiary companies, thus the report boundary within the company only encompasses Star Energy Geothermal (Wayang Windu) Ltd. As part of our operations, we outsource to third parties (vendors) that can present a risk to the image and reputation of Wayang Windu, therefore, the report boundary outside the company also covers these business partners and vendors. The main issue covered in this report in relation to these vendors is the policies they implement as related to employee rights and respect for human rights, as well as occupational health and safety.

REPORT CONTENT DETERMINATION

The report content determination process consists of 4 (four) stages. First: Identification. At this stage, we identify all relevant sustainability aspects and where they sit in relation to the boundary. Second: Priority. We then prioritize the sustainability aspects/issues that have been identified in the previous stage to decide the materiality level of the significant aspects to be reported. Third: Validation. At this stage, we validate all the material aspects. Fourth: Review. At this stage, we consider the feedback and reviews from previous reports to refine the report being prepared. (see Report Content Determination Flow Chart)

REPORT CONTENT DETERMINATION FLOW CHART



DETERMINING MATERIAL ASPECTS AND BOUNDARY

The process to determine material aspect and boundary is conducted through discussions between the Wayang Windu Internal Team and a Consultancy Team. Material aspects are the key issues to be presented in the report to consider the impact of the company's operations on the environment and communities, as well as the principles of accountability and transparency. A summary of this discussion can be seen in the table on page 113.

DETERMINING MATERIALITY LEVEL

In accordance with the principle of stakeholder inclusiveness, we request input, through a questionnaire, from stakeholders to judge the materiality level of the issues to be contained in this report. Stakeholders participating in the questionnaire include labour unions, the community, NGOs, suppliers, industry associates and the government. By implementing this forum, we can attain an illustration of the materiality level of issues to be reported, as shown in the materiality level graph below.

VALIDATION AND REVIEW

The purpose of the validation process is to ensure that the report has balanced content. This means that as well as presenting positive performances, it must also contain any negative information or performances. Determining the report's content also takes into account input and advice received from stakeholders about the previous years' reports. In the same way, input and advice received about this year's report will be used in the consideration of the content of future reports.

The indicators used in this sustainability report are grouped in three categories: economic, environment and social. Further, the social category is sub-divided into four areas, i.e. employment, human rights, community and product responsibility. Each category consists of its own aspects. The report content determination process starts with the selection of aspects considered material and deciding where, according to boundary, these material aspects take place.

CHANGES DURING THE REPORTING PERIOD

There were no significant changes to Company operations while the report was being prepared.

CONTACT PERSON

For requests, questions, feedback or comments on this report, please contact:

Coordinator Human Resources Business Partner

Star Energy Geothermal (Wayang Windu) Ltd
Wisma Barito Pacific, Star Energy Tower
Lantai 3, 8-11
Jalan Let. Jen. S. Parman Kav. 62-63
Jakarta Barat 11410, Indonesia
Tel : +62 21 532-5828
Fax : +62 21 532-5307928
www.starenergy.co.id

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GREETING FROM THE PRESIDENT AND CEO

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Satisfying stakeholder expectations through the development and utilization of geothermal energy as an environmentally friendly energy source to achieve sustainable development

Respected Stakeholders,

The variety of sustainability programs that we have been implementing with a high degree of commitment and consistency have brought about results to be proud of. From the economic dimension, despite business conditions remaining unfavourable, we have recorded an increase in economic value distributed to our stakeholders, including to our employees and the local communities, thanks to the successful stimulus of the operational efficiency program we have been conducting.

SUPPORTING ECONOMIC GROWTH

We are determined to support economic growth, in particular in the vicinity of our operational area. Our efforts to provide a real contribution to economic growth during 2013 have been directed toward, among others, compliance with payments of tax and a variety of fees and charges, the involvement of local partners to supply goods and services and the recruitment of local and non-local labour.

We have continued the Community Economy Empowerment and Economic Improvement Program by forming cooperatives and organizing competency training programs that allow the community to make use of local resources to create products of economic value. We have initiated the growth of a creative economy through micro businesses, with cooperatives serving as the marketing spearhead. Such programs are in line with the Millennium Development Goals (MDGs), Post-2015, as ratified by the Indonesian government.

IMPROVING ENVIRONMENTAL QUALITY

On the environmental side, we are determined to improve the quality of the environment while safeguarding sustainability. Our commitment to reduce Greenhouse Gas (GHG) emissions has seen us realize the implementation of various environmental conservation programs in accordance with SEGWWL Environmental Policy. We apply energy efficiency and conservation programs consistently and make use of the 3R principle (reduce, reuse, recycle) in waste management, conserve water and improve the quality of our biodiversity protection programs.

The energy conservation and efficiency program, both at the production facility and supporting operations, has resulted in us being able to manage CO_2 emissions optimally. As a result, last year we successfully attained CER with a value of 852,238 and CO_2 equivalent, in 2013 we estimate a CO_2 reduction recorded at 794,832 tons. We are also in the midst of serious discussions with the Asian Development Bank to find an agreement to sell our CER certificate.

WE CONSISTENTLY APPLY ENERGY EFFICIENCY AND CONSERVATION PROGRAMS AND MAKE USE OF THE 3R PRINCIPLE (REDUCE, REUSE, RECYCLE) IN WASTE MANAGEMENT, CONSERVE WATER AND IMPROVE THE QUALITY OF OUR BIODIVERSITY PROTECTION PROGRAMS.

Meanwhile, in the revegetation program, we continue our efforts to increase the biodiversity index in the areas we manage through planting a greater variety of trees, followed by a monitoring program with the support of satellite image analysis. We also monitor endemic flora and fauna, while preparing the means to cultivate/breed them.
In the management of waste, we have successfully reduced total waste, as well as utilizing various types of waste, such as drill mud, in cooperation with cement producers.

INCREASING SOCIAL INVESTMENT

We are also consistent in implementing social investment, prioritizing respect for human rights and acknowledging the rights of local communities in our strategy policies. We enact and foster good relationships with the community.

We continue our efforts to increase the quality of life for local communities through the realization of various programs, such as improving education, developing and empowering the economy, improving public health, as well as repairing basic infrastructure, constructing village and district government facilities and a knowledge house.

LOOKING AHEAD

Given geothermal energy utilization remains low, at only about 1.9% of potential available power, we are determined to increase production of this environmentally friendly energy in the coming years. As a concrete form of this determination, we have completed an exploration program in the vicinity of WW to develop Unit III. We are also in the midst of detailed exploration of the Jailolo area to utilize this environmentally friendly energy potential and support economic development in the local area.

Looking ahead to 2014, with forecast economic conditions regionally and nationally remaining unfavourable, we are determined to continue improving our sustainability performance in the coming years. We believe that sustainable growth is achievable if every business strategy, policy and decision is made considering its impact and emphasizes the achievement of stakeholder expectations.

CLOSING

Finally, on behalf of the management, I would like to express my thanks to all our stakeholders who have supported our sustainable performance growth during 2013. We would also like to express our most sincere appreciation of all our employees who have demonstrated their dedication and hard work to achieve the 2013 sustainability performance. As we face the challenges of 2014, let us work even harder.

Jakarta, Juli 2014

RUDY SUPARMAN
Presiden & CEO

OUR PROFILE


WELCOME TO
Wayang Windu
Geothermal
Power Station
star energy

PROFILE IN BRIEF

Company Name	:	Star Energy Geothermal (Wayang Windu) Ltd
Products & Services	:	Energi Listrik dari Sumber Panas Bumi
Products & Services	:	Electricity generated through geothermal energy
Market	:	PT PLN (Persero) for the Java-Bali-Madura grid
Head Office Address	:	Wisma Barito Pacific Star Energy Tower, Fl. 3, 8-11 Jalan Let. Jen. S. Parman Kav. 62-63 Jakarta Barat 11410, Indonesia Tel : +62 21 532 5828 Fax : +62 21 532 5307 928 www.starenergy.co.id
Operational Area	:	Marga Mukti village, Pangalengan, West Java
Share Ownership	:	Star Energy Geothermal Pte Ltd (previously known as Star Energy Holdings Pte Ltd 100%)
Status / Legal Basis	:	National Investment, Virgin Islands
Association Memberships	:	API (Indonesia Association of Geothermal Energy) MKI (Indonesian Electrical Power Community) (METI) Indonesian Renewable Energy Community

VISION, MISSION AND CORPORATE VALUES

VISION

To be a respected energy producer with the fastest growth in Indonesia driven by value creation that fulfils the expectations of our investors, employees, the state and the local community in a balanced manner.

MISSION

1. To be an international company with an Asian and Indonesian heart.
2. To achieve a range of successes alongside our stakeholders
3. To uphold high standards of occupational health and safety
4. To harm no one and to care for the environment

CORPORATE VALUES

We have formulated and strive to imbue strong corporate values to be adhered to in carrying out business and in sustainable relationships with our stakeholders. The points of our corporate values are abbreviated into the phrase BRIGHT STAR, as detailed below:

Balance Value for Stakeholders
Strive for a balanced outcome for all stakeholders when we think, act dan make decisions

Respect People
- Value and respect each other
- Value for differences
- Find value in all ideas

Innovative and Entrepreneurial
- Be creative
- Look for opportunities
- Make the best decision
- Have a sense of business
- Create value
- Challenge the status quo
- Willing to take risk
- Think critically

Go The Extra Mile
- Strive for excellence
- Work smarter
- Beat your deadline
- Be proactive
- Seek out the best process

Honesty and Integrity
- Act professionally & ethically
- Be honest and trustworthy
- Be committed
- Walk the talk
- Adhere to high business ethical standards

Teach Yourself Daily
- Create learning opportunities
- Be an active learner
- Seek feedback
- Be Proactive

Safety Health & Environment
- Comply with or exceed safety, health & environmental policy, laws and regulations
- Maintain a high level of SHE working competence and awareness.

Team Work
- Value contribution of others
- Value the differences
- Think and act as a team
- Shares information
- Communicate often

Awareness of Costs
- Work effectively and efficiency
- Sense of urgency
- Sense of ownership
- Make continuous improvements

Relationship Are Important
- Work in harmony
- Seek balance between results and relationships
- Build win-win partnership

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DISSEMINATING AND ACHIEVING THE COMPANY'S VISION AND MISSION

To ensure the company's vision and mission are achieved, we disseminate the vision and mission to our employees periodically. We generally make use of the recruitment, employee performance assessment, promotion and job rotation processes to disseminate our vision, mission and corporate values.

STRATEGIC PLANS

To realize the Company's vision and mission, we have put in place a development program we created covering several strategic initiatives, including: increasing operational efficiency, participating in efforts to reduce Greenhouse Gases (GHG), developing workforce competencies, environmental management, exploration and development of new generating plants and increasing existing generating plants and community development. Several of these strategic initiatives take place outside operational activities to establish a positive image and demonstrate the Company's care for issues in the vicinity of its operational area.

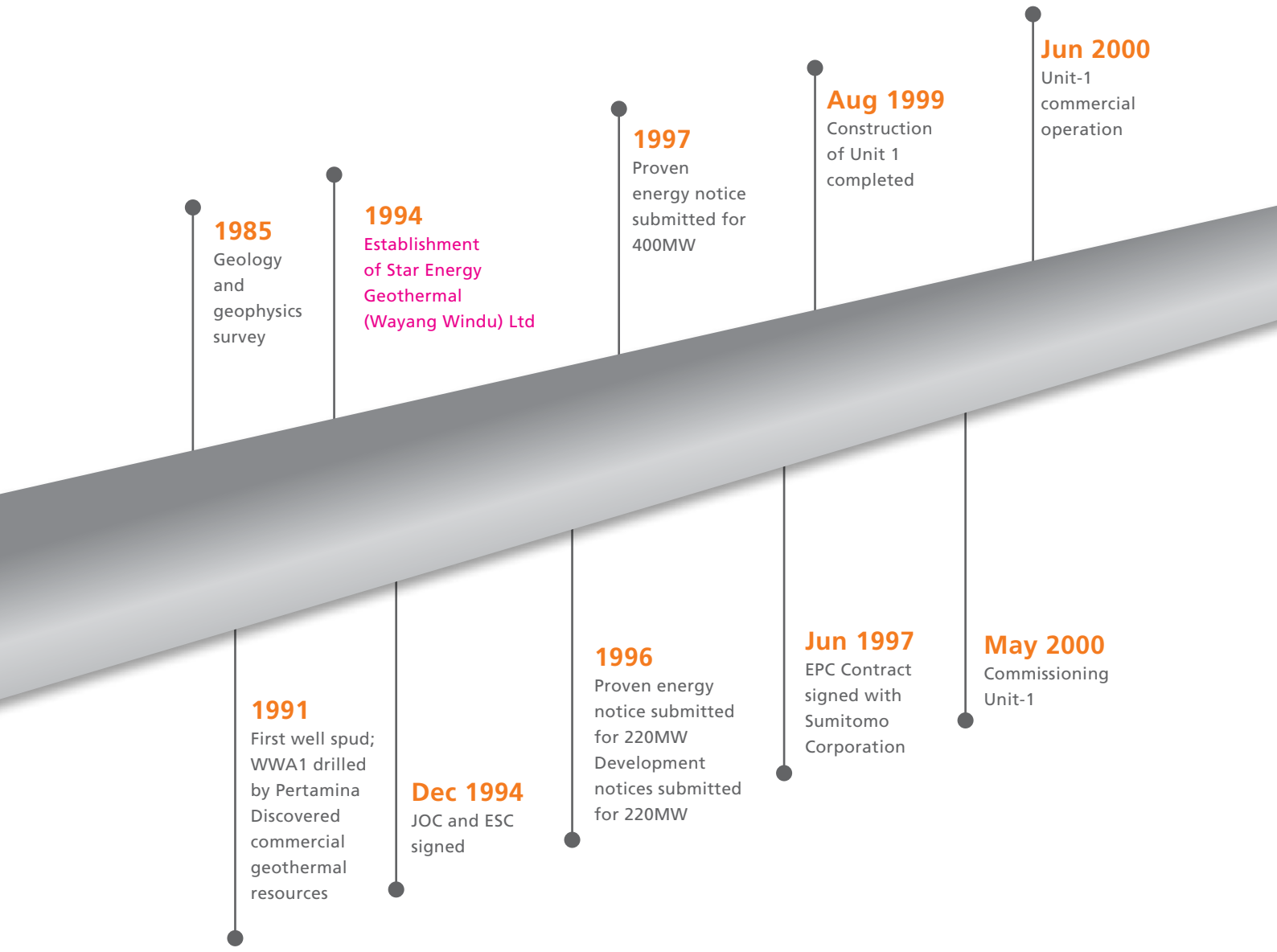
ABOUT STAR ENERGY GEOTHERMAL (WAYANG WINDU) LTD

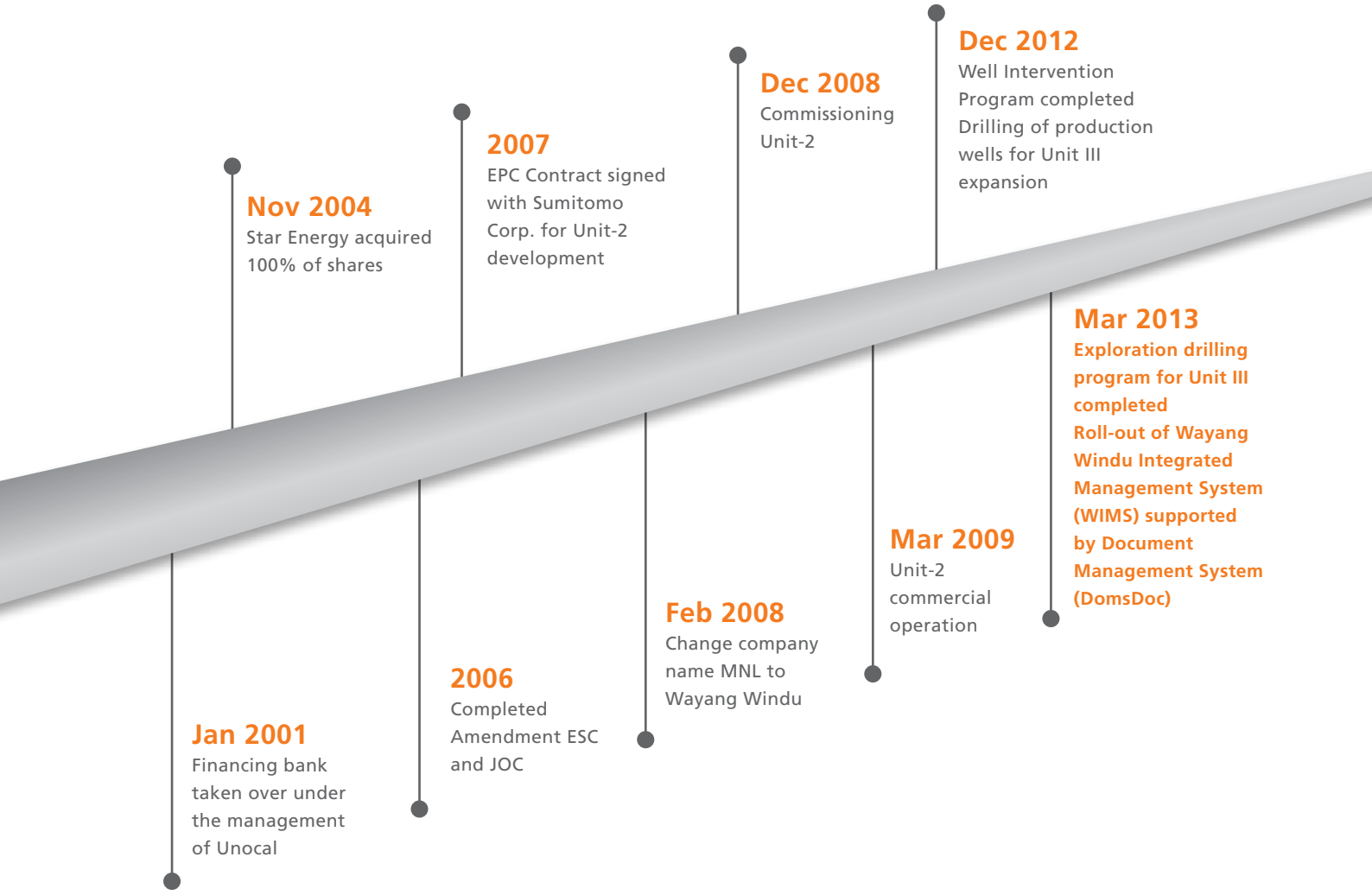
SEGWWL, the abbreviation for Star Energy Geothermal (Wayang Windu), is a Private Domestic Company that was established in 1994 and is active in the field of exploring for and exploiting geothermal energy to power geothermal power plants working under at Joint Operation Contract with PT Pertamina Geothermal Energy in the area under management around Margamukti village, Pangalengan district, Bandung regency, West Java province. The Company was established based on the laws of the British Virgin Islands and permanently established in Indonesia. The Company's product is 227 MW electricity generated by the Wayang Windu geothermal power plant. This electricity is sold to PT PLN (Persero) to supply a percentage of its requirements for the Java-Bali-Madura grid. This total capacity represents approximately 40% of the geothermal-generated electricity market in Indonesia as of the end of 2013, which totalled 568 MW.

We started producing electricity in 2000 with the operation of our first generating unit with a capacity of 110 MW. Electricity generation production capacity then rose with the operation of our second generating unit in 2009, which has a capacity of 117 MW. This second unit is supported by, as of 2013, 50 steam production wells.

We are now in the midst of completing the exploration phase for new wells and adding to our number of steam production wells, which will be used as a power source for our upcoming third generating unit with a capacity of 127 MW. Thus, should our plans come to fruition, the capacity of the Wayang Windu power plant will be 354 MW. We are also in the process of developing geothermal potential in Jailolo district, West Halmahera regency, North Maluku, which will be managed by PT Star Energy Geothermal Halmahera, and is expected to have an electricity capacity of 2x5 MW.

MILESTONE


1985
Geology and geophysics survey
1991
First well spud; WWA1 drilled by Pertamina Discovered commercial geothermal resources
1994
Establishment of Star Energy Geothermal (Wayang Windu) Ltd
Dec 1994
JOC and ESC signed
1996
Proven energy notice submitted for 220MW Development notices submitted for 220MW
1997
Proven energy notice submitted for 400MW
Jun 1997
EPC Contract signed with Sumitomo Corporation
Aug 1999
Construction of Unit 1 completed
May 2000
Commissioning Unit-1
Jun 2000
Unit-1 commercial operation


Jan 2001
Financing bank taken over under the management of Unocal
2006
Completed Amendment ESC and JOC
Feb 2008
Change company name MNL to Wayang Windu
Mar 2009
Unit-2 commercial operation
Nov 2004
Star Energy acquired 100% of shares
2007
EPC Contract signed with Sumitomo Corp. for Unit-2 development
Dec 2008
Commissioning Unit-2
Dec 2012
Well Intervention Program completed
Drilling of production wells for Unit III expansion
Mar 2013
Exploration drilling program for Unit III completed
Roll-out of Wayang Windu Integrated Management System (WIMS) supported by Document Management System (DomsDoc)

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GROUP BUSINESS

Wayang Windu, at this time, does not have any subsidiaries. Wayang Windu does have an affiliated/associated company in the field of geothermal energy, a subsidiary under Star Energy Holdings Pte Ltd, namely PT Star Energy Geothermal Halmahera.

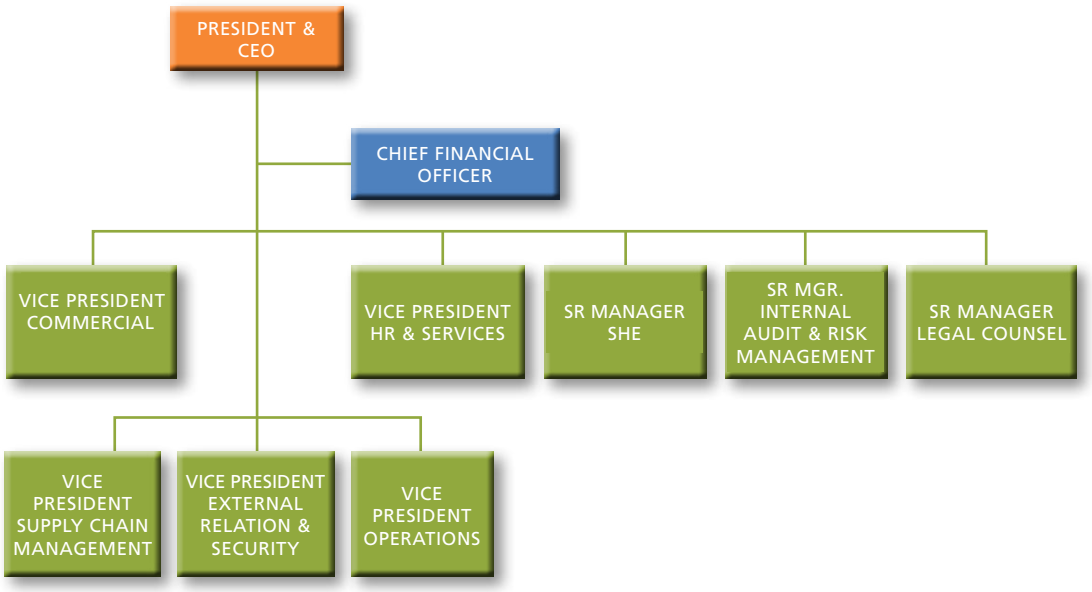
SCALE OF ECONOMY

We operate with the support of a total of 450 employees of both permanent and contracted status. The sales value in 2013 amounted to US$121,776,000. Wayang Windu's scale of economy other than that is as follows.

WAYANG WINDU SCALE OF ECONOMY TABLE

	Period	
	2013	2012
Total employees	450	470
Total net Sales (US$ thousands)	121,776	122,664
Total capitalization (US$ thousands):		
- Debt	366,169	452,169
- Equity	37,804	40,512
Quantity of Product Sold (GWh)	1,880	1,873
Total assets (US$ thousands)	535,300	643,903

ORGANIZATION STRUCTURE



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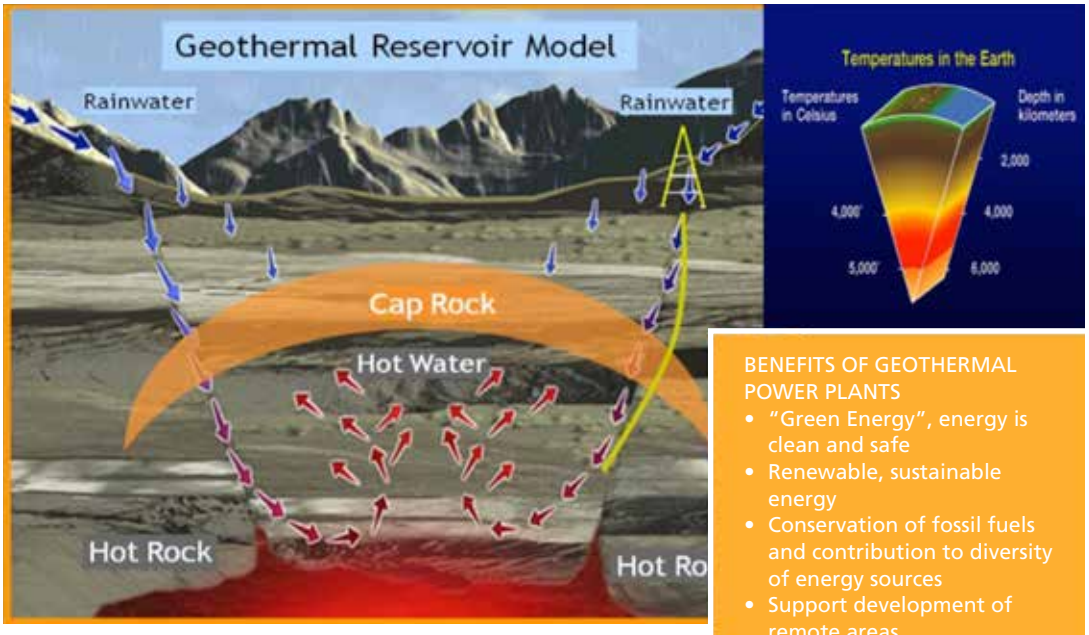
OPERATIONAL MAP

Our operational activities take place in a mountainous area in the vicinity of Pangalengan, Bandung regency, West Java, in Margamukti village, also known as Wayang Windu geothermal block. The operational area is approximately 40 km south of Bandung. Electricity generation takes place at two geothermal generating units, Unit 1 and Unit 2, with a total capacity of 227 MW, supported by 50 production wells (2011: 23 wells).



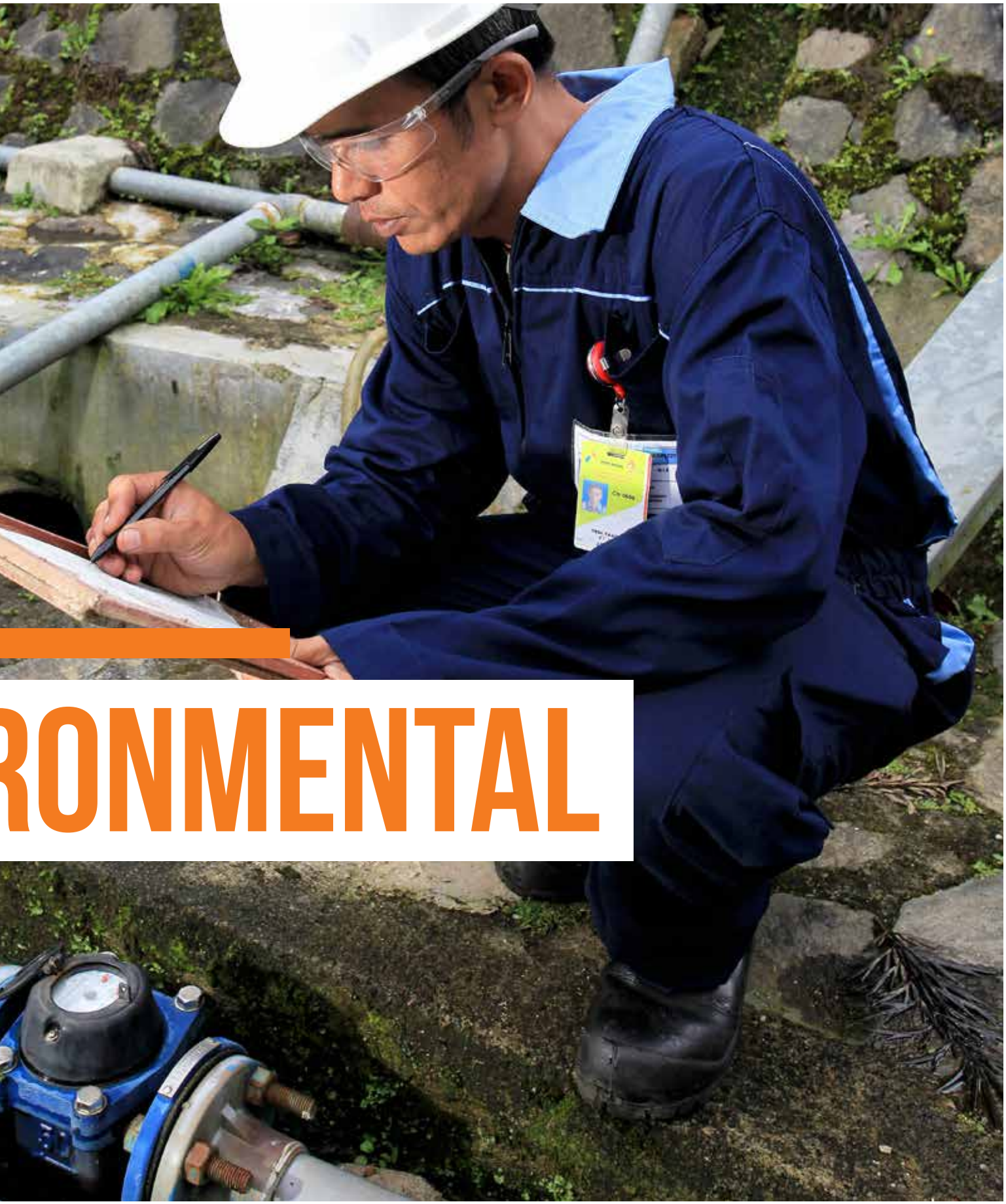
BENEFITS OF GEOTHERMAL POWER PLANTS

- "Green Energy", energy is clean and safe
- Renewable, sustainable energy
- Conservation of fossil fuels and contribution to diversity of energy sources
- Support development of remote areas

Improving environmental quality through the realization of programs related to resource utilization efficiency, energy efficiency, reducing GHG emissions, and revegetation with the aim of increasing the biodiversity index and breeding/cultivating endemic flora and fauna

CHAPTER 5

IMPROVING ENVIR QUALITY



RONMENTAL

Sustainability, from the environmental perspective, is the efforts made by each business entity to protect the Earth and everything on it for the lives of future generations. The focus of our business, providing a renewable source of electricity, i.e. geothermal energy, is a significantly valuable contribution in the efforts to minimize the environmental impact of accumulated greenhouse gases, in particular CO2 (carbon dioxide), which are perceived to be the cause of global warming.

On the global scale, efforts to reduce CO2 emissions are contained within the Kyoto Protocol, an agreement that binds 37 major industrial countries and the countries of the European Union to jointly reduce CO2 emissions by 18% from 1990 levels within an eight-year period, between 2013 and 2020. Each country has a different emission reduction target, and all are recorded in this agreement. To assist every country achieve its CO2 reduction targets in a cost effective manner, the Kyoto Protocol introduced three mechanisms:

- International Emissions Trading
- Clean Development Mechanism (CDM)
- Joint Implementation (JI)

As part of the Kyoto Protocol, the United Nations Framework Convention on Climate Change (UNFCCC) was established to act as a monitoring agency and organizer of the above-mentioned mechanisms.

Indonesia committed to reducing GHG emissions by 2020 through its own efforts by 26% as compared to a business as usual baseline, or 41% if it was to receive international support as delineated in the Millennium Development Goals (MDG). The core fields to reduce GHG emissions were: agriculture, forestry and peatland, energy and transportation, industry and waste management.

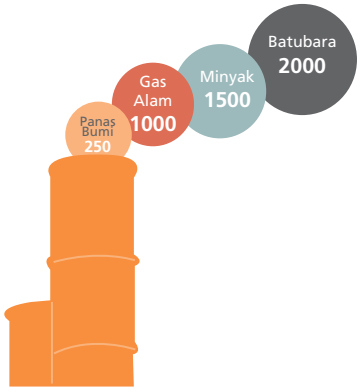
Therefore, to maximize the potential for GHG emission reduction from the geothermal power plant we manage, we realized a variety of environmental management programs and environmentally friendly operational programs. These programs overall can be summarized as having two main goals:

- Maintaining and restoring the environment and biodiversity for the long-term continuity of geothermal power plant operations
- Demonstrating the Company's participation in efforts to conserve energy, conserve water, reduce greenhouse gas emissions, reduce and utilize hazardous and toxic, and non-hazardous and toxic, waste and protection of biodiversity.

As a general illustration, the level of GHG emissions from a geothermal power plant per lbs/MW-hr unit are the lowest of all types of power generation using other fuels, as shown in the table below.

Power Plant type	Fuel Source	Emission Units	Total CO_2 Equivalent Emissions
PLTP	Geothermal	Lbs/MW-hr	250
PLTGU	Gas	Lbs/MW-hr	1,000
PLTU	Oil	Lbs/MW-hr	1,500
PLTU	Coal	Lbs/MW-hr	2,000

Comparison of CO_2 Emissions Based on Power Plant Energy Source (Lbs/MW/Hr)



POLICIES

Our commitment to operational management that cares for the environment is contained within our "SHE Corporate Policy", summarized below:

"Star Energy is committed to the highest standards of Occupational Safety, Health and Environment (SHE). Every operational area is managed in an environmentally friendly manner as a workplace that

is safe and secure for all personnel and the local communities, through the application of various activities, encompassing:

- Proactively preventing accidents, work-related illness, asset damage and environmental pollution, avoiding danger to workers, community contractors and the environment to ensure business continuity.
- Applying sustainability strategies in day to day activities through energy efficiency, emissions reduction, water conservation, the management of toxic and hazardous waste and non-toxic and hazardous waste, and the protection of biodiversity.

IMPACT, RESPONSE AND MITIGATING ACTIONS OF WAYANG WINDU TO IMPROVE THE ENVIRONMENT

In response to current environmental conditions, we have realized a variety of programs directly related to environmental management and through operational activities that take into account the preservation of the local environment, as summarized below.

Impact	Impact Source	Environmental Program
Noise	Test wells, generator operation and cooling tower	- Installing rock muffler, monitoring noise levels - Revegetation around PS, SS-1 and well pad
Water and Soil Pollution	Drilling, domestic activities, toxic and hazardous waste and non-toxic and hazardous waste, oil and diesel fuel storage	- Domestic liquid waste management through liquid waste management installation (IPLC) - Secondary containment at the fuel & oil storage. - Utilization of drilling cutting waste through co-processing with cement factories.
Air Pollution	Test wells, air conditioner operation, vehicle emissions and land clearing.	- Utilization of R-417a as a more environmentally friendly refrigerant for the cooling system - Implementation of an online system for the well testing process - Capture of H2S emissions using caustic soda during well testing.
Water wastage	Supporting activities, maintenance and drilling	- Filling air basin cooling tower from the neighbouring unit for Unit 2 start-up. - Removing the need for makeup water in the cooling tower through direct contact condenser - Using condensate to replace surface water requirements for drilling and testing fire fighting equipment.
Biodiversity Reduction	Land clearing	- Revegetation of areas around the power plant operation and of critical land outside the operational area (Perhutani land or PTPN land) - Perennial plant cultivation program - Deer breeding program in cooperation with PTPN
Traffic Congestion	Mobilization of equipment and materials	- Scheduling equipment and material transportation - Implementing traffic control procedures, escorting equipment and material transportation in cooperation with the police - Maintenance and repair of the roads in the operational area

One of the risks of operating a geothermal power plant is the possibility of fatal accidents arising from uncontrolled blasts of steam. To mitigate such risks, we apply operational standards capable of preventing such workplace accidents that uphold occupational health and safety as a top priority when working in the field.

We apply the same standards to our business partners and suppliers of goods and services, especially those related to field inspections at the steam wells and electricity generation and transmission installations. To ensure compliance with OHS work procedures and to fulfil all environmental regulations, we screen all candidate business partners and new contractors using our Contractor Safety and Health Environmental Management System (CSMS). All potential business partners and contractors are screened periodically.

G4-15
G4-EN1
G4-EN2

ENVIRONMENTAL MANAGEMENT AND MONITORING PROGRAM

We apply environmental management operating standards based on ISO 14001: 2004 as part of our Environmental Management System to identify and address environmental issues related to operations. The mechanism to regulate the Environmental Management System is defined in the Wayang Windu Integrated Management System (WIMS), to ensure identification and control of significant environmental impact and as part of the integrated management system to fulfil the criteria of ISO 14001 and OHSAS 18001.

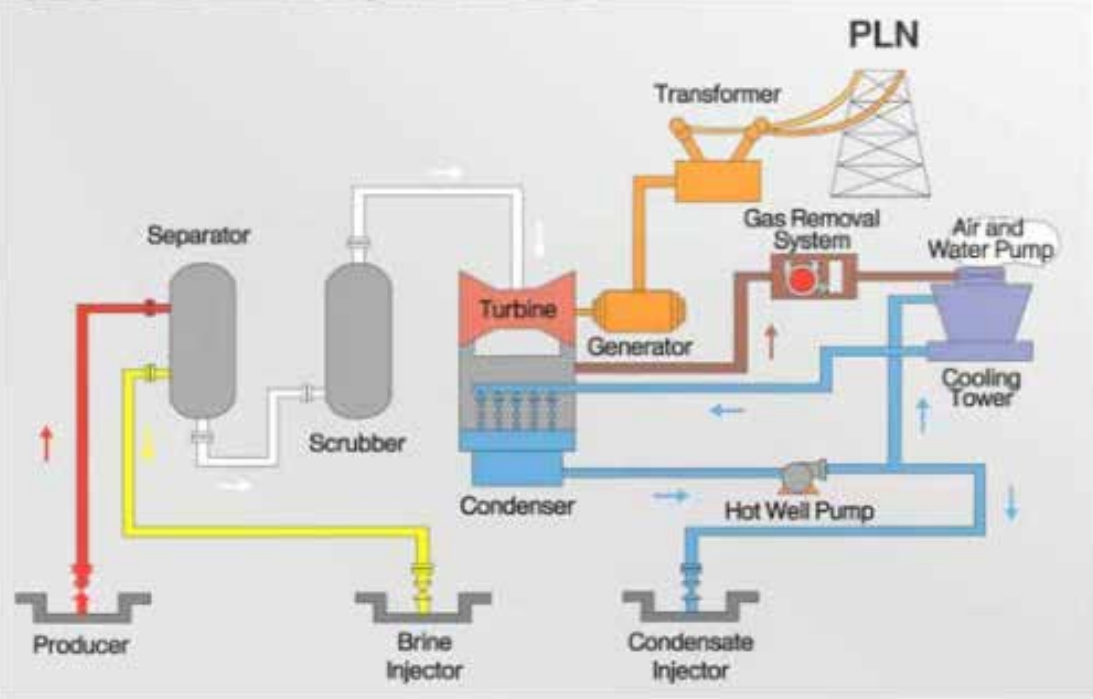
MATERIAL USE

In the process of converting renewable geothermal energy into electrical energy, the amount of electricity generated depends on the production of steam fed into the turbine generator system, and also depends on the number of steam-producing wells from the drilling process. Therefore, we continue drilling new steam production wells.

WE APPLY ENVIRONMENTAL STANDARDS BASED ON ISO 14001: 2004 AS PART OF OUR ENVIRONMENTAL MANAGEMENT SYSTEM.

GEOTHERMAL GENERATING SYSTEM FLOW CHART

GEOTHERMAL POWER PLANT



Drilling other than to ensure an increasing volume of steam production for the existing generators has also been conducted to ensure the feasibility of construction for generator Unit 3. Overall, drilling for Unit 3 has been completed, along with drilling for the Make-up Unit-1 and 2 wells.

The production wells produce water and steam, which are then fed into a separator to be separated as the turbine can only make use of dry steam (saturated). The water produced, or brine, is returned into the wells by gravitational injection through injection pipes, or sent to a holding tank where it is temporarily stored if there is a problem with the well injector system.

After being used to power the generator turbine, the steam is condensed in a direct contact condenser column and the resulting condensed water is then pumped into a cooling tower. The condensate water is then returned to the injection well through injector pipes, thus forming one closed cycle. The total steam used and returned into the earth through Unit 1 and Unit 2 of the Wayang Windu power plant amounted to 13,4141,602 tons (2013:14,401,123 tons).

MATERIALS USED IN THE GENERATION PROCESS

Type of Material	Unit	Information	Year		
			2011	2012	2013
Unit 1 Steam Generator	Ton	Renewable Raw Material	6,565,976	7,581,098	6,609,734
Unit 2 Steam Generator	Ton	Renewable Raw Material	6,820,025	6,820,025	6,804,868
Caustic Soda	Kg	Ancillary Consumable Material	308,807	385,710	550,740
Biocide	Litre	Ancillary Consumable Material	10,065	10,024	16,796

G4-EN1
G4-EN3
G4-EN5

Geothermal steam contains a small amount of gases (0.6-2.6%), specifically CO2 and H2S, that do not condense in the condenser and must be removed so that they do not damage the generator turbines. The method used is a gas extraction system consisting of a steam ejector and a liquid ring vacuum pump.

Caustic soda is used to neutralize the pH value, or degree of acidity, of the coolant water, while the biocide functions to control algae growth. Total caustic soda requirements in 2013 were 550,740 kg (2012: 385,710 kg), while the amount of biocide required was 16,796 liters (2012: 10,024 liters). Both these materials are consumables and are non renewable.

ENERGY MANAGEMENT

We apply two main strategic initiatives to manage energy, with the final aim of reducing energy use in the operation process, while at the same time increasing production and sales of electricity. These two initiatives are:

- Optimization of operations and engineering design of the cooling towers.
- Planned implementation of ISO 50001 Energy Management System.

Operational optimization and engineering design of the cooling towers has resulted in total electricity savings of 34.1 GWh/year, or equivalent to 122,596 gigajoules (116.2 BBTU). Our efforts have included:

- Modifications to the chimney and cooling tower fan (fan stack & Blade Cooling Tower)
- Cooling Tower and Water Pipe Distribution Sulfur Deposition Control
- Cleaning Unit-1 Cooling Tower Water Distribution

In 2013, we completed several of the initial stages required to implement an energy management system based on ISO 50001. Through this initiative, we plan to conduct the energy calculation stage to establish a carbon footprint for the future. Some of the programs we have implemented include:

- ISO 50001 Energy Management System Training by TUV NORD Indonesia
- EBTKE Energy Management Workshop - Medan
- Energy Audit Training by KEBTKE Training Center
- Energy Audit Walkthrough based on ISO 50001 criteria by an external party (Hake-EBTKE)

We have prepared a long term program in the interests of efficient energy use, grouped into three activities:

- Integrated Energy Management System
- Energy Mapping and Energy Analysis
- Program Preparation and Verification

Electricity Production, Use and Energy Intensity

In 2013, we produced a total of 1,944,531 MWh (2012: 1,933,845 MWh) electricity. We use a part of the electricity produced for our own requirements for operational activities in the area we manage, specifically for power plant equipment, as well as auxiliary and ancillary devices. In addition, we also use some of the electricity to light the administration building, employees' homes in the field and to light utilities. In 2013, we used a total of 68,083 MWh (2012: 66,546 MWh) electricity for our own needs, thus, the total net electricity supplied to the PLN grid, the purchaser, was 1, 879,583 MWh (2012: 1,869,675 MWh).

Thus the intensity of energy used compared to the total electricity produced and sold is 3.62%.

The increase in total electricity generated was due to an increasing supply of steam to drive the turbines. Meanwhile, electricity used for our own purposes only rose a small amount thanks to the operational efficiency/energy savings programs implemented.

At this level of electricity production, the efficiency ratio for geothermal generators Units 1 and 2, calculated by total steam used from production wells fell on average to 6.90 ton/MWh from 6.92/MWh in the previous year. Our target is to increase the steam consumption ratio to approximately 6.7 ton/MWH and become one of three most efficient power generators in the world.

Description	Unit	Year		
		2011	2012	2013
Gross Production	MWh	1,939,360	1,933,845	1,944,312
	GJ	6,981,696	6,961,840	7,000,311
Own Use	MWh	66,449	66,546	68,083
	GJ	239,216	239,569	245,099
Net Production	MWh	1,872,911	1,867,299	1,879,580
	GJ	6,742,480	6,722,271	6,755,212

In addition to electricity supplied by our own production, WWL operations also require other sources of energy for transportation and a small amount of LPG for internal consumption. In the interest of energy efficiency, we are also careful with our use of these energy sources.

Energy Use Efficiency

The more efficiently the geothermal power plant operations and work performance run, the more electricity can be supplied to the transmission and distribution system, leading to a greater potential to reduce GHG. To realize this, we have implemented various programs to improve generation operating systems and make efficient use of energy as one part of our participation in mitigating GHG emissions. The programs we have been implementing through 2013 are as follows.

ENERGY EFFICIENCY RESULTS 2010-2013				
Efficiency and Energy Conservation Initiatives	Achievement (GWh)			
	2010	2011	2012	2013
Redesigning condenser nozzles and cooling tower screen	13.1	13.1	13.1	13.1
Redesigning the chimney of Unit 1's cooling tower		12.6	12.6	12.6
Cleaning Unit 1 Cooling Tower Water Distribution Pipes and heat extractor media	17.5	17.5	17.5	17.5
Raising the threshold value of Unit 1 operation	8.8	8.8	8.8	8.8
Reducing the duration of the stem free test on Unit 2	0.4	0.4	0.4	0.4
Using monitoring technology for engine lubricant condition in Units 1 and 2	1.2	1.2	1.2	1.2
Replacing R-22 Freon (HCFC) with environmentally friendly R417A (HFC)	0.1	0.1	0.1	0.1
Controlling sulfur in the water cooling system to maintain cooling system performance		1.2	1.2	1.2
Total Energy Efficiency and Energy Conservation Results	**41.2**	**57.7**	**57.7**	**57.7**

In addition to the energy efficiency program to improve the performance of electricity production facilities, we have also implemented a number of energy saving initiatives for supporting activities through a serious of programs, including:

- Utilizing energy saving light bulbs
- Replacing refrigerant in the cooling system to reduce emissions of Ozone Depleting Substances (ODS) and to reduce the use of electricity.
- Managing the use of operational vehicles
- Applying a policy to reduce the use of LPG.
- Briefing subcontractors on restrictions in the use of operational vehicles, heavy equipment and metal processing machinery owned by contractors, as well as suppliers using fuel in their activities.
- Installing GPS in every operational vehicle and applying a route setting procedure.
- Holding teleconferences to save fuel and travel costs.
- Providing a car pool system for employees who live in the vicinity of Bandung.

G4-EN6
G4-EN16
G4-EN17

These efficiency policies and energy savings have resulted in highly efficient electricity use in all supporting buildings in accordance with standard calculations for Energy Consumption Intensity for air-conditioned rooms. The most recent calculation summary shows that the Energy Consumption Intensity for the admin building was 54.88 KwH/m2 and in the housing was 14.44 KwH/m2, which based on standards is highly efficient.

Efforts to save energy in transportation in the field have resulted in a reduction in diesel fuel being used from 120,310 liters to travel 1.06 million kilometers in 2012, to 119,840 liters to travel 991,900 km. To achieve this efficient use of fuel and reduce CO2 emissions, we have applied a vehicle age policy for operational vehicles and conduct periodic emissions testing on the vehicles being used, in cooperation with a competent third party.

As well as saving money, the reduction in diesel use has had another positive effect, a reduction of GHG emissions of 50.84 tons CO_2 equivalent.

FUEL CONSUMPTION AND CO_2 EMISSION DEVELOPMENTS FOR OPERATIONAL VEHICLES

Notes	Units	Year			
		2010	2011	2012	2013
Diesel Used	000 Liters	168.4	139.6	120.31	119.84
Savings	000 Liters	(13.6)	(28.8)	(19.3)	(0.5)
Distance	000 Km	1,230.0	1,048.4	1,055.1	991.9
CO_2 Emissions	Tons equivalent	449.31	372.57	321.00	319.75

In addition to energy savings for operational vehicles, we have also implemented various steps to conserve energy in other supporting activities, such as the use of LPG for domestic needs. Since this policy came into effect in 2009, total LPG consumption has fallen from 248 units in 2009 to 142 units in 2013. This has provided other benefits, including a reduction in cost and CO2 emissions from the use of LPG from 3.82 tons equivalent CO2 to 3.16.

Our energy savings have resulted in reduced CO2 emissions. Efficiencies in the use of diesel have reduced CO2 emissions from 372.57 tons CO2 equivalent in 2011 to 321.0 tons CO2 equivalent in 2012. Meanwhile, reducing the use of LPG has also successfully reduced GHG emissions from approximately 5.51 tons equivalent CO2 in 2009 to 3.16 tons equivalent CO2 in 2012 (2011: 3.82 tons CO2 equivalent).

LPG CONSUMPTION AND CO_2 EMISSION DEVELOPMENT

Notes	Units	Year			
		2010	2011	2012	2013
LPG Consumption	Unit (50kg)	193	171	172	142
Savings	Unit (50kg)	(55,0)	(22,0)	1,0	(30,0)
Consumption Target	Unit (50kg)	216	192	180	168
CO_2 Emissions	Tons equivalent	4,29	3,80	3,82	3,16

G4-EN19
G4-EN20

TOTAL EMISSIONS AND EMISSION REDUCTION

To reduce air polluting GHG emissions, we have realized a variety of programs to reduce motor vehicle emissions, reduce ODS emissions and applied the CDM Scheme.

Reducing Motor Vehicle Emissions

We have made use of information technology, teleconferencing (video conference) to drastically reduce the need for employees to attend meetings in certain places. In the interest of mitigating CO2 emissions, we have also conducted emissions testing and emissions worthiness tests on all operational vehicles with the involvement of the local Transportation Agency. Vehicle emissions testing makes reference to Environment Minister Regulation No. 5/2006 concerning Permissible Limits for Old Vehicle Emissions, and EURO2 Standards related to vehicle engine performance with environmentally friendly emissions. In addition, we have also required all operational vehicles to have emission tests and road worthiness tests carried out by the local Transportation Agency.

Reducing Ozone Depleting Substances (ODS)

We have also been reducing ozone depleting emissions, including by replacing Freon in cooling systems with the more environmentally friendly R417A (HFC). This step has been taken in compliance with Presidential Decree No. 23/1992 concerning Ratification of the Vienna Convention for the Protection of the Ozone Layer and the Montreal Protocol regarding the use of substances with the potential to deplete the ozone layer.

The step to replace Freon with a more environmentally friendly coolant has also had implications on increased energy efficiency, with savings of 20% made, equivalent to 120 MWh of electricity per year.

We have also monitored the emission of other gases with the potential to deplete the ozone layer, such as NOX and SOX dispersed from key equipment in geothermal generating systems and in other operational support activities, such as incineration and domestic activities. Results of periodic emissions tests by an independent party have demonstrated that during the reporting period, total gas emissions have always been under Environmental Quality Standards, in compliance with local government regulations.

PERIODIC CO_2, H2S, NH3 EMISSIONS TEST RESULTS, 2012

Gas	Quality Standard	Unit	Test Result
CO_2	n.a	%	< 1
H_2S	BM : 35 mg/Nm^3	mg/Nm^3	<5 s/d 0.43
NH_3	BM : 35 mg/Nm^3	mg/Nm^3	<0.1 s/d 0.3

THE RESULTS OF PERIODIC EMISSIONS MONITORING CONDUCTED BY AN INDEPENDENT PARTY DEMONSTRATE THAT DURING THE REPORTING PERIOD EMISSIONS WERE ALWAYS UNDER ENVIRONMENTAL STANDARDS STIPULATED IN LOCAL GOVERNMENT REGULATIONS.

G4-EN19

GREENHOUSE GAS EMISSION REDUCTION THROUGH THE CLEAN DEVELOPMENT MECHANISM (CDM) SCHEME

The use of geothermal energy to fuel power plants results in the lowest carbon dioxide (CO2) emissions compared to power plants driven by other commonly used fuels, such as coal, oil and gas, and is thus more environmentally friendly. As the use of geothermal energy is so significant in the efforts to reduce greenhouse gas emissions, we strive to improve and maintain the performance of our power plant generating units in the Wayang Windu area. We have also taken the initiative to include our operational results in the Clean Development Mechanism scheme and register all our initiatives to reduce emissions with the United Nations Frameworks Convention on Climate Change (UNFCCC) to obtain Certified Emission Reductions (CERs).

With the application of the CDM scheme, we are able to clearly illustrate the performance advantages of geothermal energy, including:

- An organizational structure established to account for and implement the CDM mechanism.
- Monitoring high quality data preparation
- Scheduled monitoring reports
- Accurate measurement instruments calibrated regularly in accordance with required standards
- A well planned file and document archiving system
- Good document control
- Scheduled management reviews and internal audits

Periodically, we calculate carbon emissions generated by a range of activities and cover various variables as part of consideration to include geothermal energy activities and the existence of geothermal power generation in the Clean Development Mechanism.

The CDM potential for Wayang Windu Phase 2 amounts to 794,832 ton CO2 eq. The actual CER figures we have been issued are:

Issue Date	Issue Period	Total CERS
February 2012	2 December 2010 – 22 May 2011	378,646
27 April 2012	23 May 2011 – 31 October 2011	327,693
28 December 2012	1 November 2011 – 31 May 2012	444,255
21 May 2013	1 June 2012 – 31 December 2012	407,983

Emissions included in CERs calculations are non-condensable gas (NCG) emissions and emissions from burning fossil fuels directly related to electricity generation. The basis used is generation emissions from the Java, Madura and Bali grid.

Monitoring Non-Condensable Gas (NGC) Emissions

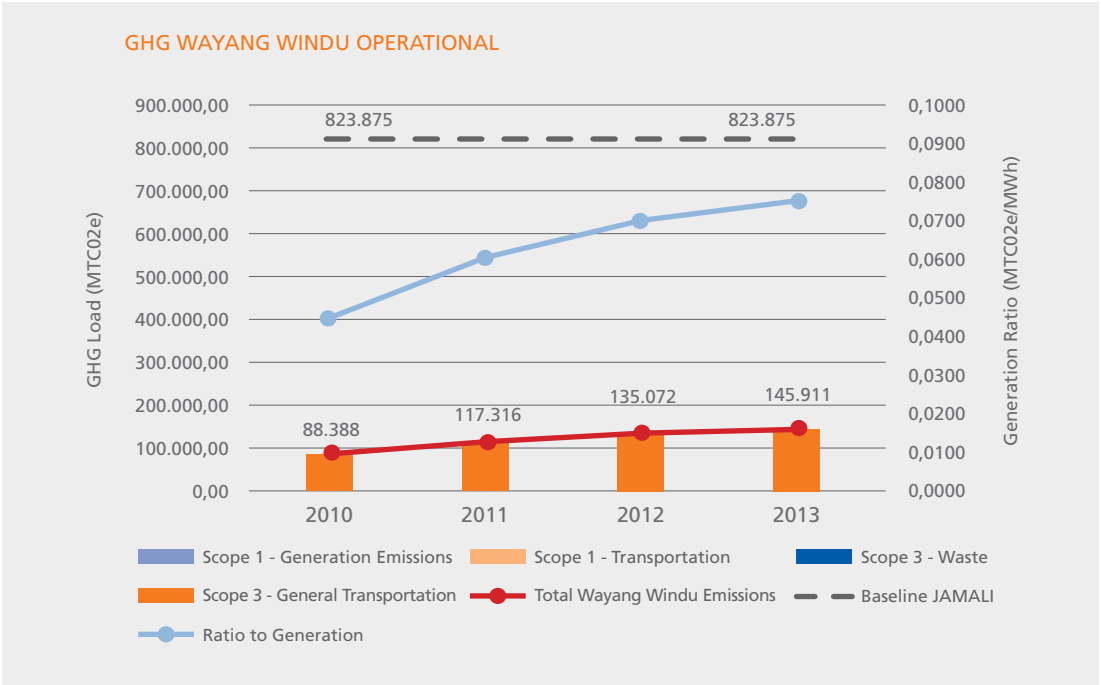
In addition to the CERs project, we are also periodically monitoring emissions from the cooling towers in Unit 1 and 2 generating units to maintain and increase performance. This is implemented twice a year and involves an independent accredited third party. The parameters being measured include levels of non-condensable gas emissions for CO_2 H2S, NHs, NO2 and SO2, which all remain under the levels stipulated by the Government.

Recapitulation of CO_2 Emissions

All the work undertaken in our environmental programs targeting improved environmental quality and reducing greenhouse gas emissions have returned positive results. We have successfully reduced the CO_2 emission levels from several scopes of activity, increased CO_2 absorption through revegetation and maintained the ratio of CO_2 emissions (GHG emission intensity) for electrical power generation at a good level, as demonstrated in the following table and graph.

TOTAL CO_2 PRODUCED

Description	Unit	Year			
		2010	2011	2012	2013
Scope 1 – Generation Emissions	$MTCO_2$	87,898.41	116,907,43	134,717,03	145,563,66
Scope 1 – Transportation	$MTCO_2e$	450.54	373.60	321.87	320.62
Scope 3 – Waste	$MTCO_2e$	33.84	27.76	25.41	20.25
Scope 3 – General Transportation	$MTCO_2e$	5.29	7.48	7.48	6.89
Baseline JAMALI	$MTCO_2e$	823,875	823,875	823,875	823,875
Actual Generation	MWh	1,988,704	1,945,475	1,932,151	1,930,282
Ratio to Generation	TCO_2e/MWh	0.0444	0.0603	0.0699	0.0756
Total Wayang Windu Emissions	$MTCO_2e$	88,388	117,316	135,072	145,911



G4-EN8
G4-EN10
G4-EN22

WATER USE AND MANAGEMENT

We use water for three main functions:

- Injecting into the Earth through injection wells to ensure the steam quantity as an energy source to drive the power plant turbines.
- Drilling for Unit 3
- Fulfilling ancillary requirements, such as domestic needs (washing, bathing and sanitary needs).

We use rainwater collected from the local area and processed condensate that meets quality standards to inject into the belly of the Earth. Drilling in the Wayang Windu area requires water as a dissolving agent to make "drilling mud" and the mixture to strengthen the walls of the injection wells, as well as the steam production wells. All these water requirements, 129,600 liters, are met from condensate. In this way, the Company attempts to re-use all the water it has used in operational activities.

The total volume of water used for domestic needs amounted to 34,508 m3, a reduction of 26.2% of total water used in 2012, which amounted to 57,940 m3. Water used for domestic purposes was surface water from the Cisangkuy watershed. We have a SIPPA permit (permit to take and use water) from the local government to use this surface water.

VOLUME OF WATER USED FROM CISANGKUY RIVER

Type of Use	Volume (m3)			
	2010	2011	2012	2013
Volume of water used	53,269	42,227	57,940	34,508
Volume of water discharged back into the river	1,683	2,244	1,864	3,062

We take and use the surface water under strict supervision to ensure we take no more than sufficient for domestic needs, as well as to ensure the balance of the sub-watershed in the operational area. We have also conducted various campaigns aimed at developing staff awareness to save water. Our save water campaign includes posting stickers, repairing broken taps, recommending the use of buckets when washing operational vehicles and so forth.

Before being returned to the water source, in this case the Cisangkuy River, we process the domestic wastewater in our sewage treatment plant/STP in accordance with Bandung Governor's Decree no. 666/KEP.008/IPBL/BPMP-2010. The processing is aimed at removing or minimizing any substances or dissolved matter that endangers the environment, while fulfilling the stipulated quality standards. To check the water quality, we work with a competent independent party.

PROCESSED WASTEWATER MONTHLY QUALITY TEST RESULTS, 2013

Parameter	BM	Measurement Results	
		Inlet	Outlet
TSS *)	100 mg/l	13 to 477	<1 to 54
pH Insitu	6-9	6.04 to 7.8	6.30 to 7.60
BOD	100mg/l	35 to 1.800	<2 to 57
Oil & Grease	10 mg/l	<5 to 26	<5

Water Conservation

We are working to conserve water generated through nature's cycles. One method being used is building water catchment facilities to absorb rainwater. This program is in accordance with the Environment Minister's Decree Per. Men. LH no. 12/2009 on the use of rainwater. We use biopore holes as water absorption facilities, and started making these in 2009. By the end of 2013, we had constructed 100 biopore holes, which we estimate can hold 1.3 m3/day rainwater, up from 2012's figure.

In addition to the biopore holes, we have created absorption wells and built rainwater reservoirs. We have designed the absorption wells to absorb rainwater in the employee housing area and to date have built five of these wells.

One of our main water requirements is for washing vehicles, and for this purpose we pump water from these reservoirs. All the water used is then stored again as recycled water. We have targeted these water conservation methods to increase the amount of rainwater we can collect and to ensure greater use of rainfall in the coming years.

To reduce the amount of surface water required for domestic use, we have completed construction of a power station settling pond with an estimated optimum useable rainwater volume of 225 m3/month.

G4-EN23

RESOURCE EFFICIENCY

Starting in 2009, we implemented efficiency policies for materials used to support operations, including:

- Reduced use of paper. Results have shown a reduction in paper used from about 475 reams in 2009 to 331 reams in 2013 (2012: 378 reams).
- Separating organic and non-organic waste.

DEVELOPMENTS IN PAPER USE

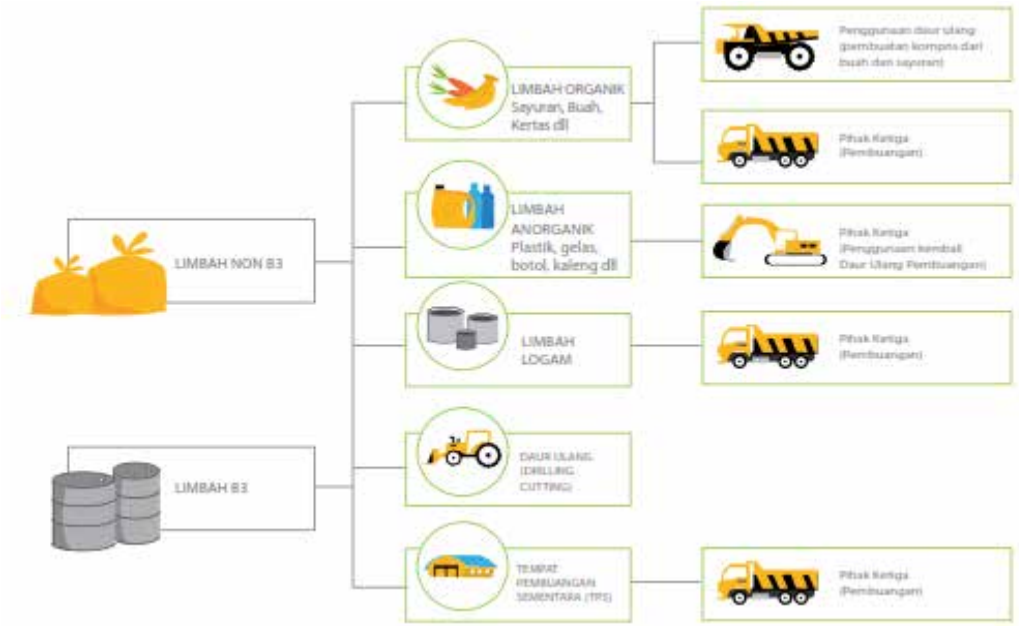
Description	Unit	Year			
		2010	2011	2012	2013
Paper Use	Ream	337.00	247.00	378.0	331.0
Target	Ream	482.00	337.00	336.0	336.0
Percentage Increase/ Decrease	%		(26.71)	53.04	(12.43)

WASTE MANAGEMENT AND PROCESSING

We process waste using the 3R principle (reduce, reuse and recycle) and safe disposal. We also separate waste into two main groups, toxic and hazardous (B3) waste and non-toxic and hazardous waste.

Star Energy Geothermal (Wayang Windu) Limited has its own waste management procedure named Waste Management (EPE.WM). This procedure is based on Law No. 18/2008 regarding Waste Management. EPE.WM governs waste reduction (limiting trash tips, reusing and recycling waste) and waste management (monitoring generation, waste sorting, transporting to temporary tip (TPS) and transporting to final tips (TPA).

SCHEME TO MANAGE SOLID WASTE



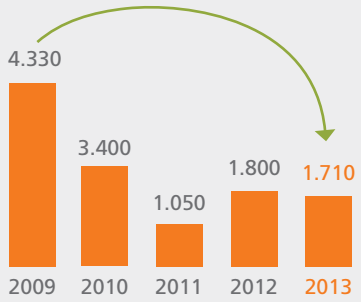
To manage toxic and hazardous (B3) waste, we apply standard operating procedures in accordance with applicable regulations, i.e.:

- We have a license to temporarily store B3 waste, based on a BPMP decree on behalf of the Bandung Regent, No. 658.31/22/IV/BPMP.
- Satisfying B3 waste packaging requirements through the use of symbols and labels required by applicable laws.
- Reporting B3 waste management quarterly to the Environment Ministry and sending a copy to the West Java Regional Environment Agency (BPLHD), BPLHD Bandung and the PPLH for Java.

B3 waste is predominantly mud from drilling, or drilling cutting, derived from drilling production wells. This waste is managed through cooperation with a third party, a cement plant, which uses the waste in a co-processing process to make cement slag. Co-processing is a waste management method that utilizes furnace heat during the cement making process. Through this process, almost all (100%) of the drilling cutting waste can be reused. In 2013, a total of 356.66 tons of drilling waste was reused in this manner.

Another significant quantity of B3 waste from operations is used lubricant from the turbine generator gearboxes. We have been striving, since 2009, to minimize the volume of used oil by implementing an oil analysis program, in which oil is changed dependent on its operational condition and not on the schedule recommended based on equipment specifications. We have achieved substantial savings, reducing oil waste by 2,620 liters (2012: 2,530 liters) by the end of 2013, or 60.5% (2012: 58.43%) from the 2009 stockpile of 4,330 liters, as shown in the following diagram.

USED OIL STOCKPILED FROM OPERATIONS



TOXIC AND HAZARDOUS WASTE SUMMARY

Type of Waste	Unit	Remainder 2012	In	Out	Stored	Notes
Used oil	Ton	-	10.58	10.58	0.0	WGI
Laboratory waste	Ton	0.06	1.65	1.71	0.0	PPLI
Used TL light bulbs	Ton	-	0.084	0.084	0.0	PPLI
Contaminated waste	Ton	0.020	0.329	0.345	0.004	PPLI
Used printer toner	Ton	0.00	0.03	0.03	0.0	PPLI
Drilling Cutting	Ton	50.00	307	356.66	0.0	HOLCIM
Medical waste	Ton	0.02	0.02	0.05	0.0	PPLI
Asbestos fiber	Ton	-	-	-	0.0	PPLI
Used batteries	Ton	-	0.01	0.01	0.0	PPLI
Used chemical containers	Ton	-	-	-	0.0	PPLI
E-Waste	Ton	-	0.007	-	0.007	
Conversion: 1 Ton = 1,000 Lt		50.10	319.38	369.46	0.011	

Notes:
WGI = PT Wiraswasta Gemilang Indonesia
PPLI = Indonesian Waste Management Company

G4-EN24

TOTAL NON-TOXIC AND HAZARDOUS WASTE GENERATED IN 2013 AMOUNTED TO 32.15 TONS (2012: 33.86 TONS), OR 2,679.4 KG (2012: 2,821 KG PER MONTH), WITH AVERAGE RECYCLING OF APPROXIMATELY 48.4 % (2012: 49.9%).

Other toxic and hazardous waste is periodically sent to a third party licensed by the Environment Ministry to process such waste. We ensure that very strict procedures and security are applied during the transportation process. This waste is only sent to waste management companies within Indonesia.

We handle oil spills with an absorbent media. During the reporting year, we had no significant spills thanks to compliance with our strict handling procedures and safe work procedures.

Non-Toxic and Hazardous Waste Management

Non-toxic and hazardous waste arises from operations, steam field and power plant maintenance, office operations, warehousing, the health clinic and employee housing. The total amount of non-toxic and hazardous waste generated during 2013 amounted to 32.15 tons (2012: 33.86 tons), or 2,679.4 kg (2012: 2,821 kg) per month, with an average recycled percentage of 48.4 % (2012: 49.9%). Of the total non-toxic and hazardous solid waste generated each month, 5,967 kg, or 18.6 %, (2012: 7,2797 kg or 21.6%), is used to make liquid fertilizer. The remainder, along with the paper and plastic waste, is managed by the local government.

BIODIVERSITY

The topography of the Company's 12,960 Ha working mine area (WKP) is mountainous, with valleys and hills located at a height of up to 1,700 m above sea level. The ecosystem around the WWL operational area is close to protected forest and productive forest, and is categorized as tropical lower mountain forest.

Land clearing for exploration, exploitation and pipe network construction in the protected forest can cause changes to plant and wild animal biodiversity caused by a loss of habitat. To manage this impact, we have applied environmentally friendly (green field) schemes to demonstrate the Company's commitment to conserving nature and implemented protective steps, including:

- Inventorying flora and fauna, followed by creating a seed nursery for any protected or locally endemic flora found in the location, as well as relocation of protected or locally endemic fauna.
- Preparing a disposal area for topsoil in preparation for the reclamation stage.
- Restricting interaction with project workers in the protected forest to minimize contact with the habitat and species found within it.
- Creating a plant nursery.

BIODIVERSITY MAPPING

In the interests of realizing our biodiversity management and protection program, we have mapped the biodiversity conditions and profile in the area around our workplace. In the initial stage, we mapped the location around Well Pad MBB-MBA, Well Pad WWS and Well Pad WWA, where, between 2003-2013, we have conducted revegetation in various spots using pine trees, eucalyptus trees, avocado trees and so forth.

As part of the biodiversity mapping, we analyzed satellite images to determine the land cover and changes in the location over the years 2003, 2007 and 2013. In addition, we analyze biodiversity (flora and fauna) development.

Analysis of land cover changes

Analysis of land cover changes in the revegetation area was focused on locations around Well Pad MBB-MBA, Well Pad WWS and Well Pad WWA, areas that we had been replanting between 2003-2013 with various tree types, such as pine, eucalyptus, avocado and others.

The land cover condition around Well Pad MBA-MBB, specifically the revegated area, in 2003 was predominantly open land. In 2007, this had become dense shrubs and open land, and in 2011 was predominantly dense shrubs. In the area around Well Pad WWS (revegetation area), in 2003 it was predominantly open land, plantation and bushes, while in 2007 it was dominated by bushes, plantation and dense shrubs; and in 2011 was predominantly dense shrubs and plantation. In 2013, there was very little further change in the land use in this location, with the only changes where plantation had become bushes.

Meanwhile, the land cover in the revegetation area around Well Pad WWA, in 2003 was predominantly open land, plantation and buildings/roads; in 2007, it was predominantly plantation, dense shrubs and buildings/roads; and in 2011 it was predominantly plantation, dense shrubs and buildings/roads. In 2013, there was further change in the land use, with open land becoming quite covered in shrubs, a little of the dense shrub coverage had become open land and some plantation had become densely covered with shrubs.

From the analysis carried out in 2013, we have seen some negative changes in the location around Well Pad MBB-MBA. However, around Well Pad WWS and WWA, there is very little meaningful change, and any changes are positive with the open land in the Well Pad WWA location becoming densely covered with shrubs, plantation becoming dense shrubs and where plantations in the Well Pad WWS location have seen shrub growth.

These changes show that in the last 10 years, there has been significant change to land cover in the locations being replanted, with a trend to positive change. This also indicates that the effects of the revegetation program that we have carried out are being maintained, even though further monitoring and improvements are required.

The mostly positive trend (from open land to covered land) at the three locations between 2003-2013 demonstrates that in a 10-year period there has been a very significant change and also shows the success of the revegetation program in these locations.

From the various land cover categories shown in the satellite analysis, such as dense shrub (BR), open land (LT) and plantation (PN), a field survey showed that the dense shrub land can now be categorized as overlapping secondary forest.

The satellite images demonstrating changes in land cover are as follows.

Year	WWA	WWS	MBA-MBB
2003			
2007			
2011			
2013			

Notes

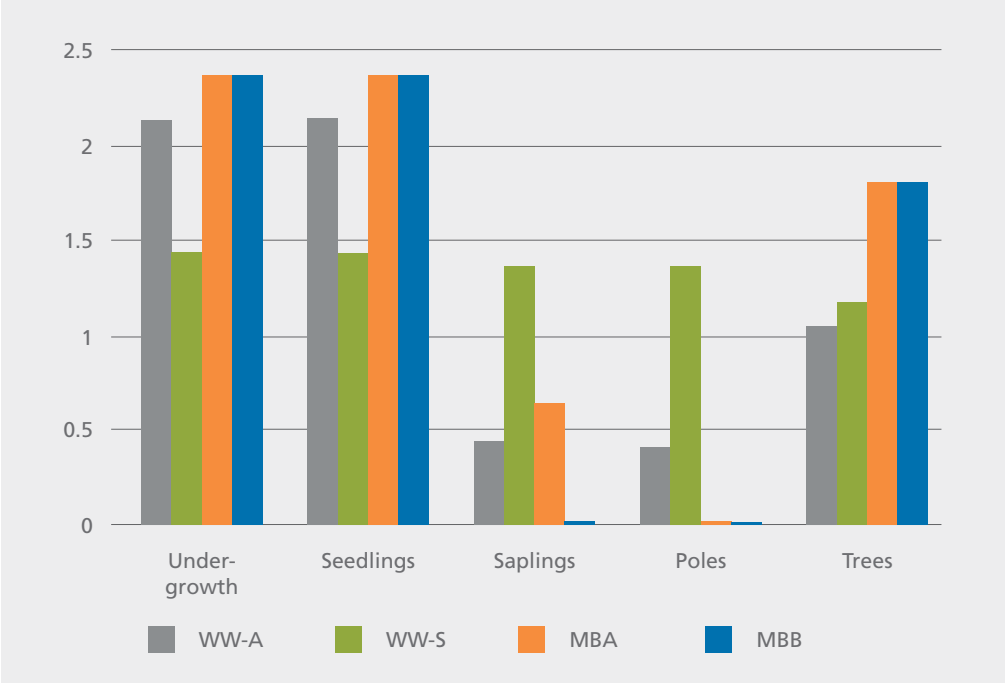
- Location Revegetation
- BR (Thicket Meeting)
- BN (Building)
- PN (Plantation)
- JL (Street)
- LT (Land Open)
- BS (Thicket Medium)
- HS (Secondary Forests)

Biodiversity Development Analysis (Flora)

To confirm the effectiveness of the revegetation program, Wayang Windu worked in cooperation with IPB to monitor biodiversity using the Shannon-Wiener (H') index. Generally, Wayang Windu's regreening program has increased land cover around the project site. The biodiversity index measurement data in 2013 demonstrated a good value for vegetation distribution for low level plants, seedlings and trees throughout the revegetation area. However, there was a significant difference in vegetation type (jenis vegetasi pancang dan tiang), in particular around the MBA and MBB production wells, which had a very low biodiversity index value at just 0.

We are targeting improvements in the biodiversity value, aiming for a relatively even index across all types of vegetation, in line with the successful expansion of land cover.

GRAPH OF BIODIVERSITY INDEX (H') COMPARISON IN REVEGETATION AREAS, 2013



Biodiversity Development Analysis (Fauna)

In addition to monitoring plant biodiversity, we also monitor fauna biodiversity, namely birds.
The MBB location has the highest Shannon-Wiener (H') biodiversity index compared to our other areas. The high H' value is believed to be the result of the relatively good forest condition, thus making it a suitable habitat for various species of birds. The MBA location has a mid-level biodiversity score, but is the lowest of the areas because the vegetation at that location tends to be homogenous. The evenness index value (E) at the four locations is the same, at 0.9. This figure, approaching a score of one, shows that evenness at the four locations is considered relatively high, as shown in the following table.

G4-EN13

BIODIVERSITY INDEX AND BIRD EVENNESS IN FOUR STUDY LOCATIONS, 2013		
Location	HI	E
WWS	2.86	0.91
MBB	3.16	0.93
MBA	2.70	0.95
WWA	2.94	0.92

Overall, there has been a development in bird presence across the four locations studied (MBB, MBA, WWA and WWS), which, in 2013, saw 20 bird species identified, in line with the success of the regreening program conducted in the areas being studied.

The predominant bird species in the WWS, MBA and WWA locations are very similar and include Cave Swiftlet (Collocalia linchi), Striated Grassbird (Megalurus palustris), Orange-spotted bul-bul (Pycnonotus bimaculatus), Spotted Dove (Streptopelia chinensis), Mountain White-eye (Zosterops montanus) and Ashy Drongo (Dicrurus leucophaeus). Meanwhile, the MBB location is dominated by the Sunda Minivet (Pericrocotus miniatus), Little Pied Flycatcher (Ficedula westermanni), Rufous-tailed Fantail (Rhipidura phoenicura), Crescent-chested babbler (Stachyris melanothorax), Lesser Shortwing (Brachypteryx leucophrys) and Javan Tesia (Tesia superciliaris).

The bird species found in the Mount Wayang area are mostly birds that prefer mountainous regions. In addition to specific species, the survey identified many small birds in mixed flocks, generally referred to as mixed species flocks (MSF).The MSF phenomenon is a normal symbiosis for small birds in tropical forests.

A

B

The dominant species of birds at the site survey, a) Cucak Gunung (*Pycnonotus bimaculatus*), b) Sikatan Belang (*Ficedula westermanni*)

REVEGETATION AND REHABILITATION PROGRAM REALIZATION

We have continued with our efforts to repair the habitat around our operational site through the revegetation program, with special focus on critical land. We planted fast-growing trees, such as eucalyptus (eucaliptus deglupa) and silver oak (Grewellia robusta). In addition, we also planted trees with economic value, such as avocado (Persea Americana), dammar gum (agathis dammara) and trees that are locally endemic to conserve the germplasm potential of the Wayang Windu area, such as saninten (Castanopsis argentea), puspa (Schima wallichii) and rasamala (Altingia excelsa).

During 2013, we planted a total of 2,100 trees (2012: 2,785 trees) of various species in the revegetation and rehabilitation program. The trees were planted along the Warehouse-WWA and WWS-MBD pipeline route.

Of the trees planted during 2013, 95% have grown well; replanting will take place for the remaining 5%. Tree planting involved the Forest Villages Community Association (LMDH), which is also overseeing care and maintenance.

Between 2002 and the end of 2013, Wayang Windu has planted a total of 544,582 plants for the regreening project.

Restoring the habitat for the benefit of local fauna in the operational area has also had the effect of mitigating the negative effect of GHG emissions by absorbing 9,262.3 (2012: 9,237.93) ton CO2e per annum (assuming all plants survive).

ACCUMULATED TREE PLANTING REALIZATION BY WAYANG WINDU, 2002-2013

Year	Location	Total and Type of Tree
2002	Unit 1 Soil Disposal	13,000 Pine trees
2003	46 Ha, forest around Wellpad WWA	45,980 Eucalyptus sp; 7,360 Avocado
2004	Forest around Wellpad WWA	80,000 mulberries
	Power Plant Area and Tea Plantation	7,500 Toona Sureni; 2,700 Eucalyptus sp
2005	Power Plant Area and Tea Plantation	1,000 Silver Oak
2006	Power Plant Area	3,000 Silver Oak
	300 ha Perhutani land	300,000 Arabica coffee seedlings
2007	Power Plant Area	12,100 Toona Sureni, Silver Oak & Cypress
2008	Critical Land Area around WWS, MBD, MBA, MBD, Wellpad; ±20 ha)	5,803 Altingia Excelsa; 4,096 Toona Sureni; 3,818 Eucalyptus sp; 9,214 Eucalyptus Flatifolia; 4,800 Cypress; 1,022 Acacia Decurrens; 4,802 Avocado. Total Trees: 33,555
	Critical Land Area around WWQ and MBD bridge (±15 ha)	Eucalyptus sp; total 38,825
2009	20 ha Critical Land Area around Aul	6,500 Toona Sureni ; 4,400 Dammar Gum; 2,200 Silver Oak; 8,800 Eucalyptus sp. Total :22,000
2011	MBC Wellpad Area	Various trees: 4,894 Eucalyptus; 4,894 Silver Oak; 4,894 Cypress. Total: 14,682
2012	Internal Power Plant Area: PS, SCC Area, Well Pad Area, MBD-Bridge, WW Village, Sukaratu Low Point, Cibolang Low Point, Warehouse-1, Warehouse 2 and SS-1 area	Total 2,785 trees
2013	Open Area along Warehouse-WWA, WWS-MBD pipeline route	1.114 Suren, 426 sengon, 239 Sobsi and others including Huru, Kihujan, Bungur, Eucalyptus; total 2,100
TOTAL		586,587 trees

In the interest of supporting our revegetation program and restoring the rich biodiversity, in 2011 we pioneered our own plant nursery. The specific purpose of the plant nursery was to ensure the quantity and type of seedlings required and to develop locally endemic species, such as saninten, puspa, rasamala, manglid baros (Manglietia glauca), suren (Toona sureni). Such endemic plants are relatively rare and seedlings are hard to come by. The availability of these seedlings through our plant nursery has finally allowed the biodiversity of the area to gradually return to its original condition, prior to human presence.

G4-EN13

As of the end of 2013, the plant nursery had provided 3,432 (2012: 2,785) seedlings of various types for the 2013 revegetation program.

LAND AREA REHABILITATED

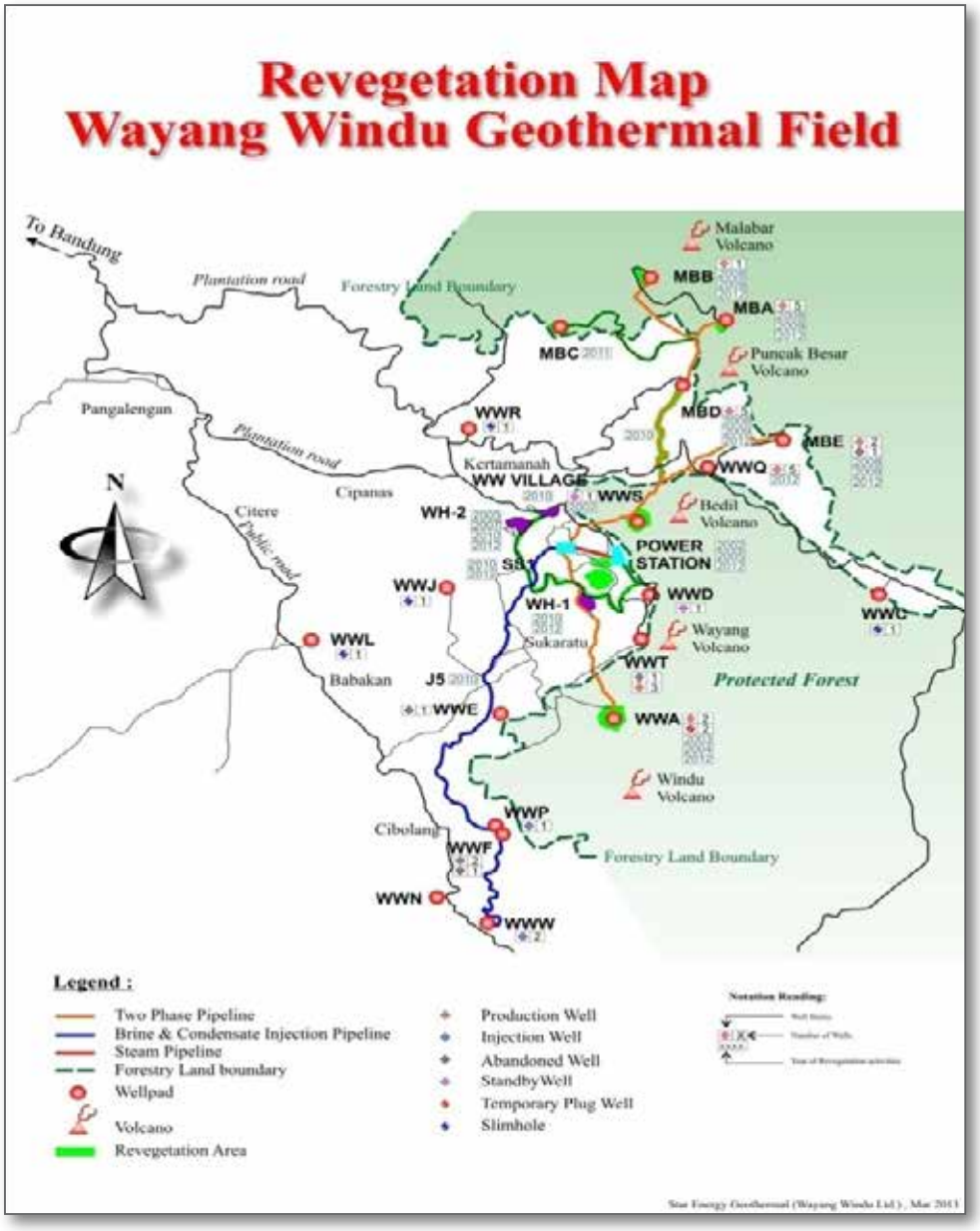
2011 2012 2013

Note: Total trees 2013: 2,100, Total land area: 5.25 Ha

Having already planted many seedlings in the revegetation area, the Company is still tending to 11,955 (2012: 2,231) seedlings of various species in the Plant Nursery. The majority of these seedlings are *suren* (Toona sureni, 7,583 plants), *trembesi* (Samanea Saman, 2,648), *puspa* (Schima wallichii, 513), *sopsi* (Maesopsis eminii, 450), *sengon* (Albizia falcataria, 244) and *saninten* (Castonopsis argentea, 164). We are also tending to several types of rare hardwood trees, including sengon buto (Enterolobium cyclocarpum), bungur (Lagerstroemia speciosa Pers), eucalyptus, merbau (iron wood) and others.

TOTAL NURSERY PLANT SEEDLINGS (AS OF END DECEMBER 2013)		
Plant Name	Latin Name	Total Plants as of end Dec
Suren	*Toona sureni*	7.583
Trembesi	*Samanea saman*	2.648
Puspa	*Schima wallichii*	513
Sopsi	*Maesopsis eminii*	450
Sengon	*Albizia falcataria*	244
Saninten	*Castanopsis argentea*	164
Manglid Baros	*Manglietia glauca*	114
Sengon buto	*Enterolubium cyclocarpum*	75
Bungur	*Lagerstroemia speciosa*	23
Manglid Biasa	*Magnolia blumei*	23
Eucalyptus	*Eucalyptus urophylla*	21
Miscellaneous		97
Total		11.955

WAYANG WINDU PLANNED REVEGETATION MAP



G4-EN13
G4-EN14

PROTECTION OF RARE FAUNA

We have also collected data on the fauna (animals) living in our managed area. According to the resulting analysis, 14 species of wildlife (mammals and birds) have a relatively significant status, while two of the mammal species are very important and need special attention.

The grizzled leaf monkey, or Presbytus comate, is categorized as Vulnerable (VU), which means that the global population is vulnerable or highly vulnerable. The leopard (Panthera pardus), one of the five big cats, is categorized as Critically Endangered (ER), which means its population in the wild globally is very critical. This big cat is included in Appendix I, meaning it is very valuable and trade in the animal is closely monitored with strict mechanisms and can only be for certain specific reasons, such as scientific research and education.

Almost all the bird species found are protected under Government Regulation No. 7/1999. The majority are from the families Accipitridae, Alcedinidae and Nectariniidae. Species under these families are protected because of their important role in the ecosystem, such as predators in the food chain, plant pollinators and indicators of water quality.

Data on the local flora and fauna is collected through environmental monitoring to identify those species endemic to the location, including the grizzled leaf monkey, or Presbytis comate, which the International Union for the Conservation of Nature and Natural Resources (IUCN) states is at risk of extinction.

Additionally, there are several endemic plants, such as *manglid* (Manglietia glauca), *saninten* (Castanopsis argentea), *Ki Hujan* (Engelhardia spicata) and *puspa* (Schima wallichii). We pay extra attention to these protected flora and fauna to improve the quality of our environmental conservation program in the vicinity of the Wayang Windu geothermal field.

LIST OF VARIOUS FAUNA IDENTIFIED IN THE WW MANAGED AREA, 2013

Taxon	Local Name	Scientific Name	Status	
			Gov. Reg. No. 7/1999	IUCN
Mammal	Monyet ekor panjang	*Macaca Fascicularis*		
	Surily Jawa	*Presbytis Comata*		VU
	Macan Tutul Jawa	*Panthera Pardus*		ER
Bird	Elangular Bido	*Spilornis cheela*	protected	
	Elang Hitam	*Ictinaetus malayensis*	protected	
	Alapalap Sapi	*Falco Moluccensis*	protected	
	Walet Gunung	*Collocalia Hirundinaceus*		NT
	Cekakak Jawa	*Halcyon Cyanoventris*	protected	
	Cekakak Sungai	*Halcyon Chloris*	protected	
	Takur Tohtor	*Megalaima armillaris*	protected	
	Tepus Pipi-perak	*Stachyris melanothorax*	protected	
	Kipasan Ekor-Merah	*Rhipidura Phoenicura*	protected	
	Burungmadu Gunung	*Aethophyga eximia*	protected	
	Pijantung Kecil	*Arachnothera Longirostra*	protected	

Alap-alap sapi (*Falco moluccensis)*

Cekakak Belukar (*Halcyon Smyrnensis)*

Madu gunung (*Aethopyga eximia)*

Serindit jawa (*Loriculus pusillus)*

Surili *(Presbytis comata)*

Monyet Ekor Panjang (*Macaca fascicularis)*

Jalak Suren (*Sturnus contra)*

Penangkaran Rusa Tutul (Axis axis)

Photographs of Several Types of Fauna Found in the Study Location (Source: www.kutilang.or.id and www.flora_fauna.blogspot.com)

As part of our commitment to fauna conservation, we conducted a bird release program in 2011 with 200 endemic birds released into the wild, constructed breeding enclosures for our bird breeding program in 2012, and built and maintained a spotted deer (Axis axis) breeding facility in cooperation with PTPN VIII on a 6,500 m2 plot of land. The cooperation with PTPN included repairing deer enclosures and providing deer food on a monthly basis.

At the start of the program, the deer population in the breeding area was 18; by the end of 2013, this had risen to 28 deer.

THE JAVANESE LEOPARD IS ENDEMIC TO JAVA

- The Javanese Leopard (Pantera Pardus) is one mammal endemic to Java. Its shrinking habitat is a huge threat to its continued existence. Rapid growth in the human population has caused these big cats to lose the majority of their habitat, from 43,274 km2 down to only 1,608 km2. This has resulted in a dramatic fall in the number of leopards.

- The IUCN has categorized the Javanese Leopard as Critically Endangered (ER), or being at threat of extinction. The Indonesian government issued its own protected status based on a Decree of the Agriculture Minister dated 5 April 1979, No. 247/Kpts/Um/1979, Decree of the Forestry Minister dated 10 June 1991, No 301/Kpts-II/1991 and Law No. 5/1990.

- Nowadays, the Javanese Leopard can only be found in protected areas, such as natural reserves and national parks in Java.

G4-EN31
G4-EN29

INDICATIONS THAT ALL WASTEWATER PARAMETERS HAVE MET QUALITY STANDARDS ARE DEMONSTRATED FROM MONITORING AQUATIC BIOTA, SUCH AS ZOOPLANKTON AND PHYTOPLANKTON, WHICH ARE THRIVING.

Monitoring Water Biota

We also monitor the biodiversity of water biota before and after it is used for operational support activities, namely domestic requirements. Aquatic biota, plankton and benthos, are sampled in the vicinity of the effluent pond. The sampling is conducted to check the zooplankton, phytoplankton and benthos diversity and to confirm the impact and correlation between resulting quality of water and the aquatic community in it.

FUNDING

As our commitment to create a better quality environment, we allocate an amount of funds for activities related to environmental protection and conservation. Environmental costs are funded from the budget for Occupational Safety, Health and Environment (SHE). In the 2013 operational year, total funding for the environment amounted to US$136,282 (2012: US$298,700).

As a result of the programs we have conducted to manage, maintain and improve the local environmental condition, trust has been established from a number of parties, including the local communities and, in particular, regulatory parties as key stakeholders. During 2013, we were not liable for any sanctions, fines or legal action related to violations of environmental regulations and legislation.

Supporting improved community welfare through planned corporate social responsibility programs involving infrastructure construction, competency development through education and building and fostering community relations with the involvement of all relevant parties to ensure successful development that is effective, efficient and sustainable

CHAPTER 6

WAYANG WINDU SHARES

G4-SO1
G4-EC7

AIMS

Our operational activities directly impacting on the area are basically drilling for new wells, power generation and maintenance of production wells and supporting facilities. To reduce the resultant impact and ensure that our main production facilities can support the local communities, at each stage of development the Company conducts a thorough study covering all aspects and involving various parties competent in their respective fields.

In parallel with building and development, the Company has designed and realized a range of corporate social responsibility programs. These activities are conducted continuously and concurrently with operational activities and continue after construction of all the operational facilities has been completed.

The Company's aim in designing and implementing its Corporate Social Responsibility (CSR) programs is to demonstrate the company's social care for the development of communities in the vicinity of the area it manages, in particular growing local community social welfare in line with the Company's progress. To measure the success of the community potential development programs that we run, we pay careful attention to the development parameters issued annually by the Central Statistics Agency, i.e. the Human Development Index, as well as utilizing internal assessment mechanisms to measure and assess the success of the programs being implemented. We use the overall assessment results as feedback to design follow up programs.

Meanwhile, to ensure program compliance and success, we involve stakeholders, community and local community leaders, local government, NGOs and other independent parties.

POLICY

To ensure the effectiveness and success of the CSR programs, at each stage of planning and program realization, we are guided by the SEGWWL CSR implementation policy and the Principles of the CSR Programs Implementation Guidelines, as contained in the following document:

CORPORATE SOCIAL RESPONSIBILITY POLICY

Star Energy is committed to perform its Corporate Social Responsibility role in a responsible and sustainable manner by emphasizing in delivering distinctive contribution towards Balanced Value for Stakeholders.

Star Energy take initiatives to focus in education, economic empowerment and infrastructure development as well as health care for the people at large and safeguarding the environment in which we operate based on our Guiding Principles.

We apply Good Corporate Governance and ethics to ensure that our business is conducted in accordance with professional, ethical and legal standard to reflect honesty and integrity.

We are committed to maintain honest and fair relationship with government agencies, public authorities, business partners, public organizations and peer companies.

GUIDING PRINCIPLES

To be the most respected and fastest growing energy producer by creating competitive and balanced value for investors, employees, country and community

Design Company's CSR program to improve the community standard of living and support government goal in Human Index Development (IPM) programs to achieve stable, longterm growth and mutual benefits

Dedicate ourselves to provide clean and safe operation and to enhance the quality of life and environmental anywhere we operate.

Foster a corporate culture that enhances individual creativity and teamwork value, while honoring mutual trust and respect

Execute Company's CSR and External Relation programs in line with Standard Operating Procedures (SOPs) and Guidelines which controlled by Star Energy Regulations & Policies.

Jakarta, July 2012

Asrul Saleh Amru
VP Ext. Relations & Security

Asrin Haznam
VP Operations Kakap

Heribertus Dwiyudha
Sr. Manager Operations WW

Rudy Suparman
President & CEO

PRINSIP-PRINSIP PANDUAN CSR
STAR ENERGY GEOTHERMAL (WAYANG WINDU) LTD

Berkeinginan untuk menjadi Pembangkit listrik yang berkembang pesat dan disegani dengan menciptakan nilai yang berimbang serta kompetitif bagi para investor, karyawan, negara dan masyarakat

Menyelenggarakan program pengembangan dan pemberdayaan masyarakat demi menyokong tujuan pemerintah dalam meningkatkan angka INDEKS PEMBANGUNAN MANUSIA (IPM) di Kabupaten Bandung dan khususnya masyarakat yang ada di sekitar lokasi operasi Star Energy Geothermal (Wayang Windu) Ltd disingkat SEG WWL, yaitu Kecamatan Pangalengan yang terdiri dari 13 desa, demi terciptanya pertumbuhan kualitas hidup yang berjangka panjang dan berkelanjutan

Mengabdikan diri untuk selalu menekankan keselamatan dan tidak mendatangkan kerusakan alam serta selalu meningkatkan dan mempertinggi kualitas hidup dan lingkungan dalam setiap kegiatan operasi SEG WWL

Menciptakan budaya perusahaan yang dapat mengembangkan kreativitas individu dan menjaga nilai-nilai kerja sama, serta menjunjung tinggi rasa saling percaya dan saling menghargai

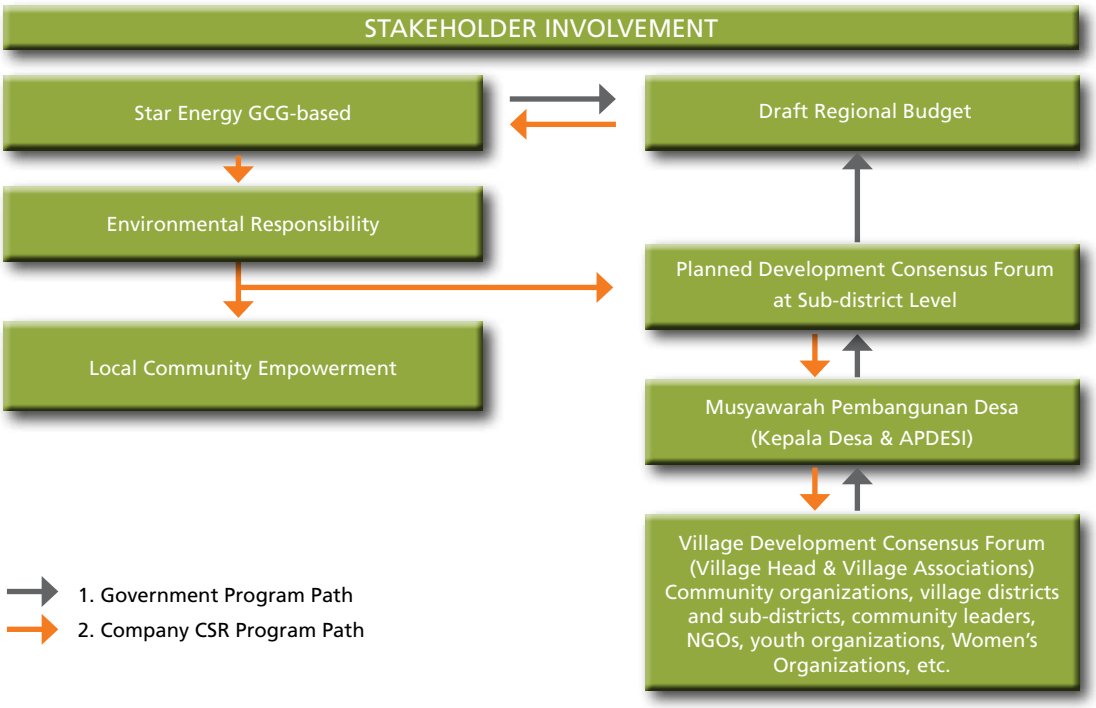
Memastikan implementasi dan pelaksanaan program-program External Relations dan program-program CSR selalu selaras dengan Prosedur Operasi Standar dan Panduan-panduan yang diatur dalam kebijakan-kebijakan dalam Wayang Windu Management System (WWMS) dan peraturan-peraturan Star Energy.

Pangalengan, 1 Juli 2012

Heribertus Dwiyudha
Sr. Manager Operation WW

PROGRAMS

To realize the goals of community development programs, we have also taken input from independent parties through cooperation with competent non-profit institutions. This cooperation is intended to design a community potential development program that takes into account all possible successes and failures and anticipates steps to improve. With this approach, the impact of the programs is expected to be maximized and the benefits immediately felt.



We have designed community development programs that fall into two main groups, namely:

1. Community Development:
   a. Assisting and supporting government programs, especially those improving the Human Development Index (HDI) with a focus on activities in the fields of:
      - Education,
      - Empowering and Improving the Local Economy, and
      - Improving Infrastructure for Social and Public Facilities
   b. Improving and promoting the quality of life economically and health-wise in local communities.
   c. Reducing poverty and unemployment levels in communities local to our sites.
2. Community Relations:

Targeting building and maintaining good community relations, based on a two way relationship, and taking the form of:

- Intensive Communications
- Sponsorship and Donations
- Community Healthcare

Further, to take internal responsibility for the implementation and success of the CSR programs, we have formed an External Relations and Security Department, which oversees the CSR Division.

PROGRAM REALIZATION

Educational Aid Program

We have great concern for and pay close attention to the "cycle of poverty", where an impoverished community cannot access relatively expensive education to improve the competencies that cause it to have a limited income, which ultimately results in poverty becoming deep-rooted among the impoverished. To break this cycle, we have designed and realized an education program to create greater opportunities for communities to receive a quality education.

The CSR education program covers:

- Scholarships for academically gifted students.
- Scholarships for academically gifted students from poor families.
- Assistance to buy learning materials and Teaching and Learning Support (KBM).
- The construction of a "Knowledge House" for the Pangalengan community.

In 2013, Wayang Windu CSR programs provided scholarships to 1,524 students from elementary, junior and senior high schools, to three-year diplomas at two renowned universities in Bandung, Bandung State Polytechnic (POLBAN) and Padjadjaran University (UNPAD). Overall, the total number of students receiving scholarships, from elementary school level to university, is 1,604 students, as shown in the following table.

SUMMARY OF SCHOLARSHIP RECIPIENTS AT ELEMENTARY, JUNIOR HIGH, SENIOR/VOCATIONAL HIGH SCHOOL, 3-YEAR DIPLOMA, 2013

Education Level	Academically Gifted Students	Students from Poor Families	Total
Elementary school	680	350	1,030
Junior High School	153	153	306
Senior / Vocational High School	90	90	180
3-yr Diploma	88*	-	88
			1,604

In addition to providing education scholarships, in 2013, we started to build a Knowledge House, which is expected to become a place of non-formal education open to all layers of society in Pangalengan. This Knowledge Houses will provide learning and teaching aids, various games, a library and reading room, computers and free internet access, and other similar facilities.

As well as promoting non-formal education, the Knowledge House can provide early childhood education, literacy programs, encourage the habit of reading in the community and other methods of promoting public socioeconomic and cultural development. Use of the Knowledge House and its facilities is not limited by age; the core concept is that it is available to anyone who wants to learn.

The establishment of this Knowledge House is an initial step for the Wayang Windu educational CSR program to bring benefit to all layers of society. This is in follow up to our long-running contributions to formal education at all levels, from elementary school right through to three-year diplomas and skills training, as previously described. The groundbreaking ceremony for the Knowledge House took place on 21 November 2013, and completion is expected to be on schedule.

G4-EC8

Smart Home

Social And Public Facilities and Infrastructure Development Support

We have taken note of decisions reached by the Village Development Consensus forum for Pangalengan district in the setting up and running of our development programs, which are self-managed and incorporate village government and local community involvement. Priority programs include construction of village infrastructure that is not included in or not funded by the Regency Budget (APBD) and involve the Planned Development Consensus Forum, which is held annually.

The infrastructure programs we have implemented in 2013, with total funding of approximately Rp 1.3 billion, cover:

- Building 13 Village Government offices in Pangalengan district, including in Sukamanah, Margamekar, Margamukti, Pulosari, Sukaluyu and 8 other villages
- Building roads, public facilities, sports facilities and others, in cooperation with 13 village governments in Pangalengan district.
- Assistance for Margaluyu village madrasah, building/rehabilitating clean water piping in 1 Kp Cipangisikan hamlet.
- Building a village meeting hall in Pangalengan village.

An overview of infrastructure funding allocations for each of the 13 villages is shown below.

Village	Activity	Funding
Margamukti	Construction of a secretariat office and TPT 30m x 2m x 1.5m	195,000,000
Pangalengan	Construction of a Village Meeting Hall	130,000,000
Margamulya	Plurisasi alley 24 RW. Volume 1m x 150m	130,000,000
Sukamanah	Asphalting village roads in Bbkan Cianjur, Legok Pocong and Gapensi	130,000,000
Wanasuka	Village road maintenance in RW 01 – 02 Srikandi, 2000m3 volume	130,000,000
Banjarsari	Road construction around RW 01 s/d RW 10. 1m x 5500m2 volume	130,000,000
Margamekar	Construction of a Village Office. Volume 17m x 9m	65,000,000

2009 | General training and Focus Group Discussions

2010 | Recycling Business Training

2010 | Tofu Business Training

2011 | Product Packaging Mentoring

2011 | Disbursement of Rolling Funds

CSR – ECONOMIC DEVELOPMENT: MSME NURKAYANA COOPERATIVE

2009

Star Energy Geothermal (Wayang Windu) Ltd. bekerja sama dengan SBM- ITB:

- Social mapping
- Based on the results of this social mapping, revitalization of small businesses is required in Pengalengan district, post-earthquake disaster.
- Inventorying, analyzing and inviting 200 small business owners in Pangalengan.

2010

- Entrepreneurial training is provided
- Formal institutions are established under the cooperative consisting of 23 small business traders with an average 46 people absorbed into the workforce.

2011

- Stage 2 entrepreneurial training
- A savings and loan unit is established with rolling capital provided by SEGWWL to 23 business people committed to entrepreneurialism
- Entrepreneurial training provided in packaging, product and licensing by SBM to members.

Providing Name Boards and Product Display Shelves

Industrial and Household Food (PIRT) and Halal Certification

Entrepreneurial Activities

2012

Improving the profiles and completeness of business members, product and packaging innovation, packaging services.

SUCCESSES:

- MSME Nurkayana has started to independently run entrepreneurial activities and provide entrepreneurial training for its members.
- Eight micro businesses have received PIRT and Halal certification and been able to improve marketing.
- Thirty five business people have received name signboards and product display cases.
- Nurkayana has become a source of research on entrepreneurism for the SEED St. Gallen forum.

2013

- Support for group and rural business institutions, non-institution business groups in Pangalengan
- Supporting Alert Village entrepreneurs
- Entrepreneurial training for the Literacy Group.

SUCCESSES:

- Seven micro businesses obtain PIRT certification
- Four additional micro businesses

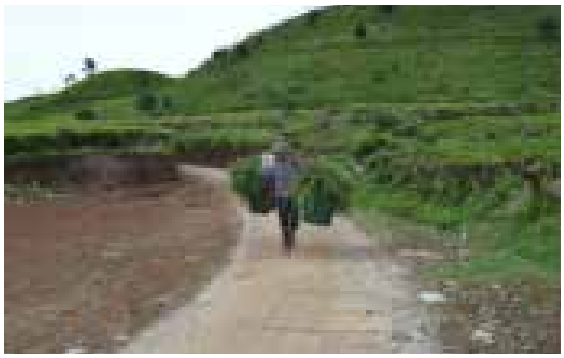
Incubation Units Established:

- Raw material and produce stalls supply members
- Product stalls: Sell members' products to the public
- Nurkayana becomes a research facilitator on entrepreneurism for SEED St. Gallen forum.
- Third prize in CSR Global Award in the Philippines for Micro Financial Institution

SEED

BUMDES

Pembentukan Unit Inkubasi dan Pemasaran



Repairs to Cibadak and Baru Mekar roads in Margaluyu village. 400m x 2m.

Village	Activity	Funding
Warnasari	Construction/rehabilitating clean water piping in I Kp. Cipangisikan hamlet	65,000,000
	RW. 08,11,14,17, 1,500m	
Pulosari	Repairs to Pulosari village office, 60m2 volume	65,000,000
Sukaluyu	Construction of a madrasah in RW.04 Kp. Margaluyu. Volume 8m x 6m – 48m	65,000,000
Margaluyu	Road repairs in Cibadak and Baru Mekar. Volume 400m x 2m	65,000,000
Lamajang	Raising the road from Rantaya to Gumpitan. Volume 2.5m x 700m. Rantaya RW 22	65,000,000
Tribaktimulya	Road construction around Cihideung village RW 14 600m x 2.5m	65,000,000
		1,300,000,000

Intensive Communications

Intensive Communications are designed to build and foster communication and positive interaction with the community, local government at various levels of authority, community leaders, community and youth organizations, and so on.

Sponsorship & Donations

During 2013, Wayang Windu sponsored and provided funding for community activities related to national holidays, sports tournaments, local arts and culture, social welfare (staple goods, etc.), religious activities and aid for disaster victims.

One of activities we donated to was the Pangalengan Sunda Sunda Art Exhibition 2013 organized by the Indonesian Pencak Silat Association DPC Pangalengan for which we sponsored a wayang golek show with Asep Sunandar as the puppet master. Another significant activity was organizing the SE CUP badminton tournament.

Community Health Program

There were two main factors that stirred Wayang Windu's deep concern for the Pangalengan community and drove the company to realize its healthcare program. First was the earthquake that shook Pangalengan in 2009 and took the lives of 9 people and injured hundreds of others. Second, was research data showing the high level of mother and baby mortality in Pangalengan district from diseases such as tuberculosis, dengue fever, diarrhea and bird flu, demonstrating the low level of community awareness on the importance of a healthy environment, family and self.

In the face of these conditions and believing in the close relationship between community development and good health, we designed and realized various healthcare and nursing programs connected to accelerating the creation of Active Alert Villages to develop a community that is aware of health and the environment through an Alert Village Forum for all villages in Pangalengan district. Empowering the community through health is possible if the community is able to grow and develop Community Based Health Efforts (UKBM).

We have implemented various programs to create Active Alert Villages, including:

- Revitalizing Community Health Centers and Village Maternity Units by providing healthcare equipment.
- Donating healthcare equipment and revitalizing the village Community Health Centers in Pangalengan district.
- Donating to the Margamekar Alert Village Forum.
- Counseling and Supporting Margamekar village to become an Alert Village.
- Counseling and training members of the Alert Village Forum and sub-district heads across Pangalengan district to become Disaster Aware and able to handle emergencies/SAR in cooperation with the National Agency for Disaster Management and Rescue 88.
- Empowered and provided certified training in Basic Trauma Life Support for nurses from three Community Health Centers in Pangalengan district.

In follow up to the Alert Village establishment, in 2013 we focused our Alert Village Development and Reinforcement in Sukamanah village. One activity was training and working with households to manage domestic waste, which took place for over one month, from 24 May to 10 July 2013.
The program to train and work with domestic waste management was organized as a cooperative effort between Star Energy Geothermal (Wayang Windu) Limited and an environmental NGO, FOKAL (Environmental Volunteer Forum). The training material covered manufacturing compost, organic recycling, creating compost using a brick overlay method, creating crafts out of anorganic waste. This program targeted the public, district forums, health clinic workers and women's groups in Sukamanah village. In addition, in the 2013 Alert Village Development and Reinforcement program, by involving a facilitator from the Health Agency, we were able to provide a workshop on matters related to environmental health to develop the alert village character.

In addition to waste management, we also established two new Community Health Center buildings complete with operational medical equipment. We hope that with satisfactory buildings and complete medical equipment, these community health centers will be able to function optimally and accelerate development in Sukamanah village to enable it to become an Alert Village.

FUNDING

To support all these CSR programs, during 2013, Star Energy Geothermal (Wayang Windu) Limited has disbursed funding of $643,805. Details of the community development funding in 2013 are presented in the following table.

Composting and utilizing waste strapping to make baskets and flower pots.

WASTE RECYCLING GOVERNANCE

This activity took place in Sukamanah village. Recycling governance basically consists of utilizing organic and inorganic waste. Organic waste is processed to become compost, which is highly useful for plant growth. Meanwhile inorganic waste is used to produce useful handicrafts or materials of economic value. Until this point, the community had managed inorganic waste by burning it, which is very harmful to the environment and human health.

For this reason, the company believed teaching the community an alternative way to manage inorganic waste, by creating handicrafts, was urgent. In the 2013 Alert Village Development and Reinforcement program, we taught trainees how to make brick overlay composters, a new composting technology that is cleaner and does not cause a pungent odor.

There are two matters in Sukamanah village that should be mentioned here with regard to training and mentoring on household waste governance. First is that the residents of RW 5 Sukamanah village had already long been practicing inorganic waste processing by using waste package strapping to make useful items such flower pots, tea picker baskets and other items. This had already provided the residents with an additional source of income.

Second, the women of RW 18 utilize their yards to plant herbs and vegetables. They typically use plastic bags or large-sized plastic packaging waste in place of pots. This resulted in RW18 serving as a pilot project for the use of yards to grow vegetables for families' daily needs.

DURING 2013, STAR ENERGY GEOTHERMAL (WAYANG WINDU) LIMITED REALIZED FUNDING OF $643,805

CSR FUNDING DISBURSEMENT, 2013 (in US$)		
Program Name	Realization	% Total of Operational Costs
Community Relations		
Intensive Communication Activities	187,074	0.37
Sponsorship & Celebrations	29,698	0.06
Health and healthcare	15,635	0.03
Subtotal	**232,407**	**0.46**
Community Development		
Educational Support	164,160	0.32
Infrastructure Development	149,764	0.29
Improving Welfare	80,589	0.16
Developing Alert Village Forum	16,885	0.03
Subtotal	**411,398**	**0.81**
Total Community Development Funds	**643,805**	**1.26**
Total Operational Costs	**50,991,000**	

The CSR budget for 2013 was therefore 1.26% of the Company's total 2013 operational costs of US$50,991,000, including employee salaries.

Participating in efforts to develop economic potential through balanced distribution of economic value, supplying quality electricity production, improving relations with business partners and committing to product responsibility

CHAPTER 7

SUPPORTING DE
OF ECONOMIC PO

VELOPMENT TENTIAL

G4-EC1

CONTRIBUTIONS TO THE NATIONAL ECONOMY

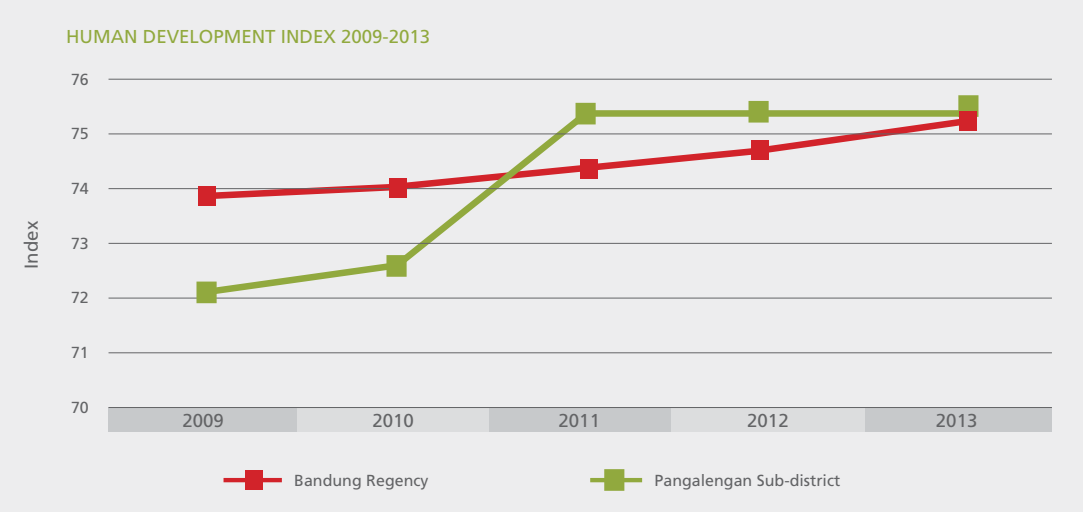
Wayang Windu contributes directly to the national economy through its reliable and trusted supply of electricity generated from geothermal energy. In 2013, we supplied electricity to the PT PLN (Persero) grid, our largest customer, amounting to 1,879,583 MWh, or the equivalent of 6,766,498.21 GJ. In the coming years, we aim to increase the amount of electricity we supply from Wayang Windu steam fields by increasing the number of production wells and developing new generators and/or adding to existing generator capacity in accordance with the results of our exploration drilling.

In addition to supplying electricity, we support national economic growth directly through the distribution of economic value. In line with our success, we have realized efficiency programs that have increased the value of our net income and been able to increase our contribution to the national economy though tax payments and also contributions to regional direct revenue.

We have also successfully improved the rural economy, as demonstrated by the rising Human Development Index (HDI), as issued by the Central Statistics Agency, resulting from our Community Economy Empowerment program, a part of the Corporate Social Responsibility program we carefully designed and consistently implement.

ECONOMIC VALUE RETAINED AND DISTRIBUTED

(in US$000)	2011	2012	2013
Direct economic value generated			
Revenues:			
a) Net Sales	118,807	122,664	121,776
b) Other Revenues :			
• Interest income	649	1,900	872
• Gain on Forex Translation	(707)	507	1,825
Total direct economic value generated (A)	**118,749**	**125,071**	**124,473**
Economic value distributed:			
Operating costs	30,998	41,756	36,277
Employee wages and benefits:			
Total employee wages and benefits	12,867	13,411	14,714
Payment to providers of capital:			
Interest payment	47,941	44,889	53,567
Total payment to providers of capital:	47,941	44,889	53,567
Community investments	615	610	644
Economic value distributed (B)	92,421	100,666	105,202
Economic value retained (C) = (A) – (B)	**26,328**	**24,405**	**19,271**



DEVELOPMENT OPPORTUNITIES

A study by experts has demonstrated that Indonesia's total useable geothermal potential is equivalent to 28,528 MW. This is equivalent to approximately 40% of the world's geothermal potential. This total is also equivalent to 62% of Indonesia's installed electricity generation capacity as of the end of 2013, which amounted to 46,103.50 MW.

As of the end of 2013, the total potential geothermal energy used in Indonesia's geothermal power plants amounted to 568.0 MW (Source: Installed Capacity of PLN Power Plants in 2013), or just 2.2% of the total available power, including the company's 227 MW capacity in 2013.

The Indonesian Government is working to facilitate increased use of renewable energy, including by issuing Forestry Ministry Decree No.: P.18/Menhut-II/2011 concerning guidelines on forest use, that allow the development of geothermal power plants in protected forest. The government, through the Energy and Mineral Resources Ministry, has also issued a regulation changing the calculations for electricity purchases from geothermal energy-fueled power plants through Minister of Energy and Mineral Resources Decree No. 22/2012 concerning "Assignment to PT PLN (Persero) to Purchase Electricity from Geothermal Power Plants and Standard Pricing for Electricity Purchases from Geothermal Power Plants". Through this regulation, the purchase price for electricity from geothermal power plants in Java, Madura and Bali, including the areas managed by Wayang Windu, can be renegotiated to approximately US 12.5 cents/kWh.

This situation has presented an opportunity to the Company to continue to develop its ongoing business. However, we still face risks in utilizing geothermal energy, including: the relatively new use of geothermal energy as a renewable energy source, the high cost of funding for development with a relatively high risk of failure, and that the majority of the locations with geothermal potential are in protected forest and are very difficult to access.

DEVELOPING GENERATING CAPACITY

To benefit from development opportunities provided by geothermal power generation, we are implementing two programs: maintaining the performance of the existing generating units and improving electricity production capacity, and building new generating units. To maintain the performance of existing units, in 2013 we completed the generating unit maintenance program, which started with the turbines, rotors, cooling tower and ended with the hot well pump, a program we called the Turn Around (TA) program. Specifically the aims of TA implementation were:

- Inspection of all the primary equipment and protection systems to ensure the readiness and capability of the power generators was in prime condition.
- Repairs (where needed) of primary equipment to ensure the integrity and reliability of power generation.
- Design of a strategy to improve power generation performance in normal operating conditions.

This maintenance program resulted in both generating units operating optimally with a percentage electricity production of approximately 96-98% of production capacity.

Meanwhile, to increase electricity production capacity, in this reporting period, we are in the midst of realizing exploration of production wells as part of the Unit 3 power generation development in the Wayang Windu area, Pangalengan district, Bandung regency, West Java. Total power production capacity from the Unit 3 turbines/generator will be 127 MW and, according to plan, physical construction will commence in 2014. Thus, if the plan is realized, total electricity production capacity from the Wayang Windu geothermal power plant will reach 354 MW.

We are also working to develop geothermal potential in Jailolo district, West Halmahera regency, North Maluku, which will be managed by PT Star Energy Geothermal Halmahera, and have an estimated capacity of 2x5 MW.

We are committed to complying with all applicable regulations for the development and sales of the electricity we produce and strive to effectively and efficiently improve power management capability. As a result, we have never been fined or received any legal sanction related to unfair business competition.

CONTRIBUTIONS TO THE STATE

Every year, we contribute directly to the state, through: taxes, land levies/use of potential geothermal energy and import duties. We always comply with all government tax regulations and legislation, thus every year providing a direct contribution to the state in the form of tax on goods sold, income tax and other relevant taxes. Compliance with all tax regulations and legislation has resulted in no fines for any violations in the reporting year.

We contribute indirectly to the national economy through supplying electricity we generate. Satisfying the demand for electricity has a positive impact on economic growth, thus our success in supplying electricity in accordance with production capacity and in line with electricity supply contracts helps support national economic growth.

We also contribute materially to the state through the development of infrastructure and facilities (see the description under "Community Development"), including:

- Building village roads.
- Building village and district government facilities.
- Building places of worship
- Building education facilities from early childhood/elementary school level to high school level.
- And many other facilities.

SUPPORTING REGIONAL ECONOMIC GROWTH

We support regional economic growth through direct and indirect contributions in the form of land and building tax on the office buildings and supporting facilities that we own, adding to regional revenue (PAD) through the payment of tax on operational vehicles, building public facilities and infrastructure, as well as absorbing local labor in the area around our operations.

As of the end of the reporting year, the total number of local residents employed by the Company reached 305 people, or 67.8% of permanent employees. This total fell from 2012's figure of 361 local people, or 76.8% of all employees. Some of these local employees have successfully developed their skills and have been able to achieve career positions as staff, supervisors and even managers.
Local Employee Composition at Wayang Windu

Year	Total Employees	Local Employees	Percentage
2010	390	248	63.6%
2011	411	267	65.0%
2012	470	361	76.8%
2013	450	305	67.7%

We also contribute indirectly to regional economic development through the use of goods and services from local suppliers. We hold firm to our commitment and policy to procure goods and services from local suppliers, provided that the quality and price offered are beneficial to both parties.

RELATIONSHIP WITH SUPPLIERS, CONTRACTORS AND PARTNERS

There are approximately 147 (2012: 137) small and medium-sized business partners, suppliers and contractors currently recorded and actively involved in our operational activities in this reporting year. To improve workforce competency and supply management to attain a level of occupational health and safety, as well as environmental protection (SHE), equivalent to that applied by Wayang Windu, we have implemented a Contractor Safety and Health Environmental Management System (CSMS) for the screening and performance assessment of all key contractors.

CSMS consists of 6 phases: risk evaluation, pre-qualification, selection, post-job activity, managing work and final evaluation. We continue to require fulfillment of product quality, credibility, accountability, accurate supply of goods and services from our partners, as well as a competitive prices.

G4-12
G4-LA14
G4-HR10
G4-PR4

We implement the evaluation program periodically on our listed partners, during the procurement process, during implementation and at the end of the contract period, as a basis to assess the following selection process.

According to the CSMS criteria, in addition to SHE standards, for certain key contractors with contract values of a certain amount, during the screening process we require fulfillment of employee rights by the contractor, as well as a performance assessment, as part of our commitment to uphold human rights. We have also introduced a whistleblowing system to ensure that each transaction to procure goods or services is transparent and accountable. In the reporting year, all our key partners (100%) had undergone the screening process.

Our electricity is channeled to supply the Java-Madura-Bali interconnection grid managed by PLN. The sales mechanism to sell electricity to PLN is governed by certain general stipulations, as follows:

- The sale of electricity is regulated in a sales agreement valid for a specified period of time.
- The sales price per kWh of electricity is regulated in a decree issued by the Energy and Mineral Resources Minister.
- The amount of power sold in each specified period is in accordance with the ability of the supplier and the power requirement of the grid.
- The supplier, Wayang Windu, must be capable and fully committed to supplying the amount of power at the required voltage noted in the contract. Meanwhile, PLN must be fully committed to absorbing all this electricity.
- In the case the Supplier is unable to supply the amount of power noted in the contract, the Supplier will be fined for undersupply in accordance with mutually agreed provisions.
- Conversely, should PLN be unable to absorb all the power supplied as per the contract, then PLN will be fined based on the amount of power that it cannot accept in accordance with mutually agreed provisions.

To ensure the fulfillment of the provisions related to the amount of power and voltage supplied, we communicate intensively with PLN. All information related to planned periodic maintenance of steam production installations and generators is communicated and discussed with PLN. The implementation of production procedures and sales administration during this reporting period has

G4-PR2

POWER LINES OF 150 KV ARE CATEGORIZED AS HIGH VOLTAGE AND CAN ENDANGER HEALTH AND LIVES WHEN TOUCHED OR IN CLOSE VICINITY

not resulted in any reports, complaints or financial sanctions related to violations of the contract to supply electricity or use of the product.

PRODUCT HEALTH AND SAFETY

Power lines of 150 KV are categorized as high voltage and can endanger health and lives if they are too close or are touched. To prevent this, we ensure the transmission system and electrical connection from the generators to PLN's transmission network have security and reliable insulators so as not to endanger humans or the surrounding environment.

We also implement tight security in the area around the production wells, even though they are in remote locations and far from the activities of local communities. Only authorized personnel on duty are permitted to enter the area and work around the production wells. All employees working in the production well areas are required to wear the stipulated OHS-compatible clothing. Meanwhile, to secure the pipe phases being used to feed geothermal energy from the production wells, we use special lining as a heat insulator to ensure there is no danger to humans or animals that touch the pipes, and to make them safe for the surrounding environment.

Periodically, we evaluate and inspect the condition of all production safety facilities, production wells and grid connections to the PLN transmission system to ensure compliance with all safety regulations and procedures to prevent threats to the health and safety of employees, the public, wildlife and the surrounding environment. Therefore, during this reporting year, we have not received any reports or complaints indicating violations to the health and safety of the surrounding environment in the product supply process.

ECONOMIC IMPACT FROM CLIMATE CHANGE

The extreme weather found across the globe has also affected our efforts to support economic growth through the supply of electricity generated by geothermal energy. Extreme weather in the form of extended dry seasons results in water "reservoirs" in the belly of the earth reducing, resulting in extreme efforts being required to "inject" water into the earth from injection wells. This extra work requires compressor pumps that use fuel or electricity. As a result, our own consumption of electricity has increased, while the amount of electricity we can sell has reduced, thus reducing revenue.

Managing human resources as partners in business development, striving to fulfill their expectations in accordance with resource ability, while ensuring the sustainable achievement of the Company's long-term goals

CHAPTER 8

OUR PEOPLE

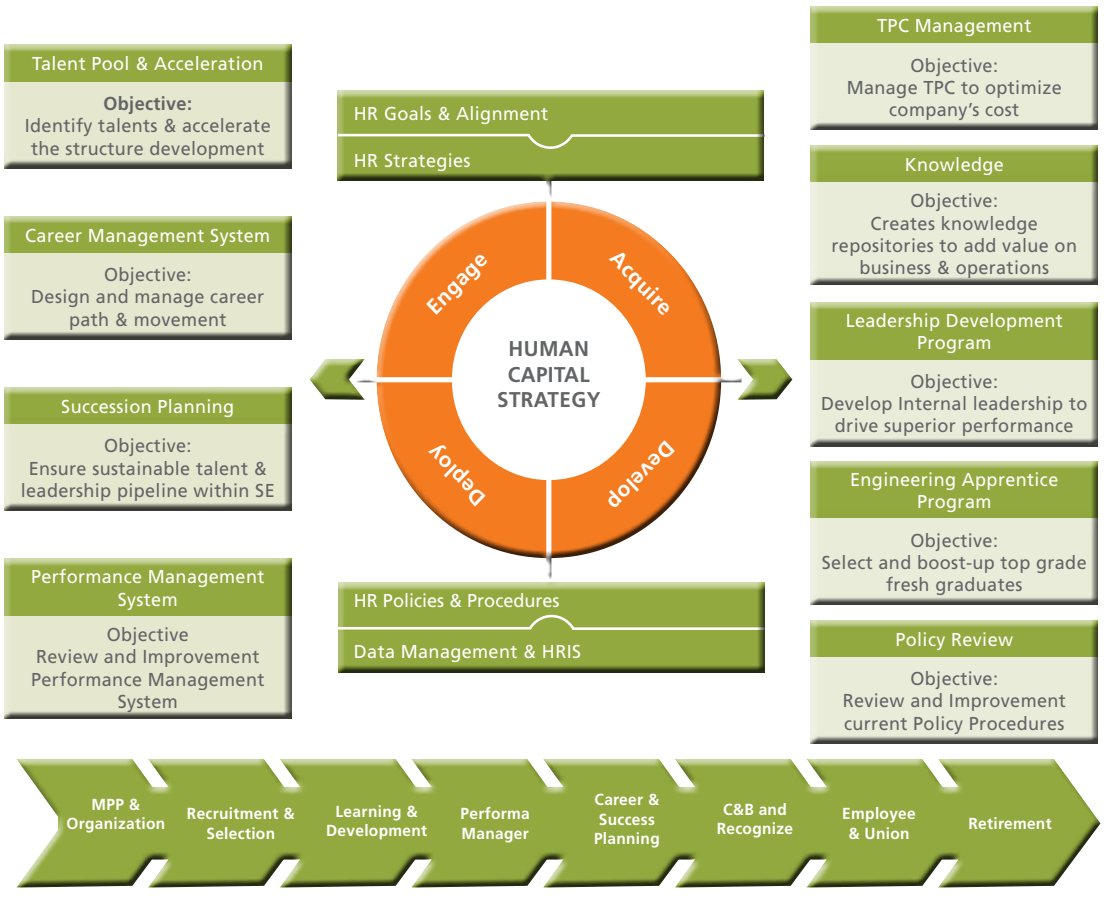

TA-2012
Wayang Windu

HUMAN RESOURCE MANAGEMENT AIMS

We consider our human resources (HR) to be capital and important partners supporting our development efforts and company operations in a sustainable manner. This position places our human resources as key stakeholders, thus full attention should be paid to the fulfillment of their aspirations, while they must also participate in determining and being responsible for business continuity.

As part of the long-term development program, we have designed and applied long-term HR management strategies, in particular determining HR positions in accordance with qualifications and business development requirements.

We apply two primary approaches to satisfy employee needs: (1) ensuring that current personnel are optimized, or ensuring that each person is working effectively and efficiently to a level of productivity equivalent to that practiced in the world's best companies. (2) improving the quality and quantity of personnel in accordance with business development. To ensure this, we have compiled an HR development strategy initiative, summarized below.



G4-LA1

HR MANAGEMENT

To manage our Human Resources and attain the maximum effort for operational performance, we apply our Human Resource Goals & Alignment HR Strategies (HRG & AHRS), which covers handling all HR management processes, covering Third Party Contractor (TPC) management, competency development, career development system, policy review, respect for employee rights and preparation for retirement.

HRG & AHRS has 9 main pillars: i) Third Party Contract Management, ii) Engineering Apprentice Program, iii) Knowledge Management, iv) Leadership Development Program, v) Talent Pool & Acceleration, vi) Career Management System, vii) Succession Planning, viii) Performance Management System and ix) Policy Review.

- Third Party Contract (TPC) Management
  Wayang Windu takes into account various parameters when managing contract-based personnel to ensure fulfillment of company requirements and business development. Some of these parameters are: employee composition, budget, efficiency factors and employee productivity.

- **Engineering Apprentice Program**
  Fresh graduate recruitment and HR development is implemented based on long-term requirement plans, as well as through consideration of the competency of candidates from the local area to join recruitment and to support the recruitment of an increasing number of local employees.
  In cooperation with the local government, we provide scholarships to junior high school, senior high school and university students and provide additional courses to recruit local labor. Through this mechanism, as of the end of 2013, we employed 305 local people (67.7%) out of a total 450 employees.

  Prior to being accepted as a permanent employee, candidates must undertake an orientation program that covers training to increase basic competencies. During 2013, there were 8 new employees recruited, 5 male and 3 female.

G4-LA1
G4-LA9
G4-LA11
G4-LA12

TOTAL NEW EMPLOYEES				
Gender	Year			
	2010	2011	2012	2013
Female	1	5	0	3
Male	8	12	9	5
Total	**9**	**17**	**9**	**8**

- **Talent Pool & Acceleration dan Leadership Development Program**
  We organize various education and training activities for all employees at all levels of rank and function to participate in to improve competencies and skills. The employee training program is divided into various types of training based on employee rank and pattern of competency development provided.

Overall, in 2013, Wayang Windu ran a variety of training programs for 291 participants, with a total of 8,915 training work hours, or 30.64 hours/employee.

We also sent a number of our Internal Audit staff on training programs related to anticorruption practices organized by external parties. In addition to this training, the Company also ran special training in entrepreneurship with the involvement of a number of competent third-party experts for employees approaching retirement.

TYPE OF EDUCATION AND TRAINING, AND TOTAL PARTICIPANTS, 2012-2013							
No	Education & Training Material	2012			2013		
		Participants	Total Hours	Hours/ Employee	Partcipants	Total Hours	Hours/ Employee
1	Administration	22	772	35.09	91	2,976	32.70
2	Technical Engineering	23	1,960	85.22	33	968	29.33
3	Maintenance	37	2,360	63.78	35	1,128	32.23
4	Operations	29	2,356	81.24	14	456	32.57
5	Safety, Health & Environment	8	390	48.75	118	3,387	28.70
	Total	119	7,838	65.87	291	8,915	30.64

- **Performance & Career Management System dan Succesion Planning**
  We implement competency-based HR management consistent with applicable regulations, while executive development is conducted through improving personnel competencies in accordance with applicable requirements for each level. To measure employee performance, we have developed a performance assessment system based on individual and team Key Performance Indicators (KPI), which is the basis for determining career paths and remuneration. Further, we have also prepared a succession planning program with attention to competency and career path as one of the basis for decision making.

G4-LA12

In 2013, a total of 34 employees were promoted.

TOTAL EMPLOYEES RECEIVING WORK ASSESSMENT AND CAREER DEVELOPMENT				
Final Assessment	Year			
	2010	2011	2012	2013
Promosi	20	29	19	34
Demosi	0	0	0	0
Mutasi/Rotasi	0	0	1	0

EQUALITY IN HUMAN RESOURCE MANAGEMENT

We strive to improve optimization of human resource management, paying attention to the interests of employees, while considering the Company's abilities. As part of the implementation of a high-quality human resource management policy that pays attention to the interests of both parties fairly and with accountability, we apply the following basic policies to our human resource management:

1. Compliance with all employment regulations and legislation.
2. Fostering good relations with employees based on mutual cooperation and on a periodically reviewed Collective Labor Agreement.
3. Implementing a performance-based remuneration system that is fair, transparent and accountable.
4. Respecting the human rights of employees, including fully supporting the formation and activities of the Employees' Union.
5. Organizing various programs to improve employee skills and competency training to improve individual, group and ultimately corporate performance.
6. Applying equality in career paths and remuneration.

We apply equal opportunities for all employees' career development in accordance with competencies and company development. Consistent application of the principle of equality in this reporting year has resulted in no discrimination cases related to ethnicity, race, religion or gender at any level of the Company. This is demonstrated in the employee composition based on position, as shown in "Employee Demographics".

BENEFITS PACKAGE

We have a number of remuneration policies that regulate the provision of compensation in return for work, based on salary grade levels (SGL) that illustrate each employee's position, duties and responsibilities. We also provide other benefits to employees in the form of major religious holiday bonus, health insurance, pension, healthcare and holiday allowance determined based on applicable regulations, which are made outside remuneration. We pay remuneration based on employee status, namely permanent or contracted employee. Several types of remuneration, such as pensions, are not paid to non-permanent employees.

CONSISTENT APPLICATION OF THE PRINCIPLE OF EQUALITY HAS RESULTED IN THERE BEING NO CASES OF DISCRIMINATION RELATED TO ETHNICITY, RACE, RELIGION OR GENDER AT ANY LEVEL IN THE COMPANY THIS REPORTING YEAR

G4-LA2
G4- EC3
G4-HR4

PRIMARY REMUNERATION TYPES BASED ON EMPLOYEE STATUS		
Facility	**Description**	
	Permanent Employee	**Contracted Employee**
Basic Salary	**ada**	**ada**
Health Allowance	**ada**	**ada**
Insurance Allowance	**ada**	**ada**
Workplace Accident Allowance	**ada**	**ada**
Maternity Allowance	**ada**	**ada**
Pension	**ada**	**tidak**
Salary-based Loan	**ada**	**tidak**

We also provide a number of other incentives to our employees, including:
- Help with education/training costs.
- Periodic health checks.
- Loans based on salary.
- Assistance to buy prostheses, glasses and hearing aids
- Scholarships for employees' relatives.
- Assistance to take the pilgrimage to Mecca.
- Assistance with house ownership.
- Assistance with annual leave costs.
- Help with infertility and IVF treatments.

In addition to material benefits, the Company also specifically applies a maternity policy entitling pregnant women to 90 days' leave. This leave is accompanied by the right to return to work at the end of the maternity leave. During this leave, employee rights, including salary and various other benefits, are still met by the Company. We also provide the right to unpaid leave for employees undertaking education overseas. After completing their education, employees are entitled to return to work with the Company.

Cooperative

As part of our efforts to support our employees' welfare, we have supported the establishment and activities of the Wayang Windu Employee Cooperative located in Pangalengan, which conducts the following types of business and activities:
- Trading in goods and services.
- Operating a savings and loans business for its members.
- Providing goods required by members.
- Providing goods required by members.
- Conducting other business, such as provision of office stationery and equipment connected to operational support activities.
- Adding to its members' knowledge of cooperatives.

PENSION PROGRAM

Wayang Windu provides a pension program in cooperation with a competent pension fund management company.

Pension funds are provided from two sources:
1. Employer Contribution of 6% from Employee Salary
2. Employee Contribution 2% of Employee Salary

When an employee retires, he or she receives all the funds in the pension fund they are entitled to in a lump sum from the Pension Fund Management Institution (DPLK).

EMPLOYEE AWARDS PROGRAM

In addition to the above programs, the Company also organizes an employee award program as a form of guidance for employees. Employee awards cover: Achievement Award, Exemplary Award, Service Award and Retirement Award.

DEVELOPING PANCASILA-BASED INDUSTRIAL RELATIONS

Wayang Windu fully supports the establishment and activities of an Employees' Union to provide a communication bridge for employees for the fulfillment of employee expectations, while at the same time supporting optimum company performance. In 2012, through a series of meetings, the Employees' Union and Company Management successfully completed negotiations to determine points for inclusion in the 2012-2014 Collective Labor Agreement. The results of this agreement were included in the Collective Labor Agreement (CLA) and signed on 16 August 2012, came into effect on 1 September 2012 and remain effective until 31 August 2014.

The CLA has been registered with the Bandung office of the Manpower and Transmigration Agency with number Kep 230/72/I/HIPK/2006 dated 16 January 2006. This CLA has been registered with the Manpower and Transmigration Ministry c.q.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Directorate General of Industrial Relations and Manpower Social Security with No. 134/Pdf.03/PKB/VIII/2012.

The agreed points contained in the 2012-2014 CLA contain the collective agreements between the employees and the Company that have been agreed at the end of negotiations by all Wayang Windu employees who are members of SP-WWL (100%), such that the rights of all employees are protected and represented in the Collective Labor Agreement.

The CLA basically regulates various crucial rules and agreements related to rights, responsibilities and employee relations with the Company, including the minimum notification time for any substantial changes to working conditions, such as the closure of a work unit and such like. The CLA also provides space for dispute settlement between employees and the Company management. As a result of these regulations, during the reporting year there have been no disputes triggering a strike.

Freedom of Association

The company guarantees its employees the right to be a union member and to form an employee organization or union in the company environment, as well as the freedom to become union management, as provided in Law No. 21/2000 concerning Employee Unions. There are a total of 185 active employees who are currently members of the Wayang Windu Employees' Union for the 2012-2014 period out of a total of 218 permanent employees (84.9%).

To demonstrate the importance of the employee role and the involvement of employees in the decision making process, employees can submit suggestions for improvements, opinions, and constructive criticism to improve operational patterns and their welfare to the Top Management through Wayang Windu Employee's Union. This input can be presented in the GMS and in other interactive forums between the Top Management and Wayang Windu Employee's Union. This mechanism demonstrates the importance of employees as a key stakeholder that is also responsible for the continuity of the business and the company.

Ensuring A Comfortable Work Environment

The Company always tries to create a physically and psychologically conducive environment in its work area so that work remains healthy, safe, secure and comfortable and has a positive effect on employee performance. This favorable environment has resulted in relatively low employee turnover rates.

In the reporting year, three employees stopped working for us, equivalent to 1.4% of the total 218 permanent employees as of the end of the year. Meanwhile, in 2013, as previously mentioned, we recruited 8 new employees.

THE WAGE RECEIVED BY A NEW RECRUIT TO THE COMPANY AT THE LOWEST LEVEL IS GUARANTEED TO BE HIGHER THAN THE REGIONAL OR PROVINCIAL MINIMUM WAGE IN THE LOCATION WHERE THE COMPANY IS SITUATED

PERMANENT EMPLOYEE TURNOVER RATE				
Final Assessment	Year			
	2010	2011	2012	2013
Pensiun	3	2	1	1
Meninggal Dunia	1	0	3	0
Mengundurkan Diri	2	2	3	2
Total	5	4	7	3

Working Hours and Changes to Working Hours

The Company implements normal working hours, shifts and special work hours to carry out work on the steam production wells and injection wells. We provide compensation in the form of overtime in accordance with applicable employee legislation for employees who have to complete their work outside of previously agreed work hours. If at a later date there are regulation changes related to work hours, changes to operational patterns or cessation of operations, we will provide at least three months' notice before such changes come into effect.

Employee Salaries

Employee salaries take the form of fixed salary, holiday allowance, service award, exemplary employee award, performance incentive, bonus and other benefits. (See "Benefits Package"). The minimum wage received by new employees at the lowest level in the Company is guaranteed to be higher than the regional or provincial minimum wage in the area where the Company is operating. As an example, following is a table comparing the wage of the lowest level new recruit with the closest provincial minimum wage (UMP).

COMPARISON OF COMPANY SALARY TO MINIMUM REGIONAL WAGE			
Year	Salary of lowest level employee	Minimum Regional Wage	Percentage
2011	Rp2,842,000	Rp1,123,000	153%
2012	Rp3,155,000	Rp1,223,800	257.8%
2013	Rp3,284,000	Rp1,388,333	236.5%

Respect For Human Rights

At every stage of operational activity, Wayang Windu is fully committed to always upholding and respecting Human Rights. The freedom to associate, participate in politics and freely channel political aspirations, including submitting suggestions for the Company's development (through the Employees' Union and mechanisms available for this purpose) are some of our forms of respect for human rights.

Human Rights Training and Communication

To ensure Human Rights are upheld in securing the company's assets, we run competency training for the Company's Security Unit. The training curriculum is in line with the curriculum compiled by the Indonesian Police, which includes strengthening and updating knowledge of Human Rights for Security Guards. All (100%) of the Company's security guards have been provided with Human Rights training materials in their security training.

Child Labor

The company supports government policy according to Law No. 13/2003 and does not hire underage workers. Our minimum requirements for prospective employees are that they must have at least a minimum of high school education and, for permanent employees, be at least 20 years old as proven by a valid, current ID card.

While working, every employee is given the opportunity to rest at a certain time. If it is necessary to exceed the shift hours, employees are given compensation in the form of overtime based on the agreements in the CLA.

DEMOGRAPHICS AND NUMBER OF EMPLOYEES

There are three types of employee status in Wayang Windu: permanent employees, non-permanent employees and outsourced labor. In the 2013 reporting year, there were 218 company employees. There are 6 non-permanent employees and 226 outsourced staff, with duties including janitorial services, office boys, drivers and security guards. Of the permanent employees, 189 are assigned in the Wayang Windu field, while 29 others are assigned to Head Office.

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TOTAL EMPLOYEES BASED ON EMPLOYMENT STATUS

Employment Status	Year			
	2010	2011	2012	2013
Permanent Employee	204	208	212	218
Non-Permanent Employee	13	23	17	6
Outsourced Labor	173	180	241	226
Total	**390**	**411**	**470**	**450**

TOTAL EMPLOYEES BASED ON PLACE OF WORK

Place of Work	Year			
	2010	2011	2012	2013
Wayang Windu field	190	190	185	**189**
Head Office	14	18	27	**29**
Total	**204**	**208**	**212**	**218**

Of all these employees, the majority have a junior or senior high school education, 64.22% or 140 people. Approximately 15.6% have a three-year diploma education, 28.9% an undergraduate degree, while the remainder have a Masters degree.

The reason the majority of our employees are junior or senior high school graduates is due to the operational scope of the Company in geothermal power generation, and the primary duties being dominated by inspecting conditions in the field, which do not require a high degree of skill, but do require prime physical condition. The composition of Wayang Windu employees in 2013, according to educational background, was as follows:

PERMANENT EMPLOYEES BASED ON EDUCATION LEVEL

Employee Education Level	Year			
	2010	2011	2012	2013
Elementary / Junior High School	5	5	5	3
High School	130	128	117	106
Diploma (1-3)	13	14	19	34
Undergraduate Degree	52	57	62	63
Postgraduate Degree (Master)	4	4	9	12
Total	**204**	**208**	**212**	**218**

We do not discriminate or have any employee recruitment limits related to gender. However, due to the type of work in the field, there are fewer female than male employees, with 16 female employees, or approximately 7.34% of total employees. The majority of the female employees work in administration and other areas that are not in the field.

EMPLOYEE DEMOGRAPHICS BASED ON GENDER

Gender	Year			
	2010	2011	2012	2013
Female	12	20	13	16
Male	192	188	199	202
Total	**204**	**208**	**212**	**218**

As of the end of 2013, employee composition based on age was dominated by employees over the age of 40, at 52.8%.

TOTAL EMPLOYEES BASED ON AGE

Employee Age	Year			
	2010	2011	2012	2013
19 - 30	20	16	29	36
31 - 40	103	80	79	67
41 - 50	67	9	9	99
>= 51	14	14	14	16
Total	**204**	**208**	**212**	**218**

Overall, the management of the Company on a day-to-day basis is handled by 7 Managers, 34 Supervisors assisted by 39 staff and 132 non-staff, with details as follows.

POSITION AND ROLE OF PERMANENT EMPLOYEES, 2013

Role	Description					
	Total	Gender		Age		
		Male	Female	<30	30-50	>50
Manager	8	8	-	-	7	1
Supervisor	31	28	3	2	27	2
Staff	39	34	5	8	3O	1
Non-Staff	140	132	8	21	105	14
Total	**218**	**202**	**16**	**31**	**169**	**18**

Improving the quality of accredited OHS operational standards by fostering a culture of OHS-risk awareness through systematic training to ensure achievement of the zero-accident target and the creation of working conditions that are safe and comfortable and free from workplace accidents

CHAPTER 9

ENSURING OCCUP HEALTH AND SAFE

ATIONAL
ETY (OHS)

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G4-LA8

AIMS

Operational management of power generation fueled by renewable geothermal energy requires precision, accuracy and a high degree of discipline from all employees in the field. This is due to the application of high-technology that requires precision and significant initial investment with a high risk of failure. High technology is required to analyze, calculate and drill water vapor production wells from "reservoirs" located deep underground, to then be piped to the electricity generators.

Negligence and lack of careful monitoring of these two vital facilities, as well as a lack of security, can result in fatal accidents and terminate operational activities. As has often occurred, the electricity transmission and distribution nodes, i.e. the substations, are highly vulnerable to workplace accidents, in particular fires that can result in fatality, if they are not well maintained.

Therefore, Wayang Windu, from the early stages of development and operation of its geothermal power plant and electricity disbursement to the PT PLN (Persero) grid has been committed to applying high standards of operational procedures based on safe, healthy and accident-free work conditions. The target we are aiming to achieve through the application of these high standards is zero accidents, which means there are no loss of work days due to accidents and a minimum loss of work time due to employee sickness.

POLICIES AND OPERATING STANDARDS

As a form of the Company's commitment to high quality OHS, Wayang Windu upholds the application of its OHS in its "SEGWWL Environmental Policy" statement, which asserts that Star Energy Geothermal (Wayang Windu) Ltd, is determined to:

- Always place SHE (Safety, Health, Environment) as a high priority related to Production, Operations and other business aspects.
- Proactively avoid all dangers to workers, contractors, the public and the environment to ensure business sustainability.
- Ensure that SHE priorities are accountable and the lines of accountability are applied from the top of the management structure.
- Ensure the system for identification and control of potential hazards in the work place is in place.
- Continually observe, monitor and improve the SHE performance / sustainability and management systems throughout the STAR ENERGY organization.
- Train and develop all employees and contractors to maintain the highest standards in implementing SHE.
- Satisfy or exceed all legal requirements in our place of operation. If the SHE policy is unsatisfactory, STAR ENERGY adopts the best practices and applies standards that always protect employees' health and safety at work and prevent negative impacts on the environment.

We have integrated an Occupational Health and Safety Management System with the OHSAS 18001:2007 accredited system and applied environmental management systems in line with ISO 14001:2004 standard certification. Periodically, we have an independent third party audit the application of these accredited standards.

As a result, we always comply with all criteria determined by the independent assessor and have never had a major find recorded during the audit process. Certification in OHSAS 18001: 2007 health and safety standards was most recently conducted by PT Lloyd's Register Indonesia in January 2011.

Health and Safety Committee

We have formed a SHE (Occupational Safety, Health and Environment) Committee to coordinate activities and programs related to OHS. Provisions on the function and position of the SHE Committee, as well as the duties it is responsible for, are set out in Chapter X of the CLA on Work Protection.

The SHE Committee membership consists of Executive Management, a Senior Operational Manager and 5 employee representatives (2.3%) of total permanent employees.

TOTAL EMPLOYEE REPRESENTATIVES IN SHE COMMITTEE LEADERSHIP				
Decription	Year			
	2010	2011	2012	2013
Occupational Safety	2	1	2	2
Occupational Health	3	3	3	2
Environmental Protection	2	2	2	1
Total	7	6	7	5

The duties of the Occupational Safety Committee encompass:

- Discussing every Occupational Safety, Health and Environment (SHE)-related issue, including protection, mitigation and settlement of all possible work-related accidents and/or illnesses;
- Investigating all workplace accidents that involve production facility safety, occupational safety and environmental pollution;
- Assessing SHE performance, including standardization, production facility safety, workplace safety and the environment;
- Evaluating implementation of the SHE program.

To evaluate implementation of the team's duties, the SHE Committee holds periodic meetings.

OHS Programs in 2013

A variety of strategic OHS programs have been realized throughout 2013, the results of which have been assessed by the SHE Committee, including:

- Preparation of all administrative documents on OHS-based operational activities as per accredited OHSAS 18001:2007 standards in preparation for the surveillance audit to check compliance with OHSAS 18001:2007 standards in 2013.
- Examination and replacement of all safety equipment and standard fire extinguishers in all steam production well facilities and generation areas.
- Provision/replacement of safety devices for all employees assigned to work in the field.
- Improvement of organization and human resource OHS-based competencies through OHS training. The aim of this training is to motivate employees at all managerial levels (starting from line management) to foster attention and behavior that prioritizes aspects of health and safety at work;

  For this purpose, we have implemented various training programs on aspects of SHE in which 118 participants took part for a total of 3,387 hours training.
- Invited resources competent in OHS for electrical power and geothermal steam production wells as instructors/supervisors for OHS-based activities around the Wayang Windu operational area.
- Conducted routine training in handling fires and practicing first aid to handle accidents.

OHS Performance Statistics in 2013

Although there are provisions for work procedures that pay great attention to employee safety and the environment, operational activities are located in a remote area off the coast and tend to trigger burnout, which can result in a less cautious attitude and result in work accidents.

Total Workplace Accidents

TOTAL WORKPLACE ACCIDENTS				
Level	Year			
	2010	2011	2012	2013
Light	12	5	10	4
Moderate	1	1	2	0
Serious	0	1	0	0
Fatal	0	0	1	0
Total	13	7	13	4

The reduction in workplace accident frequency in 2013 resulted in fewer working hours lost. This was also because the severity of the accidents also reduced, with only 4 minor accidents, thus the number of total work hours not lost rose from 932,088 working hours in 2013 to 1,421,524 working hours in 2013.

Calculations for Incident Rate (IR) and Frequency Rate (FR) for these conditions is shown below.

INCIDENT RATE (IR) AND FREQUENCY RATE (FR)				
Rate	Year			
	2010	2011	2012	2013
IR	0.00000	0.00001	0.00001	0.70
FR	0.00	1.38	1.07	0.70

To minimize the occurrence of workplace accidents in the future, we have implemented the following:

- Communicated with and required all employees to comply with all work procedures in accordance with OHS-based SOPs in carrying out their duties.
- Analyzed each workplace accident to prevent similar future occurrences.
- Tightened provisions related to employee rotation.

WORKPLACE HEALTH

As mandated in legislation, we also pay attention to the health of our employees and their families. To maintain employees' health, we have various activities to improve awareness of occupational health. This is achieved through education, training, counseling, mitigation and control of the risk of contracting serious illness or contagious disease, such as dengue fever, malaria, and so on. Workplace health activities we implement include:

IMPROVING AWARENESS OF WORKPLACE HEALTH THROUGH EDUCATION, TRAINING, COUNSELING, MITIGATION AND CONTROL OF THE RISKS OF CONTRACTING A SERIOUS OR CONTAGIOUS ILLNESS

We divide the management of workplace health into medical and work environment health. For medical occupational health, we implement the same work patterns as various private and government hospitals with satisfactory facilities close to the operational area in Pangalengan or Bandung, or our Head Office in Jakarta. These activities cover periodic health checkups for employees in accordance with applicable legislation (Manpower Law) and provisions contained in the CLA, as well as health education for employees and their families, etc.

Meanwhile, for the management of occupational health related to the work environment, we coordinate through SHE/OHS units with activities including measuring noise, sanitation care, reducing emission levels, etc.

ACTIVITIES TO SUPPORT THE CREATION OF WORKPLACE HEALTH 2013

Type of Activity	Employee	Participants	Community	Tanggal
Promotional/Workshop				
Cancer-prevention lifestyle	Employees (town hall)	53 people	-	5 Feb 13
HIV-AIDS mitigation in the workplace	Employees (town hall)	63 people	-	20 Mar 13
Age-appropriate sports/exercise for health	Employees (town hall)	56 people	-	24-Jul-13
Illness/disease arising from work relationship	Contractor (CSMS meeting)	27 people	-	5-Sep-13
Fit for Duty Assessment	Employees (Dept Maintenance)		-	9-Sep-14
Health Bulletin by e-mail : • Stretching in the office • Novel Corona Virus • Obesity • World Blood Donor Day - The benefits of blood donation for the health • The dangers of drugs • Preventing food poisoning • The benefits of age-appropriate sport for the health • Upper Respiratory Tract Infections	by -email to GRP all WW employee			22-Feb-13 24-May-13 7-Jun-13 14-Jun-13 27-Jun-13 12-Jul-13 25-Jul-13 7-Oct-13
Preventive				
Monitoring smoking	yes	All employees		21-Jul-13
Monitoring exercise levels	yes	All employees		Every month
Monitoring diet	yes	21 people		Every month
Monitoring Noise	yes			
New wells	yes			
Water sampling	yes			Every month
Monitoring hygiene and catering sanitation	yes			Every month

Ensuring an improving quality of governance based on the principles of consistently applied best governance, understanding and striving to fulfill the stakeholders' expectations to guarantee long-term sustainable business growth

CHAPTER 10

GOVERNANCE QUA

ALITY

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BEST GOVERNANCE AIMS AND TARGETS

We believe that the application of GCG best practices will increase the trust of customers and business partners, increase company value while guaranteeing business continuity, and provide maximum results in our efforts to satisfy the expectations of all stakeholders effectively and efficiently and increase the accountability of day-to-day operational activities.

Given the significant positive impact for the Company, we are determined to consistently improve and increase the quality of good corporate governance application across all operational aspects. These improvements are implemented through consistent application of the five basic principles of GCG: Transparency, Accountability, Responsibility, Independence and Fairness.

To support the increased quality of GCG implementation, we have strengthened some of the necessary institutions, including:

- Collective Labor Agreement containing basic rules that bind employees in their execution to fulfill their obligations as employees and comply with all employment regulations.
- Code of Conduct containing guidelines for behavior when interacting with internal and external parties, and professional communication within the Company environment.
- Whistleblower Policy Procedure Manual for all parties to contributes to efforts to prevent and handle occurrences of misuses of authority and violations that lead to corruption and fraud.

GOVERNANCE STRUCTURE AND MECHANISM

The SEKL organization structure and governance comprises Shareholders and Directors. The Directors are the day-to-day operational managers of the Company. The decision making mechanism is held by the Directors. The Shareholders convene an Annual General Meeting of Shareholders once a year and an Extraordinary General Meeting of Shareholders when required.

Internal Audit

We apply internal audits as part our implementation of the principles of accountability and transparency; basic principles of GCG. Through the Internal Audit department, the management guarantees the effectiveness and efficiency of operations, implementation of all operating standards, compliance with regulations and legislation, as well as accurate and reliable financial reporting. A description of the duties, responsibilities, authority and reporting mechanism for audit findings as a whole are recorded clearly in the Internal Audit Charter, which serves as a reference for the Internal Audit personnel in carrying out their duties. Internal Audits are approved and ratified by the Directors with the knowledge of the Company's Owners.

In addition to referring to the Internal Audit Charter, in carrying out their duties, our internal audit personnel always refer to the standards of the professional practice of internal auditing issued by IIA (Institute of Internal Auditing). In addition, to ensure the compliance of our operational activities with applicable regulations and legislation, several regulation references also serve as benchmarks in auditing activities, such as: the Principles of Good Corporate Governance, Code of Conduct, Sarbanes-Oxley, COSO Frameworks, Enterprise Risk Management and others.

To maintain and improve the quality of audit results in line with applicable audit standards, the Internal Audit personnel continue to improve their competency through various types of education, such as tiered professional internal audit certification, including operational field training. The Auditors in the Internal Audit department have been provided with specialized education on preventing corruption, fraud and other similar violations.

To prevent and minimize such reprehensible actions, periodic audits are conducted on work units that are prone to corruption, such as procurement, maintenance and finance, or approximately 15% of total divisions in Wayang Windu.

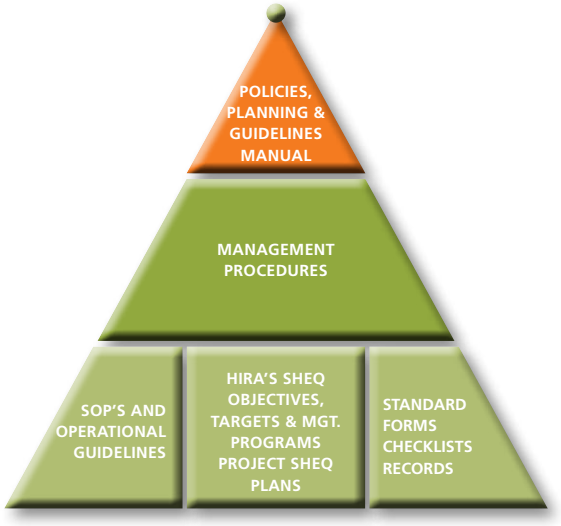
The Company applies strict sanctions in the form of termination of employment and legal process for every strongly indicated type of corruption. In 2013, no corrupt acts were identified in the company.

Wayang Windu Management System (WWMS)

The company currently applies several accredited operating standards, ISO 14001:2004 for environmental management, OHSAS 18001:2007 for occupational health and safety, as well as other as yet unaccredited operating standards, such as quality management operating standards, maintenance operating standards, etc. To facilitate the administrative system for all these operating standards, we are integrating them all into one, called the Wayang Windu Management System.

The systems integrated into WWMS are effective in ensuring improved operational performance, including environmental management. In day-to-day operational activities, sustainability begins with the PLANNING stage and the environmental risk analysis process Hazard Identification & Risk Assessment/HIRA; followed by IMPLEMENTATION through various standard procedures; CHECK with Internal Audit and External Audit (such as the PROPER Audit, ISO 14001, OHSAS 18001, audits by BPLH Bandung Environment Agency, EBTKE Agency, and others); and ACTION as the manifestation of continual improvement through the Performance Improvement Request process. The consistent application of the Wayang Windu Management System is part of our serious efforts to improve the quality of best practice corporate governance application.

Wayang Windu Policy Statement



Risk Management

We have prepared and apply a Risk Management Policy as part of our internal control system with the ultimate goal of minimizing potential loss and maintaining business continuity. The main focus of risk management is workplace accidents, which are closely connected to the risk of environmental damage.

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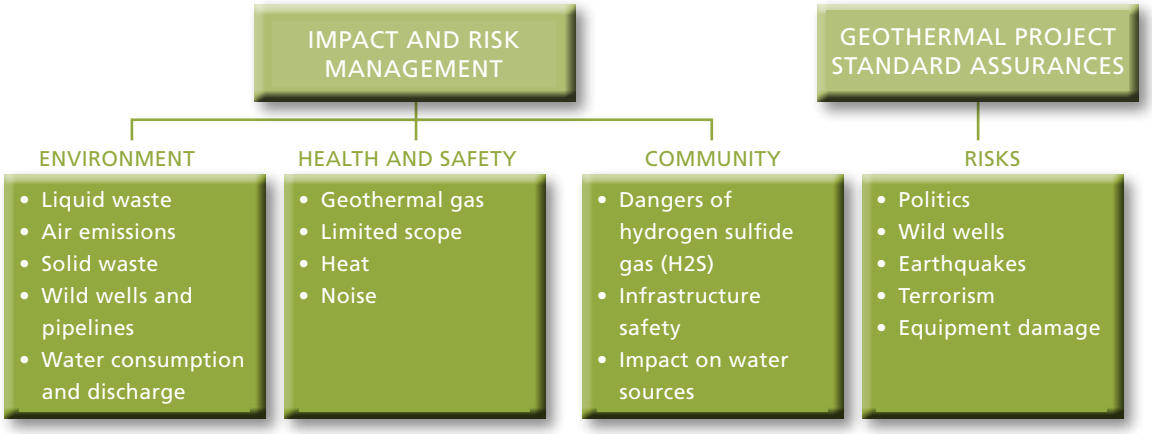
In addition to workplace accidents, other risks being carefully managed and mitigated are financial risk, the risk of incorrect analysis during the exploration process and operational risks during drilling and power generation. Mitigation efforts include the forming of Risk Control Management, which convenes meetings for follow-up evaluation of risk mitigation efforts on a regular basis.



Commitment to External Initiatives

We play an active role in several external initiatives in response to climate change, including implementing the Clean Development Mechanism/ CDM to realize the Kyoto Protocol ratified by the Indonesian Government through Law No. 17/2004 concerning Ratification of the Kyoto Protocol of The United Nations Framework Convention on Climate Change (UNFCCC).

We also play an active role in efforts to create an investment climate in the field of geothermal energy as an energy source for power generation through the organizations:

- Indonesian Geothermal Association (API)
- Indonesian Electricity Community (MKI)
- Indonesian Renewable Energies Community (METI).

Business Ethics

As a concrete manifestation of our commitment to constantly strive to improve the quality of GCG best practice implementation, in 2013, we completed the assessment process and preparation of our Code of Conduct Guidelines. The handbook was inaugurated in January 2013. The inauguration and enactment of the Code of the Code, which contains the commitment of all personnel of every rank to always uphold and implement common business ethics prevailing internationally, was followed up with a dissemination process and the formulation of the "Statement of Commitment" for every employee to comply with and apply every point of the provisions contained therein.

The inauguration, dissemination and implementation of the points contained within our Code of Conduct Guidelines demonstrate the Company's commitment to maintain trust and long-term business relations. This step is also part of our work to satisfy stakeholder expectations that the Company continues to apply the business ethics according to norms applicable internationally. Several examples of business ethics contained within the Code of Conduct include:

- **Whistleblower System**
  As part of our efforts to improve the application of good corporate governance, including the eradication of corruption, bribery and other fraudulent practices, Wayang Windu has completed its assessment process and preparation of a Whistleblower system policy. In April 2013, we officially commenced implementation of the Whistleblower system in follow up to business demands for transparency, accountability and fairness. In the guidelines, we have put in place a mechanism that encourages witnesses to make reports, with a procedure that guarantees the complainant's identity and that of the official investigating remain confidential.

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G4-LA14

- **Prohibition of Giving and Receiving Gifts and Donations**
  We have consistently implemented a prohibition on giving and receiving of gifts and donations by parties inside and outside the company. This prohibition is applied to uphold the independence of decision making, while minimizing the potential for conflict of interest that could damage our business partners' trust in the integrity of the Company.
- **Investment, Procurement of Goods and/or Services Policy**
  We apply a procurement policy that is transparent and accountable, satisfying the principles of effectiveness and efficiency, openness, competition and non-discrimination. The procurement process for goods and services is through healthy competition in accordance with applicable regulations and legislation as a form of our commitment and business principles to practice fair and anti-monopolistic business.

  In the process to select a contractor for work of substantial value, such as exploration and exploitation drilling, we require a clause to fulfill and respect human rights, as well as considering companies of good reputation in respecting human rights. All our new suppliers and business partners undergo a screening process related to human rights, including fulfillment of all employment legislation.
- **Equal Opportunity**
  In the development of managed areas in remote regions, we uphold the fulfillment of human resource requirements based on competence and equal opportunity. Prior to exploration and exploitation, we always conduct a series of complete environmental impact analyses, including the socio-cultural life of the nearest communities. We also implement the principle of equal opportunity in recruitment, improving competencies and determining career paths based on a dynamic assessment system applied transparently, including for talented human resources in local communities.

  By strongly upholding this commitment, during this reporting year, there have been no cases of discrimination reported.
- **Political Involvement and Public Policy**
  Wayang Windu expressly prohibits the use of Company funds or assets for the interests of political parties or candidates of political parties, either directly or indirectly. The Company has also never been involved in preparing or making any public policy, with the exception of suggestions to amend investment regulations in the field of geothermal-based power generation channeled through investor associations/ companies engaged in the geothermal industry. Other involvement is purely the suggestion to implement a Community Development program that is synergistic and mutually supportive with the programs to develop remote villages initiated by and/or implemented by the Government / Local Government.
- **Submitting Opinions to the Directors**
  We provide our employees with the right to give opinions and suggestions to the Directors through formal mechanisms, such as Union Meetings with the Management and company work meetings. This mechanism is to ensure the relationship with internal stakeholders, specifically management and employees, remains constructive, and has a positive impact on improving the Company's performance.

WE ALSO PLAY AN ACTIVE ROLE IN EFFORTS TO CREATE AN INVESTMENT CLIMATE FOR THE USE OF GEOTHERMAL ENERGY TO DRIVE ELECTRICITY GENERATION

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STAKEHOLDER MANAGEMENT

Long-term business sustainability implies success in fostering harmonious relationships with all stakeholders. For this reason, we strive to create harmonious relationships with our stakeholders through the implementation of quality stakeholder management. For this purpose, we have carefully identified the main groups of stakeholders with the dominant influence on the sustainability of the business and strive to satisfy their expectations in accordance with available resources.

These stakeholders are: customers, employees, government/regulators, business partners/ contractors/suppliers (vendors), PGE, NGOs and the surrounding communities.

Through the management of a two-way relationship, we work to understand stakeholder expectations clearly. At the same time, we hope that stakeholders can understand the extent to which we have made efforts to meet these expectations, recognize the major obstacles we face and even anticipate to what extent their expectations can be met.

STAKEHOLDER MANAGEMENT SUMMARY

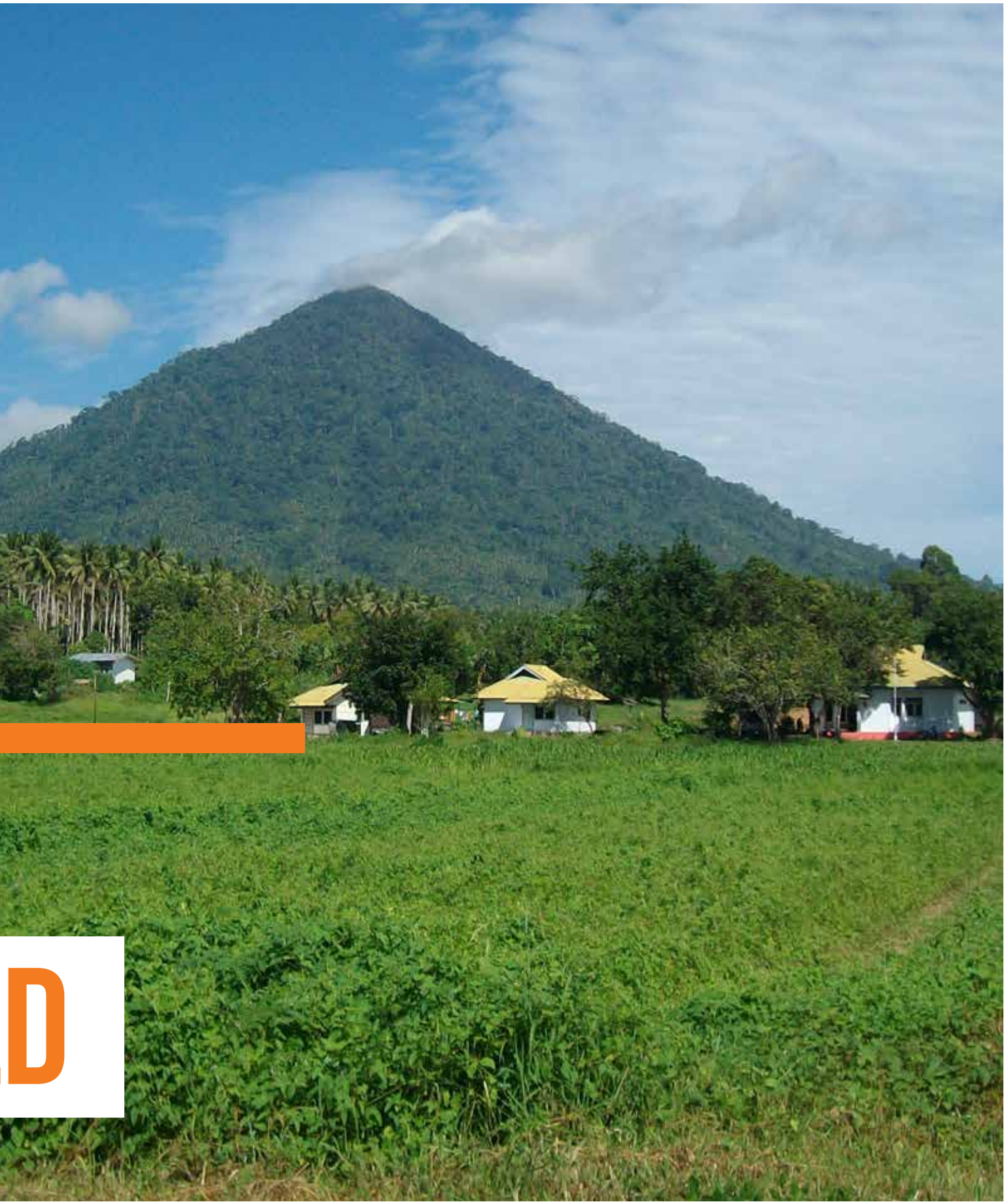
Stakeholder	Approach Method	Fokus Perhatian	Tindak Lanjut
Shareholders	- AGM / once a year - EGM / as needed	Annual Report for shareholders	Approval of the financial report and GMS approval as required for Directors' activities managing the company
Directors	Directors meetings convened as required for the company's operation. Monthly, routine Directors meeting to discuss operational activities.	Company Operations	Approval of the Annual Report and other matters requiring a Directors Meeting Decision.
Customer (PLN	Coordinating Meetings on operations and routine monthly maintenance	– Scheduled generator unit maintenance – Generator load	– Send scheduled generator unit maintenance information to PLN in writing. – Send planned generator loading monthly and weekly.
Employees	Town Hall Meetings, Gatherings, Outbound Training Workshop and seminars Mentoring and coaching; as required	Employee network strategic asset development Program	Provide input on company programs to develop employees
PGE	Meetings to discuss Budget and Costs Plan, WP & B (quarterly)	Realization of work programs explained in presentations	Present program realization in presentation format with documentary photographs
Contractors / Business Partners (Vendors/Suppliers)	Annual Gatherings Quarterly or Semester SHE Plan Audit	Performance Assessment	Provide input to improve performance

STAKEHOLDER MANAGEMENT SUMMARY			
Stakeholder	**Approach Method**	**Fokus Perhatian**	**Tindak Lanjut**
Government / Local Government	- Meetings with Government officials - Participation in Government programs in line with company programs - Provide necessary comprehensive information transparently through regular cross-institutional meetings and Forum Group Discussions	Mechanism to provide information	- Satisfy government regulations - Cooperated with research and socio-economic program development to demonstrate improved community welfare
Local Community	- Six monthly execution meetings - Community relationship management program - Twice yearly stakeholder meeting - Provide necessary comprehensive information transparently through bulletins every 4 months & regular cross-institutional meetings and Forum Group Discussions - Formation of a Counseling Team with membership from community figures as a mediator bridge between the company and the local community	Contribute to society through community-based development programs (economic, educational, health)	Conduct activities with the community (health and environment) Provide and transparently explain a variety of necessary information
NGO	- Participate in multi-stakeholder forums and initiate direct dialog through a variety of conferences and meetings - Provide the necessary information transparently and comprehensively through bulletins every 4 months and regular cross-institutional meetings and Forum Group Discussions	Information to comply with government regulations	Provide and transparently explain a variety of necessary information

The geothermal field development taking place in Jailolo has been planned in stages that are appropriate for the available geothermal potential and electricity requirements in Jailolo and the surrounding areas

CHAPTER 10

ABOUT JAILOLO GEOTHERMAL FIEL



D

GENERAL

Jailolo geothermal field is located in Jailolo district, West Halmahera regency, North Maluku province with a working mine area (WKP) of 13,850 Ha based on the decree of Energy and Mineral Resources (ESDM) Minister Kepmen. ESDM No. 1787 K/33/MEM/2007 dated 23 May 2007.

Based on the decree of the West Halmahera Regent, No. 179/2009 dated 9 December 2009, a mining permit (IUP) has been assigned to PT Star Energy Geothermal Halmahera (SEGH) to manage the Jailolo geothermal field to produce electricity and covers the following activities:

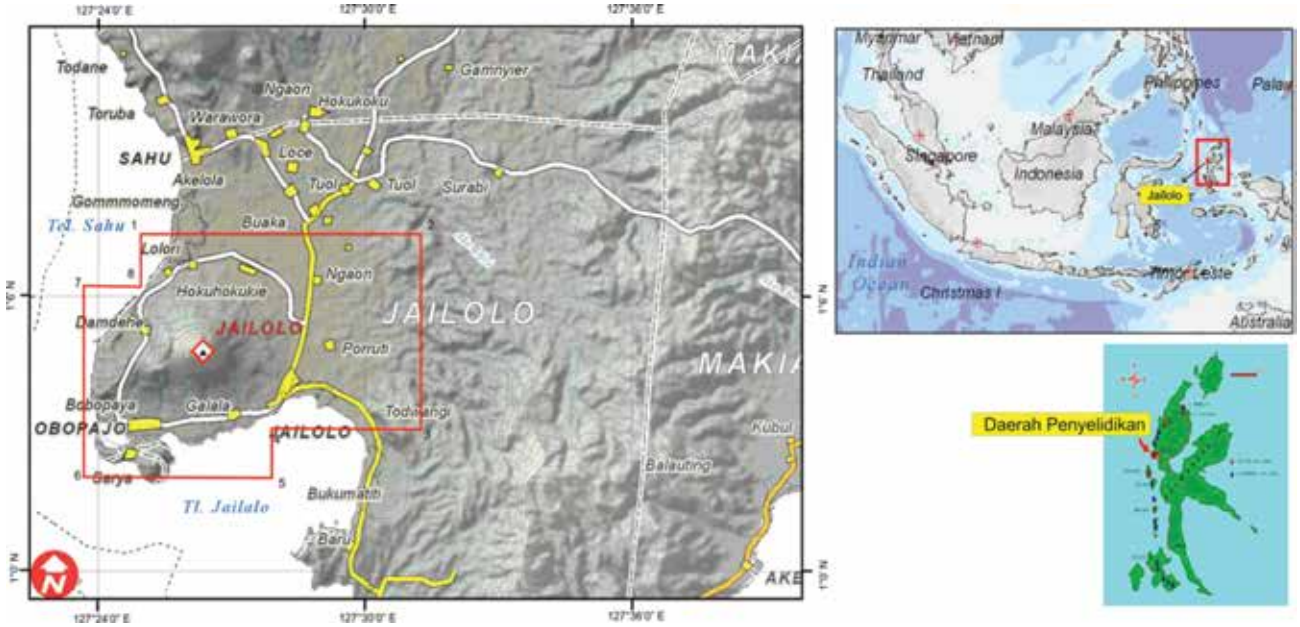
1. Exploration
2. Feasibility Study, and
3. Exploitation

The Jailolo geothermal project is included in the Government's Phase II 10,000 MW Phase II 'Crash Program' which must produce electricity by 2017.

Development of the Jailolo geothermal field is planned in stages according to potential geothermal energy available and the electricity requirements of Jailolo and the surrounding areas. In stage I, based on the program submitted in the tender document, a 2x5 MW geothermal power plant (Units 1 & 2) will be built in Jailolo. The Unit 1 generator, with a capacity of 5 MW, is expected to produce electricity (COD) in 2017.

Based on the ESDM tender document, the geothermal potential in the Jailolo field is approximately 75 MW. A follow up exploration stage is required to determine more accurately the reserves available and the characteristics of the geothermal fluid for electricity development from the Jailolo geothermal field. Overall, activities that have been conducted in the Jailolo geothermal field between 2009 and 2013 are as follows:

1. Environmental Study
2. Feasibility Study
3. Geosciences Survey and Study
4. Drilling Preparation and Civil Works
5. Occupational Safety, Health and Environment (SHE)
6. Community Relations and Development



Geothermal Field Location Jailolo

The environmental studies conducted and completed at the Jailolo geothermal field are the Environmental Management and Monitoring Plans (UKL/UPL) and Environmental Baseline Study (EBS) conducted by a third party (environmental consultant) in 2011.

The UKL/UPL studies were conducted in areas where physical activities will take place and impact on the environment, including:

- Land
- Water
- Air
- Flora & Fauna
- Social & Economy

Meanwhile, the EBS is intended to provide baseline information about the environment in the vicinity of the Jailolo geothermal WKP with a greater focus on the socio-economic environment for the local community. The results of the EBS study will serve as a reference / baseline to measure environmental conditions and community socioeconomic development in the future against the existence of the Jailolo geothermal project.

FEASIBILITY STUDY

The feasibility study is intended to identify the feasibility of the Jailolo geothermal project technically, economically and environmentally as a pre-requirement before taking action that would impact significantly on the government, community, Star Energy and the stakeholders. The feasibility study was completed at the end of 2012.

The feasibility study was conducted by AECOM (USA) with the aid of a grant from USTDA (United State Trade Development Agency).

- Preparation of a Pre-Feasibility Study.
- Development impact analysis
- Review of regulatory issues related to the Jailolo project
- Project Implementation Plan
- Project Implementation Schedule
- Economic Analysis of the Project
- Financial Analysis of the Project
- Environmental impact study and recommended mitigation efforts
- Development of a geothermal plant and steamfield system analysis

GEOSCIENCES SURVEY & STUDY

The geosciences survey and study in the Jailolo geothermal field consisted of geological, geochemical and geophysics surveys conducted between 2009 and 2013.

1. The detailed geology survey was conducted by ELC - Italy in 2009 and followed up by LAPI - ITB in 2013 (structures, surface alteration and facies mapping)
2. The geochemical survey was conducted by ELC – Italy in 2009 (identifying, sampling geothermal manifestations), and followed up by SKM – New Zealand in 2013 (identifying, sampling geothermal manifestations and heat loss survey)
3. Geophysical survey
    - Gravity; 110 stations by ELC – Italy in 2009
    - MT; 110 stations by ELC in 2009 & 60 stations by TBU in 2013
    - TDEM; 50 stations by ELC – Italy in 2009

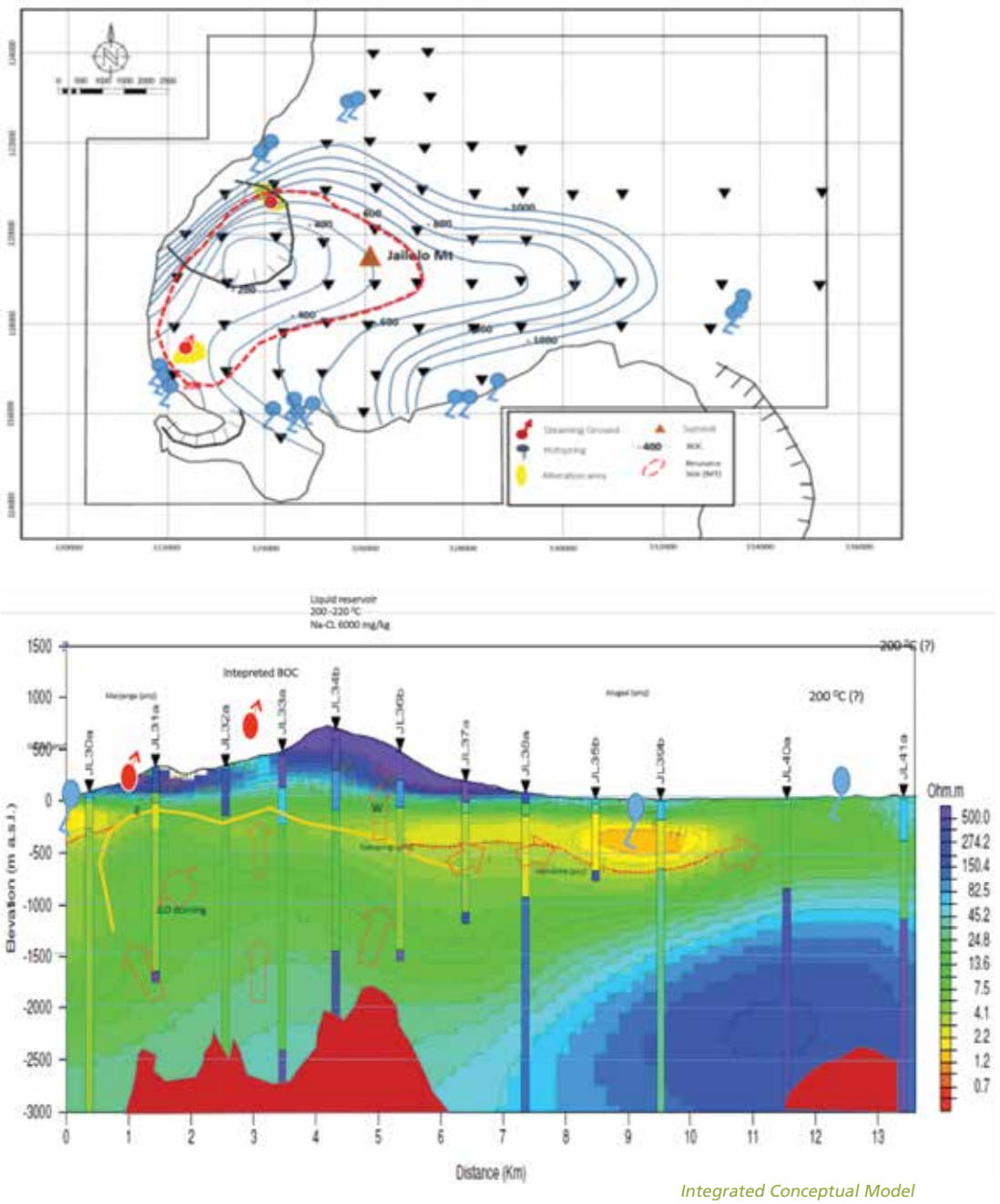
The purpose and objectives of the geosciences surveys and studies above were as follows:

1. Geology survey and study
   - Determining heat source locations
   - Charting rocks in the reservoirs
2. Identifying and mapping geological structure
3. Geochemical survey and study
   - Estimating temperature in the reservoirs
   - Determining upflow & outflow areas
   - Determining and mapping origin of fluid (magmatic, meteoric & sea water)
   - Identifying constraints to development
     - Environmental impact (arsenic <50 ppb, mercury < 2 ppb)
     - Scaling
     - Corrosiveness

Issues	Tender Document	Exploration Survey Result (as per 2013)
High Temperature System (> 240 °C)	No surface manifestation indicated to a high temperature geothermal system i.e., Fumaroles, craters	• No clear indications of high temperature system. • Estimated range of system temperature is 200- 220°C from geochemistry
Reservoir Size and boundary	• No MT data available	• MT quality are excellent • Top of reservoir depth for each upflow is obvious (600 – 1200 m deep)
Detail Structure permeability assessment	No detail geological survey available	• Defined structure play • Defined fault rank
Resource Sizing approach	• 6 – 12 km2 based on lateral extent and surface manifestation • Estimated temperature was > 240°C • Estimated resource size was 78 MW (P50)	• Area of extend is 5 – 12 km^2 • Temperature is 200- 220°C • Estimated resource size is 42-114 MW, 72 MW (P50)
Development Constrains	No data	• Low Gas content • No acid fluid (Neutral) • No significant topography challenges • Drilling water supply sources is a challenge

GEOSCIENCES STUDY RESULTS

4. Geophysics survey and study
   - Determining heat source locations
   - Determining reservoir boundaries
   - Determining top of reservoir
   - Determining thickness of reservoir rocks



Integrated Conceptual Model

DRILLING PREPARATION AND CIVIL WORKS

The activities taking place are still categorized as surveys and studies required for planning and to support future physical work.

- Processing permits (IUP, principle permit, etc.)
- Survey and topographical mapping
- Geotechnical survey and study
- Preparing the Basic Design scope of work for exploration drilling
- Field survey for mobilization and demobilization of drilling equipment, in particular determining which port to use for mobilization of drilling equipment
- Location survey to identify water source for drilling
- Location survey to map logistics strategy during drilling
- Preliminary basic design preparation for civil works
- Installation of a weather monitoring station at Idamdehe

OCCUPATIONAL SAFETY, HEALTH AND ENVIRONMENT (SHE)

Following up on the Star Energy policies related to Safety, Heath & Environment (SHE), SEGH, as a Star Energy business unit, will strive to create a safe and healthy environment for all employees, contractors, the community and environment in and around the Jailolo geothermal operational area.

During 2013, SHE activities undertaken included:

a. Conducted a Site & Safety Induction Program for employees and contractors that will be working around the Jailolo geothermal field
b. Strengthened the SHE culture through routine communications in SHE briefings/meetings, Incident Reports and the SHE Observation Program
c. Disseminated the emergency response procedure to contractors and working teams
d. Implemented CSMS on geosciences contractors & UKL/UPL
e. Conducted First Aid for Accidents Training
f. Workplace Health Program covering:
    - Routine annual health checkups for employees
    - Assessed work feasibility on employees & contractors
    - Provided information to employees and contractors regarding health issues in Jailolo, such as malaria, rabies and others.
    - Malaria prevention program for employees and contractors prior to visiting the Jailolo site

Based on SHE statistical data during 2013, there were no accidents in the Jailolo geothermal field.

COMMUNITY RELATIONS AND DEVELOPMENT

To introduce Star Energy to the Jailolo government and community and with the aim of making our geothermal development project a success, we conducted several community-based programs during 2013, including:

a. Conducted routine communications with the local government about the geothermal development program and Jailolo community development programs
b. Conducted community activities in Jailolo in cooperation with the local government
c. Communicated on an ongoing basis with community leaders and the Jailolo community
d. Communicated information about geothermal activities
e. Provided employment opportunities to the local workforce
f. Provided business opportunities for local businesses

USE OF LABOR

In accordance with government policy on the use of local labor, SEGH, through its community development program, always optimizes the use of local labor for jobs the workforce is capable of carrying out, while providing training and technology transfer about the geothermal energy business.

FUTURE ACTION PLANS

- Negotiate the electricity price and generating capacity to be established with PT PLN (Persero)
- Conduct exploration drilling to study and confirm temperatures in the Jailolo geothermal reservoirs (high/medium temperature)
- Technically and commercially assess the type of power plant to be constructed (steam single flash / binary cycle power plant)
- Conduct development drilling
- Construct the power plant, pipeline and supporting facilities

MATERIALITY ASPECT AND BOUNDARY

No	Aspect	Boundary	
		Wayang Windu	Outside Wayang WIndu
	CATEGORY: ECONOMIC		
1	Economic Performance	●	
2	Market Presence	●	
3	Indirect Economic Impacts	●	
	CATEGORY: ENVIRONMENT		
4	Energy	●	
5	Water	●	
6	Biodiveristy	●	
7	Emission	●	
8	Wastewater and Waste	●	
9	Product and Services	●	
10	Obedience	●	
11	Whole	●	
12	Environmental Assessment Suppliers		●
	CATEGORY: SOCIAL		
	LABOR PRACTICES AND COMFORT TO WORK		
13	Work	●	
14	Health and Safety	●	
15	Training and Education	●	
16	Diversity and Equal Opportunity	●	
17	Equal remuneration between women and men		●
18	Labour Practice Assessment Suppliers		
	HUMAN RIGHTS		
19	Non-discrimination	●	
20	Freedom of Association and Collective Labour Agreement	●	
21	Human Rights Assessment Suppliers		●
	Community		
22	Local Community	●	
23	Anti-corruption	●	
	PRODUCT LIABILITY		
24	Health and Safety Customer	●	
25	Labeling Products and Services	●	

● Star Energy Geothermal (Wayang Windu) Ltd

● Outside the Company

Moores Rowland

Independent Assurance Statement
Report No.1114/BD/0089/JK

To the management of Star Energy Geothermal (Wayang Windu) Ltd

We were engaged by Star Energy Geothermal (Wayang Windu) Ltd ('SEGWWL') to provide assurance in respect to its Sustainability Report 2013 ('the Report'). The assurance has been carried out by a multi-disciplined assurance team with a broad range of skills and depth of experience, thus providing a high level of competency for the assurance engagement.

Independence

We were not involved in the preparation of any key part of the Report and carried out all assurance undertakings with independence and autonomy. We did not provide any services to SEGWWL during 2013 that could conflict with the independence of assurance engagement.

Assurance Standards

We conducted our work in accordance with ISAE3000 'Assurance Engagements other than Audits or Reviews of Historical Financial Information' issued by the International Auditing and Accounting Standards Board. In addition, we have also planned and carried out our work in accordance with AA1000AS (2008) 'AA1000 Assurance Standards (2008)', issued by AccountAbility.

Level of assurance and criteria used.

Our evidence-gathering procedures have been designed to obtain a limited level of assurance based on ISAE3000 and a moderate level of assurance engagement as set out in AA1000AS (2008) in order to provide confidence to readers by reducing risks or errors to a very low but not to zero. Moreover, the AA1000 AccountAbility Principles Standard (2008) of Inclusivity, Materiality and Responsiveness has also been used as criteria to evaluate the Report.

Scope of Assurance

We provided Type 2 assurance engagement under AA1000AS (2008). This involved:

1) an assessment of SEGWWL's adherence to the AA1000 AccountAbility Principles Standard (2008) and
2) an assessment on the accuracy and quality of specified sustainability performance information contained within the Report, in relation to the agreed scope. The scope of work consisted of:
   - Community development program
   - Occupational health and safety
   - Environmental management

The assured GRI G4 indicator related to the agreed scope above is marked with the sign √ at the GRI G4 Core Index section of the Report.

Responsibility

SEGWWL is responsible for all information and claims contained in the Report, including established sustainability management targets, performance management, data collection and report preparation, etc. Our responsibility in performing this engagement is to the management of SEGWWL only for the purposes of verifying its statements relating to its sustainability performance, more particularly as described in the agreed scope. Our responsibility is to express our conclusions in relation to the agreed scope.

Methodology

We have assessed several assertions and specified data sets included in the report and the systems and processes used to manage and report these using the following methods:

- Reviewed report, internal policies, documentation, management and information systems
- Carried out interviews with staff involved in sustainability-related management and reporting
- Followed data trails to initial aggregated source and checked sample data to a greater depth during the engagement process.

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Limitations

Our scope of work was limited to a review of the accuracy and reliability of specified data and interviews with data providers, persons in charge of data collection and processing, as well as persons in charge of sustainability performance-related information.

Conclusions

We have confirmed that the Report has been prepared in accordance with G4 Core Criteria issued by the Global Reporting Initiative (GRI).

Findings and conclusions concerning adherence to the AA1000 AccountAbility Principles of Inclusivity, Materiality and Responsiveness include:

- **Inclusivity**
  An assessment has been made to determine whether SEGWWL has included all key stakeholders in developing and achieving an accountable and strategic response to sustainability issues.

  We found SEGWWL demonstrates a strong commitment to stakeholder inclusivity. SEGWWL has an effective system in place for key stakeholders to participate in the development of the organization's response in the context of sustainability. This is demonstrated for instance, by conducting needs assessment surveys in relation to the partnership and community stewardship programme and materiality level survey to the key stakeholders group.

  However, we recommend that SEGWWL continues to improve stakeholder inclusivity systems and procedures on a regular basis to maintain their effectiveness.

- **Materiality**
  An assessment has been made as to whether SEGWWL has included in the Report the material information required by its stakeholders in order to enable them to make informed judgements, decisions and actions.

  We found SEGWWL has a strong process in place to determine material issues. Key material issues were adequately reported and were found to provide balanced information about SEGWWL's sustainability performance. A range of internal stakeholders are involved in SEGWWL's materiality determination process. However, we recommend that SEGWWL continues to conduct materiality test on a regular basis in future reports.

- **Responsiveness**
  An assessment has been made as to whether SEGWWL demonstrates that it responds to its stakeholders and is accountable to them.

  SEGWWL was found to be responsive to key stakeholder concerns and expectations. This was achieved through the organization's allocation of resources to stakeholder engagement, the timeliness and accessibility of reported information, and the types of communication mechanisms regularly employed.

  However, we recommend that SEGWWL continues to improve stakeholder engagement procedures on a regular basis in future reports.

Based on our limited assurance engagement, nothing has come to our attention that causes us to believe that the data of the Report has been materially misstated.

All key assurance findings are included herein, and detailed observations and follow-up recommendations have been submitted to SEGWWL management in a separate report.

Jakarta, 31 October 2014

AA1000
Licensed Assurance Provider
000-107

James Kallman
President Director

Moores Rowland is an international organization specializing in audit, accounting, tax, legal and advisory services. Moores Rowland is a member of Praxity AISBL, the world's largest Alliance of independent and unaffiliated audit and consultancy companies.

We can rely on the skills of more than 33,400 professionals operating together in 97 countries, sharing the same values and sense of responsibility, whilst in Indonesia is served by Moores Rowland, one of the leading sustainability assurance providers.

GRI-G4 CORE ACCORDANCE ASSESSMENT REPORT

Index	Aspect and Indicator	Page	Assurance
	GENERAL STANDARD DISCLOSURES		
	Strategy and Analysis		
G4-1	Greeting from the President Director	16, 24,28	
	Organization Profile		
G4-3	Organization Name	21	✓
G4-4	Products and Services	21	✓
G4-5	Head Office Location	21	✓
G4-6	Operational Area	21, 24	✓
G4-7	Ownership and Legal Form	21	✓
G4-8	Market Share	21, 24, 29	✓
G4-9	Organization Scale	28	✓
G4-10	Employee Distribution	28	✓
G4-11	Percentage of Employees covered in Collective Labor Agreement (CLA)	78	✓
G4-12	Supply chain	78	✓
G4-13	Significant changes during the reporting period	15	✓
G4-14	Approach in applying the principle of precaution	101	✓
G4-15	International initiatives supported or adopted	34, 94, 101	✓
G4-16	Membership in industry associations	21, 102	✓
	Material Aspects and Boundaries		
G4-17	List of subsidiaries	13	✓
G4-18	Content and Boundary Determination Process	13	✓
G4-19	Material Aspect Identification List	15	
G4-23	Significant changes to scope and boundary	13	✓
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G4-24	List of Stakeholders	104	
G4-25	Basis for identifying stakeholders	104	
G4-26	Approach to stakeholder relations	104	
G4-27	Topics discussed with stakeholders	104	
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G4-28	Report period	13	✓
G4-29	Publication of previous year's report	13	✓
G4-30	Reporting cycle	13	✓
G4-31	Personal Contact	15	✓

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G4-32	"In Accordance" option, Index and Assurance	13	✓
G4-33	External Assurance		
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	CATEGORY: ENVIRONMENT		
	Aspect: Material		
G4-DMA	Disclosures on Management Approach	34	✓
G4-EN1	Use of Resources	34, 35, 36	✓
G4-EN2	Use of recycled materials	34, 35	✓
	Aspect: Energy		
G4-DMA	Disclosures on Management Approach	36	✓
G4-EN3	Energy consumption in the organization	36	✓
G4-EN5	Energy use intensity	36	✓
G4-EN6	Reductions in energy consumption	37, 38	✓
	Aspect: Water		
G4-DMA	Disclosures on Management Approach	42	✓
G4-EN8	Total water taken based on source	42	✓
G4-EN10	Use of recycled water	42	✓
	Aspect: Biodiversity		
G4-DMA	Disclosures on Management Approach	47	✓
G4-EN13	Protected or restored habitat	47, 50, 52, 54	✓
G4-EN14	Number of species including those on the IUCN Red List and national conservation lists, and habitats influenced by organization's operations	54	✓
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G4-DMA	Disclosures on Management Approach	37	✓
G4-EN15	Direct greenhouse gas emissions (Scope 1)	41	✓
G4-EN16	Indirect greenhouse gas emissions (Scope 2)	41, 38	✓

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G4-EN17	Other indirect greenhouse gas emissions (Scope 3)	38, 41	✓
G4-EN18	The intensity of greenhouse gas emissions (GHG)	41	✓
G4-EN19	Reduction of greenhouse gas emissions	39, 40	✓
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	Aspect: Liquid Waste and its Disposal		
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G4-EN23	Total waste	44, 45	✓
	Aspect: Products and Services		
G4-DMA	Disclosures on Management Approach	32, 33	✓
G4-EN27	Product and service environmental impact mitigation	33	✓
	Aspect: Compliance		
G4-DMA	Disclosures on Management Approach	33	✓
G4-EN29	Fines and sanctions for non-compliance with environmental regulations and legislation	33, 57	✓
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G4-EN31	Total cost of environmental protection	57	✓
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	Aspect: Occupational Health and Safety		
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G4-LA5	Percentage of employees on the Occupational Health and Safety Committee	94	✓
G4-LA6	Levels of workplace accidents, absence due to sickness and unexplained absence	95	✓
G4-LA8	Occupational Health and Safety clauses in the Collective Labor Agreement	94	✓
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G4-DMA	Disclosures on Management Approach	84	
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G4-DMA	Disclosures on Management Approach	77-78	✓
G4-LA14	Supplier selection based on labor practices	78, 103	✓
	SUB-CATEGORY: HUMAN RIGHTS		
	Aspect: Non-discrimination		
G4-DMA	Disclosures on Management Approach	102-103	
G4-HR3	Incidents of discrimination and resolution	103	
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	Aspect: Supplier Human Rights Assessment		
G4-DMA	Disclosures on Management Approach	77-78	✓
G4-HR10	Supplier selection based on human rights criteria	78, 103	✓
	SUB-CATEGORY: SOCIETY		
	Aspect: Local Communities		
G4-DMA	Disclosures on Management Approach	60-62	✓
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G4-DMA	Disclosures on Management Approach		✓
G4-PR2	Total number of non-compliance incidents with regulations and voluntary codes related to the impact of products and services on health and safety during the life cycle, according to type of outcome	79	✓
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CROSS REFERENCE TO ISO - 26000

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FEEDBACK SHEET

We would like to thank you for taking your valuable time to read this Sustainability Report 2013. In an effort to improve the Sustainability Reporting in the coming years, Danamon would like to ask you to kindly fill out this feedback sheet and send it back to us.

1. This Sustainability Report has provided you with any information on activities that have been conducted by Danamon in its compliance with corporate social responsibility.
   ☐ Agree ☐ Don't Know ☐ Disagree

2. The material in this Sustainability Report, including data and information presented are easy to understand and comprehensible.
   ☐ Agree ☐ Don't Know ☐ Disagree

3. The material in this Sustainability Report, including data and information presented are sufficient.
   ☐ Agree ☐ Don't Know ☐ Disagree

4. The material in this Sustainability Report, including data and information presented are accountable.
   ☐ Agree ☐ Don't Know ☐ Disagree

5. What do you think about the presentation of this Sustainability Report, including content, design and layout, as well as pictures?
   ☐ Good ☐ Don't Know ☐ Not Good

6. Which information that you find useful in this Sustainability Report?
   .....
   .....
   .....

7. Which information that you find less useful in this Sustainability Report?
   .....
   .....
   .....

8. What information that you find insufficient and needs to be improved in the next Sustainability Report?
   .....
   .....
   .....

Your Details

Full Name : .....

Institution/Company : .....

Email : .....

Type of Institution/Company :

- Government • NGO • Industry
- Education • Media • Community
- Other, please state:
  .....

Please send back this form to:

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2013
SUSTAINABILITY REPORT

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