CIREBON POWER

# SUSTAINABILITY REPORT 2019

# POWERING THE LIFE OF INDONESIA

CIREBON POWER

# SUSTAINABILITY REPORT
# **2019**

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# Message from President Director

Dear Readers,

Welcome to Cirebon Power Sustainability Report 2019!

For an emerging country like Indonesia, the availability of reliable energy sources such as electricity is essential and become the backbone of the growing economy. Indonesia, home to vast biodiversity with an abundant source of natural resources, is one of the world's biggest producers of coal. Coal is an efficient source of energy despite its potential environmental issues if not managed properly. At Cirebon Power, our sustainability starts with the vision to pioneer cleaner coal-powered energy using advance technology to ensure environmental protection. Our continuous effort and commitment to go beyond compliance were acknowledged by our stakeholders through the achievement of GREEN PROPER, the national environmental performance rating.

We believe that to provide a reliable electricity supply to Indonesia, we have to continuously maintain our operation through continuous improvement while upholding the health and safety of our employees. This year our commitment to occupational health and safety is recognized through the Zero Accident Award from the Ministry of Manpower. In addition, we are certified with ISO 90001 quality management, 14001 environmental management system, and 45000 for health and safety to ensure that our operation can be conducted in a sustainable manner.

We realize that in our effort to go beyond and be sustainable we cannot do it by ourselves. Our employees are one of the most important aspects of our company. We continuously strive to educate, motivate and improve the knowledge of our employees through training and development programs. We are holding hands with our local communities to continue supporting them to improve their livelihood. We continuously maintaining our engagement with the local community and making a positive impact through our structured community development programs.

At Cirebon Power, sustainability means that we can continue to improve ourselves, make our process better through innovations and cleaner production to provide electricity to Indonesia and creating value to our stakeholders.

Takeuchi Hisahiro

President Director
Cirebon Electric Power
Cirebon Energi Prasarana

**"Our continuous effort and commitment to go beyond compliance were acknowledged by our stakeholders through the achievement of GREEN PROPER."**

# Highlights

122 Fishermen and Farmers participated in our Livelihood Support Programs


751 micro financing for local small business

992 Vocational training for villagers

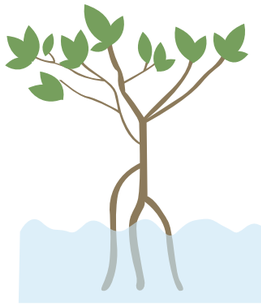
3,400 infants and toddlers received nutritious food

Planted 30,300 trees in areas where protection trees are needed

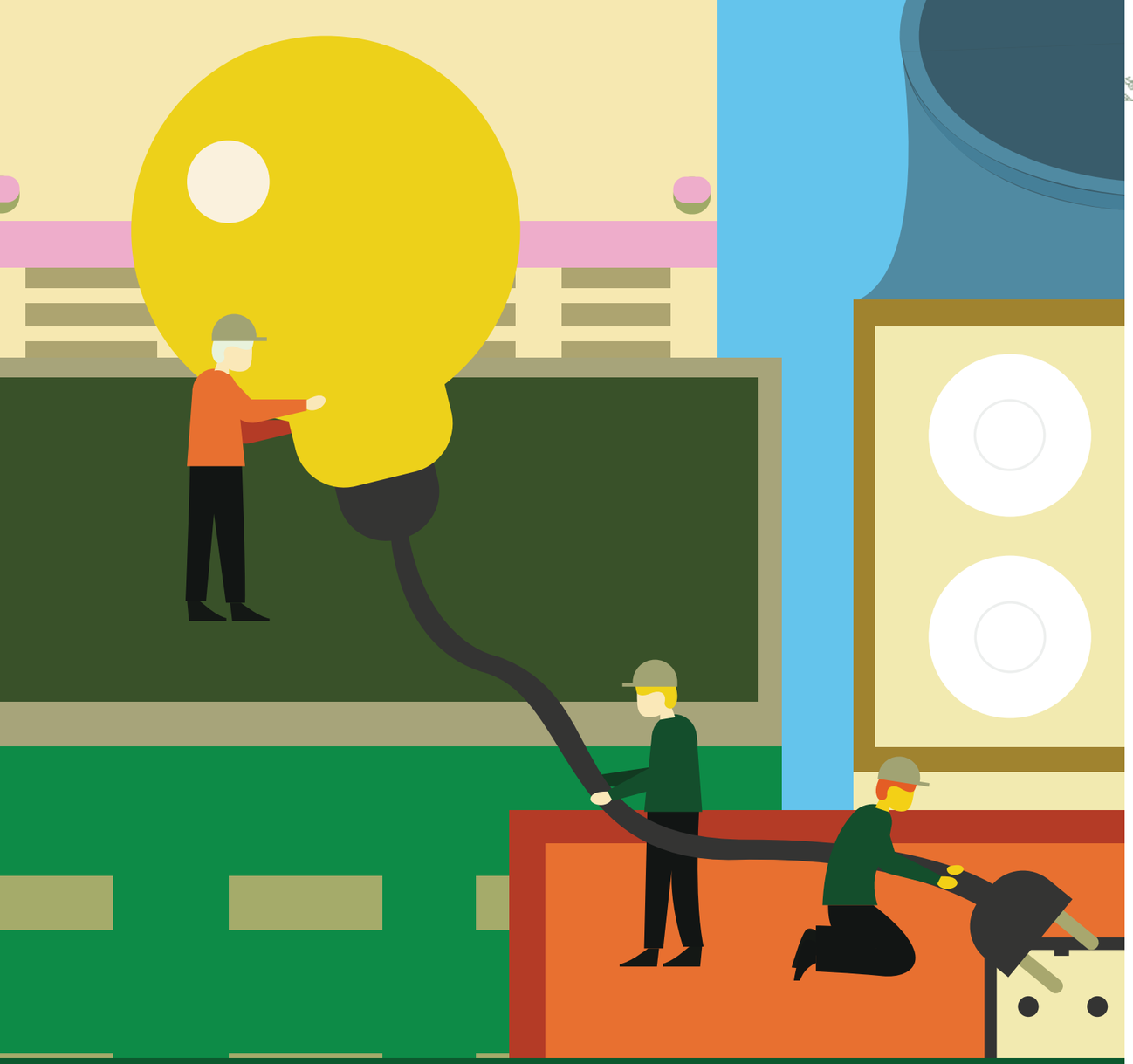
10,476 people participated in free medical check-up

Life and accident insurance for 21,000 fishermen

16,400 outstanding students received the achievement rewards



Planted 2,000 mangroves



# 01 POWERING THE LIFE OF INDONESIA





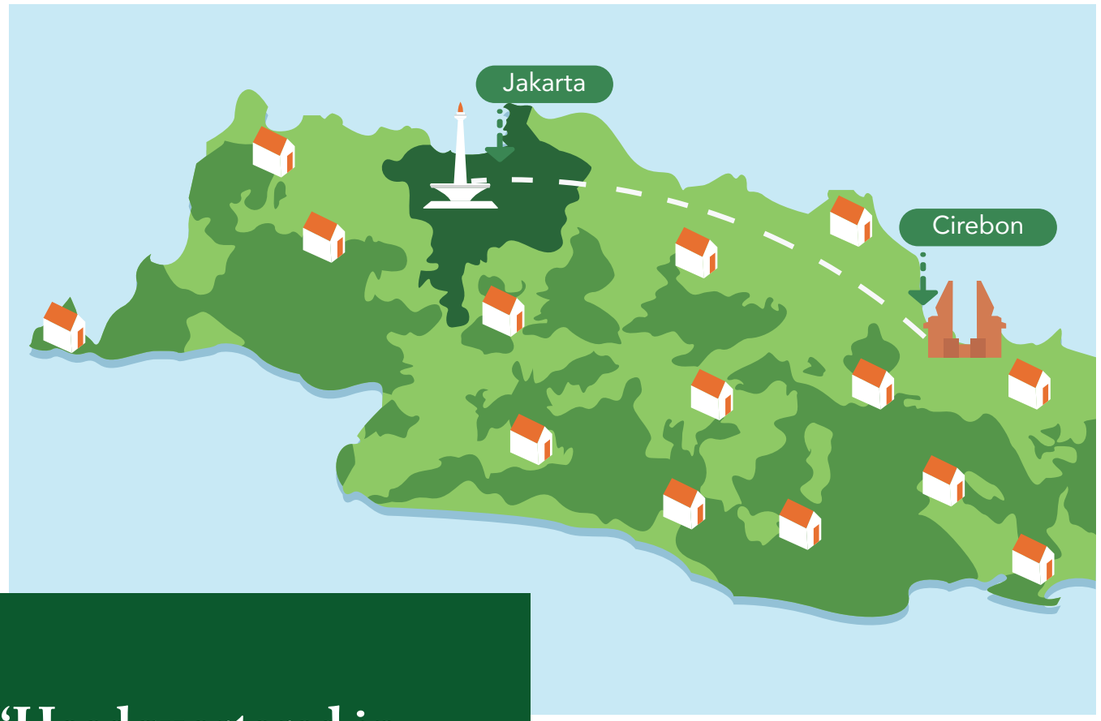
Powering the life of Indonesia is more than just a slogan. For us, it is a guiding principle that allows us to give meaning to our existence. Cirebon Power is envisioned to pioneer cleaner energy solutions using technological advances to preserve the environment and to ensure a better life for all by the power we produce.

## Cirebon Power at a Glance

[GRI 102-1, GRI 102-2, GRI 102-3, GRI 102-4, GRI 102-5, GRI 102-6, GRI 102-7, GRI 102-8, GRI 102-45]

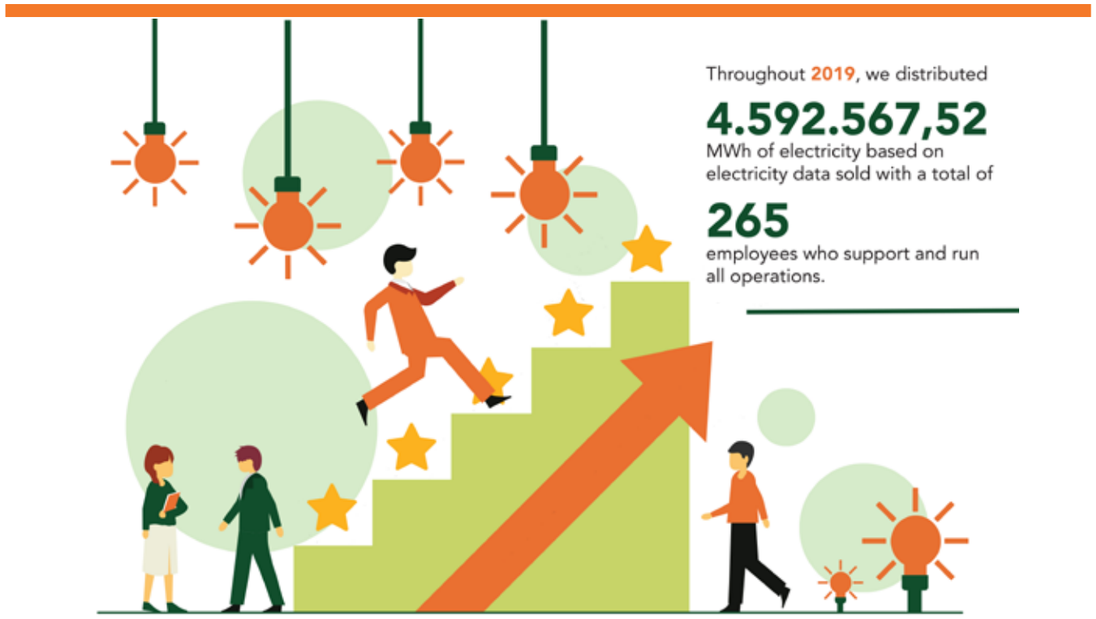
Cirebon Power is established to pioneer cleaner energy solutions using technological advances to preserve the environment and to ensure a better life for all by the power we produce.

Headquartered in Jakarta, Cirebon Power has a 1x660 MW Supercritical coal-fired power plant located in Kanci Kulon Village. In 2017, we started the construction of a new Ultra-Supercritical Coal Power Plant with a capacity of 1x1000MW in Kanci Village. Both are located in the Cirebon District coastal area in West Java Province, Indonesia.




**“Headquartered in Jakarta, Cirebon Power has a 1x660 MW Supercritical coal-fired power plant located in Kanci Kulon Village.”**

In line with the Indonesian government development program, Cirebon Power continuously contributes to the National Electricity Company (PLN), as our customer, by providing and ensuring electricity availability, especially in the Java-Bali region. Through the provision of electricity, we have indirectly contributed to national economic development. We supply 80% of our installed capacity (1x660 MWh) of the electricity to PLN based on Power Purchase Agreement (PPA) with PLN.




Cirebon Power is established by two companies, PT Cirebon Electric Power (operated by PT Cirebon Power Services) and PT Cirebon Energi Prasarana.

## PT Cirebon Electric Power (CEP)

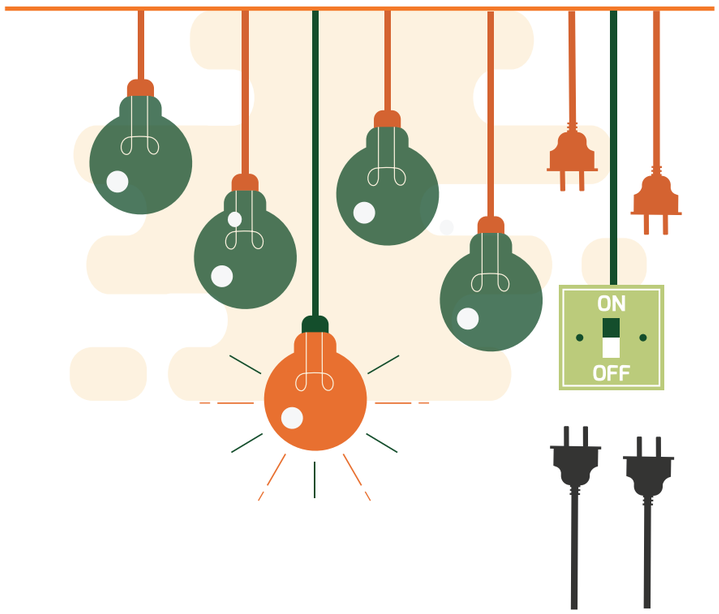
Established in 2007, CEP is a multi-national consortium company consisting of several companies such as Marubeni Corporation from Japan (32.5%), Indika Energy from Indonesia (20%), Korea Midland Power from South Korea (27.5%), and Samtan from South Korea (20%). The group of energy powerhouse join forces and built our first unit of 1x660 MW in Kanci Kulon village, West Java. Starting on July 2012, the power plant began its operation and has been producing 5 TWh of electricity per year to the PLN Java-Madura-Bali (JAMALI) grid.

## PT Cirebon Energi Prasarana (CEPR)

The multi-national consortium (Marubeni Corporation, Indika Energy, Korea Midland Power, and Samtan) behind the success of our first unit began a new journey by adding Japan’s JERA to develop the 1x1,000MW expansion project. Not only bigger and stronger than the previous unit, this new unit utilizes advanced Ultra-Supercritical technology that enables us to produce more energy in a more efficient way. The expansion unit is expected to operate in 2021.

# Corporate Vision and Mission

[GRI 102-16]




## Our Vision

We dream of a growing nation fueled by the power of energy.
We produce energy to make things brighter and lives better.

## Our Mission

We want to power not only a nation, but each and every life in it. We want to light not only cities, but each and every home in it. We strive to deliver a smarter, cleaner, more reliable energy for everyone. That is our part in building a brighter indonesia.

## Our Values

### Friendly

- Be Warm
- Be Open and Approachable
- Be a Friend
- Show Kindness

### Impactful

- Do Things with a Purpose
- Bring a Positive Impact

### Trustworthy

- Do the Right Thing
- Be Ethical
- Be Professional
- Show Responsibility
- Respect Others
- Get Better Everyday
- Strive for the Best

### Pioneer

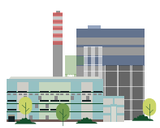
To be at the forefront technology in bringing clean energy and changing the lives of people in Indonesia through innovations.

# Our Milestones

[GRI 102-3]

## Our Head Office

Pondok Indah Office Tower 3
23rd & 25th Floor
Jl. Sultan Iskandar Muda Kav. V/TA
Pondok Indah South Jakarta 12310
DKI Jakarta - Indonesia



**2007**

PT Cirebon Electric Power (CEP) was established

**2008**

1 May:
Unit I start construction

**2011**

26 September:
Unit I first coal firing

5 December:
Unit I first synchronization

**2012**

2 July:
Unit I first Net Dependable Capacity (NDC) test

27 July:
Unit I commercial operation date

**2014**

PT Cirebon Energy Prasarana (CEPR) was established

**2015**

23 October:
The signing of Unit II PPA

5 November:
Unit II Land Utilization Agreement signed with MOEFO

7 December:
Unit II EPC contract signed

**2016**

8 July:
Unit II start pre-construction (site preparation)

20 October:
Unit I declared as National Vital Object

9 November:
Unit II BVGL issued


**2017**

9 December:
- Unit II achieved financial close
- Issued Notice to Proceed (NTP) Unit II construction

**2018**

22 January:
Receiving permanent electricity supply business license

# Our Supply Chain

[GRI 102-9]

Coal Supply from Kalimantan send to Cirebon Power
(with coal barges)

Cirebon Power generates electricity using Supercritical and
Ultra-Supercritical Power Plant technology

Electricity generated by Cirebon Power is transmitted through
PLN grid to empower Java, Madura & Bali



# Our Operation

[GRI 102-6, GRI 204-1]
[EU1] [EU2]

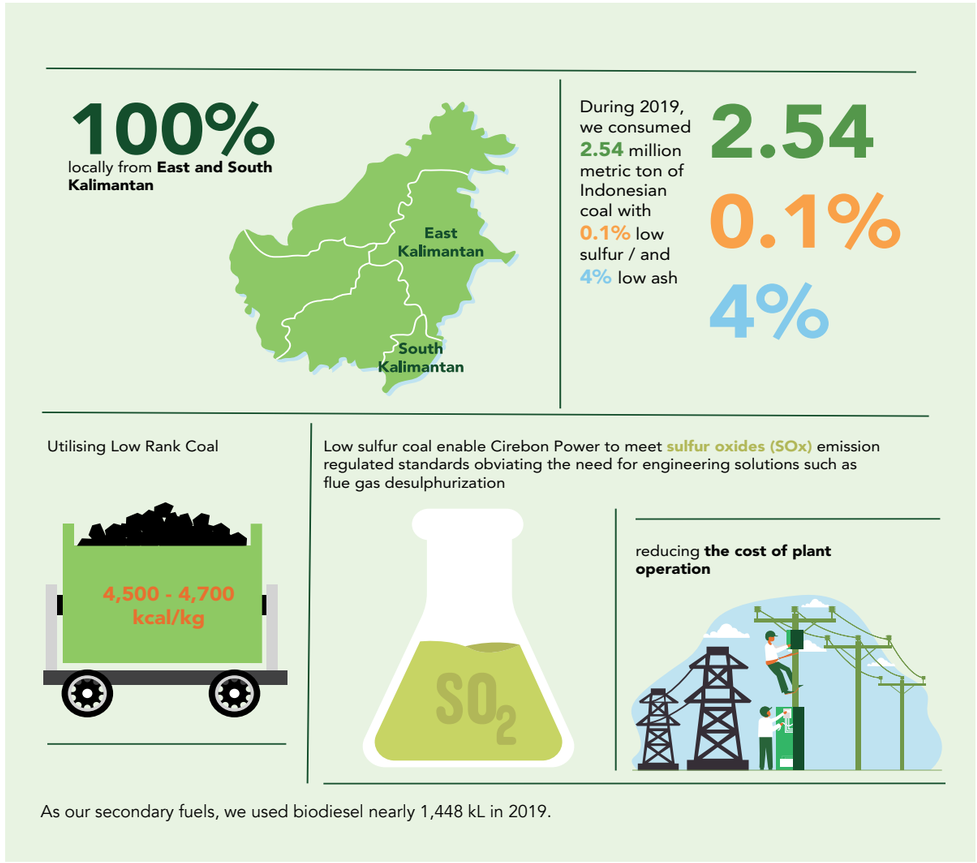
Total electricity
exported during 2019 is
4,592,567.52 MWh

# Material and Supplier

[GRI 204-1, GRI 301-1, GRI 308-1]

**Coal is the most reliable, affordable and safest energy source in Indonesia. Compared to other energy sources, for Indonesia, coal is known to be one of the most efficient sources of electricity generation because of its abundant local supply and affordable price.**

Until the end of December 2019, coal production in Indonesia had reached 565.81 million tons. Therefore, we need to utilize this fuel with care and vigilance. As a pioneer of clean generation, we have adopted and applied environmentally friendly technology to increase the efficiency of using coal.




**We provide guidelines for our suppliers to ensure that all of our main contractors conformed with ISO 14001, ISO 9001, and ISO 50001 throughout their daily operation.**

These low sulfur coals (less than 0.2%) enable Cirebon Power to meet Sulfur Oxides (SOx), Nitrogen Oxides (NOx), Particulate, and Mercury threshold requirement.

Apart from material suppliers, our supplier boundaries also cover independent contractors who helps us in performing operation and maintenance activities for Cirebon #1 and construction activities for Cirebon #2. To ensure the environmental impact and quality performance of our entire plant operation, we provide suppliers with standard guidelines. The evaluation or selection process consists of legal documents, quality management (ISO Standard), technical and commercial evaluation. We have also considered all of our main contractors in our measurement process and ensured they have conformed with several standards throughout their daily operations including ISO 14001, ISO 9001, and ISO 50001.

# Our Shareholder

[GRI 102-5]

Marubeni is involved in the handling of products and provision of services in a broad range of sectors. These areas encompass importing and exporting, as well as transactions in the Japanese market, related to food materials, food products, textiles, materials, pulp and paper, chemicals, energy, metals and mineral resources, transportation machinery, and includes offshore trading.

Komipo is a power generation company spun off from Korea Electric Power Corporation on April 2, 2001, following the enactment of Electric Power Industry Restructuring. Komipo operates six power generation facilities, which supply 13% of all domestic electric power in South Korea and takes lead in developing and utilizing renewable energy as exemplified with Yang Yang pumped storage power plant and wind power plant, which are much esteemed for applying environment-friendly energy.

Samtan is one of the leading energy specialized companies in South Korea. Samtan has devoted to energy related industry. In 1982, Samtan was involved in a proactive resources development business from the beginning of unfolding the overseas energy development. Samtan has succeeded in developing their businesses in Indonesia through their own original capital and technology.

Indika provides integrated energy solutions for its customers through its diversified investments in the areas of energy resources, energy services and energy infrastructure i.e., through its strategic investments in the areas of coal production (PT Kideco Jaya Agung); engineering, procurement and construction services (Tripatra); engineering, mining and construction contractor & services (PT Petrosea Tbk); and a power generation project (PT Cirebon Electric Power).

JERA Co., Inc. (“JERA”) was established on April 30, 2015 based on the comprehensive alliance entered into between Tokyo Electric Power Company (since renamed and referred to herein as “TEPCO”) and Chubu Electric Power Company (“Chubu”) encompassing the entire energy supply chain from upstream fuel investment and fuel procurement through power generation. In July 2016, JERA succeeded its parent companies’ fuel business and the overseas power generation business, and aims to become one of the world’s leading energy firms.

# Governance Structure

[GRI 102-18]

Cirebon Power is established by two companies, PT Cirebon Electric Power (operated by PT Cirebon Power Services) and PT Cirebon Energi Prasarana. The governance structure for the companies are similar, with the Board of Commissioners and Board of Directors defining procedures, values and long-term planning to meet the mission of Cirebon Power.

In addition, the board is also supported by:

- Quality, Environment, Health and Safety Committee (QEHS)
- Audit Committee
- Remuneration Committee
- Sustainability Committee

## Board of Commissioners

# Good Corporate Governance

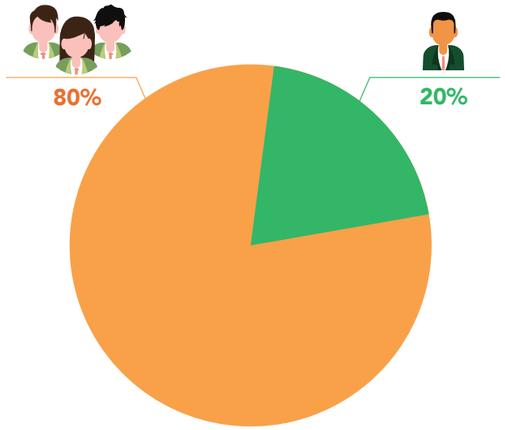
[GRI 205-2]

**As a sort of concern to Cirebon Power for any activity relating to corruption, our company regulation and internal policy have provided provisions which prohibit any party under supervision of or in any other relationship with the management of Cirebon Power from committing any kind of corruption.**

Generally, Cirebon Power adheres that any kind of expenses Cirebon Power may have shall not violate any applicable law or any other equivalent regulations prescribed by public offices or other institutions. During 2019, there is no confirmed incidents of corruption occuring throughout Cirebon Power's business activities.

Cirebon Power has been actively providing training/ presentation to all Board of Directors, Board of Commissioner and other stakeholders regarding **Bribery** and Gratification at least every 2 (two) years while updating the Company Regulation. Our internal training is conducted every 3 (three) years or at any time a new regulation is issued. The last training was conducted in September 2015. In this regard, we aim to hold this training annually.

At the moment, 80% of our employees have received the internal training and 20% have attended the last training or presentation.




**Cirebon Power is currently working on a participation in ISO 37001 both for certification and in-house training regarding Anti-Bribery Management System, which would be implemented in 2020.**

# 02 INTEGRATED CLEAN COAL TECHNOLOGY





We implement the most advanced technology to provide clean and efficient energy.

## Why it Matters?

**Efforts have been made by the Indonesian government to ensure the availability of electricity across Indonesia. However, as of 2019, only 19% of the projected 35 gigawatts planned are online. It is targeted that by 2020, another 8,823 Gigawatts would be added to the electrical grid.**

The government has consistently published an updated version of the Electricity Supply Business Plan (RUPTL) each year that reflects a ten-year forecast of electricity growth followed by the development of a power project plan to meet those demands. The RUPTL for 2019-2028 indicates that there will be an increase in coal-fired generation target to around 54.6%.

As an Independent Power Producer (IPP), Cirebon Power has played a significant role to support government plans through the establishment of coal-fired power plants. With its abundant local supply, coal is the most affordable option in meeting electricity demand due to its lower price compared to other energy sources. Using coal as an energy source becomes a preferred alternative to fulfil the government's challenge in reducing electricity price.

Though perceived as environmentally harmful, coal-fired power plants will still be required to fulfill the electricity demand in Indonesia based on RUKN (2015-2034). Hence, To reduce emissions or to achieve near-zero emissions from coal, Cirebon Power has adopted and applied advanced technology, such as High Efficiency Low Emission (HELE) coal-fired power plant.

The effort we made for our powerplant is aligned with Goal #7, Affordable and Clean Energy, and #12, Responsible Consumption and Production, of the Sustainable Development Goals.


## OUR APPROACH
### [GRI G4-DMA]

The Application of Clean Coal Technology

Continuous Improvement through Plant Modification Request (PMR)

# The Application of Clean Coal Technology

[GRI 102-16]

**Our High-Efficient Low-Emissions (HELE) coal power plant utilises Supercritical and Ultra-Supercritical technology.**

Cirebon Power uses  High Efficiency Low Emission (HELE) coal power plants to generate electricity. HELE coal power plants run at much higher temperatures and pressures and thus achieve higher efficiencies than conventional Pulverized Coal Combustion units and substantial reductions in $CO_2$ emissions. Such advanced technologies allow us to generate electricity from low-calorific coal. It is cheaper than high-calorific coal and thus helps the government implement its plan to provide low-cost electricity.

## Supercritical Technology

To improve the efficient utilization of coal, Supercritical technology is implemented to our plants. Unlike subcritical power plants where more heat is needed in the boiling phase to evaporate the water, the plant operates above the critical pressure (22.064 MPa) which eliminates the boiling phase from the process and improves cycle performance.

## Tangential Firing System and LO-NOx Burners

Since NOx is a massive pollutants to our environment, keeping NOx emission level in check is a vital part of the operation in our company. NOx emissions are produced naturally from extremely high temperatures. Staging the air to some degree will slightly reduce the temperature of the furnace and thus reduce the production of NOx. Our tangential firing system and LO-NOx burners are operated by directing the fuel and air streams to directed firing circles from the nozzles of the wind box. This tangential firing system provides more effective mixing of fuel and air by turbulence and diffusion, allowing sufficient time and composition for fuel combustion to be complete.

## Ultra-Supercritical Technology (USC)

According to the International Energy Agency (IEA), Coal still dominates as the most-used source of electricity, according to studies. Environmentally friendly and economical power plant is essential for meeting rising worldwide energy demand. Higher $CO_2$ emissions are rising the need to produce greener coal-based electricity. USC meets the high-efficiency criteria for reducing both fuel costs and emissions. This also acts as a reliable low-cost electric power source. Furthermore, This technology would be just as environmentally friendly as comparable investment in renewable energy projects. Compared to an older coal-based power plant, this power plant can bring significant reduction of fuel needed over the life of the power plant and reduce emissions of around 20- 30%.

# Continuous Improvement Through Plant Modification Request (PMR)

Continuous enhancement of key performance indicators remains our goal to ensure plant efficiency and reliability as well as to further increase our environmental and social effects of existing technologies. Our progress is reported via Plant Modification Request (PMR). The sequence of changes is calculated on the basis of predefined prioritisation.

The sequence of modifications are determined based on predefined prioritization.
The scope of PMR includes:

- Modification and Removal of Existing System and Equipment
- Adjustment of Control Logic
- Additional installation of Equipment

Furthermore, we continuously innovate to improve our efficiency by:

**Reducing technical** losses from pressure and temperature lost, condenser pressure lost

Increasing **cooling tower** efficiency.

In **2019**, our technical losses were coming from turbine loss of **2.86%** and boiler loss of **0.95%**.

## Electricity Generation Efficiency

**[EU 11]**

Since Cirebon Power started operation, plant rate efficiency has always been at 37-38%. As part of our commitment to further improve our plant efficiency, several programs developed for year 2019 are as follow:


- Optimisation of Operation 92900 GJ
- Cooling Tower Optimisation 110 GJ
- Modifed Vibrating Screen for Coal Handling 4040 GJ
- Conversion of volatile treatment to oxygenated treatment 120 GJ
- Baby Cooling Installation 1580 GJ
- Electric Precipitator Optimisation 13500 GJ

- Bicycling on Site 110 GJ
- Worker Shuttle Service Program 610 GJ

- Replacement of Fluorescent Lights with LED 110 GJ
- Timer on Lighting System 30 GJ
- Timer on Cooling System 910 GJ

## Reliable Energy Generation

### [EU1, EU10, G4-DMA (FORMER EU6)]

**As stated by RUPTL 2019-2028, the demand for electricity in Indonesia will rise by about 6.43% annually, with roughly 56 GW of power needed to be installed. As Independent Power Producer (IPP), we contributed through the construction of a 1x1000 MW coal fired Ultra-Supercritical power plant.**

Furthermore, we modified our vibrating screen on coal handling where we downsized the filter holes from 10 x 10 cm to 7 x 7 cm. This allows the removal of our 2100 watt crusher and saves 2,246,400 kWh per year of energy which is equals to reduction of 780,982 Ton $CO_2$ eq. per year, 0.07 ton $SO_2$ eq. per year, 0,086 ton NOx eq. per year and 0,009 ton PM10 eq per year.

Maintaining the stability and enhancing the efficiency of existing plants is crucial to meeting the demand for electricity based on policy regulations and energy perspectives. In 2019, two major approaches were applied via PMR. The goal is to avoid failures on essential power plant components that could endanger the operation of our plant and the protection of our power supply.

## Our strategies include:

**Upgrading the material of our boiler tube**

Over the course of 2017 to 2019, it was found that our boiler tubes leaked under immense temperature. In 2018 we had conducted a feasibility study on improvements for our boiler tube materials and hence in 2019, we implemented an upgrade for our boiler tubes according to the results of our feasibility study.

**Installing vibration sensor for pulverizer gearbox and motor**

The plan for a vibration sensor was conceived a couple of years prior and was finally installed in 2019. This sensor will monitor any faults on a periodical basis.



## Transmission and Distribution

### [EU3, EU4, EU12]

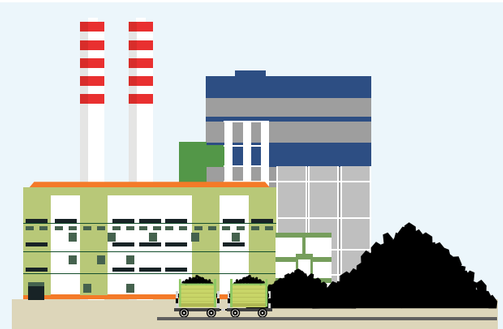
The electricity we generate from our power plants is purchased by the Indonesian government (*Perusahaan Listrik Negara* / PLN). The power generated at the Cirebon #1 plant is distributed through PLN Brebes (185 MW) and PLN Sunyaragi (475 MW) to the Java Madura Bali power grid. The Cirebon #1 power plant provides a transmission line of about 1.5 km with the voltage level of 150 kV while the Cirebon #2 power plant is designed with 18.2 km lines with a voltage level of 500 kV.

## Energy and Emission

### [GRI 302-1, GRI 302-3, GRI 305-1, GRI 305-4]

In 2019, we consumed 2.535.631 ton of coal and 965 KL fuel oil to initiate plant start up after maintenance or outage. In 2019, our energy intensity based on energy consumed is 12.70 MJ/kWh of electricity produced, which is equivalent to 0.97 kg of $CO_2$ emitted per kWh, a 0.01 kg decrease from last year. The reduction of our energy intensity this year is the result of efficiency improvement in power plant operation. The amount of electricity sold is based on some aspect such as Planned Outage (PO) for Major Overhaul (MOH), Forced Outager (FO), Reserve Shutdown (RS), Outside Plant Management Control (OMC), Forced Derating and Maintenance Derating.

In the future, we are planning to conduct vehicle emission testing as part of our commitment towards a greener electric generation.



In 2019, we consumed **2.535.631** ton of coal and **965** KL fuel oil to initiate plant start up after maintenance or outage. We used **71,644,061** GJ of energy for our production of electricity. We sold **4,592,568** MWh of electricity throughout the year. Our net consumed energy is **55,110,816** GJ.

# 03 COMMUNITY INVOLVEMENT & DEVELOPMENT





**Being the responsible and good corporate citizen, Cirebon Power strives to improve the livelihood of our community by giving back to them through our community development programs.**

## Why It Matters?

Cirebon Power recognizes that it is our responsibility as good corporate citizens to help strengthen the communities in which we live and work.

Our CSR initiative was constructed in 2007 through the establishment of Environmental and Social Impact Assessment (ESIA) conducted in Cirebon #1, that mainly focuses on social and community activities. Based on our commitment to grow and develop with the community, we aim to improve the community's socioeconomic wellbeing by targeting quality improvements in entrepreneur skill, education, health, and the environment. These targets are reflected in our goal of contributing to global sustainability goals. Our programs are in accordance with the Sustainable Development Goals No. 3 Good Health and Well-being, No. 4 Quality Education, and No. 15 Life on Land.


In 2019, we undertook a social mapping to identify and obtain a complete picture of local communities' social conditions, e.g. challenges, potential, and needs, especially those related to sustainable livelihoods. Such activity is important since specific social factors apply to each group. Therefore we visit and discuss directly with leaders and groups in the community to find out what the community needs. Not only that, we also monitor the development of the programs to determine the degree to which such services affect the community.

Along its journey, through the mentorships offered in the community, many community development programs slowly improve. Indicators are used as a guide to indicate that the running programs are focused on the planned and expected performance. Our programs' indicators are:

### Sustainability
The existence of better social, economic, environmental and institutional sustainability in the community

### Impactful
There are positive impacts felt by our stakeholders.

### Outreach
Have a broad reach and right on target.

### Self Sustain
The ability of the community to be independent in various aspects of life.

### Reputation
A company that operates well to gain stakeholder trust.

Our programs are designed to answer the 3 main pillars Cirebon Power formulated, namely Small Community Business Development, Livelihood Support & Livelihood Restoration Program, followed by other pillars. We collaborate with the community in carrying out the programs, in order to achieve greater benefits and impacts. With this participation, the likelihood of success of the program being carried would be more desirable as the group feels greater program ownership and shares responsibility for the outcomes.

## HIGHLIGHTS

- 122 Fishermen and Farmers received Livelihood Support Programs
- 3,400 infants and toddlers received nutritious food
- 16,400 outstanding students received the achievement rewards
- 751 Micro Financing for local small business
- 10,476 people participated in free medical check-up
- Planted 30,300 trees in areas where protection trees are needed
- 992 vocational training for villagers
- Life and accident insurance for 21,000 fishermen
- Planted 2,000 mangroves

## OUR APPROACH

- Community Business Development
- Livelihood Restoration Program
- Reinforcing Livelihood Support
- Maintaining Life's Quality

# Community Empowerment Through Skill Development

[GRI 203-1, GRI 203-2, GRI 413-1]

## Rumah Terasi Kanci

In 2019, Cirebon Power continued to concentrate on helping group of people who produce traditional shrimp paste under group of Rumah Terasi Kanci to continue to  produce goods that meet relevant health standards. We conducted training in hygienic production, packaging, finance, and marketing. Rumah Terasi Kanci succeeded this year in manufacturing not only natural shrimp paste but also terasi-containing chips.

The product has been approved *halal* by the West Java Province Majelis Ulama Indonesia. Promotions were conducted by joining in Bazar on Cooperation Days at Regent office yard for a three-day event to increase the sales value of the goods. This commodity is hoped to be distributed not only in Cirebon but also to other regions.

## Cirebon Batik Kanci Group

The community accomplished multiple milestones during 2019. Currently, a proper 'batik tulis' has been developed by 50% of community members. The group also manufactured its main products, namely Batik Pesisir Kanci, and produced other products, including 'batik cetak,' using natural color to create environmentally sustainable products. The group also cooperated with some official batik shops, as the demand for batik tulis items was massive.

## Rejeki Mundu Fish Crackers & Steamed Fish Group

In 2019, Cirebon Power conducted a number of training to improve the group's capacity. The curriculum includes certain practical skills such as journal transaction management, weight scaling and financial planning. As a result, this group managed to create a new product including Bandeng Presto and Bandeng crackers. The rising demand made it possible for the products to be produced in bigger quantity.

## Cooking and Catering Group (Pawon Mimi)

The Mimi Pawon Cooking Group was registered in 2019, and obtained a permit from *Pangan Industri Rumah Tangga* (PIRT) provided by the Cirebon Regency SME Health Service. Cirebon Power also cooperated with Cirebon Polytechnic Tourism in providing instruction on new grilling techniques.

## Klambi Cirebon Sewing Group

Several training sessions have been held during 2019 to update the Sewing Group's capabilities. The participants had a good spirit of being able to make different types of items. The Klambi Cirebon Group achieved good results from making goodie bags, jackets, laptop bags and clothes.

## Ratu Cirebon Make-up Artist

In 2019, Cirebon Power offers a more advanced MUA training to further improve the skills/capacities of members in doing make-up. The Ratu Cirebon Makeup Group has thus been able to provide makeup for weddings, school activities like Kartini Day celebrations and graduation from school this year. This group also rents out different wedding decorations like *gebyok*, stage, chairs, and other equipments.

# Reinforcing Livelihood Support

[GRI 203-1, GRI 203-2, GRI 413-1]

## "Jelombang Selar" Fishermen Group

In 2019, we continue to facilitate fishing net and equipment to increase catch fish and continue to plant 2,000 mangroves and maintenance in the Kanci River Estuary as a CP contribution to preserving the ecosystem. Fishermen get extra money for this activity.

Cirebon Power also makes it possible for the community to establish production of crab cultivation in the mangrove region as alternative livelihood.

## "Berkah Mandiri" Cricket Farmers

The group continues farming this year through the growing of hatchery eggs and crickets. The farmers were a regular supplier to sellers of birds and to bird farms. We also carried out a comparative analysis and benchmarking with a successful cricket farmer at Majalengka, West Java.

## P3A Farmers Group

Farmers in Kanci Kulon now need to rely on water pumps to irrigate their rice fields, as the previous reservoir irrigation is destroyed. In 2019, Cirebon Power helped them provide a normal irrigation and encourage 300-meter plastic hose to supply water to irrigation channels that will be used for 160-hectare paddy fields.

## Mundu Fisherman Forum

Cirebon Power continues to supply food stock needs in 2019, as well as transportation for coal barge & tugboat crews. In addition, in partnership with Marine Police and the Cirebon Regency Marine / Fishery Agency, we conducted Sea Safety Training to better equip fishermen with the requisite safety skills needed for their occupation.

## "Mas Pele" Catfish Breeders

The harvest of 2019 brought dividends that can be shared among group members.

In addition, we have helped introduce an innovation program to develop alternative feeds made from crab shells, shrimp leftovers (supply from the Fishermen group) and rice bran to reduce the cost of buying imported feed mills. This trial found a 35% improvement in feed costs.

## "Gopes" Wood Crafting

In 2019, Cirebon Power set up a new group based on possible local wood craftsmanship sources and supports them through workshop renovation, providing the necessary equipment, and initiating souvenir product trials. We use Cirebon #1 Power Plant wood waste as a resource for making boat miniature, thus increasing the economic benefit, as well as introducing waste use. The sale is increasing well and even there are demands from outside Java.

# Restoration Program for Community Livelihood

[GRI 203-1, GRI 203-2]

## Koperasi Mitra Dhuafa

In cooperation with Mitra Duafa, our microfinance scheme has adopted Grameen Bank Concept which has proven successful in microfinancing. Until December 2019, there were 751 beneficiaries received a financing and mentoring with the total disbursement of Rp. 1,500,000 to Rp. 5,000,000 with the below varient of businesses.

2019 KOMIDA Beneficiary Data by Villages:

| No | Village | Beneficiary Total |
|---|---|---|
| 1 | Kanci | 141 |
| 2 | Kanci Kulon | 176 |
| 3 | Waruduwur Mundu | 240 |
| 4 | Pengarengan | 150 |
| 5 | Astanamukti | 44 |
| | Total | 751 |

| Type of Business | Total Number |
|---|---|
| Farming | 134 |
| Agriculture | 46 |
| Miscellaneous Investment | 82 |
| Canteen | 190 |
| Selling Vegetables | 30 |
| Selling Sea Catches | 66 |
| Small Groceries Store | 111 |
| Selling Clothes | 44 |
| Cleaning, Washing, Barber and etc | 11 |
| Handicraft | 1 |
| Medicine, Herbal, Cosmetics Business | 6 |
| Sewing | 4 |
| Sanitary Business | 17 |
| House Water Supply Service | 0 |
| Selling Traditional Food | 0 |
| House Equipment & Furniture Business | 3 |
| Others | 6 |
| Total | 751 |

## Vocational Training Center

Our primary objective for this training center is to enhance the professional skills of brilliant individuals in nearby villages (Citemu, Waruduwur, Mundu, Kanci Kulon, Kanci, Kanci Kemis, Bandengan, Astarajapura, Kandawaru, Pangenan) that could be further used in their ventures of entrepreneurship. These skills include: maintenance and operation, welding, scaffolding fitter, and other workforces.

We cooperate with our in-house Operation and Maintenance (O&M) team as well as the Local Vocational Training Center (BLK) under the Ministry of Manpower in preparing the training materials.

A total of 6 months of training for O&M and 240 hours of training per year for BLK will be attended by participants. To assess their skills, we conduct examination at the end of their training. Participants will also receive certificates from both the BLK and the National Professional Certification Body (BSNP) upon passing the exam.

Throughout 2019, we had 128 students enrolled in our vocational classes. Not only equip technical skills to the students but we also conduct personal mentoring and consultation routinely. Moreover, we conducted a session on Soft Skills in November 2019.

Those who have passed the vocational training program have a greater chance of being able to take part in the admission selection process according to their skills.

| Training 2019 | Have worked for Cirebon Power's projects |
|---|---|
| Welding Training SMAW (1G-2G,1F-2F) | 3 |
| Welding Training (HDEC) | 0 |
| Electricity Power Installation Technician Training | 1 |
| O&M 1st Batch | 6 |
| Welding Training SMAW (3G) | 1 |
| Scaffolder | 5 |
| Fitter | 6 |
| Welding Training SMAW | 11 |
| Total | 33 |
| Total person | 128 |
| in Percent | 26% |



# Maintaining Life's Quality

[GRI 203-1, GRI 203-2, GRI 413-1]

## Health Program

### Fishermen Insurance

In 2019, 21,000 fishermen were successfully registered as recipients of this insurance. In its implementation, we collaborate with West Java Regional Police, Jasa Raharja Insurance and Coastal Fishermen Group. The fishermen's insurance policy has been adopted as a national Polairud policy since 2018, with a view to prospering fishermen's lives.

### Free Medical Treatment

Starting from 2009, every year Cirebon Power organizes Free Health Examination activities for all communities in the Kanci, Mundu Pesisir, Bandengan, Kanci Kulon, and Citemu villages. This activity is also supported by Karang Taruna, Family Welfare Empowerment (PKK), and Community Health Center. A total of 1,500 residents have received benefits from this program in 2019. The access and services are made easy for the elderly and children.

### Integrated Health Service Center

In 2019, with the participation of 220 Posyandu cadres, it was recorded that as many as 3,400 toddlers received the PMT at Posyandu. Not only toddlers are the focus of Posyandu activities, guidance for parents, especially mothers, is also carried out. Cirebon Power also conducted a comparative study, inviting 44 selected Posyandu cadres to learn about Posyandu management and administrative planning.

### Ambulance Service

To facilitate the mobilization of villagers when emergency medical matters occur, we provide three ambulances that are ready to be used 24 hours a day. In 2019 there were 712 recipients in 6 villages using ambulance services. This ambulance was operated by volunteers chosen by the village office and Cirebon Power.

# Educational Program

## Rewards for Outstanding Students

Rewards for high achieving students were given in 2019 to 1,200 elementary and junior high school students who were ranked in the top 10 in the school, with each student receiving IDR 200,000. Not only in cash, awards are also given in the form of various prizes every year. By giving this award, it is hoped that it can spark the enthusiasm of students to continue their education to a higher level.

## Study Tour

In 2019, Cirebon Power invited 650 High School (SMA) students and universities, to have a glimpse of our activities in technological innovation, environmental management, and community programs.

The site visit study was aim to give them opportunity to learn how the technology is implemented and how the environmental and community are managed, as well as to grow their learning spirit  so they can have motivation to study more and higher to get the same opportunity to work and implement the technology in the future.

## "Saba Sekolah"

We devote this initiative to creating and improving awareness and information about social and environmental problems among young people. To SMKN 1 Cirebon, SMK Samudra, and Swadaya Gunung Jati University Cirebon, experts and practitioners from Cirebon Power visited and shared their expertise and insights in the areas of scientific, business, human resource management, environmental management and Community Development Program Management.

## Library & Literation Program

Throughout 2019, the reading park and library facilities managed to draw children from nearby coastal villages to read regularly and attend some literacy events that were carried out. This Reading Club is entirely run by volunteers, who consist of teachers from local primary schools, under the guidance of the Gelemaca Group (Cirebon Reading Community). Almost 200 children attended the Literacy Festival. There were also outbound events where the kids could engage and cultivate their creativity. In weekday around 50 children came to the library and around 100 – 150 children in Saturday and Sunday.



# Infrastructure and Environmental Program

## Cirebon Power Park

Our company has launched Cirebon Power Park, constructed over 5 hectares of land in 2018, to provide more public spaces for the communities.
A library and sport facilities will be built within the park in 2020 as an educational place for the local communities. Routine maintenance is ongoing and, in some places, a renovation is carried out to be used as facilities for Small Medium Enterprises (SMEs).

## Community Environmental Forum

We continued to assist the Community Environmental Forum in doing their activities. While also supporting the activities of the group, we also supported the renovation of the seedling nursery and planted 500 protective trees in vulnerable villages. We did not record mangrove as one of the protective trees.  The seed nursery was housed in a new 1,000 sqm area behind Cirebon Power Park. In July, the Community collectively built a paranet in the new trees nursery site.

## Mangrove Cultivation and Restoration

The goal of this program is to restore the mangrove area while at the same time trying to make the region suitable for crab cultivation and to increase the biodiversity. We partnered efforts with the Community Environmental Forum and Jelombang Selar Fisherman Group. Preservation of mangroves has been consistently performed. In Kanci shoreland, 2.000 mangroves were planted in 2019. The trees were bought from the Jelombang Selar Fisherman Group's mangrove nursery cultivation.

## Waste Management

Cirebon Power has several environment projects that the community around the plant will directly feel the impacts. Another of them is the facilitation of the Kanci Kulon and Waruduwur waste containers. The containers were turned over to village officers and taken care of. The community is still using the waste containers in 2019.

# 04 PRESERVING NATURE





**We go beyond compliance to protect our environment. For us, protecting our environment is not just a responsibility mandated by the government but our genuine aspiration. That is why we go above and beyond for environmental protection.**

## Why It Matters?

Businesses have a crucial role to play in protecting the environment. We believe this is a vital component not only for our sustainability in this generation but also for many generations ahead. We commit to this responsibility and have been one of the pioneers in utilising and implementing clean and efficient coal technology.

As a proactive measure, we apply precautionary principles to ensure effective monitoring and environmental security. We perform professional, measurable and accountable management of water, waste and air emissions, as well as the preservation of local endemics. Working with suppliers, consumers, NGOs and governments in a partnership is vital to the sustainability of our environmental initiatives. Those actions demonstrate how we integrate the SDGs into our sustainability plan, especially Goal 7: Affordable and Clean Energy, Goal 12: Responsible Consumption and Production, and Goal 13: Climate Action.


## OUR APPROACH

- Environmental Compliance
- Conservation of Biodiversity
- Air Emission Management
- Water Quality Management
- Wastewater Management
- Hazardous and Non-Hazardous Material Engagement

# Environmental Compliance

[GRI 307-1]

**We are committed to continuously improving our environmental performance through efficiency and innovation beyond compliance. In 2019, we are proud to announce that we have been awarded Green PROPER from the MoEF.**

**Cirebon Power is located at an area of 315 hectare in Cirebon Regency. Cirebon Power #2 is built on government-owned land through a land use cooperation agreement with the Ministry of Environment and Forestry of Republic Indonesia (MoEF).**

This was accomplished with the aid of a recent major government policy which boosts the acceleration of infrastructure development and minimizes land acquisition barriers by using the state owned land. We are the first company to undertake development with the scheme. The area of Unit II is the land owned by MoEF previously utilized by State Forest Company (Perhutani).

We believe that data validity is an important aspect and act as a guideline in monitoring environmental performance which becomes our priority. Every target and program is documented in Objective, Target, Program (OTP) in accordance with ERA (Environment Risk Assessment), environmental management standard, internal monitoring, and external audit. In the process, OTP is integrated with the International Environmental Management System (EMS) ISO 14001. We consistently conduct sampling of water quality, air quality, waste, and other environmental parameters in laboratories. These laboratories have been accredited ISO 17025 by the National Accreditation Body of Indonesia (KAN) and registered in the Ministry of Environment.

Our 2 main environmental innovations for 2019 was the conversion of All volatile Treatment (AVT) to Oxygen Treatment (OT) and modification to our vibrating screen on our coal handling. Until today, no administrative sanction and fine related to violation of quality standards or ecological management has been recorded.

# Conservation of Biodiversity

[GRI 304-1, GRI 304-3, GRI 304-4, EU 13]

**Biodiversity is a significant measure of environmental health. Pollution, climate change or human behaviour can impact a large variety of biodiversity. The loss of a species in an ecosystem could cause a domino effect that destabilizes the entire system. Following our desire to preserve endemic species, we created a number of goals and programs to tackle ecosystem and biodiversity issues.**

In 2019 and beyond, we have further plans to collaborate with government agencies and local environmental communities (FORMAS-PL) in the preservation and protection of biodiversity in mangrove areas around the powerplant. Collaboration in conservation is implemented with the installation of conservation education boards and joint commitment in biodiversity conservation between our company with the Conservation Agency of West Java Province (BKSDA) and Environmental Agencies of Cirebon District. Moreover, we worked on the goals established in 2018 which were:

Develop a road map of biodiversity preservation and protection

Conducting baseline data for biodiversity

Conducting biodiversity training for employees

The programs that support our goals are:

## Mangrove, Coastal and Biodiversity Conservation (MATAHATI)

**We conduct an annual mangrove planting in surrounding rivers since 2009 together with environmental NGOs and local fishermen in numerous location where the mangrove ecosystem is damaged.**

We are committed together with the Conservation Agency of West Java Provincial and the Environmental Agency of Cirebon Regency to carry out biodiversity conservation in the mangrove and coastal areas around the company. We conduct an annual mangrove planting in surrounding rivers since 2009. Along with environmental NGOs and local fishermen, planting of mangrove trees were carried in numerous locations where the mangrove population has lessened.

In 2019, a biodiversity conservation program was carried out by installing education boards regarding preservation and protection of Biodiversity, plantation of 335 land trees and plantation of 10,000 mangroves. Replanting is done for trees that were damaged or died.

| Bird Name | Scientific Name | Number of Individuals | IUCN |
|---|---|---|---|
| Grey heron | *Ardea cinerea* | 9 | Least concern |
| Javan plover | *Charadrius javanicus* | 9 | Near threatened |
| White-winged tern | *Chlidonias leucopterus* | 8 | Least concern |
| Eurasian whimbrel | *Numenius phaeopus* | 3 | Least concern |
| Malaysian pied fantail | *Rhipidura javanica* | 7 | Least concern |
| Milky stork | *Mycteria cinerea* | 1 | Endangered |

**We also committed together in conservation of protected bird regarding the regulation of the Minister of Environment and Forestry Number P.106 / MENLHK / SETJEN / KUM.1 / 12/2018 and included in the red list (IUCN). Based on biodiversity monitoring, it is known that there are 6 species of birds that are protected and total around 35 species of bird are live in the coastline and mangrove habitat around us. These protected birds include the Cerek Jawa (*Charadrius javanicus*), Kipasan Belang (*Rhipidura javanica*), Dara Laut Sayap Putih (*Chlidonias leucopterus*), Gajahan Pengala (*Numenius phaeopus*), Bangau Bluwok (*Mycteria cinerea*), Cangak Besar (*Ardea cinerea*).**

These mangrove areas had become a vital habitat for much fauna and flora life and even endemic species of birds. We conducted biodiversity monitoring for flora and fauna, we give our special concern regarding protected, endemic and migrant bird in the mangrove areas around the company.

## Aquatic Biota Regular Monitoring

An external certified laboratory conducted regular monitoring on aquatic biotas on surrounding rivers and coastal areas.

Once every three months, water and sediments sampling from the river and the sea were collected and tested. Samples of planktons and benthos were also collected to give an overview of biological indicators on the health of the ecosystem. This year's results indicate that we have complied with the environmental regulations regarding aquatic biotas.

## Community Environmental Forum

The Community Environmental Forum has been in partnership with Cirebon Power since 2015 and remained active in 2019. This forum is made up of 17 cross-professional and cross-region participants dedicated to environmental issues. Their activities range from planting and restoring mangroves in the CP1 / CP2 local area to providing seedlings for mangroves.

Other activities include planting 20,000 trees such as soursop, longan, mango, *Terminalia catappa*, mahogany and other species of trees around Cirebon Power's surrounding areas. With the support of *Karang Taruna* and other like-minded community forums, we prioritize the distribution of our plants to unoccupied land on the roadside.

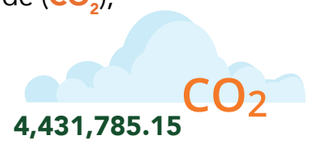
# Air Emission Management

[GRI 305-7]

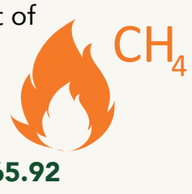
**It is expected that coal-fired electricity generation will still be the main generator of electricity throughout Indonesia in the foreseeable future. While utilizing the abundance supplies of coal in Indonesia, we maintained a high performance of pollution control equipment for our coal-fired units.**

The system monitors the emission of Sulphur dioxide, nitrogen oxides, and particulates. Moreover, we also carry out maintenance of all pollution control equipment to ensure optimal performance by performing Major Overhaul in December 2019. This work included maintaining all equipment of pollution control to ensure optimal performance from all equipment.

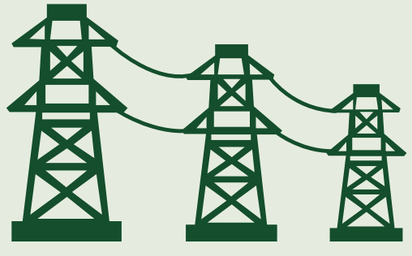
Throughout 2019, we emitted a total of **4,431,785.15** Ton of $CO_2$ equivalent of carbon dioxide ($CO_2$),




**65.92** Ton of $CO_2$ equivalent of methane ($CH_4$) and **44.03** Ton of $CO_2$ equivalent of azanide ($NH_2$).




This measurement was verifed by the Government through an application named **APPLE GATRIK**, a web-based application developed by ESDM to compile all power plant's emission data.



We also implemented solutions for cleaner emission which are:

**Ash Utilization Synergy with Cement Manufacturers**

Our fly ash shelter has a capacity of 1,350 tons and serves as a temporary shelter. Furthermore, 100% of the stored ash is transferred to a closed transport truck, to be brought to the cement factory, where ash is used as the cement making material. Additional/auxiliary fly ash silo with more than three times the capacity of the original silo has been installed to anticipate times where trucks are not allowed to pass on public roads such as during public holiday.

**Coal Storage Wind Breaker**

Our coal shelters are equipped with a 13-meter windbreaker that holds the wind around the shelter and prevents coal dust from fying into the surrounding environment. We also planted more than 7 layers of Acacia mangium trees to reduce the pollution of coal dust.

**Electrostatic Precipitator**

The Electrostatic Precipitator function can be seen from the emission parameters, where the total particulate emissions produced range from 25mg / Nm3, well below the government threshold of 100mg / Nm3, with a thickness of 10%, or only half of the maximum limit set.

**Coal Yard Dust Suppression**

The plant's coal yard is also equipped with a "dust suppression system" where water is sprayed onto the coal during loading and unloading activities in dry seasons.

**Continuous Emission Monitoring System and Ambient Air Monitoring System**

Throughout 2018 our Continuous Emission Monitoring System (CEMS) test result has complied with government regulation. Cirebon Power has also installed an Ambient Air Monitoring System (AAMS) approximately 4.5 km west of the chimney. This location is indicated to potentially have the highest concentration of NOx caused by the Plant's operation.

Furthermore, we conducted various programs throughout 2019 that reduces the amount of air pollution. The result of each program is as follows:

| Program | Reduction of Air pollutants (tonne) | | | |
|---|---|---|---|---|
| | $SO_2$ | NOx | PM | $CO_2$ e |
| Coolant Water Pump Optimization | 0.84 | 0.99 | 9.11 | 8973.00 |
| Replacement of Fluorescent Lamps with LEDs | | | | 10.96 |
| Mangrove Tree Planting | | | | 53.85 |
| Timer on the Cooling System | | | | 87.54 |
| Cooling Tower Optimization | 0.08 | 0.10 | 0.10 | 898.00 |
| Mini Cooling Installation | 0.82 | 0.01 | 0.02 | 152.00 |
| Electric Precipitator Optimization | 0.12 | 0.14 | 0.02 | 1309 |
| Conversion of Volatile Treatment to Oxygenated Treatment | | | | 11715.00 |
| Vibrate screen modification | 0.04 | 0.04 | 0.01 | 390.49 |

# Water Management

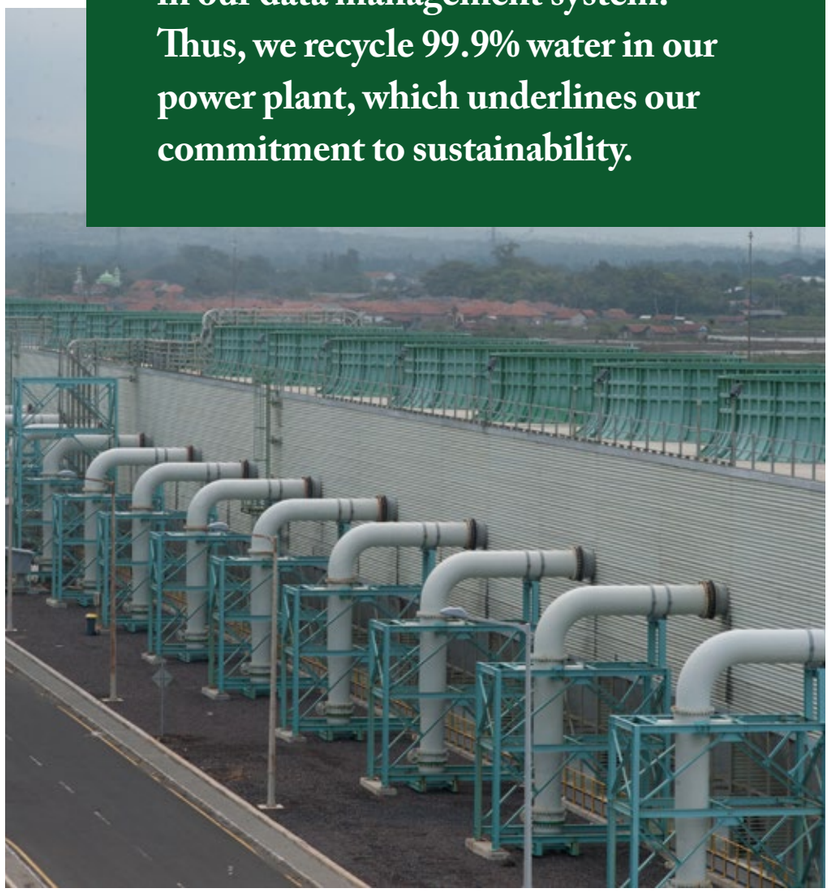
[GRI 303-1, GRI 303-2, GRI 303-3, GRI 303-5]

**It is important for us to not underestimate the severity of water crises all over the world and Indonesia. Cirebon Power recognises this issue and has taken measures to manage these limited resources sustainably.**

To allow our electricity generation, we receive permission from the Indonesian government to take in nearby seawater from the Java Sea and use it as our primary source of water. Java Sea is not considered a water stress area. We collect water from seawater and treat it into clean water to meet our operational requirements.

We consume the water for our operation, especially for steam generation. Once the water is used, various water management system is used before either being reused or discharged back to the Java sea. Our discharge is monitored and sampled annually to ensure the effluents meet the required government standard.

**Throughout 2019, we used 722 thousand Mega Liter of water with merely 1,025.36 Mega Liter withdrawn from the sea, as recorded in our data management system. Thus, we recycle 99.9% water in our power plant, which underlines our commitment to sustainability.**



| Parameter | Unit | Quality Standards | 2nd Semester of 2019 | | | |
|---|---|---|---|---|---|---|
| | | | August | | October | |
| | | | CB-02 | CB-08 | CB-02 | CB-08 |
| **Physical Characteristics** | | | | | | |
| Brightness | m | >3 | 0.3 | 0.75 | | |
| odor | - | Natural | No Odour | No Odour | No Odour | No Odour |
| Turbidity | NTU | <5 | 16.8 | 11.8 | | |
| TSS | mg/L | 20 | 19 | 12 | | |
| trash | | None | None | None | None | None |
| Temperature | C | Natural | 27 | 27 | 28.5 | 28.5 |
| Oil layer | | None | None | None | None | None |
| **Chemical Characteristics** | | | | | | |
| pH | | 7.0-8.5 | 8 | 8.1 | 7.9 | 8.1 |
| Salinity | % | Natural | 33.9 | 33.7 | 35.7 | 36.5 |
| DO | mg/L | >5 | 5.38 | 5.84 | 6 | 5.47 |
| BOD5 | mg/L | 20 | 2.575 | 3.271 | 1.529 | 1.373 |
| Ammonia (NH3.N) | mg/L | 0.3 | 0.052 | 0.027 | <0.010 | <0.010 |
| Cyanide (SN) | mg/L | 0.5 | <0.001 | 0.001 | <0.001 | <0.001 |
| Sulfide (S2S) | mg/L | 0.01 | 0.002 | 0.002 | 0.012 | 0.004 |
| Phenol compound | mg/L | 0.002 | <0.001 | <0.001 | <0.001 | <0.001 |
| detergents | mg/L | 1 | <0.010 | <0.010 | <0.010 | <0.010 |
| Oils & Fats | mg/L | 1 | <0.2 | <0.2 | <0.966 | <0.966 |
| Mercury (Hg) | mg/L | 0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Cr (VI) | mg/L | 0.005 | 0.001 | <0.001 | <0.001 | <0.001 |
| Arsenic (As) | mg/L | 0.012 | <0.003 | <0.003 | <0.003 | <0.003 |
| Cadmium (Cd) | mg/L | 0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Copper (Cu) | mg/L | 0.008 | <0.001 | <0.001 | <0.001 | <0.001 |
| Lead (Pb) | mg/L | 0.008 | <0.003 | <0.003 | <0.003 | <0.003 |
| Zinc (Zn) | mg/L | 0.05 | <0.001 | 0.009 | | |
| Nickel (Ni) | mg/L | 0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| **Microbiology** | | | | | | |
| Total Coliform | MPN/100 ml | 1000 | 6.8 | 2 | 0 | 6.8 |

## Conversion of All volatile Treatment (AVT) to Oxygenated treatment (OT) for Feed Water

Our new innovation implemented this year is the conversion of our All volatile Treatment (AVT) to Oxygen Treatment (OT). AVT is a water purifying technique to prevent rust within the boiler system. Through the use of OT system, where injected passive oxygen could create a double protective layer against corrosion, we were able to reduce the use of ammonia within the boiling system by 60% compared to 2018 as well as reduction of ammonia packaging waste by 850 kg.

Through monitoring and strategy implementation to tackle water pollution and the high temperature of discharged cooling water, we continually assess our potential impacts on water quality. The strategies we implemented are:


**Groundwater Monitoring Wells**

It is located around storage areas of fly ash, bottom ash, and coal storage. These groundwater monitoring wells are built to monitor groundwater quality through continuous water discharge monitoring. The wells located between temporary shelters of bottom ash will be used as a comparison of groundwater quality before and after the operation of the power plant. Throughout 2019, a third party verifier conducts monitoring quarterly and all of the monitoring results were reported to be satisfactory.

**Water Quality Monitoring**

We periodically conduct monitoring on water quality once every six months around our plant site, which included seawater, groundwater, and river.

For seawater, there are a few sampling points around the plant that were used by a certified third party to analyse the water quality. In 2019, all parameters were shown to be at normal levels and within the Decree of the Minister of the Environment's standards on seawater quality. Similarly, we perform groundwater monitoring through regular testing, following the regulation set by the Ministry of Health.

For river water quality, we initiated a waste management system along with the Community Development Program to manage the domestic waste. This is so as it was identified that domestic waste is the biggest polluter to the river water quality and we aim to improve the river quality for not only our operations but also for the benefit of the community around us.

**Impermeable Membrane**

Layers of membrane sheets are used to coat coal storage, coal run-off setting pond, and temporary ash storage. The membrane is made of High-Density Polyethylene (HDPE) to ensure that no bit of coal and ash waste seeped into the soil, preventing water and soil contamination around the plant site. Throughout 2019, we still use and continue to monitor the effectiveness of the membranes.

**Interceptor Pit**

This pit is where the last drop of rainwater runs. Water flowing through this pit is filtered out and precipitated, resulting in water that is clear of any remaining coal particles. This clean water then streams into the sea through our sewers. Throughout 2019, we still maintain and use the interceptor pit.

**Flood Early Warning System**

Our flood early warning system is important to mitigate climate change risk during extreme seasons, such as avoiding flood during high rainfall and drought during low rainfall. Cooperating with the government institution, we developed a flood early warning system in the upstream and downstream of the Kanci River. Equipped with detection and siren sensors, this system will provide early warning to residents if water levels have exceeded normal limits. All the systems we build are our commitment to generate energy in a smarter, more efficient and environmentally friendly way. In 2019, we still maintain this system to ensure the safety not only for the employees but also for the surrounding community.

Furthermore, there are other programs that aim to reduce the amount of water used further. The reduction of water used from these programs are as follow:

| Program | Reduced Water Use (m3) |
|---|---|
| Utilization of condensed air from the air conditioning system for domestic purposes | 1264 |
| Bio pores | 11,46 |
| Water saving mechanism for our ablution water | 260 |
| Conversion of volatile treatment to oxygenated treatment | 29700 |
| Optimization of lifetime mixed bed polisher | 763 |

# Wastewater Management

[GRI 306-1, GRI 306-5]

**We have implemented strategies and precautionary approaches to ensure that the wastewater disposed of at sea and in rivers have met the quality requirements set by the Indonesian Government. We believe that we are responsible to protect our water resources, as part of a community.**

In 2019, we discharged 26,976,720 $m^3$ in total at all our water disposal. All of the discharge was of the required standard set.

| Parameter | Unit | Quality standards | 2018 | 2019 | | | |
|---|---|---|---|---|---|---|---|
| | | | December | January | February | March | April | May |
| pH | | 6-9 | 7.9 | 7.4 | 8.5 | 8 | 7.7 | 7.6 |
| TSS | mg/L | 100 | 8 | 17 | 13 | 5 | 5 | 5 |
| Oil and fat | mg/L | 10 | <0.966 | <0.0966 | <0.0966 | 1.14 | <0.0966 | <0.0966 |
| Chlorine (Cl 2) | mg/L | 0.5 | 0.03 | 0.06 | 0.03 | 0.02 | <0.02 | <0.02 |
| Chromium (Cr) | mg/L | 0.5 | <0.001 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 |
| Copper (Cu) | mg/L | 1 | <0.001 | <0.005 | 0.008 | <0.005 | <0.005 | <0.005 |
| Iron (Fe) | mg/L | 3 | <0.001 | 1.16 | <0.010 | <0.010 | <0.010 | <0.010 |
| Zinc (Zn) | mg/L | 1 | <0.010 | <0.010 | <0.011 | <0.012 | <0.013 | <0.014 |
| Phosphate ((PO 4) 2) | mg/L | 10 | 0.086 | 0.009 | 0.018 | 0.001 | 0.012 | 0.006 |

| Parameter | Unit | Quality standards | 2019 | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | June | July | August | September | October | November |
| pH | | 6-9 | 8.2 | 8.2 | 8 | 7.7 | 7.9 | 7.6 |
| TSS | mg/L | 100 | 3 | 4 | 7 | 8 | 5 | 8 |
| Oil and fat | mg/L | 10 | <0.0966 | <0.0966 | <0.0966 | <0.0966 | <0.0966 | <0.0966 |
| Chlorine (Cl 2) | mg/L | 0.5 | 0.08 | 0.02 | 0.02 | 0.04 | 0.07 | <0.010 |
| Chromium (Cr) | mg/L | 0.5 | <0.001 | <0.010 | <0.010 | <0.010 | <0.010 | <0.005 |
| Copper (Cu) | mg/L | 1 | <0.001 | <0.005 | <0.005 | <0.005 | 0.007 | <0.010 |
| Iron (Fe) | mg/L | 3 | <0.001 | <0.010 | 0.036 | <0.010 | <0.010 | <0.010 |
| Zinc (Zn) | mg/L | 1 | <0.001 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 |
| Phosphate ((PO 4) 2) | mg/L | 10 | 0.006 | 0.005 | 0.01 | 0.024 | 0.004 | 0.009 |

**Strategies that aid us in managing our wastewater included:**

## Main Wastewater Treatment Plant

This conventional water treatment plant treats all wastewater from the boiler so that the output water meets the required standard.

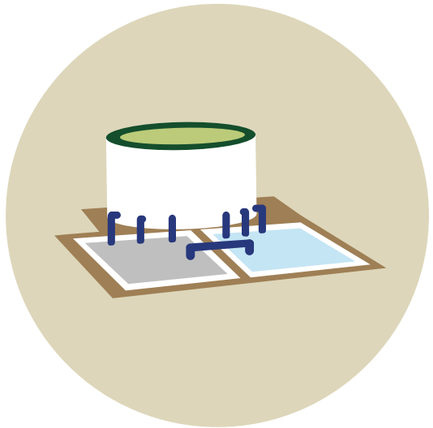
## Cooling Tower

We understand the environmental risk of the residual heat from the water we discharge to the sea. Our cooling tower technology plays a vital role in treating our wastewater before it can be safely released into the sea. The minister of the environment set standards that require water discharged to the sea should not exceed 2°C from the initial temperature to avoid any harmful impact on the marine ecosystem.

Our cooling tower system continuously contributes to managing the temperature of water output at a safe level, which is below 2°C difference from the sea water intake. No decrease of sea water quality has been recorded until today, as proven by our good level of wastewater quality parameters.

## Wastewater Treatment Plant Ash Pond

This water treatment is specifically installed to handle all of the wastewater from the ash pond.



## Run-Off Settling Pond

The settling pond is used to treat the leachate water from coal stockpiles to ensure that coal and other pollutants in rainwater can be deposited or sent to the wastewater treatment plant in the case of black/brackish water which signifies further treatment of water needed.

To measure the effectiveness of our strategies, we monitor our wastewater quality regularly by collecting samples and conduct analysis in cooperation with certified third-party laboratories. Throughout 2019, results showed that our water discharge complied to the standards permitted by the Ministry of Environment and Forestry. The results indicate that our operations are safe for the environment and complied with the regulations.

Furthermore, we have further programs that reduce the amount of pollutants in our wastewater. The reduction of pollutants from our programs are as follow:

| Program | Reduction of Pollutant (grams ppmton) |
|---|---|
| Conversion of volatile treatment to oxygenated treatment | 0,059 |
| Optimization of lifetimes mixed bed polisher | 0,0015 |
| Periodic service and cleaning of the sludge clarifier and sludge cleaner | 2.41 |



# Hazardous and Non Hazardous Material Management

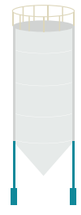
[GRI 306-2, GRI 306-4]

**There are wastes attributed to coal-fired power plants due to the combustion of coal, namely fly ash and bottom ash. Preventive efforts, such as Good Mining Practice and continuous monitoring, were conducted to reduce the negative impacts of coal combustion on the environment.**

In addition, the end-to-end mining process is planned and conducted to further reduce emissions and the impact on the environment. All our efforts have been incorporated as a cornerstone of our company in moving towards environmental sustainability through an integrated management system. The strategy for environmental control of hazardous and non-hazardous waste consists of the following goals and programs:

Our ash waste is reused fully by cement factories as the primary cement making material. We store our ash waste first in our fly ash shelter, with a capacity of 1,350 tonne.

**Industrial Synergy with Cement Manufacturer in Waste Utilization**



**Emergency Temporary Ash Pond**

Temporary Ash Pond are built separate from Fly Ash Silo. It is used only during an emergency when the silos are overcapacity, especially during holiday season.

Not only fy ash, Cirebon Power also manages other wastes with hazardous and toxic labels such as oil, lights, cartridges, resins, plastic membranes, batteries, and chemicals. These types of wastes will be stored in the warehouse before being shipped and processed by certifed contractors. This building is still in use of 2019 as its License was extended in OCtober of 2018.

**Hazardous Waste Temporary Storage Building**

**Chemical Secondary Containment**

To avoid any potential risks caused by our chemical wastes, we prepare reserve reservoirs that can accommodate up to 110% of chemicals. During the whole year of 2019, more than 99% of our hazardous wastes is handed over to thecement industry and thus, preventing hazardous wastes from contaminating the surrounding area. We also made sure any waste that will be disposed of would be handled by a professional waste disposal company. We audited the waste disposal company every six months.

# 05 OUR PEOPLE





Our people are the main factor of the success's stories behind our innovation. This year, we focused on the processes quality and welfare of our employees.

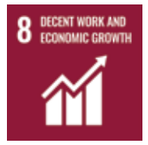
## Why It Matters?

**[GRI 102-41]**

Human Resources is the most important aspect in our company where employees will contribute their energy, effort, and creativity to the successes of our company. In line with the increasing competitive business competition, several companies are required to take important steps in facing competition in this global era, one of which is the welfare of employees. This year we have conducted innovations to encourage our employees and align with our values and the Sustainable Development Goal 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all, this year we made so many innovations to encourage our employees.

In 2019, we digitized several Human Resources Division and General Affairs Division administration system to increase productivities, efficiencies and save paper usage for the environmental support. In addition, we also succeeded in implementing several programs for the health and welfare of our employees. To support Company's Integrated Management Systems, HR participated in the Surveillance Audit for ISO 9001:2015, ISO 14001: 2015 and 45001: 2019 from the end of July to early August 2019.

Company appreciated for any positive inputs from our employees and facilitated open discussions in implementing the Company Regulation.




## OUR APPROACH

Digitizing Our Administration System

Employee Welfare Programs


Employee Training & Development Programs

Employee Diversity

Quality, Environment, Occupational Health & Safety

# Digitizing Our Administration System

**We believe that the way to impact sustainable transformation of our company is to provide an environmentally friendly platform as our new system. In 2019, we have made an improvement of paperless action by digitizing the administration system. We engaged the Human Resources Information System (HRIS) to allow us to manage employee's information more effective.**

HRIS is implemented in Q2 2019. This system is focused for Human Resources related administration activities where employees are encouraged to do Employee Self Service (ESS) on paperless based transaction over HRIS. Current modules covers employee personal informations, time attendance (included employee work attendances, overtime and permit management), absence management which covers employee leave transactions and business trip administration (collaborate with General Affairs Division to provide paperless based business trip requests and approvals).



# Employee Welfare Programs

[GRI 401-2, GRI 401-3]

**Our Company strive to provide competitive remuneration package and reward the performance of each employee with equal career opportunity to all. To support and facilitate the daily work of our employees, we provide transportation by General Affairs Division arrangement based on operating and business needs. We also provide additional coverage of the Accidental Death & Disability Benefit and Life Insurance coverage.**

We appreciate employees who have been working continuously impacting the success of the company. One of the form of this appreciation and attracting value the Company provides immediate annual leave starting from the first month of work. The amount of annual leave will be gradually adjusted in line with the additional working period.

Pre-retirement training program is also provided to support our employees with knowledge and skills as a preparation starting a new life on their retirement. Some of the training provided are financial planning and basic entrepreneurship knowledge.

| Allowances Type | | | | | | |
|---|---|---|---|---|---|---|
| Cirebon Power #1 | | | | | | |
| | Life Insurance | Hospitalisation / Medical Benefits | Disability insurance | Maternity Leave | Retirement & Pension Program | Transportation Allowance |
| Full-time | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Temporary | N/A | N/A | N/A | N/A | N/A | N/A |
| Cirebon Power #2 | | | | | | |
| Full-time | ✓ | ✓ | ✓ | ✓ | ✓ | ✗ |
| Temporary | ✓ | ✓ | ✓ | ✓ | ✓ | ✗ |

# Employees Training & Development Programs

[GRI 404-2]

**Cirebon Power is committed to develop some training programs not only for our community but also for our employees/ contractors. Our training programs emphasize several aspects that include the quality improvement of employee's competencies. Employee's competence improvement is carried out in a programmed and sustainable manner so that employees are able to show the expected performance.**

To ensure the availability of a skilled and competent workforce, we conducted various training to improve technical skills and qualifications of employees such as: In-House Training, On the Job Training and Off the Job Training. To fulfill this needs, we have implemented several training programs in 2019, which are as follows:

Leadership Training

Certification Training

Technical Training

PROPER Training

Overseas Training

CSR Training

Cirebon Power also support specific professional certifications to several members as required by each of the positions, with annual review and renewals.



# Employee Diversity

[GRI 405-1]

**Cirebon Power is committed to gender equality and fair job opportunities. As field works are more suitable for male workers, Cirebon Power allocates more positions in the office for female workers to support employees' diversity with some members have been entrusted to senior and strategic positions.**

Cirebon Power promotes equal job opportunities to any candidate with the right talent to join as our employees regardless of ethnicity, religion, race, and inter-group relationship and gender in accordance with the job requirements.

We also developed Cirebon Power Internship Program (CPIP) specifically for first-year postgraduate students and students who have at least entered their final semester and have a good record of academic achievement.

**Year 2019**

| Cirebon Power #1 | <30 | | 30–50 | | >30 | | Total | |
|---|---|---|---|---|---|---|---|---|
| | Total | % | Total | % | Total | % | Total | % |
| Male | 58 | 27.8 | 136 | 65,1 | 7 | 3.3 | 201 | 96.2 |
| Female | 4 | 1.9 | 4 | 1.9 | #N/A | 0 | 8 | 3.8 |
| TOTAL | 62 | 29.7 | 140 | 67.0 | 7 | 3.3 | 209 | 100 |

**Year 2019**

| Cirebon Power #2 | <30 | | 30–50 | | >30 | | Total | |
|---|---|---|---|---|---|---|---|---|
| | Total | % | Total | % | Total | % | Total | % |
| Male | 3 | 7 | 31 | 67 | 12 | 26 | 46 | 81 |
| Female | 2 | 18 | 9 | 82 | 0 | 0 | 11 | 19 |
| TOTAL | 5 | 25 | 40 | 149 | 6 | 26 | 57 | 100 |

# Quality, Environment, Occupational Health & Safety

[GRI 403-1, GRI 403-2]

**We are committed to ensuring that all our operations are carried out in such a way to protect the quality, health, safety, security, welfare of all personnel, assets and as well as the environment.**

Yearly review of QHSSE Policy have been conducted ensuring the policy is updated based on operation and condition in year of 2019.

In 2019, our Cirebon Power #1 unit has received a Zero Accident Award from the Manpower Ministry Indonesia. Our unit also has achieved 7 million man-hours WLTA (Without Lost Time Accident) as per December 2019.

**Our compay therefore adopts following strategies and outlined them on company's QHSS Policy:**

- Comply with all applicable legal requirement
- Fulfill customer requirement, Environment protection
- Implement effective QHSSE management system
- Ensure significant hazards are identified and adequate controls are put in place to elimenate or reduce the risk to acceptable level
- Facilitate the process of consultation and participation of workers
- Establish Quality, Health, Safety, Security and Environment Objectives

## Quality Management and Safe System of Work & Procedure Development Program

In the development of Quality Management System, company has established Key Performance Indicator, produced Level 2 QHSSE Management system procedure / Standard Operating Procedures (SOP).

## Training and Development Program

[GRI 403-5]

In order to improve awareness and knowledge of employees and workers related to occupational safety and health i.e. Incident and Accident Investigation training, Company has conducted various training and certification through safety in-house and external training.

Assessment of employee and workers competency and development of personal competency matrix have also been carried out and followed with providing training plans for forklift operator, boiler operator, crane operator, electrical technician, welding technician and confined space operator.

Contractor and Subcontractor have established a training program and stated on the approved Project HSSE Plan. During the year of 2019, we have achieved 1.116 training man-hours for Safety Induction and 1.650 training man-hours for awareness and competency training program.

### Cirebon Power #1

- Refresher OHS awareness training
- CP/NS (Competent Person/ Nominated Supervisor) or PTW Training
- Defensive driving training
- Refresher First Aid Training
- Refresher Fire Fighting Training
- Refresher Rescue Training
- Personal certification

### Cirebon Power #2

- IOSH Incident Investigation
- AED training
- General AK3
- Electricity AK3
- First Aid Lv.2
- Advanced Ringging
- Authorized Gas Tester awareness
- AK3 Construction Training

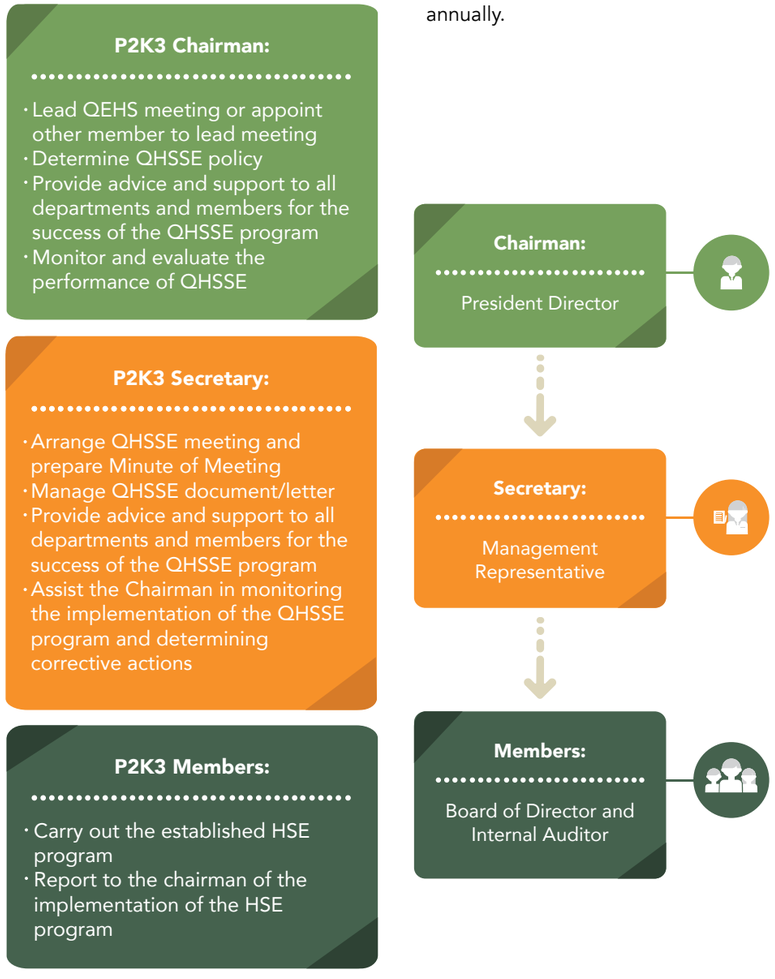
## Quality, Health, Safety, Security, and Environment Committee

[GRI 403-4]

**Company has formed a Quality, Environment, Occupational Health & Safety (QHSSE) committee in all the Company units, with 5% of total employees are represented in the committee.**

Our committee's members were from Level Management, Chief, Engineer, Supervisor, and representative technician level from each section and CPS sub-contractors. Below is the description of the committee's role and responsibility based on the QEHS Committee Procedure.

In Q3' 2019, Management Review Meeting was conducted to measure the suitability, adequacy, and effectiveness of its QHSSE Management System annually.




## Contractor Safety Management Program

In effort to reduce injuries/illnesses to employees, most accidents, incidents, property losses and environmental incidents occur during Contractors and Sub-contractor activities and within their work locations. Consequently, to achieve the QHSSE objectives and targets, it is essential to appoint experienced and competent Contractor and Sub-contractors who have a positive attitude towards QHSSE management, and an excellent past record of QHSSE performance.

This is also to confirm that the Contractor and Sub-Contractor has an QHSSE programme that falls in line with Company expectations, as well as current regulatory standards and to find opportunities for improvement of the QHSSE program of the Contractor and Sub-contractor.

In Q3'2019 Audit to Ash Disposal (Holcim), Waste Disposal (PPLI & WGI) and Construction Contractors (HDEC) have been conducted to fill the requirement of contractor safety management program.

Project Monitoring and Development program to maintain and verify the implementation of Contractor's Project HSSE Plan was continuously performed in the year of 2019 through Management Site Visit, Weekly/Monthly Management Walkdown, Company's Policy socialization and QHSSE Inspection program.

## Office Safety Management Program

Our Company has established program to promote office safety management program i.e. Fire Detection and Prevention Equipment Monitoring, Monthly Office Inspection cross departments, Random Vehicle Inspection, First Aid kit Inspection and Issuance of Monthly Safety Bulletin.

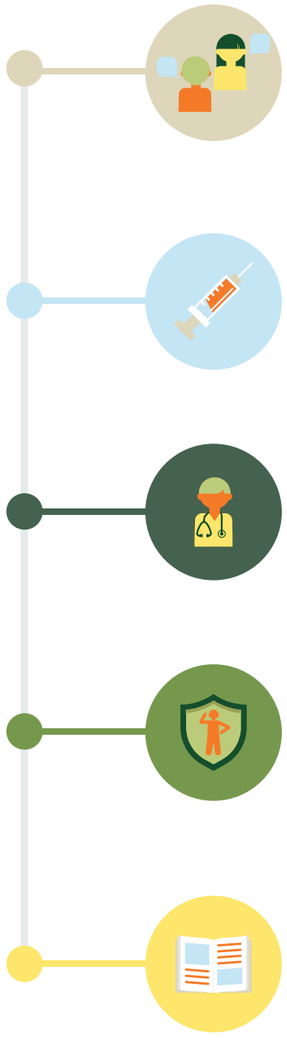
## Emergency Response Plan

Evacuation, Disaster, Recovery Drill and Medical Evacuation Drill were within the year of 2019 carried out to evaluate the readiness of all personnel to emergency situation and competency of Emergency Response Team (ERT) according to assignment as required on Company Emergency Response Plan.

Readiness employee response to emergencies have been enhanced through training and development programs in the use of life saving devices i.e. socialization of Automatic Electronic Defibrillator (AED).

# Health Promotion Development

Cirebon Power integrates health programs for all of our employees. The activities that we have carried out in 2019 included:



## Health Talk

In November 2019, in collaboration with Insurance company and Medical provider conducted Health Talk and consultation to employees at both Jakarta Office and Cirebon Site highlighting the Occupational Illness.

## Vaccine Program

This is a continuous health program to maintain employee immunity where in the year of 2019 Flu vaccinations have been carried out for all of employees.



## Medical Check Up

In coordination with the HR department, the Annual Medical Checkup for existing employees and Medical Checkup screening for new hired employees were performed. The Medical Checkup result is verified by the Company's doctor to have further advice for employees to improve their health performance.



## Loss Weight Program

Fitness Club and Badminton court membership for employees.



## QEHS Bulletin

This is a continuous monthly program. The aim is to enrich employee knowledge and awareness related to issues on health and food and hygiene issues.

# QHSSE Management System Manual

[GRI 403-1]

This QHSSE Management System serves as the Level 1 (one) QHSSE document and is a part of the Company's Integrated Management System (IMS). Level 2 (two) QHSSE procedures were developed accordingly to support and provide more detailed guidelines in the administration and implementation of this QHSSE Management System.

The development of QHSSE Management System, Company has considered the applicable National and International HSSE regulation, Regulation, Codes and Standards i.e. ISO 9001: 2015; ISO 14001: 2015; ISO 45001: 2018 and Work-Related Health and Safety Management System (OHS-MS) GR No. 50 of 2012.

**The manual provides guideline to following key points:**

## QHSSE Key Performance Indicator

[GRI 403-9]

Our Company establishes QHSSE Key Performance Indicator (KPI) at all levels and functions considering the Requirements of Conformity of Product, Improvement of Customer Satisfaction, QHSSE Policy and Company's commitment for continual improvement, and taking into account the actual HSSE performance from the previous year, the result of the HIRARC and EAIA process, and the result of QHSSE Audit.

| Standard | Corporate KPI | Achievement of Corporate KPI | Objectives | CEP | Achievement of CEP KPI | CEPR | Achievement of CEPR KPI |
|---|---|---|---|---|---|---|---|
| Quality ISO 9001: 2015 | Fulfil Customer Requirement and Legal Compliance | | Legal Compliance | 100% | 100% | 100% | 100% |
| | | | Project Schedule Delay | N/A | N/A | 0 | 1.93 |
| | | | Fulfil OBVITNAS requirement | 100% | 100% | NA | NA |
| | | | Written Customer Complaint Case | 0 | 0 | 0 | 0 |
| Environment ISO 14001: 2015 | No harm to Environmental & Green Proper Requirement | | Preparation for Green PROPER (2019) | Green | | N/A | |
| | | | Water Emission Discharge Pollution Case | 0 | | 0 | |
| | | | Hazardous and Toxic Waste Pollution Case | 0 | | 0 | |
| | | | Air Emission Discharge Pollution Case | 0 | | N/A | |
| | | | Energy Efficiency Usage Improvement | 0.01% | | 0.01% | |
| | | | Project EPC Guarantee Deviation (Air and Noise Emission Level, Net Plant Output/ NDC, Net Plant Heat Rate (HHV)) | N/A | | 0 | |
| Health & Safety ISO 45001: 2018 | Zero Fatality & Zero Ill Health | | Fatality | 0 | 0 | 0 | |
| | | | Disability | 0 | 0 | 0 | |
| | | | Lost Time Incident (LTI) | 0 | 0 | 0 | |
| | | | Medical Treatment Case (MTC) | 0 | 0 | 0 | HDEC : 6<br>CEPR : 0 |
| | | | First Aid Case (FAC) | 0 | 0 | 5 | HDEC : 30<br>CEPR : 0 |
| | | | Near Misses | 0 | 0 | 5 | HDEC : 88<br>CEPR : 0 |
| | | | Fire Accident Case | 0 | 0 | 0 | |
| | | | Work Related Illness | 0 | 0 | 0 | |

## Security Management

Throughout 2019, we conducted several training sessions for our security team. The trainings were managed by contractor and their security services company in accordance with applicable government regulations (*Peraturan Kepala Kepolisian Negara Republik Indonesia Nomor 24 Tahun 2007 Tentang Sistem Manajemen Pengamanan Organisasi, Perusahaan dan/atau Instansi/Lembaga Pemerintah*).

In December 2019, we hired a security coordinator to control the security management system in our Cirebon Power #2 unit.

# 06 ABOUT THE REPORT





## Reporting Approach

[GRI 102-10, GRI 102-48, GRI 102-49, GRI 102- 50, GRI 102-51, GRI 102-52, GRI 102-53, GRI 102-54]

**This is our third report. This report has been prepared in accordance with the GRI Standards: Core option, supplemented with the GRI G4 Electric Utilities Sector Disclosure.**

Cirebon Power Sustainability Report 2019 aims to provide transparent, reliable, and balanced information on the economic, social, and environmental matters identified as the most important and relevant for the businesses as well as its stakeholders. Spanning business performance from January 1st, 2019 to December 31st, 2019.

To improve readability, we include the GRI disclosure number at relevant sections of this report. A GRI Content Index is presented at the end of this report listing all disclosures contained in the report. This year, we have not done external assurance.

This bilingual report is published in Indonesian-English and can be downloaded at Cirebon Power's website. We welcome feedback from our stakeholders, and questions should be addressed to our website, https://www.cirebonpower.co.id, and our official Instagram account, @cirebonpower_official.


**Cirebon Power**

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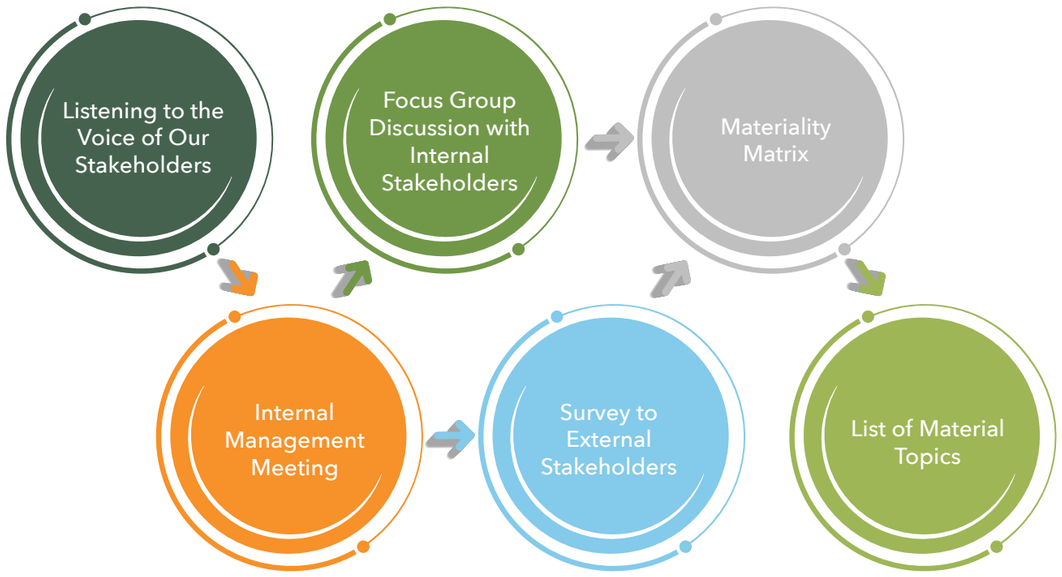
# Defining Report Content

[GRI 102-46]

**The process for defining the report's content was based on the GRI Standards as well as GRI G4 Electric Utilities Sector Disclosures. The principles of inclusiveness, materiality, sustainability, and completeness were implemented.**

Also, to achieve high quality sustainability reporting, we apply six reporting principles of accuracy, balance, clarity, comparability, reliability, and timeliness.

## Stakeholder Defining Report process






# Stakeholder Engagement

[GRI 102-40, GRI 102-42, GRI 102-43, GRI 102-44]

**As a company that supplies energy, we understand that our decisions and activities affect all individuals from society directly. We have our own procedure for firming commitment and amplify each stakeholder's desires.**

Throughout 2019, we used various channels to communicate with stakeholders. The frequency of communication with each stakeholder group is diverse, relying upon our work plan and our comprehension of stakeholders' needs and concerns. Our stakeholder engagement practices can be defined as follows:

| Topics Discussed | |
|---|---|
| 01 | Target Profit, Operations Plan, CSR, Project Development, Finance, HR and Regulation |
| 02 | CSR, Project Development, Finance, HR and Regulation |
| 03 | Electricity Supply and Availability Factor Performance, Operation |
| 04 | Technical Spec., Environment, Regulation, Certification, Corporate Social Responsibility Report, Report of National Vital Object |
| 05 | Report, Seminar, Workshop, Regulation, Consultation |
| 06 | Labor Regulation, Annual Report Health & Safety, Compliance and Vocation, Vocational Training Collaboration |
| 07 | Operation Performance |
| 08 | Permit, Compliance |
| 09 | Permit, Compliance, Land Acquisition |
| 10 | CSR & Community Development, Permit, Compliance, Land Acquisition |
| 11 | CSR & Community Development, Permit, Compliance |
| 12 | Jetty Coal Operation |
| 13 | CSR & Community Development |
| 14 | CSR, Training and Community Development |
| 15 | CSR, Training and Community Development |
| 16 | CSR, Training and Community Development, Land Acquisition |
| 17 | CSR, Training and Community Development, Land Acquisition, Job Opportunity and Local Business Opportunity |

| No. | Stakeholder | Basis for Determining Stakeholder | Frequency of Engagement | Method | Topics Discussed |
|---|---|---|---|---|---|
| 1 | Board of Director (Marubeni, Samtan, KOMIPO, Indika, JERA, etc) | Establishment of the project | Daily | Meeting, visit, email, call daily activities | Target Profit, operations plan, CSR, project development, finance, HR and regulation |
| 2 | LENDER (JBIC) | Establishment of the project | Daily, monthly ad hoc | Meeting, visit, email, call daily activities | CSR, project development, finance, HR and regulation |
| 3 | Customer (PT PLN Persero) | Power Purchase Agreement | Monthly ad hoc | Meeting and Email | Electricity supply and availability factor performance, operation |
| 4 | Ministry of Energy and Mineral Resources-Director General of Electricity | Mandatory by law | Monthly and ad hoc | Meeting, coordination, site visit | Technical spec, environment, regulation, certification, social activity reports, national vital object reports |
| 5 | Ministry of Environment and Forestry-Cirebon Environmental Services | Mandatory by law | Monthly and ad hoc | Meeting, coordination, site visit | Report, seminar, workshop, regulation, consultation |
| 6 | Ministry of Manpower / Cirebon Office of Manpower | Mandatory by law | Monthly and ad hoc | Meeting, coordination, site visit | Labor regulation, power report health & safety, compliance and vocation, vocational training collaboration |
| 7 | PT Cirebon Power Services (CPS) / Operation and Maintenance company | - | Daily and monthly | Report, meeting | Operation performance |
| 8 | BKPM | Authority / government | Ad hoc | Report, monitoring, visit | Permit, compliance |
| 9 | DPMP-TSP (Cirebon) | Authority / government | Ad hoc | Report, monitoring, visit | Permit, compliance, land acquisition |
| 10 | The Regional People's Representative Council (Cirebon) | Authority / government | Ad hoc | Report, monitoring, visit | CSR & community development, permit, compliance, land acquisition |
| 11 | Regional Government (Cirebon) | Authority / government | Ad hoc | Report, monitoring, visit | CSR & community development, permit, compliance |
| 12 | KSOP | Authority / government | Ad hoc and Monthly | Report, monitoring | Jetty coal operation |
| 13 | NGO | Surrounding stakeholder | Ad hoc | Meeting, collaboration, visit and call | CSR & community development |
| 14 | Local Universities | Surrounding stakeholder | Ad hoc | Meeting, collaboration, visit and call | CSR, training and community development |
| 15 | MUSPIKA (Astanajapura, Mundu, and surrounding district), Koramil, Polsek | Surrounding stakeholder | Ad hoc and Monthly | Meeting, collaboration, visit and call | CSR, training and community development |
| 16 | Village Head | Surrounding stakeholder | Adhoc and Monthly | Meeting, collaboration, visit and call | CSR, training and community development, land acquisition |
| 17 | Surrounding Community | Surrounding stakeholder | Adhoc and Monthly | Meeting, collaboration, visit and call | CSR, training and community development, land acquisition, job opportunity and local business opportunity |



Cirebon Power creates a working environment that enables them to keep a balance between work and life. We provide various support programs as part of family-friendly management. Some of these programs included:

## Employee Gathering

Boredom can be a temporary feeling and still become one of the reasons why employees could not focus on work. We took the initiative to conduct an employee gathering activity. This year, we held an employee gathering activity in Bali. Besides building a strong relationship between the employees, the event was aimed at introducing the new President Director and other board of members.

## Culture Learning Program

The culture learning program is our initiative aimed at employees and their families to take part in the programs we have created. This program has been running for 2 years and this year, we conducted the program in Bali.

Apart from these 2 activities, we also have other activities such as break a fast together and provide service awards to motivate employee passion and loyalty to the company.

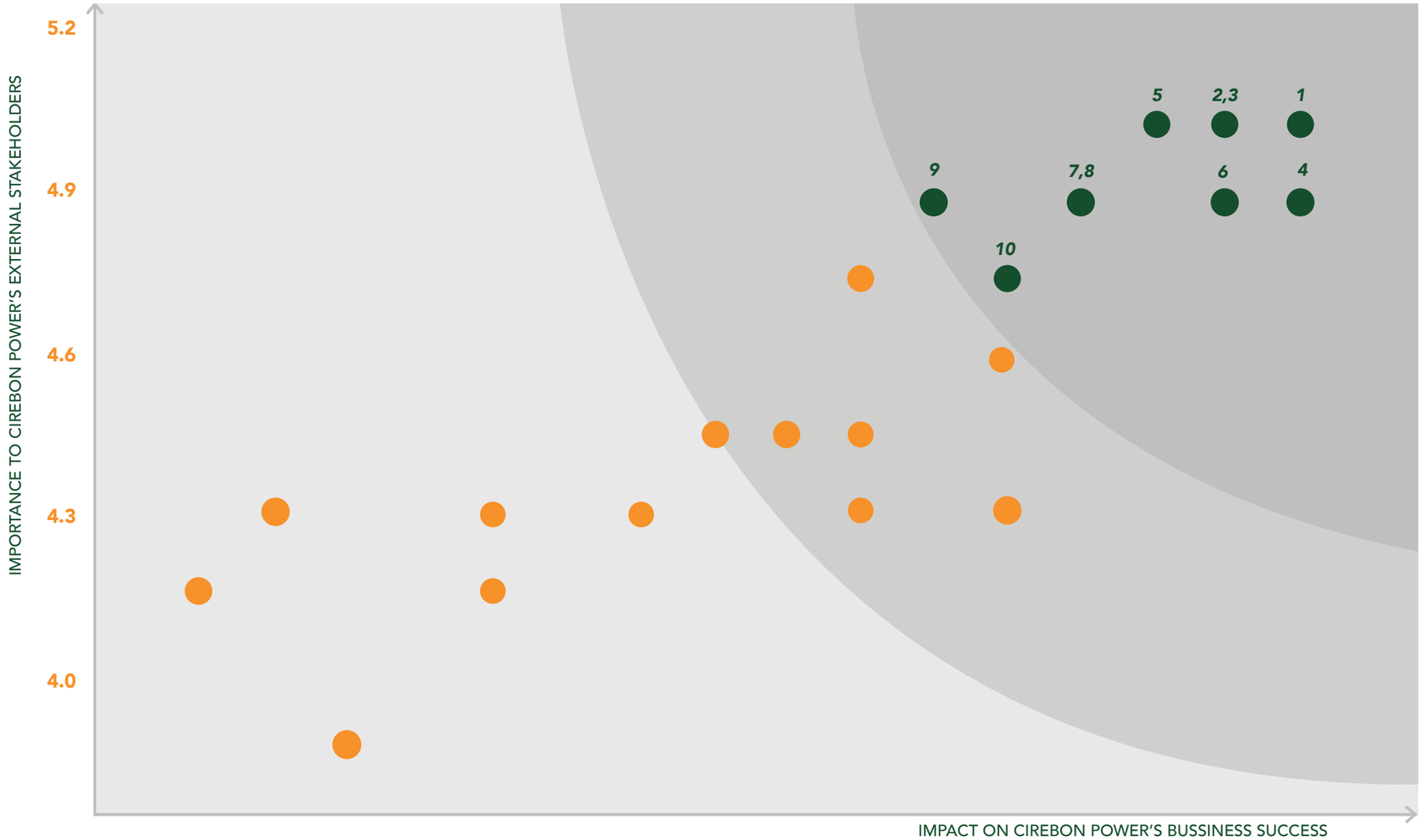

# Defining Materiality

[GRI 102-47]

**Materiality is the principle that defines which related topics are important enough that reporting on the sustainability report is necessary. Before writing this report we sought our stakeholders' viewpoints to answer their noteworthy concerns.**

We began with an internal management meeting to identify our materiality, and continued focus group meetings with members from various departments. As voices of external stakeholders, we surveyed customers (PLN), suppliers, local community, government, NGOs and conducted interviews with the local community.

As a result we are concentrating on ten materiality issues for our Cirebon Sustainability Report 2019. We developed our materiality matrix on the basis of our quantitative research, and described our topics for this year's study. The topics are as shown below:




1. Occupational Health and Safety
2. Company's program in maintaining air quality around the factory area
3. Compliance with environmental regulations
4. Importance of preventing corruption in companies
5. Water and wastewater management
6. Solid waste and hazardous waste management
7. Emissions generated by the company in its activities and emission reduction programs
8. Community's health and safety in the location around the company
9. CSR activities, empowerment of local communities and communities around the company
10. Energy stability provided by the company

# Topic Boundary

[GRI 102-46, GRI 102-47]

**For the second step, we aligned each topic to the GRI Standards on materiality. Every topic has its boundaries within our supply chain. The boundaries of the topics define where the impacts for a material topic arise, and the role of Cirebon Power.**

Cirebon Power might be participating either through its operations or through its business relations with other organizations. The impacts we reported could be caused, contributed, or linked through a business relationship with our activities.

The effect will not only affect Cirebon Power itself, but will also affect the supply chain, either upstream or downstream. This topic boundary will provide insights into the entire company in terms of risk management and precautionary approach.

| List of Materiality Topics | GRI Topic | Supplier | Cirebon Power | Customer |
|---|---|---|---|---|
| Occupational Health and Safety | Occupational Health and Safety | Contribute | Caused | |
| The company's program in maintaining air quality around the factory area | Emission | | Caused | |
| Emissions generated by the company in its activities and emission reduction programs | | Contribute | Caused | |
| Compliance with environmental regulations | | | Caused | Linked |
| Importance of preventing corruption in companies | Anti-corruption | Linked | Caused | Linked |
| Water and wastewater management | Effluents and Waste | | Caused | |
| Solid waste and hazardous waste management | | | Caused | |
| Community's health and safety in the location around the company | | | Caused | Linked |
| CSR activities, empowerment of local communities and communities around the company area | | | Caused | |
| Energy stability provided by the company | Energy | | Caused | |

Caused  Linked  Contribute



# Our External Initiative

[GRI 102-12]

## Awards:

- The 2019 Proper Green Candidate (Beyond Compliance) from the Ministry of Environment and Forestry Indonesia
- Indonesia Sustainable Development Goals Award (ISDA) 2019 – Corporate Social Responsibility Based on SNI ISO 26000:2013 for SDGs - Gold Category on SDGs 1

## Certification:

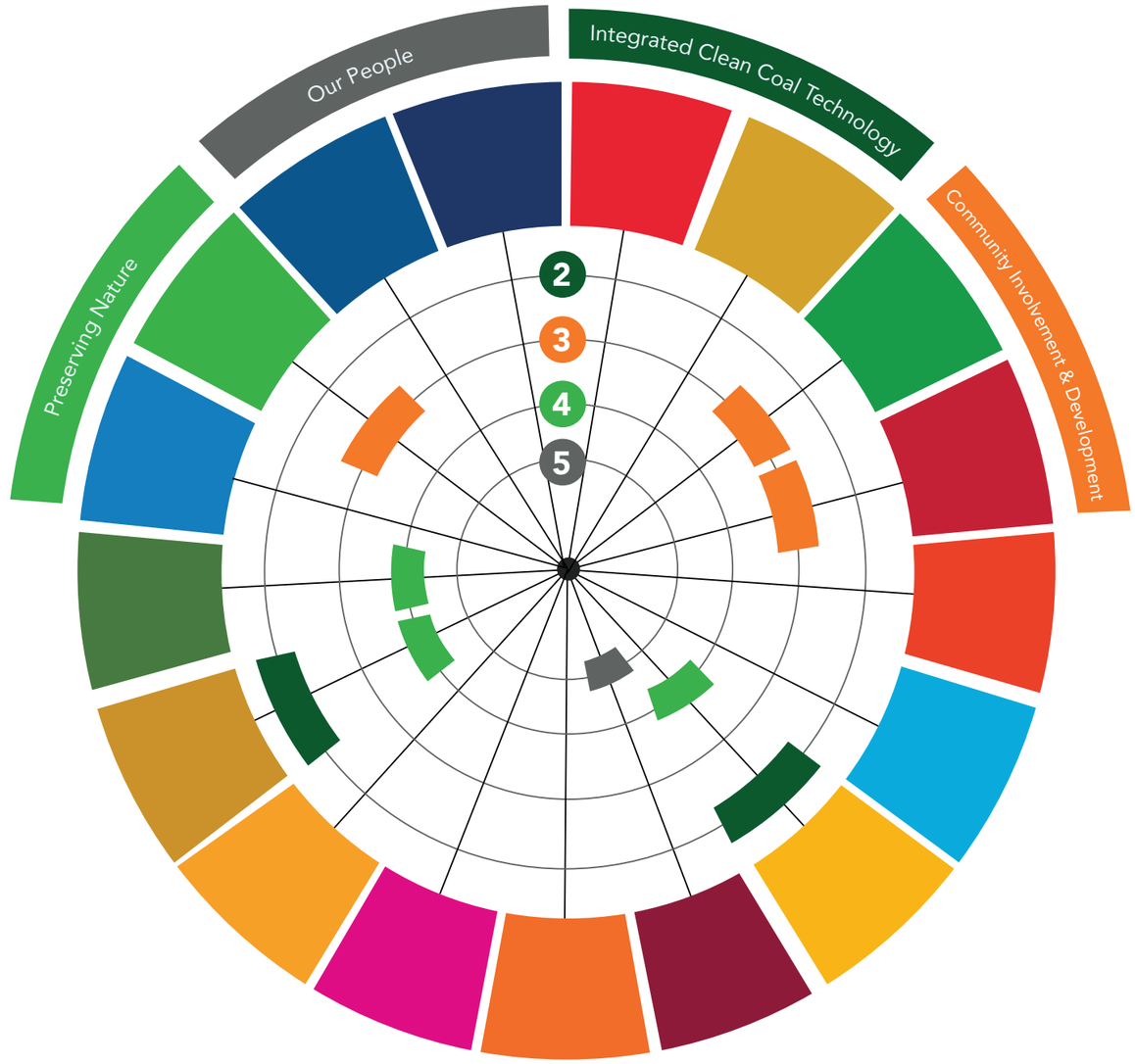
- ISO 9001 : 2015 Certification

## Members of Association:

- APLSI (*Asosiasi Pengusaha Listrik Swasta Indonesia*)
- APLBI (*Asosiasi Pembangkit Listrik Batu Bara Indonesia*)
- MKI (*Masyarakat Ketenagalistrikan Indonesia*)

# Sustainable Development Goal Compass

**Through its activities, Cirebon Power has contributed to the Sustainable Development Goals by aligning several goals set by UN Sustainable Development, including:**


Chapters

**2** Integrated Clean Coal Technology

**3** Community Involvement & Development

**4** Preserving Nature

**5** Our People

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