CORPORATE
GOVERNANCE

CORPORATE SOCIAL
RESPONSIBILITY

PARTNERSHIP AND
COMMUNITY DEVELOPMENT
PROGRAM (PKBL)

APPENDICES

CONSOLIDATED
FINANCIAL STATEMENTS

ENVIRONMENTAL
RESPONSIBILITY

THE COMMITMENT AND POLICY OF CORPORATE SOCIAL RESPONSIBILITY FOR THE ENVIRONMENT

TelkomGroup always strives to minimize the negative impact of its policies and operational activities on the environment. It follows the Company's business ethics stated in the policy number PD.201.01/r.00/PS150/COP-B0400000/2014 dated May 6, 2014, regarding Business Ethics in TelkomGroup. The commitment of corporate social responsibility for the environment is by respecting and considering the stakeholders' expectations, complying with applicable laws, and consistent with international norms of behavior.

Telkom encourages socially responsible behavior for the environment on the whole organization, its subsidiaries, and business partners in the implementation. It is expected would contribute to sustainable development, specifically related to the management of energy, water, and waste in the TelkomGroup operational environment. The organization and organizing of corporate social responsibility initiatives in the environment are integrated with other social responsibility initiatives. The implementation of social responsibility in the environment is under the framework of Telkom's social responsibility initiatives.

In the budgeting, the implementation of Telkom's social responsibility for the environment is supported by several budget sources according to the management unit. Some of them are from GSD/Telkom Property (for building electricity and STO, and fuel for operational vehicles), the Digital Service Operation unit (for STO fuel), Telkomsel (for BTS), and Telin and Sigma (for data centers).

THE FORMULATION OF CORPORATE SOCIAL RESPONSIBILITY FOR THE ENVIRONMENT

Telkom has conducted internal due diligence on the various impacts of TelkomGroup decisions and activities for stakeholders and sustainable development.Telkom also reviews every defined policy for all its operational activity. It is to ensure the minimization of negative impacts caused by its activities on the environment.

In principle, Telkom and its subsidiaries always support the Government's efforts to improve environmental conditions, such as mitigation and adaptation to climate change. It realizes the extreme climate change is a sequence of greenhouse effects that would affect all human beings' activities and affect all corporate entities including TelkomGroup.

The potential risks of climate change for TelkomGroup include extreme weather that can damage digital telecommunications networks and infrastructure, and those will impact consumer service and the sustainability of the Company. For prevention, Telkom mitigates the impact of global warming by reducing carbon emissions and supporting the implementation of environmentally friendly business activities.

In recognizing and formulating social responsibility and significant stakeholders for the environment, Telkom has an initiative as a social responsibility approach. The formulating mechanisms of major social responsibility issues are internal discussions, reviewing all regulations related to them, and considering international social responsibility reporting standards, such as the publication of the Global Reporting Initiative (GRI) and Sustainability Accounting Standard Board (SASB).

One of the sustainability initiative pillars in implementing social responsibility for the environment is "sustainable in business and use of technology." This pillar includes energy use, environmental impact management, and electronic waste end-life management. Those aspects represent the significant direct or indirect impacts of the Company's activities and decisions, and the sustainability context of TelkomGroup. It also shows the risks that may occur from the failure of social responsibility implementation which is very related to stakeholder expectations on Telkom's social role.

Besides the high energy use for its operations, the other main activity that impacts the environment is materials use for telecommunications equipment and infrastructure on land and sea. The infrastructure construction includes the submarine telecommunications cables installation, the establishment of Base Transceiver Station (BTS) towers, and other infrastructure installations.

TELKOM
HIGHLIGHTS

REPORT OF THE BOARD
OF COMMISSIONERS
AND DIRECTORS

ABOUT
TELKOM

MANAGEMENT DISCUSSION
AND ANALYSIS

THE PLANNING OF CORPORATE SOCIAL RESPONSIBILITY FOR THE ENVIRONMENT

In 2020, Telkom's social responsibility planning for the environment including:

1. STO Management
   a. Electric generator optimization for diesel fuel consumption efficiency as its capacity adjusted to the load capacity.
   b. Optimization of air conditioner (AC) system for device room to increase its reliability and electricity efficiency.
   c. Revitalization of the obsolete and inefficient device to another with an efficiency of more than 90%.

2. Pengelolaan BTS
   a. Presenting cutting edge technology that more energy efficient to support operational activities.
   b. Use of Base Transceiver Station (BTS) with clean energy or environmentally friendly.

3. Sigma Data Center Management
   a. AC system consumption saving by temperature and humidity adjustment setting on AC units. It aims to maintain PUE (Power Usage Effectiveness) on average to the efficient level.

4. Telin Data Center Management
   a. Saving water with the gutters on the rooftop to collect rainwater which will be processed and used for water consumption in Jurong-3.
   b. The use of the IoT concept with sensor power for non-IT electronics, such as automatic light adjustment affected by time or hour.
   c. Using Diesel Rotary Uninterruptible Power Supply (DRUPS) technology for backup power sources (generators). This technology replaces batteries which produce a lot of chemical impacts on the environment.

5. Building Management
   a. LED lamp and cooling system management use on office buildings.
   b. Reflective glass uses on most office buildings with a depth of 6 mm to reduce incoming heat.
   c. Use a zoning lighting scheme to adjust the lighting area as its necessity for energy saving.
   d. Apply lighting and automatic device schedule to save electricity consumption without disturbing the user building convenience and safety.
   e. Capacitor bank uses to optimize electricity consumption.
   f. Educate the energy-saving to the employees.
   g. Put the reminder board and sticker in various strategic locations to get the employees aware of power and water saving.
   h. Biopores and infiltration wells in part of Telkom building for rainwater control.

In the implementation, Telkom's social responsibility planning for the environment shows TelkomGroup's commitment to reduce negative impacts on the environment and demonstrate efforts to create mutual benefits of environmental initiatives for the stakeholders and Company. TelkomGroup uses its influence to prevent, mitigate, and improve the environment quality to get maximum impact, including vendor or partner selection that offer more reliable and efficient device.

In the planning, Telkom strives to involve stakeholders in the future environmental activities of the Company. These stakeholders are the more eco-friendly technology provider partner and employees who operate various infrastructure and technologies in the TelkomGroup.

Following the business context, the sustainability aspects of TelkomGroup are not very relevant and significant to environmental incidents, such as explosions or oil spills, which cause emergencies and/or conflicts. However, with the existing mechanisms and procedures, TelkomGroup can prepare itself to face this situation. If there are complaints and suggestions related to the environment, people could send an email via web www.telkom.co.id or Telkom's social media.

CORPORATE
GOVERNANCE

CORPORATE SOCIAL
RESPONSIBILITY

PARTNERSHIP AND
COMMUNITY DEVELOPMENT
PROGRAM (PKBL)

APPENDICES

CONSOLIDATED
FINANCIAL STATEMENTS

THE IMPLEMENTATION OF CORPORATE SOCIAL RESPONSIBILITY FOR THE ENVIRONMENT

TelkomGroup accomplishes its social responsibility for the environment comprehensively and involves the Board of Directors, management, employees, and relevant stakeholders, such as suppliers or work partners. Management and employees are the executors supported by stakeholders, while the Board of Directors provides direction, supervises, and reviews its performance and reporting. This review will increase the credibility of the activity initiatives and social responsibility reports.

In 2020, TelkomGroup consistently implemented various policies to reduce adverse impacts on the environment. Those are the use of air conditioners with inverter technology, LED lights, and capacitor banks to optimize electricity use, which has been implemented since 2010. Besides, TelkomGroup also educates employees to save energy. In offices, warning boards and stickers are placed at strategic locations to remind employees to save electricity and water. The work area uses a zoning lighting scheme and reflective glass with a thickness of 6 mm in most office buildings to reduce incoming heat.

For STO operation, Telkom optimizes the electric generator's capacity to its load capacity for diesel fuel-efficiency consumption and the air conditioner system of the device room to increase its reliability and electricity consumption. For data center management, Telkom Sigma had AC system consumption saving by temperature and humidity adjustment setting on AC units to maintain PUE (Power Usage Effectiveness) on 1.8 level in 2020. Telin data center in Singapore also improved in the PUE value from 1.73 in 2019 to 1.43 in 2020. Meanwhile, in the operational management of BTS, Telkomsel presents advanced technology to support operational activities, such as the Go Green Fuel Cell Base Transceiver Station (BTS). This commitment is realized by utilizing Fuel Cell through an energy source using Hydro Plus (a mixture of Methanol and Water) and Solar cell with solar energy sources. Telkomsel has implemented this technology in several BTS in several operational areas.

Telkom always reviews the potential environmental impacts while carrying out operational activities, such as installing telecommunication cables and constructing Base Transceiver Station (BTS) towers. Telkom always follows standards according to international norms in development. The Company understands the importance of environmental aspects to avoid the lessen public image risk of neglecting this impact.

ACHIEVEMENTS OF CORPORATE SOCIAL RESPONSIBILITY INITIATIVES FOR THE ENVIRONMENT

The social responsibility programs realization for the environment in 2020 was considered a positive impact on the community. Reducing fuel, electricity consumption, and emissions expected to contribute to the lower climate change impact. On the other hand, through a sequence of the implemented social responsibility programs, TelkomGroup also received positive benefits, both directly and indirectly, such as efficient resources use.

By carrying out social responsibility for the environment, TelkomGroup is committed to providing sustainable development benefits, either directly or indirectly. It is an effort to support Government Regulation No.59 of 2017 related to the sustainable development goals achievement.

ECO-FRIENDLY WORK CULTURE

Telkom understands the importance of creating an environmentally friendly work culture in the operational areas of the Company and its subsidiaries. Besides, partners who work their activities in the TelkomGroup operation area also should understand and support the work culture. One of Telkom's efforts is to socialize an eco-friendly lifestyle, such as reducing plastic beverage packaging and plastic-based material in the ongoing activities.

Since 2009, Telkom has built an eco-friendly lifestyle system. It was marked by the "Bike to Work" program as a campaign to reduce carbon emissions. Also, TelkomGroup has determined several policies, including online official memos, virtual meetings, shared files, online surveys, and IT-based human resource management. During the pandemic, TelkomGroup implemented a Work from Home policy. Besides the health and safety of employees, it could give a positive impact on the environment due to decreased resource use and discharged emissions.

TELKOM
HIGHLIGHTS

REPORT OF THE BOARD
OF COMMISSIONERS
AND DIRECTORS

ABOUT
TELKOM

MANAGEMENT DISCUSSION
AND ANALYSIS

In 2020 it was estimated that there were 321,827 published online internal official memos. Assuming each official memo is equivalent to 1 sheet of paper and addressed to 2 recipients, Telkom saved as much as 643,654 sheets or 1,288 reams of paper.

TelkomGroup continues to educate customers by paperless bills via email. Besides, customers can also access MyIndiHome and MyTelkomsel applications. From 8.0 million IndiHome subscribers and 6.5 million postpaid cellular subscribers, Telkom can save 147 million sheets of paper (equivalent to 348 thousand reams of paper) assuming 1 bill sheet per month in 1 year.

TelkomGroup through Telkomsel also invites people to show commitment and take real action to reduce plastic use while reducing plastic waste through the #BhayPlastik movement. It has been held since December 2018 aiming to spread environmental awareness, so that people can use plastic wisely.

ELECTRICITY CONSUMPTION

As of the end of 2020, TelkomGroup has calculated electricity consumption includes fixed and cellular networks, building operations, and data centers. The total electricity consumption for 2020 was 2,313,300,900 kWh, increased by 78,447,855 kWh or 3.5% than the previous year.

The electricity increase was due to the consumption of cellular networks in line with the addition of more BTS to strengthen Telkomsel network across country and client colocation, or IT load capacity of data center customers. On the other hand, the electricity consumption decreased due to upgrading STO type device with higher efficiency consumption and the lower electricity consumption of operational building due to the COVID-19 pandemic that decreased the office activities. The following table is the electricity consumption of TelkomGroup for the last three years.

TelkomGroup's Electricity Consumption 2018-2020

Electricity consumption	2020	2019**	2018**
	Kilo Watt Hour (kWh)		
Fixed Network (STO)	287,927,905	323,667,742	338,596,501
Operational (Building)*	71,981,976	80,916,935	84,649,125
Cellular Network (BTS)	1,889,032,157	1,776,077,129	1,679,150,702
Data Center	64,358,862	54,191,239	43,042,256
Sigma Data Center	62,736,741	52,821,841	41,801,266
Telin Data Center in Hong Kong	251,241	90,678	18,430
Telin Data Center in Timor Leste	1,370,880	1,278,720	1,222,560
Total	**2,313,300,900**	**2,234,853,045**	**2,145,438,584**

*Building managed by Telkom Property.
**Restatement.

FUEL CONSUMPTION

Furthermore, through the facility of Employee Shuttle Bus (EMSHUB), Telkom contributes to reducing the congestion and emissions in Jakarta. The presence of EMSHUB is supported by Satellite Office facilities in Bogor, Tangerang, and Bekasi allowing employees to continue their work when the traffic is high. EMSHUB also has a meeting room and collaboration room equipped with video conferencing facilities and high-speed internet so they can work comfortably in a mobile manner and remain productive. Besides, TelkomGroup Board of Directors have also participated in reducing emissions by using electrical vehicles since 2020.

CORPORATE
GOVERNANCE

CORPORATE SOCIAL
RESPONSIBILITY

PARTNERSHIP AND
COMMUNITY DEVELOPMENT
PROGRAM (PKBL)

APPENDICES

CONSOLIDATED
FINANCIAL STATEMENTS

Furthermore, TelkomGroup uses mostly fuel for operational vehicles, BTS, and STOs. In 2020, there was a decrease in fuel consumption around 130,692 liters or 0.9% due to the lower fuel consumption for STO operation by 31.6% due to the increasing PLN continuity supply, so power outage and the low gap of electric generator capacity and its load rarely occurred. Fuel efficiency also shows in the BTS operational due to energy saving and eco-friendly technology use. The following table is TelkomGroup's fuel consumption for the last three years.

TelkomGroup's Fuel Consumption 2018-2020

Fuel Consumption	2020	2019**	2018**
	Litre		
Fixed Network (STO)	1,082,622	1,583,986	N/A
Operational Vehicle*	2,100,567	1,463,650	4,799,513
Cellular Network (BTS)	9,979,993	10,246,811	± 12,000,000
Sigma Data Center	18,215	16,642	27,230
Telin Data Center in Timor Leste	9,000	10,000	12,000
Total	**13,190,397**	**13,321,089**	**±16,838,743**

*Operational vehicles managed by Telkom Property.
**Restatement.

ECO-FRIENDLY ENERGY

To reduce carbon emission, TelkomGroup currently uses eco-friendly energy for BTS. The eco-friendly energy use is not new for Telkomsel. Previously, Telkomsel has utilized alternative eco-friendly energy sources of Fuel Cells and Solar Cells (solar power). We can use this eco-friendly energy thanks to continuous research based on the spirit of maintaining and improving Telkomsel services.

Fuel Cell technology can produce power with exhaust gas of water vapor (zero emission). Telkomsel has deployed 216 Go Green Fuel Cell BTSs and 209 Solar Cell BTSs across Indonesia. The eco-friendly alternative energy use is also part of Telkomsel measures to ensure the broadband networks available across the country.

WATER MANAGEMENT AND CONSUMPTION

In water consumption, TelkomGroup uses water sources from the Regional Drinking Water Company. Water use includes domestic needs. Several efficiencies that have been made were implementing water-saving policies, using automatic taps in most of Telkom buildings and use the AC effluent water. Water saving also implemented by with the gutters use on the rooftop to collect rainwater which will be processed and used for water consumption in Jurong-3. Besides, most of Telkom buildings have biopores and infiltration wells for rainwater control and water reuse. The following table is TelkomGroup's water consumption in 2018-2020.

TelkomGroup's Water Consumption 2018-2020

Water Consumption	2020	2019	2018
	m³		
Office Operational*	1.588.177	1,881,747	1,779,662
Total	**1.588.177**	**1,881,747**	**1,779,662**

*Water consumption for domestic purpose in Telkom Property buildings.