A large, high-resolution image of the Earth from space, showing the Western Hemisphere with North and South America visible. The Earth is partially submerged in water, with a clear horizon line. The background is a deep blue sky with wispy white clouds.

CLIMATE CHANGE REPORT

FOLLOWED TCFD RECOMMENDATION

PATHWAY TO DECARBONIZATION

2022

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01 INTRODUCTION

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ESG Chairman Message

“

At the heart of this report is Banpu's commitment to reducing impact on the climate change and helping to create a more sustainable future.

”



I am proud to announce the release of our first Climate Change Report following the Task Force on Climate-related Financial Disclosures (TCFD) recommendation. This report marks an important milestone in Banpu's greener and smarter strategy.

At the heart of this report is Banpu's commitment to reducing impact on the climate change and helping to create a more sustainable future. We have made great strides in developing renewable energy and energy technology portfolio, and this report demonstrates the progress we have made to date.

We at Banpu understand the challenge of climate change. We take our responsibility to address climate-related risks and opportunities seriously and are committed to continuing to enhance our disclosure in this area.

We look forward to working jointly with our stakeholders to ensure that we are adequately managing climate-related risks and opportunities as well as creating a more sustainable future.

Mr. Piriya Khempon
Chairman of the Environment,
Social and Governance Committee



CEO Message

“ We have already achieved significant improvements in our carbon emissions reduction as well as strong growth in our renewable energy portfolio. ”



This year marks a milestone for Banpu, as we release our first Climate Change Report. This report reflects our commitment to tackling climate change head-on and our dedication to the future of our planet.

Based on Task Force on Climate-related Financial Disclosures (TCFD) recommendations, this report contains a comprehensive assessment of the impact of climate change on the Company, the progress we have made in reducing our carbon footprint, as well as strategies for further emissions reduction. It also highlights the efforts we are making to reduce our dependency on traditional fuels and our accelerated transition to becoming a Greener and Smarter energy solutions provider.

We have already achieved significant improvements in our carbon emissions reduction as well as strong growth in our renewable energy portfolio. We are committed to ramping up our efforts to ensure we are driving a just and inclusive transition across the Pacific Rim region. We are also committed to the ongoing monitoring and disclosure of our climate-related financial performance and progress.

I am confident that with the continued hard work of our team, and the support of the Board of Directors and all our stakeholders and shareholders, we will continue taking bold and decisive action to deliver on our promise of sustainable energy.

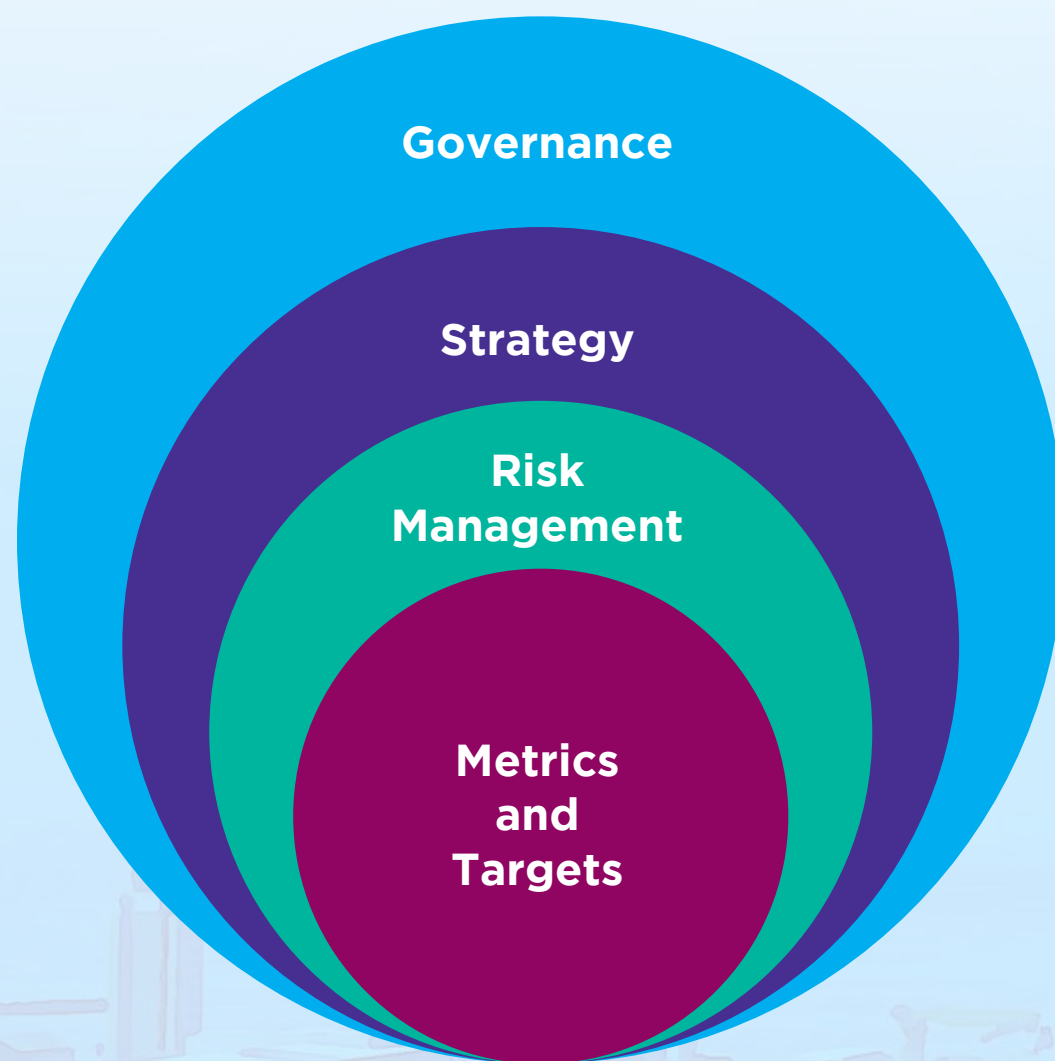
Mrs. Somruedee Chaimongkol
Chief Executive Officer



TCFD Framework

Task Force on Climate-related Financial Disclosures (TCFD) are structured around four thematic areas that represent core elements of how organizations operate: governance, strategy, risk management, and metrics and targets.

Core Elements of Recommended Climate-related Financial Disclosures



Governance:

to disclose the organization's governance around climate-related risks and opportunities



Strategy:

to disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning where such information is material.



Risk Management:

to disclose how the organization identifies, assesses, and manages climate-related risks.



Metrics and Targets:

to disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.

In this report, we describe how climate change scenarios may impact to our business and outline our strategy to mitigate those potential impacts and ensure our resilience. Our understanding of the challenges associated with climate change is evolving and we continuously update our plans accordingly.

While this report focuses on Banpu's strategy to mitigate the climate-related risks and opportunities to our business, we are also taking actions to tackle climate change at source. We continuously invest in projects and programs that can reduce and/or remove greenhouse gas (GHG) emissions towards low carbon society. To pursue our sustainability:

Our Decarbonization Roadmap is developing which aims to reduce our GHGs emission in-scope 1 and 2 as well as to fully disclose scope 3 by 2025.

We have sought more opportunities in renewable energy investment by increasing investment to be 1.1 GW by 2025, as well as no new inorganic investment in coal business since 2020.

Reprinted from "Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures" (June 2017)

About Banpu

ENERGY RESOURCES

Covering coal mining business in Indonesia, Australia, China and Mongolia and Gas business in the US, emphasize on decarbonization by integrating green energy sources and emission reduction initiatives into all operations.

OPERATIONS

MINING



Responsible and reliable supplier
Continue improvements in operational efficiency through implementation of green initiatives to deliver high-quality products to our customers.

Explore and establish new S-curve businesses
including strategic minerals, natural-based solutions, etc. as part of commitment to decarbonization and sustainable growth.

GROWTH



GAS



Continued focus on delivering consistent production
With CAPEX flexibility to maximize cash flow generation to further supporting Greener & Smarter transition.

Net Zero Scope 1 and 2 emissions of BKV's upstream business by 2025
With ambitious plans to expand across the gas value chain in the US and develop CCUS*.

Note: * Carbon Capture, Utilization, and Sequestration



ENERGY GENERATION

Consists of Thermal & HELE and renewable power plants across Asia-Pacific region, maintained operational excellency and resiliency, while continued growth of affordable, reliable and eco-friendly power portfolio.

OPERATIONS

THERMAL



Maximize value and efficiency of legacy assets
maintaining stable operation across all plants, while lowering emission levels, and generating steady cash flow.

Greener baseload power, Value enhancement across electricity value chain
including electricity retail and trading capabilities in merchant markets, as well as HELE plants with potential synergies with gas assets.

GROWTH



RENEWABLES



Efficiency improvement and generation consistency
of operating assets while ensuring on-time commissioning of developing projects in pipeline.

Grow renewable capacity
seeking investment opportunities focusing on high-growth geographies aligned with Banpu's presence to grow green generation portfolio.



ACCELERATING THE GREENER, SMARTER TRANSFORMATION

ENERGY TECHNOLOGY

OPERATIONS



Scale up smart energy portfolio by continue expanding portfolio and focus in providing solutions with cutting-edge technologies, reliable, affordable price and environmentally friendly.

GROWTH



Value creation through invested partners and new S-curve businesses by exploring new disruptive businesses to new horizons in clean energy and beyond, and maximizing value creation from investments and partnerships.

Leading Net-zero smart clean energy solution provider in Asia Pacific, covering smart energy ecosystem to become one-stop shop for integrate energy services.



Banpu Greener & Smarter Strategy

Banpu has been going through a fundamental process of strategic transition to a “Greener & Smarter” value structure designed to provide a more sustainable platform for value growth for stakeholders and shareholders. New investments have focused primarily on lower carbon and clean energy technology businesses including gas, renewables, solar rooftops & floating, battery & energy storage systems (ESS) solutions, smart cities and energy management, energy trading and e-mobility.

Banpu focusses its investments in renewable energy and energy technologies such as energy storage, energy trading platforms, and other energy solutions. As Banpu prioritizes an eco-friendly business and smart integration of technologies and innovations, its strategy centrals around the 3Ds of energy: Decentralization, Decarbonization, and Digitalization – to establish an integrated clean energy technology portfolio throughout the Asia-Pacific: renewable energy generation, solar rooftop solutions, energy storage systems, energy management systems, e-mobility, smart infrastructure and electricity trading. In addition, Banpu’s medium-term plans are to ensure operational stability to respond to high dispatch requirement from customers, support financial stability by having consistent cash flow through disciplined financial and liquidity management, and focusing on capacity expansion from existing pipelines. Its long-term plans are strengthening cash flow with operational improvement and cost management, ensuring projects development are on time, and seeking new opportunities for expansion in baseload projects and development in renewable energy and energy technology.

This has elevated the operational efficiency of Banpu’s 3 core groups of businesses –



- **Energy resources:** coal and gas including related operations such as marketing, trading, logistics, fuel procurement and transmission. Focus on GHG emissions reduction through various initiatives, process improvement through digital technology & cost optimization, and seeking investment opportunities in the related midstream business along the value chain.

Gas business: we have production capacity 864 Mtcfd. Continued implementation of Scope 1 & 2 emission reduction program utilizing best-in-class technologies and operational methods, i.e., methane leak detection, methane capture, etc.

Mining business: we have production capacity 35.4 Mt. Exploration of potential investments in strategic minerals with high growth, leveraging energy trends; as well as other clean technology opportunities.



- **Energy generation:** base-load and renewable power plants

Emphasis on maintaining excellence of reliability and maximize plant efficiency reducing emissions while seeking opportunities to invest in greener energy such as gas and renewable energy. The company is expanding into new markets with high growth, such as renewable power in the Asia Pacific region, namely China, Japan, Australia, and Vietnam, the Integrated Coal Gasification Combined Cycle (IGCC) plant in Japan, and the Combined Cycle Gas Turbines (CCGT) plant in the U.S.



- **Energy technology:** Smart Data Analytics & Energy Management, Smart Energy Generation, Smart Energy Storage, Smart Energy Utilization, Smart Circular Economy

Provides one-stop service of total solar energy solutions tailored to customers’ needs. The majority of solar power system providers focuses on the installation of the rooftop solar power generation system. Furthermore, Banpu scale up energy technology portfolio by expanding existing energy services, including e-mobility platform under the Mobility-as-a-Service (MaaS) concept, battery production, energy and waste management. Acquire and develop new energy-related services with a focus on building competency and integration of services into a single digital platform.



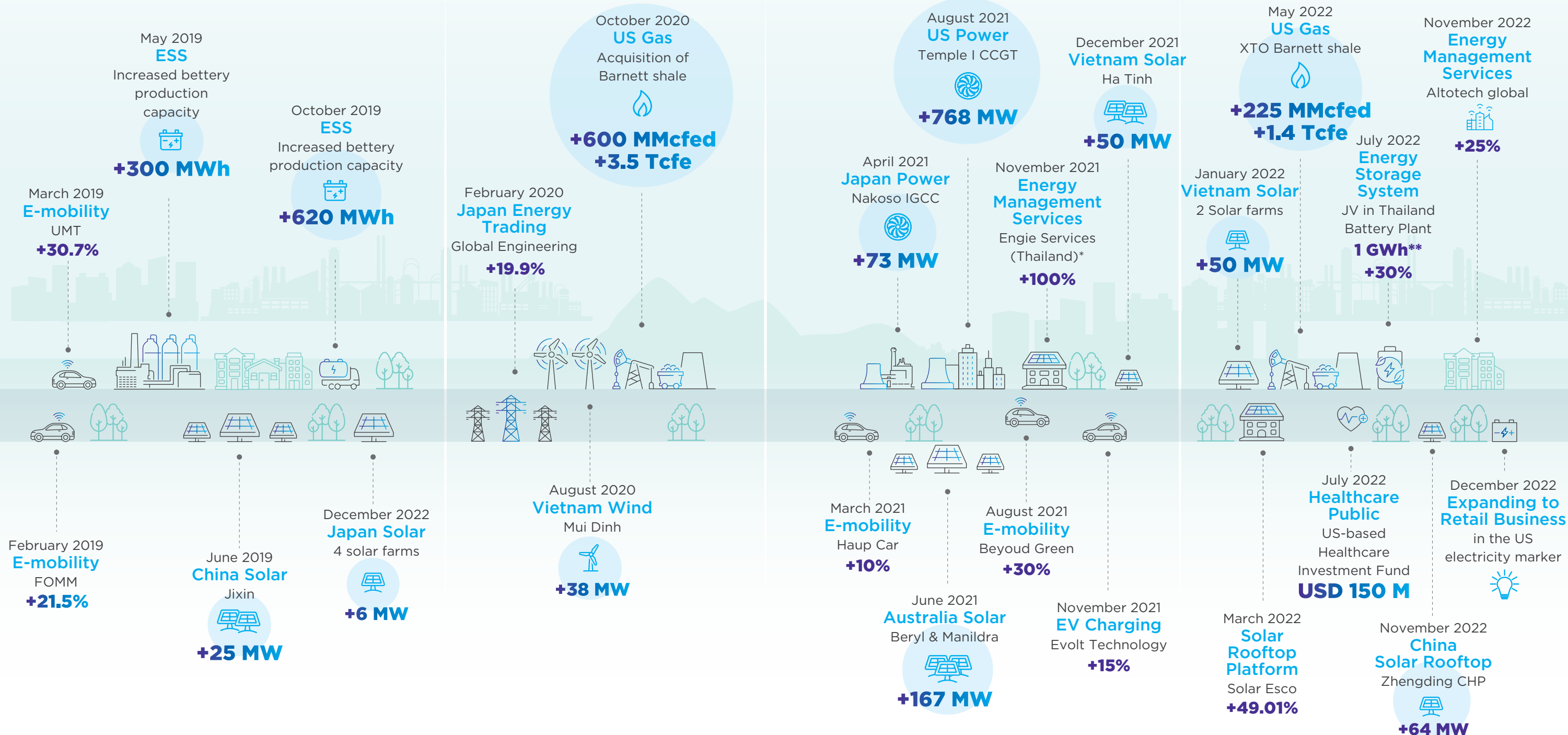
Banpu Journey towards Greener & Smarter Acceleration

2019

2020

2021

2022



*Renamed to Banpu Next EcoServe Co., Ltd.
**Year 2026 full capacity 1 GWh



02

GOVERNANCE

Describe the board's oversight
of climate-related risks
and opportunities

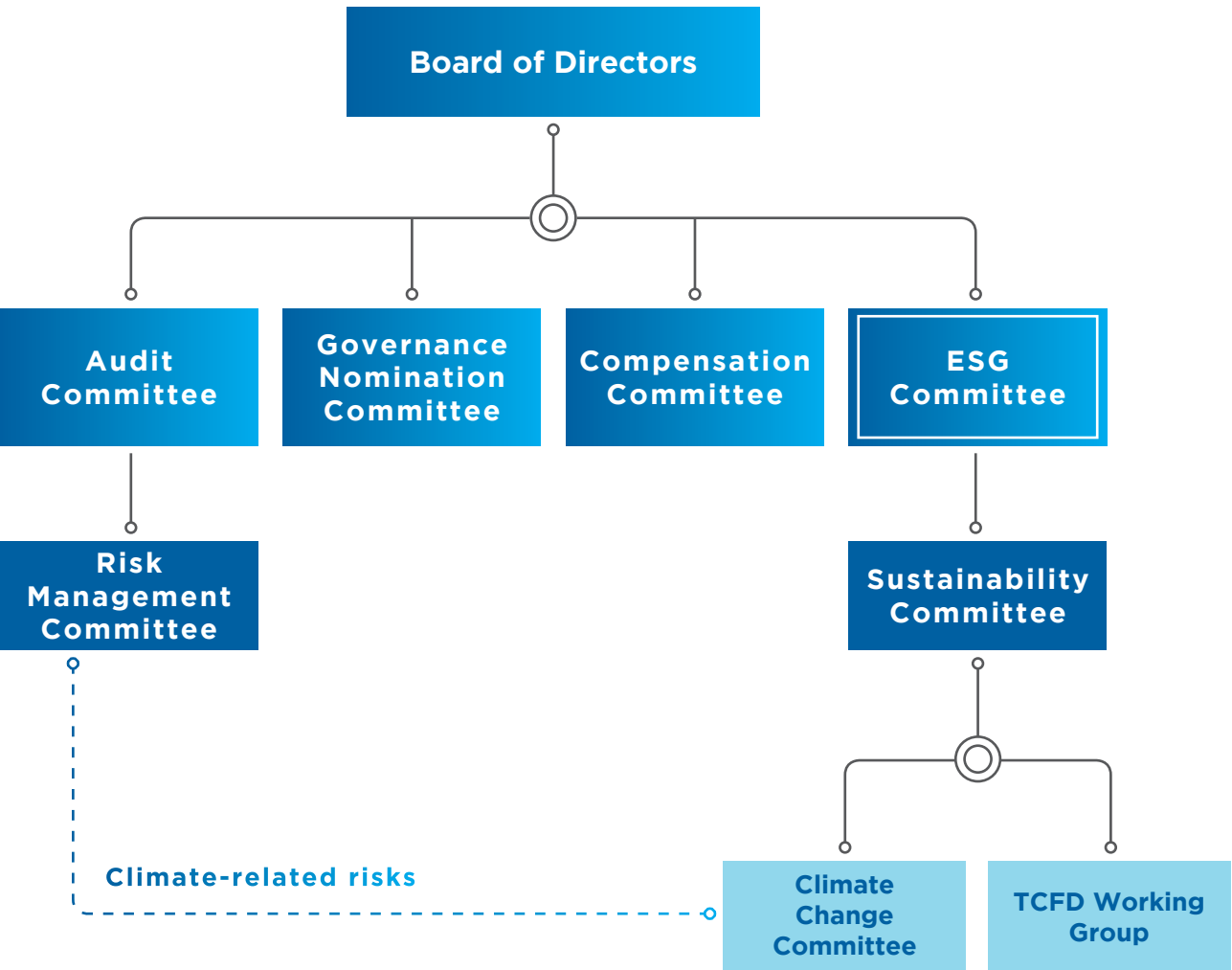
—
Describe management's role
in assessing and managing
climate-related risks and
opportunities








Governance

Banpu oversight in climate-related risks and opportunities is embedded at the highest level of our company. We are continually evolving our corporate governance structure in regards to urgency of climate action and our increased understanding of climate change impact on our business.

In 2020, Banpu was officially announced as a supporter of the Task Force on Climate-related Financial Disclosures (TCFD Supporter). In 2021, the Company established the Environment, Social and Governance Committee (ESG Committee), comprising of 3 independent directors. ESG Committee represents the Board of Directors in overseeing matters related to ESG to ensure that ESG-related issues are properly managed and ongoing commitments to ESG are fulfilled. Climate-related issue is one of the ESG topics that is overseen by our committee as well as climate-related risks and opportunities assessment. In practice, the Board of Directors and management held a joint discussion to review and approve the strategic plan and business direction aligning with sustainable development plan to determine business strategies, reinforcing the Greener & Smarter strategy. The focuses are on building competitiveness, creating added value for stakeholders, and adapting to changing economic and industrial environments

In brief, roles and responsibilities of the Board of Directors and Management related to climate change are as follows;



Governance Body	Role and Responsibility	Meeting Frequency
 Board Chair	Board Chair has the most powerful in the Board of Directors. He has conducted and facilitated the meeting towards sustainable growth.	Quarterly
 Board of Directors	<p>The Board of Directors monitors, manages, and resolves the climate-change risks through ESG Committee and Audit Committee.</p> <p>In practice, the Board of Directors and management held a joint discussion to review and approve the strategic plan and business direction aligning with sustainable development plan to determine business strategies, reinforcing the Greener & Smarter strategy. The focuses are on building competitiveness, creating added value for stakeholders, and adapting to changing economic and industrial environments.</p>	Quarterly
 ESG Committee	Climate Change issues are included under the direct responsibility of the ESG Committee, which is appointed by the Board of Directors. ESG committee consists of 3 independent members from the Board of Directors and one of them acting as a chairman of the committee. Climate-related issues including risks and opportunities are evaluated, reviewed, and monitored by this committee. This includes overseeing other climate-related topics such as GHGs emission, mitigation, adaptation, low-carbon investment.	Quarterly
 Audit Committee	Audit Committee consists of 3 independent members from the Board of Directors and one of them acting as a chairman of the committee. Climate-related risk is one of the risks that oversight by this committee including climate-related regulation change, strategic risk, etc.	Quarterly
 Risk Management Committee (RMC)	The RMC role is to review, manage and monitor Company's risk management and report to Audit Committee. Climate-related risk is one of the risks that is integrated into our Enterprise Risk Management.	Quarterly
 Sustainability Committee	Climate-related issues has taken into consideration by Sustainability Committee, including target setting, performance monitoring, and roadmap to achieve target.	Twice a year
 Chief Executive Officer (CEO)	<p>The CEO is responsible to monitor GHG emission reduction performance and other climate-related issues for both corporate-wide and country level we have operations. It includes quarterly performance review included energy usage, energy intensity, GHG emissions and GHG intensity.</p> <p>The CEO is also responsible to ensure and closely monitor that the GHG emission performance will be achieved against our target. She is also responsible for considering and making decision to announce internal carbon pricing for a new business investment to align with our Greener & Smarter strategy.</p>	Monthly



Kesennuma Solar Power Plant, Japan

03

STRATEGY

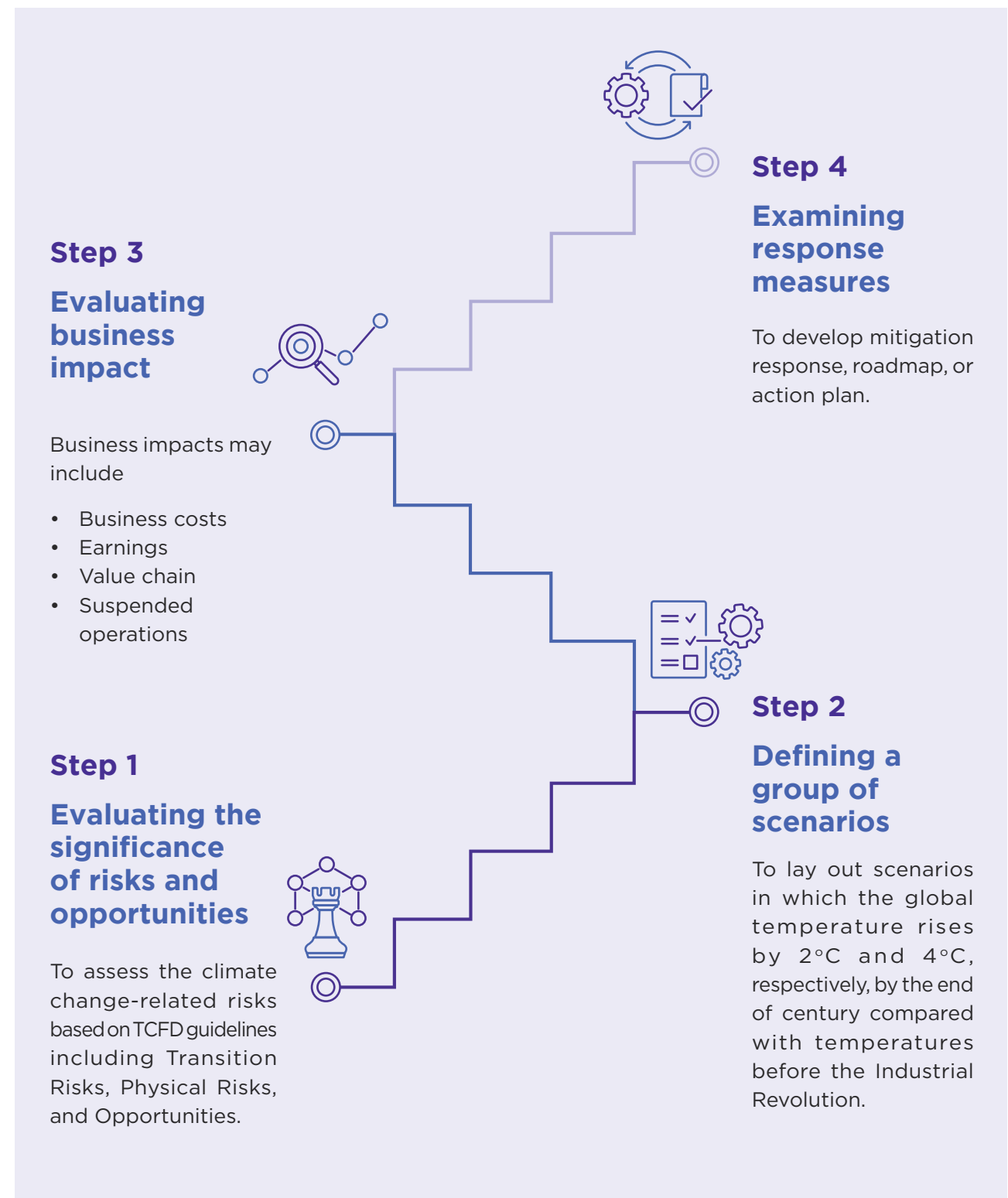
Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term

Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning

Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2 C or lower scenario

Strategy

Banpu has applied 4 steps of analysis comprising of evaluating the significance of risks and opportunities, defining a group of scenarios, evaluating business impacts, examining response measures, as below;



Step 1 Evaluating the significance of risks and opportunities

For this report, our timeframe for risk assessment and mitigation strategy will be divided to 2 main timeframes. Short-term period means impacts will occur within 3 years. Medium-and long-term period means impacts will occur more than 3 to 25 years. There are key climate-related risks and opportunities as follows:

- Transition risks: policy and legal, technology, market, reputation
- Physical risks: increased severity of extreme weather (acute) and change of precipitation patterns (chronic)
- Climate-related opportunities: resource efficiency and products and services opportunities

Risk Type			Potential Financial Impact (-)	Short-term	Medium-term & Long-term
Transition Risk	Policy and legal	Increased pricing of greenhouse gas emissions due to regulation e.g. carbon taxes			
		Increased compliance costs and potential disruption related to new mandates and regulations in operating countries and potential investment countries			
	Technology	Increased capital expenditure/ operating cost and potential disruption due to technology improvement or innovation that support the transition to lower-carbon and energy efficiency			
	Market	Decreased in net operating revenue of coal sale due to reduction in demand for thermal coal from energy transition and any consequential substitution of the fossil fuel by renewables, also changing the metallurgical coal market dynamics due to the necessity of low-carbon product in industry			
	Reputation	Increased cost of finance or divestment of our shares as banks and other financial institutions discontinue working with companies involved in fossil fuels			
Physical Risk	Increased severity of extreme weather (acute)	Increased operating cost and decreased of revenue due to extreme weather events, such as cyclones or floods			
		Increased insurance premium in operating countries due to severe and frequency of natural disaster which effect from climate change			
	Change of precipitation patterns (chronic)	Increased operating cost and decreased of coal production due to abnormal rain pattern			

Opportunity Type			Potential Financial Impact (+)	Short-term	Medium-term & Long-term
	Resource efficiency	Reduced operating costs through efficiency gains and cost reductions by moving towards more efficient operations			
	Products and services	Increased revenue through demand for lower-carbon products			
		Increased revenue from better competitive position to reflect shifting consumer preferences			

Note: ■ High ■ Medium to High ■ Low to medium ■ Low



Step 2 Defining a group of scenarios

Banpu has adopted 2 scenarios for impact assessment from climate-related risks which are current stage scenario (represent 4C pathway) and 2C pathway scenario (represent 2C pathway).

Scenario	Current Stage (4C scenario)	2C-pathway
Rationale	This scenario presents current situation for our financial model including existing regulatory change and technology disruption which commence to be occurred.	This scenario presents the impact from climate-related change to aligned with 2-degree scenario. It reflects actions necessary by the energy sector to limit global warming to under 2-degree.
Underlying model	<ul style="list-style-type: none"> IPCC Representative Concentration Pathway 8.5 (RCP 8.5) Water Stress Map by aqueduct tool 	<ul style="list-style-type: none"> International Energy Agency's Sustainable Development Scenario
Impact assessment	Physical impacts only	Transition Impacts only
Assumption	<ul style="list-style-type: none"> This assessment covered the period of 2022-2050 Physical features: <ul style="list-style-type: none"> Global emission continues to rise because of high carbon intensity Very high frequency and intensity of heat waves and extreme precipitation events 	<ul style="list-style-type: none"> This assessment covered the period of 2022-2050 Transition features: <ul style="list-style-type: none"> Carbon price introduced (followed World Bank carbon pricing data) Fossil fuel subsidies dramatically decrease Increase generation from renewable energy



Step 3 Evaluating business impacts

After analysis based on TCFD guidelines, we found that coal price fluctuation and carbon cost is the main impact for our main business units, mining and thermal power business. High priority risks of each BU based on financial model were selected to analyze financial impacts to Banpu portfolio.

Business Unit	Risk type	Impact item	Impact on Banpu group Financial Portfolio		
			Short-term	Medium-term	Long-term
Mining	Transition Risk	Operating cost increase from Carbon tax	Medium	High	High
		Revenue decreases from coal price downward trend	Medium	High	High
	Physical Risk	Operating cost increase (i.e. insurance premium)	Low	Low	Low
Thermal power	Transition Risk	Operating cost increase from Carbon tax	Low	Low	Low
	Physical Risk	Operating cost increase (i.e. insurance premium)	Low	Low	Low
Gas	Transition Risk	CAPEX/ Operating cost increase from implement Net Zero Strategy	Low	Low	Low
	Physical Risk	CAPEX/ Operating cost increase from extreme weather event (e.g. equipment broken)	Low	Low	Low
Renewable energy	Transition Risk	Increase renewable energy in our portfolio	Low	Low	Medium
	Physical Risk	CAPEX/ Operating cost increase from extreme weather event	Low	Low	Low

Note: means positive impact

means negative impact



Step 4 Examining response measures

Since 2017, Banpu has developed Climate change strategy which includes 4 pillars as follows;

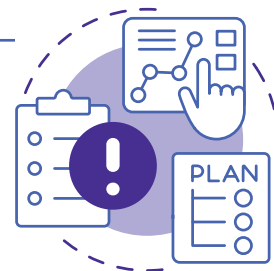
Strategy

 Mitigation	<ul style="list-style-type: none"> • Ensure compliance with related laws • Seek to reduce GHG emissions • Integrate carbon pricing in the investment decision
 Adaptation	<ul style="list-style-type: none"> • Monitor risks, opportunities, and implications of climate change • Plan for business continuity regarding climate change
 Be a part in low carbon society	<ul style="list-style-type: none"> • Seek to invest renewable energy business • Support initiatives, research and development (R&D) of low GHG emissions technologies
 Participate in climate change strategy	<ul style="list-style-type: none"> • Share the performances and GHG management practices • Be a member of the climate change committee or taskforce

Regarding our strategy and our climate-related risks and opportunities assessment, we came up with our ‘Mitigation Strategy’ with ‘Execution plan’ to achieve our target, mitigate impact, maximize our potential on energy platform, and support the SDGs.

At Banpu Corporate;

- Announced climate change policy
- Announced 5-year emission reduction target for each business unit
- Implemented internal carbon pricing
- Participated in CDP-climate change since 2010, CDP-water since 2017, and CDP-forest since 2019.
- Assessed climate related risks and reported to the Risk Management Committee and Audit Committee
- Conducted scenario analysis which covers financial information
- Established ‘Decarbonization team’ to work on Climate-related strategy and its implication
- Set corporate communications and brand management works in line with its direction and the ESG commitment by developing communication strategies to achieve quick and accurate communications while ensuring good understanding among all stakeholders
- Maintained a strong relationship with banks and other institutions
- Accelerated business transformation by providing integrated energy solutions to customers and expanding investment portfolio to cover other businesses, i.e. healthcare



Mining Business

- Incubate low GHG emissions technologies i.e. energy storage system, electric vehicle and smart city
- Improve production efficiency and reducing scope 1 and 2 emissions
- Track changing weather condition and amend operating processes
- Consider natural disaster risk as part of new project due diligence.
- Pursue attractive near-term carbon and methane capture



Thermal Power

- Restructure energy portfolio by shifting from conventional energy to cleaner and smarter energy solution
- Incubate low GHG emissions technologies i.e. energy storage system, electric vehicle and smart city
- Improve production efficiency and reducing scope 1 and 2 emissions
- Track changing weather condition and amend operating processes
- Consider natural disaster risk as part of new project due diligence
- Invest through most efficient technology, such as flue gas desulfurization (FGD), selective non-catalytic reduction (SNCR) and electrostatic precipitators (ESP)



Gas Business

- Incubate low GHG emissions technologies i.e. energy storage system, electric vehicle and smart city
- Improve production efficiency and reducing scope 1 and 2 emissions
- Track changing weather condition and amend operating processes
- Consider natural disaster risk as part of new project due diligence



Renewable Energy

- Seek to invest in renewable and energy technology business including other alternative energy sources
- Adjust portfolio to greener and smarter
- Track changing weather condition and amend operating processes
- Consider natural disaster risk as part of new project due diligence





04

RISK MANAGEMENT

Describe the organizations processes for identifying and assessing climate-related risks

Describe the organization's processes for managing climate-related risks

Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's over all risk management

Risk Management

Banpu takes a comprehensive view on reducing our carbon footprint. Our GHG reduction strategy covers our existing assets, assets that Banpu will develop in the future, new acquisitions to the business and our supply chain. Banpu's climate-related risks identification and assessment are integrated into Banpu's overall risk management process which align with the international standard of The Committee Sponsoring Organizations of the Treadway Commission (COSO) and the International Organization for Standardization's ISO 31000. Banpu integrates enterprise risk management framework throughout our business through a structured process that establishes a common methodology for identifying, assessing, managing, and monitoring risks to prevent any possible adverse impacts on the business and enhances the business opportunities, leading to long-term value creation for Banpu.

For the integration process of climate-related risks assessment as an input to the business strategy, Banpu regularly assesses the climate-related risks and opportunities with collaborations among the risk management team, environmental management team, and all BUs and related SUs. The main tools Banpu uses to identify climate-related risks and opportunities are:



Climate change scenario analysis to evaluate our exposure to climate-related risks and opportunities



External environment monitoring, including new regulations, emerging technologies, market developments and potential change of policies and regulations



Stakeholder engagement in the related forums e.g. COP27, in order to monitor new positioning, emerging trends and regulations

The Climate-related risks and opportunities are prioritized based on their likelihood and severity of impact. The aspects of impacts cover financial, strategic, health, safety, environment, regulatory and license, reputation, relationship, human resources, and service delivery impacts. These categorizations are standardized for risk assessment processes across Banpu, allowing for comparability to other non-climate-change-related risks, and integration with standard risk management processes in Banpu.





Luannan Power Plant, China

05

METRICS AND TARGETS

Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process

Disclose Scope 1 , Scope 2 , and if appropriate, Scope 3 GHG emissions and the related risks

Describe the target used by the organization to manage climate-related risks and opportunities and performance against targets

HIGHLIGHTS

GHG EMISSIONS TARGETS

Banpu has set GHG emissions target for mining and power (thermal power and renewable) during 2021-2025 as follows;

- Mining business: GHG emission intensity reduction 7% from BAU by 2025
- Power business: GHG emission intensity reduction 20% from BAU by 2025

SCOPE 3 EMISSIONS ESTIMATION

Since Banpu has identified relevant categories of scope 3 for each business unit, this year Banpu has started to collect the data and estimate scope 3 emissions of mining in Indonesia. For other business units, we have set a joint plan together with each business unit in the following year.

GHG EMISSION REDUCTION PROJECT IMPLEMENTATION

There are a number of projects implementation within this year include;

- Energy efficiency improvement from Combined Heat power Plant in China
- Solar panel installation for internal use of mining business
- Developing fuel switching project of mining business
- Developing carbon sequestration dashboard
- Developed CCUS project of gas business

GREEN INVESTMENT STRATEGY

Toward 'Greener and Smarter Strategy', the company has continuously increased number of electricity generation from renewable power which we have target to invest in RE up to 1,100 MW by 2025.

GHG EMISSIONS

Climate change presents a significant concern for all stakeholders. Collaboration across countries to prevent further increases in the average global temperature by controlling GHG emissions through rigorously strict regulations in each country is thus the global agenda. As an energy producer and provider, the Company is committed to increasing clean energy in our portfolio and reducing GHG emissions intensity. More information is disclosed in Banpu Sustainability Report 2022.

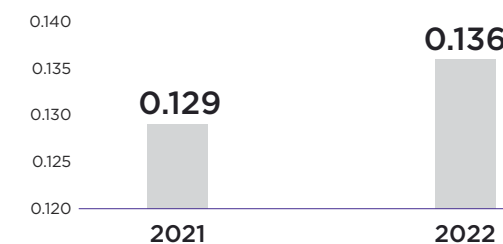
PERFORMANCE



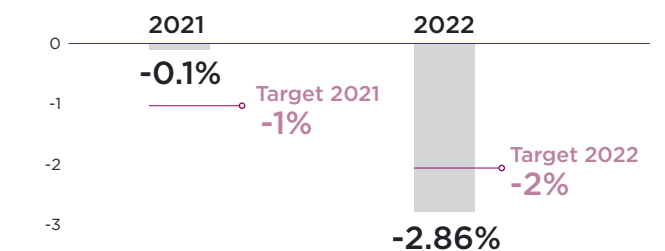
Mining Business

In 2022, the total GHG emissions was 3,435,392 tCO₂e which can be divided into Scope 1 and Scope 2 as 3,195,922 tCO₂e and 239,471 tCO₂e, respectively.

GHG emissions intensity (tonne CO₂e/tonne finished coal)



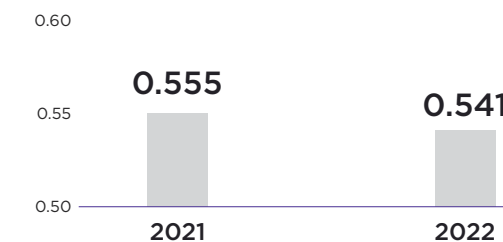
GHG emissions reduction



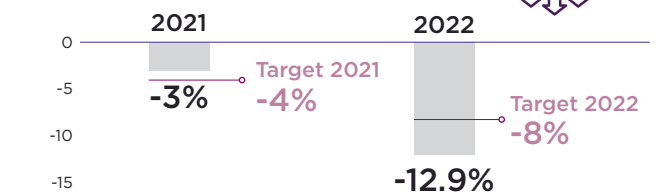
Power Business (Thermal Power + Renewable Power)

In 2022, the total GHG emissions was 3,573,885 tCO₂e which can be divided into Scope 1 and Scope 2 as 3,566,284 tCO₂e and 7,601 tCO₂e, respectively.

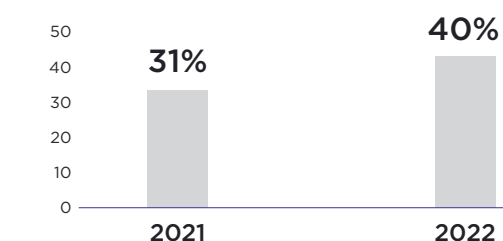
GHG emissions intensity (tonne CO₂e/MWh)



GHG emissions reduction intensity



Power generation from renewable energy





Vinh Chau Wind Power Plant, Vietnam

06

LOOKING AHEAD

Conclude climate-related risk
and opportunity and way forward
of the organization

Looking Ahead

This report is a fundamental of actions following TCFD recommendations. We have identified climate-related governance, risks and opportunities, and targets to manage our GHG emission portfolio. Regarding this report, we have conducted risk assessment of climate-related risks and opportunities that may have a material financial impact on Banpu by 2025. However, in order to develop our strategies for climate-related issues in accordance with the TCFD recommendations, Banpu has established 3 timeframes to analyze financial implications of risk and opportunity comprising of short-term (1 year), medium-term (2-5 years), and long-term (more than 5 years). Moreover, we have started to develop an ambitious target towards net zero emission with decarbonization strategy. We will continue to monitor developments and review our approach as necessary, to respond to evolving approaches to climate change and climate-related disclosures.

This report contains forward-looking statements based upon current expectations and assumptions regarding anticipated developments and other factors. They are not historical facts, nor guarantee any of future performance since they are subject to numerous assumptions, risks and uncertainties, which change over time. Forward-looking statements speak only as of the date they are made, and various factors could cause actual performance to differ materially from what expressed or implied by these forward-looking statements. We aim to evolve its disclosures in the future to provide meaningful information to stakeholders by adapting it to new facts and regulations impacting the changing climate landscape.




We welcome and encourage our stakeholders to provide any feedback you may have on this report by contacting us via Climatechange@banpu.co.th





27th Floor, Thanapoom Tower,
1550 New Petchburi Road,
Makkasan, Ratchathewi,
Bangkok 10400

 +66 2694 6600

 @Banpuofficialth

 www.banpu.com