



Cosmo Energy Holdings Co., Ltd. Green Finance Framework

July 2024

Cosmo Energy Holdings Green Finance Framework

1. Introduction

(1) Company Profile

Cosmo Energy Holdings (hereinafter referred to as the “**Company**”) manages subsidiaries and other businesses related to it as the holding company. The Group consists of 47 subsidiaries and 35 affiliates (as of March 31, 2024), and is mainly engaged in businesses ranging from the independent development of crude oil to import, refining, storage and sale of oil products. In addition, some affiliates are engaged in the business of manufacture and sale of petrochemical products; wind power generation; sale, purchase and management of real estate; construction of petroleum-related facilities; and insurance agency, etc.

(2) Overview of the Framework

The Group has recently formulated the Green Finance Framework (hereinafter referred to as the “**Framework**”) as follows. The Group will continue to promote initiatives aimed at achieving net zero carbon while repeating dialogue with investors and a wide range of market participants through the use of green finance bonds and loans based on the Framework.

In order to promote the achievement of net zero carbon by the Group as a whole, the Framework may also be used for financing the relevant consolidated subsidiaries.

The Group has received a second opinion from Rating and Investment Information, Inc. (R&I), a third-party organization, on the alignment of the Framework with the following principles, etc.

● Principles, etc. that were referred to

The Framework has been formulated based on the following principles, etc.

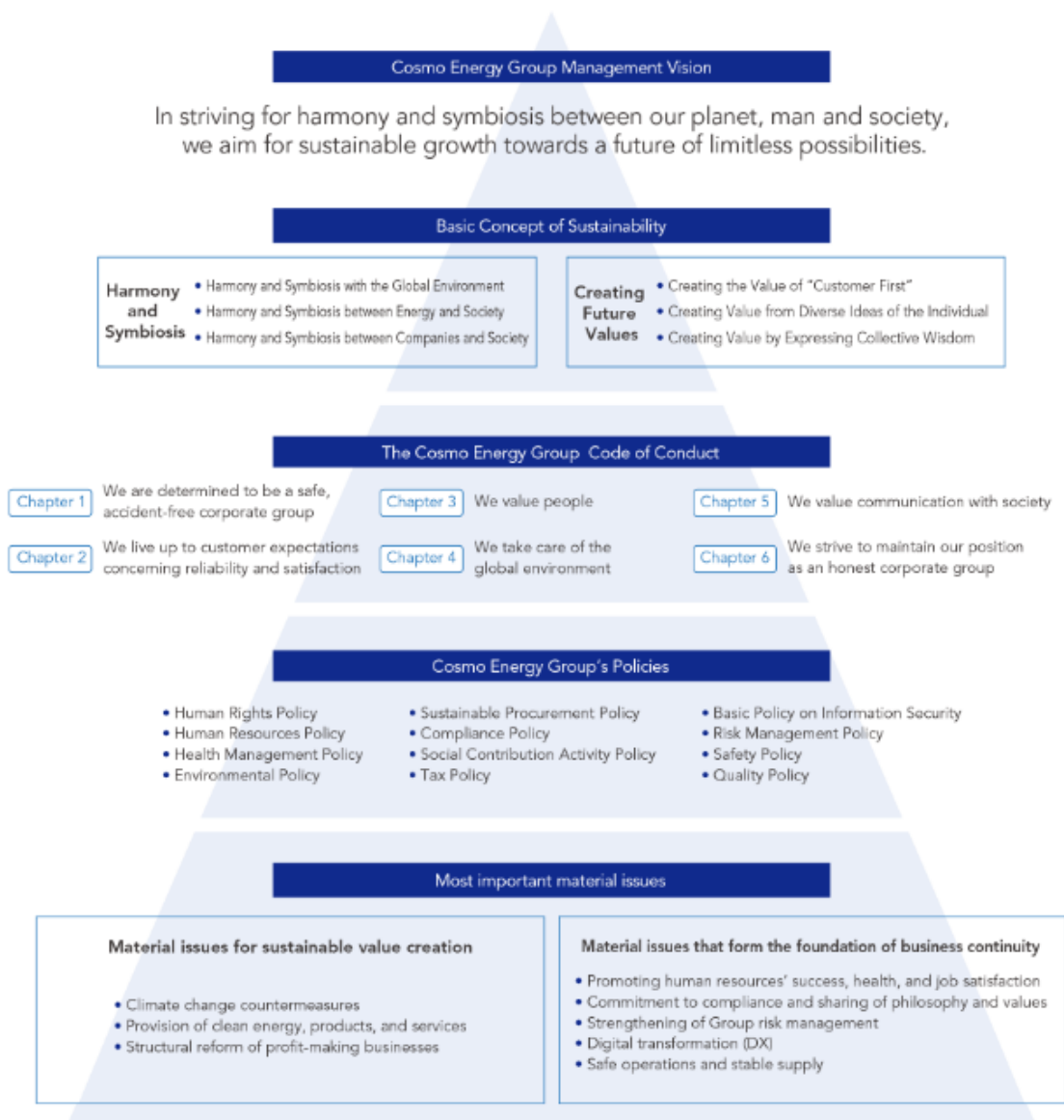
- Green Bond Principles 2021 (International Capital Market Association (ICMA))
- Green Loan Principles 2023 (Loan Market Association (LMA), etc.)
- Green Bond Guidelines 2022 (the Ministry of the Environment)
- Green Loan Guidelines 2022 (the Ministry of the Environment)

2. Sustainability Initiatives

(1) Sustainable Management of the Cosmo Energy Group

The Cosmo Energy Group Management Vision—In striving for harmony and symbiosis between our planet, man and society, we aim for sustainable growth towards a future of limitless possibilities — incorporates our desire for the sustainable growth of our Group and society. The “Harmony and Symbiosis” and “Creating Future Values” included in our Group Management Vision constitute our Basic Concept of Sustainability and show our determination to promote sustainability in our management.

As a group, we have always strived to help realize a sustainable society through our businesses, and to achieve sustainable growth within the Group. The Cosmo Energy Group Code of Conduct, incorporated into our Group Management Vision, is the cornerstone of our sustainability and serves as the foundation for the actions and values of all employees.



(2) Material Issues

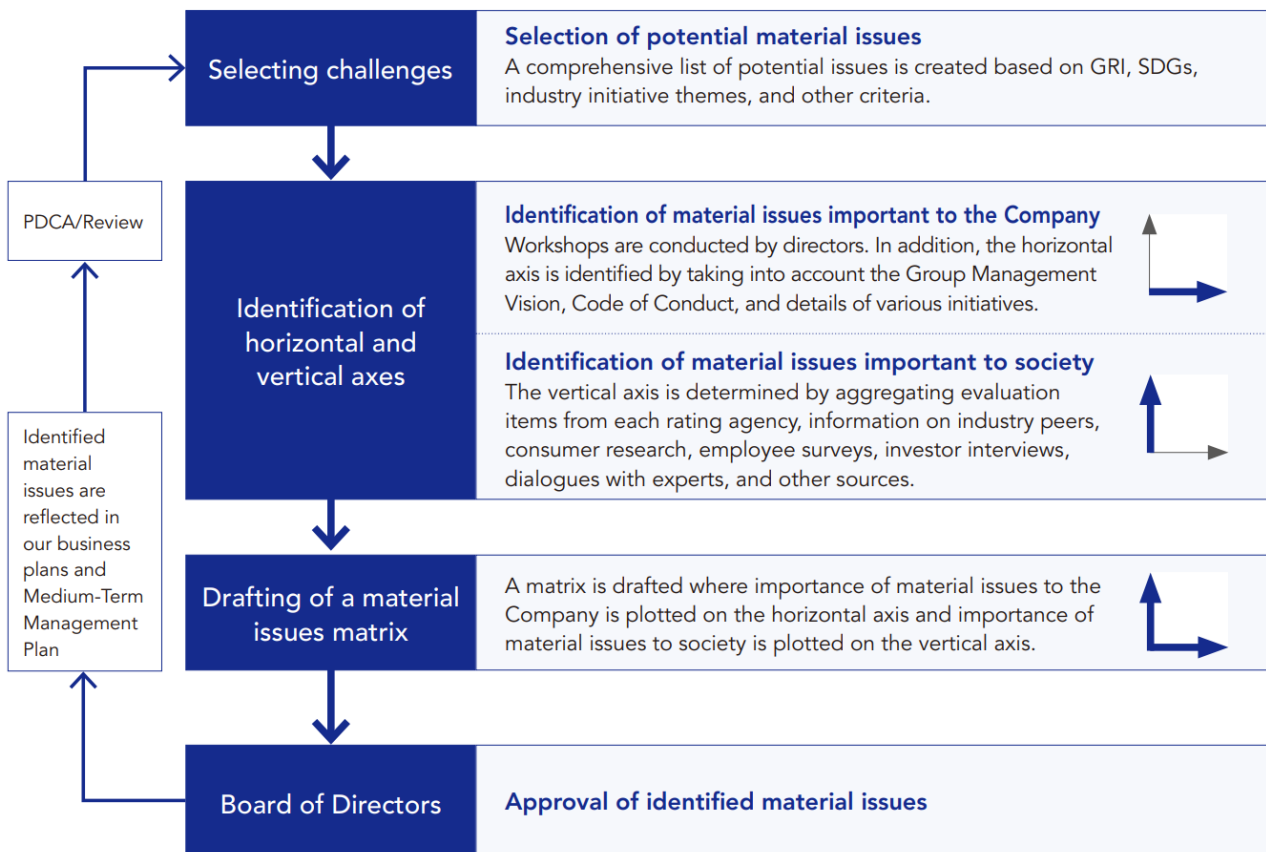
As one of its focus measures in the Seventh Consolidated Medium-Term Management Plan, the Group has identified the eight most important material issues based on the Group’s Management Vision “In striving for harmony and symbiosis between our planet, man and society, we aim for sustainable growth towards a future of limitless possibilities” and the Group’s Basic Concept of Sustainability, which has been arranged by reflecting on the origin of the Management Vision again. By addressing these material issues, the Group is promoting sustainable management to achieve sustainable corporate growth and increase corporate value.

Past specific initiatives include the Sustainability Strategy Committee’s discussion and implementation of the setting and monitoring of KPIs for the identified most important material issues, the revision of the roadmap for achieving net zero carbon by 2050, etc. In addition, as an initiative regarding business and human rights, we conducted human rights due diligence in 2023 based on the Human Rights Policy established in 2021. Going forward, we will continue to enhance ESG measures to be taken by the Company while improving the literacy of management and employees.

● Material issue identification process

In conjunction with the launch of the Seventh Consolidated Medium-Term Management Plan in April 2023, the Group reviewed important ESG issues (materiality) that affect sustainable growth of society and the Group and medium- to long-term corporate value, and identified the following eight issues, in order to realize the society we aim to achieve in 2050.

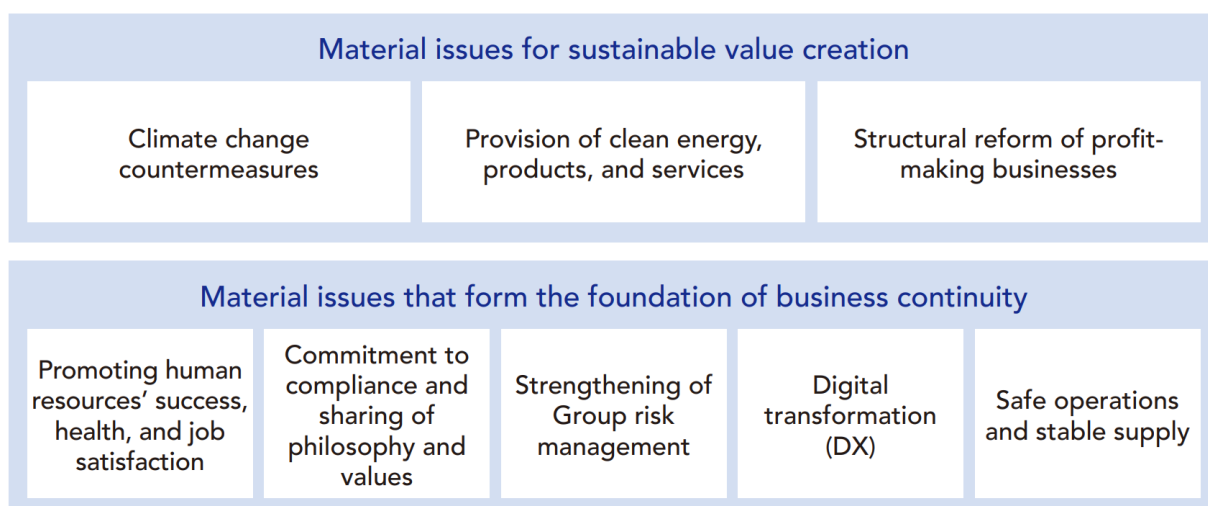
Material issue identification process



● Most important material issues





The most important material issues are categorized into material issues for sustainable value creation – “Climate change countermeasures,” “Provision of clean energy, products, and services,” and “Structural reform of profit-making businesses” – and material issues that form the foundation of business continuity – “Safe operations and stable supply,” “Strengthening of Group risk management,” “Commitment to compliance and sharing of philosophy and values,” “Promoting human resources’ success, health, and job satisfaction,” and “Digital transformation (DX).” With regard to material issues for sustainable value creation, we will also pursue efforts under the Consolidated Medium-Term Management Plan to address societal challenges. These activities will be underpinned by addressing the material issues that form the foundation of business continuity. We are implementing a variety of initiatives to fulfill the vision we have for addressing material issues.

Most important material issues



· Indicators and targets

Material Issues	Vision for addressing material issues	KPIs	Related SDGs
Climate change countermeasures	<ul style="list-style-type: none"> GHG emissions are managed appropriately Progress has been made toward achieving net zero carbon emissions by 2050 	<ul style="list-style-type: none"> 30% reduction in emissions by FY2030 (vs. FY2013) CO₂ emission reduction (Scope 1, 2) Contribution to CO₂ reduction 	
Provision of clean energy, products, and services	<ul style="list-style-type: none"> Clean fuel that meets customer needs has been developed and is supplied We have become a leading company in domestic renewable energy generation Clean products have been developed and are being provided across the entire value chain Technologies and services that support low carbonization and decarbonization have been developed and are being supplied 	<ul style="list-style-type: none"> Amount of clean fuel supplied, bio-ETBE Capacity of wind power generation facility Capacity of other renewable energy generation facilities Amount of next-generation raw materials supplied Sales excluding fossil fuels R&D expenses and investment in new businesses 	
Structural reform of profit-making businesses	<ul style="list-style-type: none"> Business profits are generated in a decarbonized society by investing profits from existing businesses in new businesses Enterprise value is being enhanced through new businesses centered on clean technology 	<ul style="list-style-type: none"> Investment in new businesses 	

Promoting human resources' success, health, and job satisfaction	<ul style="list-style-type: none"> All employees can demonstrate their abilities to the fullest, regardless of age, gender, nationality, job type, affiliation, or work history Decisions are made through dynamic discussions that incorporate diverse opinions Overwork and harassment are prevented, and employees can work healthily and with peace of mind Employees take the lead in managing their own physical and mental healthcare, and manage and improve their health Employees autonomously improve and utilize their strengths and expertise to implement business strategies Employees are energetic and challenge themselves, and enjoy continuous growth with job satisfaction and fulfillment 	<ul style="list-style-type: none"> Proportion of females in managerial roles: 10% by 2025 Ratio of females among new university graduate hires: 50% Percentage of employees who have taken a stress check (mental health) Percentage of employees who have received lifestyle health guidance (physical health) Investment in employee education and training Employee awareness survey "work satisfaction/pride" score: 60 points 	
Commitment to compliance and sharing of philosophy and values	<ul style="list-style-type: none"> Laws, regulations, and social norms are observed Officers, employees, and other staff members understand and observe the Group Management Vision, policies, and internal regulations The Cosmo Energy Group Code of Conduct and policies are widely understood and individuals are able to make appropriate decisions 	<ul style="list-style-type: none"> Number of compliance violations Employee awareness survey scores: "compliance education: 83%," "awareness of consultation helplines: 94%," and "understanding of Code of Conduct: 72%" 	
Strengthening of Group risk management	<ul style="list-style-type: none"> Both the Company's operational risks and strategic risks (including opportunities) can be identified, and risks are appropriately hedged or taken Serious risks for the entire Group are understood and managed 	<ul style="list-style-type: none"> Risks associated with CEG priority initiatives are additionally monitored Risks associated with priority initiatives undertaken by each company are monitored 	-
Digital transformation (DX)	<ul style="list-style-type: none"> A corporate culture that uses digital technology to change work processes and continuously pursue innovation is being fostered to bring about business transformation Efforts are being made to improve internal and external CX (customer experience) by providing customers and employees with solutions to solve internal and external challenges centered on data utilization 	<ul style="list-style-type: none"> Cultivation of core digital personnel: 900 people for 2025 	
Safe operations and stable supply	<ul style="list-style-type: none"> Employee injuries are prevented Plant accidents and product (quality) accidents are prevented Operations are carried out so they do not threaten the safety of the operating area or surrounding residents A stable supply of energy is provided, even during disasters and emergencies 	<ul style="list-style-type: none"> Number of work-related accidents Number of accidents Number of accidents with an impact on the environment Supply and sales system in case of disaster or emergency: Resume within 24 hours 	

Note: GHG emissions: Scope 1 and 2 emissions, including emissions from the transportation division, less reduction contributions from renewable energy and biofuels

(3) Governance

In order to put into practice the Cosmo Energy Group Management Vision and Code of Conduct and to execute duties appropriately and efficiently, the Cosmo Energy Group has established and operates a system for the execution of duties by directors and employees of the Company and Group companies, a risk management and internal audit system to support this execution, and a system to ensure that audits by the Audit & Supervisory Committee are conducted effectively, all in accordance with our Basic Policy on

Internal Control Systems. We have also established the Sustainability Strategy Committee chaired by the Group CEO as the organization that oversees internal control.

The Sustainability Strategy Committee members include the executive officers and the general manager of the Corporate Planning Department, the full-time Audit and Supervisory Committee member at Cosmo Energy Holdings, as well as the CEOs and executive officers in charge of sustainability at core operating companies. The committee evaluates the results of activities on material issues under the Seventh Consolidated Medium-Term Management Plan and reports important issues to the Board of Directors. In addition, the Sustainability Committee, which is headed by the general manager of the Sustainability Initiative Department, meets as necessary, functioning as the practical working body of the Sustainability Strategy Committee.

Governance system driving sustainability



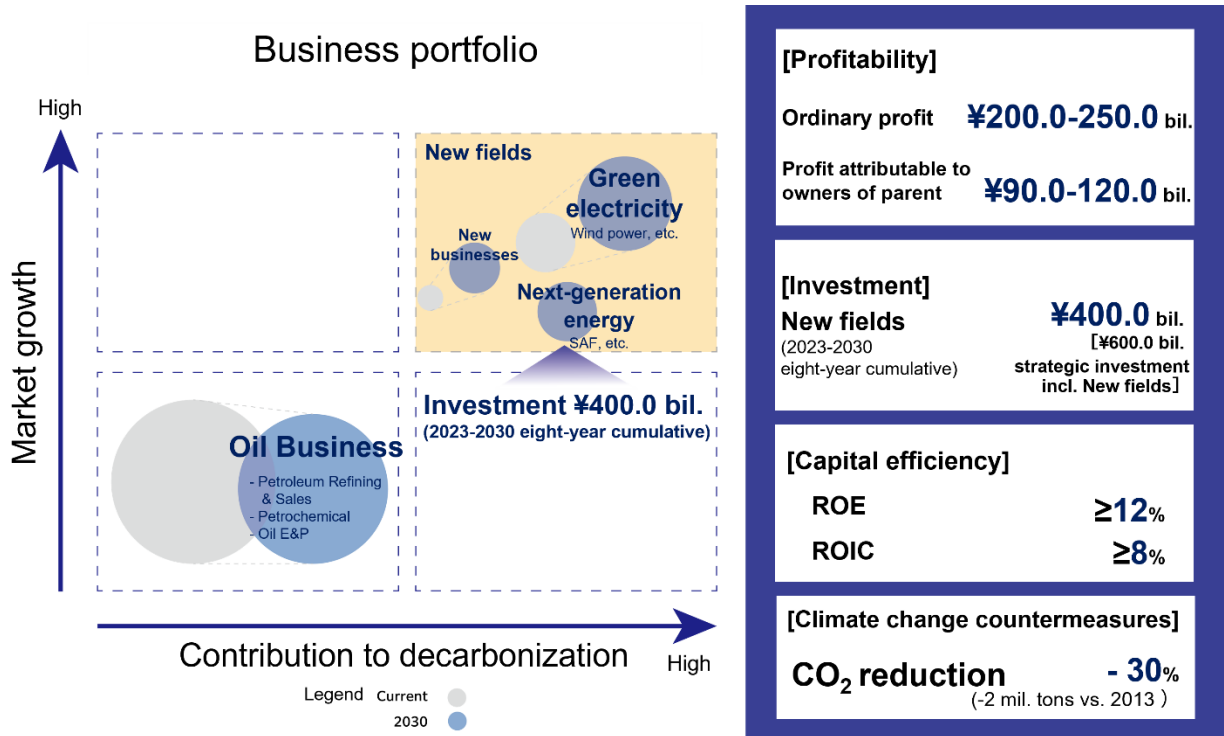
In fiscal 2023, the Sustainability Strategy Committee met seven times and discussed 15 agenda items, of which seven were reported to the Board of Directors for deliberation and further discussion. Where necessary, the matters discussed by the Sustainability Strategy Committee were shared with Group companies through the Sustainability Liaison Committee. Moreover, the evaluation of progress toward ESG targets has been reflected in executive remuneration since fiscal 2022 as the directors and executive officers promote sustainability management.

(4) Environmental Initiatives

(4)-1. The Seventh Consolidated Medium-Term Management Plan and Vision 2030

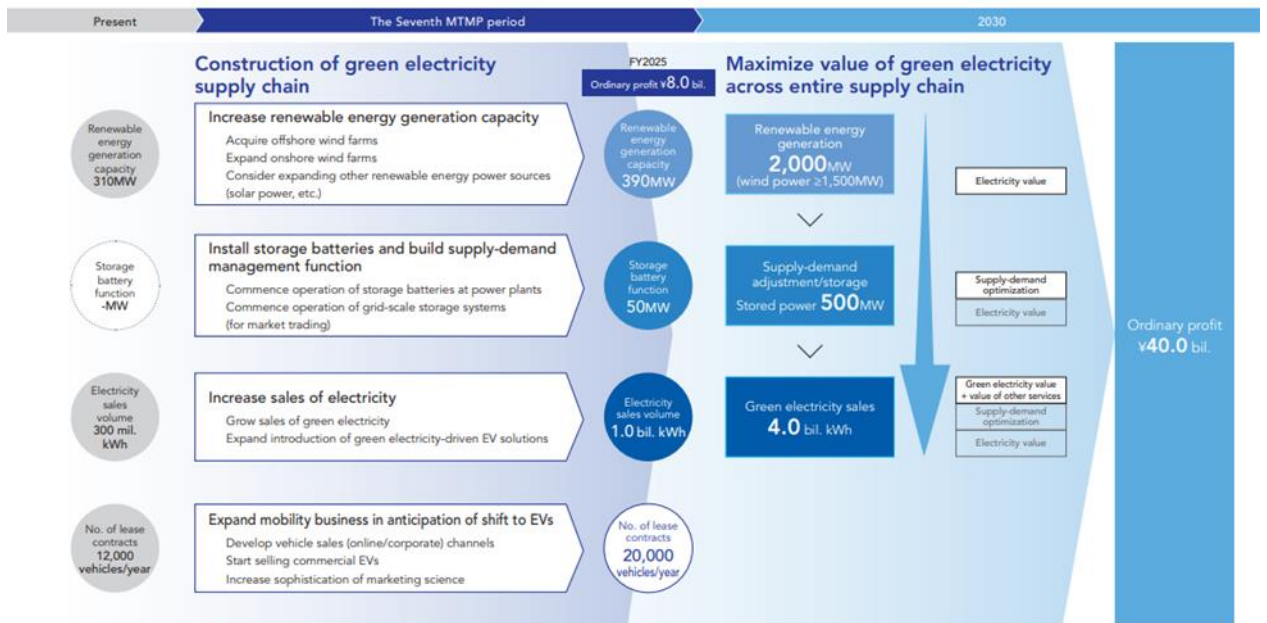
In the period of energy transformation, we are expected to develop a medium- to long-term vision. We have therefore formulated the slogan, **“To create energy that shapes the future, energy that sustains society, and new forms of value,”** as Vision 2030 and have been working on the following three measures to realize our aspiration.

● Vision 2030 and our aspiration



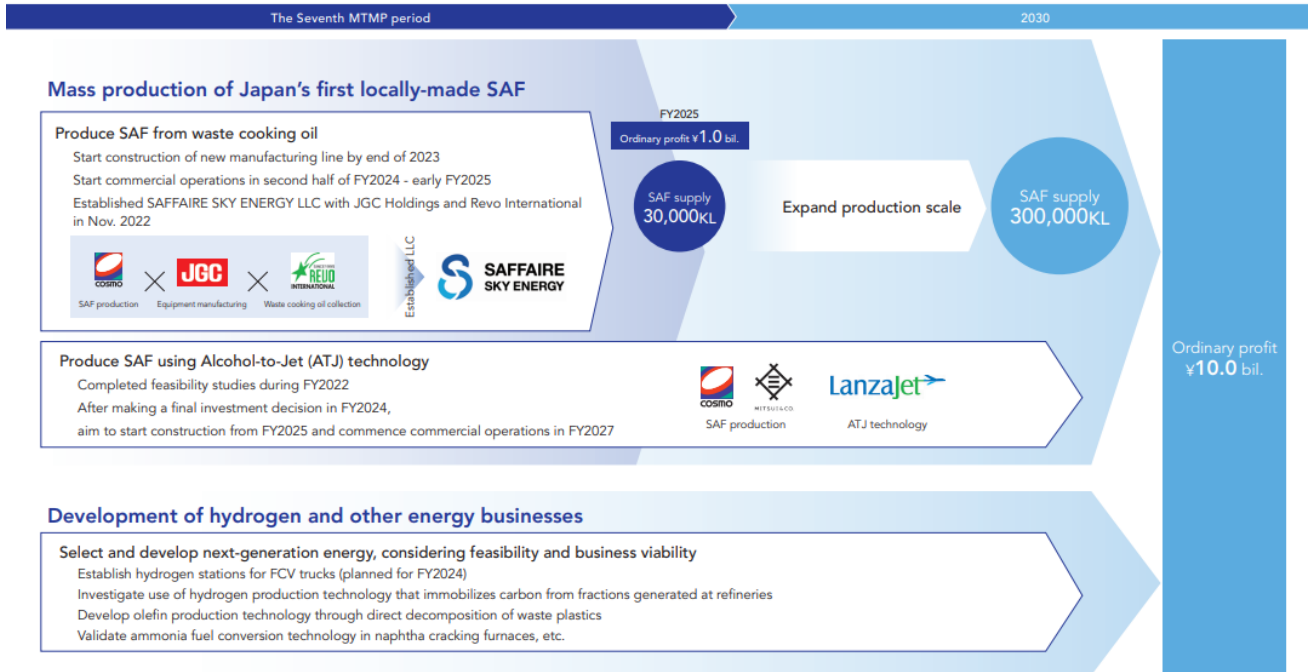
● Bolster the green electricity supply chain

As we look ahead toward 2030, the Group will expand its green electricity sales beyond the Renewable Energy Business, which is currently centered on wind power, by establishing a supply-demand adjustment and electricity storage system. We will maximize the value of green electricity by building and strengthening all green electricity-related supply chains.



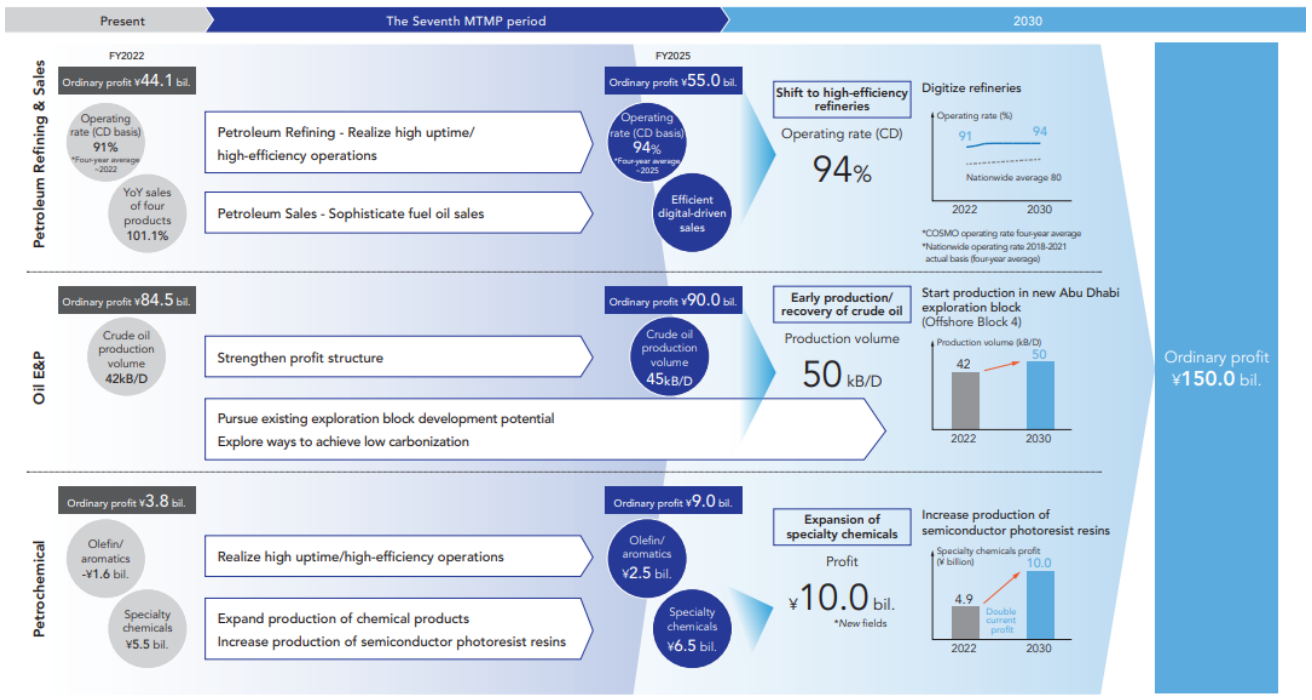
- Expand next-generation energy

The Cosmo Energy Group will realize mass production of Japan's first locally made SAF, and steadily build a structure capable of supplying 300,000 kiloliters in 2030. Furthermore, we will promote hydrogen and next-generation energy initiatives, beginning with the operation of hydrogen stations.



- Strengthen Oil Business competitiveness and pursue low carbonization

To fulfill our mission of providing a safe and stable supply of energy, we will further strengthen our competitiveness in our Petroleum Refining and Sales, Oil Exploration and Production, and Petrochemical businesses. At the same time, we will steadily undertake efforts to realize low-carbon operations in each.



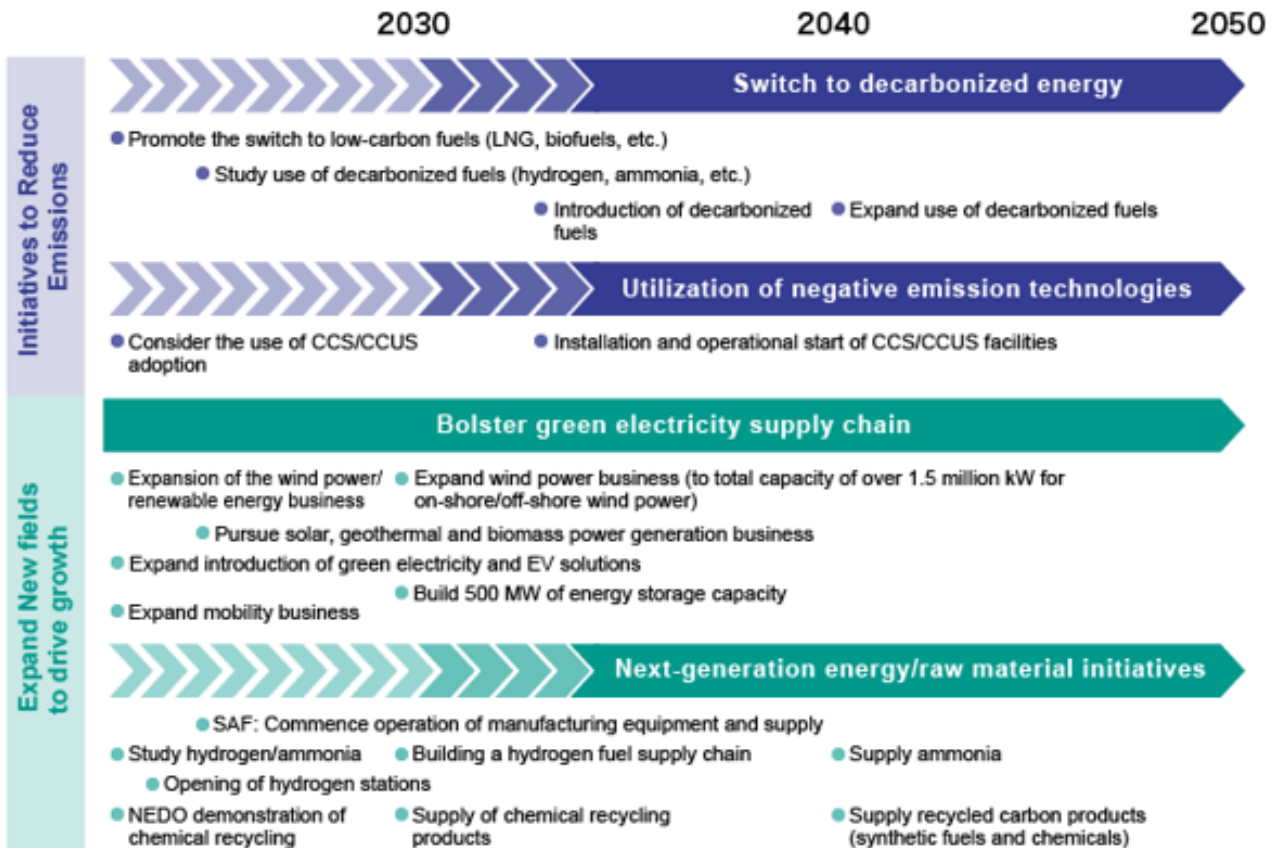
● Environmental targets

2050	CO ₂ emissions (Scope 1 + 2 + 3): Net zero
2030	CO ₂ emissions (Scope 1 + 2, contribution to reduction): -30% (vs. FY2013) Renewable energy facility capacity: 2,000 MW (including wind power of 1,500 MW or more) Installation of storage batteries contributing to supply-demand adjustment: 500 MW Green electricity sales: 4 billion kWh SAF sales: 300,000 KL
FY2025	Renewable energy facility capacity: 390 MW (currently 310 MW) Installation of storage batteries contributing to supply-demand adjustment: 50 MW (currently 0 MW) Green electricity sales: 1 billion kWh (currently 0.3 billion kWh) SAF sales: 30,000 KL

* Scope 1 + 2 represents emissions from business activities

In addition, the Group is aiming for net zero carbon emissions, including Scope 3, by 2050 to contribute to achieving net zero carbon for society as a whole.

● Basic approach and procedures for achieving net zero carbon



- Priority themes for achieving net zero carbon

2 Use of negative emissions technologies

- Study feasibility of CO₂-EOR technology in oil fields and other locations where Group holds concessions
Study feasibility of CCS and CCUS technologies to recover CO₂ from major equipment and utilize CO₂

3 Bolster green electricity supply chain

- Aim for total renewable energy generation capacity of 2,000 MW by 2030, including over 1,500 MW of onshore and offshore wind power.
- Study geothermal, solar, and biomass power generation projects utilizing Group technologies, networks, and assets
- Expand green electricity sales to 4 bil.kWh by 2030, in line with value-added services such as installation of rapid EV charging equipment at service stations and provision of EVs through Cosmo My Car Lease and EV car sharing
- Started power storage business validation, aiming to build 500 MW of storage battery function by 2030.
- Contribute to co-creation with local communities

1 Direct reduction

- Reduce Scope 1 and Scope 2 emissions through shift to low-carbon fuels (LNG, biofuels, etc.) and decarbonized fuels (hydrogen, ammonia, etc.), introduction of renewable energy, energy conservation, etc.
- Introduce virtually all renewable energy at service stations directly operated by the Group



5 Use of carbon credits

- Use negative emissions technologies, reduction contributions from renewable energy projects, carbon credits and other means to cover remaining emission from our own operations that cannot be reduced to achieve 30% reduction (compared to 2013) by 2030 and zero carbon emissions including our supply chain by 2050

4 Initiatives for next-generation energy/raw materials

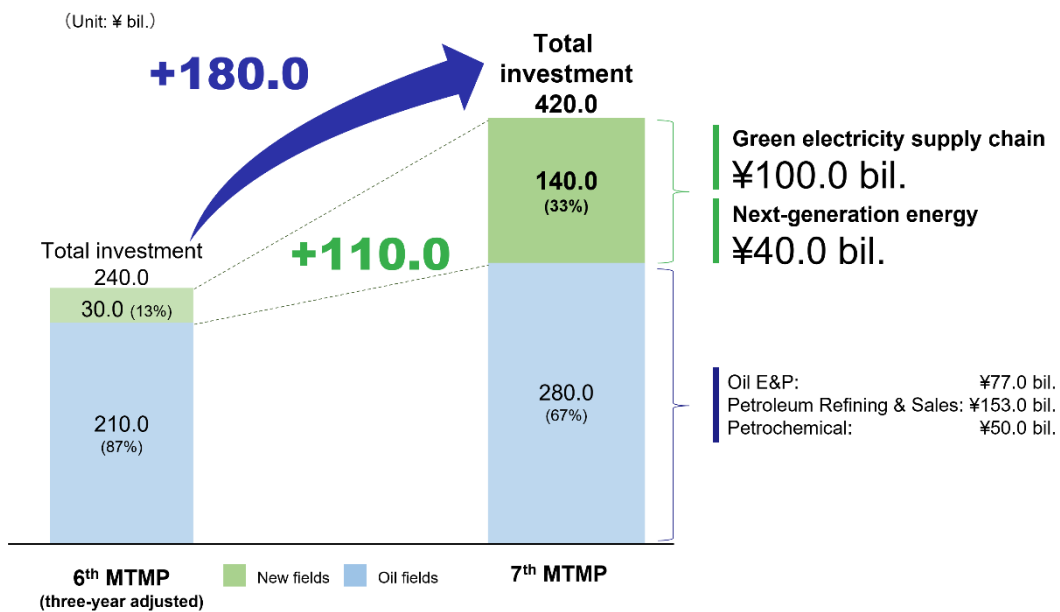
- Further accelerate business development to build SAF supply chain, aim for operation of Japan's first large-scale SAF production facilities and fuel supply 30,000 KL by 2025 and 300,000 KL by 2030
- Use existing assets to open the first hydrogen station in 2024, develop hydrogen stations for trucks and enter the hydrogen supply chain
- Study recycled carbon products (ammonia, synthetic fuels and chemicals) supply
- Study chemical recycling

● Investment plan

The Group has an investment plan to invest approximately 420 billion yen during the period of the Seventh Consolidated Medium-Term Management Plan (from FY2023 to FY2025), of which the Group expects to invest approximately 140 billion yen to bolster the green electricity supply chain and expand next-generation energy.

In addition, the Group expects to invest 400 billion yen in total over 8 years from 2023 to 2030 to foster the green electricity supply chain, expand next-generation energy, and develop new businesses for the realization of our aspiration under Vision 2030.

In order to achieve the financial targets under the Seventh Consolidated Medium-Term Management Plan and Vision 2030, the Group will promote initiatives for low carbonization and decarbonization with balanced cash distribution.



(4)-2. Climate Change Countermeasures of the Group Based on Scenario Analysis

In December 2020, we announced our support for the recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD). Based on the climate change risks indicated in the TCFD recommendations, the Group investigates the significance of potential climate-related risks and opportunities relating to its business activities. To do this, it identifies potential changes in the business environment as a result of global environmental changes.

The Group performed scenario analysis for its petroleum, petrochemical, and oil exploration and production businesses, looking at possible business impacts from 2030 to 2050. Two temperature ranges for climate change scenarios were used: the 4°C scenario (business as usual) and the 1.5°C scenario (very low-carbon transition). The Group selected the NZE scenario for the 1.5°C scenario, the APS scenarios for the 2°C scenario, and the STEPS scenario for the 4°C scenario of the International Energy Agency (IEA). We also referred to IPCC RCP8.5, RCP6.0, and RCP2.6 as well as scenarios of Japanese and foreign governments and other sources to take into account physical risks such as natural disasters, which are not included in the IEA scenario. Based on these analyses, we are implementing initiatives by reflecting their results in measures to help bolster the green electricity supply chain, expand next-generation energy, and pursue low carbonization of oil business under the Seventh Consolidated Medium-Term Management Plan.

In addition, we will perform reviews reflecting our analysis by referring to the latest scenarios and the earnings outlook for opportunities, implement analyses for a longer term, expand them to other businesses, and improve the accuracy of analysis by referring to IEA and other scenarios that are updated every year. We will continue to strengthen the system that integrates our management strategy with disclosure in accordance with TCFD recommendations. This includes regular reporting of results to the Sustainability Strategy Committee.

● Results of scenario analyses

Type	Classification	Business environment changes	Assumed impact on the Group	Time span	Impact level when risk emerges
Transition risk	Policy/legal	Introduction of carbon pricing	Increased manufacturing costs	Medium to long	Large
		Strengthening of carbon regulations in various countries	Increased cost of purchasing emission credits and investing in energy-saving equipment	Medium to long	Large
	Technology	Low-carbon and clean technologies	Decline in demand for petroleum products due to the spread of EVs and alternative fuels	Short to medium	Middle
	Industry/Market	Development of low carbon energy mix and power supply composition	Cost increase due to rising renewable energy prices	Short to medium	Large
		Change in energy resource mix, shift to low-carbon electricity sources	Decrease in revenue due to lower demand for petroleum products	Short to medium	Large
	Reputation	Customer behavior change	Decline in corporate value due to delay in responding to the needs of a decarbonized society	Medium to long	Large
Investor rating		Divestment in petroleum business accelerates	Medium to long	Middle	
Physical risk	Chronic	Sea level and tsunami rise	Increased investment costs for disaster prevention measures	Long	Small
	Acute	Extreme weather (wind and flood damage)	Increased costs due to shutdowns and breakdowns caused by typhoons,	Short to long	Middle
Opportunity	Resource efficiency	Transition to a resource-recycling society	Increase in demand for products with lower environmental impact Expansion of chemical recycling business	Medium to long	–
	Energy source	Changes in energy demand due to progress in de-fossilization	Increasing demand for renewable energy sources (wind power generation business) Increased demand for low-carbon energy	Short to long	–
	Products/services	Customer behavior change	Expansion of EV-related service business Expansion of car sharing and other new service businesses	Short to long	–
	Market	Development of low-carbon and clean technologies	Progress in CCS and CCUS technologies and expansion of CO2 recycling business, etc. Expansion of production capacity due to increased SAF requirements	Medium to long	–
	Resilience	Investor rating		Investment in renewable energy business, etc.	Short to long
Extreme weather			Reputation among business partners earned by providing stable supply in times of disaster	Short to long	–

3. Green Finance Framework

(1) Use of Proceeds

Proceeds from green finance will be appropriated for new investments and refinancing for projects that meet the following eligibility criteria (eligible projects). Refinancing is carried out for projects that started operations or in which investments were made within 36 months preceding the execution date of the finance.

Priority themes for achieving net zero carbon		
	Eligibility criteria* ¹ (Eligibility category)	Examples of applicable projects
Bolster the green electricity supply chain	Renewable energy · Offshore/onshore wind power, solar power (Renewable energy)	Expenditure for wind and solar power generation projects to achieve over 2,000 MW of the renewable energy generation facility capacity by 2030 (development, facilities, operation, investment, repair, etc.)
	EV (Clean transportation)	Expenditure for introduction of EVs to Cosmo My Car Lease and Cosmo Zero Carbon Solutions* ² (development, facilities, operation, investment)
	Power storage (Renewable energy)	Expenditure for construction of 500 MW of installed storage batteries by 2030 (mainly renewable energy generations and grid-scale storage batteries) (development, facilities, operation, investment)

Initiatives for next-generation energy, raw materials, CCS/CCUS	SAF (Environmentally adapted products)	Expenditure for SAF production to achieve supply of 300,000 KL of SAF by 2030 (use of used cooking oil raw materials and ATJ technology) (development, facilities, operation, investment)
	Hydrogen and next-generation energy <ul style="list-style-type: none"> · Hydrogen supply chain · Synthetic fuel · Biodiesel · Bio-engine oil (Environmentally adapted products)	Expenditure for construction of hydrogen supply chains (mainly establishment of hydrogen stations and hydrogen production) (development, facilities, operation, investment) Expenditure for carbon recycling and production of biomass products (development, facilities, operation, investment, etc.)
	Chemical recycling (Prevention and control of pollution)	Expenditure for supply of chemical-recycled products using waste plastics (development, facilities, operation, investment)
	CCS/CCUS (Environmentally adapted products)	Expenditure for CO ₂ capture and its utilization in major equipment (development, investment)

*1 Applicable projects include expenditure of the Group companies

*2 A solution package for carbon neutrality initiatives that utilizes the assets of the Cosmo Group's energy mobility business

Projects for which proceeds will be appropriated will be proceeded with in accordance with the project launch procedures established by the Company after confirming that they take potentially negative environmental and social impacts into consideration, and that the facility certification or approval required by the government of the country, region, or municipality where the facilities will be installed has been obtained, and the environmental assessment procedures have been taken appropriately, for the applicable facilities and projects. The acquisition of certifications regarding avoidance of food competition for SAF raw materials and sustainability of raw materials for biomass products are being managed properly.

(2) Project Evaluation and Selection Process

Eligible projects for which proceeds will be used are ultimately selected by the CFO after candidate projects are selected by the division in charge of finance based on eligibility criteria and applicable projects, and the finance division and relevant divisions of the Company have discussions.

(3) Management of Proceeds

Appropriated and unappropriated amounts of proceeds from green finance will be tracked by the finance division to ensure that the net proceeds and the expenditure for the eligible projects are the same. Projects whose implementation entity will be a subsidiary of the Company will be managed in the same manner.

Proceeds will be managed by creating a dedicated account book.

Any unappropriated proceeds are managed in cash and cash equivalents.

(4) Reporting

The Company plans to annually disclose the status of appropriation of proceeds and the matters defined by the Company as environmental improvement effects in its integrated report (Cosmo Report) or website until the full amount of proceeds from green finance is appropriated, within the scope of confidentiality and to the extent reasonably practicable (in the case of loans, those matters may be disclosed to lenders only). In addition, Any material changes in the status of appropriation of proceeds and the projects for which proceeds are appropriated during the financing period will be disclosed.

- Reporting of appropriation of proceeds

The Company plans to disclose the following matters in accordance with the priority themes for achieving net zero carbon.

- Appropriated amount
- Balance and management method of the unappropriated amount
- Approximate amount (or percentage) of the portion of proceeds appropriated to refinancing

- Impact reporting

- In the impact reporting, the Company plans to disclose all or part of matters whose examples are shown below, in accordance with the eligibility criteria for which proceeds have been appropriated, although they may be changed depending on the applicable projects. The Company aims to disclose environmental improvement effects quantitatively to the extent possible, such as the CO₂ emission reduction amount. However, if quantitative disclosure is difficult due to the status or nature of the applicable projects, the Company may implement qualitative disclosure.

Eligibility criteria	Reporting items
Renewable energy	<ul style="list-style-type: none"> • Overview and progress of the project • Facility capacity (MW) or actual power generation (kwh) • CO₂ reduction/contribution to reduction (t-CO₂)
EV	<ul style="list-style-type: none"> • Overview and progress of the project • CO₂ reduction/contribution to reduction (t-CO₂)
Power storage	<ul style="list-style-type: none"> • Overview and progress of the project • Power storage capacity (MW)
SAF	<ul style="list-style-type: none"> • Overview and progress of the project • Product production (KL) • CO₂ reduction/contribution to reduction (t-CO₂)
Hydrogen and next-generation energy	<ul style="list-style-type: none"> • Overview and progress of the project • Hydrogen/product supply • CO₂ emission reduction/contribution to reduction (t-CO₂)
Chemical recycling	<ul style="list-style-type: none"> • Overview and progress of the project • Product supply/waste reduction
CCS/CCUS	<ul style="list-style-type: none"> • Overview and progress of the project • Installation of CCS/CCUS