

## Third-party Opinion on Transition Linked Bond Framework to ENEOS Holdings, Inc.

Japan Credit Rating Agency, Ltd. (JCR) submitted a third-party opinion to the Transition Linked Bond Framework to ENEOS Holdings, Inc. ("ENEOS" or the "Company").

### <Executive Summary>

This third-party opinion confirmed the conformity of Transition-Linked Bond Framework (the "Framework") and Transition-Linked Bond originated under the Framework with respect to Climate Transition Finance Handbook ("CTFH")<sup>1</sup>, Climate Transition Finance Basic Guidelines<sup>2</sup> ("CTF Basic Guidelines") (CTFH and CTF Basic Guidelines collectively, "CTFH, etc."), Sustainability-Linked Bond Principles (SLBP)<sup>3</sup>, Green Loan and Sustainability-Linked Loan Guidelines ("Guidelines") (Guidelines for SLBP and Ministry of the Environment, collectively, "SLBP, etc."). In order to ensure the transparency and objectivity of evaluations recommended by CTFH, etc., and SLBP, etc., JCR, as an independent third-party organization, conducted third-party evaluations of the following (1) ENEOS' transition strategy and its appropriateness, (2) ENEOS' sustainability strategy and establishment of key performance indicators (KPIs) and sustainability performance targets (SPTs), and (3) bond terms and the monitoring system during the period.

#### (1) ENEOS Business Overview, Climate Transition Strategy and Its Appropriateness

ENEOS is a pure holding company of ENEOS Group, which was established in April 2017 by merging the management of the former JX Holdings Group and the former TonenGeneral Group. The Group is engaged in a wide range of businesses in the energy and non-ferrous metals businesses, from upstream to downstream. In June 2020, the company changed its name from JXTG Holdings to ENEOS Holdings. Its main petroleum refining and marketing business accounts for about 50% of domestic fuel oil sales. In addition, it has the No. 1 supply capacity for petrochemical products (paraxylene and propylene) in Asia and the No. 1 share of the global market for electrical materials. As an energy and materials company, it is implementing initiatives that are ahead of the industry. By segment, in the fiscal year ended March 2021, the energy business accounted for 78.3% of the sales, the oil and natural gas exploration and production business 1.5%, the metals business 14.3%, and others 5.9%.

In response to long-term changes in the business climate, such as the response to climate change, the progress of the digital revolution, and changes in lifestyles, ENEOS envisages a halving of domestic fuel oil demand in 2040, and has set a Long-Term Vision for 2040 as the Group's envisioned goals for 2040. In addition, ENEOS has incorporated it into its three-year Medium-Term Management Plan and is considering specific measures to achieve its long-term vision. In the Second Medium-Term Management Plan announced in May 2020, the Company's basic policy is to promote reforms aimed at realizing the long-term vision, which is the envisioned goals for the Group in 2040.

ENEOS revised the Carbon Neutrality Plan in May 2022, and set the following targets as targets for FY2050, FY2040, and FY2030, respectively.

- The realization of Carbon Neutrality including Scope3 by working with the government and other companies by FY2050

<sup>1</sup> Established by International Capital Market Association (ICMA) in December 2020.

<sup>2</sup> Established by the Financial Services Agency, the Ministry of Economy, Trade and Industry, and the Ministry of the Environment in May 2021.

<sup>3</sup> International Capital Market Association (ICMA) established in July 2020.

- Net zero Scope1 and 2 CO<sub>2</sub> emissions by FY2040
  - 46% reduction compared with FY2013 in Scope1 and 2 by FY2030 (16 million tons on a net emissions basis)
- To achieve the above targets, ENEOS intends to utilize offsets such as: (1) energy conservation and utilization of renewable energy at refineries, manufacturing plants and smelters; (2) utilization of CCS and CCUS; and (3) forest absorption.

ENEOS has established an ESG management structure centered by ENEOS Holdings Executive Council, which is chaired by the president and CEO and with top management. The Executive Council discusses risks and opportunities in relation to ESG that may affect management, and in principle confirms the status of responses to material ESG issues once a year. The Board of Directors also monitors and supervises risks and material issues determined by the Executive Council and reports on the status of responses to them (in principle, once a year) from the Executive Council. In April 2022, the Carbon Neutral Strategy Department was established as a dedicated organization to strengthen the system for early and steady promotion of strategy formulation and concrete measures for realizing carbon neutrality.

Under the Second Medium-Term Business Plan, which covers FY2020 to FY2022, ENEOS has announced plans to allocate 960 billion JPY of its cumulative capital expenditures of 1.6 trillion JPY to strategic investments in growth businesses such as next-generation energy supplies and regional services, and environmentally friendly businesses.

The company plans to implement measures for strategic investment through participation and investment in domestic and overseas solar power generation, onshore and offshore wind power generation, biomass, and other renewable energy projects, and demonstration-related investment for the construction of hydrogen supply chains. ENEOS also plans to disclose future investment plans in conjunction with the formulation of a Medium-Term Management Plan for FY2023 and beyond.

JCR assesses that the above transition strategies and specific policies satisfy the four elements of CTFH, etc. ENEOS' transition strategy is also highly transparent, as it is progressive in its efforts to achieve carbon neutrality by achieving net zero of Scope1 and 2 emissions by FY2040 and by FY2050, including Scope3, and it has announced its investment plan.

## (2) ENEOS' Sustainability Strategy and Establishment of KPI and SPTs

JCR confirmed that ENEOS would set the following KPI and SPTs in the Transition-Linked Bonds (the Bonds) to be issued under the Framework.

KPI: The Scope 1 and 2 net CO<sub>2</sub> emissions of the ENEOS Group

SPT1: 46% reduction compared with FY2013 in Scope 1 and 2 net CO<sub>2</sub> emissions of the ENEOS Group by FY2030

SPT2: Net zero Scope 1 and 2 CO<sub>2</sub> emissions of the ENEOS Group by FY2040

In this framework, ENEOS set the Group's net CO<sub>2</sub> emissions (Scope1 and 2) as KPI and set SPTs for the FY2030 and 2040 goals. The above KPI is consistent with the FY2040 and FY2030 goals in ENEOS' Carbon Neutrality Plan, and are meaningful because efforts to reduce CO<sub>2</sub> in the petroleum industry are of paramount importance to achieve carbon neutrality, while ensuring a stable supply of petroleum is a major premise from the viewpoint of energy security. In terms of SPTs, the content set by ENEOS is significantly above the industry level compared to other companies in the same industry. In addition, compared to the Company's own historical track records, it requires initiatives that exceed the conventional business (Business As Usual), and JCR evaluates this as a goal with a high degree of ambition.

## (3) Bond Characteristics and Medium-Term Monitoring System

JCR has confirmed that economic conditions and other factors are linked to each other in terms of the financial characteristics of the Bonds if SPTs related to them are achieved. ENEOS will also disclose net CO<sub>2</sub> emissions for the fiscal year after the end of its fiscal year, and will obtain third-party verification of SPT1, 2's CO<sub>2</sub> emissions from the external certification organization. Should a significant change in SPTs occur in the period to redemption, JCR will continue to review the status of compliance with SLBP, etc. and whether the

originally assumed ambitions and meaningfulness will be maintained. The Bonds will be reviewed by ENEOS and JCR upon maturity to assess the status of SPTs achievement as well as the status of ENEOS and social impacts.

Based on the above considerations, JCR has confirmed that this framework of ENEOS, which is the subject of third-party opinion, conforms to CTFH, etc. and SLBP, etc.

\*Please refer to the following pages for details of the opinions.



## Third-Party Opinion

Subject: Transition-Linked Bond Framework  
Issuer: ENEOS Holdings, Inc.

May 13, 2022

Japan Credit Rating Agency, Ltd.

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## <Executive Summary>

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### (1) ENEOS Business Overview, Climate Transition Strategy and Its Appropriateness

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In response to long-term changes in the business climate, such as the response to climate change, the progress of the digital revolution, and changes in lifestyles, ENEOS envisages a halving of domestic fuel oil demand in 2040, and has set a long-term vision for 2040 as the Group's envisioned goals for 2040. In addition, ENEOS has incorporated it into its three-year Medium-Term Management Plan and is considering specific measures to achieve its long-term vision. In the Second Medium-Term Management Plan announced in May 2020, the Company's basic policy is to promote reforms aimed at realizing the long-term vision, which is the envisioned goals for the Group in 2040.

ENEOS revised the Carbon Neutrality Plan in May 2022, and set the following targets as targets for FY2050, FY2040, and FY2030, respectively.

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- The realization of Carbon Neutrality including Scope3 by working with the government and other companies by FY2050
- Net zero Scope1 and 2 CO<sub>2</sub> emissions by FY2040
- 46% reduction compared with FY2013 in Scope1 and 2 by FY2030 (16 million tons on a net emissions basis)

To achieve the above targets, ENEOS intends to utilize offsets such as: (1) energy conservation and utilization of renewable energy at refineries, manufacturing plants and smelters; (2) utilization of CCS and CCUS; and (3) forest absorption.

ENEOS has established an ESG management structure centered by ENEOS Holdings Executive Council, which is chaired by the president and CEO and attended by top management. The Executive Council discusses risks and opportunities in relation to ESG that may affect management, and in principle confirms the status of responses to material ESG issues once a year. The Board of Directors also monitors and supervises risks and material issues determined by the Executive Council and reports on the status of responses to them (in principle, once a year) from the Executive Council. In April 2022, the Carbon Neutral Strategy Department was established as a dedicated organization to strengthen the system for early and steady promotion of strategy formulation and concrete measures for realizing carbon neutrality.

Under the Second Medium-Term Business Plan, which covers FY2020 to FY2022, ENEOS has announced plans to allocate 960 billion JPY of its cumulative capital expenditures of 1.6 trillion JPY to strategic investments in growth businesses such as next-generation energy supplies and regional services, and environmentally friendly businesses.

The company plans to implement measures for strategic investment through participation and investment in domestic and overseas solar power generation, onshore and offshore wind power generation, biomass, and other renewable energy projects, and demonstration-related investment for the construction of hydrogen supply chains. ENEOS also plans to disclose future investment plans in conjunction with the formulation of a Medium-Term Management Plan for FY2023 and beyond.

JCR assesses that the above transition strategies and specific policies satisfy the four elements of CTFH, etc. ENEOS' transition strategy is also highly transparent, as it is progressive in its efforts to achieve carbon neutrality by achieving net zero emissions of Scope1 and 2 emissions by FY2040 and by FY2050, including Scope3, and it has announced its investment plan.

## (2) ENEOS' Sustainability Strategy and Establishment of KPI and SPTs

JCR confirmed that ENEOS would set the following KPI and SPTs in the Transition-Linked Bonds (the Bonds) to be issued under the Framework.

KPI:	The Scope 1 and 2 net CO <sub>2</sub> emissions of the ENEOS Group
SPT1:	46% reduction compared with FY2013 in Scope 1 and 2 net CO <sub>2</sub> emissions of the ENEOS Group by FY2030
SPT2:	Net zero Scope 1 and 2 CO <sub>2</sub> emissions of the ENEOS Group by FY2040

In the Framework, ENEOS set the Group's net CO<sub>2</sub> emissions (Scope1 and 2) as KPI and set SPTs for the FY2030 and 2040 goals. The above KPI is consistent with the FY2040 and FY2030 goals in ENEOS' Carbon Neutrality Plan, and are meaningful because efforts to reduce CO<sub>2</sub> in the petroleum industry are of paramount importance to achieve carbon neutrality, while ensuring a stable supply of petroleum is a major premise from the viewpoint of energy security. In terms of SPTs, the content set by ENEOS is significantly above the industry level compared to other companies in the same industry. In addition, compared to the Company's own historical track records, it requires initiatives that exceed the conventional business (Business As Usual), and JCR evaluates this as a goal with a high degree of ambition.

### (3) Bond Characteristics and Medium-Term Monitoring System

JCR has confirmed that economic conditions and other factors are linked to each other in terms of the financial characteristics of the Bonds if SPTs related to them are achieved. ENEOS will also disclose net CO<sub>2</sub> emissions for the fiscal year after the end of its fiscal year, and will obtain third-party verification of SPT1, 2's CO<sub>2</sub> emissions from the external certification organization. Should a significant change in SPTs occur in the period to redemption, JCR will continue to review the status of compliance with SLBP, etc. and whether the originally assumed ambitions and meaningfulness will be maintained. The Bonds will be reviewed by ENEOS and JCR upon maturity to assess the status of SPTs achievement as well as the status of ENEOS and social impacts.

Based on the above considerations, JCR has confirmed that the Framework of ENEOS, which is the subject of third-party opinion, conforms to CTFH, etc. and SLBP, etc.



## I. Positioning and Purpose of Third-Party Opinions

JCR conducted a third-party evaluation on the Framework in line with CTFH, etc. and SLBP, etc. CTF refers to a financial method aimed at supporting the initiatives of corporates considering measures for climate change when they are making efforts to reduce greenhouse gases in accordance with long-term strategies in order to realize a carbon-free society. SLBs are bonds that aim to help the issuer contribute to the realization of a sustainable society by incentivizing it to achieve ambitious SPTs predetermined by it.

CTFH consists of four elements. Element 1 is the transition strategy and governance of the issuer, element 2 is an environmental challenge in the enterprise's business model, element 3 is based on scientific evidence, and element 4 is secured by transparency on the investment plan for the transition.

SLBP consists of five principles. The first principle is the selection of KPIs; the second principle is the measurement of SPTs; the third principle is the characteristics of bonds; the fourth principle is reporting; and the fifth principle is verification.

The purpose of this third-party opinion is to ensure the transparency and objectivity of the evaluation recommended by the CTF's basic guidelines and five SLBP principles, and JCR, as an independent third-party, confirms compliance of the Framework with SLBP Principles 1 through 5 and the Ministry of the Environment guidelines, and also confirms compliance with CTFH four elements and the CTF Basic Guidelines.

## II. Outline of the Subject Matter of Third-Party Opinion

The scope of this evaluation is the Transition-Linked Bond Framework formulated by ENEOS in May 2022. The following are the endpoints included in this Third Party Opinion.

1. The Sustainability Relationship of this Framework
2. ENEOS' long-term vision and transition strategy
3. Consistency with items required in CTFH
4. Consistency with SLBP (Principle 1) Appropriateness of KPIs Selection
5. Consistency with SLBP (Principle 2) Calibration of SPTs
6. Consistency with SLBP (Principle 3) Characteristics of Bonds (Economic Conditions)
7. Consistency with SLBP (Principle 4) Reporting and (Principle 5) Verification
8. Conclusions on fitness with CTFH, etc. and SLBP, etc.

### III. Confirmation of alignment with CTFH, etc. and SLBP, etc. of this framework

#### 1. The Relationship of between Sustainability and this Framework

ENEOS chose the following KPI and SPTs related to the Company's materiality and emphasized initiatives for financing activities under the Framework. As described in detail in the following section, the KPI, together with the related SPTs, is one of the most important issues within the company's sustainability strategy.

KPI:	The Scope 1 and 2 net CO <sub>2</sub> emissions of the ENEOS Group
SPT1:	46% reduction compared with FY2013 in Scope 1 and 2 net CO <sub>2</sub> emissions of the ENEOS Group by FY2030
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#### 2. ENEOS' long-term vision and transition strategies

##### <Business Overview>

ENEOS is a pure holding company of the ENEOS Group, which was established in April 2017 by merging the former JX Holdings Group and the former TonenGeneral Group. The Group is engaged in a wide range of businesses in the energy and non-ferrous metals businesses, from upstream to downstream. In June 2020, the company changed its name from JXTG Holdings to ENEOS Holdings. Its main petroleum refining and marketing business accounts for about 50% of domestic fuel oil sales. In addition, it has the No. 1 supply capacity for petrochemical products (paraxylene and propylene) in Asia and the No. 1 share of the global market for electrical materials. As an energy and materials company, it is implementing initiatives that are ahead of the industry. By segment, in the fiscal year ended March 2021, the energy business accounted for 78.3% of the sales, the oil and natural gas exploration and production business 1.5%, the metals business 14.3%, and others 5.9%.

##### <ENEOS Group Philosophy>

ENEOS' Group Philosophy is to contribute to the development of its communities and help to ensure a vibrant future through its business. In order to realize ENEOS Group Philosophy, ENEOS Group Code of Conduct embodies the standards of conduct of every employee. This Code of Conduct is composed of 14 items, including compliance, safety and security, environmental conservation, and respect for human rights etc., and is established as the basis for decisions in business activities as a standard to be practiced by employees working in ENEOS Group in order to fulfill their social responsibilities.

Figure. 1: ENEOS Group Philosophy



(Source: ENEOS Holdings website)

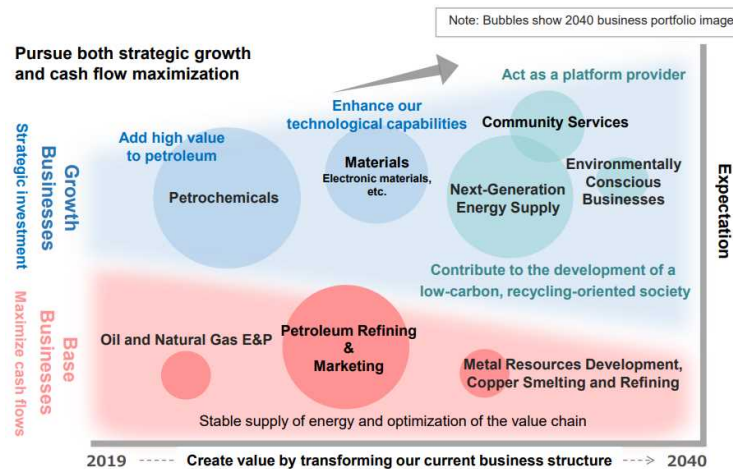
### <Envisioned Goals for 2040 and Value Creation Process>

In response to long-term changes in the business climate, such as the response to climate change, the advancement of the digital revolution, and changes in lifestyles, ENEOS anticipates a halving of domestic fuel oil demand in 2040, and presents the following long-term outlook for the Group's business domains.

- Non-fossil energy is growing its share in global primary energy demand
- Global demand for petrochemicals is growing against the backdrop of economic growth in Asia.
- Global demand for copper bullion is expanding in India and other emerging countries.

Based on the above long-term outlook, ENEOS assumes the future image of the Group's business portfolio for 2040 as shown in the chart below.

Figure. 2: Overview of ENEOS' future businesses to 2040



(Source: ESG Briefing Materials "ENEOS Group ESG Management" March 2022)

<Second Medium-Term Management Plan (FY2020-FY2022)>

ENEOS Group has incorporated the above Long-Term Vision to 2040 into its three-year medium-term management plan and is considering specific measures. The second medium-term management plan announced in May 2020 is positioned as the promotion of reforms aimed at realizing the Long-Term Vision to 2040 for the Group. It is developing and strengthening growth businesses by combining the strengths of the same group, such as efficient supply chains, SS networks, and advanced material development, with digital technologies and open innovation. At the same time, it is pursuing business portfolio optimization. It also plans to maintain the soundness of its management base and appropriately allocate cash flow.

Figure. 3: Long-Term Vision and Positioning of the Second Medium-Term Management Plan



(Source: ESG Briefing Materials "ENEOS Group ESG Management" March 2022)

<Basic Policy for ESG Management>

ENEOS has established the Basic Policy for ESG Management in order to realize its envisioned goals in its long-term vision in line with the Group Philosophy. Under this basic policy, for a company to achieve sustainable growth, ENEOS will respond to social needs through our business activities and contribute to solving social issues, thereby earning the trust of society and the recognition of its value.

**Basic Policy for ESG Management**

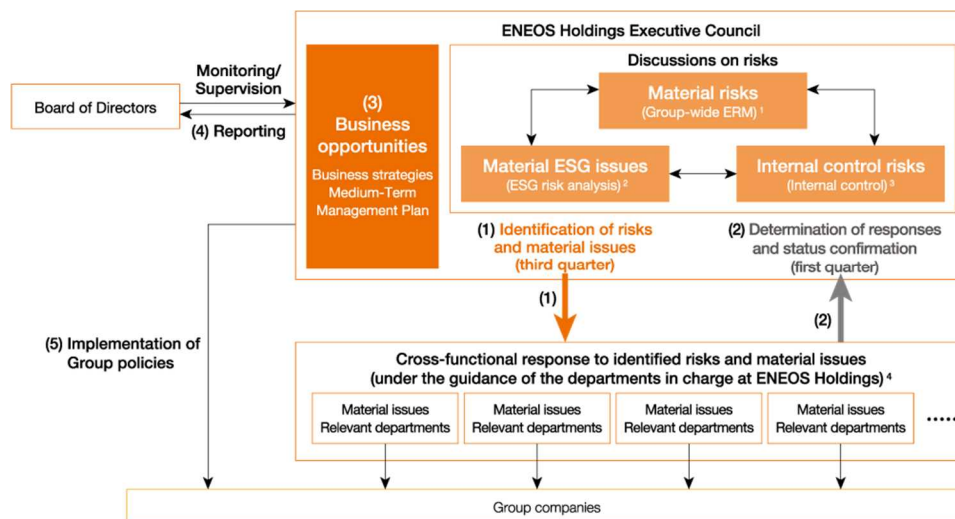
- ESG management at the ENEOS Group involves formulating management and business strategies based on risks and business opportunities and creating both economic value (profits) and social value (resolution of social issues) through our business in order to realize the ENEOS Group Philosophy.
- The ENEOS Group is a group of companies that strives to earn the trust of stakeholders through the implementation of ESG management in our business operations.

(Source: ENEOS Holdings website)

<ESG Management Structure>

In order to effectively and reliably implement ESG management, ENEOS abolished the existing CSR Committee system and shifted to an ESG management structure centered on the ENEOS Holdings Executive Council from FY2020. The ENEOS Holdings Executive Council, chaired by the President and Representative Director and with top management participated, discusses risks and opportunities in relation to ESG that may affect management, and in principle confirms the status of responses to material ESG issues once a year. In addition, the Board of Directors monitors and supervises the Executive Council by receiving reports (in principle, once a year) on the risks, material issues, and the status of responses to the material issues determined by the Executive Council. Departments in charge of each ESG issue, respectively, the Safety, Health & Environment Department for environment issues, the Legal & Corporate Affairs Department for governance issues, the Corporate Planning Department for human rights issues etc., attend the Executive Council. The Corporate Planning Department acts as the secretariat.

Figure. 4: ENEOS ESG Management Structure



(Source: ENEOS Holdings website)

In April 2022, ENEOS established the Carbon Neutral Strategy Department, a dedicated organizational unit with the purpose of strengthening the system for early and steady promotion of strategic formulation and concrete measures for realizing carbon neutrality. As a dedicated organization, the department is responsible for formulating medium- and long-term strategies for the ENEOS Group's carbon neutrality and a Circular Economy. It is also responsible for considering and promoting individual carbon neutral projects, managing the progress and performance of plans to reduce greenhouse gas emissions, and formulating guidelines for the content of external disclosures. In the future, this department will take the lead and further promote the realization of the company's Carbon Neutrality Plan.

<Response to Material ESG Issues>

ENEOS identifies material ESG issues annually based on various guidelines, such as GRI standards and ISO26000, as well as the evaluation items of ESG evaluation organizations, such as the U.S. Sustainability Accounting Standards Board (SASB). ENEOS has established three steps for identifying material ESG issues: (i) designating ESG risks to consider; (ii) assessing the designated ESG risks; and (iii) identifying material ESG issues. For FY2021, 15 Material ESG issues were identified. In addition, departments responsible and targets (KPIs) are set for each material ESG issue, and the progress of KPIs and the results of measures for material ESG issues are reported to the Executive Council and the Board of Directors.

Figure. 5: Material ESG Issues and Targets (KPIs) for Fiscal 2021

**Fiscal 2021 Material ESG Issues and Targets (KPIs)**

Category	Material ESG Issues	Target (KPI)
Environmental	Contribution to the development of a low-carbon society	Reduction in CO <sub>2</sub> emissions: Reduce by 4.02 million tons compared to fiscal 2009
	Contribution to the development of a recycling-oriented society	Waste-to-landfill ratio: Maintain zero emissions (less than 1%)
	Understanding and management of biodiversity risks	Understand risks at manufacturing sites and examine responses
	Understanding and management of water risks	Serious environmental incidents: zero Serious legal compliance incidents: zero Understand risks at manufacturing sites and examine responses
	Control of air pollutant emissions	Serious environmental incidents: zero Serious legal compliance incidents: zero
Social	Ensuring safety / Health enhancement	Zero serious occupational injuries (occupational fatalities) Achieve TRIR of 1.0 or less Increase the cancer screening rate (recommendations) Achieve screening rate of 70% or higher for stomach cancer, colorectal cancer, breast cancer, and cervical cancer
	Communication with stakeholders (investors, etc.)	Effective engagement with investors and others
	Compliance with international principles on human rights	Implement human rights due diligence, including for subsidiaries Implement human rights training
	Securing and developing human resources	Implement effective training and evaluation based on the human resources development plan
	Diversity and inclusion	Maintain rate of women among newly hired graduates at 25% or higher Maintain employment rate of people with disabilities at 2.3% or higher
	Work-life management	Maintain annual paid leave days taken at 80% or higher Maintain 100% rate of return to work after childcare leave
Governance	Appropriate structuring and operation of corporate governance	Implement evaluations of effectiveness for the Board of Directors Improve corporate governance based on the corporate governance code and analysis of the results of exercising voting rights at general meetings of shareholders
	Compliance	Conduct legal compliance inspections Implement training on important laws and regulations (Anti-Monopoly Act, etc.) Appropriate operation of the internal reporting system
	Social responsibility in the supply chain	Implement CSR procurement surveys at overseas sites in addition to domestic sites, where surveys have already been conducted Communicate the Group's procurement policies and procurement guidelines for business partners
	Effective risk management	Steady execution of the risk management process

Note: Data from ENEOS Holdings, principal operating companies, and NIPPO

(Source: ENEOS Holdings website)

Among the material ESG issues identified by ENEOS for FY2021, the most highly evaluated issue is "contribution to the development of a low-carbon society" in the environmental category. Transition strategy is a core issue in the company's sustainability strategy.

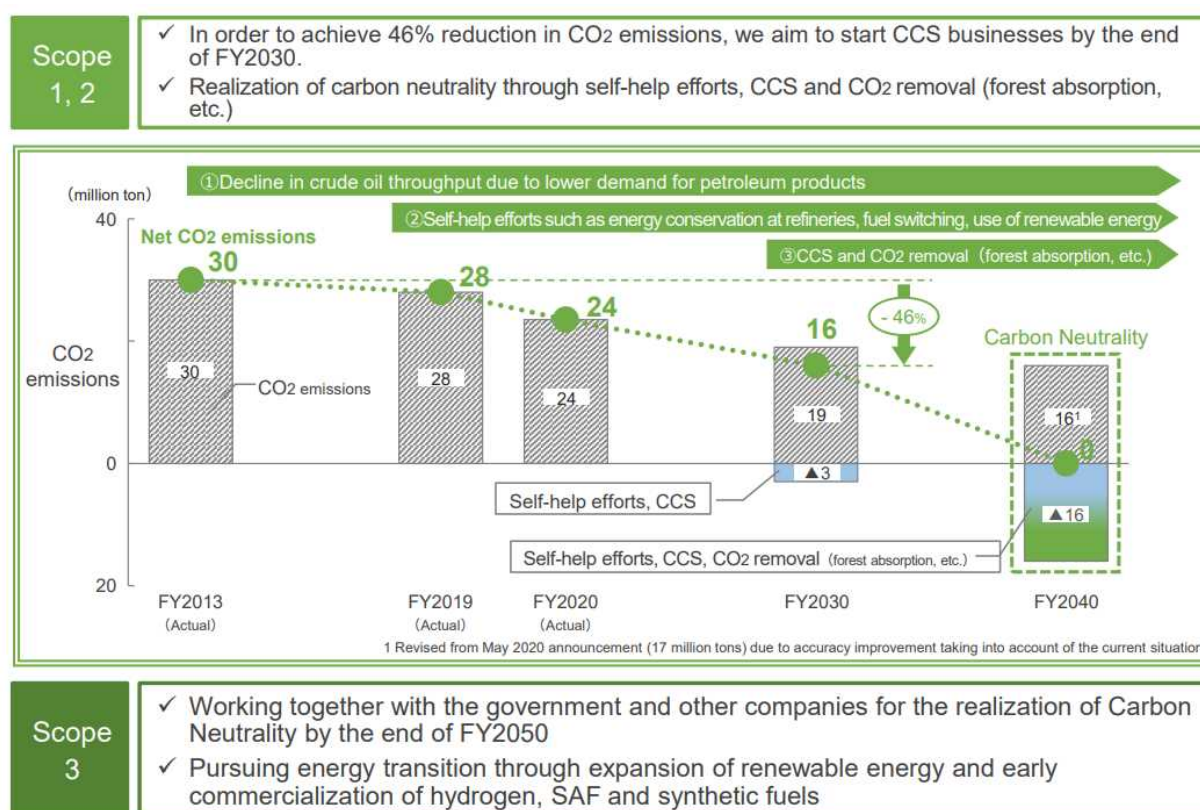
<Environmental Targets and Results>

ENEOS revised its Carbon Neutrality Plan in May 2022. The following targets were set as the medium-to long-term targets for FY2050, 2040, and 2030, respectively.

Target year	Details of Targets
FY2050	Net zero Scope1 and 2 CO <sub>2</sub> emissions and the realization of Carbon Neutrality including Scope 3 by working with the government and other companies by FY2050
FY2040	Net zero Scope1 and 2 CO <sub>2</sub> emissions by FY2040
FY2030	46% reduction compared with FY2013 in Scope1 and 2 net CO <sub>2</sub> emission by FY2030

(Source: Prepared by JCR based on materials submitted by ENEOS)

Figure. 6: ENEOS grouped CO<sub>2</sub> emissions (Scope1, 2)<sup>4</sup>



(Source: ENEOS Transition-Linked Bond Framework)

With regard to ENEOS' Scope 1 and 2 emissions by business segment, the energy business and the oil exploration business account for more than 90% of ENEOS' total Scope 1 and 2 emissions. Therefore, measures for the carbon neutral strategy of the energy business mainly centered on petroleum are shown in the evaluation of the Framework.

The current revision of the Carbon Neutrality Plan is in line with the Japanese Government's goal towards carbon neutrality in line with the 1.5°C target. In addition, the method of offsetting

<sup>4</sup> Scope of data: ENEOS Group, JX Oil Exploration Group, JX Metals Group, and other operating companies



shifted from recording the contribution to CO<sub>2</sub> reduction as offsets based on the sales volume of renewable energy and the sale of environmentally conscious products, to recording only the direct removal of CO<sub>2</sub> in the atmosphere through CCS and forest absorption etc. as offsets.

In order to achieve net zero Scope 1 and 2 CO<sub>2</sub> emissions by FY2040 while maintaining the domestic business foundation essential for a stable energy supply, ENEOS plans to take the initiative in promoting CCS as a domestic Carbon Major through utilizing the know-how it has accumulated through participation in the U.S. Petra Nova CCUS project and through joint projects with Electric Power Development Co., Ltd.. In addition, ENEOS is considering utilizing offsetting through forest absorption, etc.<sup>5</sup>

<Medium-Term Environmental Management Plan>

ENEOS has formulated the Second Medium-Term Environmental Management Plan, a three-year plan which covers FY2020 to FY2022. By breaking down the plan into specific targets for a single fiscal year, the Group is pushing forward initiatives to contribute to a low-carbon society on a group-wide basis.

Figure. 7: Medium-Term Environmental Management Plan

Key themes	Basic initiatives	Concrete measures aimed at 2022
Contribution to a low-carbon society	Pursuit of energy conservation measures in business activities CO <sub>2</sub> recovery in business activities (Scope 1 and Scope 2)	<ul style="list-style-type: none"> <li>Reduce CO<sub>2</sub> emissions by <b>2.16 million tons</b> compared to fiscal 2009 by pursuing energy conservation</li> <li>CCS/CCUS initiatives</li> </ul>
	Reduction of CO <sub>2</sub> emissions in the supply chain (Scope 3)	<ul style="list-style-type: none"> <li>Reduce CO<sub>2</sub> emissions of customers by <b>1.2 million tons</b> compared to fiscal 2009 by promoting sale and development of environmentally friendly products*</li> </ul>
	Develop businesses in hydrogen and renewable energy	<ul style="list-style-type: none"> <li>Develop hydrogen station business</li> <li>Develop renewable energy business</li> <li><b>Total reduction of 920,000 tons</b> from biomass, solar power, wind power, and other forms of renewable energy</li> </ul>

Total CO<sub>2</sub> emission reduction target: 4.28 million tons in fiscal 2022

(Source: ENEOS Holdings integrated Report 2021)

<sup>5</sup> [https://www.hd.eneos.co.jp/newsrelease/upload\\_pdf/20220510\\_02\\_01\\_2008355.pdf](https://www.hd.eneos.co.jp/newsrelease/upload_pdf/20220510_02_01_2008355.pdf)

3. Consistency with elements required in the Climate Transition Finance Handbook

3-1. Element 1: Issuer's Climate Transition Strategy and Governance

(1) Does the financing issuer have a strategy related to transition for climate change mitigation?

As an energy and materials company group, the ENEOS Group views climate change as both a critical management risk and an opportunity. The Long-Term Vision to 2040 sets three envisioned goals: "Become one of the most prominent and internationally competitive energy and materials company group in Asia", "Create value by transforming our current business structure" and "Contribute to the development of a low-carbon, recycling-oriented society". Based on these goals, the Carbon Neutrality Plan announced in May 2022 sets the following targets for reducing medium-to long-term CO<sub>2</sub> emissions.

- Aiming for net zero Scope 1 and 2 CO<sub>2</sub> emissions and the realization of Carbon Neutrality including Scope 3 by working together with the government and other companies by FY2050
- Net zero Scope 1 and 2 CO<sub>2</sub> emissions by FY2040
- 46% reduction compared with FY2013 in Scope 1 and 2 net CO<sub>2</sub> emissions by FY2030 (16 million tons on a net emissions basis)

In order to achieve the above targets for FY2040 and 2030, ENEOS intends to utilize offsets such as (i) energy conservation and utilization of renewable energy at refineries, manufacturing plants and smelters, (ii) utilization of CCS and CCUS, and (iii) forest absorption.

(2) Whether the purpose of applying the "transition" label to financing is to contribute to the realization of the issuer's corporate strategies to transit to a business model that can effectively address climate change-related risks and contribute to the achievement of the goals of Paris Agreement.

ENEOS' transition strategy is developed based on scenario analyses conducted in line with TCFD guidance. ENEOS regularly analyzes the long-term outlook for global energy demand using the IEA's World Energy Outlook. During the formulation of its Long-Term Vision to 2040, while referring to World Energy Outlook 2018's New Policies Scenario and the Sustainable Development Scenario based on Paris Agreement, ENEOS anticipates that there will be three changes in the business environment: "the development of a low-carbon, recycling-oriented society," "the development of the digital revolution," and "lifestyle changes". Therefore, JCR evaluates ENEOS' transition strategy as important for the Group's business model transition.

(3) Is a governance system established to ensure the effectiveness of the transition strategy?

As previously stated, ENEOS has adopted a system in which the ENEOS Holdings Executive Council, chaired by the president of ENEOS Holdings, analyzes risks and business opportunities that could have a major impact on future management, and appropriately confirms the status of responses to identified risks and material issues. The Executive

Council conducts company-wide risk management, risk analysis related to ESG, and comprehensive discussions on risk events related to internal control, in principle, once a year. The responsible departments take the lead in responding to the identified risks and material issues on a cross-organizational basis. In addition, the Board of Directors monitors and supervises the Executive Council by receiving reports (in principle, once a year) on the risks, material issues, and the status of responses to the material issues determined by the Executive Council. In addition, ENEOS has established the Carbon Neutral Strategy Department as a dedicated organization, and is formulating strategies and implementing specific measures. Accordingly, the Executive Council, which discusses the most important issues, discusses material issues including climate change. JCR has evaluated that a system has been established for cross-organizational and group-wide deployment centered on a dedicated organization for strategies and specific measures.

### 3-2. Element 2: Business Model Environmental Materiality

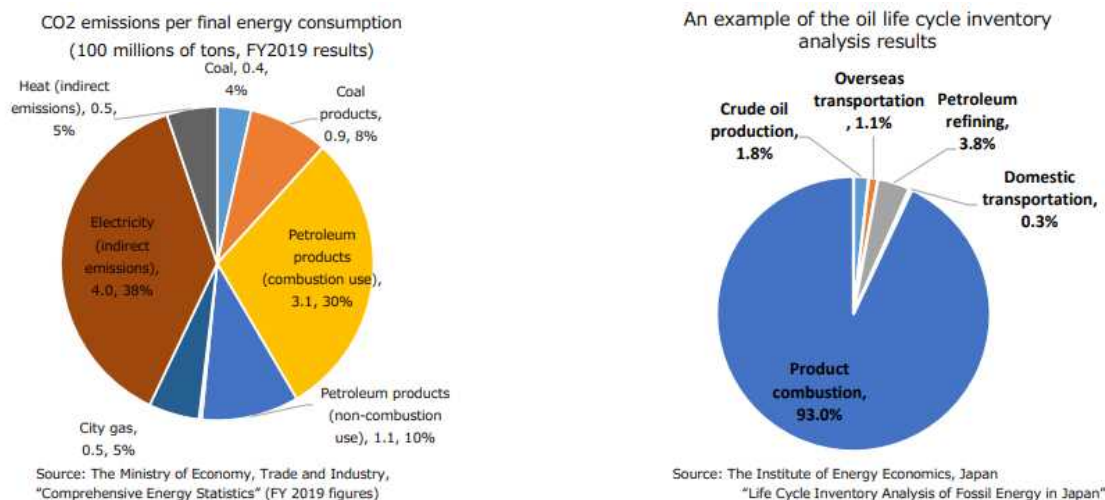
According to the comprehensive energy statistics of the Ministry of Economy, Trade and Industry<sup>6</sup>, petroleum products account for about 40% of Japan's CO<sub>2</sub> emissions per final energy consumption, and more than 400 million tons of the emissions. Among them, combustion use accounts for 30% and non-combustion use such as chemical materials accounts for 10% of the total. According to the Life Cycle Inventory analysis on fossil energy in Japan by Institute of Energy Economics, Japan,<sup>7</sup> crude oil production, transportation, and refining account for less than 10% of the life cycle CO<sub>2</sub> emissions from oil, while product combustion accounts for 90%. According to the IEA's Net Zero by 2050, as the world moves toward carbon neutrality, while demand for oil will remain in some sectors, the majority will be converted to biofuels and synthetic fuels etc. Therefore, the petroleum industry needs to change the petroleum refining process to a low-carbon or decarbonized one and replaces petroleum products themselves with decarbonized fuels. There are also needs for a major shift in the business model itself, from conventional crude oil production, transportation, and petroleum refining to product sales.

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<sup>6</sup> Ministry of Economy, Trade and Industry Agency for Natural Resources and Energy, Statistics, <https://www.meti.go.jp/english/statistics/index.html>

<sup>7</sup> The Institute of Energy Economics, Japan, <https://eneken.ieej.or.jp/data/old/pdf/enekei/lci.pdf>

Figure. 8: Analysis CO<sub>2</sub> emissions per final energy consumption and life cycle inventory of petrology



(Source: Ministry of Economy, Trade and Industry, Roadmap for "Transition Finance" in Oil Sector)

On the other hand, the stable supply of petroleum, which is regarded as an indispensable source of energy for people's lives and economic activities, is a major premise for promoting the climate transition of the society. According to the Energy White Paper 2021<sup>8</sup>, petroleum is the largest source of energy, accounting for about 40% of the domestic supply of primary energy. By application, automobiles account for about 44%, chemical feedstocks account for about 25%, and households and businesses account for about 13%. Petroleum is considered as an essential energy source that supports the society, with it being used in many fields. In addition, petroleum plays an important role in energy supply in the event of disasters, because it has advantages in mobility given the established supply systems and stockpiling systems to final users.

Similarly, from the viewpoint of energy security, securing a stable supply of oil is indispensable. The Russian invasion of Ukraine launched in February 2022 and the implementation of severe economic sanctions against Russia from all over the world have resulted in instability in international politics, security, the global economy, and soaring crude oil prices and European gas prices, which have also destabilized the international energy market. On March 7, 2022, price of WTI crude oil from the U.S., which is used as an indicator, temporarily exceeded US\$130 per barrel in futures trading on the New York Mercantile Exchange, a new record high after the global financial crisis. The Japanese government also held a Ministerial Meeting on Soaring Crude Oil Prices in March 2022.<sup>9</sup> The Ministerial Meeting said that geopolitical changes could have a major impact on global crude oil prices on supply and demand, and that in preparation for further soaring prices, it is essential to consider and implement additional measures ahead of schedule.

<sup>8</sup> Ministry of Economy, Trade and Industry, Agency for Natural Resources and Energy, White Paper, <https://www.enecho.meti.go.jp/en/category/whitepaper/>

<sup>9</sup> Cabinet Secretariat, [https://www.cas.go.jp/jp/seisaku/genyu\\_kakau/index.html](https://www.cas.go.jp/jp/seisaku/genyu_kakau/index.html)

From the viewpoint of energy security, the petroleum industry's most important task in advancing the climate transition is to promote efforts to achieve carbon neutrality while maintaining a stable supply and security of oil, which is an essential energy source for people's lives and economic activities, as a major prerequisite.

ENEOS handles petrochemical products, non-ferrous metals and other materials industries in addition to petroleum. Copper materials, functional materials and thin film materials for semiconductor materials handled in ENEOS' metals business are used in electronic equipment, electric vehicles, and storage batteries. Demand for these materials is expected to increase in the future in line with the decarbonization of society through the spread of renewable energy and electric vehicles, and the progress of digital transformation through the use of IoT and AI technologies. Under the Long-Term Vision to 2040, ENEOS has positioned the Materials Business as one of its growth businesses, and its policy is to invest further in order to respond flexibly to rapidly expanding demand and to contribute to the decarbonization of society through the provision of materials. At the same time, ENEOS believes that decarbonization initiatives are crucial to the materials manufacturing supply chain. In addition to energy conservation, fuel conversion, and process development in the metals business, the company is introducing CO<sub>2</sub> free electricity derived from renewable energy, creating renewable energy, and improving the ratio of recycled raw materials in copper smelting.

ENEOS' Long-Term Vision to 2040 also states that ENEOS would like to contribute to a low-carbon, recycling-oriented society, and it is aiming to realize carbon neutrality. In addition, contribution to the development of a low-carbon society is identified as a material ESG issue.

Based on the above, JCR has evaluated that efforts toward a low-carbon society are top-priority business issues for ENEOS.

### 3-3. Element 3: Climate Transition Strategy to be Science-based including Targets and Pathways

Does the transition roadmap meet the following requirements?

- (1) Quantitatively measurable and covers Scope 1 and 2. (it is desirable that Scope 3 targets are set to the extent feasible)

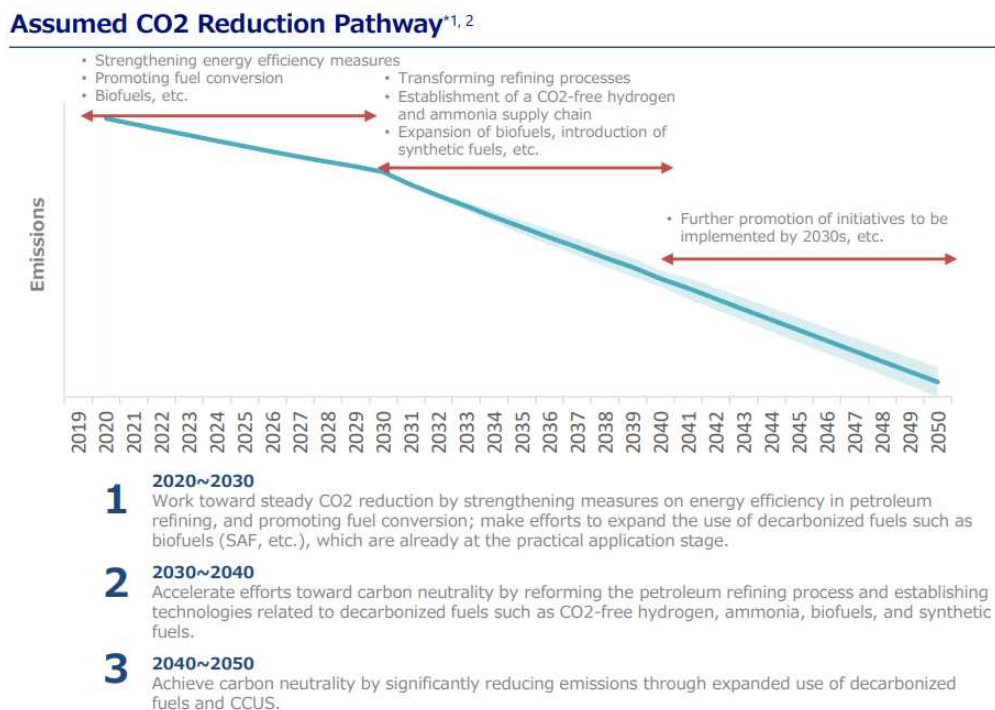
ENEOS measures Scope 1 and 2 (on a consolidated basis) and Scope 3 (ENEOS Corporation only) CO<sub>2</sub> emissions and obtains third-party verification for Scope 1 and 2 and part of Scope 3. The transition roadmap of ENEOS has indicated that ENEOS will work toward achieving net zero Scope 1 and 2 by FY2040 and Carbon Neutrality of Scope 3 by FY2050. The transition roadmap of ENEOS covers Scope 1, 2 and 3.

- (2) Consistent with generally recognized science-based target setting

By FY2030, ENEOS' goal of reducing net CO<sub>2</sub> emissions by 46% compared with FY2013 (16 million t-CO<sub>2</sub> per year on a net CO<sub>2</sub> emissions basis) is consistent with Japan's CO<sub>2</sub> Emissions Reduction Target. In addition, ENEOS' targets, which are achieving net zero Scope 1 and 2

by FY2040 and carbon neutrality of Scope 3 by FY2050, are considered being consistent with the policies of Japan, Paris Agreement, and the roadmap for transition finance in oil sector published by the Ministry of Economy, Trade and Industry.

Figure. 9: Image of Reducing CO<sub>2</sub> Emissions in the Oil Field



(Source: Ministry of Economy, Trade and Industry, Roadmap for "Transition Finance" in Oil Sector)

(3) Publicly disclosed, include midpoint milestones

In May 2020, ENEOS announced its Environmental Vision for FY2040, long-term environmental targets for FY2030, and the Second Medium-Term Environmental Plan, which covers FY2020 to FY2022. Thereafter, the Carbon Neutrality Plan was revised in May 2022, with a target for FY2050 and midpoint milestones of the plan, the FY2040 target and the FY2030 target both announced. The Environmental Vision (FY2040), the long-term environmental targets (FY2030), and the Medium-Term Environmental Management Plan for FY2023 and beyond will be aligned with the Carbon Neutrality Plan announced in May 2022.

(4) Supported by independent assurance or verification

ENEOS obtains third-party verification for environmental data, including actual CO<sub>2</sub> emissions.

3-4. Element 4: Transparency is assured in the investment plan for transition

Under the Second Medium-Term Management Plan, which covers FY2020 to FY2022, ENEOS

has announced plans to allocate 960 billion of its 1.6 trillion capital expenditures for strategic investments in growth businesses, such as next-generation energy supplies and regional services, and environmentally friendly businesses. The plan aims at implementing measures for strategic investment through participation and investment in domestic and overseas renewable energy projects such as solar power generation, land/offshore wind power generation, and biomass power generation, and demonstration-related investment for the construction of hydrogen supply chains. ENEOS also plans to disclose future investment plans in accordance with the formulation of Medium-Term Management Plans for FY2023 and beyond.

Figure. 10: Investment Plan



(Source: ENEOS Holdings website)

As stated above, ENEOS regularly analyzes the long-term outlook for global energy demand using the IEA's World Energy Outlook. While formulating the Long-Term Vision to 2040, ENEOS used the New Policies Scenario of the World Energy Outlook 2018 and Sustainable Development Scenario based on Paris Agreement, and set the long-term targets for FY2050 and FY2040 and the FY2030 target as a milestone in the Carbon Neutrality Plan. As the global trend is to achieve Carbon Neutrality by 2050, JCR has evaluated that it is an advanced initiative to set a net zero target for its own Scope 1 and 2 emissions by FY2040, that is 10 years ahead of schedule, and to work toward achieving Carbon Neutrality of Scope 3 by FY2050. ENEOS also plans to disclose specific investment plans to achieve these targets in accordance with the Medium-Term Management Plans going forward. JCR has evaluated that these plans are highly transparent.

With the implementation of ENEOS' transition strategy, the negative impact on employment and society other than climate change will be mitigated by shifting to growth businesses such as advanced materials, next-generation energy supply including hydrogen etc., and environmentally responsive businesses including CCS and CCUS etc., although the impact on employment will exist to a certain extent as operations decline and the oil industry as a whole shrinks in the future. From an environmental perspective, JCR confirmed that appropriate measures are being taken, such as participation in renewable energy projects, demonstration-related investment for hydrogen energy, utilization of know-how accumulated through participation in CCUS projects that the U.S. Petra Nova has been working on since 2014, and taking the lead in CCS as a domestic Carbon Major. Regarding the possibility of lock-in to fossil fuels, while entering and developing the renewable energy and hydrogen energy businesses mentioned above and advancing CCS in parallel, JCR anticipated a decline in refinery utilization rates due to a decrease in demand for petroleum products along with the anticipation of progress toward global decarbonization in the future. Therefore, there is no possibility of lock-in to fossil fuels. Furthermore, the investment plans for transition explained in the Framework is unlikely to have any significant damage (Do No Significant Harm) to other environmentally beneficial projects. Moreover, as for just transition, the impact on employment is expected to be mitigated by shifting to growth businesses, although it exists to a certain extent as mentioned above.

Based on the above, JCR has evaluated that the Framework satisfies the four elements required by the Climate Transition Finance Handbook.



4. Consistency with SLBP, etc.: Principle 1 Appropriateness of KPI selection

4-1. Evaluation perspective

This section assesses the significance of the issuer's selected KPIs, centered on whether they contain the following elements illustrated in SLBP and elsewhere:

- 1) Are the KPIs relevant, core and material to the issuer's overall business, and of high strategic significance to the issuer's current and/ or future operations?
- 2) Are they measurable or quantifiable on a consistent methodological basis and can be externally verifiable?
- 3) Can be benchmarked (i.e. as much as possible using an external reference or definitions to facilitate the assessment of the SPT's level of ambition)?

4-2. Current Situation of Evaluation Targets and Evaluation of JCR

(Evaluation Results)

The KPIs defined in the Framework include all the elements required by SLBP, etc., and KPIs with significance have been selected to contribute to the achievement of ENEOS' Environmental Vision and long-term environmental targets.

With respect to net CO<sub>2</sub> emissions (Scope1 and 2) set in the KPIs in the Framework, this Indicator is consistent with the quantitative environmental targets set by ENEOS for FY2040, which is to achieve a net zero for Scope1, 2, and with the revised Carbon Neutrality Plan, which will reduce net Scope1, 2 emissions to 46% compared with FY2013 by FY2030. In its Long-Term vision to 2040, ENEOS also sets forth its envisioned goals to contribute to a low-carbon, recycling-oriented society. As a material ESG issue, its contribution to the formation of a low-carbon society is highly evaluated, and it is positioned as a key issue in its business and material ESG issues.

As mentioned earlier, the petroleum industry is required to change its business in order to realize carbon neutrality, while it is highly assumed that the stable supply and security of petroleum, which is an indispensable source of energy for people's daily lives and economic activities, will be crucial for promoting transition from the viewpoint of energy security. Therefore, it can be said that efforts to reduce CO<sub>2</sub> are of utmost importance for the industry as a whole.

Accordingly, JCR assesses that the KPIs selected in the Framework are significant.

5. Consistency with SLBP, etc.: Principle 2 Calibration of SPTs

5-1. Evaluation perspective

This section assesses the ambition and significance of an issuer's established SPTs, focusing on whether they include the following factors illustrated in SLBP and elsewhere:

- 1) Are SPTs represent a material improvement in the respective KPIs and be beyond a “Business as Usual” trajectory?
- 2) (Where possible) can be compared to a benchmark or an external reference?
- 3) Are they consistent with the issuers’ overall strategic sustainability / ESG strategy?
- 4) Are they determined on a predefined timeline, set before (or concurrently with) the issuance of the bond?

Next, we examine the benchmarks taken into account when setting the issuer's SPTs. The following elements are illustrated in SLBP, etc.

- ✓ Establish quantitative measures based on the issuer's own recent performance level (select KPIs with at least the last three years' track records whenever possible) and also disclose forward-looking information on KPIs as much as possible.
- ✓ Relative positioning of established SPTs relative to peers (e.g., average level of performance, industry-leading level, etc.)
- ✓ Scientific-based scenario analyses and absolute values (e.g., carbon budgets), national and regional or international targets (e.g., Paris Agreement, CO<sub>2</sub> Zero Emissions Targets, SDGs, etc.), recognized BATs (best available technologies) and other indicators that determine relevant targets across ESG topics

5-2. Current Situation of Evaluation Targets and Evaluation of JCR

(Evaluation Results)

ENEOS' established SPTs relative to its peers and to the company's historical performance are ambitious setting.

(1) Comparison of initiatives with other companies in the same industry

As mentioned earlier, ENEOS set a target of reducing net CO<sub>2</sub> emissions (Scope1, 2) by 46% compared with FY2013 by FY2030 (16 million percentage t-CO<sub>2</sub> on a net emissions basis) and a target of net zero by FY2040, and set each target as a SPTs of the Framework.

Regarding the 2030 goals set in SPT1, JCR assesses that ENEOS' reduction ratio is high compared to domestic peers, and that ENEOS' 2030 target is not inferior to those of BP and Shell when compared to overseas peers, and are ambitious.

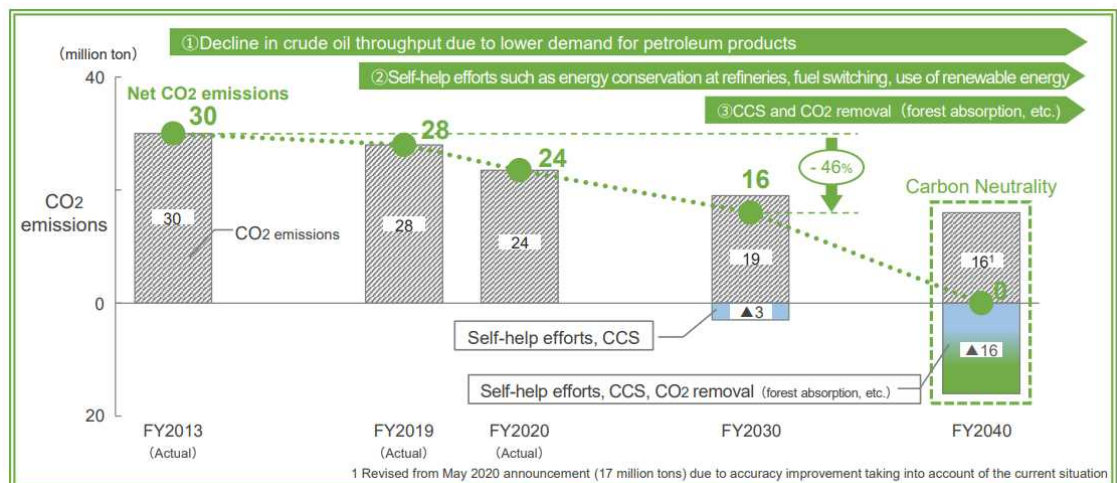
Regarding the targets set in SPT2, JCR believes that ENEOS is progressive and highly ambitious in that no other domestic or overseas peer company in this study has set a target for 2040, and that ENEOS has set a target of zero net emissions for 2050, 10 years ahead of the target set by other companies.

Based on the above, JCR evaluates that the targets of SPT 1 and 2 are highly ambitious and beyond the industry level, as they lead the petroleum industry to a low-carbon society.

(2) Comparison with the company's historical track record

The following figures show historical CO<sub>2</sub> emissions and estimates for FY2030 and 2040. In the most recent fiscal years of 2019 and 2020, the outliers were observed in each fiscal year in response to the contraction of economic activities due to the COVID-19 pandemic from the second half of FY2019. When the impact is subtracted, the numerical targets for individual SPTs can be said to have a degree of ambition as SPTs, compared to the track records to date, because they require initiatives that go beyond conventional business (Business As Usual).

Figure. 11: ENEOS grouped CO<sub>2</sub> emissions (Scope1, 2)



(Source: ENEOS Transition Linked Bond Framework)

(3) Efforts to Reduce ENEOS' CO<sub>2</sub> Emissions

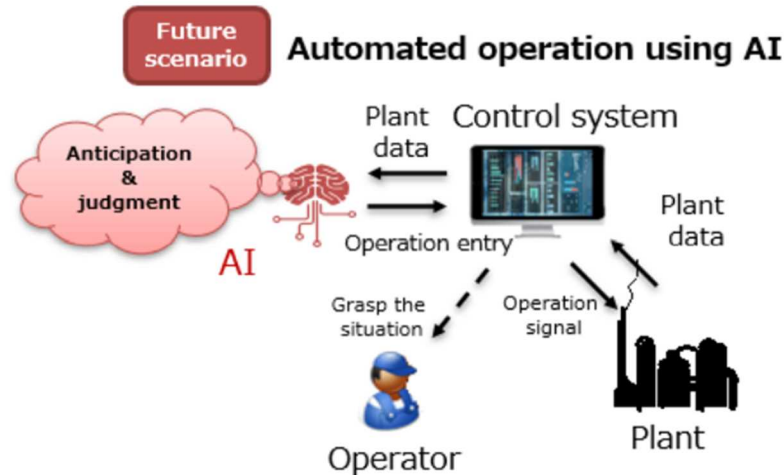
The following measures will be taken to reduce CO<sub>2</sub> emissions at ENEOS.

(i) Energy conservation at refineries, manufacturing plants, and smelters, and the use of renewable energy

ENEOS has been introducing automated operation to refineries and smelters. In the conventional plant operation, operators monitor operations and make operational decisions in 24-hour system, and the lack of human resources with operational know due to the aging of skilled operators is a concern. In order to cope with this issue, ENEOS has developed an AI system that automates plant operation. By learning complex correlations between multiple sensor values and valve operations from past operation data and simulator data, it has made it possible to predict sensor values and automate valve operation decisions. The company aims to introduce an AI model for automated

plant operation in the future, as the introduction of automated operation will lead to more efficient production and energy-efficient operation.

Figure. 12: Image of Autonomous Plant Operation AI System



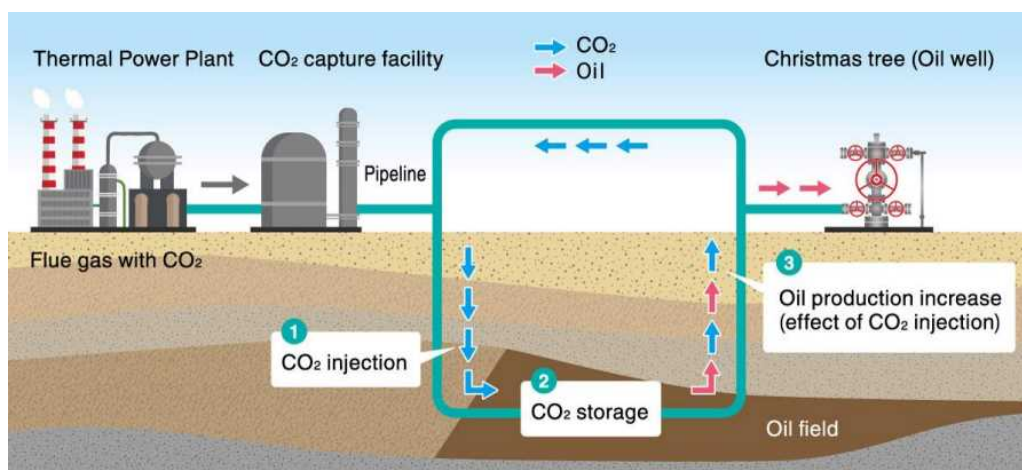
(Source: ENEOS News Release)<sup>10</sup>

(ii) Reducing Emissions through CCS and CCUS

Since December 2016, ENEOS has been promoting a project in Petra Nova CCUS Project to increase production of crude oil by separating and recovering CO<sub>2</sub> generated at thermal power plants in the U.S. and injecting it into the ground. This plant is the world's largest plant to recover CO<sub>2</sub> from flue gases, and 3,770,000 tons of CO<sub>2</sub> have been collected to date. CO<sub>2</sub> collected at this plant is about 5000 tons/day, and the useful life of CO<sub>2</sub> recovery equipment is expected to be about 30 years. On the other hand, as the cost of separating and recovering CO<sub>2</sub> is large in the current CCS, there is room for cost reduction through technological advances. It is said that it is necessary to reduce storage costs by increasing the amount of CO<sub>2</sub> injection in collaboration with partner companies, and to support the development of technologies to achieve costs equivalent to the carbon price that is expected to be formed in the future. ENEOS believes that CCS/CCUS technologies for collecting, using and storing CO<sub>2</sub> will play a key role in realizing a decarbonization society. In the future, it plans to accelerate its efforts at home and abroad by utilizing the technologies and operating know-how it has cultivated.

<sup>10</sup> [https://www.eneos.co.jp/english/newsrelease/2021/pdf/20211228\\_01.pdf](https://www.eneos.co.jp/english/newsrelease/2021/pdf/20211228_01.pdf)

Figure. 13: Image of CO<sub>2</sub> collection, transport, and storage



(Source: 2nd Material of the CCS Long-Term Roadmap Study Group, Ministry of Economy, Trade and Industry)

(iii) Utilization of offsets such as forest absorption

ENEOS is promoting efforts to create carbon credits derived from forests, and is actively advancing collaborations with startups and other organizations to create businesses that will contribute to reducing CO<sub>2</sub> emissions.

In March 2021, ENEOS launched a collaboration with a startup aimed at promoting forest-based CO<sub>2</sub> absorption and sequestration. This collaboration will utilize 3D laser and drone measurement technology and measurement data analysis systems to digitize forest resource information and provide managers with information necessary for forest maintenance and management, such as areas and timing for thinning and afforestation, thereby contributing to the proper functioning of forests as a source of CO<sub>2</sub> absorption and sequestration.

In the future, ENEOS aims to build a CO<sub>2</sub> environmental value ecosystem in which it will credit CO<sub>2</sub> reduction amounts through collaboration in the value exchange business and apply them as its own CO<sub>2</sub> emission reduction amounts. ENEOS plans to participate in the forestry business from an early stage and accumulate the necessary offsetting volume from 2040 onward.

Based on the above, JCR assesses that SPTs set by ENEOS are ambitious, as they aim for achieving targets for reduction rates that go beyond conventional scenarios, in addition to being ambitious targets beyond industry levels.

### 5-3. Impact assessment by JCR

JCR examined the degree of impact (degree of impact) of SPTs in line with the five elements (diversity, effectiveness, efficiency, multiplicity, and additionality) of the impact assessment criteria illustrated in Principle 4 of the Positive Impact Finance (PIF) principle formulated by the United Nations Environmental Programme in order to ensure that SPTs established in the Framework are ambitious and significant and contribute to sustainable growth of ENEOS and enhancement of social value, as well as to maximize positive impact and avoid, manage, and reduce negative impact.

#### (1) Variety: Variety of positive impacts delivered

While ENEOS' CO<sub>2</sub> mitigation objectives are limited to mitigating climate change in the impact area, they have a broad scope in a variety of aspects:

- SPTs sets are Scope1 and 2
- Target for the entire business segment
- Targets domestic and overseas business sites

#### (2) Magnitude: Magnitude of the impacts delivered

The Bonds have a significant impact in the petroleum industry from the following perspectives.

ENEOS is the largest domestic company in the petroleum industry. As it is working to develop low-carbon technologies by forming consortiums with a variety of different industries when it moves forward with its decarbonization efforts, it is expected to have a significant impact. In addition, the targets for FY2030 are more ambitious than those of other companies in the domestic industry, and initiatives aimed at achieving zero Scope1, 2 net emissions by FY2040 are also advanced. Therefore, these initiatives are highly influential from the viewpoint of further development of SLBs and transition financing.

#### (3) Efficiency: Scale of impacts delivered relative to amount of funds spent

The Bonds are an efficient initiative from the following perspectives.

At ENEOS, the following targets were set by the Carbon Neutrality Plan: tackling with the aim of realizing carbon neutrality including Scope 3 by FY2050, net zero emission of Scope1, 2 by FY2040, and targets in line with the Japanese government's target for 2030. As measures for the achievement of the goals for FY2030 and FY2040, the government intends to utilize the following: (i) energy conservation at refineries, manufacturing plants and smelters and the utilization of renewable energy; (ii) utilization of CCS and CCUS; and (iii) utilization of offset such as absorption of forests. ENEOS' initiative to promote environmentally conscious initiatives will be crucial to maintaining and expanding businesses in the future, and the impact of petroleum products on other industries is also considered significant. ENEOS has identified "Contribute to the development of a low-carbon, recycling-oriented society" in the environmental field as a material ESG issue. It conducts scenario analyses in line with TCFD and decides investment plans after thoroughly

considering its own risks and opportunities. Based on the above, it is expected to have a large impact on invested capital.

**(4) Leverage: Degree of leverage of private funds relative to public funds and/or donations**

As for the efforts aimed at reducing CO<sub>2</sub> emissions by the Bonds, subsidy system from some the government can be utilized for hydrogen technological development, etc., but many are financed by private funds. It is expected that further decarbonization of the petroleum industry will proceed with the backup of these public funds.

**(5) Additionality: Level of additionality**

Individual indicators are considered to have additional impacts on several of SDGs 17 and 169 targets as follows:



**Goal 7: Affordable and clean energy**

**Target 7.3** By 2030, double the global rate of improvement in energy efficiency



**Goal 9: Industry, innovation and infrastructure**

**Target 9.4** By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities



**Goal 12: Responsible consumption and production**

**Target 12.4** By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment

**Target 12.6** Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle



**Goal 13: Climate action**

**Target 13.1** Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries

**Target 13.3** Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning

6. Consistency with SLBP, etc.: Principle 3 Bond Characteristics (Economic Conditions)

6-1. Evaluation perspective

In this section, we confirm the following details.

- (1) Are there arrangements under which the financial and structural characteristics of the bond will change depending on whether or not the selected KPIs achieve pre-established SPTs?
- (2) Are the definitions of KPIs, SPTs and variability of the financial and structural characteristics of sustainability-linked bonds included in the bond disclosure documents?
- (3) Are there plans to mention the responses in the event of unexpected events that could have a material impact on the method of measuring KPIs, setting of SPTs and assumptions, and scope of KPIs (such as important M&A activities, significant changes in regulations or other systems, or the occurrence of unusual events, etc.) in the bond disclosure documents?

6-2. Current Situation of Evaluation Targets and Evaluation of JCR

(Evaluation Results)

The Bonds have arrangements whereby the financial characteristics of the Bonds will vary depending on whether or not the pre-defined SPTs are achieved with respect to the selected KPIs. Such variability is included in the bond disclosure documents and all targets are expected to be disclosed in the Framework, resulting in a high degree of transparency. Methods of measuring KPIs, SPTs setting and assumptions will be mentioned in the bond disclosures.

JCR has confirmed that in the disclosure document for the Bonds, if the SPTs are not achieved, arrangements will be made to change the financial characteristics of the Bonds and that the arrangements will be disclosed. The definition of KPIs, setting of SPTs, and assumptions will also be described in the same document. In the event that the definition of KPIs, the setting of SPTs, or the assumptions are changed due to circumstances that cannot be foreseen at the time of the financing of the Bonds, ENEOS will disclose to investors an explanation of the changes in an appropriate manner.

In addition, in the event of a material change in the setting of SPTs, ENEOS will discuss with the relevant parties the establishment of a SPTs that is at least as ambitious as the previous evaluation criteria based on the plans of these changes, and obtain an assessment by an external review organization as required.

Based on the above, JCR confirmed that the necessary arrangements or disclosures will be made in connection with the terms and conditions the Bonds, and that the information in the disclosure documents of the Bonds or to be disclosed is also appropriate.



7. Consistency with SLBP, etc.: Principles 4 and 5 Reporting and Verification

7-1. Evaluation perspective

In this section, we will confirm whether the following items are planned to be included in the report content after financing, the method of disclosure, and whether third-party verification are planned.

i. Items to be disclosed

Are the following items planned to be disclosed at least once a year?

- ✓ Update on selected KPI performance, including baseline assumptions
- ✓ Useful information for issuers to gauge the degree of SPTs ambition (e.g., information about the issuer's most recent sustainability strategy and related KPI/ESG governance, as well as information about KPIs and SPTs analyses)

Disclosure of the following information to the extent possible:

- ✓ Qualitative and quantitative explanations of the main factors contributing to the improvement in performance/KPIs (including M&A activities, etc.)
- ✓ Explanation of how improved performance impacts the sustainability of issuers and borrowers
- ✓ Presence of revaluation of KPIs, revision of SPTs set, and changes in baseline assumptions and scope of KPIs

ii. Verification

Are verification details (status of achievement of SPTs, impacts on changes in financial and structural characteristics, timing of such changes, etc.) scheduled to be disclosed?

7-2. Current Situation of Evaluation Targets and Evaluation of JCR

(Evaluation Results)

ENEOS appropriately plans the content, frequency, and methods of disclosures in post-financing reporting, and plans to receive third-party verification of details required by the Principles such as SPTs' progress.

ENEOS plans to disclose on its website the annual reporting on the performance of KPIs regarding the progress of its CO<sub>2</sub> emission reduction plan (achievement of medium-and long-term goals). Scope1, 2 net CO<sub>2</sub> emissions will be verified by a third party. ENEOS also plans to annually report on its website the figures that have been accurately calculated in accordance with the standard. Should a significant change in SPTs occur during the period, JCR will continue to review the status of compliance with CTFH, SLBP, etc. and whether the initially assumed level of ambition and significance will be maintained. In the year of maturity, ENEOS and JCR will conduct a review of the individual bonds implemented based on the Framework, and evaluate the status of impact on ENEOS and society, in addition to the status of achievement of SPTs.

8. Conclusions on conformity with CTFH, SLBP, etc.

Based on the above considerations, JCR has confirmed that this Framework, which is the subject of this third-party opinion, conforms to CTFH, SLBP, etc.

(Responsible analysts for this evaluation) Atsuko Kajiwara and Takahiro Yamauchi

## Important explanation of this third-party opinion

### 1. Premises, significance, and limitations of the JCR Third-Party Opinion

Third-party opinions granted and provided by the Japan Credit Rating Agency, Ltd. (JCR) are representations of JCR's overall opinion at the present time regarding the evaluation target, the Climate Transition Finance Handbook (CTFH), the Sustainability Linked Bond Principles (SLBP), the basic guidelines for Climate Transition Finance established by the Financial Services Agency, the Ministry of Economy, Trade and Industry and the Ministry of the Environment in May 2021, and the conformity of JCR to the Green Loan and Sustainability Linked Loan Guidelines formulated by the Ministry of the Environment in March 2020. These statements do not fully depict the extent of positive impact that such appraisal targets may have.

This Third Party Opinion evaluates current plans or circumstances based on information provided by the Client and information independently collected by JCR and does not guarantee an evaluation of future status. Also, this Third Party Opinion does not quantitatively prove the positive effects of the Transition Linked Bond and is not responsible for its effects. JCR confirms that the funding raised by this project is measured quantitatively and qualitatively by the issuer or by a third party requested by the issuer in terms of the degree of achievement of the impact indicators established by the Company, but in principle, this is not directly measured.

### 2. International initiatives, principles, etc. referred to in carrying out this evaluation

In conducting this evaluation, JCRs refer to the following principles and guides formulated by ICMA, UNEP FI and its ministries and agencies.

- Climate Transition Finance Handbook
- Basic Guidelines for Climate Transition Finance of the Financial Services Agency, the Ministry of Economy, Trade and Industry, and the Ministry of the Environment
- Principles of Sustainability Linked Bonds
- Ministry of the Environment's Green Loan and Sustainability Linked Loan Guidelines
- Positive impact financial principle
- Positive Impact Finance Model Framework without Limited Use of Funds

### 3. Relationship with activities related to credit rating business

The conduct of providing this Third-Party Opinion is conducted by JCR as a related business and is different from the conduct related to the credit rating business.

### 4. Relationship with credit ratings

This evaluation differs from credit ratings and does not constitute a commitment to provide or inspection a predetermined credit rating.

### 5. Third-party nature of JCR

There are no capital or personal relationships, etc. between the parties subject to this evaluation and JCR that may give rise to conflicts of interest.

## ■Points of Attention

The information in this document has been obtained by JCR from issuers and accurate and reliable sources. However, this information may contain errors due to human, mechanical or other reasons. Accordingly, JCR makes no representation, express or implied, as to the accuracy, consequences, accuracy, timeliness, completeness, marketability or fitness for any particular purpose of such information, nor does JCR assume any liability for any error, omission or consequence of the use of such information. JCR shall not under any circumstances be liable for any special, indirect, incidental or consequential damages of any kind, including loss of opportunity or financial loss, which may arise from any use of such information, whether contractual liability, tort liability, negligent liability or other cause of liability, and whether such damages are foreseeable or unforeseeable. This third-party opinion does not express an opinion on various risks (credit risk, price fluctuation risk, market liquidity risk, etc.) related to Positive Impact Finance, which is the subject of evaluation. In addition, this third-party opinion represents JCR's overall opinion at this time and is not a representation of facts, and does not constitute any recommendation as to risk judgments or any decision to purchase, sell or hold individual debt securities, commercial paper or the like. This Third Party Opinion may be changed, suspended or withdrawn due to changes in information, lack of information or other reasons. All rights associated with this document are reserved by JCR. Any reproduction, adaptation, or modification of this document, in whole or in part, without the permission of JCR is prohibited.

## ■Glossary of Terms

**Third-party Opinion:** This report was prepared by International Capital Market Association and expresses an opinion from an independent, neutral and equitable standpoint on the Transition Linked Bonds to be conducted by the issuer, as requested by the client, as well as on the conformity of Climate Transition Finance Handbook to the Sustainability Linked Bonds Principles.

## ■Registration status as an external evaluator of sustainable finance, etc.

- Members of the Working Group on the Impact Financial Initiative for the United Nations Environment Programme
- Registered as External Reviewer of Green Bonds, Ministry of the Environment
- Climate Bonds Initiative Approved Verifier (Accreditation Verification Agency for the Climate Bond Initiative)
- ICMA (registration with the International Capital Markets Association as an observer) Principles for Social Bonds, Members of Climate Transition Finance Working Group

## ■In addition, the status of registration as a credit rating agency, etc.

- Director-General of the Financial Services Agency (Credit Rating) No. 1
- EU Certified Credit Rating Agency
- NRSRO: JCR is registered in the following four classes of five credit rating classes of NRSRO (Nationally Recognized Statistical Rating Organization as defined by the U.S. Securities and Exchange Commission. (1) Financial institutions, broker-dealers, (2) insurance companies, (3) general business corporations, and (4) government and local governments. When subject to disclosure under Section 17g-7(a) of the Securities and Exchange Commission, such disclosure is attached to the news release appearing on JCR's website (<https://www.jcr.co.jp/en/>).

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<Reference>

Check Sheet for Consistency with Basic Guidelines on Climate Transition Finance

May 13, 2022

Japan Credit Rating Agency, Ltd.

Company to be evaluated: ENEOS Holdings, Inc. (ENEOS)

The following are the check results of the consistency of the Finance with respect to the items recommended in the Basic Guidelines on Climate Transition Finance (the "Guidelines") published by the Financial Services Agency, the Ministry of Economy, Trade and Industry, and the Ministry of the Environment.

The Guidelines use three expressions: "should," "recommended," and "be considered/possible." These expressions are used in the following context:

- Items described with the word "should" are basic elements that financial instruments labeled as transition finance are expected to have.
- Items described with the word "recommended" are elements that financial instruments labeled as transition finance are optimally recommended to have under the Guidelines although instruments which do not have these items can also be labeled as transition finance.
- Items described with the word "be considered" or "possible" are elements that they are not considered problematic even if financial instruments labeled as transition finance do not have them.

#### **Element 1: Fundraiser's Climate Transition Strategy and Governance**

a) Financing through transition finance **should** aim to implement or incentivize the achievement of transition strategies. Such strategies **should** incorporate a long-term target to align with the goals of the Paris Agreement, relevant interim targets on the trajectory towards the long-term goal, disclosure on the levers towards decarbonization, and fundraiser's strategic planning.

Consistency: ✓

In May 2022, ENEOS announced its Medium-and Long-Term Goals for FY2050: Aiming for realization of carbon neutrality of Scope1, 2, 3 by working with the government and other companies; FY2040: Net zero Scope1 and 2 CO2 emissions; FY2030: 46% reduction compared with by FY2013 in Scope1 and 2 (16 million t-CO2 on a net emissions basis). KPI and SPTs for this financing are the goals for FY 2040 and the targets for FY 2030 themselves, and are among the most important issues in the Transition Strategy.

The Transition Strategy refers to scenarios published by the International Energy Agency (IEA). ENEOS' goals are consistent with Japan's policies and Paris Agreement, and Ministry of Economy, Trade and Industry's Roadmap for the Oil Sector. It also endorses the "Challenge Zero" declaration, an initiative by Keidanren and the Japanese government to achieve the "decarbonized society"

positioned as the long-term goal of the Paris Agreement.

b) A transition strategy **should** serve to explicitly communicate the implementation of an issuer's strategy to transform the business model in a way which effectively addresses climate-related risks and contributes to achieving the goals of the Paris Agreement. Transformation of a business model is not limited to initiatives as an extension of existing businesses but **can** also be transformation based on various other perspectives. It includes fuel conversion that achieves significant carbon and GHG reduction benefits, introduction of innovative technologies, improvement of / changes in manufacturing processes and products, and development and provision of products and services in new fields.

Consistency: ✓  
In May 2019, ENEOS announced its endorsement to the TCFD, developed scenarios based on the scenarios published by the IEA, and identified possible climate-related risks and opportunities. As a business transformation related to the transition strategy for carbon neutrality for FY2050, the company aims to realize carbon neutrality through the following initiatives.

- Promotion of energy conservation activities in business operations at refineries, etc.
- Fuel conversion
- Renewable Energy Utilization
- Utilization of offsets such as CCS and forest absorption

c) The implementation of a transition strategy assumes cases where it affects society and environment other than climate change, such as employment or stable provision of products and services, through transformation of a business model. In such cases, it is **recommended** that the fundraiser also takes into consideration the impact of business innovations to society and environment other than climate change.

Consistency: ✓  
Based on the group philosophy of "we will contribute to the development of our communities and help to ensure a vibrant future through our business," the company plans to promote a transition strategy toward carbon neutrality while maintaining the domestic business foundation essential for the stable supply of energy. Negative impacts include a certain degree of impact on employments as the oil industry as a whole is expected to shrink in the future, but this will be mitigated by shifting to growing businesses in the advanced materials industry, next-generation energy supply businesses such as hydrogen, and environmentally friendly businesses such as CCS and CCUS.

d) Climate change-related scenarios **should** be referenced in developing transition strategies. The pathway to transition **should** be planned for respective sector and regions of individual

fundraiser, who may generally be placed in a different starting point and pathway to transition.

Consistency: ✓

Identified possible climate-related risks and opportunities. In formulating the Long-Term Vision to 2040, the company assumed that three changes in the business environment would occur: "Development of Low-Carbon, Recycling-Oriented Society", "Digital Innovation" and "Lifestyle Changes" while referring to the "New Policy Scenario (NPS)" of WEO2018 published by the IEA, as well as the "Sustainable Development Scenario (SDS)" based on the Paris Agreement.

e) Transition strategies and plans must be highly credible in terms of their effectiveness. Therefore, it is **recommended** that a transition strategy and plan are linked to management strategy and business plan, including Medium-term Business Plans.

Consistency: ✓

In May 2020, ENEOS announced its Environmental Vision, which is a target for FY2040, long-term environmental targets for FY2030, and the Second Medium-Term Environmental Management Plan for FY2020 to FY2022. Thereafter, the Carbon Neutrality Plan was revised in May 2022, with a target for FY2050 and milestones at the midpoint of the plan, the FY2040 target and the FY2030 target both announced. The Environmental Vision (FY2040), the long-term Environmental Target (FY2030), and the Medium-term Environmental Management Plan for FY2023 and beyond will be aligned with the carbon neutral plan announced in May 2022.

f) However, because such strategies and plans run for a long period of time, it is **possible** that the content may be modified or adjusted in the event of a major change in the assumed external environment and so on.

Consistency: ✓

ENEOS revised the carbon neutrality plan in May 2022 and will continue to revise the content appropriately in the future.

g) In the initial phase of developing a transition strategy by the fundraiser, it is **considered** as an option for the fundraiser to indicate a plan for future implementation of items described with the words "recommended" and "be considered/possible" in these Guidelines.

Consistency: ✓

All matters that are considered "should" in the Basic Guidelines satisfy their requirements. In addition, almost all items identified as "recommended" and "considered/possible" have met their requirements or are expected to be implemented in the future.

h) In order to secure the effectiveness of the transition strategy, the fundraiser **should** establish an

organizational structure for the board of directors and/or other such committee to oversee the activities addressing climate change and for management to play a role in assessing and managing such climate-related activities.

Consistency: ✓

ENEOS has adopted a system in the Holdings Executive Council chaired by the president and CEO to analyze risks and business opportunities that could have a major impact on future management, and to appropriately confirm the status of responses to identified risks and priority issues. At the Executive Council in principle, once a year, the company-wide risk management, risk analysis related to ESG, and comprehensive discussions on risk events related to internal control are conducted, and the department in charge takes the lead in responding to the identified risks and priority issues on a cross-organizational basis. In addition, the Board of Directors monitors and supervises the company by receiving reports (in principle, once a year) on the risks, priority issues, and the status of responses to them determined by the Executive Council. In April 2022, the Carbon Neutral Strategy Department, a dedicated organization, was established for the purpose of strengthening the system to quickly and steadily formulate strategies and implement specific measures to achieve carbon neutrality. The dedicated organization will play a central role in further promoting the company's carbon neutrality plan.

i) While a transition strategy shall be basically developed by a company in need of finance, it is **possible** for entities to utilize the strategy of companies that are wholly or partially responsible for the initiatives to establish or explain their own strategy, given that the finance supports GHG emissions reduction initiatives of not just a single company but its supply chain.

Consistency: ✓

The company aims at carbon neutrality including Scope3 by FY2050, which will contribute to the greenhouse gas emission reduction of the supply chain. In addition, the company has announced that it will actively promote dialogue with a diverse range of stakeholders, including shareholders, investors, customers, business partners, and employees, and promote activities that respond to their expectations and requests.

j) Transition strategies **should** be disclosed in advance in a company's integrated report, sustainability report, statutory documents and other materials for investors (including such disclosures on the website). This also applies to the other three elements.

Consistency: ✓

Transition strategies are disclosed in the Integrated Report and ENEOS Group Second Medium-Term Management Plan.

k) It is **possible** to disclose transition strategies and elements concerning the governance guaranteeing that the execution of transition strategies is in alignment with the reporting frameworks such as the Recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD; Final Report).

Consistency: ✓

ENEOS analyzes the impacts of climate change issues, and discusses, decides, or reports on the following at the Board of Directors' Meeting.

- Representation of endorsement of the purpose of TCFD Final Report
- Disclosure in line with TCFD recommendations (e.g., scenario-based analysis)
- Formulation of carbon neutrality plan

l) If the implementation of a transition strategy assumes impacts on society and environment other than climate change, it is **recommended** that the fundraiser explain the view underlying its approaches, etc. to address such impacts and disclose how the strategy on the whole contributes to achieving the Sustainable Development Goals (SDGs) so that the effects can be appropriately evaluated by the financier.

Consistency: ✓

In addition to contributing to resolving climate change issues as a material ESG issue, the company is promoting initiatives with the aim of achieving SDGs targets by identifying safety assurance, health promotion, and promotion of diversity and inclusion as areas of challenge.

m) Considering the length of application and other factors, there may be instances when a transition strategy and plan will need to be modified due to major changes in the external environment and relevant conditions that were assumed at a planning phase. In this case, the contents of the modification **should** be disclosed together with the underlying reason in a timely manner.

Consistency: ✓

ENEOS revised the carbon neutrality plan in May 2022 and will continue to revise the content appropriately in accordance with the external environment. As the background of the revision of the carbon neutrality plan, ENEOS has announced that the purpose is to revise it to be in line with the Japanese government's goal toward carbon neutrality in line with the 1.5°C target.

n) In terms of governance, it is **recommended** that disclosures include an organizational structure for overseeing the implementation of a transition strategy and for assessing and managing related initiatives. It is also **recommended** that disclosures include the specific roles of the constituent organizations and the management and the process by which the content of deliberations is reflected in management.



Consistency: ✓

ENEOS has adopted a system in the Holdings Executive Council chaired by the president and CEO to analyze risks and business opportunities that could have a major impact on future management, and to appropriately confirm the status of responses to identified risks and priority issues. At the Executive Council in principle, once a year, the company-wide risk management, risk analysis related to ESG, and comprehensive discussions on risk events related to internal control are conducted, and the department in charge takes the lead in responding to the identified risks and priority issues on a cross-organizational basis. In addition, the Board of Directors monitors and supervises the company by receiving reports (in principle, once a year) on the risks, priority issues, and the status of responses to them determined by the Executive Council. The process described above is disclosed in the Integrated Report and on the ENEOS website.

o) In cases where the fundraiser determines the need for an objective assessment regarding the transition strategy, it is **recommended** that a review, assurance and verification by an external organization for its transition strategy.

Consistency: ✓

For the purpose of objective evaluation, ENEOS has obtained reviews by Japan Credit Rating Agency, Ltd. (JCR), etc. for this framework.

p) It is **recognized** useful to obtain a review particularly concerning the following in connection with the transition strategy:

- Alignment of short-term, mid-term and long-term targets (for targets, refer to Element 3) with the overall scenario
- Credibility of the fundraiser's strategy to reach the targets
- Appropriateness of the management process and governance for the transition strategy

Consistency: ✓

JCR confirmed the above three items and provided this evaluation report.

## **Element 2: Environmental Materiality (Priority) in Business Models**

a) Initiatives for achieving the transition strategy **should** be such that contribute to transforming core business activities that are environmentally material parts today and in the future.

Consistency: ✓

The oil industry is required to change its business in order to realize carbon neutrality, while it is highly assumed that the stable supply and security of petroleum, which is an indispensable source of energy for people's daily lives and economic activities, will be crucial for promoting transition from the viewpoint of energy security. Therefore, it can

be said that efforts to reduce CO2 are of utmost importance for the industry as a whole. ENEOS has positioned efforts toward a low-carbon society as a material ESG issue.

b) When identifying business activities that are environmentally material parts, it is **recommended** that the fundraiser consider multiple climate change-related scenarios that may possibly impact its judgment on the identification.

Consistency: ✓

Identified possible climate-related risks and opportunities. In formulating the Long-Term Vision to 2040, the company assumed that three changes in the business environment would occur: "Development of Low-Carbon, Recycling-Oriented Society", "Digital Innovation" and "Lifestyle Changes" while referring to the "New Policy Scenario (NPS)" of WEO2018 published by the IEA, as well as the "Sustainable Development Scenario (SDS)" based on the Paris Agreement.

c) In terms of considering materiality, it is **possible** to apply existing guidance provided by an organization that creates standard criteria concerning sustainability reporting.

Consistency: ✓

ENEOS identifies material ESG issues annually based on various guidelines such as GRI standards, ISO26000, and the U.S. Sustainability Accounting Standards Board (SASB), as well as evaluation items of ESG evaluation organizations.

d) The fundraiser **should** indicate that climate change is an environmentally material part of business activities.

Consistency: ✓

Among the material ESG issues identified by ENEOS for FY2021, "contribution to the development of a low-carbon society" in the environmental field was identified as the most highly evaluated issues.

e) It is **recommended** that disclosures include the contents of climate change-related scenarios used in identifying business activities that are environmentally material parts along with the underlying reasons (e.g., regional and industrial characteristics) for selecting such scenarios.

Consistency: ✓

Identified possible climate-related risks and opportunities. In formulating the Long-Term Vision to 2040, the company assumed that three changes in the business environment would occur: "Development of Low-Carbon, Recycling-Oriented Society", "Digital Innovation" and "Lifestyle Changes" while referring to the "New Policy Scenario (NPS)" of WEO2018 published by the IEA, as well as the "Sustainable Development Scenario (SDS)" based on the Paris Agreement.



**Element 3: Scientifically Rationalized Climate Transition Strategies (Including Targets and Channels)**

a) The fundraiser **should** reference science-based targets in developing its transition strategies.

Consistency: ✓

Identified possible climate-related risks and opportunities. In formulating the Long-Term Vision to 2040, the company assumed that three changes in the business environment would occur: "Development of Low-Carbon, Recycling-Oriented Society", "Digital Innovation" and "Lifestyle Changes" while referring to the "New Policy Scenario (NPS)" of WEO2018 published by the IEA, as well as the "Sustainable Development Scenario (SDS)" based on the Paris Agreement.

b) This **should** include mid-term targets (short- to mid-term targets) in addition to long-term targets for 2050 and be quantitatively measurable based on a measurement methodology which is consistent over a long period of time.

Consistency: ✓

The target for FY2050: Aiming for realization of carbon neutrality of Scope 1, 2, 3 by working with the government and other companies, and the short- and medium-term goals are: FY2040 target: Net zero Scope 1 and 2; and the FY2030 target: 46% reduction compared with FY2013 in Scope 1 and 2 net CO2 emission (16 million t-CO2 on a net emissions basis)

c) In addition, it is recommended that GHG reduction targets, which could be formulated either in intensity and absolute terms, **should** consider environmental materiality and cover Scopes 1 through 3 of GHG Protocol, the international standard on supply-chain emissions.

It is **recommended** that targets covering Scope 3 be set using a practical calculation method when it could be subject to significant reduction in the fundraiser's business model.

It is also **possible** to disclose the avoided emissions as necessary.

Consistency: ✓

Regarding the target setting, ENEOS has set an advanced target of aiming for carbon neutrality by FY2050, including Scope 3. The company calculates and publishes CO2 emissions for Scope 1, 2 (on a consolidated basis) and Scope 3 (ENEOS Corporation only), and has obtained third-party verification for a part of items in Scope 1, 2, and 3.

d) Science-based targets are GHG reduction targets required for achieving the goals of the Paris Agreement and **should** be set while taking into account differences in regional characteristics and industries. In so doing, it is **possible** to refer to the following trajectories.

- Scenarios widely recognized in the international community (Examples include the Sustainable Development Scenario (SDS) outlined by the International Energy Agency (IEA))

- Objectives verified under the Science Based Targets Initiative (SBTi) and such like
- Nationally Determined Contributions (NDC) of countries aligned with the goals of the Paris Agreement, roadmaps by industry sector, industries set out plans that are science-based achieving the Paris Agreement and so on.

Consistency: ✓

Identified possible climate-related risks and opportunities. In formulating the Long-Term Vision to 2040, the company assumed that three changes in the business environment would occur: "Development of Low-Carbon, Recycling-Oriented Society", "Digital Innovation" and "Lifestyle Changes" while referring to the "New Policy Scenario (NPS)" of WEO2018 published by the IEA, as well as the "Sustainable Development Scenario (SDS)" based on the Paris Agreement.

- e) Short- to mid-term targets (with a term of three to fifteen years) **should** be set by referencing the aforesaid trajectories or on the pathway toward the long-term targets planned as benchmarks.

Consistency: ✓

The Carbon Neutrality Plan was revised and the mid-to long-term targets are set as follows: FY2050: Aiming for realization of carbon neutrality of Scope1, 2, 3 by working with the government and other companies, FY2040 target: Net zero Scope1 and 2 CO2 emissions; and the FY2030 target: 46% reduction compared with FY2013 in Scope1 and 2 net CO2 emission (16 million t-CO2 on a net emissions basis)

- f) In doing so, since short- to mid-term targets will likely be set in consideration of various factors (including the starting point and track records of the issuer, timing of capital investments, economic rationality, cost-benefit analysis, and availability of technology necessary to achieve the targets), it is **possible** that the pathway may not necessarily be linear with the same slope at all times but may be nonlinear.

Consistency: ✓

Targets have been set taking into account a variety of factors in addition to a road map for decarbonization, such as investment plans and the resulting returns. As a result, it is assumed that it is not a linear path of the same slope.

- g) The fundraiser **should** disclose the short- to mid-term and long-term targets they have set, including the base years, etc.

Consistency: ✓

The target of 46% reduction in net CO2 emission of Scope1, 2, which is the short-and medium-term target, has set the base year as FY2013.

h) In order to show that long-term targets are science-based, disclosures **should** explain the methodology or trajectory used to define target, including the underlying reasons (e.g., characteristics specific to a region or industry). In particular, when reference is made to plans and industry roadmaps established by an industry, etc., the explanation **should** include that they are grounded in scientific basis.

Consistency: ✓

It is consistent with Japan's policies, the Paris Agreement, and METI's roadmap for "transition finance" in Oil Sector.

i) It is **possible** that disclosures explain the pathway toward a long-term target and the alignment between the short- to mid-term targets on the pathway and the transition strategy, based on the investment plan (refer to Element 4) and other plans.

Consistency: ✓

Under the Second Medium-Term Business Plan for FY2020 to FY2022, out of a total of 1.6 trillion JPY in capital investment, 960 billion JPY has been announced as a plan to be appropriated for strategic investments in growth businesses, such as next-generation energy supply and local services, and environmentally conscious businesses. The company plans to develop measures for strategic investment through participation in and investment in solar power generation, onshore and offshore wind power generation, biomass and other renewable energy projects domestically and overseas, and demonstration-related investment for the construction of hydrogen supply chains. The company also plans to disclose future investment plans.

j) Concerning targets and trajectories, obtaining expert reviews on the following is **considered** to be particularly useful:

- Whether the long-term target is aligned with science-based targets
- > Whether the disclosed information explains the alignment with the Paris Agreement
- Whether the short- to mid-term targets are determined using a GHG emissions forecast calculated based on a climate change scenario analysis
- > Whether scenarios, etc. widely recognized in the international community are used or referenced
- Whether the actual values of the indicators used for the targets are quantitatively measured using consistent measurement methods
- > Whether a specific GHG emissions reduction measure has been developed to achieve short- to mid-term targets aligned with long-term goals

Consistency: ✓

JCR has confirmed that all of the above items have been met in this assessment report.

#### Element 4: Transparency of Implementation

a) In implementing transition strategies, the fundraiser **should** provide transparency of the basic investment plan to the extent practicable.

Consistency: ✓

Under the Second Medium-Term Business Plan for FY2020 to FY2022, out of a total of 1.6 trillion JPY in capital investment, 960 billion JPY has been announced as a plan to be appropriated for strategic investments in growth businesses, such as next-generation energy supply and local services, and environmentally conscious businesses. The company plans to develop measures for strategic investment through participation in and investment in solar power generation, onshore and offshore wind power generation, biomass and other renewable energy projects domestically and overseas, and demonstration-related investment for the construction of hydrogen supply chains. The company also plans to disclose future investment plans.

b) The investment plan includes not only capital expenditure (Capex) but also capital and operational expenditure (Opex). Therefore, costs related to research and development, M&A, and dismantling and removal of facilities are also subject to the investment plan. In other words, it is **recommended** that the investment plan incorporate, to the extent possible, expenditure and investment necessary for implementing the transition strategy.

Consistency: ✓

The investment plan incorporates costs and investments related to the implementation of the transition strategy.

c) It is **recommended** that the investment plan outline the assumed climate-related outcomes and impacts in a quantitative fashion where possible, along with the calculation methods and prerequisites. If quantification is difficult, the use of external certification systems **can** be considered as a substitute for qualitative assessment.

Consistency: ✓

Regarding KPIs' performance, annual reports on the progress of CO2 emission reduction plans (achievement of medium-and long-term goals) are scheduled to be disclosed on ENEOS's website. CO2 emissions of Scope1, 2 will be verified by a third-party organization.

d) In particular, when outlining the assumed climate-related outcomes and impacts, it is **recommended** that the disclosure include not only GHG emission reduction and other initiatives to ease climate change but also report how consideration of a "just transition" is incorporated into the transition strategy.

Consistency:

With regard to consideration for the just transition by implementing ENEOS' Transition Strategy, while there is a certain degree of impact on employment that is expected to occur in the future as the oil industry as a whole shrinks, it is considered that this will be mitigated by shifting to growing businesses in the advanced materials industry, the next-generation energy supply business such as hydrogen, and environmentally friendly businesses such as CCS and CCUS.

e) If implementing the transition strategy has the potential of having a negative impact on employment or the environment and communities other than climate change, it is **recommended** that any expenditures to mitigate such negative impacts be added to the plan.

Consistency: ✓

While there is a certain degree of impact on employment accompanying the expected decline in operation as the oil industry as a whole shrinks in the future, it is considered that it will be mitigated by shifting to growing businesses in the advanced materials industry, the next-generation energy supply business such as hydrogen, and environmentally friendly businesses such as CCS and CCUS.

f) Moreover, the outcomes arising from investments included in the investment plan **should** align with the targets.

Consistency: ✓

ENEOS will work to achieve carbon neutral by FY2050 through investments totaling 960 billion JPY in strategic investments in growth businesses, such as next-generation energy supply and local services and environmentally conscious businesses, which are currently planned.

g) Transition finance is a means to financially support the implementation of a transition strategy, and it is **recommended** that financing be provided for new initiatives. However, in the case of transition finance in the format of Use of Proceeds instruments, refinancing for a reasonably set lookback period (the period during which refinancing is to be applied for projects that have already started) is **considered** to be eligible.

Consistency: Not Applicable

General corporate purpose instruments

h) It is **recommended** that investment plans be disclosed by linking the outcomes and impacts with the expenditures to the extent practicable.

Consistency:

For the entire transition strategy, each investment target and the total investment amount are disclosed, but it is difficult at present to link the results and impact individually, and it is not



disclosed. In the future, it is assumed that specific individual plans will be disclosed as soon as they are finalized.

i) It is **recommended** that the fundraiser, after securing financing, reports any deviations between the initial plan and the actual expenditure, outcomes and impacts. For any deviations, it is **recommended** that the underlying reasons be explained.

Consistency: ✓

The differences between the original plan and actual expenditures, results and impacts of this financing will be disclosed in the Impact Reporting, which is scheduled to be implemented on a regular basis after issuing the bonds.

j) In cases where the Use of Proceeds loans include refinancing, the fundraiser **should** provide an explanation on the lookback period set under the framework or other relevant methods along with the underlying reasons and factors.

Consistency: Not applicable

General corporate purpose instruments

k) While there are differences in business practices, such as the fact that loans are traditionally made based on the bilateral relationship between a borrower and a lender, it is **recommended** that disclosure on the above be made to the extent possible in order to ensure transparency and credibility of transition finance. However, if it is difficult to disclose such information to the public from the standpoint of confidentiality and competition, it is **possible** to report such information only to lenders or external evaluation organizations without disclosing it to the public.

Consistency: Not applicable

The issuance of bonds is planned.

l) Similarly, in cases where the fundraiser is a small-to-medium-sized enterprise and it is difficult to disclose to the public the same content as that reported to the financier or an external evaluation institution, it is **possible** for the fundraiser to simplify the content of disclosure, for example, by limiting disclosure to a summary of h) to j) of this section.

Consistency: Not applicable

Although ENEOS does not fall under the category of SMEs, it is under consideration to disclose the content of the report to the extent practicable by the project.