

Considering Japan's Transition Strategy Toward Carbon Neutral

Suggestions for Japan from the EU Green Policy

Mizuho Bank Industry Research Department Research & Consulting Unit Mizuho Financial Group Link to survey

Private and confidential

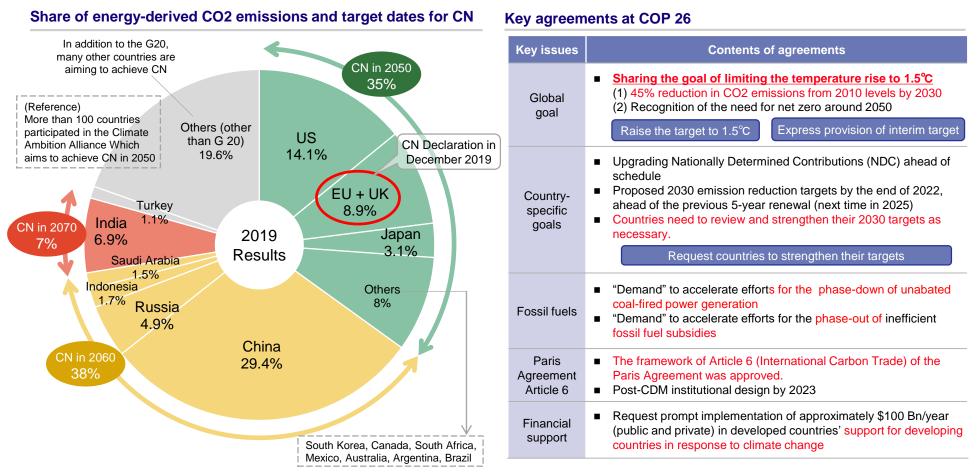
Summary

- The Ukraine Crisis has brought about a new shift in the trend toward carbon neutrality (CN) when countries agreed on a 1.5°C target at COP 26 in November 2021 and further efforts are needed. In particular, the EU, which had expected a considerable amount of Russian energy to make the transition to CN, is now under pressure to implement a green policy on review, and this is expected to have an impact on Japan. In this report, we have reviewed not only the recent impact of the Ukraine crisis, but also the history and main points of the EU Green Policy, and based on the suggestions that have been obtained, we have examined what kind of transition strategy Japan should draw at the timing of this change.
- Chapter 1 summarizes the issues on which the EU, which has advanced green policies, is promoting its policies, what are the key points in its policy package, and how will it be affected by the Ukraine Crisis. In view of these perspectives, the EU has developed a comprehensive policy package that balances environmental measures with economic growth since the announcement of the Green Deal in December 2019. In addition, the EU has established a framework for financial contributions that embody policies by utilizing the Covid-19 reconstruction fund, etc. In response to the Ukraine Crisis, the EU, which is required to reduce its dependency on Russia, announced the "REPowerEU" in March 2022, which centers on diversification of gas supply and elimination of dependence on fossil fuels. By updating and implementing the "REPowerEU" in May 2022, the EU is implementing initiatives in a flexible manner to further accelerate its green policy.
- Chapter 2 clarifies the common points and differences between Japan and the EU, considers what Japan should learn from the EU, and examines how Japan should approach the transition to CN from the perspective of policies and industries. In promoting Japan's policy, there are lessons to be learned from the EU, which has advanced green policies. However, since Japan and the EU have significant differences in their assumptions from the viewpoint of the potential of renewable energy sources and energy security, what is needed is not a mere copy of EU rules, but a transition strategy that suits the actual conditions of local communities and industries. Japan needs to (1) transform the energy supply structure in light of actual conditions in Japan, (2) give priority support to promising industries and technologies, including cooperation with Asia, (3) provide support through industrial policy and industrial financing in transition areas, and (4) draw up a consistent and coherent overall strategy for the entire country. In addition, for companies facing difficult business environments, it is important to continually brush up on strategies that aim for best practices in response to the rapidly changing CN trend.



The major countries declared CN and agreed on the 1.5°C target at COP 26

- After the EU's declaration of CN2050 in December 2019, it took only two years or so for most major countries to declare CN.
- In November 2021, at COP 26, an agreement was reached to limit the temperature increase to 1.5°C (the "1.5°C target"), setting forth an express interim target for 2030.
 - In order to realize the upgraded target, countries are required to reinforce their targets and submit their 2030 targets again at the end of 2022.



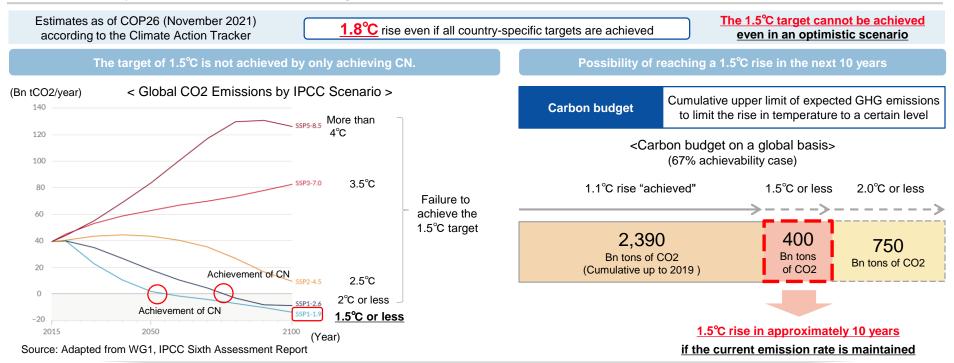
Source: Compiled by Mizuho Bank Industry Research Department based on IEA, "Greenhouse Gas Emissions from Energy 2021", COP26 website



It is important to strengthen measures in the next 10 years to achieve 1.5°C target

- Some estimate that even if all the announced plans are realized, the temperature will rise by 1.8°C.
- Therefore, The strengthening of measures is essential to realize the 1.5°C target shared at COP 26.
- From the perspective of a carbon budget, the mere achievement of CN is not enough. Discussions on the path to reduce emissions is also required.
 - Since the global temperature will rise by 1.5°C in about 10 years in the event the current emission rate is maintained, further strengthening of measures toward 2030 is required.

Reasons for early action to achieve the 1.5°C target



In order to achieve the 1.5°C target, the mere adherence to CN compliance is not enough.

Discussions on the path to reduce emissions is also required.

Response by 2030 is the key, and strengthening of climate change measures in each country is necessary

Source: Compiled by Mizuho Bank Industry Research Department based on IPCC Sixth Assessment Report WG1 Report, Climate Action Tracker, etc.



Given the rising importance of economic security due to the Ukraine crisis, greening trends are also changing

- The Ukraine crisis has changed the global trend toward greening, which was set to speed up at the COP 26.
 - Economic security and other factors have become increasingly important as factors to be considered in the promotion to achieve CN. This is requiring more difficult decisions than before.
- In the face of the EU's flexible response in the revision of it green policy, Japan must reconsider how it should respond.

Developments in greening from COP26 onward

1.5 °C target agreed at COP 26

Greening trends speed up, requiring countries to strengthen their efforts

< Eruption of the Ukraine crisis >

The number of factors to be considered in the promotion of CN increase, requiring more difficult decisions than before

Impact on existing CN response and energy strategies

Difficulties in procurement of Russian fossil fuels

Rise of prices of fossil fuels and commodities

Elements of greater importance than before

Geopolitical risks

Economic security
• Energy security

Fortification of supply chains (including the impact of Covid-19)

Sustainability and ESG practices

Change in thinking

It has become necessary for countries to review their green policies

Amid a difficult external environment, the EU was the first to announce REPowerEU

EU's Green Policy was revised flexibly, as REPowerEU presented in March 2022 and updated and detailed in May 2022.

The EU is going green. Intend to accelerate further

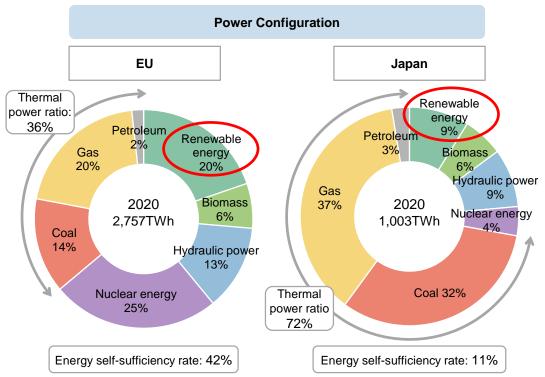
What kind of transition strategy should Japan follow in the face of the need to accelerate greening?



Japan should accelerate its transition strategies suited to Japan, taking into account the differences with the EU

- In considering Japan's green policy, it is important to keep in mind that the current situation regarding greening is very different from that of the EU.
 - In contrast to the EU, which is already introducing the larger amount of renewable energy sources, Japan needs significant steps in reduction of thermal power generation and promotion of CN.
- While learning from the EU, it is important for Japan to accelerate its CN response through transition strategies suited to Japan

Perspectives necessary when considering Japan's Transition Strategy



Circumstances in the EU and Japan differ greatly in terms of both renewable energy sources that are expected to increase, and

thermal power generation that needs to be reduced or require CN response

Source: Compiled by Mizuho Bank Industry Research Department based on IEA, "World Energy Outlook 2021", "World Energy Statistics and Balances", etc.

Japan's characteristics

It is necessary to consider regional characteristics, given significant differences in current preconditions in greening between Japan and the EU

Japan's response

Japan needs to accelerate its CN response upon formulation of a transition strategy suitable for Japan, in light of the EU's response to CN

Focus of this report

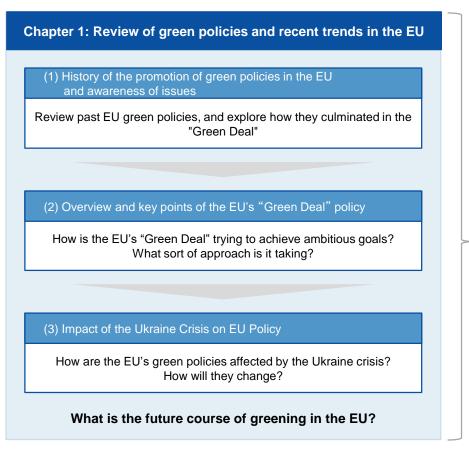
For this end, this report will explore the background and key points regarding the EU's intent in promotion of green policies

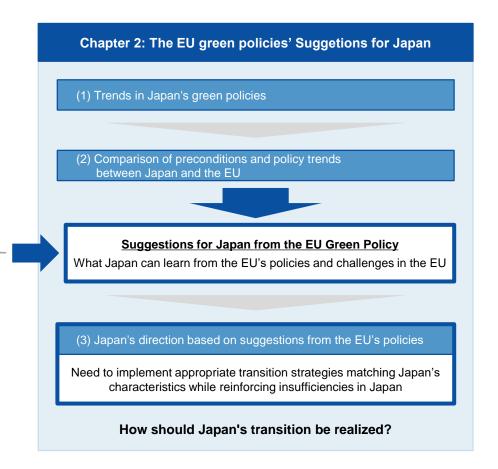
In view of the above, this report will consider what transition strategy is suitable for Japan



Structure of this report: The direction of Japan's transition based on the EU Green Policy

- Chapter 1 Review of the EU's progressive Green Policy, focusing not only on recent progress in responding to the Ukraine crisis but also on the EU's historical awareness of issues.
- Chapter 2 Based on the review, we compared and evaluated Japan and the EU, and considered the direction of transition that Japan, which has set an ambitious goal for CN, should realize in accordance with the regional characteristics of Japan.







Although the EU has been taking a progressive approach to the environment from before the Green Deal, the challenge is balancing growth

- Although the EU has been promoting advanced green policies from before the Green Deal announced in 2019, the issue of balancing these policies with growth has become a challenge.
- Awareness on issues such as the integration of green policies and growth strategies, public and private financial contributions, and just transition support are reflected in the Green Deal.

Major EU green policies prior to the Green Deal (2019)

A system under which companies and facilities in the EU are allocated emission limits, and surpluses or deficits are **EU-ETS** traded on the market. Initiated as a concrete measure to (Started in 2005) achieve the targets of the Kyoto Protocol Policy package to reduce GHG emissions by 20% (compared to 1990 levels), achieve 20% renewable 20-20-20 Strategy energy as final energy, and improve energy efficiency by (Announced in 2008) 20% by 2020 Policy package to reduce GHG emissions by 40% A policy framework for climate (compare to 1990 levels), achieve 32% renewable energy and energy in the period from as final energy, and improve energy efficiency by 32.5% 2020 to 2030 (Announced in 2014) by 2030 Strategy to increase resilience to energy dependence on **Energy alliance** imports and climate change impacts (Announced in 2014) An action plan to promote the transition to a Circular Circular Economy (CE) economy and to maintain and strengthen the industrial action plan competitiveness of the EU in order to reduce the external (Announced in 2015, dependence of resources and the risk of price fluctuations revised in 2020) Clean energy for Policy package to modernise the EU economy through an all Europeans package energy alliance and climate action measures (Announced in 2016) An action plan to mobilize funds for sustainability projects Sustainable finance and to make financial and capital markets sustainable. In action plan particular, the EU Taxonomy is a core measure (Announced in 2018)

Environmental and energy policies are gradually integrated into the Green Policy

EU's awareness of green policy issues

Focus only on green policies (environmental and energy policies) may hinder economic growth (1 Green policies and growth strategies should be promoted as a whole, and environmental impact (GHG emissions, resource use, etc.) and economic growth should be decoupled Constraints on growth in previous growth strategies Support is needed for people left Transitions accompanying environmental measures behind in declining industries require massive funds due to shifts in industrial structure 2 Support measures should Should be promoted by both be enhanced so as to promote massive fiscal spending and a just transition from the framework of private investment perspective of leaving no one behind Green Deal (Announced in 2019)

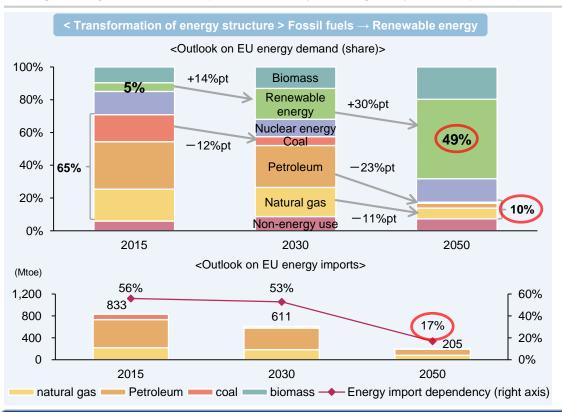
Source: Compiled by Mizuho Bank Industry Research Department based on releases by the European Commission, JOGMEC, "Ooshu no enerugii seisaku no Fukan" (in Japanese, "An overview of European energy and environmental policies"), etc.

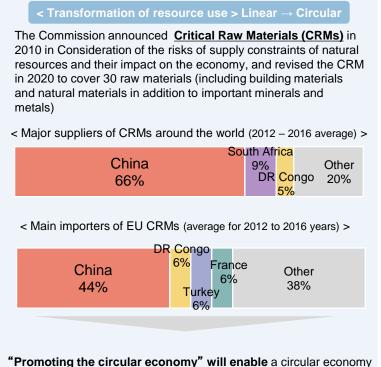


The EU aims to change its dependence on imports of energy and resources and strengthen industrial competitiveness within the EU

- The EU, which is highly dependent on imports of energy and resources, plans to strengthen its economic security and local production for local consumption by switching to renewable energy and promoting CE.
 - The EU seeks to maintain and improve industrial competitiveness and employment in the EU by reducing external dependence.

Strengthening industrial competitiveness by shifting away from import dependence as envisaged by the EU





and reduce dependence on sources outside the EU

Policy to reduce import dependency by strengthening local production for local consumption and to maintain and strengthen industrial competitiveness and employment in the EU

Note: In 2030 and 2050, as shown on the left, the European Commission's MIX scenario (standard scenario combining CP and other regulatory measures to reduce GHG by 55% by 2030) was adopted

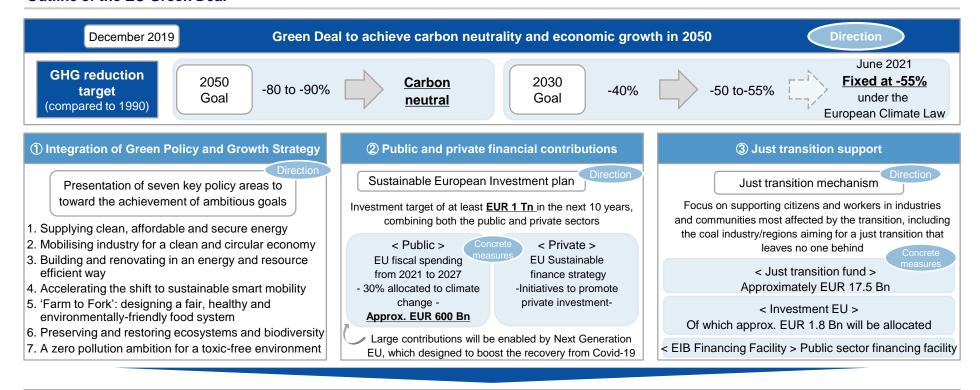
Source: Compiled by Mizuho Bank Industry Research Department based on European Commission, "Impact assessment, Stepping up Europe's 2030 climate ambition" "Study on the EU's list of Critical Raw Materials"



A new growth strategy will be developed by incorporating conventional awareness of issues into the Green Deal

- In December 2019, the EU, together with CN in 2050, announced targets such as raising GHG reduction targets by 2030 in the Green Deal.
 - The EU positioned it as its growth strategy by creating a comprehensive policy package that includes measures to address existing concerns.

Outline of the EU Green Deal



"Fit for 55," a policy package to achieve the 2030 target of - 55%

measures

In order to make the policy consistent with the target of 55% reduction by 2030, the package is divided it into two parts, "Phase 1 (July 2021)" and "Phase 2 (December 2021)", as a comprehensive policy package of regulatory and supportive measures for each sector.

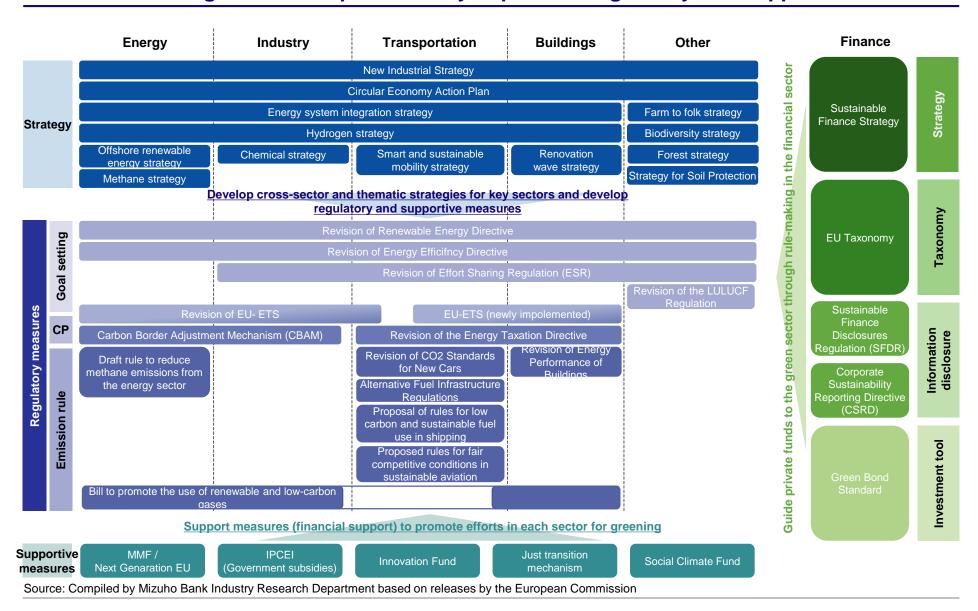
Source: Compiled by Mizuho Bank Industry Research Department based on releases by the European Commission



1. EU trends

Overview of the EU Green Policy

- Formulate strategies and comprehensively implement regulatory and supportive measures

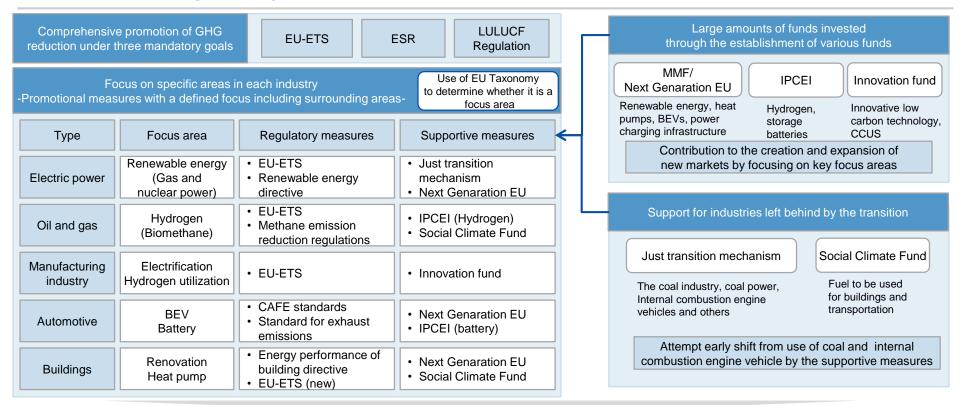




The EU promotes greening efficiently through well -defined promotion measures

- The EU's strategy is to achieve efficient greening by identifying areas of focus in each industry, and implementing well-defined support measures.
 - Even though it is effective to promote transition systematically in order to realize CN at an early stage, there are concerns that
 it may narrow the options.

The direction of the EU's green policy (Mizuho's view)



The EU's sector-focused strategy has the advantage of efficient greening

<On the other hand, there are concerns that options may be narrowed in an external environment with high uncertainties>



EU accelerates greening and diversifying gas sources through REPowerEU

- In May 2022, the EU presented details of the REPowerEU programme outlined in March 2022.
 - It consists of 3 main actions, (1) Save Energy, (2) Diversify energy sources, and (3) Accelerate clean energy transition.
- Additional investment of EUR 210 Bn by 2027 and EUR 300 bn by 2030 is estimated to be required to achieve this plan.

Overview of the REPowerEU Project

Save Energy		Review of the Energy Efficiency Directive	Raise target by 2030 (from 9% to 13% compated to 2020)
		Announcement of "EU Save Energy" plan	 Measures to promote short-term action changes towards a 5% reduction in natural gas and oil demand and medium- to long-term efficiency measures
Diversify energy sources	Energy import Increase production of	EU Energy Platform	 Established an organization to coordinate energy (including green hydrogen) imports among member countries Developing a voluntary operational 'joint purchasing mechanism' responsible for negotiating and contracting on behalf of participating Member States of the aggregated gas demand and competitive release to the market
		EU External Energy Engagement	 Diversification of gas supply and establishment of trading system for green hydrogen (assuming import from North Sea and southern Mediterranean Sea in particular) are indicated
		Review of green hydrogen targets	 Increase target by 2030 (Imports 10 Mn tons, manufactures 10 Mn tons in the region, and implements regulations and subsidies in review)
Accelerate clean energy transition	renewable gas	Review of biomethane targets	Increase target by 2030 (double to 35 bcm)
	Expansion of renewable energy (wind and solar power)	Review of Renewable Energy Directive	 Raise the target for the ratio of renewable energy by 2030 from 40% to 45%
		Review of the renewable energy licence system	 Accelerate the licensing process by identifying suitable locations for renewable energy and minimizing potential environmental risks
		EU Solar Strategy	 Target of 320 GW by 2025 (more than 2 times current) and approximately 600 GW by 2030 Developed three initiatives: (1) the EU Solar Rooftop Initiative (requiring solar panels to be installed in buildings), (2) the EU Large-Scale Skills Partnership (developing skilled workers needed to manufacture, install and maintain panels), and (3) the EU Solar Industry Alliance (promoting production within the EU)
	Heat pump expansion	Review implementation targets	Double the current developement rate and aim to install a total of 10 Mn units over the next 5 years
	Electricity and hydrogen utilization in industry	Utilization of PPAs	Guidance issued to expand the use of PPAs to promote electrification
		Introduction of carbon contracts	 Introduction of carbon credit agreements to shift hydrogen production from natural gas to renewable energy sources

[European Commission Estimation] Required additional investment amount: EUR 210 Bn by 2027, EUR 300 Bn by 2030

Expected financial resources

Utilize the RRF framework of the Reconstruction Fund

Up to EUR 35 Bn
Use of unused quota

Up to EUR 35 Bn
Diversion from other funds

EU / Member State Level Fiscal Measures

(triggered by EU program)

Source: Compiled by Mizuho Bank Industry Research Department based on releases by the European Commission

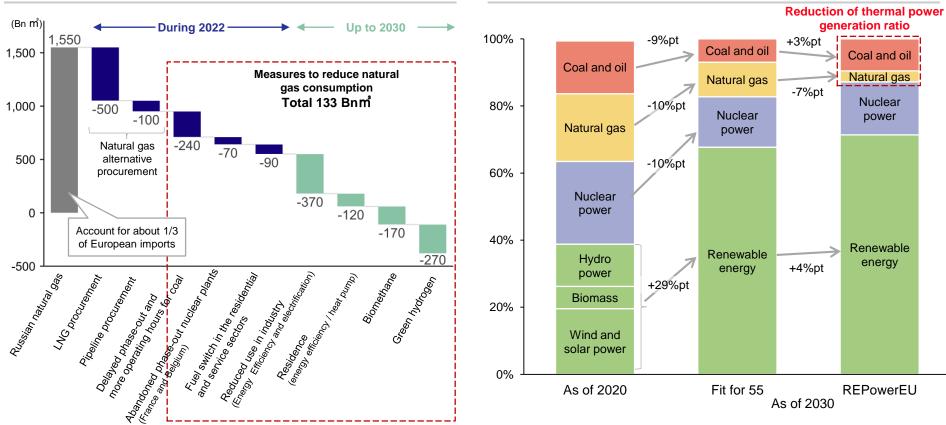


REPowerEU: Dramatic cuts in natural gas use to end dependence on Russia

- The Ukraine Crisis has exposed the geopolitical risks of dependence on Russia, and it has become necessary to rapidly break away from dependence on Russian energy, which had been expected to play an important role in the transition period.
- The EU intends to reduce natural gas use significantly by 2030, in addition to reduce the use of Russian natural gas to two-thirds by the end of 2022.

Impacts of REPower EU on Natural Gas Equivalents

Changes in power configuration as of 2030 due to REPowerEU



(Note 1) The figure on the left was compiled with reference to the "Implementing The REPowerEU Action Plan" of the European Commission.

(Note 2) The figure on the right is an image created with reference to "Impact assessment, Stepping up Europe's 2030 climate ambition" of the European Commission, IEA. Source: Compiled by Mizuho Bank Industry Research Department based on the European Commission data, IEA, World Energy Outlook 2021, etc.



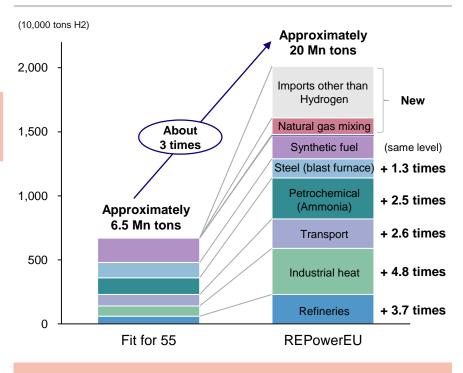
REPowerEU: The maximum amount of additional investment is for renewable energy and a significant increase in hydrogen demand is expected

- With REPower EU, the maximum additional investment required by 2030 is EUR 86 bn for renewable energy (wind and solar).
 - Raise the renewable energy ratio target by 2030 final energy consumption from 40% to 45% by using the increased investment for green hydrogen production.
- The demand for hydrogen by sector in 2030 is expected to be 20 Mn tons, which is about 3 times that of Fit for 55. The EU is aiming to secure 10 Mn tons of green hydrogen for each of regional production and import.

Additional investment required by 2030

Diversification of Energy saving, Infrastructure fuels Promotion of clean energy (EUR Bn) 505 640 1,830 1,000 860 Additional wind and solar 800 power plants will be used to produce green hydrogen 560 600 410 370 400 290 270 200 100 100 15 Rouced Use in industry (Engly) Mino and solar Domes

Changes in Outlook for Hydrogen Use by Sector (as of 2030)



On the supply side, the EU is aiming to secure 10 Mn tons of regional production and 10 Mn tons of imports by 2030.

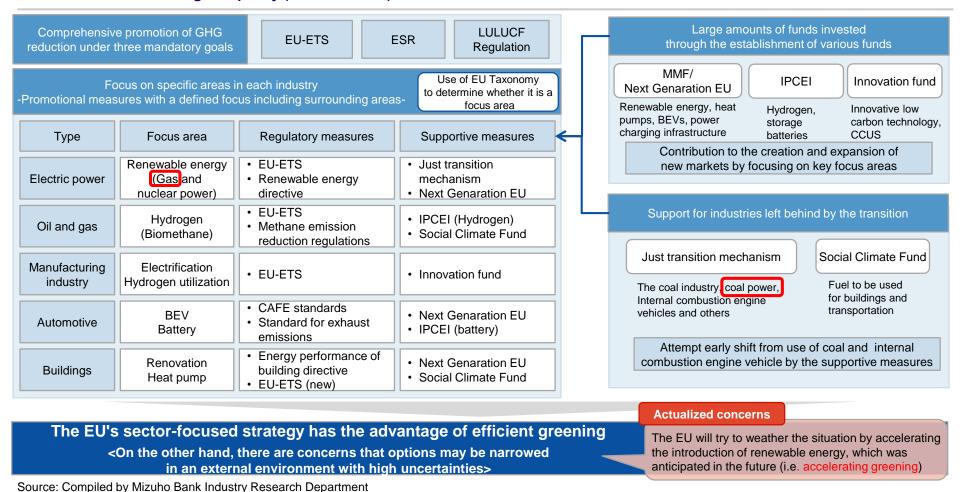
Source: Compiled by Mizuho Bank Industry Research Department based on the Commission's "Implementing The REPowerEU Action plan" and other materials



[Repost] Concerns over greening have emerged through efficient promotion measures - further acceleration is needed to address the concerns

- The EU's strategy is to achieve efficient greening by identifying areas of focus in each industry, and implementing well-defined support measures.
 - Even though it is effective to promote transition systematically in order to realize CN at an early stage, there are concerns that
 it may narrow the options.

The direction of the EU's green policy (Mizuho's view)



MIZUHO

Given differences in pre-conditions between the EU and Japan, it is important to take note of regional characteristics

■ When considering Japan's transition strategy, it is important to consider its regional characteristics.

Comparison of the EU and Japan

EU (27 countries)	Compared in terms of	Japan
	Macro environment (2020)	
\$162 Tn	Economic size (GDP)	USD 51 Tn
3.72 Bn tons	GHG emissions	1.15 Bn tons
42%	Energy self-sufficiency ratio	11%
	Power Configuration (2020)	
36%	Thermal power generation ratio	72%
20% <39%>	Renewable energy ratio (including hydropower and biomass)	9% <24%>
Germany has a high installed capacity per flat area. Some countries have more room for low-cost deployment	Potential for renewable energy	Given Japan's small ratio of flat land area in national land, it has limited leeway to adopt low cost renewable energy
	Investment in greening	
EUR 3.5 Tn	Necessary investment over the next 10 years	JPY 150 Tn
EUR 600 Bn or over (MMF + RRF)	Budget for investment in the green sector	JPY 2 Tn, (GI Fund) +, Fund of around JPY 20 Tn (under consideration)
	CP policy	
Individual taxation in each country	Carbon tax	Environment tax
EU-ETS	ETS	_
Scheduled to be introduced	СВАМ	_

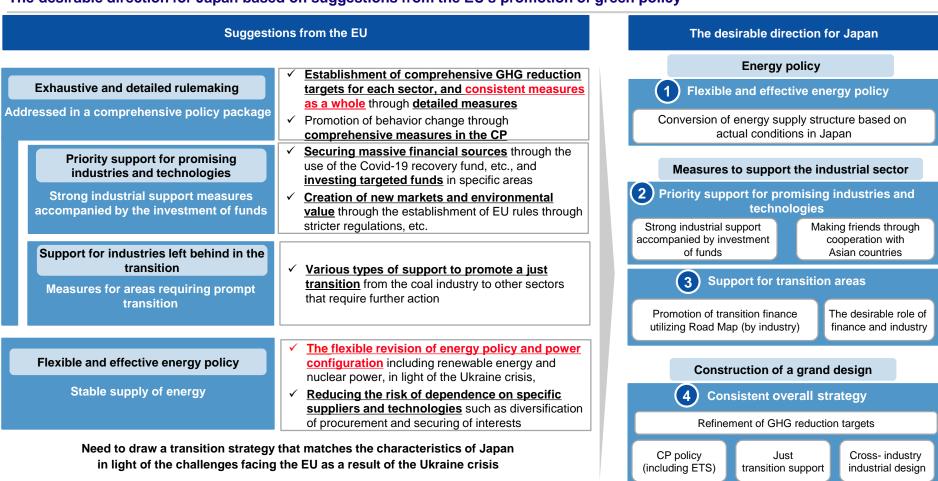
Source: Compiled by Mizuho Bank Industry Research Department based on the National Institute for Environmental Studies, IEA, the European Commission, the Ministry of Economy, Trade and Industry, etc.



Suggestions from the EU green policy and the desirable direction for Japan

- What Japan should learn from the EU is the promotion of a flexible and effective energy policy, support measures for the industrial sector based on this policy, and the presentation of a grand design that is consistent with these policies.
 - Japan needs to develop a strategy that is appropriate for Japan, taking into account the EU's challenges.

The desirable direction for Japan based on suggestions from the EU's promotion of green policy

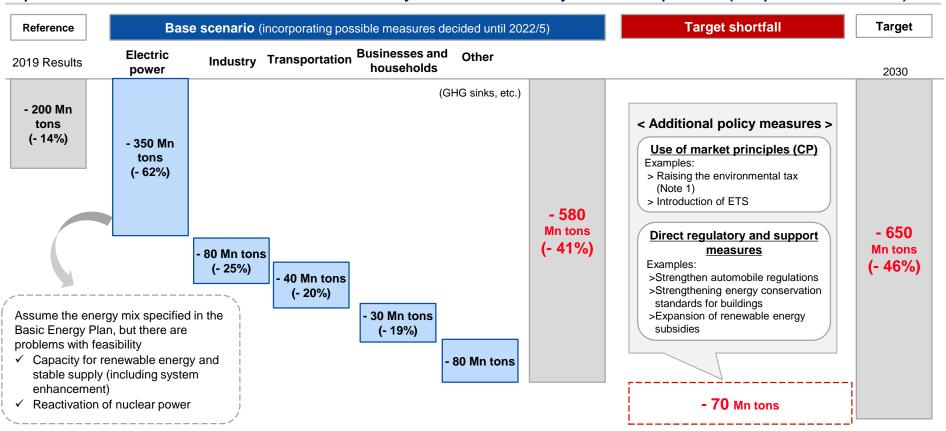




Additional policies are essential to realize Japan's 2030 targets: estimation of GHG reduction potential

- Even assuming the realization of the Basic Energy Plan, it is estimated that voluntary efforts will only reduce 41% compared to 2013.
 - To achieve a reduction of 46%, strong additional policies are essential, while paying attention to negative aspects such as cost increases and competitiveness impacts.

Japan's GHG emissions reductions in 2030 – estimates by Mizuho Bank Industry Research Department (compared to 2013 levels)



Note 1: Environmental tax (a tax to combat global warming): the carbon tax introduced in Japan

Note 2: Calculations by sector are comparisons before electricity and heat allocation. Self-generation is included in the electric power sector and the industrial sector includes non-energy source CO2



The desirable direction for Japan in its transition strategy: overall coherency and consistency are essential

In order to promote the transition strategy in Japan, where there are many unfavorable conditions for the introduction of CN systems, the flexible implementation of measures that are coherent and consistent as a whole in accordance with the actual situation in Japan is essential, while looking at both general and specific points that Japan should address.

The desirable direction for Japan

Energy policy	1	Flexible and effective energy policy	Conversion of Japan's energy supply structure in consideration Japan's conditions	 ✓ "General comments": Urgent need to promote the CN in electric power in light of the Ukraine crisis ✓ [Offshore Wind Power] Introduction of Japanese central system to promote offshore wind power generation ✓ [Coal-fired thermal power]Fade-out and decarbonization of inefficient coal-fired power ✓ [Ammonia] Address issues in co-firing for thermal power generation and joint procurement efforts
Support measures toward the industrial sector	2	Priority support for promising industries and technologies	Strong industrial support accompanied by investment	 ✓ "General comments": Need for strong industrial support measures accompanied by investment ✓ [Hydrogen/Ammonia] Policy to support construction of supply chain and formation of supply base in the future ✓ [Batteries] Review emphasis on supporting next-generation technologies and comment on support for current LiBs. ✓ [CCS] Create a roadmap to improve the business environment and consider support for CAPEX and OPEX. ✓ [Housing] Reinforcement of energy efficiency labeling system for real estate transactions is serving as a factor for renovation of existing houses
			Making of "friends" in cooperation with Asian countries	 ✓ "General comments": promote creation and expansion of new markets through collaboration with Asia and other regions ✓ [Coal-fired thermal power] Global rulemaking is necessary in cooperation with ASEAN countries, which have similar business environments ✓ [Steel] Strengthen cooperation and develop technologies with the Asian region in the future, which is set to follow the same path as Japan
	3	Support for transition areas	Promotion of transition finance through utilization of road maps	 ✓ "General comments": transition support based on regional characteristics in Japan is effective ✓ [Steel] aim first of all to reduce CO2 emissions through hydrogen reduction in blast furnace process ✓ [Chemical] fuel conversion (e. g. ammonia) - accelerate public and private sector efforts to promote fuel conversion
			Ideal state of finance and industry	✓ "General comments": response for the ideal form of cooperation between the financial and industrial sectors will become important
Grand design	4	Coherent and consistent overall strategy	Elaborating GHG reduction targets	✓ "General comments" Need for industry-specific targets to ensure consistency with Japan's overall target
			CP policies (including ETS)	✓ "General comments": Need to start an early review, including the introduction of ETS, as a multifaceted CP policy
			Just transition support	✓ "General comments": Need for support for Just transition in areas possessing numerous constraints in transition
			Cross-sectional view of industrial sector	✓ "General comments": Need to draw up a cross-industrial grand design for manufacturing sites across industry type



Proof of validity is essential for transition strategies: clarification of strategies across Japan is necessary

- Japan's transition roadmap is a realistic approach that takes into account the development and penetration rates of technologies from the perspective of providing proof of validity of the transition strategy. However, a further brush-up will be necessary in order to enhance its pursuasiveness.
 - It is necessary to clarify the strategy of Japan as a whole, including each sector, and to reinforce the grounds that the emission reduction path of the relevant industry is appropriate.

Characteristics of Japan's Transition Roadmap and the future direction

Characteristics of the Transition Roadmap

Verification of consistency with the Paris Agreement in consideration of the "time axis of technology development" and "state of technology diffusion"



Mere backcasting from the target (2050 CN)

Rationalize emission reduction path as <u>consistent with Paris Agreement</u> (= <u>appropriate transition strategy</u>)

However, it is necessary to gain the understanding of foreign countries about the special situation Japan is facing and the appropriateness of its response.

Emission Reduction Path (Image) Example:steel industry Improve current facilities better energy savings and efficiency Ferro-coke, etc. 1. 2020~2030 2. 2030~2040 3. 2040~2050 3. 2040~2050

Source: Reposted from "Technology Roadmap in the Steel Sector," the Ministry of Economy, Trade and Industry

Future issues regarding the expansion of the use of the Transition Roadmap

Scope of release

① Quantitative information on emission reduction paths

Given the absence of disclosures of quantitative values and assumptions for emission reduction paths (diffusion rate, economy, etc.), it is difficult to usethe roadmap for examinations of appropriateness and individual circumstances

Industries

② bilateral comparison with other countries and factors for differences

A few references are made to international assumptions and differences in comparison with international scenarios (IEA, SBT, etc.). Thus, it is insufficient as evidence of the validity of Japan's inherent circumstances

Japan as a whole

2030

3 Position of the industry in Japan

2040

Need to strengthen the appropriateness of sufficient responses by setting forth a clearer explanation of the position of the industry in Japan's emissions reduction

The desirable direction for the future

Need for a "brush-up" to clearly show that it is a "realistic scenario consistent with CN"

As a prerequisite for this, it is necessary to clarify the strategy for Japan as a whole, including the positioning of each sector

By creating a model case in Japan, Japan should expand its market by "making friends" in Asia, where conditions for CN are close.

< Corporate Perspective >

In view of the pending issues, it will be necessary for companies to think of ways to complement the initiatives

Source: Compiled by Mizuho Bank Industry Research Department based on releases by the Ministry of Economy, Trade and Industry



(Year)

Amid the severe business environment to achieve CN, it is important for companies to continuously brush up their strategies

- In the face of multiple major changes in the business environment, companies will need not only respond to CN but also to respond from a medium- to long-term perspective.
- In order to achieve CN, it is necessary to have a strategy for survival in the medium to long term, while also indicating its consistency with the 1.5 °C target.
 - Companies have to brush-up continously and modificate flexibly their transtion strategies based on fast-changing trends and importance.

Companies actions needed in terms of a transition to CN

Business environment surrounding Japanese Companies

Need for enhanced CN response (Consistency with 1.5 °C target)

Relative high cost of renewable energy in Japan

Economic security measures due to the Ukraine crisis

Ripple effect upon supply chains due to Covid-19 etc.

Impact of trends other than CN

There are many requests for support and improvement from the government, as there are some issues that are difficult for companies to deal with on their own.

On the other hand, because of rapid changes, waiting for the government's policy may lead to a slow response in comparison to global counterparts

A perfect transition strategy which does not need to be changed over the long term

Corporate response necessary for CN

Flexible transition strategy whose assumptions are verifiable and communicable

Companies should continually brush up on their transition strategies to keep up with the latest trends ~ It is important to continually pursue more persuasive methods while presenting best practices at the time ~

In an uncertain business environment, it is necessary for companies to provide clear and convincing explanations on their efforts consistent with the 1.5 °C target, in order to obtain support by the government and financial stakeholders in an efficient manner



The need for a winning strategy in the medium and long term

< Consistency with corporate value Improvement >



Link to survey



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