Efforts to Maximize the Value of "Green"

Amid the pressing crisis of climate change, DENSO is exploring the ideal vision for a sustainable mobility society and is accelerating its sustainability management with a view to maximizing the value of "green," which is a target adopted under its Long-term Policy for 2030. In 2019, we pledged our support for the Task Force on Climate-related Financial Disclosures (TCFD). Since doing so, we have been carrying out a scenario analysis regarding the impact of climate change on our businesses and the risks and opportunities related to this impact. We have also been examining ways to reflect the results of this analysis in our business strategies. Through these efforts, we have been working to pursue avenues that will lead to sustainable business growth. In this section, we introduce the status of the initiatives we are promoting in accordance with the TCFD.

Scenario Analysis of Business Risks and Opportunities

To understand the impact of climate change on our businesses and to identify climate-related risks and opportunities, we referenced the external scenarios of the International Energy Agency (IEA) and the Intergovernmental Panel on Climate Change (IPCC) and used them as benchmarks for our scenario analysis. Also, while confirming the scenario analysis for the automotive industry, we compared and contrasted this analysis with our awareness of the business environment existing under the Company's medium- to long-term strategies to hypothesize comprehensive scenarios. Upon doing so, we were able to identify climate-related risks and opportunities by analyzing the differences between our medium- to long-term strategies and these scenarios.

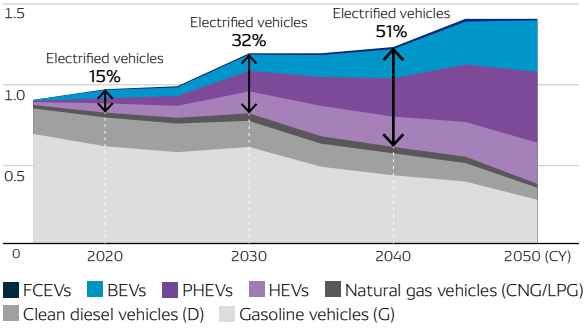
Hypothesizing Scenarios

In terms of transition risk, we have defined the Beyond 2 Degrees Scenario (B2DS) and the Sustainable Development Scenario (SDS), which are hypothesized by the International Energy Agency (IEA)'s World Energy Outlook, as "promotional" and "ambitious" scenarios, respectively. For the scope of these scenarios, we quantified Group CO_2 emissions, carbon tax, crude oil prices, renewable energy rate, and the rate of new electrified vehicle (xEV) introduction by 2040 and analyzed risks and opportunities based on the differences between these scenarios and Group strategies.

Also, with regard to physical risks, we have defined the RCP8.5 and RCP6.0 scenarios of the Fifth Assessment Report of the IPCC as "stagnant" and "promotion" scenarios, respectively. We visualized aspects such as weather disasters, rising sea levels, deteriorating eco systems, and water and food shortages in a qualitative manner and analyzed risks and opportunities based on the differences between these scenarios and Group strategies.

Scenario for the Commercialization of Electrification as Stated by the IEA (under the assumption of an average temperature increase of 2°C)

Projected sales volume of passenger vehicles (millions of vehicles)



Source: Documents from the 1st Strategic Commission for the New Automotive Era, Ministry of Economy, Trade and Industry

Analysis of Climate-related Risks and Opportunities

We performed an analysis on the differences between our awareness of the business environment, which forms the basis of our medium- to long-term strategies, and the circumstances under the scenarios above. Items expected to have an impact on our businesses equivalent to over 2% of total revenue, or, as an absolute value, over ¥10.0 billion in revenue, were identified as key items. The main risks and opportunities identified through this analysis are as follows.

Also, for more details on this analysis and evaluation, please see our answers to the CDP Climate Change Questionnaire.

Major Risks

Key items	Timeframe / Level of impact	Major potential financial impact	Financial impact (fiscal 2026)	Response measures	Response cost (fiscal 2022)
New controls and regulations placed on our existing products and services	Long-term / Relatively high	**Decline in revenue against the backdrop of increasingly strict regulations on fuel efficiency and exhaust gas** We expect to see even tighter regulations on fuel efficiency (lower CO_2 emissions [upper limit] to roughly one-third between 2018 to 2030) as well as acceleration in the transition to xEVs, including HEVs (going from comprising 2% of all vehicles in 2018 to 47% of all vehicles in 2030). The inability to respond to these changes and a suspension in sales due to non-compliance with regulations could lead to a decline in revenue.	¥300.0 billion	• Accelerate the development of energy-saving technologies for products powered by electricity with a view to extending driving distance • Accelerate development aimed at enhancing fuel efficiency of internal combustion engines in HEVs and other vehicles to respond to new regulations on fuel efficiency	¥90.0 billion
Increased severity and occurrence of abnormal weather such as typhoons and floods	Long-term / Relatively high	**Decline in revenue due to suspended plant operations and supply chain disruptions** Revenue could decline due to a suspension of plant operations in Japan and Asia (where we conduct 66% of our overall production), where the possibility of floods occurring is high.	¥100.0 billion (2035)	• Implement measures to mitigate the impact of weather disasters on buildings and other structures • Strengthen risk management in the supply chain by ensuring multiple suppliers for components and other materials, etc. • Develop platforms that connect our plants across the globe using IT and IoT and establish a global production structure that can immediately respond to changing production needs caused by natural disasters	¥8.5 billion
Carbon pricing mechanism	Medium-term / High	**Decline in cost competitiveness due to the accelerated introduction of carbon pricing** Carbon costs could be added onto all in-vehicle products, including products for internal combustion engines, due to the expansion and increasing strictness of new regulations around the globe, such as carbon taxes, emissions trading systems, and carbon border adjustment mechanisms.	¥12.0 billion	• Strategically and incrementally transition to electricity derived from renewable energy sources, which is not affected by a carbon tax, with a view to reducing CO_2 from energy use in our domestic and overseas manufacturing activities • Continue to promote activities to conserve energy and enhance energy efficiency in the production process	¥0.2 billion

Major Opportunities

Key items	Timeframe / Level of impact	Major potential financial impact	Financial impact (fiscal 2026)	Response measures	Response cost (fiscal 2022)
Development of new products and services through R&D and technological innovation	Medium-term / High	**Increase in revenue due to higher demand for xEVs** • Increase in the number of xEVs in each country against the backdrop of the trend toward carbon neutrality. Rising demand for technologies such as heat pumps that improve the heat efficiency of xEVs • Increase in revenue from the response to electrification, including inverters and thermal products related to electrification	¥500.0 billion	• Accelerate the development of products related to electrification, including power-saving technologies (ejectors, heat pumps, cold storage evaporators), labor-saving technologies (two-layer flow air-conditioning units), and compact high-output technologies (inverters) as well as heat management technologies (heat storage, waste heat utilization, adsorption heat pumps) • Promote the development of engine control systems and other technologies that respond to alternative fuel (e-fuel, hydrogen, etc.)	¥80.0 billion
Diversification of business activities	Long-term / Medium	**Increase in revenue following higher demand for decarbonization technologies** • Creation of business opportunities in non-automotive fields using technologies that contribute to carbon neutrality, which were cultivated in the automotive domain, including agriculture, logistics, and FA • Development of technologies to capture, store, and recycle CO_2 and aim to commercialize them by 2035	Agriculture and FA, etc. ¥300.0 billion CO_2 capture, storage, and recycling ¥300.0 billion (2035)	• Create technologies such as agricultural production technologies that leverage sensor, control, robot, and bio-related technologies to the greatest extent possible and technologies such as CO_2 capture, storage, and recycling that leverage purification technologies for exhaust gas from automobiles • Develop new businesses and create sales channels through proactive business alliances	¥12.0 billion
Utilization of more effective production and logistics processes	Medium-term / Relatively high	**Reduced energy costs through the promotion of energy conservation at plants** If we promote enhanced energy efficiency at our plants around the globe and are able to achieve our target under Eco Vision 2025 of reducing the amount of energy used per unit by half compared with fiscal 2013, we could achieve a CO_2 emissions reduction of 1.73 million tons per year while also reducing energy costs.	¥60.0 billion	Continue to engage in energy-saving activities and promote the development of energy-saving production technologies with the aim of further enhancing production process efficiency	¥16.0 billion

Impact on Management Strategy

As mentioned previously, based on the results of our analysis, we have come to understand the significant impact that the climate change-related risks and opportunities expected to occur by 2030 will have on our product development and production activities, particularly the trend toward carbon neutrality.

Based on this understanding, we set an ambitious target within our environmental initiatives to commit to becoming carbon neutral, a higher target than we have ever set before, and have reflected this commitment in our management strategies.

Specifically, we have added the perspective of carbon neutrality to our CO_2 reduction plans under Eco Vision 2025, the Company's environmental vision formulated in 2016. For our *Monozukuri* activities, we have adopted the target of realizing carbon-neutral electricity by 2025 (gas will make use of carbon credits) and becoming completely carbon neutral, including with gas, by 2035. To achieve this target, we will continue to promote energy-saving activities, an area in which we excel as a company. At the same time, we will introduce electricity derived from renewable energy and utilize carbon credits, among other initiatives. To accelerate investments toward these kinds of efforts to reduce CO_2 emissions, including energy conservation and renewable energy, we have commenced the introduction of internal carbon pricing (ICP) within our investment decision-making approach.

Meanwhile, for mobility products, we are working to reduce CO_2 emissions to the greatest extent possible by promoting the development of electrification technologies for all aspects of mobility. Furthermore, we are working to achieve negative CO_2 emissions through the establishment of technologies to capture, recycle, store, and reuse CO_2. Through these efforts, we will aim to achieve carbon neutrality across all of society. Moreover, to balance contributions to the environment with business growth, we are holding regular discussions on reshuffling our business portfolio based not only on profitability and growth potential but also on CO_2 emissions and the reduction of these emissions and are promoting reshuffling efforts accordingly (see "Message from the Chief Financial Officer" on P58–64).

We launched an expert team within the Safety, Health & Environment Division to serve as a structure for steadily promoting our carbon neutral strategy. At the same time, we established the new Environment Neutral Systems Development Division and the FC System Business Development Division (currently the Energy Solution Development Division) in a Companywide effort to realize carbon-neutral manufacturing, encompassing carbon neutrality throughout all processes through to the production activities at our plants.

Meanwhile, to respond to physical risks such as floods, which are increasing in frequency due to climate change, we are carrying out disaster mitigation measures at plants (including buildings and structures) and ensuring multiple suppliers for components and other materials so that we can minimize the risk of suspended operations due to damage at plants or disruptions in the supply chain. We are also introducing F-IoT platforms. Through such efforts, we will build a global production and supply structure that can immediately respond to production fluctuations caused by weather disasters or other adverse events.

Examples of Initiatives

Receipt of Energy Conservation Grand Prize Award for 12 Consecutive Years

In fiscal 2022, DENSO received the Energy Conservation Center Chairman's Prize in the Examples of Energy Conservation Division of the Energy Conservation Center, Japan (ECCJ)'s Award Program, in recognition of the Company's efforts to reduce the amount of steam used to heat pure water for the cleaning of semiconductors by 67%, equivalent to a 491.5-kL reduction in crude oil a year, through the reuse of plant waste heat. In addition, we received the Chairman's Prize of the Agency for Natural Resources and Energy in the Products and Business Division, together with Toyota Motor Corporation, in recognition of Toyota's new FCEV MIRAI.

Since the inception of the ECCJ Award Program in fiscal 2010, DENSO has won 20 prizes in total and has won prizes for the past 12 years in a row. In particular, DENSO CORPORATION

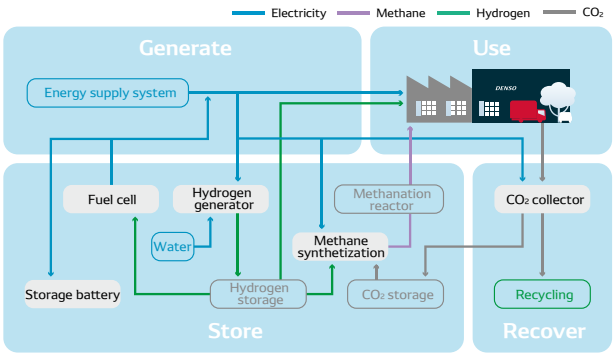
has won a total of 13 prizes in the Examples of Energy Conservation Division. Going forward, we will continue to promote activities that leverage our high level of proposal-making and improvement capabilities for energy conservation.

Examples of Initiatives

Striving to Realize Carbon-Neutral Plants

In fiscal 2022, we realized the 100% transition to renewable energy at the Anjo Plant (electricity and gas), six European bases (electricity), and one base in Asia (electricity) through the use of CO_2 offset certificates and carbon credits.

At the moment, we are currently working to verify energy recycling systems at our four domestic model plants, the Anjo Plant, Hirose Plant, Nishio Plant, and DENSO FUKUSHIMA CORPORATION. After completing verification tests at these plants, we will introduce these energy recycling systems at all of our 130 plants around the world and will gradually expand the promotion of energy-saving activities that make use of F-IoT and digital technologies. By doing so, we will aim to become completely carbon neutral at our plants.



Impact on Financial Planning

Against the backdrop of the carbon neutrality trend, it is crucial that we transition to products such as hydrogen fuel and biofuel that respond to alternative fuel needs and further strengthen our products powered by electricity. Furthermore, in order to realize carbon-neutral *Monozukuri*, we need to allocate funds to procure electricity derived from renewable energy sources and purchase CO_2 offset certificates and carbon credits.

To that end, in our financial planning, we have reflected an increase in R&D costs related to electrification, which will follow the expansion of products powered by electricity, and products that respond to alternative fuel needs. We have also reflected costs related to the introduction of renewable energy.

In addition, we have incorporated costs related to measures to address climate change risks (reinforcing buildings and structures), such as tornadoes, floods, and other abnormal weather events that are becoming ever more frequent and more severe.

Examples of Initiatives

Issuing Sustainability Bonds

We issued sustainability bonds in order to accelerate new value creation in the domains of green and peace of mind (totaling US$500 million). In the green domain, these bonds will be allocated to R&D and capital expenditures for products powered by electricity (BEVs, FCEVs, eVTOL [all-electric vertical take-off and landing] aircraft) as well as investments toward realizing carbon-neutral *Monozukuri* (external procurement costs of electricity derived from renewable energy sources, etc.).

Governance

DENSO views environmental issues, including climate change, as one of the highest priority issues (Materiality) in the promotion of its sustainability management. Accordingly, DENSO has established KPIs for these issues and is working to achieve them through its business activities. DENSO has established the Companywide Safety, Health, and Environment Committee as an organization for deliberating on and determining important items related to climate change. This committee is chaired by a representative member of the Board, who also serves as an executive vice president, and meets twice a year. At these meetings, members discuss and decide upon important items in the promotion of environmental management, such as formulating medium- to long-term targets and executing investment related to energy conservation. Items that the Companywide Safety, Health, and Environment Committee deems to have a significant influence on the Company's businesses (environmental vision, medium-term management strategies, large-scale investments, etc.) are then deliberated on by the Management Deliberation Meeting and the Board of Directors. Serving under the Companywide Safety, Health, and Environment Committee are committees in each business group and at each Group company in Japan, as well as committees in each region of operation overseas (North America, South America, Europe, China, and Southeast Asia). These committees are chaired respectively by a managing officer. Furthermore, DENSO has established energy, logistics, clean products, and production environment subcommittees. By clarifying the scope of responsibility for each subcommittee, the Company is promoting activities related to safety, health, and the environment in an efficient and highly focused manner.

Also, the Companywide Safety, Health, and Environment Committee will examine and implement the necessary procedures for sharing environmental issues such as those identified based on the results of scenario analysis. Upon doing so, these issues will be reflected in DENSO's Companywide business plans, which will be executed accordingly.

Risk Management

Amid the rapidly occurring changes in the business environment, DENSO is striving to ascertain the constantly diversifying risks and implementing risk management from the perspectives of minimizing damage and ensuring business continuity. Climate change-related risks are reported to the Companywide Safety, Health, and Environment Committee, which identifies key items and clarifies the Company's response.

Also, we have designated climate change-related risks (physical risks) as one of the major risks toward which the Risk Management Meeting should particularly invest resources and promote initiatives. Based on this designation, we are strengthening our response to these risks on a Groupwide basis from the perspective of overall risk management (see "Risk Management" on P.114–115).


Metrics and Targets

In light of the progress we have made with activities based on Eco Vision 2025 and of social demands and expectations, in fiscal 2022, we adopted a more ambitious goal of becoming carbon neutral and commenced activities to reach this goal accordingly.

We clarified specific targets for this goal in the Mid-term Policy for 2025. At the same time, we incorporated a sustainability target pertaining to our material issues into part of our management targets. As previously mentioned, the status of progress and follow-up regarding these targets are shared not only at the Companywide Safety, Health, and Environment Committee but also at the Management Deliberation Meeting and the Board of Directors.

The specific targets for becoming carbon neutral are shown in the table below. These targets have been determined in accordance with the SBT 1.5℃ scenario of the Science Based Targets initiative (SBTi). Going forward, we aim to have these targets receive SBTi certification.

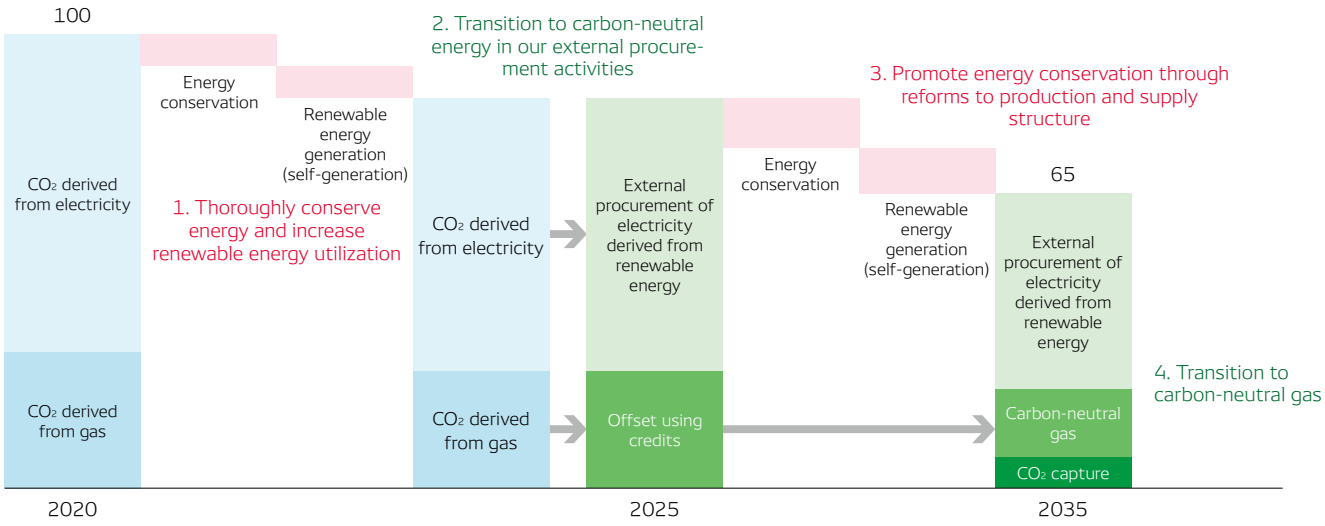
Climate Change-related Targets (Reductions in CO_2 emissions)

Domain	Target (2035)
Monozukuri	Achieve complete carbon neutrality (including gas) (2025: Achieve carbon neutrality for electricity [utilizing carbon credits for gas])
Mobility products (electrification)	50% reduction in CO_2 compared with fiscal 2021*
New businesses (energy use)	50% reduction in CO_2 compared with fiscal 2021*

* Base value: CO_2 emissions from mobility products in fiscal 2021

Basic Strategy for Realizing Carbon-neutral *Monozukuri*

Baseline = 100



Going forward, we will continue to hold thorough examinations and comprehensively analyze the quantitative financial impact of key items as well as specific business risks and opportunities. We will then reflect the results of such analysis in our business strategies and action plans.

Please see the following URL for details on Eco Vision 2025.
https://www.denso.com/global/en/csr/environment-report/management/ecovision/ecovision/#/MOVIE/

Please see the following URL for details on Environmental Action Plan.
https://www.denso.com/global/en/about-us/sustainability/environment/action-plan/

Please see the following URL for details on DENSO's environmental performance data.
https://www.denso.com/global/en/about-us/sustainability/library/environment-data/