

Engaging with Climate-Related Risks and Opportunities

Hitachi sees climate change risks and opportunities as important management issues. One governance mechanism that we established to address such risks and opportunities is the Executive Sustainability Committee, chaired by Hitachi's President & CEO, with other top executives serving as committee members. The committee develops business strategies to minimize risks and maximize opportunities from climate change in line with relevant global regulations and policy trends.

In 2017, the Task Force on Climate-related Financial Disclosures (TCFD), established by the Financial Stability Board in response to a request from the G20 Meeting of Finance Ministers and Central Bank Governors, published its recommendations seeking corporate disclosures of information about climate-related risks and opportunities. In June 2018, Hitachi announced its endorsement of the TCFD and is preparing its information disclosure based on its recommendations. As regards climate-related risks and opportunities, Hitachi is reviewing its risks in two categories, namely, (1) risks related to the transition to a low-carbon economy, and (2) risks related to the physical impact of climate change in accordance with the categories outlined in the new global TCFD recommendations. In terms of opportunities, we are positioning our contributions to the creation of a low-carbon society through enhanced energy-saving features of our products and services as a major opportunity, and are discussing how we can further expand it.

Risks in Transitioning to a Low-Carbon Economy Policy and Legal

Carbon taxes, energy consumption taxes, emissions trading systems, and other measures may be newly introduced or further strengthened, representing risks impacting directly on management costs in addition to those incurred in complying with the environmental regulations and policies of countries and regions around the world.

To mitigate such risks, we have been reducing or minimizing cost burdens by enhancing production efficiency and introducing energy-saving measures. In fiscal 2017, our energy-saving investments totaled approximately 5.4 billion yen. Should our products fail to meet energy-efficiency standards and regulations, we will risk losing sales opportunities. In addition to strictly complying with existing standards and regulations, we will always endeavor to keep abreast of trends in laws and regulations and participate in the planning of new policies.

Technology

To reduce CO₂ emissions caused by the use of our products and services by our customers, which make up a significant share of emissions in the value chain, we need new technology to achieve further energy-saving in our products and services.

Therefore, by applying Environmentally Conscious Design Assessments in the design and development stages of Hitachi products and services, we assess various environmental aspects at each stage of the product life cycle and strive to minimize environmental impact. In addition, by combining Hitachi's longstanding expertise in a wide range of social infrastructure technologies with OT (operational technology) and IT, we can provide optimal solutions that lead to the creation of new business opportunities.

Market and Reputation

A company's approach to climate change issues influences stakeholders' evaluations, and changes to market values, such as placing great importance on climate change countermeasures, affects customers' choices of products and services. This may pose a risk to business continuity. Hitachi upholds long-term environmental targets of reducing CO₂ emissions throughout its value chain by 50% in fiscal 2030 and 80% in fiscal 2050 compared to fiscal 2010 levels. Measures to attain these goals include investing in new facilities and equipment with higher energy efficiency and targeting greater efficiency in production through digitalization.

Risks Related to the Physical Impacts of Climate Change

Acute and Chronic

Climate-related physical risks include acute risks, such as increased severity of typhoons and floods, and chronic risks, including climate patterns that may cause the sea level to rise and chronic heat waves. Hitachi has a worldwide business presence and believes that disasters due to weather phenomena attributed to climate change, such as increasingly bigger typhoons and torrential rainfall, pose a risk to business continuity.

In order to minimize these risks, we take into consideration such factors as location and the possibility of damage from flooding when setting up a new plant or deciding on the deployment of equipment. We also use the *Hitachi Group Guidelines for Developing Business Continuity Plans* that outline measures to be taken in times of disaster to mitigate risks.

Climate-Related Opportunities

Resource Efficiency

Hitachi is promoting the efficient use of resources by reducing waste, recycling, and undertaking other measures. Also, for the efficient and sustainable use of natural resources, we are promoting efforts to minimize the amount of natural resources we use through improvements in production processes and resource-conserving designs.

Energy Source

Hitachi proactively uses renewable energy for our factories and offices. In our factories, we are able to efficiently use the electricity supplied from photovoltaic power generation facilities, despite fluctuations in the amount of power generated, by monitoring and controlling energy usage on production lines and by using storage batteries. Also, we are promoting the adoption of renewable energy credits and the expanded deployment of internal carbon pricing and the self-consumption solar power generation. In our offices, too, we are enhancing the efficiency of lighting and air conditioning, as well as visualizing energy usage and optimizing the amount of energy used in the building as a whole through Building and Energy Management Systems (BEMS).* In our business operations, we create new business opportunities, such as by actively providing renewable energy from wind power generation systems.

* BEMS aim to optimize the internal environment of a building and its energy efficiency.

Products, Services, and Markets

Products and services featuring innovative, energy-saving technology that can contribute to the mitigation and adaptation of climate change are viewed as having the potential to increase market value and revenue. Many of our products use energy, so we must enhance the efficiency of our products and services and facilitate low carbonization in order to contribute to resolving the issue of climate change. To this end, we are developing ultra-efficient products and low-carbon energy, as well as encouraging their use. We are also promoting the development of innovative devices and materials that contribute to reducing the environmental burden. In fiscal 2017, Hitachi's total investment in R&D was 332.9 billion yen, including sizable spending to reduce the environmental burden.

A company's approach to climate change issues influences stakeholders' evaluations and affects customers' choice of products and services. Hitachi not only meets the required standards and regulations for the energy efficiency of its products, but also develops and provides energy-saving products and services that go beyond the prescribed standards, thereby increasing opportunities to be chosen by customers.

Resilience

We have devised a plan for vital functions to be maintained through the use of renewable energy and storage batteries if a power outage occurs in any of Hitachi's main factories.

In our business operations, we are providing disaster-prevention solutions to help various countries and regions deal with the rise in natural disasters. Hitachi uses sophisticated IT developed over the years to analyze and evaluate data pertaining to people's daily lives, meteorological and other natural trends, and the operation of social infrastructure, in promoting the provision of solutions conducive to responding to climate change.