Tohoku Electric Power Group

Tohoku Electric Power Group

INTEGRATED REPORT 2023

Editorial Policy

Tohoku Electric Power Group Integrated Report 2023 Editorial Policy

The Tohoku Electric Power Group has published integrated reports since FY2018 to promote understanding of the Group's plans for medium- and long-term value creation from both financial and non-financial perspectives.

Based on a careful selection of the information we want to convey to shareholders and investors, this FY2023 Report includes an introduction to the Tohoku Electric Power Group's sustainability priorities (materiality topics) and specific measures designed to achieve Working alongside next, the Tohoku Electric Power Group's Medium- to Long-Term Vision.

The Report also reflects the International Integrated Reporting Framework of the IFRS Foundation, the Guidance for Collaborative Value Creation from the Ministry of Economy, Trade and Industry of Japan, and other documents. Prior to its publication we submitted this Report to the Board of Directors and confirmed its validity.

We will continue to enhance the content provided in the Report to deepen understanding of the Tohoku Electric Power Group among our stakeholders.

Guidelines and other information used for reference

- Ministry of Economy, Trade and Industry: Guidance for Collaborative Value Creation
- IFRS Foundation: The International <IR> Framework
- IFRS Foundation: SASB Standards
- Global Reporting Initiative (GRI): GRI Sustainability Reporting Standards
- Final report of the Task Force on Climate-related Financial Disclosures (TCFD)

Environment Social Governance
価値協創ガイダンス

Boundary of Report
The 77 companies in the Tohoku Electric Power Group

Period subject to Report
While the Report in principle covers initiatives during FY2022 (April 1, 2022–March 31, 2023), certain activities presented include information from past fiscal years or FY2023

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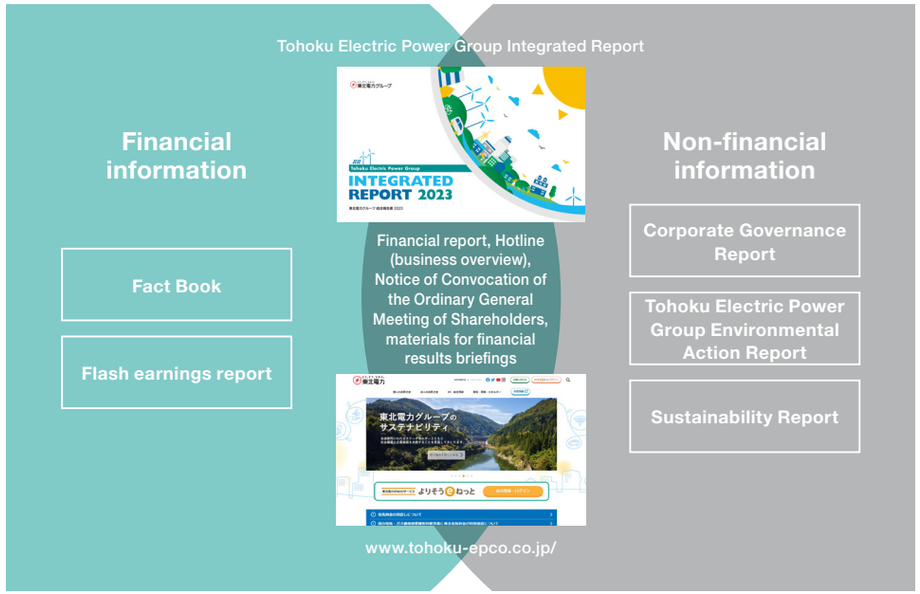
Tohoku Electric Power Group

Tohoku Electric Power's media for information disclosure

The Tohoku Electric Power Group reports issues and actions of high significance in its Integrated Report. Indepth financial information and non-financial information are available from other information sources. The Tohoku Electric Power Group's Sustainability Report introduces a broad range of information on sustainability, including the Group's sustainability concepts, targets, and initiatives.



Forward-looking statements

This report contains financial forecasts and other forward-looking statements. They represent Tohoku Electric Power's judgments based on information available at the time of disclosure and certain assumptions. They involve known and unknown risks, uncertainties, and other factors that may cause actual results, performance, and achievements to differ materially from expectations.

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The Tohoku Electric Power Group's Management Philosophy and Group Slogan

Tohoku Electric Power was founded in 1951.
Amid the postwar recovery, our first President, Ungoro Uchigasaki, established the management philosophy which called for "Rebuilding Japan starting in Tohoku and developing Tohoku starting with electric power." The Group rephrased this motto thereafter as follows: "The prosperity of the Tohoku region is essential to our own growth." We've continued to do business under this philosophy for some 70 years.

The strong commitment to local communities expressed in this concept is a fundamental management value and the ultimate expression of the Tohoku Electric Power Group's Management Philosophy of prospering with local communities. This vision of extending our roots to contribute to the regions in which we operate is an unshakeable pillar from which all Group employees continue to approach their work, even amid dramatically changing business environment.

However, the way to prosper with local communities must change with the times. To date, prosperity with local communities has referred to generating earnings by providing a stable, low-cost source of electricity to customers in Tohoku and Niigata. Looking forward, we will seek to expand our business area and secure management resources beyond Tohoku and Niigata, while maintaining our willingness to contribute to Tohoku and Niigata. Through value created by progressive activities grounded in energy services and creating solutions to social challenges, our goal is to contribute to Tohoku and Niigata, attracting human resources, technology, and investment to the region.
Essential aspects of putting this management philosophy into practice include receptiveness to the needs and issues confronting the customers who make up our local communities and the commitment of each individual employee to creating new forms of prosperity in joint efforts.
The Tohoku Electric Power Group slogan—Yori, Sou, Chikara (The Strength to Work Alongside)—is a promise to our customers and to local communities. Based on the perspective of working together with and alongside our customers and communities, this promise says each and every Group employee will take this management philosophy to heart in his or her work and everyday activities. Under this slogan, we will seek to help co-create a comfortable, safe, reliable, and smart society and to provide the added value only the Tohoku Electric Power Group can deliver.

The Tohoku Electric Power Group's Management Philosophy

Prosper with Local Communities

We seek to create value only the Tohoku Electric Power Group can deliver and to realize growth and an enriched society by continuing to take on challenges and pursue innovation alongside our customers and our communities.

The Tohoku Electric Power Group Slogan

Yori, Sou, Chikara

(The Strength to Work Alongside)

Our motto, yori, sou, chikara, derives from the care we take in providing each and every customer with services suited to their lifestyles and working lives. Moving forward, driven by our founding motive of serving as a bedrock for the region, we will continue working hand-in-hand with local communities, delivering services to the individuals within them based on a true sense of gratitude and broad vision of the future.

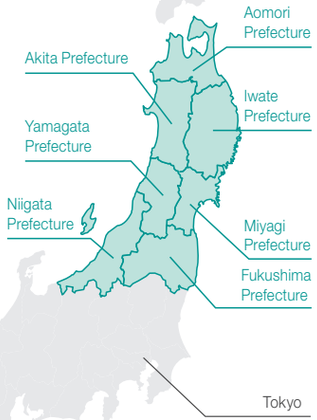
At a Glance

About the Tohoku and Niigata region

The area in which the Tohoku Electric Power Group's businesses are based—the Tohoku and Niigata region—accounts for about 20% of Japan's land mass. The region is subject to challenging natural conditions, including earthquakes like the Great East Japan Earthquake, winter storms, and snowfall.

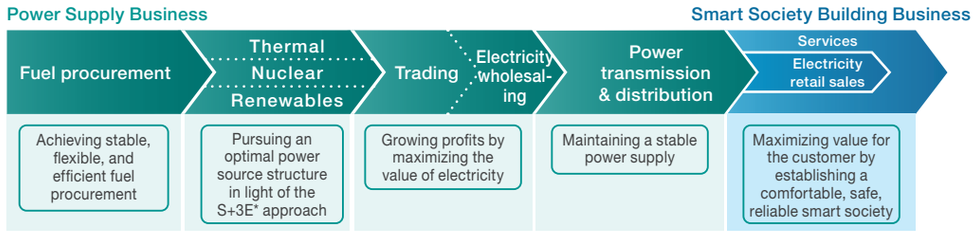
The region's traits also serve as valuable community resources that contribute not just to renewable energy from hydroelectric, wind, and geothermal sources, but to the region's seasonal scenery and diverse culture, including foods and festivals marked by distinctive local flavors.

The region adjoins the vast market of the greater Tokyo area, to which it is connected by high-speed transportation network, including Shinkansen high-speed rail and expressways. At the same time, the region is experiencing the effects of depopulation and an aging population with low birth rates at a rate that outpaces other regions in Japan. The region is widely expected to confront social challenges in various areas, including transportation, education, and welfare.



Tohoku Electric Power's Value Chain

The Tohoku Electric Power Group engages in business as an energy services group based on its commitment to maximize value for the customer. Its main area of business is supplying power, primarily in the Tohoku and Niigata region. By demonstrating the integrated capabilities of the Group while optimally allocating management resources across the value chain, the Tohoku Electric Power Group is working to put "Working alongside next," our medium- to long-term vision into practice—and, in so doing, to increase corporate value groupwide.



* Safety + energy security, environmental conservation, and economic efficiency

The Tohoku and Niigata region in nationwide statistics

Total land mass*1

21.0%

79,531.35 km²

The vast region comprising Tohoku and Niigata represents a valuable natural resource with high potential for renewable energy development.

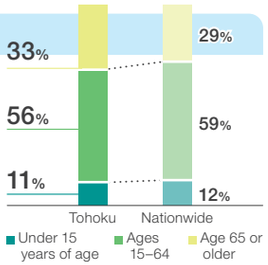
Population*2

8.5%

10,579,000

The region faces issues related to depopulation and an aging population with low birth rates. At the same time, we see efforts toward solutions to these issues as business opportunities for the Group.

Population composition



Agricultural output*3

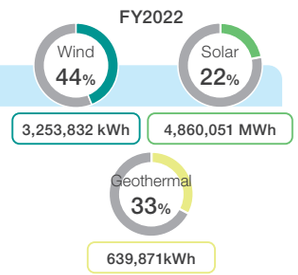
19%

1,586 billion yen

Agriculture, an important regional industry, offers high potential for the development of related services. The Group will take on the challenges of this and other new business fields.

Renewable energy power generation*4

Leveraging the distinctive features of the region, the Group has gathered expertise by promoting renewable energy. We will continue to strengthen these businesses in the future.



Sources
*1: Ministry of Land, Infrastructure, Transport and Tourism, Statistical Reports on the Land Area by Prefectures and Municipalities in Japan (as of April 1, 2023)
*2: Statistics Bureau, Ministry of Internal Affairs and Communications, Population Estimates (as of October 1, 2022)
*3: Ministry of Agriculture, Forestry and Fisheries, Agricultural Production Statistics (2021)
*4: Agency for Natural Resources and Energy, FY2022 Electric Power Statistics

Tohoku Electric Power by the numbers

Technological capabilities

Combined cycle power generating efficiency

A world leader

Since launching Japan's first large-capacity combined cycle power generation facility, the Group has amassed a wealth of technology and knowledge in the field. The state-of-the-art Unit No. 1 at the Joetsu Thermal Power Station has achieved thermal efficiency of 63.62%, the world's highest figure as of January 24, 2023. We're achieving both high cost performance while reducing environmental impact.

Network of communities and people

Number of business sites

103 sites

The Group has built up its customer base and human networks over many years in the Tohoku and Niigata region and will maximally leverage these assets to drive further growth.

* Total number of business sites of Tohoku Electric Power and Tohoku Electric Power Network (as of April 2023)

Name recognition

Tohoku Electric Power's name recognition

96.2%

The Group's solid name recognition in the Tohoku and Niigata region, where its businesses are based, is among its greatest strengths.

* Percentage of respondents answering that they were aware of Tohoku Electric Power in a survey of 2451 residents of the Tohoku and Niigata region (June 2023)

Steps in Value Creation

Tohoku Electric Power was founded in 1951, a time when Japan was still recovering from the turmoil of the Second World War. Since then, we've confronted difficult challenges in each era, including power shortages during the postwar period of reconstruction, oil crises, numerous natural disasters, and the deregulation of the electric power market. On each occasion, the Group has worked as a team to fulfill its mission of delivering a stable, high-quality supply of electricity. Moving forward, we will continue to work with local communities to contribute to the growth and development of the six Tohoku prefectures and Niigata Prefecture while ceaselessly working to create new corporate value.

	1950s –	1970s –	1990s –
Developments in society	■ Mid-1950s economic boom ■ 1958-1961 economic boom, income-doubling plan ■ Late 1960s economic boom	■ Dollar shock ■ First oil crisis ■ Second oil crisis ■ Bubble economy	■ Collapse of the Bubble Economy ■ Kyoto Agreement signing mandates reductions in greenhouse gas emissions. ■ Start of liberalization of the retail electricity market International Financial Crisis, growth of sustainability management in the West
Social issues	■ **Postwar reconstruction and rapid economic growth bring growing demand for electric power**	■ **A global oil crisis and power shortages**	■ **Responding to global environmental issues, including the need to reduce greenhouse gas emissions** ■ **Low-priced supply of electricity in a competitive global environment**
Value provided by Tohoku Electric Power	Contributing to postwar recovery and the development of Tohoku and Niigata by developing power sources catering to growing demand for electric power	Pursuing diversification of power sources to break from dependency on oil-fired thermal power and ensure a stable supply of electrical power	Responding to the partial liberalization of retail electricity markets while pursuing reduction of environmental impact in response to growing interest in global environmental issues

Amidst electricity shortages during the postwar period of recovery, Tohoku Electric Power pushed ahead to develop energy sources within the Tadami River water system, its largest hydroelectric power zone, working under the motto: "Rebuilding Japan starting with Tohoku and developing Tohoku through electric power." Later, to meet growing demand for electric power, we began building and expanding state-of-the-art thermal power stations, starting with the Hachinohe Thermal Power Station. We've supported local economic growth and the lives of local residents ever since.

Motivated by the global oil crisis, Tohoku Electric Power approached various issues, including research on diverse power sources and development site surveys, with the aim of breaking the dependency on oil-fired power. Power source diversification advanced considerably. Both the large-scale pumped-type Numazawa Power Station No. 2 and Onagawa Nuclear Power Station Unit 1 came online during this period.

Striving to protect the environment and to make more efficient use of energy, we launched initiatives to develop techniques for renewable energy such as wind, solar, and geothermal power and to improve the thermal efficiency of thermal power generation.

In addition, with the implementation of partial liberalization of retail electricity markets for special high-voltage power users, we took on the challenge of corporate reforms to achieve price competitiveness. Starting with the rate reductions in October 2000, the first after partial liberalization, we reduced rates four times over the course of six years.

1954

Uwada Power Station comes online.

1958

Our first large-scale thermal power plant, Hachinohe Thermal Power Station Unit No. 1, begins operating

1984

Launch of operations at Onagawa Nuclear Power Station Unit No. 1, our first nuclear power plant

1999

Higashi Niigata Thermal Power Station Unit 4-1 system comes online (achieving thermal efficiency of 55% or higher, world-leading figures at the time)

Steps in Value Creation

Today

	2010s –	2020s –	Future
Developments in society	■ Great East Japan Earthquake ■ Sustainable Development Goals (SDGs) adopted at UN Summit ■ Start of full liberalization of retail electricity market	■ COVID-19 pandemic ■ Russia invades Ukraine	
Social issues	■ Recovery and restoration from the Great East Japan Earthquake	■ Responding to society's challenges, such as climate change and an aging population with low birth rates ■ Securing stable supply by ensuring preparedness for natural disasters and geopolitical risks	
Value provided by Tohoku Electric Power	Supporting recovery and restoration from the Great East Japan Earthquake	Tackling the challenge of creating new value to realize a sustainable society and a smart society for a new age, starting in Tohoku	

The Great East Japan Earthquake caused widespread power failures affecting nearly the entire Tohoku region. Nevertheless, drawing on the Group's strengths, we were able to restore power to around 80% of the area in just three days. The automatic shutdown of all reactors in response to the earthquake at the Onagawa Nuclear Power Station maintained safety, as designed. The station accommodated evacuees from the community for about three months and helped the region overcome the challenges posed by the disaster.

We also launched the Forward Together initiative to support restoration work within the region. The initiative entailed a wide range of activities undertaken alongside residents, including support for community development and information provision.

2011

Rapid recovery from power failures caused by the Great East Japan Earthquake

Values we have treasured since our founding

The prosperity of the Tohoku region is essential to our own growth.

The Tohoku Electric Power Group's Management Philosophy

Prosper with Local Communities

The Tohoku Electric Power Group Slogan

Yori, Sou, Chikara

(The Strength to Work Alongside)

The strengths we have built up over more than 70 years

Electricity professionals

- Human resources and sense of mission supporting the stable supply of electricity
- Power generation operation technologies and world-leading high-efficiency thermal power generation technologies
- Power grid operation and control technologies
- Experience overcoming and recovering from the Great East Japan Earthquake
- Renewable energy potential in the six Tohoku prefectures and Niigata Prefecture

Strong community ties

- Customer base, business sites, and power infrastructure, centered on the six Tohoku prefectures and Niigata Prefecture
- Ties to local governments and local business associations in the six Tohoku prefectures and Niigata Prefecture
- Social contribution activities in the six Tohoku prefectures and Niigata Prefecture

The emergence of various and diverse social challenges in recent years has led to dramatic changes in the structure of society. Combined with other factors, including changes to demand and supply structures accompanying the growing use of renewable energy and digitalization, these factors have brought the business environment in which the Group operates to a major turning point.

To increase corporate value over the medium to long term and contribute to sustainable progress throughout society in this time of dramatic change, the Group is promoting sustainability in line with its Sustainability Promotion Policy.

The Group will continue to fulfill its mission and seek to achieve sustained growth alongside society by reexamining the values it has maintained since its founding in order to challenge the new era, while fully capitalizing on its strengths amassed to date to expedite reforms, realize solutions in line with sustainability priorities (materiality topics), realize a smart society starting in Tohoku, and achieve carbon neutrality by 2050.

Tohoku Electric Power Group's vision

Tohoku Electric Power Group medium- to long-term vision "Working alongside next" P17

Working alongside next よりそうnext Targeting a smart society, starting in Tohoku

→ Realizing a smart society, starting in Tohoku

Tohoku Electric Power Group's Carbon Neutral Challenge 2050 P20

→ Achieving carbon neutrality

Medium-term Plan P29

Tohoku Electric Power Group's Sustainability Policy / sustainability priorities (materiality topics) P21

Increasing corporate value over the medium to long term and contributing to sustainable progress throughout society

Striving to further raise corporate value while building strong risk-resilient management foundations based on our earnings capabilities

Representative Director & President
Tohoku Electric Power Co., Inc.
Koziro Higuchi

Taking on increasing uncertainty and change

Three years have passed since I took office as President. Various ongoing situations make it difficult to forecast future prospects, including the transformation of values due to COVID-19, the accelerating trend toward carbon neutrality, and supply chain disruptions and increasing fluctuations in market prices of fuel and power transactions due to the Ukraine crisis.

In FY2022, we recorded the second consecutive year of losses. Consolidated ordinary losses reached a record high of 199.2 billion yen due to factors including large-scale increases in power procurement costs due to rising prices in wholesale electricity markets as well as the effects of soaring fuel prices and yen depreciation. Over the past two years, our balance of interest-bearing debt swelled by about 1 trillion yen to 3.3756 trillion yen. At the same time, our equity ratio fell from 18.5% (in FY2020) to 10.5%. While the ratio remains in the 10% range, it is even lower than it was at the time of the Great East Japan Earthquake.

Under such a critical situation, in addition to efforts of comprehensive efficiency improvements, we have taken various other measures, including cutting executive pay, revising electricity rates, choosing not to pay dividends to shareholders, and cutting employee bonuses. I would like to take this opportunity once again to express our gratitude to all stakeholders for their understanding and cooperation.

Going forward, in addition to swiftly improving our financial standing and enhancing risk resilience, we will invest in future growth as we pursue stable earnings to provide returns to our stakeholders.

Electricity rate revisions and the importance of resuming nuclear power operations

The revised electricity rates introduced to all customers since the summer of last year reflect the changing demand and supply structures generated by factors including the growing adoption of renewable energy and rising fuel and market prices. The revised rates also make it possible to shift the base fuel prices for fuel cost adjustments to levels after Russia's invasion of Ukraine. This has strengthened our resilience to the risk of rising fuel prices.

In light of geopolitical risks, climate change, and other factors, we see nuclear power as a key source of electricity. We expect the restart of Unit No. 2 at the Onagawa Nuclear Power Station to improve profitability by 40.0 billion yen per year due to savings in fuel costs and other effects.

The Onagawa Nuclear Power Station will resume operations after the 12-year suspension following the Great East Japan Earthquake, and is our first boiling water reactor (BWR) to resume operations. In addition to simulator-based training, we are dispatching personnel to nuclear power plants operated by other companies in Japan and around the world for training on actual reactors.

We are making steady progress toward resuming operations around May 2024 through measures such as construction incorporating safety measures, assigning top priority to occupational health and safety, and testing and inspections in preparation for resumed operations.

Toward sustained growth based on strengthened earning capabilities

For FY2023, we project ordinary income of 200.0 billion yen thanks to a series of revisions to electricity rates, as well as falling fuel prices and electricity transaction prices. However, this level of earnings is still not sufficient to restore the equity lost over the two years of FY2021 and FY2022. In addition, as mentioned earlier, the business environment is subject to significant fluctuations due to factors including geopolitical and market risks. In addition to restoring our financial makeup and building strong and risk-resilient management foundations, we must lay the groundwork for future growth in corporate value, squarely centered on the growth areas of renewable energy and the Smart Society Building Business.

In the renewable energy business, we continue to challenge our power generation target of 2,000 MW. Renewable energy development in the Tohoku region, which boasts a wealth of sites ideally suited to renewables, has started to become competitive. We will work to increase the use and profitability of renewable energy through businesses that address the entire life cycle, including operation and maintenance, such as by building a training center for wind power maintenance technicians.

In the Smart Society Building Business, we are moving forward in the three main areas of building on our customer base to deliver electricity plus services, leveraging our expertise in next-generation energy, and identifying new domains. For next-generation energy, in December of last year, we opened the Office of Corporate PPA to enhance our corporate power purchase agreement (PPA)* business. In addition to on-site PPAs involving the installation of solar power generation facilities at customer power consumption sites, we will also deploy off-site PPA services in which solar power generation facilities are installed at sites located remotely from the end-user facilities.

The power of our human resources constitutes the foundations of our business activities; this, and digital transformation (DX), will be important drivers in strengthening corporate value. We have formulated an HR portfolio linked to medium- to long-term business strategies and are moving forward with hiring and training based on the numbers of personnel and the skills needed to implement our business strategies. Additionally, we have issued a health management declaration and a message from top management concerning diversity, with the goal of ensuring that each and every employee can demonstrate their abilities to the fullest. Through these efforts, we are striving to maintain and improve safety, physical health, and mental health. Under our DX promotion policy, we are reforming business processes and creating new business value across the Group to ensure that our accumulated data and the digital technologies that continue to advance from day to day can increase our earning capacity.

Since assuming office as President, I have repeatedly highlighted the need to transform our awareness while maintaining the trust we have earned to date. This transformation is already visible: The Power Generation Company and the Internal Services Division, which had previously not engaged in sales activities, are now developing and selling products and services, including services involving monitoring for customer facility irregularities and online teaching materials to train DX human resources.

I believe actions to identify solutions that only the Tohoku Electric Power Group can deliver, based on the Group's slogan "Yori, Sou, Chikara" (The Strength to Work Alongside), will generate earnings. Our earning capabilities are the direct result of the strength to work alongside. We will maintain Groupwide efforts to strengthen them still further.

* A method for long-term procurement and supply of renewable energy from new solar power generation equipment and other facilities at fixed prices, through direct long-term agreements between power companies and customers

Improper handling of information on subjects including PPS customers

The recent discovery of the improper handling by Tohoku Electric Power employees and subcontractors of information on various matters, including power producer and supplier (PPS) customers managed by Tohoku Electric Power Network, has dented the trust so vital to our operations. We take this incident, at odds with the fundamentals of the electricity business system premised on free and fair competition, very seriously.

Under the Committee of Corporate Ethics and Compliance, of which I am the chair, we are investigating all sales section employees and subcontractors involved since the deregulation of retail electricity sales in April 2016 and analyzing the causes of this incident based on counsel from internal and external attorneys and outside experts. We are also implementing a series of ongoing measures to prevent any recurrence of this incident.

The trust of our customers and communities is fundamental to our businesses. Following the rules is a necessary precondition of earning this trust. In addition to thoroughgoing efforts to encourage each and every employee to be aware, to speak up, and to rectify improper practices, we will implement a series of preventive measures based on both tangibles and intangibles to make sure such an incident cannot happen again.

Toward our vision of society through sustainability management

Founded in 1936 under the national power policy, our predecessor Tohoku Shinko Denryoku sought to contribute to the development of the Tohoku region during the Great Depression and two famines caused by cold weather. In the more than 70 years since the establishment of the Tohoku Electric Power Group, the successor to Tohoku Shinko Denryoku's vision, we have pursued the balance between creating social value and building corporate value under the basic concept articulated in the following words: The prosperity of the Tohoku region is essential to our own growth. This has led directly to our philosophy on sustainability management today.

Last year, to further promote management with sustainability positioned at its core, we identified eight sustainability priorities (materiality topics) to be addressed by the Tohoku Electric Power Group. Over the past year, we have made steady progress in areas including the start of commercial operations at Unit No. 1 at the Joetsu Thermal Power Station, which boasts the world's highest thermal efficiency; testing to contribute to decarbonization of thermal power as a step toward carbon neutrality; formulation of a human-rights policy and implementation of human-rights due diligence, and DX human resource training. At the same time, we have faced various issues, including a fatal on-the-job accident and a serious compliance violation involving the improper handling of information on PPS customers. Management will play an active role in efforts to prevent the recurrence of such incidents.

As a business responsible for a vital community infrastructure and as an energy business, the Tohoku Electric Power Group must address various issues related to the sustainability of society from both global and local perspectives. In particular, we recognize the increasing severity of natural disasters due to climate change, the rapid depopulation, an aging population, and low birth rates—all trends more pronounced in the six Tohoku prefectures and Niigata Prefecture than in other regions of Japan—to be important issues from the perspectives of both a sustainable society and our business foundations and customer base.

As for the lives of individual consumers, it occurs to me that digital technologies have made it possible to meet a diversity of needs and preferences while contributing to market fragmentation. The experience of COVID-19 has impressed on many the fact that wellbeing, including rewarding lives and good health, are more important than the pursuit of wealth. I believe we will need to adapt to such changes in social values as we advance the Smart Society Building Business.

Unit No. 1 at the Joetsu Thermal Power Station began operating commercially in December 2022.

Based on our sustainability priorities (materiality topics), by balancing global and local perspectives, we seek to co-create value alongside our stakeholders into future generations. This is apparent in the focus on carbon neutrality globally; in efforts to protect the abundant natural environment in the Tohoku and Niigata region; and in efforts to advance universal human rights and human capital, as well as living standards, industrial development, and the strengths and attractions of the Tohoku and Niigata region.

Uesugi Yozan, the ninth head of the Yonezawa clan whose domain was centered on the current city of Yonezawa in Yamagata Prefecture, is famous for the saying: “Where there’s a will, there’s a way; where there is no will, there is no way.” With the Yonezawa clan confronting a financial crisis, Uesugi Yozan took the lead as clan head in cutting costs and transforming attitudes while promoting sericulture, carp culture, Yonezawaori textiles, Sasano Ittobori woodcarving, and other local industries and making them more profitable. Additionally, he established Kojokan as the clan school for human resource development. Through the restoration of the clan’s finances, he built the foundations for the community in the Yonezawa domain for many years. When the British travel writer Isabella Bird visited the former Yonezawa domain 100 years after Uesugi Yozan, she named it the Arcadia of Asia.

To realize sustainable development within the six Tohoku prefectures and Niigata Prefecture and, by extension, society as a whole, and to increase the corporate value of the Tohoku Electric Power Group over the medium to long term, I pledge to demonstrate leadership that will restore the Group’s financial standing and improve its earning capabilities as we move into the future to break new ground. I ask for the continued support of our stakeholders.

Message from the CFO

On taking office as CFO

My name is Satoshi Isagoda. I was appointed Chief Financial Officer (CFO) in April 2023. As the first CFO in Tohoku Electric Power's history, I would like to briefly review the factors that led to my appointment.

Tohoku Electric Power recorded losses for two consecutive years in FY2021 and FY2022. Its consolidated equity ratio at the end of FY2022 had fallen to 10.5%, its lowest point ever. Our balance of interest-bearing debt had swollen to a record high of 3,375.6 billion yen. As these figures show, we faced very challenging financial conditions.

While projected financial results for FY2023, announced in July 2023, call for consolidated ordinary income of 200.0 billion yen, we project the consolidated equity ratio to be around 13% and the balance of interest-bearing debt to be around 3,320 billion yen at the end of FY2023. In short, our efforts to restore our financial footing have just begun.

Under these conditions, more than ever before, the rapid recovery of our financial footing will require comprehensive decision-making in our selection of fundraising sources, accurate assessments of investment priorities, and effective action in other related aspects. That is my responsibility as CFO.

Review of FY2022

Tohoku Electric Power's financial situation in FY2022 was remarkably challenging.

The March 2022 earthquake centered off the Fukushima Prefecture coast damaged our power plants—chiefly coal-fired thermal power plants—on the Pacific side of the region. Russia's invasion of Ukraine generated soaring fuel and wholesale electricity market prices. These events led to a sharp increase in the cost of procuring power to offset the capacity lost due to the damaged thermal power plants. These and other factors led to sustained conditions of negative profit, in which the cost of supplying electricity significantly exceeded revenues. As a result, we registered record consolidated ordinary losses of 199.2 billion yen.

Our consolidated equity ratio fell to 10.5%, even lower than immediately following the 2011 Great East Japan Earthquake. Consolidated interest-bearing debt swelled to a record high of about 3.4 trillion yen.

We deployed various cost-cutting measures in response to these challenging business conditions, including working to achieve swift recovery at the damaged thermal power plants and drawing on derivatives and other means to make fuel procurement costs more manageable in the face of rising fuel prices. In addition, we further strengthened efforts to improve management efficiency and moved forward with initiatives involving new technologies intended to improve efficiency.

Regrettably, since the damage to our financial footing posed risks to our capacity to ensure a stable supply of electricity, we were compelled to revise electricity rates in deregulated market segments from November 2022 and to raise rates in June 2023, following review by the national government, in regulated segments.

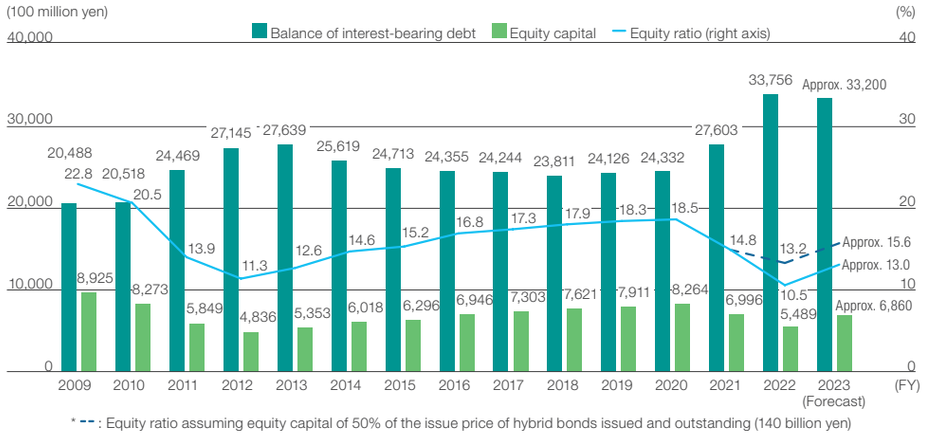
Consolidated settlement of accounts in FY2022

Net sales	3.72 trillion yen
Ordinary loss	199.2 billion yen
Net loss attributable to owners of parent	127.5 billion yen
Consolidated cash income	136.6 billion yen
Interest-bearing debt (as of the end of March 2023)	3.3756 trillion yen

Representative Director &
Executive Vice President
Tohoku Electric Power Co., Inc.

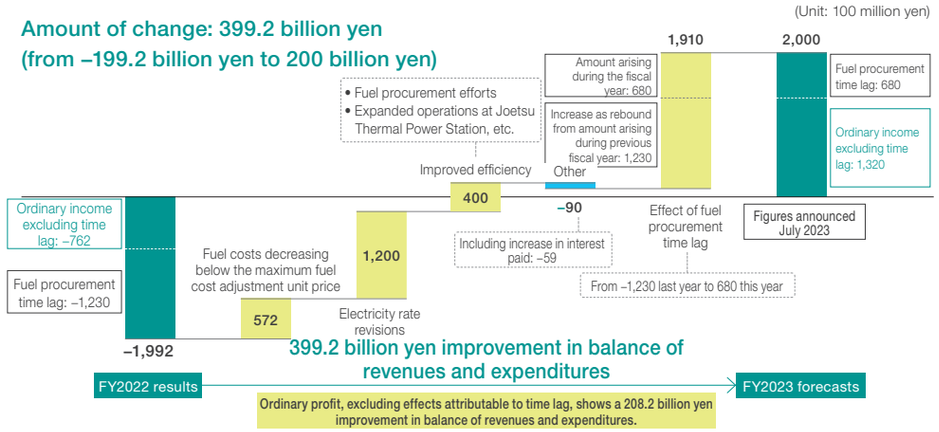
Satoshi Isagoda

Trends in balance of interest-bearing debt, equity capital, and equity ratio



* - - : Equity ratio assuming equity capital of 50% of the issue price of hybrid bonds issued and outstanding (140 billion yen)

Major factors behind the change in consolidated ordinary income since FY2022



Outlook for FY2023

We are pursuing companywide efforts to ensure profitability in FY2023. Among these are various efficiency improvements, including optimized fuel and electricity procurement, cost-cutting, and electricity rate revisions.

Our projected financial results for FY2023 now call for consolidated ordinary income of approximately 200.0 billion yen as we expect to return to profitability by achieving record highs due to factors including significant upward pressure on income from the time lag effects of the fuel cost adjustment system as fuel prices fall.

However, we expect the balance of interest-bearing debt at the end of FY2023, at approximately 3.32 trillion yen, to remain even higher than in the aftermath of the Great East Japan Earthquake. The consolidated equity ratio is projected to be around 13.0%. These persisting challenging financial conditions compel us to admit that our readiness for business risks remains inadequate.

Basic thinking on financial strategy

To boost our resilience to business risks, we must build up equity capital, keeping in mind a target consolidated equity ratio of about 20%, similar to the level we maintained before the Great East Japan Earthquake.

In addition, due in part to recent dramatic fluctuations in fuel and wholesale electricity market rates, revenues and expenditures in the electricity supply business are fluctuating widely. Given the impossibility of predicting when such fluctuations in revenues and expenditures may occur, it is vital to prepare for them as soon as possible. Not only is the scale of equity capital important, so too is the sense of urgency we need to adopt toward achieving it. For this reason, to restore our financial footing at the earliest possible date, we will pursue efforts to improve our earning capabilities through sustained improvements in management efficiency, proposals for optimal electricity and service menus suited to customer needs, and other efforts.

Readiness for future uncertainties requires profitability in growth businesses and the capacity to secure revenue from new sources beyond the electricity business. We must make steady progress in the Smart Society Building Business, renewable energy business, and other sectors.

At the same time, we must consider returns to shareholders, employees, and other stakeholders.

Even in the face of this wide range of factors and expectations, we will strive to balance efforts to swiftly restore our financial foundations and efforts to ensure future growth.

Investment in growth

	Scale of investment	Effects, returns (targets)
Development of renewable energy sources	More than 100 billion yen	(FY2030) ■ Consolidated cash income of approx. 20 billion yen
Investments in renewable energy networks	Approx. 200 billion yen	■ Decarbonization ■ Sustained and stable supply ■ Optimization of the transmission/distribution network
Smart Society Building Business	Approx. 100 billion yen	(FY2030) ■ Net sales of approx. 100 billion yen ■ Consolidated cash income of approx. 20 billion yen* * Not including electricity sales

In lieu of a conclusion

Efforts to rapidly restore our financial footing and achieve future growth are part of our medium- to long-term vision “Working alongside next.” We will strive to maximize corporate value by responding appropriately to the financial challenges we currently face.

Preventing the recurrence of a case involving the improper handling of information on PPS customers

We take very seriously a recent incident involving the improper handling of information and the subsequent improvement instructions. We will continue to implement thoroughgoing measures to prevent the recurrence of similar incidents.

Overview of the incident

Since January 2023, according to investigations, Tohoku Electric Power employees and others viewed information on customers of other retail electricity providers managed by Tohoku Electric Power Network (i.e., information that should have been kept confidential by Tohoku Electric Power Network). In response to this incident, the Electricity and Gas Market Surveillance Commission and the Agency for Natural Resources and Energy issued improvement instructions to Tohoku Electric Power and Tohoku Electric Power Network.

Incident summary

Incident 1 Viewing information on power producer and supplier (PPS) customers

- Errors in aspects such as the placement and configuration of business computers resulted in Tohoku Electric Power employees viewing private information, concerning PPS customers, managed by the Tohoku Electric Power Network.

Incident 2 Viewing the network administration system

- Three Tohoku Electric Power employees used IDs and other information issued by the Ministry of Economy, Trade and Industry to the Tohoku Electric Power Network and accessed the Ministry's information system to view confidential information.

Investigation summary and findings

In response to these incidents, Tohoku Electric Power undertook a thorough investigation with the direct involvement of the Committee of Corporate Ethics and Compliance, chaired by the President. This investigation included a Web survey of and interviews with individuals employed by subcontractors and all employees who had worked in the relevant sales sections since retail sales of electricity were deregulated in April 2016.

The investigation found that while contractual status had been checked on matters such as customer applications for and inquiries concerning contracts and switching of contracts, this information was not used in Company sales activities. No external leaks of personal information occurred. Nevertheless, we take these incidents very seriously. Such incidents can generate mistrust of our business operations, which are based on the premise of free and fair competition in compliance with the requirements of electric power deregulation, and damage the trust of our communities and customers.

Analysis of causes and measures to prevent recurrence

Based on the findings of the investigation, we are analyzing the causes of these incidents in detail, looking at both tangibles and intangibles, under the leadership of the Committee of Corporate Ethics and Compliance and with the advice and guidance of internal and external attorneys and outside experts. We have formulated and are steadily implementing measures to prevent the recurrence of such incidents, beginning with those for which prompt implementation is most feasible.

We have established a Committee of Conduct Regulations Compliance to monitor the progress of these preventive measures and to increase their effectiveness, in addition to an objective monitoring and checking structure, including a new dedicated organization within the internal audits section and a checking system that incorporates independent viewpoints.

Overview of our responses to improper handling of information on PPS customers and other data

Incident summary

Investigation findings

Overview
- Information was viewed at 23 sites.
- The information viewed included 36,980 items concerning 214 persons.
- This information was viewed during the period from April 2016–January 2023

Details
- One person viewed 26,885 items of information on eight corporations and 693 items concerning individuals.
- Subcontractors: The information viewed at two companies included 9,402 items concerning 75 persons.

- Findings proved no information used in Company sales activities and no external leaks of personal information.

Analysis of causes

Tangibles
- **Errors in placement of business computers** connecting the two companies and insufficient rules on their use
- **Errors in the configuration of business computers** connecting the two companies

Intangibles
- **Insufficient knowledge and awareness** of compliance matters
- Insufficient communication on compliance

Structure for executing and checking on preventive measures

Tangibles

Measure launched swiftly
- Switching to authorization for use based on IDs

Retotaling
- Storage and management on separate systems **(physical segregation)**

Intangibles

Improving awareness
- **Revising the Group Code of Conduct**
- Enhancing corporate ethics and compliance **training and education**

Monitoring and checking functions

Systemic

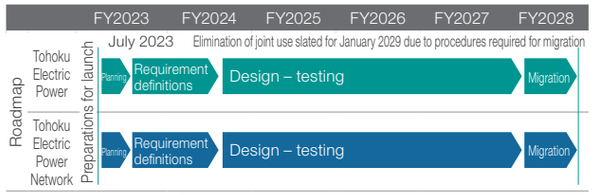
Objectivity
- Clarification of involvement through allocation of responsibilities to officers
- Building a structure to perform monitoring functions
- **Strengthening internal audit functions**
- Building a structure to implement preventive measures
- Building **a system for checking from an independent perspective**

Future efforts

In response to the improvement instructions received from the Electricity and Gas Market Surveillance Commission regarding these incidents, Tohoku Electric Power has reported that it plans to eliminate joint use of systems related to information on the consignment of power transmission starting in January 2029 (following a lead time of five years and six months). We have reported our plans to implement these measures at the earliest possible date, as well as plans to implement comprehensive measures to strengthen internal controls systems, including systems affecting the control environment, risk assessment, control measures, and monitoring.

Plan for eliminating joint use of computer systems

Timetable of processes leading to the elimination of joint use



This timetable may be accelerated on an ongoing basis.

System development and progress monitoring structures

- While system development by Tohoku Electric Power and Tohoku Electric Power Network will proceed separately, the two entities will work jointly to ensure the consistency of their development efforts. A Joint Systems Elimination Promotion Council, including members of management, will oversee the overall progress of these efforts, identify related issues, and manage risks.
- Matters such as programming methods and system segregation specifications will be reviewed from an independent and outside perspective.

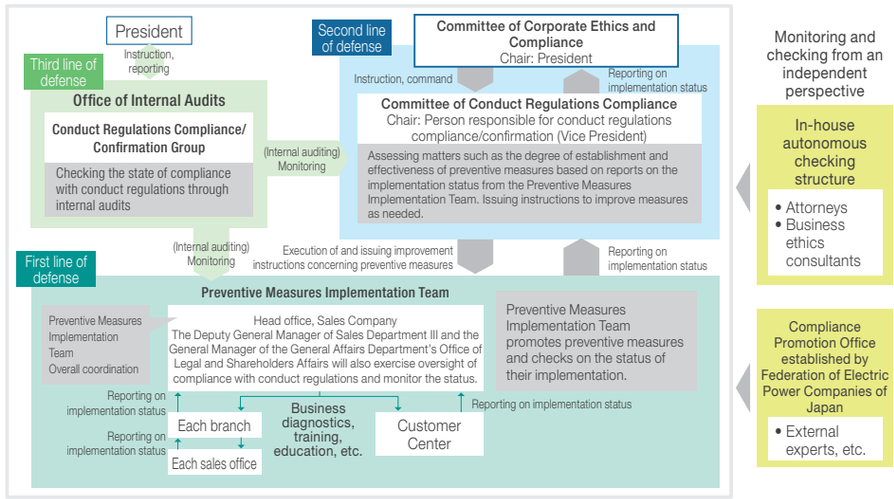
Lead time

The following four development issues in particular are expected to require considerable lead times in the timetable of processes leading to the elimination of joint use of computer systems. Note that we intend to accelerate the schedule as much as possible.

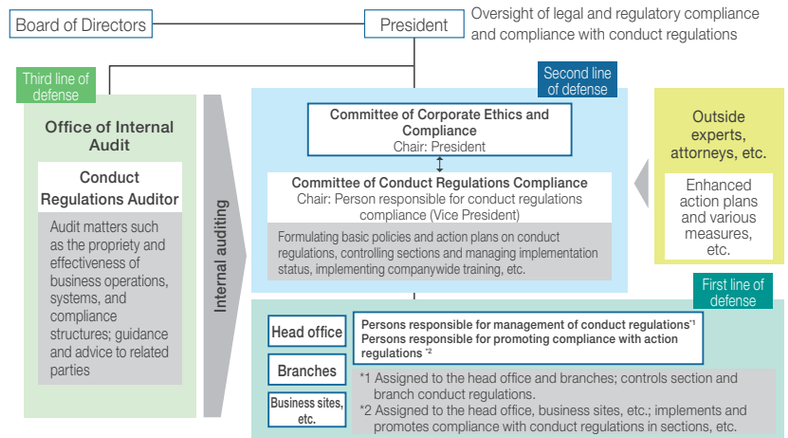
- Bloating and increased complexity of computer systems due to long-term use
- Lack of sufficient development engineers due to use of outdated programming languages
- Effects of close coupling of related internal systems
- Quality control in testing and migration due to handling of large volumes of data

Structural enhancements to prevent recurrence

Tohoku Electric Power



Tohoku Electric Power Network



In response to these incidents, Tohoku Electric Power Network has also analyzed the causes that need to be addressed and is enhancing internal controls systems through an approach based on three lines of defense, to ensure the efficacy of its compliance. It will strive to increase the effectiveness of these measures still further by developing action plans with input from outside experts, enhancing various measures, and other efforts.

Once again, Tohoku Electric Power Group would like to express its heartfelt regret for these incidents. We will implement various measures, including measures intended to change the awareness and behavior of individual employees, as well as implement new operating rules, to assure such incidents do not recur. We are committed to regaining the trust of all of our stakeholders through initiating comprehensive preventive measures and efforts to achieve compliance with laws, regulations, and ethical standards.

Chapter
01

A Value Creation Story

Value Creation Process

Input

Financial capital
- Total assets (consolidated): 5,211.9 billion yen

Production capital
Full range of organizations and facilities
- Group companies: 77
- Major power generating facilities: 253 facilities, 17.39 GW
- Total length of transmission facilities: 15,506 km
- Total length of distribution facilities: 149,517 km
- Capital investment: 325.0 billion yen

Intellectual capital
Knowledge, know-how, and technological capabilities in the power business
- Power generation operation technologies
- Power grid operation and control technologies
- Capacity to respond to disasters

Human capital
A wealth of professional human resources
- Group employees: 24,528
- Development costs per employee: 103,000 yen
- DX literacy human resources: 2,000*1

Natural capital
- The abundant natural environments within the six Tohoku prefectures and Niigata Prefecture
- Wind, hydroelectric, solar, geothermal, wood biomass

Social and community capital
Building relationships of trust with stakeholders

Customers	Relationships characterized by trust with customers based on stable supply of electricity, etc.
Communities	Strong ties to local communities based on the provision of solutions to community challenges, etc.
Shareholders, investors	Relationships characterized by trust built up through proactive IR activities
Business partners	Strong cooperative ties based on fair and impartial trade activities
Employees	A positive, vital company culture based on respect for individuals

Business Model (business activities)

Deploying efforts targeting solutions for materiality topics and earnings in each business

Power Supply Business

Power Generation, Wholesaling (P30, P38)


Fuel Procurement


Power Generation


Market Trading

Value chain optimization

- Power generated: 57,934 GWh

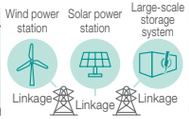
Renewable Energy (P34)

Promoting new development and improving the performance of existing power generation facilities

- New renewable energy development: 650 MW*2

Power Transmission and Distribution (P41)


Ensuring stable supplies



Building next generation networks to expand use of renewables


New business and growing power demand

- Developing resilient social infrastructures
- Renewable energy network capacity: approx. 20 GW

Smart Society Building Business (P44)

Next-generation energy services

Electricity + services

New domains

Promoting various initiatives in three domains

- Business/service contracts: cumulative total of 43 (FY2022)

Sustainability priorities (materiality topics)

Taking on the Challenge of Carbon Neutrality	Establishing a recycling-based society
Conserving biodiversity	Realizing safe, comfortable, secure communities and ways of life
Developing resilient social infrastructures	Creating workplaces in which diverse human resources can work with a sense of vitality
Respect for the human rights of diverse stakeholders	Sound and transparent corporate management

Our motto since the company's founding: **The prosperity of the Tohoku region is essential to our own growth.**

Tohoku Electric Power Group's Management Philosophy: Prosper with Local Communities

Tohoku Electric Power Group Slogan: *Yori, Sou, Chikara*

Output

Tohoku Electric Power Group's vision

Increasing corporate value over the medium to long term and contributing to sustainable progress throughout society

SUSTAINABLE DEVELOPMENT GOALS

2030
Aiming to realize a smart society, starting in Tohoku

よりそうnext
Targeting a smart society, starting in Tohoku

P17

2050
Achieving carbon neutrality by 2050

P20

Outcomes

Main impacts on capital / value provided to stakeholders

● Internal outcomes ★ External outcomes

Financial capital
- ● Increasing capacity to generate cash flow (consolidated cash income of 320 billion yen or more in FY2024)
- ● Maintaining financial discipline, securing financial soundness

Production capital
- ● Decarbonizing power sources (e.g., renewable energy development target of 2,000 MW)
- ● Advanced equipment operation based on digital technologies

Intellectual capital
- ● Further enhancing our capacity to respond to disasters
- ● Accumulating knowledge assets through technological development and R&D
- ● New business creation through open innovation

Human capital
- ● Improving employee morale ● Promoting diversity
- ● Building a corporate culture that puts safety first
- ● Assigning and developing human resources to support business model transformation

Natural capital
- ★ Controlling greenhouse gas emissions
- ★ Controlling environmental impact in areas such as air pollution and waste generation

Social and community capital

Customers	★ Providing services to meet customer needs
Communities	★ Solutions to social challenges and sustained growth in the six Tohoku prefectures and Niigata Prefecture
Shareholders, investors	★ Stable returns to shareholders
Business partners	★ Building relationships of trust through free and fair transactions
Employees	● Building positive, stimulating working environments

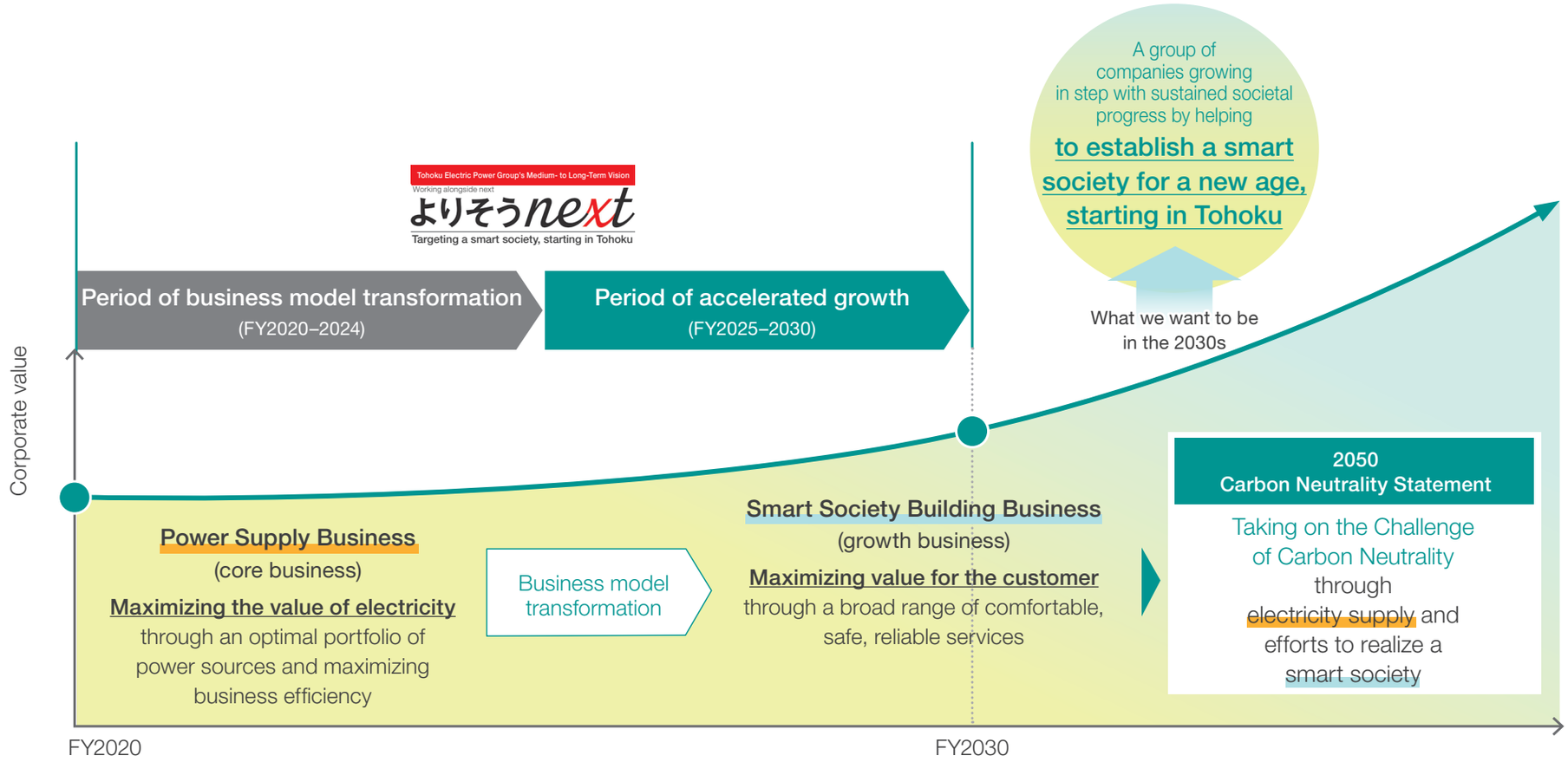
*1 By FY2025 *2 Assuming commercialization of all development projects

Realization of the Tohoku Electric Power Group's Medium- to Long-Term Vision "Working alongside next"

Realization of the Tohoku Electric Power Group's Medium- to Long-Term Vision "Working alongside next"

Based on our awareness that failing to innovate and proactively take on new challenges during the current environment of dramatic transformations in society and electricity supply and demand structures would make it difficult to fulfill the Group's raison d'etre of seeking co-prosperity with local communities and realizing sustained growth alongside society, the Tohoku Electric Power Group released its Medium- to Long-Term Vision, "Working alongside next" in February 2020.

Striving to achieve the Group's ideal vision by the 2030s —"realizing a smart society, starting in Tohoku"—as identified in Working alongside next vision, we are advancing structural reforms in the Power Supply Business and moving toward swiftly achieving profitability in the Smart Society Building Business. Through these two businesses, we will also tackle the challenge of carbon neutrality.



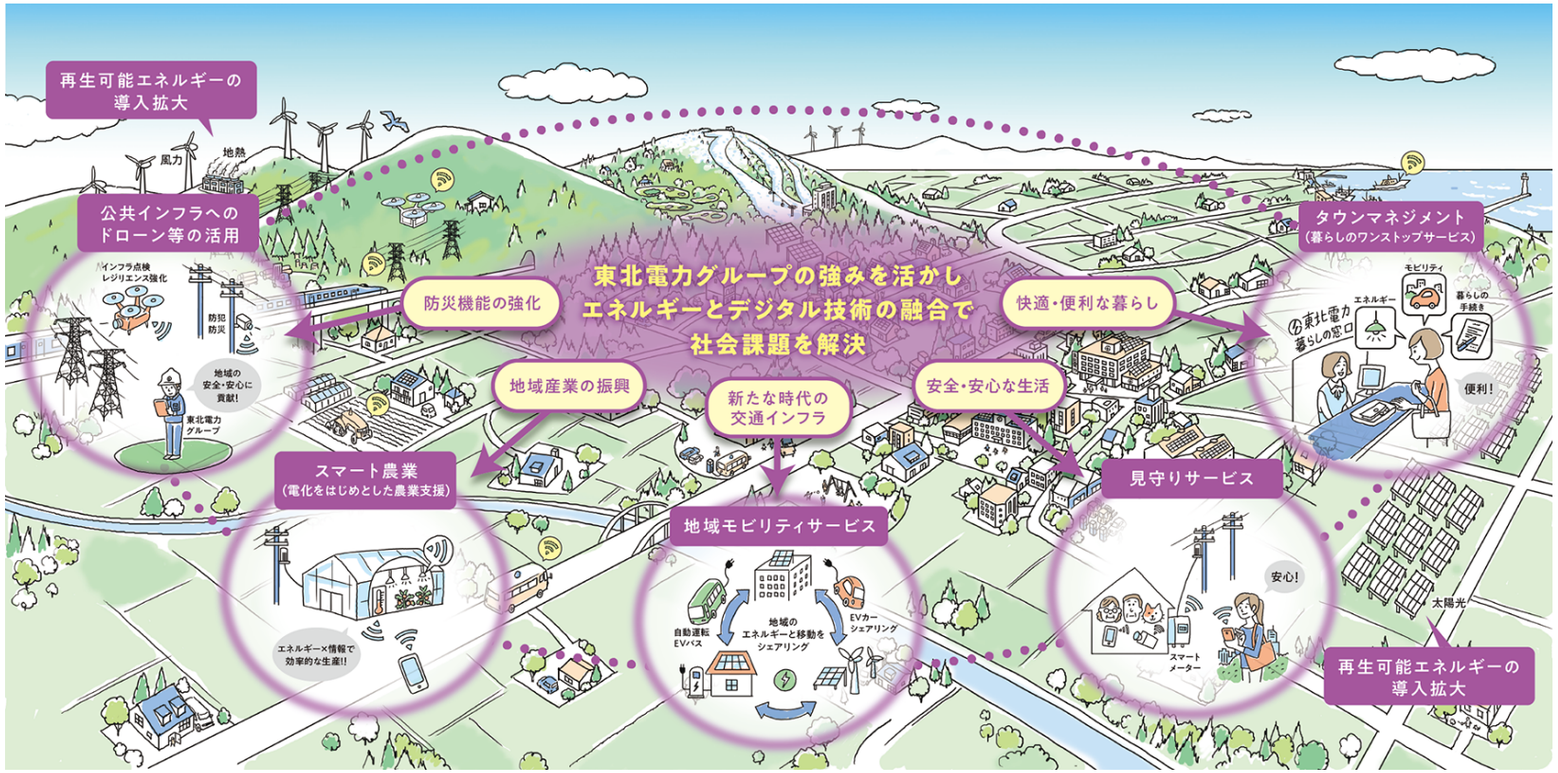
The smart society envisioned by Tohoku Electric Power

In the six Tohoku prefectures and in Niigata Prefecture, where the Tohoku Electric Power Group's businesses are based, shrinking populations and an aging society resulting from low birth rates is proceeding at a faster pace than in other regions. As a result, wide-ranging social issues are expected to emerge in the future, including transportation, education, and welfare. Among related issues, the Group considers the following issues as important: effective utilization of energy in the community, consideration for the environment, advancement of digitization, securing safety and peace of mind, making optimal use of diverse human resources, realizing a sharing economy, expanding flows of non-resident people, rebuilding social infrastructures, and building a transportation infrastructure for the new era.

Smart society building business refers to those businesses that can identify and create solutions to the abovementioned social issues through next generation digital technologies and innovations, to enable residents to live in comfort and safety, and with peace of mind without conscious concern over each of the individual services used.

Illustration of Smart Society Building Business

A vision of the region's future reflecting Tohoku's natural abundance: Comfort, safety, and convenience for adults and children alike



Investment in growth fields, future business development

As we move forward to realize the Medium- to Long-Term Vision "Working alongside next," we regard the renewable energy business, including power transmission grid enhancements, and the smart society building business as growth areas over the medium to long term. We will strive to expand these business areas and achieve profitability in a timely manner by investing approximately 400 billion yen through roughly 2030.

Investment in growth

Growth businesses

	Investment through 2030	Major initiatives	Effects, returns (targets)
Developing renewable energy power sources	More than 100 billion yen	■ Enhancing renewable energy business promotion structures ■ Accelerating new development of 2,000 MW through means including strengthening in-house development and expanding development areas ■ Maintaining and expanding kWh capacity through means including thorough renovation of aging hydroelectric and geothermal facilities ■ Deploying operations and maintenance (O&M*2) businesses through Tohoku Electric Power Renewable Energy Service	(FY2030) ■ **Consolidated cash income of approx. 20 billion yen**
Investment in renewable energy networks*1	Approx. 200 billion yen	■ Grid capacity expansion (enhancements of connecting lines and trunk lines) ■ Effective use of existing grid (e.g., N-1 generation control system, addressing congestion) ■ Securing adaptability and advancing adjustment methods (improving power generation forecasts, responding to the supply-demand adjustment market) ■ Adopting next-generation devices and smart meters to the power distribution grid ■ Optimal demand-supply controls through renewable energy, storage cells, EMS, etc.	■ **Decarbonization** ■ **Continuous, stable supply** ■ **Grid optimization**
Smart Society Building Business	Approx. 100 billion yen	■ Tohoku EPCO Frontier: Offering plans bundling electricity with services and various services to enrich people's lives ■ Tohoku EPCO Solar e Charge: Offering services combining solar power with storage cells ■ VPP business: Developing services in aggregation of renewable energy and other areas ■ Community project, smart city plan ■ Support for comfortable living, sustainable agriculture, etc.	(FY2030) ■ **Net sales of approx. 100 billion yen*3** ■ **Consolidated cash income of approx. 20 billion yen*3**

*1 Investments during first regulatory period (2023–2027) of the new wheeling charge system *2 Operations & Maintenance *3 Not including electricity sales

Tohoku Electric Power Group Carbon Neutral Challenge 2050

Carbon Neutral Challenge 2050

In March 2021, the Tohoku Electric Power Group launched the Tohoku Electric Power Group Carbon Neutral Challenge 2050, a roadmap to carbon neutrality by 2050. Based on this roadmap, we will accelerate CO_2 emissions reductions based on three main pillars: maximum use of renewable energy and nuclear power; decarbonization of thermal power sources; and electrification and realization of a smart society.

As an interim target on the path to carbon neutrality by 2050, we are striving to halve CO_2 emissions from FY2013 by FY2030 based on practical initiatives undertaken in line with the three main pillars.

Roadmap to carbon neutrality ▶ P56

The Tohoku Electric Power Group will take on the challenge of achieving carbon neutrality by 2050 based on the major prerequisite of securing S+3E

1 Maximum use of renewable energy and nuclear power

Renewable energy

- Accelerating new development to achieve a target of 2,000 MW
- Maintaining and growing generating capacity of existing sources

Nuclear power

- Swift resumption of operation, subsequent safe operations, increasing utilization

2 Decarbonization of thermal power

Coal-fired thermal power

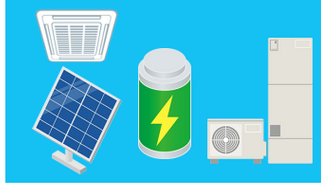
- Decarbonization through use of biomass and ammonia

LNG-fired thermal power

- Decarbonization through use of hydrogen

Phasing out inefficient power sources, replacement with high efficiency sources, and considering CCUS

3 Electrification and realization of a smart society



Electrification

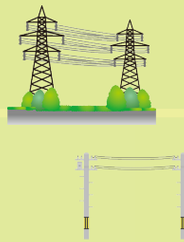
- Proposing smart electric lifestyles, expanding domains of electrification (to transport, industrial, and other fields)

Next-generation energy

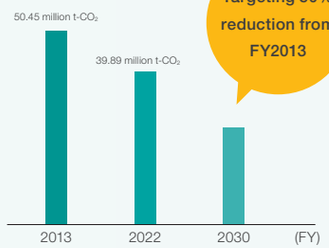
- Expanding distributed power source services, such as home solar and battery equipment and corporate PPAs
- Providing distributed energy resource services using VPP technologies
- Providing energy management solutions

Power network advances

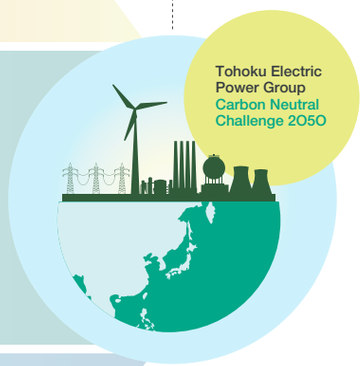
- Grid development and operational enhancements to boost use of renewable energy



By FY2030, to make progress toward carbon neutrality, we will seek to halve CO_2 emissions from our FY2013 figure.



Targeting 50% reduction from FY2013



* Previously, we reported CO_2 emissions in the retail electricity business. However, with our participation in Phase 1 of the GX League, which focuses on CO_2 emissions on a power generation basis, we have switched to reporting CO_2 emissions on a power generation basis.

Sustainability Initiatives

Positioning sustainability as the core of management under its Sustainability Policy, the Tohoku Electric Power Group has identified the priority sustainability topics (materiality topics) we must address to strengthen corporate value over the medium to long term and to contribute to the sustained progress of society as a whole.

By tackling the materiality topics, realizing "Working alongside next," the Tohoku Electric Power Group's Medium- to Long-Term Vision and taking on the challenge of achieving the goals of the Tohoku Electric Power Group Carbon Neutral Challenge 2050, we will help achieve the targets of the Sustainable Development Goals (SDGs) and co-create both social and corporate value together with our stakeholders, into future generations.

Tohoku Electric Power Group Sustainability Policy

The Tohoku Electric Power Group proactively promotes sustainability through means including realization of the Group's "Working along next" Medium- to Long-Term Vision and taking on our Carbon Neutral Challenge 2050.

Drawing on our Management Philosophy of Prospering with Local Communities and the Group Slogan Yori, Sou, Chikara (The Strength to Work Alongside), the Tohoku Electric Power Group's concept of sustainability calls for the Group to work as a cohesive, united team alongside customers and communities to realize a smart society. The Group will provide energy-related services that contribute to growing corporate value over the medium to long term and to the sustainable progress of society as a whole.

Based on the goal of fulfilling its CSRs, the Tohoku Electric Power Group will demonstrate its overall strengths through sincere and fair business activities in accordance with the Tohoku Electric Power Group Code of Conduct while drawing on the unique characteristics of individual group companies, thereby providing powerful support for the value chain of business activities and meeting the expectations of its valuable stakeholders.

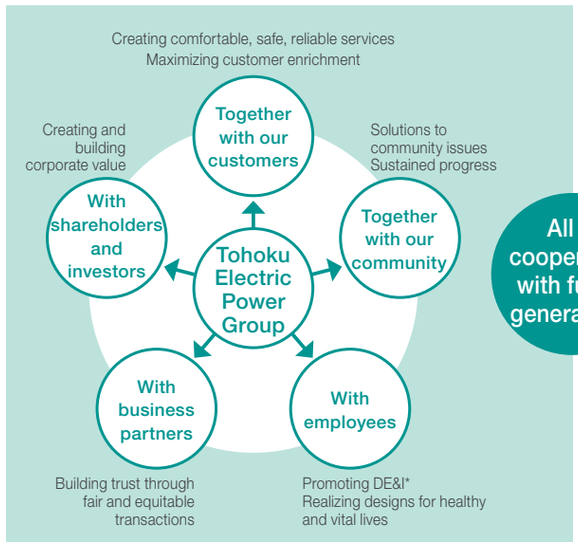
Sustainability materiality topics

- Taking on the challenge of Carbon Neutrality
- Establishing a recycling-based society
- Conserving biodiversity
- Realizing safe, comfortable, secure communities and ways of life
- Developing resilient social infrastructure
- Creating workplaces in which diverse human resources can work with a sense of vitality
- Respect for the human rights of diverse stakeholders
- Sound and transparent corporate management

Tohoku Electric Power Group's Medium- to Long-Term Vision
Working alongside next
よりそうnext
Targeting a smart society, starting in Tohoku

Tohoku Electric Power Group Carbon Neutral Challenge 2050

Value co-created with stakeholders



All in cooperation with future generations

Helping to achieve the SDGs

SUSTAINABLE DEVELOPMENT GOALS

* Diversity, equity, and inclusion

Sustainability Priorities (Materiality Topics)

Sustainability priority (materiality topic) identification process

Seeing the various issues related to the sustainability of society not only as risks but also as opportunities for the sustained growth of both the Group and society as a whole, the Tohoku Electric Power Group is taking on the challenges of realizing Working alongside next, the Tohoku Electric Power Group's Medium- to Long-Term Vision and of the Tohoku Electric Power Group Carbon Neutral Challenge 2050.

Recognizing the importance of clearly identifying specific priorities (materiality topics) in order to promote sustainability through realizing the vision of Working alongside next, the Group has identified eight sustainability priorities through the following process, based on deliberations in the Sustainability Promotion Council and with reference to the recommendations of outside experts. These priorities will be monitored from now on through deliberations in the Sustainability Promotion Council and the Board of Directors and used to steer management's course toward realization of the vision of Working alongside next.

Monitoring reflects various factors such as the recommendations of the Sustainability Advisory Board, an advisory body to the director responsible for sustainability, and the results of dialogue with stakeholders

Step 1 Choosing topics

To choose topics related to the businesses of the Tohoku Electric Power Group and its stakeholders, the current states of both external and internal environmental conditions were analyzed. Based on the findings of such analysis, a list was prepared of 63 topics to be considered.

Step 2 Assessing the topics

In cooperation with related internal sections, the topics chosen in Step 1 were assessed along the two axes of their importance to the Tohoku Electric Power Group and their importance to stakeholders. These assessments also were discussed in the Sustainability Promotion Council, and the views of management were reflected in the assessment process as well. On the subject of importance to stakeholders, comments from five classes of stakeholders considered important to the Group—customers, local communities, shareholders and investors, trading partners, and employees—were collected through means such as surveys and dialogues for use in the assessment process.
Based on the findings of this process, particularly important topics were narrowed down and grouped. Then, a list of proposed priorities consisting of 29 individual topics and eight materiality topics was prepared.

Step 3 Validation

The proposed priorities prepared in Step 2 were validated from the perspective of stakeholders through means including exchange of opinions with outside experts.

[Major opinions of outside experts]

- Sustainability priorities should be expressed more from the perspective of stakeholders.
- In promoting sustainability initiatives, it is important to utilize digital transformation (DX) and promote diversity, centered on promoting women in the workplace, and to participate actively in domestic and international initiatives and other activities.
- There also is a need for consideration of human rights throughout the entire supply chain, which is a subject of increasing interest in society.

Step 4 Identifying sustainability priorities (materiality topics)

Based on the results of Step 3, final proposed materiality topics were discussed in the Sustainability Promotion Council and then decided on by the Board of Directors. From now on, together with setting targets and key performance indicators (KPIs) regarding the identified materiality topics and monitoring these, the materiality topics will be reviewed as necessary in light of factors such as changes to the business environment and social issues.

Reviewing sustainability priorities (materiality topics) as necessary in light of monitoring results and other information

Guidelines, frameworks, and other materials referenced

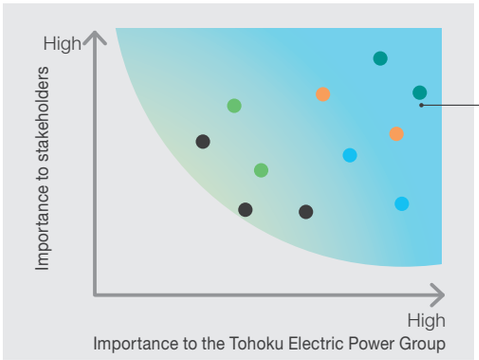
External environment

- International frameworks (e.g., Sustainable Development Goals (SDGs), Global Reporting Initiative (GRI) Standards, Sustainability Accounting Standards Board (SASB) frameworks, ISO 26000)
- Items used in assessments by ESG assessment agencies
- Japanese government's Green Growth Strategy
- Social and regional issues in the Tohoku and Niigata region
- Industrywide topics, etc.

Internal environment

- The Tohoku Electric Power Group's management philosophy, policies, Medium- to Long-Term Vision, medium-term plans, etc.

Overview of assessment and grouping along two axes



Relationship between identification of sustainability priorities and SDGs

Category	Sustainability priority (materiality topic)	Relevant SDGs
E	Taking on the Challenge of Carbon Neutrality	
	Establishing a recycling-based society	
	Conserving biodiversity	
S	Realizing safe, comfortable, secure communities and ways of life	
	Developing resilient social infrastructure	
	Creating workplaces in which diverse human resources can work with a sense of vitality	
	Respect for the human rights of diverse stakeholders	
G	Sound and transparent corporate management	

Risks and opportunities related to sustainability priorities (materiality topics)

	Materiality topic	Related SDGs	Major risks associated with failure to address	Major opportunities potentially created by addressing
E	Taking on the Challenge of Carbon Neutrality		■ Increasing costs from stricter regulations, loss of society's trust ■ Inability to grow market share in decentralized power sources and declining market value of the Company's conventional power sources ■ Falling share prices due to accelerating divestment from thermal power and rising fundraising costs ■ Damage to facilities and power failures due to increasingly severe weather events ■ Decreased hydroelectric power generation due to changing precipitation patterns	■ Increased demand for electricity due to expanded use of EVs and other electrification ■ Falling fuel costs due to restricted operation of thermal power ■ Contributions to local economy (e.g., employment) ■ Creation of new business opportunities
	Establishing a recycling-based society		■ Rising waste treatment costs ■ Reputation risk due to negative impact on ecosystems and extinction of rare species ■ Rising fundraising costs, divestment due to lower ESG evaluation	■ Improved power generating efficiency of hydroelectric power due to effective use of water resources ■ Lower costs due to effective use of waste and reduced waste generation ■ Earning the trust of stakeholders
	Conserving biodiversity			
S	Realizing safe, comfortable, secure communities and ways of life		■ Degradation of revenue foundations due to depopulation and deindustrialization ■ Loss of business opportunities due to failure to adapt to changing societal needs ■ Decreased demand due to lower customer satisfaction	■ Strengthening earnings and customer satisfaction through the development and deployment of services ■ Population growth due to regional vitalization and industrial promotion (market growth) ■ Securing new business opportunities by identifying customer needs
	Developing resilient social infrastructures		■ Loss of society's trust due to lengthening power failures following large-scale disasters ■ Loss of business opportunities due to failure to adapt to changing societal needs ■ Accelerating depopulation as communities become less attractive and public service levels decline	■ Maintaining and strengthening societal trust through rapid recovery from power failures ■ Preventing depopulation through regional vitalization and industrial promotion (market growth) in Tohoku and Niigata ■ Maintaining and expanding the customer base by earning stakeholder trust
	Creating workplaces in which diverse human resources can work with a sense of vitality		■ Increasing difficulty in securing human resources ■ Increasing separation, decreased job motivation (productivity), lower performance ■ Loss of business opportunities through decreased ability to meet customer needs	■ Securing human resources, preventing separation ■ Enhancing ability to adapt to increasingly diverse customer needs ■ Increasing earnings through improving performance and enhancing competitive strengths
	Respect for the human rights of diverse stakeholders		■ Accidents involving fatalities or serious injuries ■ Litigation risk and worsening reputation ■ Growing demand loss due to impaired trust among stakeholders or brand damage	■ Consideration for employee human rights by ensuring worker safety ■ Securing human resources, preventing separation ■ Maintaining and expanding customer base through earning trust from stakeholders
G	Sound and transparent corporate management		■ Growing demand loss due to impaired trust among stakeholders or brand damage ■ Falling stock prices, increased difficulty of raising funds, divestment ■ Decreased competitiveness due to failure to ascertain trends in soft law and delays in responding thereto	■ Maintaining and expanding customer base through earning trust from stakeholders ■ Beneficial fundraising through improved ESG evaluation ■ Rising stock prices

Materiality targets and metrics

	Materiality topic	Key topics	Major targets and metrics	Target fiscal year/scope*1	FY2022 results	Related page(s)
E	Taking on the Challenge of Carbon Neutrality	■ Rapid resumption of stable operation of nuclear power stations based on a safety-first approach ■ Increasing adoption of renewable energy ■ Migration toward decarbonization of thermal power ■ Promoting energy conservation solutions and electrification alongside customers ■ Promoting decarbonization technological development and innovations	Achieving carbon neutrality	2050/G	■ CO_2 emissions: 39.89 million t-CO_2 (–20.9% vs. FY2013)	P20 P55
			Targeting reduction in CO_2 emissions to one-half actual level in FY2013 (50.45 million t-CO_2*2)	2030/G		
	Establishing a recycling-based society	■ Controlling waste generation and using resources effectively	Recycling at least 90% of all industrial waste	Annual/TD & TN	■ 87.6%	P67
			Wherever possible, choosing products that use fewer plastics or substitute materials Maintaining or increasing rates of recycling plastic waste	Annual/TD & TN	■ Plastic waste generated: 1,006 t ■ Plastic waste recycling rate: 84.2%	
	Conserving biodiversity	■ Local environmental preservation	Avoiding or minimizing the impact on biodiversity of business activities	Annual/TD & TN	■ Implementing wetlands surveys and maintenance management at the site of the Higashidori Nuclear Power Station; confirming the conservation of wetlands environments ■ Confirming based on the results of follow-up surveys the preservation of flora and fauna ecosystems as planned in the project to replace the Shin-Sendai thermal power station, reporting the findings to the Sendai City Environmental Impact Assessment Committee ■ Collecting information on rare plants and animals when planning facilities, and determining and implementing necessary preservation measures	P68
S	Realizing safe, comfortable, secure communities and ways of life	■ Promoting the Smart Society Building Business to utilize digital technologies to help find solutions to community challenges ■ Pursuing customer satisfaction ■ Co-creation of vital local communities in Tohoku and Niigata	Providing services with high added value to contribute to solutions to social challenges, etc.: number of businesses and services	2030/G	■ 43 (cumulative total releases)	P44
			Achieving a share of 66.0% for deregulated electricity rate service plans introduced to provide new value and boost customer satisfaction	2025/G	■ Deregulated electricity rate service plans (share in kWh): 48.4%	
			1,500 Yori, Sou Connect Tohoku users	2024/TOHKNet	■ 1,087 users	
	Developing resilient social infrastructures	■ Stable energy supplies ■ Responding rapidly to large-scale disasters ■ Contributing to more advanced social infrastructure through our technologies	Maintaining the quality of electricity: average number and duration of power failures per household	Annual/TN	■ 0.11 power failures, 24 min.	P41 P75
			Maintaining stable supplies through systematic repairs of aging facilities ■ Pylons: 591 pylons/5 years ■ Poles: 95,660 poles/5 years ■ Overhead power lines: 11,197 km/5 years ■ Underground cables: 428 km/5 years	2027/TN	■ (Efforts began in FY2023)	
			Enhancing resilience to major disasters (emergency drills conducted at least once a year)	Annual/TD & TN	■ Major drills conducted at all offices	

*1 TD: Tohoku Electric Power; TN: Tohoku Electric Power Network; G: Tohoku Electric Power Group *2 Previously, we reported CO_2 emissions in the retail electricity business. However, with our participation in Phase 1 of the GX League, which focuses on CO_2 emissions on a power generation basis, we have switched to reporting CO_2 emissions on a power generation basis.

	Materiality topic	Key topics	Major targets and metrics	Target fiscal year/scope*1	FY2022 results	Related page(s)
S	Creating workplaces in which diverse human resources can work with a sense of vitality	■ Enhancement of human capital to support business model transformation ■ Implementing work-style reforms through means such as use of digital technologies ■ Promoting diversity, equity, inclusion ■ Promoting health management	Training 2000 DX literacy human resources	2025/TD & TN	■ (Efforts began in FY2023)	P69 Sustainability Report P46 P55
			Achieving a rate of at least 80% of employees taking ordinary leave (including hourly leave)	2024/TD & TN	■ TD: 77.1%; TN: 83.0%	
			At least doubling the number of women managers (vs. the start of FY2019)	2024/TD & TN	■ TD: 1.48-fold; TN: 1.11-fold	
			Achieving a rate of at least 5.0% of managers being women	2035/TD & TN	■ 2.46%	
			Complying with statutory percentage of employees with disabilities	Annual/TD, TN & TFP	■ 2.48%	
			Achieving a percentage of no more than 20.0% of employees who are smokers	2024/TD & TN	■ 20.9%	
	Respect for the human rights of diverse stakeholders	■ Ensuring worker safety ■ Preventing discrimination and harassment ■ Ensuring public safety and consumer safety	Zero fatal accidents (including subcontractors, contracted work, etc.)	Annual/G	■ 2	P73 Sustainability Report P40 P43 P53
			Responding appropriately to consultation on harassment: number of consultations with hotline	Annual/TD & TN	■ 25	
			Zero power accidents affecting the public (due to facility defects)	Annual/TD & TN	■ 0	
G	Sound and transparent corporate management	■ Securing sound foundations for revenues and finances ■ Thorough adherence to corporate ethics and compliance ■ Risk management and response ■ Ensuring information security ■ Protecting and utilizing intellectual property ■ Risk management in the supply chain ■ Expanding two-way communication with stakeholders ■ Enhancing partnerships ■ Developing an effective governance structure	Consolidated cash income of at least 320.0 billion yen	2024/G	■ 136.6 billion yen	P27
			Thorough business ethics and compliance: number of serious compliance violations, number of consultations with whistleblowing hotline	Annual/G	■ Number of serious compliance violations: 2 ■ Number of consultations with whistleblowing hotline: 148	P13 Sustainability Report P73
			Appropriate management of and response to important risks identified based on integrated risk management policy: controlling value at risk to keep it within the range of consolidated equity capital	Annual/G	■ Under control (value at risk / consolidated equity capital less than 1)	P77
			Maintenance and promotion of information security management: number of subjects for which information security has been confirmed	Annual/G	■ Number of subjects confirmed (number of those with whom we had interviews during visits): 206 (38)	Sustainability Report P72
			Compliance with Protection of IP rights mandate under the Group Code of Conduct: number of patents held	Annual/TD & TN	■ 293 patents ■ 4 utility models ■ 12 designs ■ 102 trademarks	P54
			100% of major trading partners surveyed	Annual/TD & TN	■ (Efforts began in FY2023)	Sustainability Report P41
			Proactive communication activities with stakeholders: number of social contribution activities	Annual/G	■ 922	P76
			Enhanced dialogue with shareholders and investors (including ESG): number of dialogues	Annual/TD	■ 24	P91
			Improving efficacy of Board of Directors (assessing the efficacy of the Board and making continual improvements based on the results)	Annual/TD	■ Surveys assessing efficacy have been undertaken continuously since FY2016, their results are reported to the Board, and improvements and other measures are implemented during the following fiscal year.	P84

*1 TD: Tohoku Electric Power; TN: Tohoku Electric Power Network; TFP: Tohoku Electric Power Friendly Partners; G: Tohoku Electric Power Group

(Source: Akita Offshore Wind Corporation)

Chapter 02

Toward the Working Alongside Next Vision

Financial Strategies

Financial targets

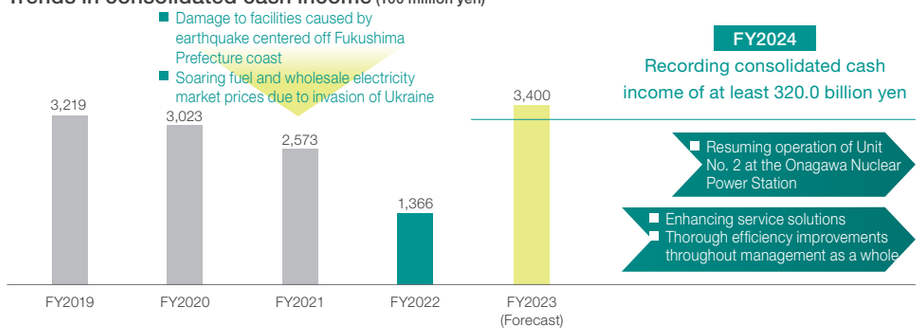
In addition to securing stable revenue through comprehensive enhancements in competitive strengths and structural reforms of our core power supply business, the Tohoku Electric Power Group will assume the challenge of business growth to help realize a smart society by strategically investing management resources into dramatically transforming our business model. Success in this endeavor will require generation of the funding (cash income) for investments in related initiatives. To increase our capacity to generate cash flow, we established the financial target (indicator) of consolidated cash income.

Consolidated cash income has remained low in recent years due to factors including COVID-19, earthquakes centered off the Fukushima Prefecture coast in two consecutive years, and Russia's invasion of Ukraine.

In FY2023, we expect to record consolidated cash income of approximately 340.0 billion yen, as a result of a sharp recovery in business performance spurred by electricity rate revisions in deregulated market segments from November 2022, measures to raise rates in regulated segments beginning in June 2023, improvements in overall management efficiency, and other initiatives.

In the future, in addition to developing long-term sustainable revenue foundations, including the resumption of operations at Unit No. 2 at the Onagawa Nuclear Power Station and other measures, we will continue to pursue efficiency improvements to achieve our FY2024 financial targets.

Trends in consolidated cash income (100 million yen)



Reference Consolidated cash income

To measure our capacity to generate the cash needed, we established consolidated cash income as a financial target. This includes non-cash expenses (i.e., depreciation and impairment of nuclear fuel) not included in accounting profit indicators such as ordinary income, as well as shares of gains or losses of entities accounted for by the equity method.

Consolidated cash income is calculated as follows:

Consolidated cash income = operating income + depreciation + amortization of nuclear fuel + share of profit of entities accounted for using equity method

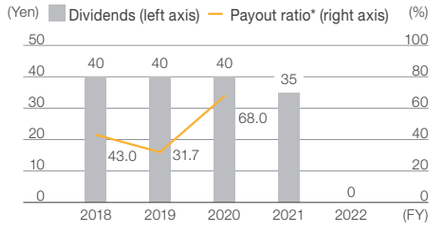
(Operating income does not include the effects of the time lag in the fuel cost adjustment system.)

Policy on returns to shareholders

Our policy calls for decisions on dividends that reflect comprehensive consideration of matters including financial results for the fiscal year and medium- to long-term revenue and expenditure projections, based on pursuing stable dividends.

Due to substantial losses and other factors, we will not pay interim or year-end dividends for FY2022.

As for dividends for FY2023, based on a comprehensive evaluation of factors including the need to make steady progress on efforts to improve equity capital, degraded due to substantial losses in the past two years, and reducing interest-bearing debt, in addition to business-performance forecasts for the current fiscal year, we plan to pay interim dividends of five yen/share and year-end dividends of 10 yen/share.



* No payout ratio is calculated for FY2021 and FY2022 due to the net losses recorded.

The thinking behind "Working alongside next," the Tohoku Electric Power Group's Medium- to Long-Term vision

Financial soundness	Returns to shareholders	Returns to shareholders
In addition to investing in the electricity business, including resumption of nuclear power station operation and renewable energy development, we will put interest-bearing debt to effective use through investments in growth businesses while monitoring our capacity to repay debts (flow) and our financial standing.	Steady returns based on consideration for stable dividends as well as matters such as resumption of operations at Unit No. 2 at Onagawa, progress on development of the smart society building business, and achievement of financial targets	We plan to improve returns on invested capital by monitoring returns on individual investments and groupwide capital efficiency, as well as by securing profitability in the power supply business and shifting resources to quickly achieve profitability in growth businesses.
FY2022 results Consolidated interest-bearing debt / cash income ratio: 22.5 Consolidated equity ratio: 10.5%	**FY2022 results** No interim or year-end dividends	**FY2022 results** ROIC: –3.5%
FY2023 forecasts* Consolidated interest-bearing debt / cash income ratio: approx. 9.8 Consolidated equity ratio: approx. 13.0%	**FY2023 forecasts*** Interim: 5 yen / year-end: 10 yen	**FY2023 forecasts*** ROIC: 4.0%

* Calculated based on performance forecasts announced July 31, 2023

Promoting Green/Transition Financing

We are currently promoting green/transition financing as part of efforts to achieve carbon neutrality by 2050. In FY2022, in addition to our existing green financing initiatives, we raised funds through transition financing for investments in power transmission and distribution networks and high efficiency thermal power stations.

We will maintain the course of optimal fundraising to achieve the goals of the Tohoku Electric Power Group Carbon Neutral Challenge 2050.

The following information includes the disclosures required in annual reports following the execution of green/transition financing. The first and second issuance of Tohoku Electric Power Green Bonds and green loans executed in FY2021 are not included below because their allocation was completed in FY2021, thus they are not subject to annual reporting requirements.

Overview of financing

Type	Lender (loans)/name (bonds)	Use of funds	Date executed
Green loans	1 Shinsei Bank, Ltd.*1	Construction costs for the Tamagawa Hydroelectric Power Station No. 2*2 (Yamagata Prefecture)	April 27, 2022
	2 Taiju Life Insurance Company Limited		February 27, 2023
	3 The Shonai Bank, Ltd.	Renovation costs for the Chojahara Hydroelectric Power Station*2 (Yamagata Prefecture)	November 29, 2022
Green bonds	4 Third Green Bonds	Three onshore wind power stations, four geothermal power stations	June 2, 2022
Transition loans	5 Development Bank of Japan Inc. 6 Mizuho Bank, Ltd. 7 Nippon Life Insurance Company 8 The Dai-ichi Life Insurance Company, Limited	Funding for improvements at the Joetsu Thermal Power Station Costs of improvements of the grid connecting Tohoku with Tokyo*3 and activities involving the process of acquiring power sources*3 in the northern Tohoku area	March 28, 2023
Transition bonds	9 First transition bonds 10 Second transition bonds	Funding for improvements at the Joetsu Thermal Power Station Costs of improvements of the grid connecting Tohoku with Tokyo and activities involving the bidding process of acquiring power sources in the northern Tohoku area Decommissioning of Harbor Units Nos. 1 and 2 at the Higashi-Niigata Thermal Power Station	March 9, 2023

*1 SBI Shinsei Bank, Limited at the time of loan execution *2 Power station developed and operated by Tohoku Sustainable & Renewable Energy Co. Inc.
*3 Included in the use of funds for 7 and 8

Assessment by external agencies

Our green/transition finance initiatives have been assessed and verified for compliance with various applicable standards (including GBP standards) by DNV Business Assurance Japan K.K., an independent agency

Allocation of funds raised through green finance*1 and environmental impact (as of March 31, 2022)

Funds raised	Amount allocated	Amount allocated to refinancing	Unallocated balance	Output of projects to which funds were allocated	Annual CO_2 emissions reductions*2 (FY2022)
1 Not disclosed	100%	0%	0%	14.6 MW (Tamagawa No. 2)	3,164 t
2 Not disclosed	100%	0%	0%		2,637 t
3 Not disclosed	100%	0%	0%	12.4 MW (Chojahara)	—
4 10.0 billion yen	10.0 billion yen	1.0 billion yen	0.0 billion yen	Onshore wind power: 127.6 MW/3 stations Geothermal: 207.2 MW/4 stations	457,960 t
Total 10.0 billion yen*3	10.0 billion yen*3	1.0 billion yen*3	0.0 billion yen*3	361.8 MW/9 stations	463,761 t

*1 Projects funds of which were allocated from each mode of financing and were operating steadily as of 2023.
*2 Method for calculating annual CO_2 emissions reductions: FY2022 annual power generated (MWh) × FY2022 CO_2 emissions factors (t-CO_2/MWh). Emissions reductions from all projects are estimated through prorating by the amount of funds allocated.
*3 Total excludes undisclosed amounts.

Allocation of funds raised through transition finance and environmental impact (as of March 31, 2022)

Funds raised	Amount allocated	Amount allocated to refinancing	Unallocated balance	Annual CO_2 emissions reductions (FY2022)*1
5 Not disclosed	100%	87%	0%	Not disclosed
6 Not disclosed	100%	90%	0%	Not disclosed
7 Not disclosed	100%	83%	0%	Not disclosed
8 5.0 billion yen	5.0 billion yen	3.5 billion yen	0%	22,668 t
9 10.0 billion yen	9.95 billion yen	8.0 billion yen	0.05 billion yen	45,335 t
10 5.0 billion yen	4.95 billion yen	3.0 billion yen	0.05 billion yen	22,668 t
Total*2 20.0 billion yen	19.9 billion yen	14.5 billion yen	0.1 billion yen	90,671 t

*1: Method for calculating annual CO_2 emissions reductions: facility utilization rate × 365 × 24 × difference in fuel consumption rate (Higashi-Niigata Thermal Power Station Unit No. 3 – Joetsu Thermal Power Station Unit No. 1) × calorific value of fuel × FY2022 CO_2 emissions factors, assuming replacement of power output from the Higashi-Niigata Thermal Power Station Unit No. 3 system (572 MW) with that from Joetsu Thermal Power Station Unit No. 1. Emissions reductions from all projects are estimated through prorating by the amount of funds allocated.
*2: Total excludes undisclosed amounts.

Details of transition projects

Use of funds	Details
Joetsu Thermal Power Station	Location: Joetsu, Niigata Prefecture Fuel used: LNG Power output: 572 MW FY2022 total output (at transmission point): 1,840 GWh Effects: Reduced fuel consumption and CO_2 emissions due to higher efficiency, etc.
Grid connecting Tohoku with Tokyo	Location: Tamura, Fukushima Prefecture, and elsewhere Construction began: 2022 Planned start of operation: 2027 Effects: Increased use of renewable energy through expanded transmission capacity to Tokyo (from 5.65 GW to 10.28 GW), etc.
Bidding process to aquire power sources in the northern Tohoku area	Location: Akita, Akita Prefecture Construction began: 2022 Target start of operation: 2032 Effects: Connection of 3.9 GW of renewable energy sources to the grid
Minato Units Nos. 1 and 2 at the Higashi-Niigata Thermal Power Station	Location: Seiro, Niigata Prefecture Fuel used: LNG Power output: 700 MW (total of Harbor Units Nos. 1 and 2) Date decommissioned: 2022

* Among projects to which funds were allocated, those in use are operating steadily. Work is proceeding steadily for those currently under construction or in the process of removal.

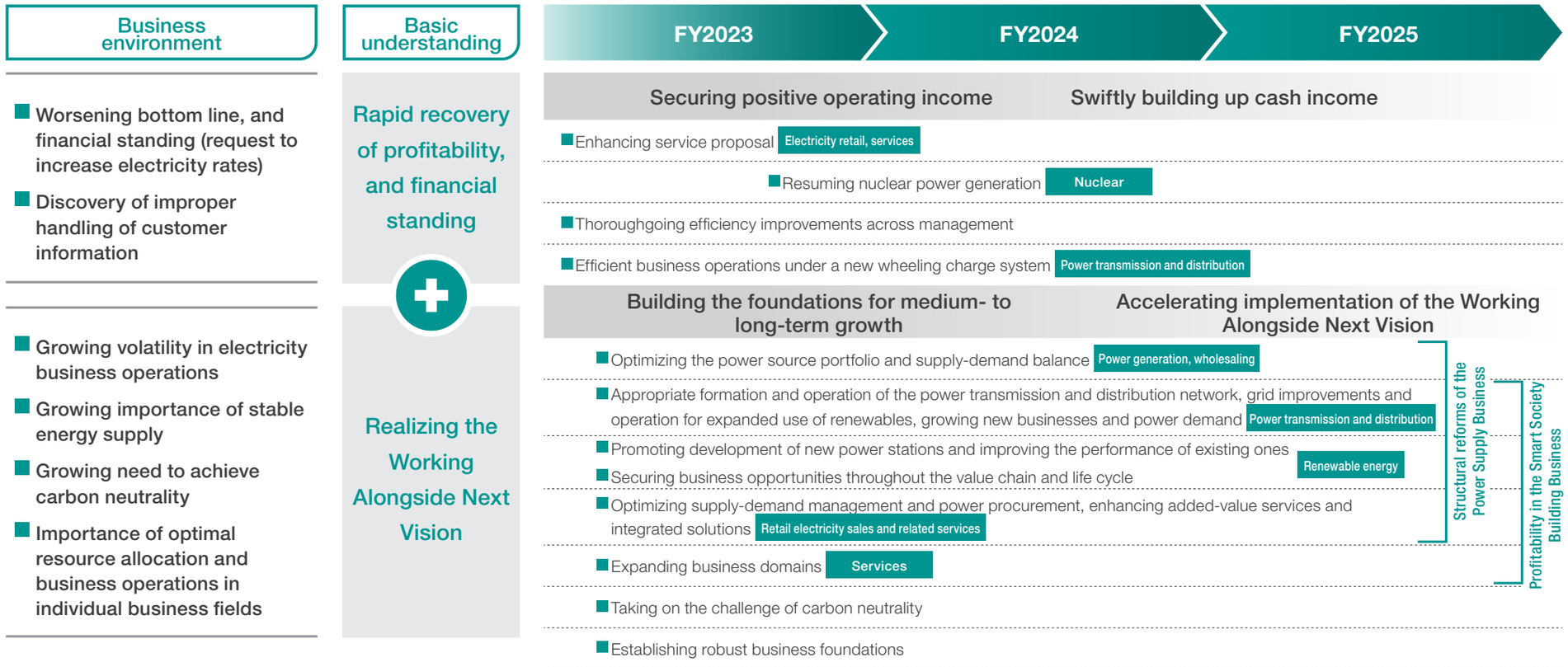
Overview of the Tohoku Electric Power Group's FY2023 Medium-Term Plan

Since formulating the Working Alongside Next Vision, the Tohoku Electric Power Group has generated steady progress toward its goals for both the Power Supply Business and the Smart Society Building Business. However, in terms of our finances and bottom line, both have been affected by the rising prices of fuel and power procurement since Russia's invasion of Ukraine, the effects of earthquakes off the Fukushima Prefecture coast in 2021 and 2022, and other factors.

In light of these conditions, the FY2023 Tohoku Electric Power Group Medium-Term Plan calls for enhancing the services proposed to help ease the burdens faced by customers, as well as enhancing products and services in fields other than electricity. In addition, we will make every effort with regard to safety measures for Unit No. 2 at the Onagawa Nuclear Power Station as we resume operation of nuclear power generation, which will help restore profitability and our financial standing, as well as help stabilize power supplies. Further, we will implement thoroughgoing companywide measures to improve efficiency while adapting appropriately and flexibly to the changing business environment.

Through these initiatives, we will secure positive operating income in FY2023 and rapidly accumulate earnings, thereby recovering our solid foundations of profitability, finances and management to achieve growth and operational stability. At the same time, we will strive to achieve structural reforms in the Power Supply Business and to generate revenue from the Smart Society Building Business. In this way, we will establish the foundations for growth for the medium to long term and accelerate our efforts to realize the Working Alongside Next Vision.

We will set forth on a new growth path, as all companies and employees throughout the Tohoku Electric Power Group join hands to implement this Medium-Term Plan.



Fuel Procurement, Thermal Power Generation, Wholesaling

Business environment

Opportunities

- Growing demand for carbon neutrality
- Capturing new markets to secure revenue opportunities

Risks

- Increasing volatility attributable to rising fuel prices and electricity market prices
- Prohibition of distinctions between internal and external transactions in wholesale power sales

Strengths

- Efforts to optimize supply and demand using trading skills and markets
- Distinction-free wholesale sales through wholesale bidding

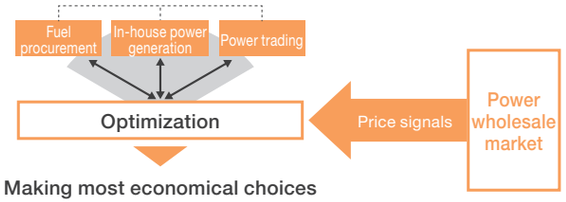
Courses of action for responses

Major initiatives

We will promote the following initiatives to optimize our power source portfolio, with the goal of achieving solid competitive strengths and carbon neutrality while continuing to prioritize safety:

- Cutting fuel procurement costs while improving resilience and stability
- Replacing and decarbonizing thermal power to reflect future roles and regulations
- More efficient maintenance via state-of-the-art digital technologies
- Optimization throughout the value chain of fuel procurement, power generation, and wholesale power sales
- Profit maximization and distinction-free wholesale sales by implementing wholesale bidding

How to generate profit



Pursuing stable fuel procurement and economic performance over the medium to long term

Tohoku Electric Power will seek to achieve further improvements in economic performance, flexibility, and stability by continuing to make progress on optimizing its procurement portfolio as a whole through means including diversifying pricing structures, decentralizing procurement sources in light of structural changes in fuel procurement markets, and use of derivatives, thereby reducing fuel costs over the medium to long term.

In addition, using the trading functions of Group member Tohoku EPCO Energy Trading, we will strive to enable higher profitability across the entire value chain, from fuel procurement through power generation and wholesaling by means such as hedging against potential future price hikes.

As part of efforts to achieve the goals of Tohoku Electric Power Group Carbon Neutral Challenge 2050, we are proceeding with studies to establish procurement schemes for new fuels (e.g., hydrogen, ammonia, and black pellets) that will help decarbonize thermal power generation.

Tohoku Electric Power established a representative office in Singapore in April 2022 to enhance functions for researching international energy trends. These efforts will help to realize carbon neutrality through utilization of renewables and carbon-neutral fuels, while also improving our flexibility and economic performance in fuel procurement, centered on LNG.

Efforts to reduce fuel costs

- Procurement of low-grade coal (e.g., high ash content coal, subbituminous coal, and spec coal)*
- Increasing procurement from nearby sources (coal)
- Enhancing LNG procurement and sales negotiating functions based on the representative office in Singapore

Efforts to increase flexibility in fuel procurement

- Securing quantitative flexibility to respond to supply-demand volatility (coal, LNG)
- Optimizing procurement volumes using provisions for change of destination (LNG)
- Enhancing alliances with buyers in Japan (LNG)

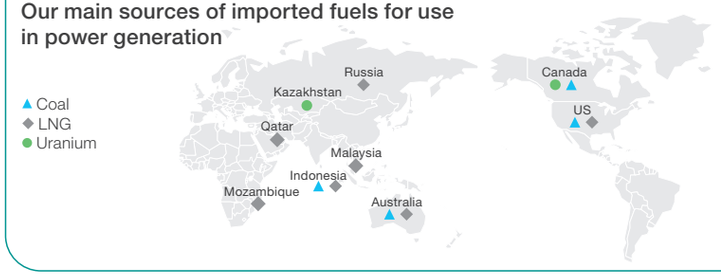
* High ash content coal: coal of higher than standard ash content but of higher overall economy in consideration of matters such as ash processing costs
Subbituminous coal: coal with lower thermal value and ash content than standard coal
Spec coal: coal designated by specifications (calorific value, moisture content, ash content, etc.) suitable for use at our coal-fired thermal power plants, without consideration for coal brand

Responding to risks of cutoff of fuel sources and price volatility

We will implement the following measures in response to the current high volatility in global energy prices and risks to fuel procurement since Russia's invasion of Ukraine:

- Diversifying procurement sources, growing procurement of new coal brands (coal)
- Diversifying contact prices and distribution of contract negotiating timing (coal)
- Increasing use of derivatives (coal, LNG)
- Concluding economical short-term LNG contracts (LNG)
- Building optimal procurement portfolios (LNG)
- Strengthening cooperation with partners, including power and gas companies (LNG)

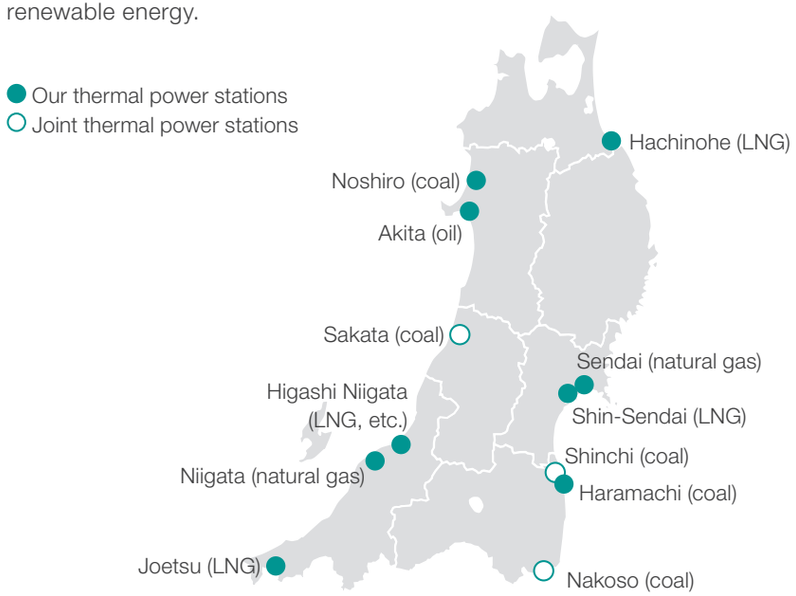
Our main sources of imported fuels for use in power generation



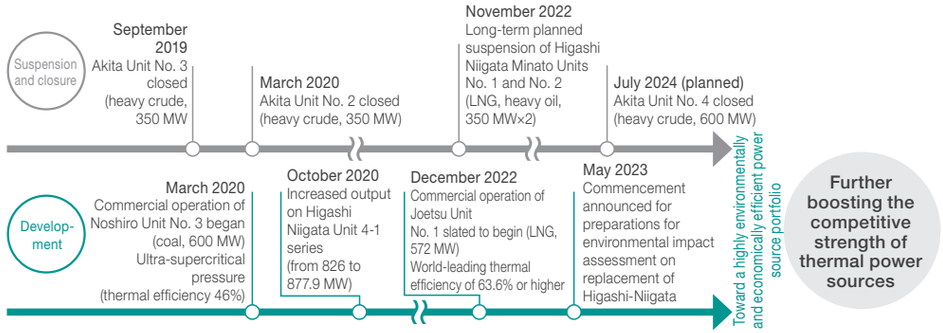
We procure US-produced natural gas, including shale gas, from the Cameron LNG project in the United States (photo shows the supply ship Diamond Gas Sakura).

Enhancing competitive strengths in thermal power generation

In addition to steady progress on developing high-efficiency thermal power stations, we're also suspending and decommissioning old and inefficient thermal power stations, enhancing competitive strengths in power sources, and responding to fluctuations in power demand and supply accompanying the growing adoption of renewable energy.



Status of thermal power stations in power source development plans



Further boosting the competitive strength of thermal power sources

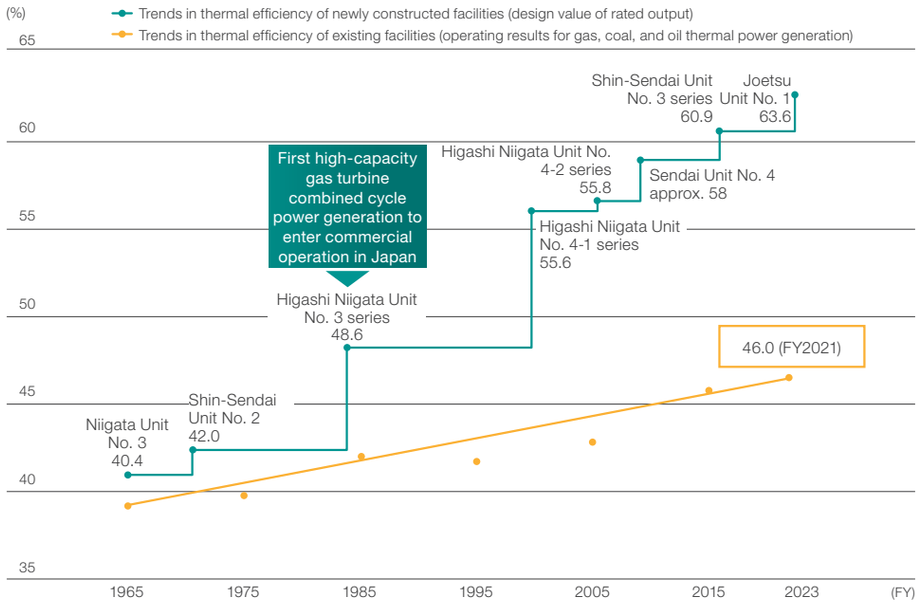
Commencement of commercial operation of Unit No. 1 at the Joetsu Thermal Power Station (December 2022)

Using a next-generation gas turbine based on a forced air-cooled combustor system developed jointly with Mitsubishi Power, Ltd., which was recognized by a 2018 Energy-Efficient Machinery Award from the Ministry of Economy, Trade and Industry, Unit No. 1 at the Joetsu Thermal Power Station has the goal of achieving world-leading thermal efficiency of 63.6% while also improving facility operability compared to previous facilities.

The unit is designed to improve economic performance and reduce environmental impact by reducing fuel consumption and CO_2 emissions, while also improving the capacity to adapt to fluctuations in power supply and demand attributable to growing adoption of renewable energy.

This facility contributes to our competitive advantages as a new power source providing high economic, environmental, and operational performance, as described above.

Trends in thermal efficiency of our own thermal power stations (based on lower heating value*)



* Lower heating value basis: volume of heat generated after subtracting condensation heat from water content of fuel and water generated by burning fuel

Advances in the operation of thermal power sources

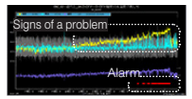
Seeking to boost operational efficiency of thermal power stations still further, we're adopting advanced digital technologies like Big Data analysis and IoT.

Since 2017, we've moved forward in joint verification efforts with Toshiba Energy Systems & Solutions Corporation for the following two systems, which are intended to contribute to the early detection of equipment anomalies and increased thermal efficiency. Since March 2020, we've deployed and operated these systems at all thermal power stations (15 units at nine stations as of May 2023).

Of these, we believe in principle that the systems for early detection of signs of equipment anomalies will contribute to safety and operational stability not just for our own thermal power stations but also for facilities of customers in various manufacturing industries. For this reason, we have conducted feasibility testing in this area since FY2020. Following the completion of testing, in April 2023 we began providing these services under the name of the ASYOMI Yori Sou Abnormality Monitoring Service. Working with Group members Tsuken Electric Ind. Co., Ltd. and TOHKnet Co., Inc., we will aim to grow overseas sales of this service while putting the Group's strengths to maximum use.

Systems for early detection of signs of equipment anomalies (utilizing Big Data analysis technologies)

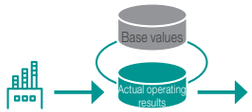
Comparison of current target values and actual values



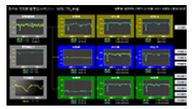
Results of adoption

Earlier detection of anomalies than conventional monitoring methods
Capacity to detect unknown anomalies
→ Allows early detection and elimination of serious equipment anomalies

Systems to increase thermal efficiency by modifying operating conditions (applying IoT technologies)



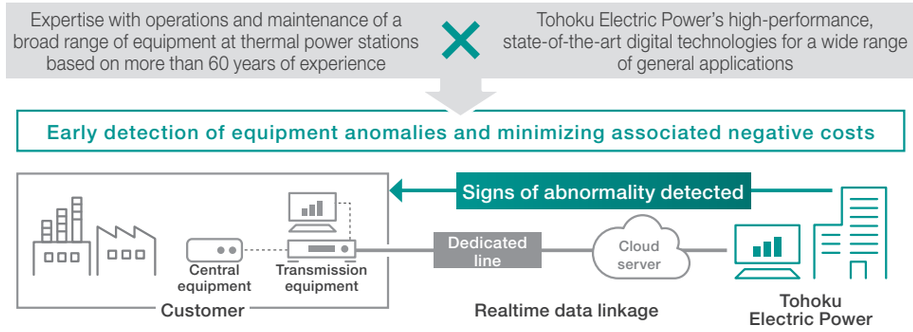
Comparison of base values and actual operating results in accordance with operating conditions



Results of adoption

Achieved capacity to increase thermal efficiency through analysis at 0.1% levels

Service provision began in April 2023 under the name ASYOMI Yori Sou Abnormality Monitoring Service



Overseas power generation business

We've applied the technologies, experience, and other resources gathered in Japan in activities related to the power generation business in pursuing business opportunities around the world. We plan to press forward to launch the commercial operation and stable utilization of projects in which we have invested and participated worldwide.

In development and planning for renewable energy and smart society building business we will make full use of the expertise, personnel networks, and other resources accumulated to date in our overseas power generation operations.

Rantau Dedap Geothermal Power Plant (Indonesia)

Projects in which we have invested and participate

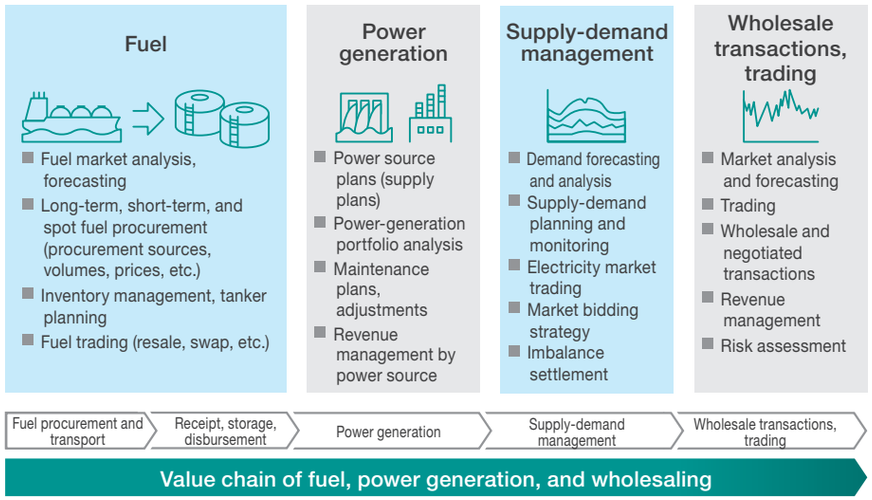
	Rantau Dedap Geothermal Power Project	Nghi Son 2 Coal-fired Power Project
Country	Indonesia	Vietnam
Output (thousand kW)	98	1,200
Our share of output (thousand kW)	19.6	120
Operational commencement	December 2021	July 2022

Value-chain optimization

With the expanding adoption of market mechanisms in electricity trading, we are promoting value-chain optimization through pricing that reflects fuel and electricity market trends and diversifying sales methods including wholesale power sales, as well as utilizing trading activities to secure revenue while accounting for uncertainties in quantities and prices.

In the future, we will adopt an optimization support system to improve our scenario analysis and risk assessment further.

Illustration of initiatives to optimize the value chain from fuel procurement to power generation and wholesaling



Further advances through adoption of a supply-demand optimization support system

Trading

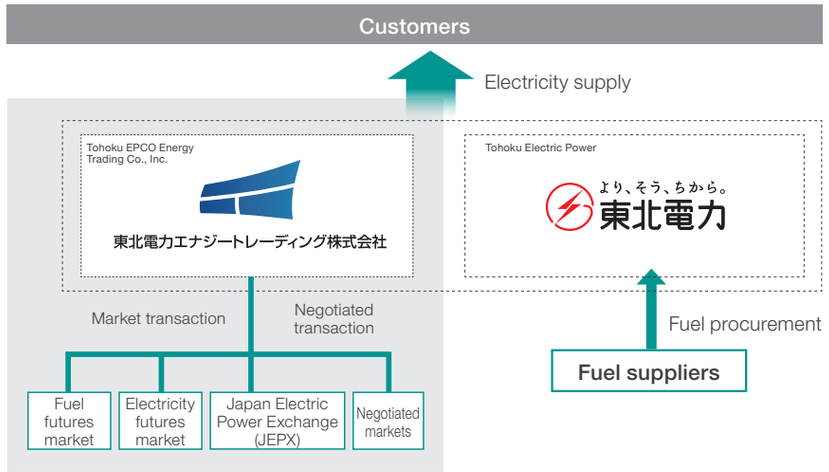
Seeing electricity market reforms as business opportunities, our strategic subsidiary Tohoku EPCO Energy Trading Co., Inc. engages in integrated trading including trading in the electricity market and fuel futures. It will continue to increase revenues by proposing solutions that deliver added value in aspects such as price levels tailored to the market's perspective and flexible contractual terms and conditions while making the most of its trading functions.

We manage a range of risks surrounding the company, including market risk, by building a multilayered system involving the parent company.

Tohoku EPCO Energy Trading

Since it started operating in April 2018, Tohoku EPCO Energy Trading has engaged mainly in the business of trading in wholesale electricity in the electricity market to boost revenues while also utilizing fuel futures and other means to control the impact of fluctuations in fuel prices.

Efforts for supply-demand optimization based on market trading



Renewable Energy

The Tohoku Electric Power Group will build a solid position as a responsible renewable energy operator.

Under the Tohoku Electric Power Group Carbon Neutral Challenge 2050, the Tohoku Electric Power Group is striving to achieve carbon neutrality through maximal use of renewable energy and nuclear power, decarbonization of thermal power sources, and electrification and realization of a smart society.

Among these efforts, we recognize the need to assign a major role to renewable energy as an important power source to achieve carbon neutrality and promote sustainability. Centered on the Renewable Energy Company launched in April 2022, we are accelerating the development of new power sources, making the most of existing ones, and pursuing new business opportunities.

To date, the Group has adopted approximately 2,800 MW in renewables, including hydroelectric, solar, geothermal, and wind power. In addition, we are currently proceeding with new development and business participation toward a target of developing 2,000 MW in new renewable energy sources, centered on the six Tohoku prefectures and Niigata Prefecture. As of July 2023, we held equity stakes for approximately 650 MW* of the output. To achieve our target, we plan to boost output in which we hold an equity stake still further through means including enhancing in-house development and expanding the business territory, taking advantage of the technological capabilities, expertise, and other strengths accumulated by the Company over 70 years in the electric power business and harnessing numerous business facilities in the six Tohoku prefectures and Niigata Prefecture.

As for existing power sources, we will generate maximum value from our hydroelectric, geothermal, and other power sources already in operation by moving forward with comprehensive repairs and other maintenance activities and by boosting generated power, based on the premise of creative cost cutting.

To pursue new business opportunities, Tohoku Electric Power Renewable Energy Service is growing its business scope through means including training maintenance engineers for wind power facilities and dispatching certified chief electrical engineers, with a focus on operation and maintenance of renewable energy sources and related facilities.

Tohoku Electric Power also is testing the reuse and recycling of spent solar panels in Miyagi Prefecture, as we actively take on the challenge of large volumes of wastes generated from solar panels after use.

By comprehensively advancing these initiatives, the Group will realize solutions to the issues faced in our communities, increase the profit-generating potential of our renewable energy businesses, and aim for both the sustained progress of society as a whole and medium- to long-term increases in corporate value.

* Assuming commercial operation of all projects currently under development

Managing Executive Officer
Tohoku Electric Power Co., Inc.
President of Renewable Energy Company
Yuji Sasaki

Renewable Energy

Business environment

Opportunities

- Growing need to realize carbon neutrality
  - Rising importance of carbon neutrality from an energy security (energy self-sufficiency) perspective
  - Need to strengthen awareness of opportunities and threats in business operations and play an active role in securing opportunities and mitigating threats

Risks

- Impact of regulatory changes on the electricity business
- Reduced profitability due to heightened competition
- Rising business costs attributable to expanding inflation
- Difficulty in procuring materials attributable to supply chain disruptions

Strengths

- Technological strengths and expertise amassed over 70 years in the electricity business
- Numerous business sites within the six Tohoku prefectures and Niigata Prefecture

Courses of action for responses

Main initiatives

We will move forward with the following initiatives to strengthen the profit-generating potential of our renewable energy businesses with the aim of the sustained progress of society as a whole and to increases our corporate value over the medium to long term:

- Promoting new development toward coexistence with the community, targeting 2,000 MW
- Improving performance through appropriate maintenance and operation of existing power generation facilities
- Optimizing Group companies' renewable energy power generation structures (reorganizing wind, solar, and geothermal power businesses between Tohoku Sustainable & Renewable Energy Co. Inc. and Tohoku Electric Power)

Key points for profit generation

- Securing development opportunities by enhancing in-house development activities, expanding the business territory, and other efforts
- Improving performance through appropriate maintenance and renovation
- Pursuing new business opportunities through the wind power maintenance business and other businesses

Accelerating the development of 2,000 MW power sources through means including enhancement of our in-house development and expansion of our business territory

As of July 2023, the Group was participating in 31 new development and business operation projects, with an equity stake in output capacity of approximately 650 MW.*

In the area of wind power, in addition to ongoing independent development feasibility studies on the Takko Wind Power Project (tentative name), in June 2022 we acquired all rights to the Shiraishi-Kosugo wind power project from AR Wind Energy K.K, and since then we have proceeded with independent development and other efforts as we aim to strengthen in-house development. While operations started at the JRE Oritsumedake South No. 1 wind farm followed by Akita Port and Noshiro Port wind farms, we continue feasibility studies with BW Ideol, a global leader in floating offshore wind power, toward joint development of a commercial-scale floating offshore wind power project off the coast of Iwate Prefecture. Outside our franchise area of the six Tohoku prefectures and Niigata Prefecture, Tsunase Solar Power Plant (Tsu, Mie Prefecture) began operating in February 2023, after which we started participating in the Fukui Kunimidake wind power project (Fukui, Fukui Prefecture). We are also at work on building hydroelectric, geothermal, and biomass power projects.

* Assuming commercial operation of all projects currently under development

Maintaining and expanding kWh capacity via the comprehensive renovation of aging hydroelectric and geothermal power facilities

To achieve sustained earnings, we are moving forward with various initiatives to maintain and expand power generation at existing facilities.

Following replacement work to improve generating efficacy at the aging Asanai Power Station (a hydroelectric power station that first began operating in 1945) and Iwaizumi Power Station (a hydroelectric power station that first began operating in 1941), these plants resumed commercial operation in July 2022 and January 2023, respectively.

In addition, Group member company Tohoku Sustainable & Renewable Energy Co., Inc. is carrying out full-fledged renovations on the Chojahara Power Station, (a hydroelectric power station with maximum output of 12,400 kW), which first began operation in 1938. This project is expected to boost capacity to 12,900 kW.

In the area of geothermal power facilities, Tohoku Sustainable & Renewable Energy is making progress on replacement work at the Matsukawa geothermal power station, which began operating in 1966 as Japan's first commercial geothermal power station.

Growing business opportunities across the renewable energy value chain

Group member Tohoku Electric Power Renewable Energy Service is growing its maintenance business for onshore wind power facilities in the Tohoku and Niigata regions while also training maintenance engineers for wind power facilities and engaging in the business of certified chief electrical engineer dispatching.

In December 2022, we opened and began accepting trainees at the Akita Juku Wind Power Training Center on the site of the Tohoku Electric Power Akita Thermal Power Station, as the fourth certified Global Wind Organization (GWO) Basic Safety Training (BST)* training facility in Japan.

We are also engaging in businesses related to the reuse and recycling of spent solar panels through the activities of the Community Collection Model Study Committee, an agency of PV Cycle Japan.

* A nonprofit formed in 2012 whose membership includes major wind turbine makers such as GE, Vestas, and Siemens, and wind power facility owners, and which certifies training agencies based on international standards on training for wind power facility operators.

Renewable Energy

Renewable energy development

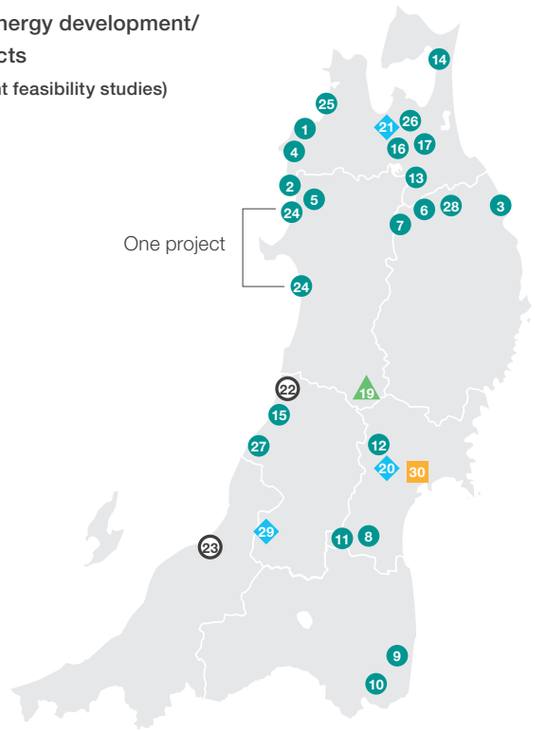
To date, we have been involved in the development of 31 projects. As of the end of July 2023, we held equity stakes in a total output of about 650 MW*. We plan to continue working toward our various goals, including enhancing in-house development activities and expanding our business territories to expand our renewable energy options.

* Assuming commercial operation of all projects currently under development

Major renewable energy development/ participation projects

(including development feasibility studies)

- Wind
- Hydroelectric
- Geothermal
- Solar
- Biomass



18 Fukui Kunimidake wind farm (Fukui, Fukui Prefecture)

31 Tsunase Solar Power Plant (Tsu, Mie Prefecture)

(As of July 31, 2023)

Power stations currently under development or in which we participate

		Project name	Output	Scheduled operational start date
Offshore wind	1	Aomori Prefecture offshore	TBD	TBD
	2	Akita Prefecture offshore	TBD	TBD
	3	Iwata Prefecture offshore floating	TBD	TBD
Onshore wind	4	Fukaura wind	73.6 MW	February 2024
	5	Noshiro-Yamamoto wide area wind	96.6 MW	March 2025
	6	Inaniwa-Takko wind	Approx. 100 MW	FY2025 or later
	7	Inaniwa wind	Approx. 100 MW	FY2025 or later
	8	Shiroishi-Kosugo wind	Approx. 38 MW	FY2026 or later
	9	Abukuma S. wind	Approx. 90 MW	FY2025 or later
	10	Tabito Central Wind Farm	Approx. 54.6 MW	FY2027 or later
	11	Inego Pass Wind Farm	58.8 MW	May 2028
	12	JRE Miyagi Kami Wind Farm	42 MW	April 2024
	13	Takko wind (tentative name)	75.6 MW	FY2027 or later
	14	Shimokita wind	96 MW	2027 or later
	15	JRE Sakata wind replacement project	27.5 MW	2026
	16	Onakadaibokujo wind	4 MW	November 2024
	17	Fukamochi wind	94.6 MW	FY2030 or later
	18	Fukui Kunimidake wind farm	37.8 MW	May 2027
Geothermal	19	Kijiyama (tentative name)	14.9 MW	2029
Hydroelectric	20	Narusegawa	2.3 MW	FY2034
	21	Shin-Kamimatsuzawa	9.4 MW	FY2031
Biomass	22	Chokai-minami Biomass	52.9 MW	October 2024
	23	Niigata-Higashi Minato Biomass	50 MW	October 2024

Power stations in current operation

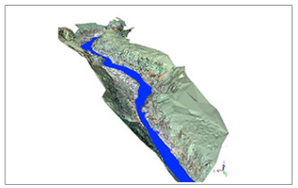
		Project name	Output	Operational start date
Offshore wind	24	Akita port/Noshiro port offshore	138.6 MW	Noshiro December 2022 Akita January 2023
Onshore wind	25	Wind Farm Tsugaru	121.6 MW	April 2020
	26	JRE Shichinohe-Towada wind	30.5 MW	December 2021
	27	JRE Tsuruoka-Hachimoriyama wind	13.6 MW	November 2021
	28	JRE Oritsumedake S. 1 wind	44.18 MW	January 2023
Hydroelectric	29	Tamagawa No. 2 hydroelectric	14.6 MW	November 2022
Solar	30	Miyagi Osato Solar Park	37.5 MW	October 2021
	31	Tsunase Solar Power Plant	35 MW	February 2023

The Tohoku Electric Power Group's comprehensive renewable energy solutions

Measurements and surveys for renewable energy sources

Measurements and surveys of project sites are an essential part of renewable energy development.

Higashi Nihon Techno Survey Corporation contributes to renewables development by providing advanced measurement technologies using 3D laser scanning, drones, and remote-control boats. It will expand the range of orders received from their current focus on hydroelectric power projects to include surveying in the offshore wind power field using underwater drones and other maintenance surveying.



Topographical image made using 3D laser scanning

Aerial photographic surveying via UAV (drone)

Surveying of rivers via remote controlled boat

Renewable power generation

Tohoku Sustainable & Renewable Energy operates 18 power stations in the Tohoku and Niigata region with a total capacity of approximately 124 MW, in addition to two geothermal steam plants (as of the end of August 2023). It is proceeding with replacement work at the Matsukawa geothermal power station, Japan's first commercial geothermal power station, while proactively researching and developing new projects.

Illustration of Matsukawa geothermal power station after completion of replacement work

New Tamagawa No.2 hydroelectric power station (completed in November 2022)

Construction on renewable energy facilities

Yurtec has a track record of more than 20 years in construction work related to renewable energy facilities, chiefly in the Tohoku and Niigata regions. In particular, since 2012, following the Great East Japan Earthquake, it has worked on about 300 solar power facilities (generating capacity: approx. 1,200 MW) and about 50 wind power facilities (generating capacity: approx. 1,000 MW). It also works on biomass power generation facilities.

Through this work, it has accumulated considerable experience and expertise not just in power stations but also in power transmission and substation facilities for connection to the existing power grid, as well as telecommunications facilities.

In recent years, solar power facilities are being used increasingly in comparatively small-scale local production and local consumption of power at sites such as factory and residential rooftops, while wind power facilities are trending toward large-scale offshore farms and, increasingly, larger than ever onshore facilities as well.

As a member of the Tohoku Electric Power Group, Yurtec will strive to expand orders received for construction related to renewable energy facilities by establishing related construction structures and leveraging its sales strengths as a local firm to contribute to a sustainable society.

Yurtec's track record (since FY2012)

Solar power

Projects	Generating capacity
Approx. 300	Approx. 1,200 MW

Watari Solar Power Station
- Comprehensive construction contract
- 79,458 kW
- 22 kV on-site power lines
- 66 kV/22 kV transformer facility

Wind power

Projects	Generating capacity
Approx. 50	Approx. 1,000 MW

Rokkasyomura Futamata Wind Farm
- Comprehensive construction contract
- 1,500 kW turbines × 34
- 22 kV power line (20 km)
- 154 kV power line (1.2 km)
- 154 kV/22 kV transformer facility

Nuclear Power

Business environment

Opportunities

- Growing importance of nuclear power in response to tight supply-demand conditions and soaring fossil fuel energy prices
- An important carbon-free energy source for a carbon-neutral society

Risks

- Facility damage and nuclear accidents attributable to natural disasters, terrorist attacks, and other events
- Unplanned suspension of operation attributable to human error, mechanical failures, etc.

Strengths

- An important energy source in terms of decarbonization, supply stability, and energy security

Courses of action for responses

In addition to accelerating efforts to achieve rapid resumption of nuclear power station operations, based on the paramount precondition of safety, we will proceed with the following initiatives to enhance our competitive strengths and public trust.

Initiatives to enhance safety and reliability

- Onagawa Unit No. 2: Rapid resumption of operation and subsequent stable operation
- Higashidori Unit No. 1: Continued appropriate handling of compliance testing under new standards
- Onagawa Unit No. 3: Studying application for compliance testing under new standards
- Onagawa Unit No. 1: Planned decommissioning

Initiatives to enhance competitive strengths

- Maintenance and improvement of facility utilization rates and reducing operating costs after restart and maintenance and management costs for long-term outages

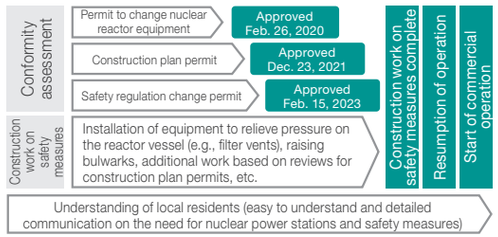
Initiatives to enhance trust

- Two-way dialogue with local community on operational resumption of Onagawa Unit No. 2 through reimagining it as the first reactor

Nuclear power stations

At our nuclear power plants, we are completing construction work on safety measures with safety prioritized and making steady progress on initiatives in preparation for subsequent resumption of operations. We will move forward steadily with initiatives intended to improve safety even more, above and beyond merely conforming to new regulation standards.

Unit No. 2 at the Onagawa Nuclear Power Station (output: 825 MW)



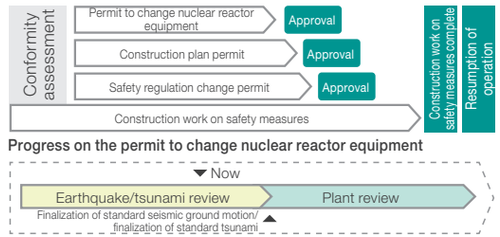
Our December 2013 application for a permit to change nuclear reactor equipment in connection with new regulation standards was approved in February 2020, while our construction plans were approved in December 2021 and our safety regulation change permit was approved in February 2023.

We are aiming for swift resumption of operation as we make every effort to complete the construction work now underway on safety measures, while giving top priority to safety.

Unit No. 3 at the Onagawa Nuclear Power Station (output: 825 MW)

Currently, we are carrying out studies in proportion for conformity assessment regarding matters such as the planned layout of safety equipment, based on the knowledge, assessment, and other feedback from a review of the permit to change nuclear reactor equipment and construction plan permit for Unit No. 2 at the Onagawa Nuclear Power Station.

Unit No. 1 at Higashidori Nuclear Power Station (output: 1,100 MW)



Currently, our June 2014 application in connection with new regulation standards is undergoing review concerning assessment of standard seismic ground motion and standard tsunami. After standard seismic ground motion/standard tsunami finalization, the process will proceed to the stage of plant review based on the results of review of earthquake/tsunami safety and other matters.

We will continue working to complete the review process as soon as is feasible.

Decommissioning of Unit No. 1 at Onagawa Nuclear Power Station

Decommissioning plans for Unit No. 1 at Onagawa Nuclear Power Station, which ceased operation in December 2018, were approved by the Nuclear Regulatory Commission in March 2020. In May 2020, Miyagi Prefecture, the town of Onagawa, and the city of Ishinomaki granted preliminary approval for plans in accordance with our safety agreements. In addition to putting safety first in the decommissioning process, we will share information on the progress with local residents and other parties through our website and other avenues.

Nuclear-power decommissioning information | https://www.tohoku-epco.co.jp/electr/genshi/safety/haishi/index.html

Safety initiatives

At our nuclear power plants, we are completing construction work on safety measures with safety prioritized and making steady progress on initiatives in preparation for subsequent resumption of operations. We will move forward steadily with initiatives intended to improve safety even more, above and beyond merely conforming to new regulation standards.

Nuclear power information | https://www.tohoku-epco.co.jp/electr/genshi/safety/

Tangibles

In addition to making our nuclear power plants more resistant to earthquakes and tsunami, we are implementing measures to ensure double and triple redundancy in our response to potential accidents.

Preparing double and triple redundancy measures for the responses at each stage

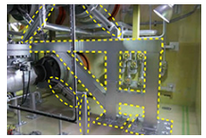
Preparing appropriate measures for each stage of potential accidents

Protecting the facility

Earthquake/tsunami countermeasures

- Raising bulwarks
- Seismic retrofitting, etc.

Raising bulwarks



Seismic retrofitting

Fire/flood countermeasures

- Installation of automatic fire extinguishing equipment
- Watertightness at openings, etc.

Automatic fire extinguishing equipment

Watertightness at an opening

Preventing damage to fuel

Securing power supplies

- Distribution of gas-turbine generators
- Distribution of power supply vehicles, etc.

Gas-turbine generators

Power supply vehicles

Securing cooling functions

- Installation of high-pressure alternative water injection equipment
- Distribution of large-capacity pumping trucks, etc.

High-pressure alternative water injection equipment

Large-capacity pumping trucks

Containing radiation*

Securing containment functions

- Installation of container ventilation equipment equipped with filters
- Installation of hydrogen recombination equipment, etc.

Container ventilation equipment equipped with filters

Hydrogen recombination equipment

Infrastructure development for responding to accidents

- Distribution of bulldozers
- Emergency task force locations, etc.

Bulldozers

Emergency task force location

Measures against intentional airplane crash and other events (Safety facilities to remotely prevent severe damages in case of nuclear accidents)

* Measures to prevent damage to nuclear reactor vessels and buildings that contain radioactive materials

* Photos depicting equipment at Onagawa Nuclear Power Station

Intangibles

We will continue with various measures to improve readiness for accidents in terms of intangibles in addition to tangibles, through means such as drills for various eventualities to enable plant staff to respond better to emergencies.

Hands-on emergency task force drills at the emergency response center

Emergency task force drill on appropriate first response and swift external reporting and communication to contain an accident (Onagawa Nuclear Power Station)

Accident drills using reactor simulators

Operation drill for an accident in which all AC power is cut off, using a reactor simulator (Onagawa Nuclear Power Station)

Drills for connections to power supply vehicles

Drill on connecting cables to a power supply vehicle to supply power to the plant in an emergency (Higashidori Nuclear Power Station)

Efforts to enhance competitive strengths

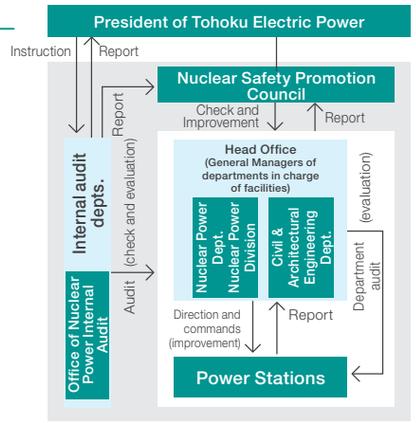
Maintaining and improving facility utilization rates and reducing operating costs after restart and maintenance and management costs for long-term outages

Together with making every effort to ensure the safety of operation after resumption, we will carry out various measures to reduce costs, including further improvements in utilization rates through more efficient periodic inspection and other activities, joint procurement with other businesses and enhancement of joint management with affiliate companies, optimization of facility inspection cycles and items, and expansion of competitive bidding.

Nuclear risk management system

Establishing and strengthening organized and systematic risk management

In July 2014, in light of the importance of nuclear risk management, we established a nuclear risk management system led by the President to strengthen the commitment to nuclear risk management among senior executives. Among other duties, this commission is tasked with analyzing and evaluating nuclear risks and deliberating on measures to mitigate risks, approaches to establishing dialogue with local communities, and the overall direction and management of nuclear risk management.



See ▶ Risk Management ▶ P77

Enhancing risk communication

We're working to strengthen nuclear risk communication. This means engaging local communities in dialogue concerning the basis of the risks posed by nuclear power generation, an approach that seeks to share risk information while carefully attending to community concerns and opinions on nuclear energy to help forge mutual understanding and build trust. On these occasions, we continue to provide detailed presentations on and measures to reduce nuclear risk as part of efforts to maintain two-way dialogue with local communities. Furthermore, we also proactively communicate information via social media to help people to understand our initiatives to reduce the risks of nuclear power.

We will also reflect the opinions of outside experts and other stakeholders in our nuclear risk management. We plan to reorganize risk information into various categories to improve clarity and to develop the personnel who will be responsible for risk communication. In these and other ways, we plan to continue enhancing risk communication.

Efforts to strengthen trust

Two-way dialogue with the community on operational resumption of Onagawa Unit No. 2 through reimagining it as the first reactor

We consider the resumption of operation of Unit No. 2 at the Onagawa Nuclear Power Station as a new starting point, expressing our resolve for the rebirth of the facility, rather than a simple restart of operation. Accordingly, we will devote every effort to the restart while prioritizing safety by learning from our predecessors, who started up Unit No. 1 from scratch, to strengthen ties with members of the community.

We are deploying a wide range of activities reflecting our view that listening to community residents based on two-way dialogue is vital to a nuclear power business.

Visiting all local households to reflect community feedback in power station operations

Twice each year, as part of the continuing Konnichiwa Visit (Onagawa) and All-household Visit (Higashidori) programs, plant personnel from the Onagawa and Higashidori nuclear power stations visit all households in the local communities, one at a time*.

* We visited some 3,700 households around the Onagawa Nuclear Power Station (in the town of Onagawa and the Oshika Peninsula area of the city of Ishinomaki) and 2,300 households around the Higashidori Nuclear Power Station (in the village of Higashidori).

A Konnichiwa Visit at the Onagawa Nuclear Power Station

Holding facility tours and other activities to demonstrate facts about the power station

We believe it is important for people to view the nuclear power station up close so that they can understand matters such as the status of its safety measures. For this reason, we take various opportunities to provide station tours to a wide range of people.

A facility tour

Providing information on nuclear power via social media and the Web

We use social media such as X (formerly Twitter) and YouTube to communicate to the broadest possible audience information on our nuclear power stations and efforts to improve plant safety.

Our website provides virtual power station tours, which use video, photos, computer graphics, and other media to convey information on the state of safety measures to a broad audience.

Virtual tour of Onagawa Nuclear Power Station on our website

Communicating information via X (formerly Twitter)

Power Transmission and Distribution

Representative Director & President
Tohoku Electric Power Network Co., Inc.
Mitsuhiro Sakamoto

より、そう、ちから。
東北電力ネットワーク

Company name	Tohoku Electric Power Network Co., Inc.
Established	April 1, 2019
Representative	Mitsuhiro Sakamoto, Representative Director & President
Capital	24 billion yen
Employees	6,786 (as of March 31, 2023)

Securing a stable supply of electricity alongside our communities —We tackle the challenges of building a next-generation network to expand use of renewables

While fulfilling our mission to ensure a stable supply of electricity as the general power transmission franchise for the six Tohoku prefectures and Niigata Prefecture, Tohoku Electric Power Network supports the enriched lifestyles of local residents through ceaseless cost-saving activities and contributing to achieving carbon neutrality by 2050.

We deeply regret the recent case of inappropriate handling of customer information (including making customer information concerning PPS services, which should have been kept confidential, accessible by Tohoku Electric Power employees), which not just involved leakage of customer information but also could shake the foundations of fair trading among retail electricity businesses.

We will continue to aim to regain the trust of customers and retail electricity businesses through steady preventive measures.

The environment in which the Power Transmission and Distribution operates is undergoing dramatic change, including increasingly severe natural disasters, aging facilities, growing adoption of renewables to achieve carbon neutrality by 2050, and decreasing demand for electricity attributable to the shrinking population.

Under such conditions, the new revenue cap system has been launched in the wheeling charge system. Intended to keep down costs as much as possible while securing the investment needed for stable supply, this system will promote both autonomous improvements in efficiency by general power transmission and distribution operators and competition among businesses. The national government, as well as customers and local communities, will compare and assess general transmission and distribution operators based on the results. In this dramatically changing business environment, we at Tohoku Electric Power Network will continue to fulfill our mission of stable delivery of low-cost, high-quality electricity to all those in our service area through continually executing our business plan identifying our aims for five years into the future while also further improving on efficiency.

As we strive to ensure supply stability, all members of the organization will work as one to address both the tangibles and the intangibles of our business in areas including construction, inspections, maintenance, and renovations of power transmission and distribution facilities, as well as emergency drills to strengthen our disaster response. We also recognize the need for full-fledged renovation of the numerous power stations built during Japan's postwar years of rapid economic growth, and we will move forward steadily on measures to address aging infrastructure using asset management systems, digital technologies, and other solutions.

We expect an accelerating shift to renewable energy as a major power source amid efforts to contribute to realization of carbon neutrality by 2050. Since our franchise area of the six Tohoku prefectures and Niigata Prefecture offers marked renewable energy potential, we must advance our large-scale power transmission grid equipment and our grid stability and supply-demand adjustment technologies. From this point forward, we will play an active role in building the next-generation power network with an even greater sense of urgency than before.

In addition to making progress on such efforts toward stable supply and expansion of renewables, we are enhancing our business foundations through comprehensive cost reduction and efficiency improvement efforts and measures to grow earnings. To cut costs and improve efficiency, the Efficiency Promotion Committee and the Kaizen Promotion Committee, under the leadership of the Chief Kaizen Officer (CKO), are leading the way toward our goal of further improving efficiency and productivity. To grow earnings, we are striving to create new businesses that draw on our network assets, including facilities and know-how. Our goal is to generate as many successful case studies as possible by further accelerating these initiatives.

Despite dramatic changes in the business environment, including the shrinking population and the launch of the revenue cap system, our goals remain unchanged: growth and progress together with our communities while supporting their safety, peace of mind, and comfort through the power network. We strive to provide high-quality services that meet the needs of our customers, enrich their lives, and support our communities, while fulfilling our mission to ensure a stable supply of electricity, based on the perspective of working alongside our customers and our communities, as well as our foundations in the six Tohoku prefectures and Niigata Prefecture.

Power Transmission and Distribution

Business environment

Opportunities

- Growing opportunities for efficiency improvements using digital innovations
- Potential for advances in technological innovation and growth in business opportunities in decarbonization efforts, including efforts to achieve carbon neutrality by 2050
- Securing systematic capital investment opportunities following the launch of the new wheeling charge system

Risks

- Impact of increasingly severe natural disasters on facilities, capacity to ensure stable power supplies, etc.
- Responding to an operating environment characterized by changes in earnings structures and competition among power transmission and distribution companies following the launch of the new wheeling charge system
- Consequences of declining populations and changes in the power supply-demand structure

Strengths

- Expected renewable energy potential for the six Tohoku prefectures and Niigata Prefecture
- Disaster resilience based on lessons from earthquakes, etc.

Courses of action for responses

Major initiatives

Ensuring stable supply

- Passing on disaster response knowhow and technological capabilities gained from past disasters
- Systematic renovations of aging facilities
- Improving disaster response capabilities through drills, etc.

Building next-generation power transmission and distribution networks

- Steady implementation of grid improvement plans
- Making effective use of the existing grid
- Advancements in supply-demand and grid management

Reducing costs

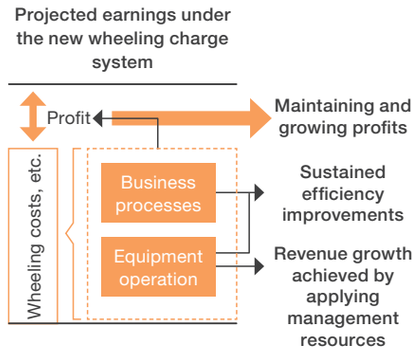
- Harnessing AI, IoT, and other new technologies
- Reducing costs in response to the changing business environment by making operations more efficient

How to generate profit

Under the new wheeling charge system, while taking the steps needed to ensure the necessary investments and stable supply, we will achieve the efficiency target specified in our business plans and seek out further efficiency improvements, draw on management resources to grow earnings, and strive to maintain and grow profits.

Key points for profit generation

- Ceaseless efficiency improvements (new technologies, business processes, construction, procurement, etc.)
- Harnessing management resources (our assets and knowhow) to grow profits
- Creating power demand based on our local customer base



Overview of the new wheeling charge system and quantitative targets of the power transmission and distribution business

The purpose of the new wheeling charge system (revenue cap system) is to encourage the general power transmission businesses to secure both investments and cost efficiency improvements, which makes it possible to strengthen resilience and ensure that renewables can serve as a major power source. It has been adopted to replace the previous comprehensive-cost method.

Under this system, general power transmission businesses will formulate business plans identifying goals to be achieved during a fixed regulatory period (the first period is the five years from FY2023 through FY2027) based on national guidelines.*1 With the approval of the national government, they will set wheeling service rates based on revenue projections accounting for the costs needed to realize these plans and other specific parameters.

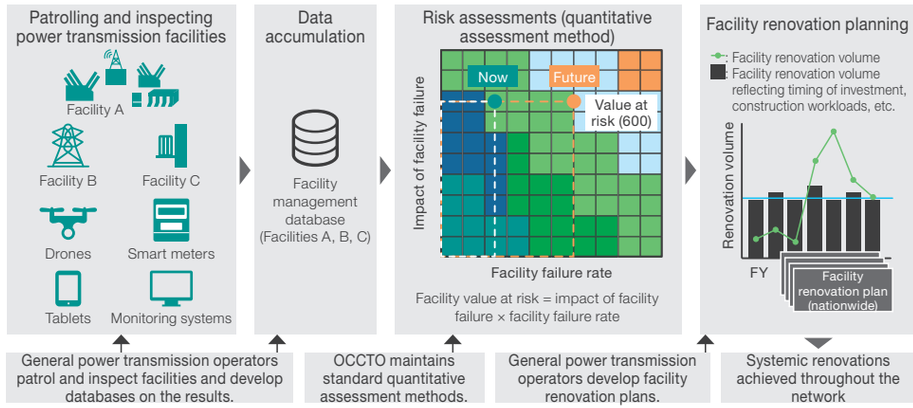
Major quantitative targets of business plans based on the revenue cap system

Stable supply	■ Annual power failures affecting lower voltage (lighting) customers: 155 MWh or less
Growth in renewables	■ Number of project owners applying for connection study who do not respond by deadlines: 0 ■ Number of project owners applying for contracts who do not respond by deadlines: 0
Service-level improvements	■ Number of service applicants requesting advance connection study who do not respond by deadlines: 0 ■ Number of misreported final usage volumes: 0 ■ Number of errors in rate calculation: 0 ■ Number of delays in notification of final usage volumes and billing for rates: 0

*1 Guidelines on Appropriate Calculation of Projected Wheeling Revenues of General Power Transmission Businesses (Ministry of Economy, Trade and Industry Directive No. 61 of 2022 [issued July 22, 2022])

Ensuring stable supply through appropriate formation and operation of power transmission facilities

Tohoku Electric Power Network serves a vast region in which it maintains and manages numerous facilities under challenging natural conditions, including some of Japan's heaviest snow belts. With the growing frequency and severity of natural disasters in recent years, we will strive to enhance the resilience of these facilities while applying various new technologies, including asset management systems and digital technologies, to renovate aging facilities systematically and efficiently. In this way, we will maintain the soundness of our power transmission facilities and ensure stable power supplies.



Source: Guidelines on Renovating Aging Facilities (Organization for Cross-regional Coordination of Transmission Operators, published December 17, 2021)

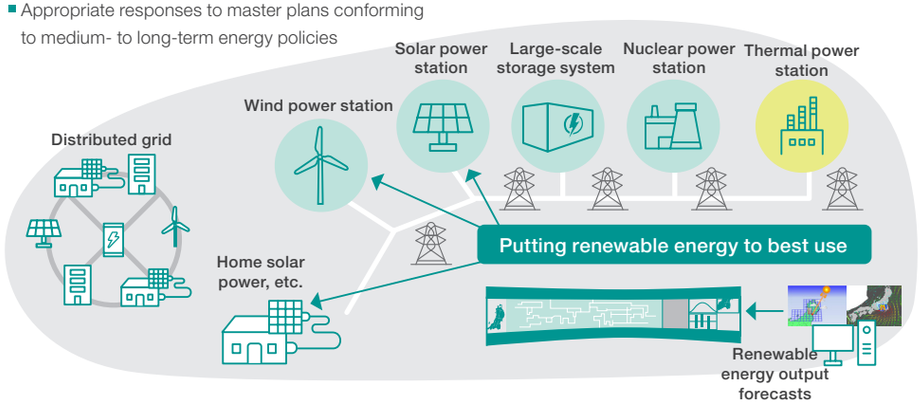
Building a next-generation network as adoption of renewable energy expands

The Tohoku and Niigata regions offer great potential for wind power and other renewable energy sources, which will be key to Tohoku Electric Power Network achieving carbon neutrality by 2050. To this end, we are striving to expand the renewable power network through means including improving and expanding the grid connecting Tohoku to Tokyo and other parts of the transmission network, and promoting power source bidding in the northern Tohoku area. (The total volume of renewable energy connected in FY2022 was approximately 20,000 MW.)

We will also strive to enhance resilience, expand the use of distributed power sources including renewables, and develop next-generation networks to realize a smart society.

Specifically, we expect to make progress in building efficient facility equipment configurations in response to increased adoption of distributed power sources and grid operation suited to changes in supply and demand; building supply-demand optimization controls on remote islands; and systems development to realize more advanced use of smart-meter data and communications networks.

- Steady promotion of the bidding process for new power sources in the northern Tohoku area and wide-area grid improvements such as the grid connecting Tohoku with Tokyo
- Appropriate responses to master plans conforming to medium- to long-term energy policies
- Promoting effective use of existing grid, such as Japanese-style connection and management including non-firm connection



- Balancing stable of electricity and its quality, through means such as advances in grid and supply-demand technologies and further improvements in the precision of renewable energy output forecasts

Thorough cost cutting

To achieve progress with efficiency improvements in response to the changing business environment, we have established the Efficiency Promotion Committee, chaired by the President, and the Kaizen Promotion Committee, chaired by the Chief Kaizen Officer (CKO), to advance integrated efficiency improvements companywide. The approaches taken include equipment and operation review, new technologies and digital transformation (DX), organizational review, and kaizen activities.

We will also continue to carry out thorough cost cutting and efficiency improvements while actively incorporating new knowledge, technologies, and other solutions under the efficiency plan formulated in response to the launch of the revenue-cap system—all based on the premises of ensuring safety and stable power supplies.

Keys to efficiency improvements

- Equipment and operation review
- Harnessing new technologies and DX promotion
- Organizational review
- Seizing initiatives from competitors
- Kaizen

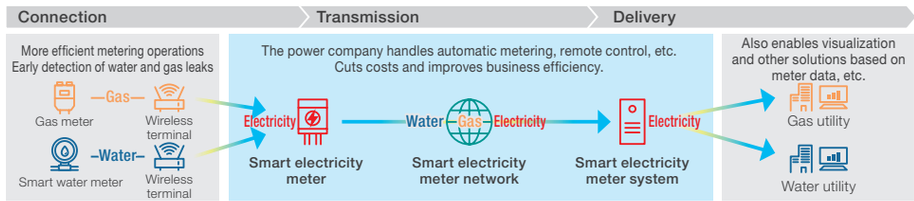
Promoting thorough efficiency improvements based on coordinated efforts among the head office, branches, and frontline sites

New businesses and growth in power demand from a medium- to long-term perspective

Tohoku Electric Power Network is making progress on creating new businesses and services based on our existing network assets. Examples include Denki SOS, a service that handles power failures caused by customer equipment, an advertising businesses using the exterior walls and other spaces at our business sites, and Yori, Sou Power Pole Search, a geolocation search service based on power poles and towers. In March 2023, we launched a new automated metering service for water and gas utilities, using our smart meter communications network.

We will continue to increase earnings through means including creating new businesses based on our assets and know-how as well as public dissemination of the benefits of electrification to contribute to carbon neutrality.

Overview of automated metering service



Development Courses of Action

Contributing to the progress of our region while growing the Tohoku Electric Power Group

Working alongside next, the Tohoku Electric Power Group's Medium- to Long-Term Vision, calls for the Group to grow while promoting the sustainable development of communities by helping to achieve a smart society for a new age, starting in Tohoku. Currently, we are in the process of evolving into a Group capable of providing a wide range of services centered on energy as we pursue initiatives in three domains.

Most of our efforts are currently focused on the domain represented by next-generation energy. As an integrated regional energy firm and team of electricity professionals, we will develop and provide services to enable businesses and consumers in the Tohoku and Niigata regions to make the most of diverse energy resources. In the virtual power plant (VPP) business, we have launched a renewable energy aggregation service in addition to existing efforts to secure gains through market trading. In the power purchase agreement (PPA) business, we opened the Corporate PPA Business Office in FY2022 to enhance corporate solutions; we also made progress on developing the Tohoku Electric Solar e-Charge business for individual customers. By building a business model encompassing all aspects, from the development of renewable energy through sales and supply-demand management services, and by delivering optimal energy management solutions, we will help establish a carbon neutral society.

Another core domain is services bundled with electricity. Here, Tohoku Electric Power and Tohoku EPCO Frontier will develop high added value services based on the retail electricity business and bundle them with electricity services, leveraging our customer base and ties to the community established over more than 70 years in the electricity business.

To develop attractive products and services, we will leverage Tohoku EPCO Frontier's strengths in digital technologies to enable dynamic service development and marketing while seeking to maximize Group synergies.

By anticipating the needs of individual customers, Tohoku Electric Power will deliver safety and peace of mind through Sumai Anshin Support and other services, while Tohoku EPCO Frontier will propose a diverse range of products and services to enrich the lives of our customers.

We are also sowing seeds in new business domains with the aim of enhancing our lines of business. Specifically, we are implementing open-innovation programs on themes related to social challenges in our region, seeking a wide range of business ideas from outside the organization. We are aiming to generate new businesses and services through collaboration and cocreation with our partners. We are also striving to develop new businesses beyond the boundaries of the energy domain, through feasibility testing on use of new technologies such as non-fungible tokens (NFTs).

Grounded in customer needs and expectations for the Group, we are moving forward with business development and expansion initiatives that draw on our strengths, including energy knowhow, customer base, and other diverse assets. To accelerate these initiatives even further, we are increasing the speed of the cycle from service development through sales and proposing diverse services with high added value, to improve our competitive strengths as a company chosen by customers.

In these ways, we will realize a smart society starting in Tohoku by developing and providing a wide range of products and services centered on energy and delivering comfort, safety, and peace of mind to the lives of the residents of our communities. In so doing, we will contribute to the sustained growth of the Tohoku and Niigata regions and achieve growth for the Tohoku Electric Power Group.

Managing Executive Officer
Tohoku Electric Power Co., Inc.
Mitsuo Oyama

Development Courses of Action

Business environment

Opportunities

- Post-COVID changes in society
- Emergence of social issues accompanying depopulation
- Changes in power supply and demand structures due to the progress of decarbonization, decentralization, and digitalization

Risks

- Rising fuel and power procurement costs and changes in supply and demand structures
- Emergence of new service providers, severe competition

Strengths

- Energy know-how built up in the power business
- Customer base and human networks in the Tohoku and Niigata regions

Courses of action for responses

We will advance the following initiatives to transform our business model and swiftly achieve profitability in this business:

- Enhancing the earnings potential of the retail electricity business by deploying new sales approaches that reflect the changing business environment
- Expanding business into the next-generation energy domain, based on VPP technologies
- Development of high value added services based on electricity retail sales
- Expanding into new business fields such as agriculture and healthcare
- Developing and stimulating the foundations for business creation, including incubation and M&A activities

Courses of action in developing the Smart Society Building Business

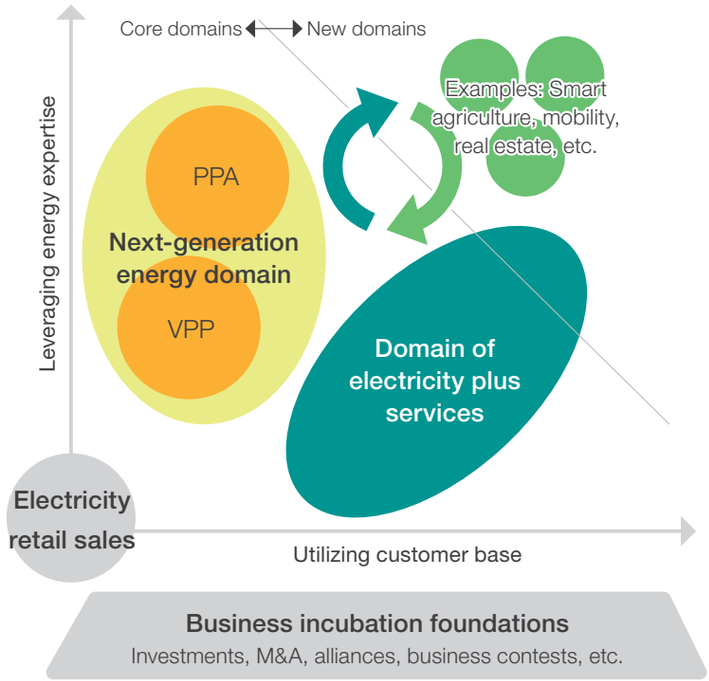
In the Smart Society Building Business, as electricity professionals, we focus above all on business development that draws on our energy expertise in next-generation energy. In ways that include VPP technologies, distributed renewable energy sources and storage cell installation services, and energy management solutions, we will expand our business domains and help establish a carbon neutral society.

In addition to efforts to enhance the earnings potential of its base in the retail electricity business through sales approaches that account for rising fuel and electricity procurement costs and changing supply and demand structures, the Smart Society Building Business is also focusing on the domain of services beyond electricity by bundling high value added services with retail electricity sales. In this domain, we will expand the scope of products and services that deliver comfortable, safe, and reliable value by proposing diverse rate plans and various convenient services.

To broaden the Smart Society Building Business still further, we will leverage our strengths and assets to take on the challenges of new domains through a business incubation process that involves internal and external business contests and enhanced open innovation functions in cooperation with startups.

By deploying packages that combine various products and services with local initiatives (community projects) such as smart-city programs in ways that meet community needs, we will realize a smart society, starting in Tohoku while delivering solutions to various issues in the community.

Business portfolio



Electricity Retail Sales

We revised retail electricity rates to enhance the earnings potential of the retail electricity business in light of rising fuel and power procurement costs and changing supply and demand structures.

We will continue to promote efforts to achieve reliable, comfortable, eco-friendly lifestyles while helping customers reduce the burden of electricity rates.

Revised electricity rates

Despite efforts to date to enhance cost competitive strengths by implementing efficiency improvements amid intensifying competition for retail sales following the deregulation of retail electricity sales, we faced circumstances in which the cost of supplying electricity exceeded revenues from electricity rates. This is due to complex factors, including soaring fuel prices and wholesale electricity market prices, as well as large-scale facility damage caused by earthquakes.

Given the difficulty of maintaining a stable supply of electricity under such conditions, regrettably, we had no choice but to increase electricity rates for customers in regulated segments. In November 2022, we requested an average increase of 32.94%. In May 2023, we received approval for an average increase of 25.47%, which we implemented in June 2023.

In deregulated segments, in November 2022, we revised rates for high voltage power and above and eliminated maximums under the fuel-cost adjustment system for deregulated low voltage rates. We also revised deregulated low voltage rates at the same time of revision of regulated electricity rates in June 2023.

In the standard service menu for high voltage power and above, we implemented rate revisions in April 2023 to include market-price adjustments.

We take very seriously the views and feedback received from customers during the process of gaining approval for the rate revisions, and we will continue thorough efforts to improve efficiency and ensure a stable supply of electricity to our customers. We will provide advice on efficient ways to use electricity and help realize reliable, comfortable, eco-friendly lifestyles, to minimize the burden of electricity rates.

Activities to propose energy conservation and rate reduction solutions to customers

We launched a summer energy conservation action program in June 2023 to provide benefits to customers who cooperate in energy conservation.

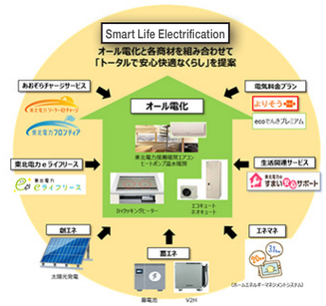
In addition to this action program, we are providing consulting services for energy conservation and proposing on-site solar-power generation and consumption services for corporate customers. For household customers, we have launched a promotional campaign to support part of the costs of heat pump replacement.

We will implement a program similar to the summer energy conservation action program in winter 2023 as well, as we strive to improve power supply-demand balance and reduce rate burdens on customers.

Promoting Smart Life Electrification

To achieve carbon neutrality, we recommend that customers switch to full electrification in ways that include use of EcoCute solutions based on energy-efficient heat pump technology.

In the future, we will strive to realize reliable, comfortable, eco-friendly lifestyles that conserve energy and safeguard the planet by proposing comprehensive Smart Life Electrification solutions that combine various Tohoku Electric Power services with devices such as solar panels, storage cells, and vehicle-to-home (V2H) solutions.



Next-Generation Energy Services

Service positioning, value provided

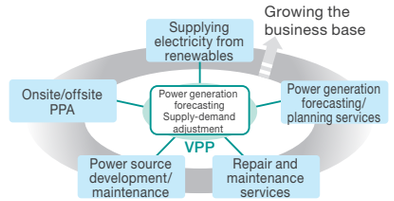
We will grow our businesses in next-generation energy services and contribute to a carbon neutral society by providing services to put various energy resources to maximum use drawing on virtual power plant (VPP) technologies and supplying distributed renewable energy sources and storage cell installation services.

We will also enhance the provision of optimal energy management solutions to individual customers and actively participate in smart city and other community initiatives projects, to realize a smart society starting in Tohoku, as well as solutions that address individual community issues.

How to generate profit

Key points for profit generation

- Improving precision of power generation forecasting related to supply-demand management
- Swiftly securing VPP (aggregation) resources
- Ascertaining corporate PPA needs and supporting adoption
- Swiftly developing and securing service human resources



Improving profitability and growing business domains by linking various businesses around a core of power generation forecasting and supply-demand adjustment

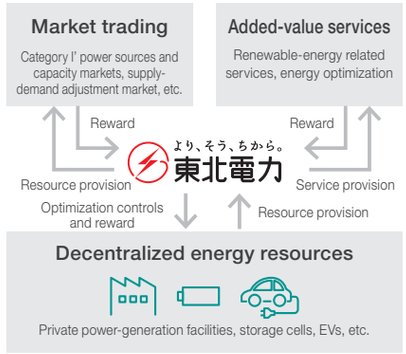
See here for more information on the renewable energy business
▶ Power Supply Business: Renewable Energy ▶ P34

Major initiatives in FY2022, future courses of action

Virtual power plants (VPPs)

A virtual power plant (VPP) service combines customer distributed energy resources and provides returns to customers as a portion of revenues earned through market trading and other means.

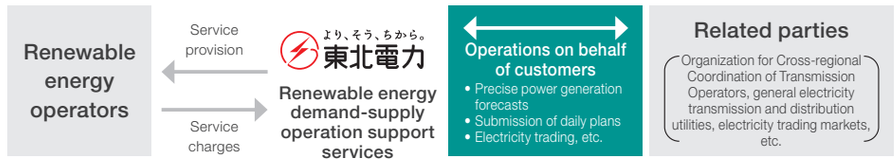
In the future, we will test household demand response services to control household storage cells remotely in accordance with electricity market price fluctuations and tight supply-demand conditions. These will contribute to decarbonization by supporting the adoption of storage cells and, in the future, managing storage cells on the scale of tens of thousands of units.



Growing the renewable energy aggregation service business

Renewable energy, which is seeing growing use, is a power source for which it is difficult to balance supply and demand. We have launched renewable energy aggregation services that draw on our knowledge of the power business to efficiently deliver renewable energy on behalf of renewable power producers.

Demand is also growing for power purchase agreements (PPAs), whereby corporate customers conclude long-term contracts with renewable power producers, as a means of procuring renewable power. We will increase orders received by applying our renewable energy aggregation technologies to meet PPA needs.



Carport type solar panels at Sendai International Airport

This on-site PPA project by Toyota Tsusho, Tokyu Land, and Tohoku Electric Power involved installing carport type solar panels on parking lot no. 1 of Sendai Airport, which operates Sendai International Airport, and began operation in May 2023.

It is projected to generate 1,816 MWh of power per year, reducing CO_2 emissions by 875 t.

Tohoku EPCO Solar e Charge business development

Since its establishment in April 2021, Tohoku EPCO Solar e Charge has promoted adoption of solar power and storage cell services to households (under the name Aozora Charge Service) through this business. Highly regarded for how it facilitates contributions to carbon neutrality with zero initial costs, Tohoku EPCO Solar e Charge has partnered with about 200 home builders. Its service is used by customers over a broad territory from the Tohoku Electric Power service area to the Kanto region.

It has also secured bulk contracts for housing subdivisions in Miyagi and Niigata prefectures and elsewhere. In particular, the Asahi District of Izumi New Town in Sendai recommends its use on its 721 residential lots. Testing of demand response services using solar power and storage cell services is also underway in the district.

In addition, Tohoku EPCO Solar e Charge has proposed using its services to contribute to local government decarbonization plans. Specifically, it is participating in a joint proposal to select an advanced decarbonization district in the city of Miyako, Iwate Prefecture. It will continue proposing solutions to contribute to the development of decarbonized districts by local governments.

In the future, in addition to targeting continuing growth in its partnerships and its service area, it will strive to realize a society in which households and communities can use electricity with peace of mind at any time based on the development of products related to electric vehicles and energy management.

Smart city and town management

Drawing on our knowledge as a general energy company with a focus on electricity, we supply value to help identify solutions to social issues and to achieve sustained growth in local communities through local smart city plans and other efforts.

At Izumi Park Town (Izumi Ward, Sendai), alongside other activities, we're developing state-of-the-art services with a focus on the energy field. We're participating in Super City plans* in the cities of Sendai and Aizuwakamatsu. Our goal is to establish a smart society, starting in Tohoku, by deploying the knowledge and understanding gained through such activities at other locations.

Source: Super City Open Lab

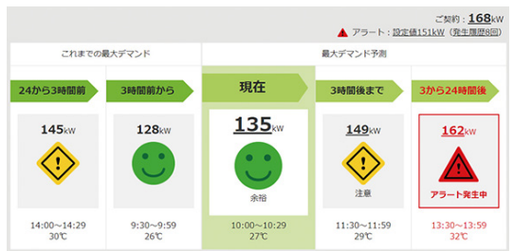
* Super City plan: An effort targeting the development of a true city of the future to take the lead in realizing future ways of living based on state-of-the-art technologies ranging from AI to Big Data, under the Cabinet Office's National Strategic Special Zones program.

exEMS service to support optimal energy experiences

We offer the experience Energy Management System (exEMS) to businesses that contract with us for high-voltage electricity or above as a service furthering energy conservation and cost savings in light of ever-growing awareness of the need to cut energy costs and protect the environment. Drawing on technologies such as Internet of things (IoT) and artificial intelligence (AI), this service helps customers manage daily energy use and draft energy-conservation measures by visualizing the details of electricity use, including changes in demand and electricity consumption.

The greatest strength exEMS offers is its ease of adoption. By realizing battery operation using next-generation telecommunications and other technologies, exEMS makes it possible to visualize electricity use without requiring large-scale installation construction. Since introducing this service in 2018, we've provided it to numerous customers, primarily in the Tohoku and Niigata region.

The product lineup includes exEMS with A, which supports air conditioning demand controls, and exEMS Advance, which enables visualization of electricity use per device along with environmental measurements. We plan to continue developing this product line by expanding the range of services provided to meet customer needs.



Electricity Plus Services

Service positioning, value provided

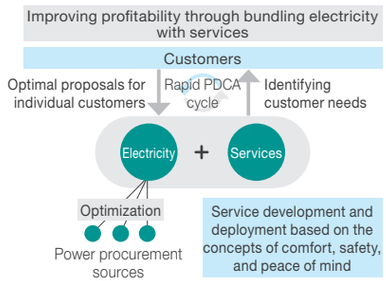
Tohoku Electric Power and Tohoku EPCO Frontier are working together to provide bundled services based on electricity retail sales. We will expand the scope of products and services by formulating diverse rate plans and various convenient services.

Through these diverse rate plans and services, we will put into practice the Group slogan “Yori, Sou, Chikara (The Strength to Work Alongside),” delivering comfort, safety, and peace of mind to customers.

How to generate profit

Key points for profit generation

- Securing optimal power procurement sources
- Service development leveraging Group strengths and based on customer needs
- Enhancing sales abilities to propose optimal electricity and service plans suited to customer needs



Main initiatives in FY2022 and future courses of action

Business development by Tohoku EPCO Frontier

Tohoku EPCO Frontier was established in April 2021 as a core company driving the Smart Society Building Business.

In FY2022, it did business under highly challenging conditions as power procurement prices rose due to factors such as higher fuel costs spurred by the Ukraine crisis and rapid yen depreciation.

Under these conditions, it undertook the Smart Energy Conservation Challenge, a program that bundled smart energy-conserving power plans, in which rates were discounted in accordance with energy savings, and energy conservation supporting services to help customers save energy through means such as improving the energy savings of home appliances. These efforts seek to reduce economic burdens on customer households.

In FY2023, it will seek to improve profitability by deploying various services that meet customer needs and contribute to solutions to society’s challenges, while also striving to procure power at low prices and realize further efficiency improvements throughout its businesses.

A wide range of services to enrich the lives of our customers

In addition to expanding services likely to grow in the future, including household budget consultation services and camping support services, Tohoku EPCO Frontier is striving to rapidly develop new services. As part of such efforts, it participates in testing of a program to use IoT technologies to help keep children safe on their way home from school.

In preparation for future growth, it is engaging in activities such as identifying the products it should provide based on a vision of living 10 years in the future and actively developing new services by backcasting from this vision.

By collecting and analyzing customer information, including behavioral data, and running through rapid hypothesis-testing cycles through A/B testing and other means, it will move forward to develop new solutions quickly as part of efforts to promote advances in digital marketing.

Enhancing partnerships in plans bundling electricity with gas or electricity with cable TV/Internet (Selling bundles in cooperation with eleven partners in total, including existing partners)

Recent partners	Sales began	Summary
Sennan Gas (Natori, Miyagi Prefecture)	April 2022	Bundling electricity with gas
Sendai Propane (Tagajo, Miyagi Prefecture)	April 2022	
Yamagata Gas (Yamagata, Yamagata Prefecture)	April 2022	
Mizusawa Gas (Oshu, Iwate Prefecture)	May 2022	
New Media (Yonezawa, Yamagata Prefecture)	June 2022	Bundling electricity with cable TV/Internet
Sendai CATV (Sendai, Miyagi Prefecture)	June 2023	
Noshiro Energy Service (Noshiro, Akita Prefecture)	July 2023	Bundling electricity with gas

We will contribute to community development by supporting enhanced lifestyles and enhancing partnerships with local infrastructure services to offer affordable bundles.

Tohoku Electric Power lifestyle services work alongside customers to improve safety and peace of mind

We offer Tohoku Electric Power lifestyle services to help community residents find solutions for their needs.

In FY2022, we enhanced the range of services available and, in June 2023, began offering lawn mowing, pruning, pest control, and other services to deliver solutions to household concerns.

We will continue to provide safe, reliable services to help people in the community live happier lives.

Vacant home management service launched

This service includes monthly checking of the interior and exterior conditions of customers' cherished homes and reporting to customers with photographs.

We launched this service in the Sendai area of Miyagi Prefecture in November 2022 and expanded it to parts of Yamagata and Fukushima prefectures in June 2023.

家族の想いを、未来につなぐ。
東北電力の
「空き家管理サービス」

Support services launched for lock, window, and furniture problems

This fixed-rate service prepares customers for unforeseen issues such as lost keys, broken windows, and door problems.

When a customer calls to report a problem, we provide a full range of services, including acceptance of repair requests, dispatch of repair staff, and identifying and fixing the problem.

We began offering this service in the six Tohoku prefectures and Niigata Prefecture in November 2022.

いちばん近くで、くらしを守る。
カギ・窓ガラス・建具
トラブルサポート

Low-priced plan added to Sumai Anshin Support service lineup

This fixed-rate service handles issues related to electricity and plumbing.

When a customer calls to report a problem, we provide a full range of services, including acceptance of repair requests, dispatch of repair staff, and identifying and fixing the problem.

In March 2023, we added a lower priced plan to handle a limited range of problems compared to the existing plan that covers electrical facilities.

This service is available in the six Tohoku prefectures and Niigata Prefecture.

東北電力の
すまい安心サポート

Open Innovation

Tohoku EPCO Open Innovation Program 2023 for cocreation with partner firms

Aimed at realizing a smart society, the Tohoku EPCO Open Innovation Program 2023 is underway from late April 2023 through late February 2024. This program will cocreate solutions to social issues such as depopulation, low birth rates, and population aging to help realize a smart society in the six Tohoku prefectures and Niigata Prefecture, as well as putting to use the region's wealth of forestry resources and vacant properties.

Companies that submit highly feasible business ideas that can utilize the resources and strengths of both partners will be provided with assistance in further improving on their plans together with Tohoku Electric Power or Tohoku EPCO Frontier. Then, the results of consideration of the plans will be announced in a meeting and efforts toward testing or commercialization will begin.

Themes sought

1. **Providing services to enrich human-resource development through reskilling and job matching**
2. **Realizing services putting the region's forestry resources to maximum use**
3. **Realizing community vitality using vacant properties**

Results of Tohoku EPCO Open Innovation Program 2022

With the goal of realizing a smart society, the Tohoku EPCO Open Innovation Program 2022 took place from May 2023 through February 2023.

The program received a total of 132 ideas on three themes. Following consideration of the potential for synergies to Tohoku Electric Power Group assets and feasibility of the ideas, cocreation has begun on the business ideas from Engate, Inc., ADDIX, Inc., and Panta Rhei Co., Ltd.

Future plans call for aiming to commercialize these ideas through cocreation between the partner companies and Tohoku Electric Power or Tohoku EPCO Frontier.

Partner companies

Engate, Inc.

The project seeks to develop a platform to use a gifting system to highlight the appeal of the Tohoku region, including traditional culture, cuisine, and arts, as well as its natural blessings.

ADDIX, Inc.

The project seeks to develop a service platform to make it easier to collect Tohoku Electric Power points and enable customers to experience true advantages using the partner firm's knowledge of Web service operations.

Panta Rhei Co., Ltd.

The project will supply safe, reliable wind power even in locations where solar panels cannot be installed.
As a power source for local production and local consumption, in which the power generated is used on site, it will generate revenue through sales of wind power equipment to power companies, real estate businesses, and other buyers.

R&D/IP Strategies

R&D vision

We have identified this five-year period (FY2020–2024) as a time in which we will transform our business model to achieve what we want to be in the 2030s identified in Working alongside next, the Tohoku Electric Power Group's Medium- to Long-Term Vision. To this end, we are moving forward with business activities based on the three focal points. The entire Tohoku Electric Power Group is working together as one toward Group growth by promoting R&D to contribute to innovations in society and thorough enhancement of our competitive strengths.

In these initiatives, together with careful selection of the details of R&D projects based on profitability and future potential we also have identified three priority domains, and we will focus in particular on R&D to contribute to promoting the Tohoku Electric Power Group's Carbon Neutral Challenge 2050 as well as realizing a smart society and creating new revenue sources.

Point 1 Change
Enhancing competitive strengths through comprehensive reforms in the Power Supply Business

Point 2 Challenge
Taking on the challenge of swiftly achieving profitability in Smart Society Building Business

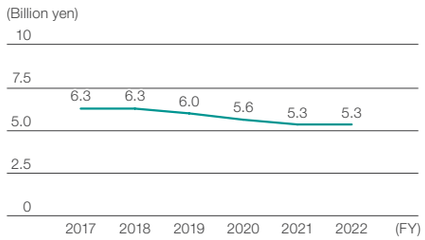
Point 3 Create
Evolving the management foundations to support corporate value creation

Priority R&D domains

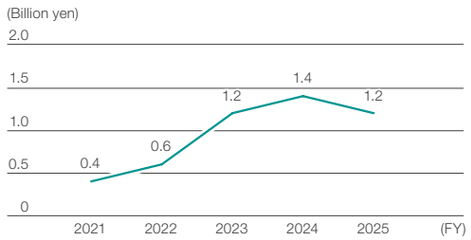
- Contributing to progress toward Tohoku Electric Power Group Carbon Neutral Challenge 2050
- Realizing a smart society and creating new revenue sources
- Steady efforts toward smart electric power maintenance and resilience

R&D contributing to a stable supply of electricity to support core businesses

Trend in R&D expenses



Planned R&D expenses related to carbon neutrality



* Actual figures shown for 2021, 2022

Current state of R&D in priority fields and future courses of action

Contributing to progress toward the Tohoku Electric Power Group Carbon Neutral Challenge 2050

To achieve carbon neutrality in 2050, we're pursuing R&D across a wide range of fields, including decarbonization, renewable energy, and power grids. We plan to continue pursuing these initiatives.

We're planning 83 R&D projects to help realize carbon neutrality over the coming three years, and 57 projects currently are underway.


Black pellets

Examples of R&D in FY2023

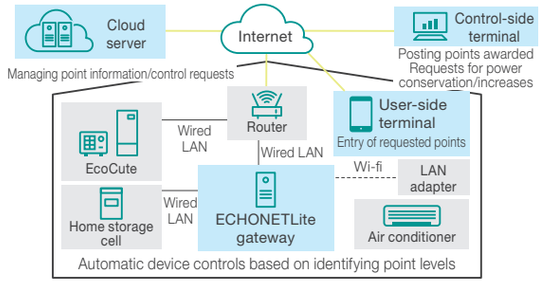
- Research on LNG thermal hydrogen/ammonia mixed burning
- Research on burning black pellets in coal thermal power
- Research on CO_2 reduction and effective use
- Research on floating offshore wind power
- Research on dynamic-rating power transmission capacity
- Research on more advanced methods of forecasting solar and wind power output
- Research on improving precision of short-/medium-range demand forecasting

Realizing a smart society and creating new revenue sources

In addition to actively carrying out R&D toward swiftly achieving profitability in new businesses related to realizing a smart society and creating new revenue sources, we will also further advance initiatives toward increasing electrification rates and expanding adoption of electric devices and efforts to help improve business efficiency and cut costs by using means such as digital innovation technologies.

Examples of R&D in FY2023

- Research on service to provide PV for in-house consumption
- Research on automatic control of home appliances
- Research on more advanced solution services for consumer households
- Research on new next-generation energy businesses



Concept of automatic control of home appliances

Examples of other major R&D efforts

Efforts toward smart maintenance and resilience

- Research on automatic facility patrols
- Research on using autonomous drones to perform inspections and patrols
- Research on more advanced wiring work and use of robotics
- Research on use of high-precision positioning technologies

Research on responding to fluctuations in the output of renewable energy using hydrogen production technologies

Background and objectives

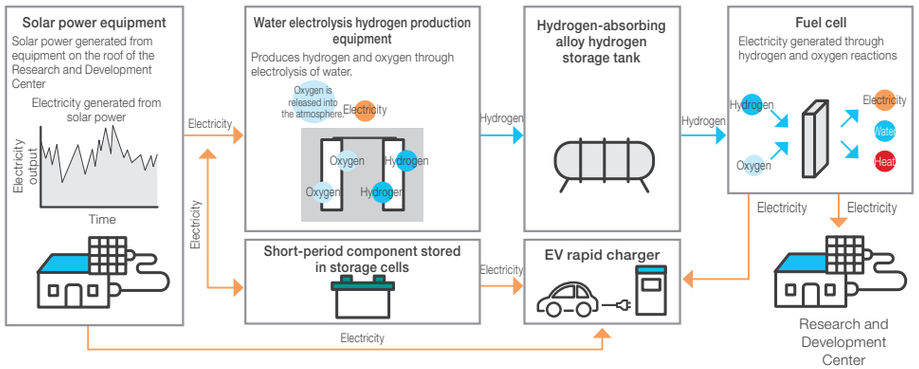
Accompanying the expanding adoption of renewable energy is the need for adjustments in response to fluctuations in output resulting from weather conditions. We have to date addressed output fluctuations based on storage cell technologies. By focusing on hydrogen production technologies, however, this project is intended to verify whether such technologies can be used to absorb large-scale fluctuations in power output from renewable energy sources to the same degree as fuel cells.

Research overview

This project involves the production of hydrogen through water electrolysis in solar power generation by setting up solar power and hydrogen production systems. The green hydrogen produced from solar power in this way is used as fuel to generate electricity using fuel cells. This power is supplied to the R&D Center. While it involves energy losses in hydrogen production and power generation, this project has generated a wide range of knowledge on various topics, including the feasibility of smoothing out power supply by absorbing sudden fluctuations in solar power generation through the production of green hydrogen.

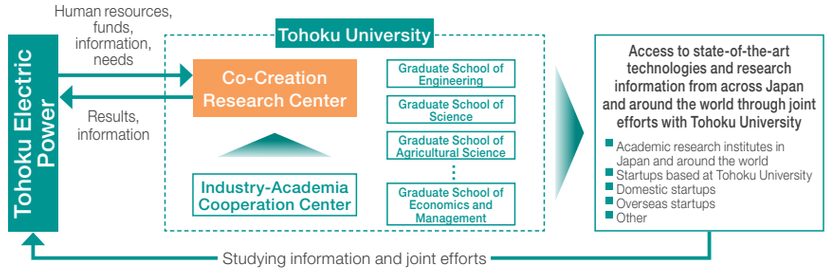
Based on future research on topics such as verification of the durability of main equipment and power supply to EV rapid charger using green hydrogen, we will make progress on deepening knowledge on effective use of hydrogen energy, including measures to control renewable energy fluctuations using water electrolysis, and other topics to help develop hydrogen-related businesses.

Overview of hydrogen generating system



Accelerated promotion of R&D together Intellectual property with Tohoku University

In November 2021, we opened the Co-Creation Research Center together with Tohoku University to serve as a base for R&D joint efforts. During the period of November 2021 through March 2025, through close joint efforts with the University, we plan to make the most of research results and human resources in cooperative efforts on topics such as carbon neutrality and digital transformation (DX), thereby enhancing competitive strength of the power business.



Collaboration and joint efforts topics

Under the supervision of Tohoku University Data Science College (operated by Tohoku University Knowledge Cast Co., Ltd.), we launched a joint online program intended to train human resources for digital transformation (DX) with zero to one, inc. based on the zero to one learning platform, titled “Data Literacy Couse for Solutions to Social and Business Challenges.”

This course draws on lectures and case studies that meet Ministry of Economy, Trade and Industry DX literacy standards to help students learn the essential statistical fundamentals and methods used with data. Among its distinguishing features is a focus on applications in business settings, which should help promote both DX implementation and DX reskilling within the enterprise.

This course will contribute to a sustainable society by helping businesspeople learn data literacy and provide solutions to social and business challenges.

Intellectual property

We see intellectual property s a key management resource in enhancing our competitive advantages. Our R&D activities also comply with the obligation to respect intellectual property rights specified in the Tohoku Electric Power Group Code of Conduct.

Policy on intellectual property

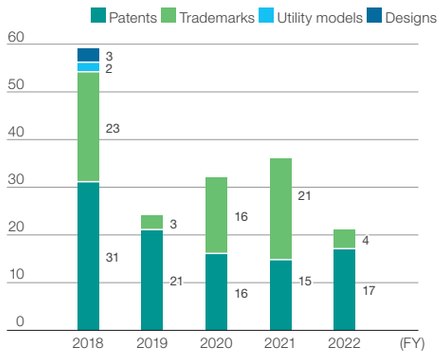
We advance strategic intellectual property initiatives throughout the Tohoku Electric Power Group to allow effective use of intellectual property in business activities through its creation, protection, and application.

Targets and metrics

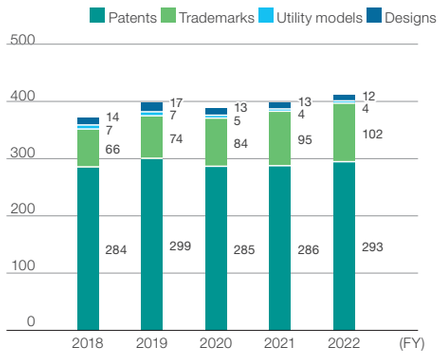
We have identified the following targets and metrics for our IP strategy initiatives. Based on these, we are pursuing sustained efforts to enhance in-house training that will strengthen knowledge and awareness of IP from a compliance perspective, including avoiding infringement, and the competitive perspective of securing rights to our research results.

Target	Protecting IP rights in line with the Group code of conduct	Metric	Number of patents held

Patent applications



Patent registrations



Code of Conduct: 3 (1) Protecting intellectual property rights	**We protect and utilize the Group's intellectual property rights while respecting those belonging to others.**

Initiatives under the intellectual property strategy

Our branding initiatives, new business promotion efforts to realize a smart society, and other activities have led to a significant increase in the number of trademark applications over recent years.

Setting up a hotline for patents and other IP rights	To promote efficient R&D and to secure and make proactive use of intellectual property, we provide general employees with introductory and applied training on IP operations. We also provide seminars on searching for patent and trademark information and more specialized training for our IP staff. We have also set up three IP courses in our distance learning program for employees to offer a broad range of opportunities for acquiring knowledge in this area.
Setting up a hotline for patents and other IP rights	We have set up a hotline for the handling of industrial property (IP) rights by a team in the Research and Development Center to help oversee activities involving filing of patent applications and maintaining and managing IP rights.
Supporting the IP activities of Group companies	In addition to introducing the current state of Company IP activities through the Research and Development Center's publicity bulletins, we accept trainees from Group companies for IP training programs and seminars. The goal is to strengthen IP knowledge groupwide.

Example of protected IP rights

Power supply vehicle
Patent no. 6545110
(registered June 28, 2019)
(jointly developed by Aichi Corporation and Tohoku Electric Power)

Chapter

03

Toward Realizing Carbon Neutrality

Roadmap Toward Realizing Carbon Neutrality

To achieve carbon neutrality by 2050, the Tohoku Electric Power Group is striving to reduce CO_2 emissions based on three pillars: making the most of renewable energy and nuclear power, decarbonization of thermal power sources, and electrification and realization of a smart society.

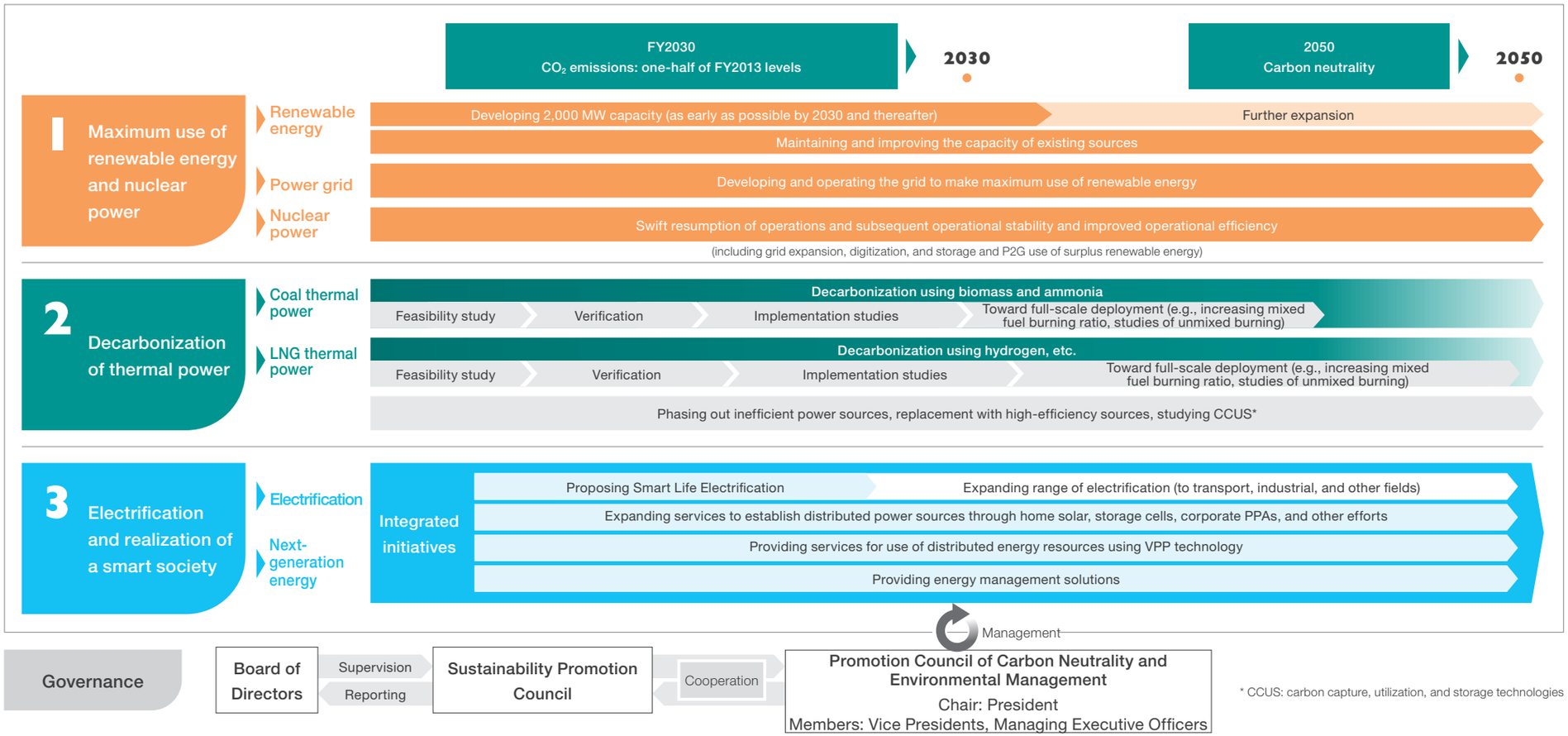
For renewable energy, we are striving to develop 2,000 MW of new power as early as possible by 2030 and thereafter while maintaining and improving the power generation capacity of existing sources. For nuclear power, we are making steady progress toward resumption of operations around May 2024.

To decarbonize thermal power sources, we are studying and testing the use of biomass and ammonia at coal-fired thermal power plants and the use of hydrogen and other materials at LNG-fired thermal power plants. We're also studying CO_2 capture at thermal power plants to enable use of CCUS.*

To promote electrification and realize a smart society, in addition to promoting Smart Life Electrification to enable comfortable, smart use of electricity by combining full electrification with solar, storage cell, and other services, we are also working to grow the business domains of our next-generation energy services to set up distributed power sources based on VPP technologies, corporate PPAs, and other solutions.

To achieve the goal of carbon neutrality by 2050, the Group is seeking to halve CO_2 emissions by FY2030 vs. actual FY2013 levels.

The Group Promotion Council of Carbon Neutrality and Environmental Management, chaired by the President, manages efforts to achieve this goal and the goal of carbon neutrality by 2050.



* CCUS: carbon capture, utilization, and storage technologies

Case Studies of Carbon Neutrality Initiatives

Making the most of renewable energy and nuclear power

We are making steady progress on efforts to develop new renewable energy sources and to make the most of nuclear power. Both are carbon-free energy sources.

In the area of renewable energy, we are accelerating work to develop 2,000 MW of new capacity while improving the performance of existing sources.

In addition, to expand the use of renewables, we are improving and enhancing our power transmission and distribution networks and making rapid progress on developing next-generation networks.

In the area of nuclear power, we are accelerating efforts to resume operations while putting safety first.

Accelerating work to develop 2,000 MW of new capacity / maintaining and enhancing kWh performance of existing sources ▶P35

Nuclear power station initiatives ▶P38

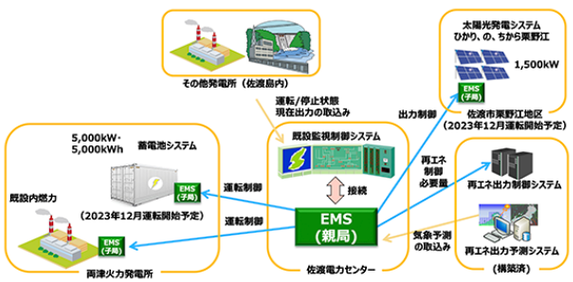
Development of next-generation networks to expand use of renewables

Case study: Building optimal supply-demand controls on Sado Island

The Tohoku Electric Power Group is participating in the Niigata Prefecture Natural Energy Island Vision, a project that seeks to establish a sustainable recycling-based society and carbon neutrality, invigorate the local economy, improve disaster resilience, and maintain a thriving natural environment based on the adoption of renewable energy.

To encourage further adoption of renewable energy on Sado Island, Tohoku Electric Power Network is combining solar power and storage cell systems and energy management systems (EMSs) to realize optimal control of supply and demand.

To prepare for the commencement of operations in December 2023, we are moving forward with construction to install a storage cell system (output: 5,000 kW) at the Ryotsu Thermal Power Station in Sado, Niigata Prefecture, and the Hikari no Chikara Kurinoe solar power station (output: 1,500 kW) in Kurinoe, Sado.



Decarbonization of thermal power

Key to achieving carbon neutrality by 2050 while maintaining stable supplies of electric power will be maintaining an adequate level of large-scale grid power sources. For this reason, we are proceeding with efforts to reduce and eliminate carbon emissions from thermal power sources.

For coal-fired thermal power, we are testing mixed burning with biomass and expanding our study of ammonia use. For LNG thermal power, we are striving to accumulate the knowledge needed for mixed burning with hydrogen and explore the feasibility of future operation by testing related technologies. We are also studying a wide range of options to contribute to decarbonization, including participating in a study project under contract to the Japan Organization for Metals and Energy Security as an advanced carbon capture and storage (CCS) project (FY2023).

While suspending operation of aging power sources, we will carry out further efforts toward decarbonization of thermal power. As part of efforts to study replacement of Units Nos. 1 and 2 at the Higashi-Niigata Thermal Power Station with high-efficiency equipment that generates less CO_2 emissions, for example, we have started preparations for environmental impact assessments. We will continue to upgrade power sources in light of considerations such as the states of various regulatory systems intended to achieve carbon neutrality and customer electricity demand as we strive toward both environmental performance and competitive advantage.

Thermal power decarbonization initiatives

Case study: Joint study toward adoption of hydrogen and ammonia with JERA, Kyushu Electric Power, Chugoku Electric Power, Shikoku Electric Power, Hokuriku Electric Power, and Hokkaido Electric Power

In November 2022, we concluded a memorandum of understanding on studying joint efforts toward adoption of hydrogen and ammonia as fuels for power generation, with JERA Co., Inc., Kyushu Electric Power Co., Inc., Chugoku Electric Power Co., Inc., Shikoku Electric Power Co., Inc., Hokuriku Electric Power Co., Inc., and Hokkaido Electric Power Co., Inc. To secure large volumes of hydrogen and ammonia as fuels for power generation it is essential to develop and expand new supply chains through joint efforts among companies motivated toward decarbonization.

This memorandum signed by seven companies operating large-scale thermal power plants in Japan calls for a study of the feasibility of joint efforts in the following areas to develop and expand hydrogen and ammonia supply chains. Based on these studies, we will seek to help rapidly build stable, economic supply chains for next-generation fuels and realize a carbon free society.

- Joint procurement to reduce procurement costs of hydrogen and ammonia for use in domestic power plants
- Establishing means of transport and storage of hydrogen and ammonia
- Encouraging policy support and development of rules for hydrogen and ammonia
- Exchanging opinions and study of cooperative projects regarding adoption of hydrogen and ammonia in Japan

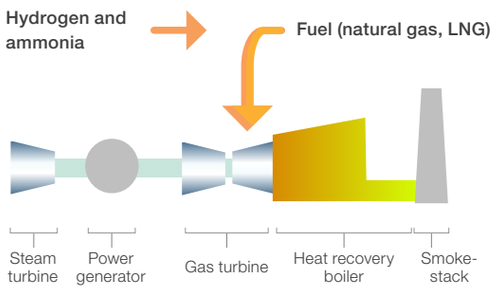
Decarbonization of thermal power

Verification study of mixed burning with hydrogen and ammonia to decarbonize LNG-fired thermal power

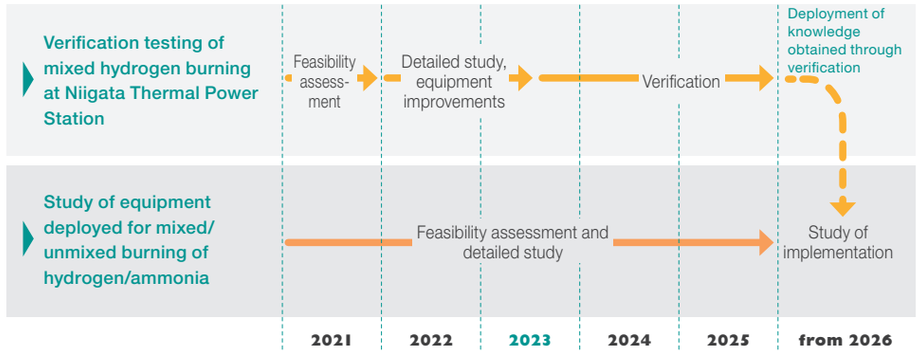
Expectations are high for hydrogen and ammonia as energy sources to move closer to achieving carbon neutrality. Neither substance releases CO_2 emissions when burned.

We are currently targeting hydrogen because testing can begin more quickly for LNG thermal power than for ammonia. We are preparing equipment for verification testing of mixed hydrogen burning at our Niigata Thermal Power Station No. 5 series (a 109 MW natural gas plant) to check the stability of burning.

Illustration of mixed burning of hydrogen and ammonia



Projected timetable



Case study: Verification study of mixed burning with black pellets to decarbonize coal thermal power/production of biomass raw materials on unused land on the power station site

In 2021, the Noshiro Thermal Power Station (a coal-fired station with total output of 1,800 MW) began verification testing of mixed burning with black pellets biomass fuel made from partially carbonized wood.

Following assessment of the storability and transportability of black pellets, in May 2023, we tested small-scale mixed burning. We will proceed with various studies and preparations for testing using larger ratios of mixed burning. In addition, at the Akita Thermal Power Station (a station fired by heavy oil and crude oil with total output of 600 MW), test cultivation of plants that can serve as raw materials in biomass fuel began in 2021 using an unused plot of land.

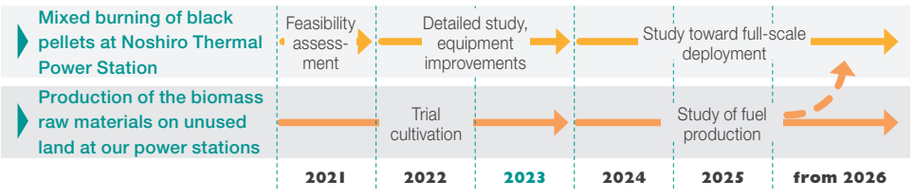
Efforts to date have demonstrated that certain varieties of plants are well-suited to the cold Tohoku climate. After harvesting some of the plants, we undertook trial pelletizing and torrefaction to verify their characteristics as biomass fuel.

In FY2023, we also started the production of biomass materials at the Noshiro Thermal Power Station to gather knowledge concerning expected crop yields and regional conditions and characteristics.

We will continue to pursue efforts such as trial cultivation of biomass materials to accumulate more knowledge of biomass.

Test production of biomass materials at Akita Thermal Power Station

Projected timetable

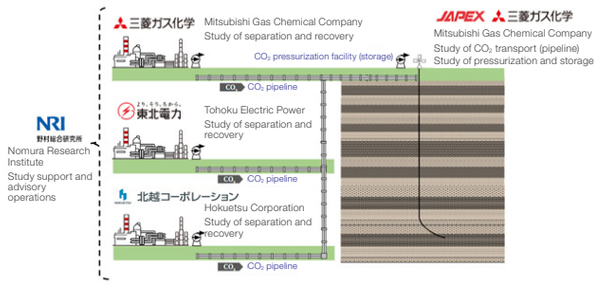


Case study: Joint study of advanced CCS project in the eastern Niigata area

Alongside Japan Petroleum Exploration Co., Ltd., Mitsubishi Gas Chemical Co., Inc., Hokuetsu Corporation, and Nomura Research Institute, Ltd., we are participating in a five-company FY2023 study of an advanced CCS project under contract to the Japan Organization for Metals and Energy Security (August 2023–March 2024).

This study involves research on an advanced CCS project in the eastern Niigata area (aiming to begin CO_2 collection and storage by FY2030).

Specifically, in the eastern Niigata area, which is subject to the Niigata carbon-neutral facility development basic preparation strategy announced by Niigata Prefecture in March 2023, we will study separation and capture, pipeline transport, and pressurization and storage of CO_2 emitted from chemical, paper, and thermal power plants.



Decarbonization of thermal power

Research on conversion of CO_2 generated by thermal power to methane gas using hydrogen from renewable energy

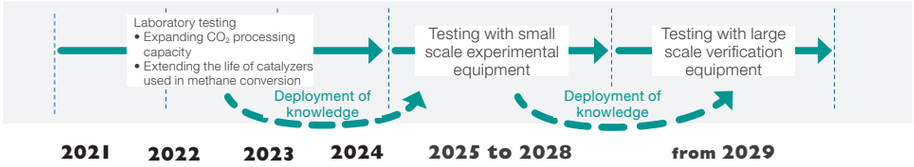
We're currently undertaking joint research with Shizuoka University on converting the CO_2 generated by thermal power sources to methane gas—a carbon capture, utilization and storage (CCUS*) technology.

This project seeks to synthesize methane gas from CO_2 generated by a thermal power station and hydrogen produced using renewable energy for reuse in mixed burning in LNG thermal power generation. This technology will enable reductions in and more effective use of CO_2 generated by thermal power sources.

This project is currently studying expanding the size of the equipment used to convert CO_2 to methane gas, extending the useful life of catalyzers used in methane conversion, and other approaches.

* CCUS: carbon capture, utilization, and storage technologies

Projected timetable



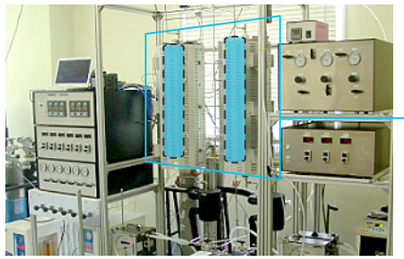
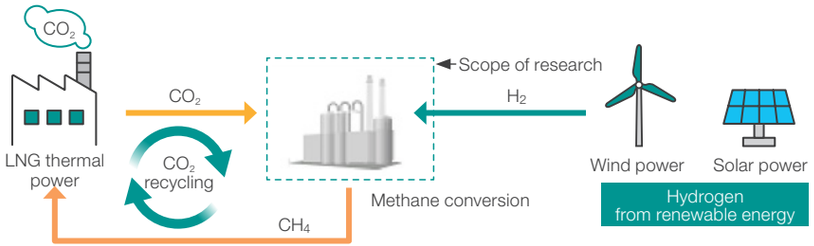


Illustration of methane gas conversion

Experimental CO_2-to-methane conversion equipment (in laboratory)



Electrification and realization of a smart society

Promoting electrification and realization of a smart society will help reduce CO_2 emissions from customers and the community and to realize decarbonization.

We propose comprehensive solutions by promoting Smart Life Electrification to enable comfortable, smart use of electricity by combining full electrification with solar, storage cell, and other services.

We will expand next-generation energy services, including VPP technologies, distributed renewable energy sources, storage cell installation services, and energy management solutions.

Promoting Smart Life Electrification ▶ P46

Expanding the business domains of next-generation energy services ▶ P47

Growing corporate PPA projects

Case study: Purchasing renewable energy from 77 Solar Park Tomiya

The 77 Bank, Ltd. and our wholly owned subsidiary Tohoku Energy Service Co., Inc. have concluded a contract on an offsite corporate PPA (self-consigned transmission) service.

Under this contract, 77 Solar Park Tomiya, a solar farm with a capacity of approximately 2,000 kW will be built on unused land on a general athletic ground owned by 77 Bank in the city of Tomiya, Miyagi Prefecture. Electricity generated from renewable energy source will be supplied to the 77 Bank head office building and several branch offices. With construction and launch of power supply by 2024, this project is expected to lead to annual reductions of approximately 1,237 t in CO_2 emissions once it begins providing renewable energy.

We believe adopting renewable energy through setting up new solar power stations can contribute to realizing carbon neutrality and to sustained community development as an effort that contributes directly to increasing renewable energy sources through additionality.*

77 Bank and Tohoku Electric Power concluded an agreement on joint efforts in promoting carbon neutrality on April 27, 2023, and this is the first project under the framework of this agreement.

* The contribution to alternatives to CO_2-emitting power sources during generation by newly installed renewable power generation facilities.

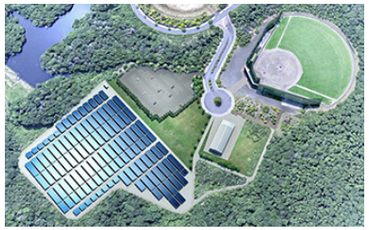


Illustration of 77 Solar Park Tomiya at completion

Reducing CO_2 emissions by adopting onsite PPA projects (Tohoku Electric Power Group as a whole)

As part of our next-generation energy services, we are enhancing proposals for onsite PPA projects in which solar power and other facilities are installed on the same sites as customer business facilities, which then use the power generated. We estimate CO_2 emissions reductions by corporate customers provided with onsite PPA services in FY2022 to total 4,979 t-CO_2.

The Group also proposes other solutions, including solar and storage cell installation services for household customers. We will actively promote CO2 emissions reductions on the customer side through these efforts.

FY2022	4,979 (t-CO_2)

Disclosure Under the TCFD Recommendations

Having long recognized climate change risks and opportunities as important management issues, we've moved forward with measures to reduce emissions of CO_2 and other greenhouse gases in terms of both supply and demand. In addition, since announcing our support for the TCFD* recommendations in April 2019 we have redoubled efforts to promote environmental management in aspects such as strengthening our responses to climate change and continually enhancing information disclosure in accordance with the framework of the recommendations.

We believe it is important not merely to disclose information but to reflect in our management strategies the risks and opportunities posed by climate change. In doing so, we also rely on engagement with various stakeholders including institutional investors.

* Task Force on Climate-related Financial Disclosures, established by the Financial Stability Board (FSB) to reflect the aims announced by G20 finance ministers and central bank governors

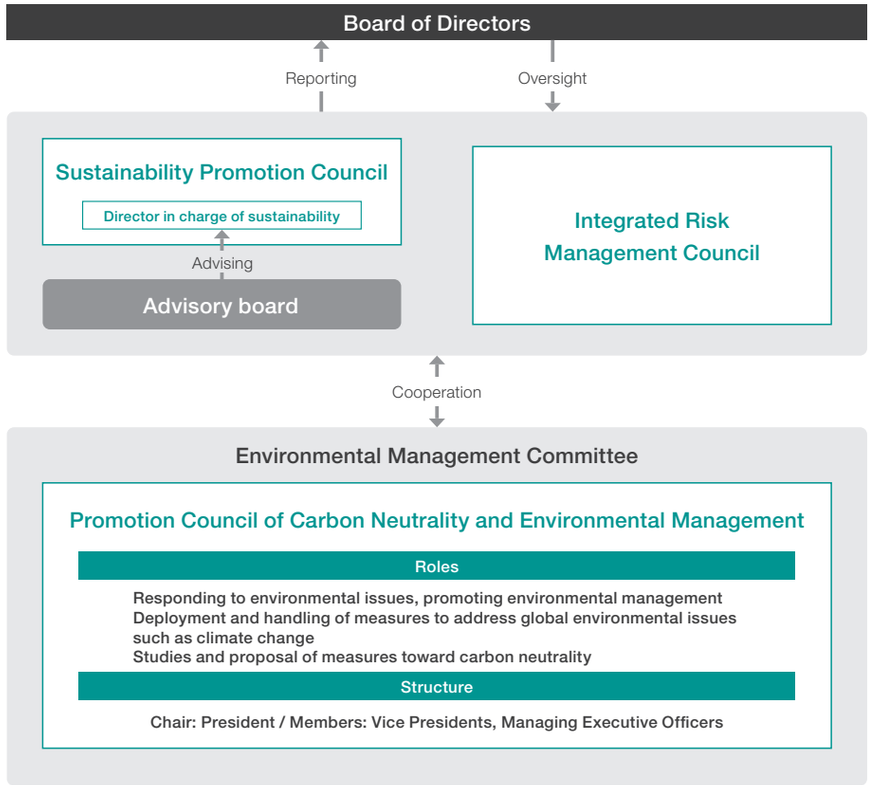
Governance

The Board of Directors enhances our responses to climate change and makes decisions on their incorporation into management strategy based on a recognition of the risks and opportunities posed by climate change, studies of various response measures, and monitoring and oversight of the state of progress toward our goals.

The President chairs the Promotion Council of Carbon Neutrality and Environmental Management and coordinates environmental activities, including responses to climate change.

Following the integration of progress status into the environmental management framework and reporting to the Promotion Council of Carbon Neutrality and Environmental Management, responses to climate change are reported annually to the Board of Directors as sustainability priorities (materiality topics) following deliberations by the Sustainability Promotion Council.

We have also established an advisory board composed of outside experts, to advise the director in charge of sustainability on matters such as sustainability trends and stakeholder perspectives, and we incorporate these into the deliberations of the Sustainability Promotion Council.



Risk management

Tohoku Electric Power integrates and lists in its environmental management framework the groupwide climate risks and opportunities identified by each business execution section and assessed with regard to financial impact. It then ascertains the priority of responding to each risk based on the projected financial impact. Under the integrated risk management framework, a structure has been developed for reporting on climate-related risks with major impacts on management to the Board of Directors twice annually, together with non-climate-related risks.

See ▶ Sustainability Promotion Structure ▶ Sustainability Report 2023 ▶ P4

See ▶ Risk Management ▶ P77

Financial Report 2022 ▶ P24 Business and Other Risks | https://www.tohoku-epco.co.jp/ir/report/security/pdf/2022_ho.pdf

Strategy

Scenario analysis

We perform ongoing scenario analyses to ascertain the financial impact of future climate change risks and opportunities. In our scenario analyses, we selected the risks and opportunities identified under the environmental management framework deemed likely to have an outsize impact on the Company's businesses and ascertained in particular which risks and opportunities are likely to grow within the scenarios envisioned.

We chose two scenarios: a 4° C scenario under which the shift to a low carbon society fails to advance and countermeasures against climate change are not enhanced beyond current levels, and a 1.5° C scenario under which major changes are made to policy and the behavioral forms throughout society as a whole to achieve greenhouse gas emissions neutrality and limit the global temperature increase to no more than 1.5° C (the scenario of progress toward carbon neutrality in 2050). Our scenario analysis reflects medium- to long-term timelines including the period starting in 2050.

To ensure sustained operations under any scenario, we will continue to analyze climate change risks and opportunities, seeking to minimize management risks and swiftly reflecting opportunities in management strategies, aiming for sustained growth.

1.5° C scenario	4° C scenario
Temperature rises by less than 1.5° C since the Industrial Revolution thanks to aggressive action.	Temperature at century's end is up 3.2–5.4° C from the Industrial Revolution due to failure to take additional countermeasures.
Reference scenarios: IEA WEO2022 (NZE Scenario), etc.	Reference scenarios: IPCC Fifth Assessment Report (RCP8.5 Scenario), etc.

Anticipated risks to the Company

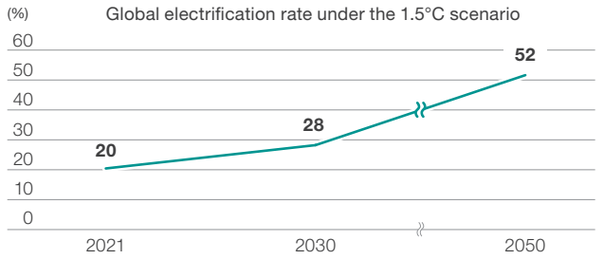
Analysis of **transition risks** associated with more pronounced impacts

1. Enhanced restrictions on CO_2 emissions
2. Systems related to adoption of renewable energy
3. Energy prices, market prices
4. Changing evaluations by stakeholders
5. Progress of decarbonization technologies (including electrification and distributed power sources)

Analysis of **physical risks** associated with more pronounced impacts

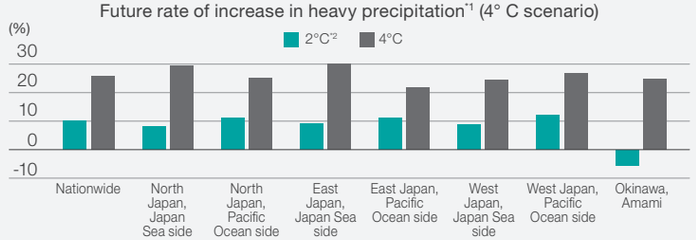
6. Increasingly severe climate disasters
7. Changes in precipitation patterns

Global electrification rate under the 1.5°C scenario



Source: Prepared based on IEA World Energy Outlook 2022

Future rate of increase in heavy precipitation*1 (4° C scenario)



*1 This graph shows rates of increase in heavy precipitation in the future (2080–2100 annual average) under the 4° C scenario, based on current levels (1984–2004 annual average). Heavy precipitation refers to the top 5% average values of daily precipitation on days of precipitation during the year.
*2 The 2° C scenario refers to RCP2.6.

Source: Based on Ministry of the Environment and Japan Meteorological Agency projections of Japan's climate at the end of the 21st century

We're improving our scenario analysis in stages, based on multiple climate change scenarios identified by the International Energy Agency (IEA), Intergovernmental Panel on Climate Change (IPCC), and other bodies. This scenario analysis is intended to consider impacts that may arise under certain assumptions and feasible responses, based on a long-term perspective. No guarantees are made regarding results.

See ▶ Roadmap Toward Realizing Carbon Neutrality ▶ P56

Strategy

Results of analysis of transition risks

Under the 1.5° C scenario, which anticipates growing transition risks, we anticipate political and policy risks (e.g., introduction of carbon pricing) or economic and market risks (e.g., falling market prices of conventional power sources) in each of the short, medium, and long term. This scenario involves risks of thermal power using coal and other fossil fuels becoming less competitive due to rising costs of carbon emissions.

Over the medium to long term, we expect advances in decarbonization technologies that enable improved thermal efficiency and lower costs for the storage cells used in electric vehicles. This involves risks including rising amounts of new capital investment and decreased electricity demand due to progress in energy-conservation technologies.

The 1.5° C scenario also anticipates business opportunities for the Group due to growing market shares of carbon-free products and services, rising electrification rates, and other factors.

Scenario	Category	Climate change risk	Anticipated business risks to the Company *1	Impact	Timing of occurrence *2	Anticipated business opportunities for the Company
1.5° C scenario	Politics (policies)	1 Enhanced restrictions on CO_2 emissions	Increased costs due to adoption of carbon pricing, etc.	Significant	Short/ medium/ long term	Growth in market share of low carbon and carbon-free products (including power source from renewable energy) and services
		2 Systems related to renewable energy adoption	Decreased recoverability of investment in renewables due to changes to the FIT program, intensifying competition in the renewables business, etc.	Significant	Long term	
	Economy (markets)	3 Energy prices, market prices	Decreased market prices of existing power sources due to expansion of distributed power sources	Significant	Short/ medium/ long term	
	Society (reputation)	4 Changing evaluations by stakeholders	Accelerating divestment from thermal power sources for which decarbonization has not been implemented, rising fundraising costs, falling stock prices	Significant	Short/ medium/ long term	
	Technology	5 Progress of decarbonization technologies (including electrification and distributed power sources)	Increase in new capital investment involving decarbonization technologies Decreased demand for electricity due to progress on energy-saving technologies	Significant	Medium/ long term	Growing demand for electricity due to rising electrification rates, including EVs Lower cost of renewable energy facilities Development and penetration of technologies related to storage cells, CCUS

*1 Business risks that would have pronounced impact on the Company have been identified under certain assumptions.
*2 Short term: through 2025; medium term: through c. 2030; long-term: through c. 2050

Our response

■ Proactively assuming the challenge of carbon neutrality by accelerating CO_2 emissions reductions in the Tohoku Electric Power Group under the Tohoku Electric Power Group Carbon Neutral Challenge 2050

Maximum use of renewable energy and nuclear power

- Developing projects targeting new development of 2,000 MW in renewable energy
- Rapid resumption of nuclear plant operations

Decarbonization of thermal power sources

- Verification testing of mixed burning with hydrogen and ammonia at the Niigata Thermal Power Station
- Verification testing of mixed burning with black pellets at the Noshiro Thermal Power Station
- Test cultivation of biomass materials on unused land at power plant sites

Electrification and realization of a smart society

- Progress on electrifying Company vehicles to promote EV use
- Business expansion through proposal of electrification including conversion of heat sources and decentralized power sources
- Promoting renewable energy through corporate PPA initiatives
- Promoting the renewables aggregation business*

* Services to ensure the aggregation and effective use of community renewable resources

■ Promoting technological development

- Technological development toward utilization of hydrogen and ammonia
- Technological development in grid and storage systems toward increased use of renewables
- Technological development related to offshore wind power
- Technological development in carbon recycling

See ▶ Roadmap Toward Realizing Carbon Neutrality ▶ P56

Strategy

Results of analysis of physical risks

Under the 4° C scenario, which envisions high levels of physical risks, we anticipate significant climate change impacts, increasingly severe climate disasters, and changing precipitation patterns.

Acute risks include increased damage to Group facilities and impediments to supply. It will become increasingly important to enhance resilience throughout the power infrastructure. We also anticipate the chronic risk of changes in precipitation patterns to affect hydroelectric power generation and other activities.

We will strive to increase power system resilience through being ready for frequent and severer climate disasters and enhancing the resilience and recoverability of facilities.

Scenario	Category	Climate change risk	Anticipated business risks to the Company *1	Impact	Timing of occurrence *2	Examples of financial impact of physical risks
4° C scenario	Acute	6 Increasingly severe climate disasters	Damage to Company facilities and supply impediments resulting from frequent occurrence of increasingly severe strong winds, torrential downpours, etc.	Signifi-cant	Short/ medium/ long term	● FY2019 Extraordinary losses caused by typhoons in East Japan 6.1 billion yen
	Chronic	7 Changes in precipitation patterns	Reduced hydroelectric power production capacity	Medium	Long term	● Increase in costs due to a 1% decrease in the precipitation rate 2.4 billion yen

Our response

■ Increasing power system resilience

- Enhancing resilience of power sources and supply equipment (installation of bulkheads, elevating important equipment, dredging)
- Increasing recovery abilities (implementing disaster drills)

*1 Business risks that would have pronounced impact on the Company have been identified under certain assumptions.
*2 Short term: through 2025; medium term: through c. 2030; long-term: through c. 2050

Methods for securing power supplies
1. Connection to low-voltage power lines
2. Connection to power meters
3. Attached temporary power outlets
(eight outlets with a total capacity of up to 80 A)

Response case study: Adoption of compact, low-voltage emergency power supply vehicles transportable by air

To ensure power supply to isolated regions and remote islands in the event of a major disaster, Tohoku Electric Power Network has adopted low-voltage emergency power supply vehicles that can fit inside large helicopters used by the Japan Ground Self-Defense Force.

These can be transported by helicopter to enable safe, flexible emergency power transmission in isolated regions and shorten the time required until recovery from the disaster.

Metrics and targets

CO_2 reduction targets

We will proactively assume the challenge of carbon neutrality by 2050, based on the major prerequisite of securing S+3E.

To achieve the goals of the Tohoku Electric Power Group Carbon Neutral Challenge 2050, the Group will aim to halve CO_2 emissions in FY2030 vs. their actual FY2013 levels.

Based on the Tohoku Electric Power Group Carbon Neutral Challenge 2050 announced in March 2021, we will accelerate CO_2 emissions reductions across the Tohoku Electric Power Group through decarbonization of thermal power, maximum use of renewable energy and nuclear power, and electrification and realization of a smart society.

See ▶ Carbon Neutral Challenge 2050 ▶ P20

1. Maximum use of renewable energy and nuclear power

- Seeking to develop 2,000 MW of renewable energy soon after 2030
- Swift operation resumption and increased operation rate of nuclear power based on the essential prerequisite of safety

2. Decarbonization of thermal power

- Decarbonization based on the use of hydrogen and ammonia in LNG thermal power generation
- Decarbonization based on the use of biomass and ammonia in coal thermal power generation

3. Electrification and realization of a smart society

- Proposing optimal electrification and energy efficiency centered on heat pumps
- Expanding promotion of distributed energy services
- Promoting the renewable-energy aggregation business

Investing in growth

We will aim to invest more than 100 billion yen in renewable energy power development by roughly 2030, to generate consolidated cash income* of roughly 20 billion yen in FY2023.

In the Smart Society Building Business, we will aim to invest approximately 100 billion yen by roughly 2030, to generate consolidated cash income of roughly 20 billion yen (not including electricity sales) in FY2030.

* Operating income + depreciation + amortization of nuclear fuel + share of profit of entities accounted for using equity method

Example of financial impacts of transition risks

Cost of purchasing 100 GWh worth of non-fossil-fuel certificates: **130 million yen***

* The reference price of non-fossil fuel certificates is based on the results of the fourth phase of market trading to achieve obligations under the Act on Sophisticated Methods of Energy Supply Structures (contract price 1.3 yen/kWh).

Estimated impact of a change of 1% in interest rates on Group business results and financial status: **5.3 billion yen/year***

* The impact of market interest rate fluctuations is limited because most of interest-bearing debt consists of bonds and long-term borrowing at fixed interest rates.

See ▶ Roadmap Toward Realizing Carbon Neutrality ▶ P56

Financial Report 2022 ▶ P24 Business and Other Risks | https://www.tohoku-epco.co.jp/ir/report/security/pdf/2022_ho.pdf

Metrics and targets

Scope 1, 2, and 3 greenhouse gas emissions

Scope 1 and 2 greenhouse gas (GHG) emissions from Tohoku Electric Power and Tohoku Electric Power Network power stations and other business facilities are calculated pursuant to the following Japanese laws: Act on Rationalizing Energy Use, Act on Promotion of Global Warming Countermeasures.

Scope 3 GHG emissions are calculated based on the Basic Guidelines on Accounting for Greenhouse Gas Emissions Throughout the Supply Chain (Ver. 2.5).

Scope 1 emissions are direct emissions from GHG sources in Tohoku Electric Power and Tohoku Electric Power Network. Scope 2 emissions are indirect emissions from the generation of electricity and heat supplied to us by other companies. Scope 3 emissions are indirect emissions from the business activities of Tohoku Electric Power and Tohoku Electric Power Network, not included in Scope 1 and 2 emissions.

Scope 1, Scope 2, and Scope 3 (Category 3) emissions have been assured by an external party.

(Unit: 10 thousand tons CO_2)

Item			FY2021 results	FY2022 results
Scope 1 (Direct GHG emissions by the business)			**3281.5**	**3106.9★**
Scope 2 (Indirect GHG emissions from use of electricity, heat, and steam supplied by other companies)			**0.1**	**0.1★**
Scope 3 (Indirect GHG emissions other than Scope 1 and 2)			**1359.2**	**1381.5**
	Category 1	Purchased goods and services	27.4	33.0
	Category 2	Capital goods	15.9	50.4
	Category 3	Fuel- and energy-related activities	1313.0	1295.3★
	Category 4	Upstream transportation and distribution	0.3	0.2
	Category 5	Waste generated in operations	1.6	1.6
	Category 6	Business travel	0.2	0.2
	Category 7	Employee commuting	0.8	0.8

★: The data has been assured by KPMG AZSA Sustainability Co., an external party.

Calculation methods

Emissions in the following categories are calculated based on Japan's Act on Rationalizing Energy Use, Act on Promotion of Global Warming Countermeasures, and Basic Guidelines on Accounting for Greenhouse Gas Emissions Throughout the Supply Chain (Ver. 2.5).

Emissions intensities are derived from the Emissions Intensity Database for Calculation of Organizational Greenhouse Gas and Other Emissions through the Supply Chain (Ver. 3.3) and IDEA Ver. 2.3.

- Category 1: (price data on products and services purchased) × (emissions intensity)
- Category 2: (increase in book value of fixed assets) × (emissions intensity)
- Category 3: (volume of power supplied by other companies) × (alternative CO_2 emission factor) + (volume used by type of fuel) × (emissions intensity)
- Category 4: (heat consumption by type of vehicle, vessel, etc.) × (emissions intensity)
- Category 5: (final industrial waste disposal) × (emissions intensity) – (industrial waste recycled) × (emissions intensity)
- Category 6: (number of employees) × (emissions intensity)
- Category 7: (number of employees by working pattern and urban category) × (number of business days) × (emissions intensity)

KPMG

Independent Assurance Report

To the Representative Director & President of Tohoku Electric Power Co., Inc.

We were engaged by Tohoku Electric Power Co., Inc. (the "Company") to undertake a limited assurance engagement of the environmental and social performance indicators marked with ★ (the "Indicators") for the period from April 1, 2022 to March 31, 2023 included in its Tohoku Electric Power Group Integrated Report 2023 (the "Integrated Report") for the fiscal year ended March 31, 2023.

The Company's Responsibility

The Company is responsible for the preparation of the Indicators in accordance with its own reporting criteria (the "Company's reporting criteria"), as described in the Integrated Report.

Our Responsibility

Our responsibility is to express a limited assurance conclusion on the Indicators based on the procedures we have performed. We conducted our engagement in accordance with the 'International Standard on Assurance Engagements (ISAE) 3000, Assurance Engagements other than Audits or Reviews of Historical Financial Information' and the 'ISAE 3410, Assurance Engagements on Greenhouse Gas Statements' issued by the International Auditing and Assurance Standards Board. The limited assurance engagement consisted of making inquiries, primarily of persons responsible for the preparation of information presented in the Integrated Report, and applying analytical and other procedures, and the procedures performed vary in nature from, and are less in extent than for, a reasonable assurance engagement. The level of assurance provided is thus not as high as that provided by a reasonable assurance engagement. Our assurance procedures included:

- Interviewing the Company's responsible personnel to obtain an understanding of its policy for preparing the Integrated Report and reviewing the Company's reporting criteria.
- Inquiring about the design of the systems and methods used to collect and process the Indicators.
- Performing analytical procedures on the Indicators.
- Examining, on a test basis, evidence supporting the generation, aggregation and reporting of the Indicators in conformity with the Company's reporting criteria, and recalculating the Indicators.
- Visiting the Company's Sendai Thermal Power Station selected on the basis of a risk analysis.
- Evaluating the overall presentation of the Indicators.

Conclusion

Based on the procedures performed, as described above, nothing has come to our attention that causes us to believe that the Indicators in the Integrated Report are not prepared, in all material respects, in accordance with the Company's reporting criteria as described in the Integrated Report.

Our Independence and Quality Management

We have complied with the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which includes independence and other requirements founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior. In accordance with International Standard on Quality Management 1, we design, implement and operate a system of quality management including policies or procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Kazuhiko Saito, Partner, Representative Director
KPMG AZSA Sustainability Co., Ltd.
Tokyo, Japan
November 9, 2023

Chapter

04

Foundations for Sustained Growth

Establishing a Society that Recycles Effectively

Appropriate waste management and treatment

Our waste management system allows centralized and companywide control of emitted waste. In addition to appropriate waste treatment, we're moving ahead with studies of individual waste items based on a wide range of perspectives, including cutting emissions and final treatment volumes, recycling, and reuse.

For coal ash in particular, which accounts for some 80% of total waste emissions, we're enhancing recycling initiatives to allow use in land reclamation as landfill materials, in addition to use as a component of cement and roadbed materials.

In FY2022, we made effective use of 87.6% of the waste we generated, exceeding the rate of 86.7% for FY2021 but short of our target of 90%. Contributing factors included lower shipments of coal ash to cement companies due to lower demand for cement, although coal ash generated, which accounts for the majority of wastes, did decrease.

Putting coal ash and gypsum to effective use

The coal ash generated by coal-fired thermal power stations is put to effective use as fly ash that meets JIS standards* for use in concrete for architectural construction, civil engineering, and other applications. The gypsum generated as a byproduct of the exhaust desulfurization process is used in gypsum boards and other products.

JIS-standard fly ash

Work on the foundation of Unit No. 3 at the Noshiro Thermal Power Station built using fly ash

* JIS standards: The Japanese Industrial Standards, national standards specifying matters such as standards and measurement methods for industrial products in Japan.

Efforts to promote reuse and recycling of spent solar panels

We are proceeding with the testing of appropriate reuse and recycling of spent solar panels from homes and other uses, through our participation in the Miyagi Feasibility Testing Program of the Community Collection Model Study Committee, an agency of PV Cycle Japan.

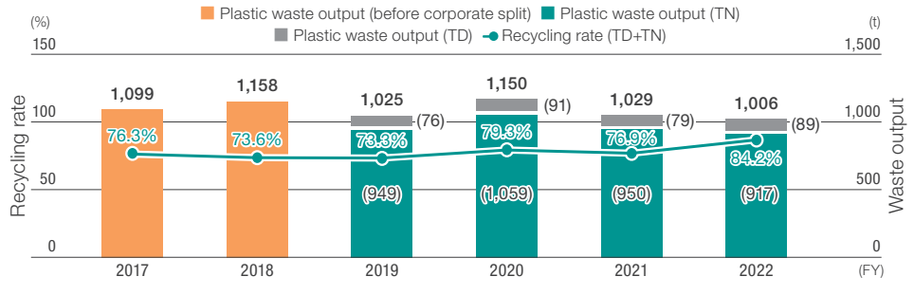
Targets for reducing and recycling industrial wastes from products using plastics

- Choosing products that use fewer plastics or substitute materials as much as possible
- Striving to promote recycling of plastic wastes, and maintaining and increasing the recycling rate

Plastic waste output

Our volume of plastic waste output is trending around the level of 1,000 tons/year. The bulk of this waste consists of wiring materials generated by the Tohoku Electric Power Network. At least 80% of this waste is recycled. We maintain an overall recycling rate of at least 70% for all plastic waste.

Plastic waste output and recycling rates

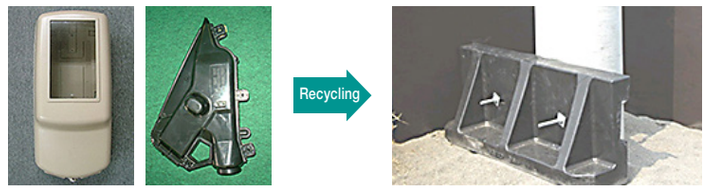


*TD: Tohoku Electric Power, TN: Tohoku Electric Power Network.

Making effective use of waste plastic

With the goal in mind of establishing a society that recycles effectively, in addition to reducing, recycling, and reusing plastic waste, we strive to purchase products made from waste plastic.

Examples of recycled products include the plastic deadman units needed to help prevent the collapse, subsidence, and inclination of power poles. We've replaced concrete deadman units with plastic units made from waste plastic removed during wiring construction.



Waste plastic after removal
(e.g., meter boxes, insulation covers)

Plastic deadman
(buried in the ground to prevent power pole collapse)

Supporting the Plastics Smart Campaign cleanup activities https://www.tohoku-epco.co.jp/enviro/disclosure/

Conserving Biodiversity

Our position on biodiversity

One of our four environmental action principles calls for us to “safeguard and coexist with the rich natural environment.” Emphasizing the spirit of coexistence with nature that characterizes the Tohoku and Niigata region, we advance various business activities that reflect due consideration for the environment, including a sense of gratitude for the various blessings and benefits generated by biodiversity and implement measures to prevent our business activities from damaging biodiversity.

We will continue to seek to avoid and minimize the impact of power station operations on biodiversity.

Biodiversity considerations at power stations

Coexistence with peregrine falcons, a rare wild animal species in Japan at thermal power stations

Peregrine falcons, one of Japan’s rare wild animal species, are found in the areas of the Sendai Thermal Power Station and the Shin-Sendai Thermal Power Station. To further the level of biodiversity, we’re working to preserve their living habitats.

In particular, at the Shin-Sendai Thermal Power Station, we placed nesting platforms for peregrine falcons on smokestacks and confirmed that peregrine falcons were making their nests on the nesting platforms and that young birds had already fledged and left the nests.

Peregrine falcon nursing chicks on a nesting platform; photographed in May 2022 (Shin-Sendai Thermal Power Station)

Creating a waterside environment on the premises of a thermal power station

The Sendai Thermal Power Station reconstructed a biotope around the reservoir on its premises, as part of our actions to conserve biodiversity. Cercion sexlineatum, Oryzias fish, and other valuable species can be found in the Maejima Pond for Wild Birds, positioned at the center of the biotope.

Cercion sexlineatum

Preventing intrusion of sandfish in thermal power stations

In addition to installing nets on its water intakes to keep fish out, the Noshiro Thermal Power Station in Akita Prefecture deploys channels to return to the sea any fish that make it through the nets. These are part of efforts to prevent the intrusion of sandfish—the prefectural fish—which congregate in large numbers near the coast to spawn during winter.

While sandfish eggs adhere to the nets, we remove the nets after incubation is confirmed, reflecting our concern to preserve local fishery resources.

Sandfish eggs

Preserving wetlands on the premises of a nuclear power station

Numerous rare animal and plant species are found in the wetlands on the premises of the Higashidori Nuclear Power Station. Protecting them requires controlling the growth of reeds and other plants. We carry out regular weeding to ensure that habitats for rare animals and plants remain unchanged.

Hemerocallis esculenta in bloom in the wetlands

Maculinea teleius, a rare butterfly species

Surveying and preserving endangered flora and fauna in transmission and substation facility installation and expansion work

Before setting up a substation or switching station on site, we survey endangered flora and fauna and take measures such as relocation of rare flora and fauna and checking on their propagation to minimize the impact on ecosystems.

In addition, when installing ultra-high-voltage power lines through mountainous areas, we implement autonomous preservation measures based on prior surveying of endangered flora and fauna and expert opinions, to minimize the environmental impact of construction.

Tohoku salamander eggs

Eggs relocated

Artificial off-site incubation environment

Biodiversity initiatives https://www.tohoku-epco.co.jp/enviro/seibutsu/index.html

Removing the designated invasive alien species cutleaf coneflower

Tohoku Sustainable & Renewable Energy Shizukuishi site in Iwate Prefecture, an operator certified by the Ministry of the Environment, removes the designated invasive alien species cutleaf coneflower from the Kakkonda and Matsukawa areas every year.

Link

Confirmation and certification of removal (under procedures prior to legal amendment) | Japan’s efforts to combat invasive species | Act on the Prevention of Adverse Ecological Impacts Caused by Designated Invasive Alien Species (env.go.jp)

Participation in the Ministry of the Environment’s 30 by 30 Alliance

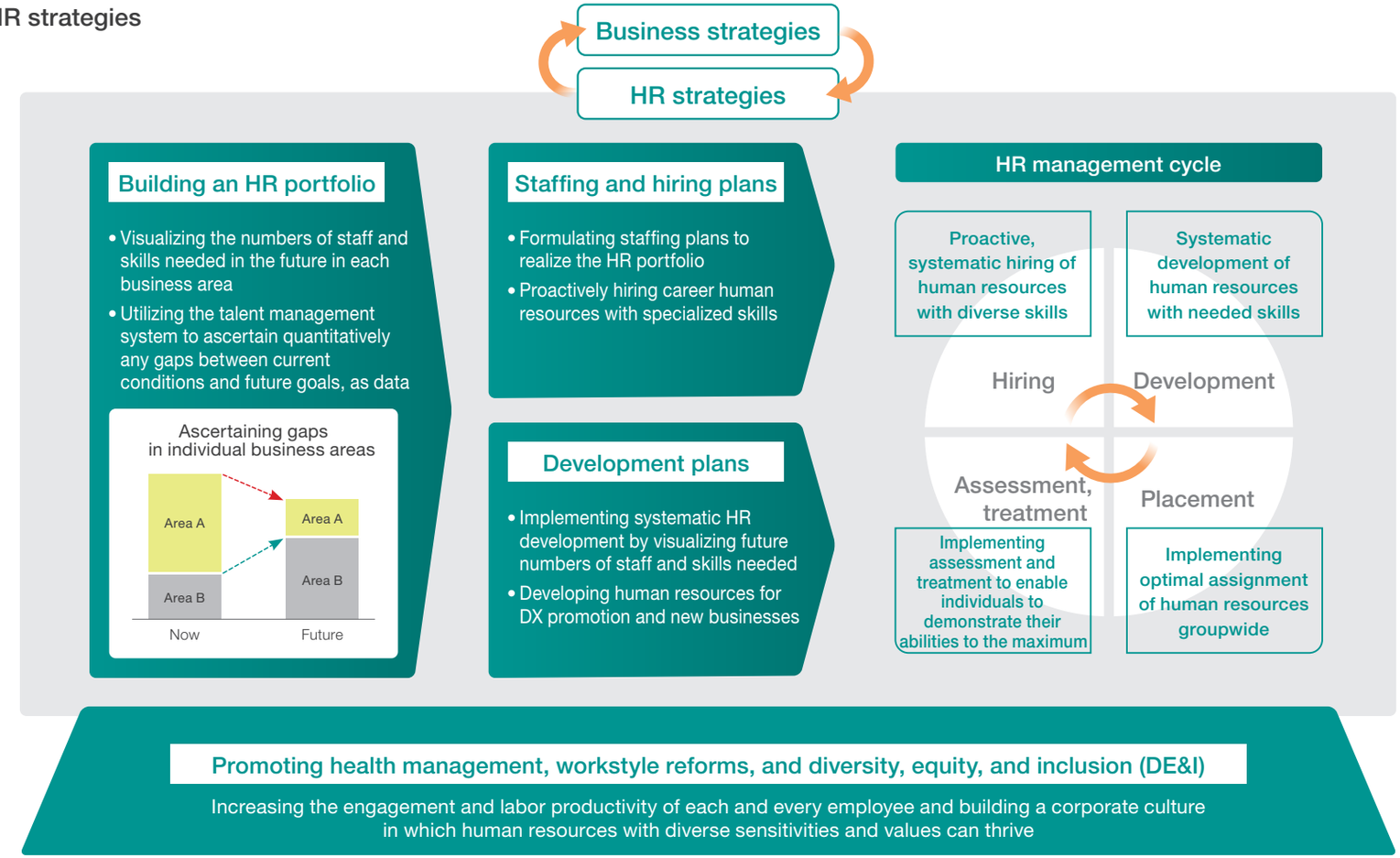
Tohoku Ryokka Kankyohozen participates in the *30 by 30 Alliance for Biodiversity*, aimed at helping to achieve the target of preserving or protecting 30% of Japan’s land and sea regions by 2030.

Human Resource Strategy

For the Tohoku Electric Power Group to grow in step with the sustained progress of society by contributing to the realization of a smart society for a new age, starting in Tohoku, we believe it will be vital to strengthen human resources capable of creating new value and to improve coordination between business and HR strategies. On this basis, in FY2021 we formulated a human resource portfolio based on our medium- to long-term business portfolio and visualized the number and skills of human resources needed to carry out business strategies. We are also systematically enhancing efforts such as developing and hiring the human resources of skill types that require enhancement for the future.

At the same time, we will promote measures in areas such as health management, workstyle reforms, and diversity, equity, and inclusion (DE&I) to increase the engagement and labor productivity of each and every employee and build a corporate culture in which human resources with diverse sensibilities and values can thrive.

Overview of HR strategies



The human resource portfolio to support realization of *Working alongside next*

We will draw on our human resource portfolio based on our medium- to long-term business portfolio to deploy HR measures and maximize our human capital.

Our human resource portfolio divides the Group's business domains into 14 fields and divides the human resources who can play active roles in these fields into 181 skill types. Among these, we are enhancing HR development, hiring, and other efforts for human resources in 36 skill types essential to activities such as data analysis, digital marketing, and other digital initiatives, launching and promoting new businesses, promoting next-generation energy services such as VPP, and developing and promoting renewable energy businesses. We will review in the future the domains and skill types to be expanded in light of business strategies.

In addition, by adopting a talent management system we will both promote digital transformation (DX) in HR management and quantitatively ascertain and analyze various matters, including the skills of individual employees, reflecting these in staffing plans, hiring plans, HR development, and placement.

By advancing HR management to promote these measures, we will develop the human resources needed to realize our vision: *Working alongside next*.

Putting our slogan *Strength to Work Alongside* into practice

To put the Medium- to Long-Term Vision into practice, each and every employee must live-out the message embodied in the slogan *Strength to Work Alongside* through his or her everyday work by working alongside our customers and communities.

Toward this end, we are working to ensure the vision is firmly understood by all employees through means including the *Working Alongside Next* Manual, an e-learning tool for learning about the concepts behind the vision, section-specific action case studies collected to provide a concrete image of how the vision can be put into practice by sharing information on successful case studies, and a brand video intended to inspire autonomous action.

Sharing successful case studies

Brand video

Efforts to promote understanding and permeation of the *Working alongside next* Medium- to Long-Term Vision

For all Group employees to work together to realize the *Working alongside next* Medium- to Long-Term Vision, it is important to ensure permeation in the organization of information on topics such as the background of its formulation and course of action for its realization in light of subsequent changes in business conditions.

For this reason, in addition to establishing related themes in various tiered training programs, we are taking steps such as providing opportunities for sharing ideas among employees on how to realize the vision and direct communication by members of management, in visits to sites across our service areas, of information on the Group's business environment and ideas for realizing *Working alongside next*. By combining various approaches such as these, we are working to ensure thorough understanding and promotion of the vision among employees.

Tiered training (examples)

Training for new employees	The background behind formulation of *Working alongside next* and our vision for its realization
Training for newly appointed managers	Management's role in realization of *Working alongside next*
Site manager training	Efforts to realize *Working alongside next* at sites on the frontlines

Internal public study meetings

To deepen understanding of *Working alongside next*, we hold study meetings to share information on subjects such as ideas for and challenges in its realization, across sectional boundaries.

Site visits by management

Members of management of both Tohoku Electric Power and Tohoku Electric Power Network visit frontline business sites to engage in periodic exchange of opinions and discussions on topics like the Group's business environment, management's courses of action for realizing *Working alongside next*, and their personal views.

Sites visited in FY2022: 141


President Higuchi exchanges opinions with employees at a frontline site

Diversity, Equity, and Inclusion

Message on diversity from top management

Yori, Sou, Chikara (The Strength to Work Alongside) each other as diverse individuals

Representative Director & President

Kojiro Higuchi

Drawing on our Management Philosophy of Prospering with Local Communities, we strive to contribute to a sustainable society in which each customer and community member can live in comfort, safety, and peace of mind. We do this through our smart society building business, seeking growth and development with local communities as their chosen partner.

Important issues in these initiatives include respect for human rights and the need to promote diversity, equity, and inclusion (DE&I). To accommodate the diverse lifestyles and needs of our customers, our employees must be able to work in good health and with vitality, capitalizing on their diverse backgrounds, unique perspectives, and individual experiences. This is why we believe DE&I will drive innovation.

We will maintain our proactive stance on developing and enhancing systems that allow diverse human resource to thrive. At the same time, we will promote awareness of and seek to develop our organizational culture, striving to be an enterprise in which all workers can thrive with vitality, without regard for gender, age, disability status, form of employment, nationality, ethnicity, religion, creed, culture, sexual orientation, or sexual identity.

Through these initiatives, we will work alongside our customers and communities as a strong partner who enables them to live in better comfort, safety, and peace of mind.

Targets and plans to promote diversity, equity, and inclusion (DE&I)

As described below, Tohoku Electric Power and Tohoku Electric Power Network have formulated general employer action plans pursuant to the Act on Promotion of Women's Participation and Advancement in the Workplace, including targets for the number and, as a medium- to long-term goal, the percentage of women managers.

Number of women managers*1	To increase the number of women managers by at least 2.0 times vs. the start of FY2019 by March 31, 2025
Percentage of women managers*2	Aiming for a percentage of 5.0% of all managers being women by the end of FY2035

*1 Number of women in positions of department manager or above under the Act on Promotion of Women's Participation and Advancement in the Workplace

*2 Percentage of women in executive positions, including department manager or above, under the Act on Promotion of Women's Participation and Advancement in the Workplace

We will continue to enhance initiatives that support a work-life balance, family, and career formation and success, as well as considering and implementing measures reflecting feedback from women employees (e.g., networking among women employees, awareness reforms among management, and awareness reforms in the workplace concerning promoting women in the workplace and working during child-rearing years).

Through these measures, targeting the goals above, we will help build workplaces where diverse human resources can thrive and help accelerate changes in employee awareness of DE&I promotion.

In addition, in April 2021 Tohoku Electric Power declared it support for the Keidanren's proposal that businesses take on the challenge of increasing the percentage of women directors to 30% or more by 2030.

Employee interview

Sachiko Chisaka
Strategic Planning
Corporate Strategy Division

In the Group Strategy Section, I work mainly to identify domestic and international energy trends and periodically communicate information to related internal sections. I'm also raising two boys.

Since the birth of my first child, in addition to taking childcare leave, I've taken full advantage of programs like shortened working hours for childcare, flextime, and work from home, so that I can balance home life and childcare with my career. After my second child was born, when I returned to work, my husband took childcare leave. That allowed me to return to work a little earlier.

Sometimes overtime is unavoidable when work gets busy. My husband and I always talk about how to divide our responsibilities, like taking children to and from school, as well as home and childcare duties, while continuing to talk about what work is like currently.

I plan to continue making the most of various programs to fulfill my duties at work and home with the support of my family members.

Digital Transformation (DX) Strategy

Basic concept

Digital transformation (DX) in the Tohoku Electric Power Group refers to the use of digital technologies and data to transform business processes and create new business value.

We have formulated the Tohoku Electric Power Group DX Promotion Policy based on this concept. In addition to efforts to promote DX as a Group strategy, we will enhance structures and initiatives to achieve our goals based on the policy.

Tohoku Electric Power Group DX Promotion Policy

Tohoku Electric Power Group DX Promotion Policy

1. **Using digital technologies and data to increase value in the energy business**
2. **Creating new businesses and enhancing DX business based on customer perspectives**
3. **Taking on the challenges of Group growth and innovation by taking a personal interest in DX**

Digital technologies and platforms	DX HR development/innovative mindsets
■ Achieving business model transformation by updating legacy systems ■ Accelerating decision-making and judgment using AI and other technologies in data analysis and applications ■ Developing DX platforms and accelerating DX promotion	■ Improving DX literacy among all employees to enable agile cocreation and career formation ■ Securing advanced DX technologies through joint efforts with communities, universities, and research institutions ■ Fostering a corporate culture that continues to generate innovations Groupwide

DX promotion targets

We will realize earnings growth by developing DX human resources across the Tohoku Electric Power Group and by deploying DX to increase value in our energy businesses.

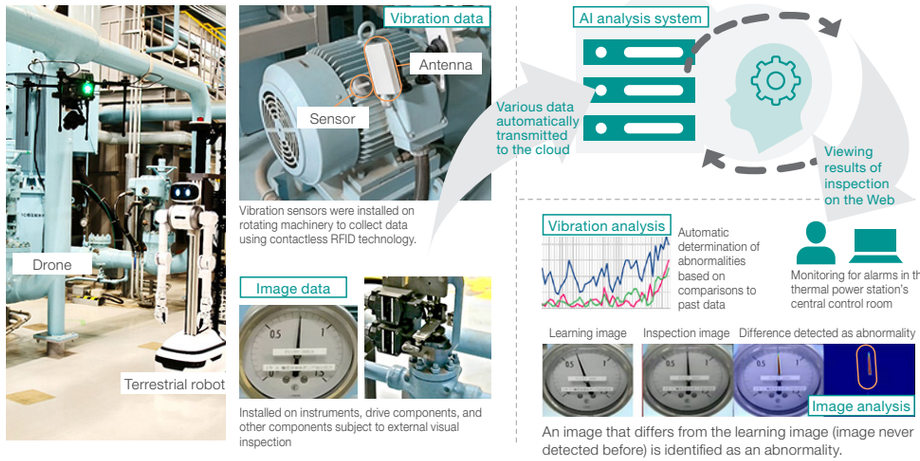
Increasing business value	By FY2025, we will implement and make steady progress on 30 joint measures across sections and the Group. By FY2030, we will realize concrete energy business advances and increases in value in all business sections and Group companies.
Growing earnings	We will use DX to accelerate development of new businesses in facility management using AI and smart devices and data-driven businesses with the goal of achieving cash income of 20 billion yen in the Smart Society Building Business by FY2030.
HR development	By FY2025, we will train 20 Groupwide DX promotion personnel, 50 advanced data analysts, 350 section DX promotion personnel, and 2,000 DX-literate employees.

HR development and agile cocreation

To foster a mindset among all Group employees of actively promoting DX and continually taking on challenges, we will identify the human resource ideal currently in demand and provide training tailored to individual roles. We will also promote agile cocreation by providing opportunities for value creation and problem-solving by team members, including external partners. In addition to enhancing practical capabilities, we will promote programs to improve the career potential of human resources who take a positive approach.

Case study: Automating facility patrols using drones and terrestrial robots (thermal power section)

This project developed a precursor system capable of AI-driven image analysis and vibration analysis by combining drones and terrestrial robots to automate thermal power station facility patrols, which require considerable time and labor. We expect further improvements to enable greater energy stability, safety, and economic performance.



Employee interview

For transmission and distribution businesses, we saw a need to promote DX to take advantage of AI, drones, and other technologies that would promote automatic diagnosis of equipment and improve job performance and efficiency.

I plan to continue working to advance the business reforms by focusing my knowledge and skills with DX technologies.

Tamotsu Hayasaka
Power System Engineering Dept. (Substation)
Tohoku Electric Power Network

Respect for Human Rights

Formulating a Human Rights Policy

Under our Prosper with Local Communities management philosophy and our Yori, Sou, Chikara (The Strength to Work Alongside) Group slogan, the Tohoku Electric Power Group seeks to contribute to sustained social progress while striving to increase corporate value over the medium to long term, through solutions to the challenges facing our communities and society by working to realize a smart society. To achieve these goals, we believe it is essential to respect the dignity and rights of all stakeholders in our business activities.

Toward this end, in March 2023, we formulated the Tohoku Electric Power Group Human Rights Policy, which is based on the United Nations Guiding Principles on Business and Human Rights. The policy seeks to clearly identify our commitment to human rights and declare it to both internal and external stakeholders, which help promote the efforts above to achieve sustainability.

This policy is the result of gathering and assessing a broad range of perspectives from internal sections and Group companies and soliciting the views of outside experts. The policy was approved by the Sustainability Promotion Council under the oversight of the President of Tohoku Electric Power and subsequently reported to the Board of Directors.

Under this policy, we will fulfill our responsibilities with regard to the human rights of all stakeholders throughout our business activities.

See ▶ Tohoku Electric Power Group Human Rights Policy ▶ Sustainability Report 2023 ▶ P43

Human rights due diligence

Identifying and assessing the impact of human rights risks

In FY2022, as part of our human rights due diligence efforts, we began identifying human rights risks and assessing their impact at Tohoku Electric Power and Tohoku Electric Power Network while soliciting the view of outside experts.

In addition to making further progress on identifying human rights risks, we will consider corrective measures in stages, based on the priorities of individual initiatives, and strive to mitigate and prevent risks through an appropriate plan-do-check-act (PDCA) cycle.

Identifying and assessing the impact of human rights risks will expand to include Group companies in FY2023.

Process of identifying and assessing the impact of human rights risks

- **STEP 1 Value-chain analysis**
  - Based on reviews of internal materials and interviews with related sections at the head office and corporate headquarters, surveying stakeholders concerning the organizational structure and lines of business to identify potential human rights risks from the perspectives of seriousness and likelihood of occurrence and performing initial assessments of their impact
- **STEP 2 Surveying**
  - Conducting surveys of related sections at the head office and corporate headquarters regarding the status of efforts to address human rights risks
  - Reviewing survey questions and surveying multiple business sites
- **STEP 3 On-site audits**
  - Based on survey results, conducting on-site audits (facility tours, interviewing site employees, reviewing related materials and data) of sites that require more detailed review
- **STEP 4 Impact assessment analysis / study of corrective measures**
  - Based on the results of the survey above and on-site audits, carefully reviewing our identification and assessments of the impact of human rights risks from the perspectives of seriousness and likelihood of occurrence
  - Studying corrective measures

Supplier human rights risk assessment

In our sustainability surveys targeting suppliers, in addition to improvements in the area of human rights in Request to Material Suppliers, we check on human rights initiatives on various topics, including respect for human rights, prohibition of child labor and forced labor, and prohibition of discrimination.

Specifically, we check on internal policies on human rights, consultation systems related to human rights, and periodic surveys on human rights.

We also analyze the survey results, review their specifics, and exchange opinions with suppliers for whom we believe room for improvement remains based on dialogue and discussions. We also request improvements in their efforts.

In FY2022, we surveyed 234 suppliers and identified none that warranted improvement.

See ▶ Supplier Cooperation ▶ Sustainability Report 2023 ▶ P42

Remediation mechanism

Appropriate hotline operation

We have established the internal and external Yori, Sou Hotline[*1] to respond to harassment and issues related to corporate ethics or compliance.

This hotline accepts consultations from those working within the Group (executives, employees, subcontractors, temporary staff, and staff from placement agencies) as well as Group suppliers.

In addition to training hotline staff to ensure they have the necessary skills, we deploy various procedures, including strict control of personal information on those who contact the hotline and measures to prevent disadvantageous treatment traceable to their consultations. This is intended to maintain a structure whereby users can consult with the hotline with peace of mind.

Hotline consultations[*2]

	FY2020	FY2021	FY2022
Harassment hotline[*1]	17	24	25
Corporate ethics hotline[*1]	14	14	14

*1 On July 1, 2023, the previous hotline programs, including the harassment hotline and the corporate ethics hotline, were consolidated into the Yori, Sou Hotline.
*2 Numbers of consultations shown are totals for Tohoku Electric Power and Tohoku Electric Power Network.

Safety Initiatives

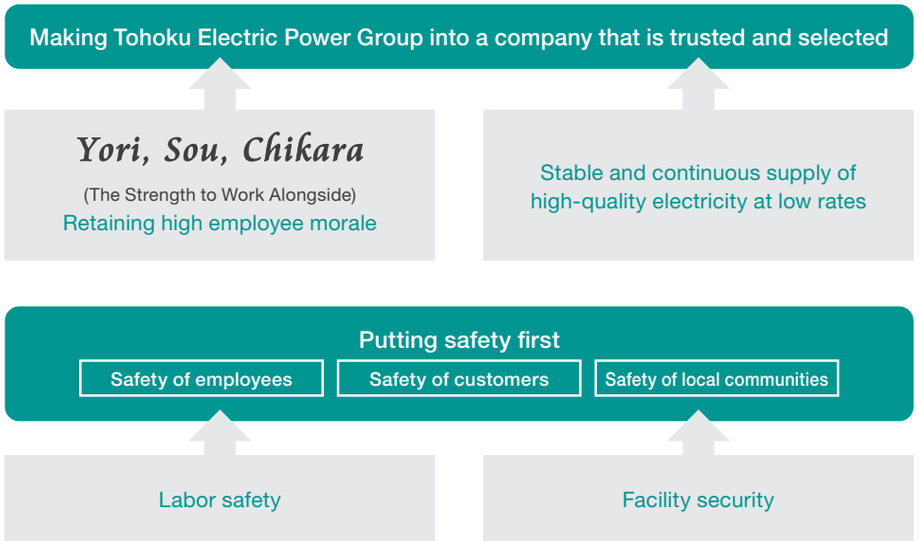
Actions for safety that lead to medium- and long-term improvement in corporate value

Occupational safety and equipment security are the foundations of the Tohoku Electric Power Group's business activities. We consider securing the safety of our customers and our communities to be the first steps in earning trust in order to fulfill our unchanging mission to deliver stable supplies of low-cost, high-quality electricity to customers.

Through efforts by all our employees and construction workers to put into practice our slogan of "Yori, Sou, Chikara (The Strength to Work Alongside)," we strive to be a group that is trusted and selected.

In accordance with our safety-related policies, we will continue our efforts to build a corporate culture that puts safety first and to increase corporate value.

Relationship between actions for safety and corporate value enhancement



See ▶ Thorough Safety ▶ Sustainability Report 2023 ▶ P53

Building a corporate culture that puts safety first

Initiatives to ensure thorough safety and improving business quality

Aiming to firmly establish a corporate culture that ensures thorough safety and boosts business quality, we're striving to improve safety and security groupwide and the quality management system for nuclear power.

Based on our recognition that securing safety is the top priority in all business activities, a key goal is to build a corporate culture that puts safety first through even greater coordination groupwide. In April 2020 we established the Tohoku Electric Power Group Safety and Security Policy, under which we strive to enhance initiatives related to occupational safety and equipment security.

Actions on safety management towards the achievement of zero accidents

For the purpose of reducing industrial accidents, we have introduced the safety and health management system to independently and continuously improve safety management. It is an international standard method of safety and health management. Each office will independently perform management and remove and reduce latent risks and harmful factors in advance to prevent industrial accidents.

If any industrial accident occurs, we will probe into the fundamental cause and background to develop effective measures for the prevention of recurrence and share information within the Company to prevent any similar accident from happening.

Initiatives to ensure facility security

To avoid the recurrence of improprieties that have occurred before, the status of autonomous security activities in each section is reported to the Promotion Council of Safety and Maintenance, the Nuclear Safety Promotion Council, and the Committee of Corporate Ethics and Compliance, thereby confirming that they are being implemented according to plan; that systems are in place for identifying and correcting any issues ourselves; and that active communication occurs through dialogue and other measures. In these and other ways, we seek to ensure that autonomous security activities are even more firmly established within the organization.

In addition, through autonomous security activities, we strive to ensure the safety of customers and our communities by ensuring the security of facilities.

See ▶ Actions for entrenching voluntary security activities ▶ Sustainability Report 2023 ▶ P75

Enhancing Resilience

Governance structure for disasters

To deliver a stable supply of electricity to customers, Tohoku Electric Power and Tohoku Electric Power Network have developed a governance structure intended to enhance their abilities to respond to major disasters such as earthquakes and typhoons.

While Tohoku Electric Power Network has succeeded to the power transmission and distribution business since its statutory separation into a separate entity in April 2020, to account for the state of damage and social impact of an emergency, both companies respond together to disasters.

Enhancing resilience based on the lessons learned and experience gained in responding to disasters

Tohoku Electric Power and Tohoku Electric Power Network have accumulated significant expertise and technological capabilities through their experience with numerous natural disasters, including the Great East Japan Earthquake. Based on the lessons learned, we have enhanced various structures to ensure preparedness for the potential for more frequent and severe natural disasters.

In addition to ensuring a stable supply of electricity, we will continue to develop facilities efficiently while maintaining and managing them appropriately by incorporating the lessons learned from past natural disasters in both tangible and intangible measures.

Enhancing the capacity to respond to disasters in cooperation with outside organizations

Tohoku Electric Power and Tohoku Electric Power Network have concluded agreements on cooperation with outside organizations, including local governments, the Japan Self-Defense Forces, and the designated public utility East Nippon Expressway Co., Ltd. to facilitate mutual cooperation in the event of a disaster.

Under these agreements, practical drills are carried out to enhance cooperation. The drills carried out to date include drills on the air transport of Company vehicles using Japan Self-Defense Forces helicopters, drills on sea transport using convoy vessels, drills on recovery work in the event of blocked roadways, and drills on transporting emergency teams via expressways, undertaken with East Nippon Expressway Co., Ltd.

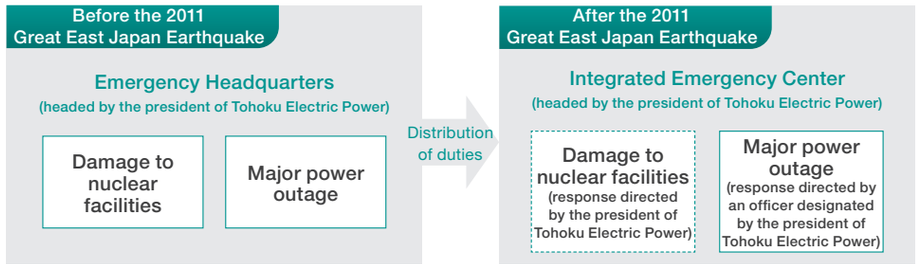
By continuing to establish and maintain personal contact with related parties through drills and other activities, we will enhance readiness for natural disasters of growing severity.

Recovery work drills assuming blocked roadways
[Ground Self-Defense Force]

Drills on transporting emergency teams via expressways
[East Nippon Expressway Co., Ltd.]

Distribution of duties in the event of a complex disaster

Learning from the accident at the Fukushima Daiichi Nuclear Power Station following the Great East Japan Earthquake, Tohoku Electric Power and Tohoku Electric Power Network distribute emergency center duties to ensure an effective response at their head offices in the event of a complex disaster—for example, a nuclear disaster combined with a major power outage. Accordingly, the President of Tohoku Electric Power will prioritize actions to respond to the nuclear disaster, while officers assigned by the President will oversee measures to tackle other disasters. This system is intended to ensure the preparedness needed to respond effectively to multiple concurrent disasters.



Contributing to Communities

Basic concept

Based on our management philosophy of prospering with local communities and Yori, Sou, Chikara (The Strength to Work Alongside), our Group slogan, the entire Tohoku Electric Power Group strives to establish a smart society by providing services based on energy and to advance initiatives that deliver solutions to challenges facing our communities and society. In this way, we hope to contribute to the sustained growth and progress of society.

Based on this outlook, we implement various social contribution activities, including Machizukuri Genki Juku® training courses designed to help identify solutions to community challenges and the Tohoku Niigata Revitalization Support Program to support community vitality. Through these and other measures, we strive to play a role as a member of the community in its sustained progress and to build relations of trust with local communities based on ongoing dialogues in which individual employees take part.

Social contributions targets, metrics, and results

The Group pursues social contribution activities in line with its social contribution targets and metrics.

Targets/metrics	Active communication activities with stakeholders / number of social contribution activities

Social contribution activities*

FY2022 social contribution activities

Actions implemented: **922**

Participants from the community

around **39,132**

Regional revitalization support

Machizukuri Genki Juku® support organizations

Between FY2006 and FY2022: **42** organizations

Tohoku and Niigata Revitalization Support Program aid organizations

Between FY2017 and FY2022: **43** organizations

* The results shown are totals for Tohoku Electric Power and Tohoku Electric Power Network.

Supporting solutions to community challenges and community revitalization

Machizukuri Genki Juku®

Machizukuri Genki Juku® training courses dispatch appropriate expert Machizukuri Partners to organizations working to solve issues faced by individual communities, thereby contributing to community revitalization and autonomy in the six Tohoku prefectures and Niigata Prefecture. This program supports highly individual community development in the region.

Machizukuri Genki Juku® https://www.tohoku-epco.co.jp/genki/

Tohoku and Niigata Revitalization Support Program

The subsidies granted under this program support organizations engaged in voluntary activities to resolve issues in local communities across the six Tohoku prefectures and Niigata Prefecture, including local industrial promotion, local community restoration and revitalization, and expanding the numbers of visiting non-residents.

Tohoku and Niigata Revitalization Support Program https://www.tohoku-epco.co.jp/sprogram/

Promoting International Cooperation and Exchange Activities

We promote various international joint efforts and exchange activities. These activities include online seminars for technical trainees from various ASEAN countries, helping to operate the Tohoku Canada-Japan Society, and working with various other organizations to promote international exchange in the Tohoku region.

Social contribution activities

Under the Houkago Hiroba next-generation support project, Tohoku Electric Power holds an essay contest for middle school students and school concerts and supports various athletic tournaments. We believe these activities support the healthy growth of children, who are key to the region's future.

Participation in the Yamagata Hanagasa Festival

In addition, as a member of the local community, we seek to strengthen communication with the community in various ways, including participation in community activities in each prefecture, cleanup and tree-planting activities, and welfare activities.

Essay contest for middle school students

School concert

Interaction with a nursery school

Risk Management

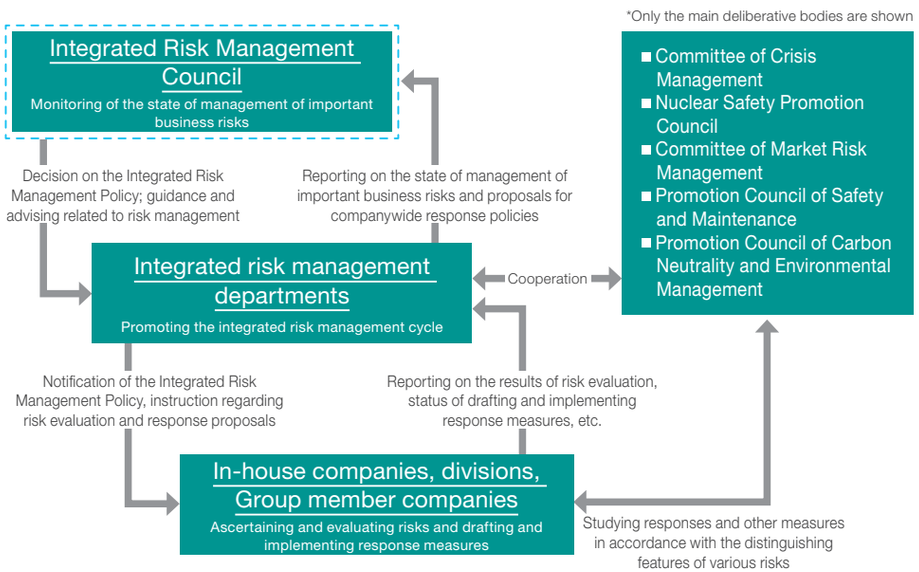
Risk management initiatives

In addition to establishing an Integrated Risk Management Policy, the Company periodically reviews business and financial risks to identify, analyze, and evaluate risks and to study and implement responses.

Particularly for factors that pose major risks to Company businesses, the integrated risk management departments cooperate with various committees and other organizations in accordance with risk characteristics, based on monitoring and risk management by the Integrated Risk Management Council. Business execution departments such as in-house companies and divisions also identify and evaluate risks periodically and incorporate responses and other measures into their annual business plans to deploy risk management activities specific to their own organizations.

As an example of cooperation with individual committees, the Committee of Market Risk Management appropriately manages market risks in the Company's business activities, including those related to fluctuating fuel prices and wholesale electricity trading prices, in light of the growing importance of revenue management as the Company's business environment changes. It then studies and implements responses as necessary, including hedge transactions.

Risk management structure



Basic concept underlying integrated risk management

- We advance risk management activities in which the Integrated Risk Management Council serves as the leading organization based on the Integrated Risk Management Policy.
- While the sections closest to where risks occur conduct autonomous risk management as our basic policy, we carry out management to keep measured value at risk within a range that the Company finds tolerable. Based on a recognition that securing stable revenues requires appropriate risk-taking, we also strive to keep value at risk within the amount of consolidated equity capital, thereby achieving management that strikes a healthy balance between soundness and profitability.
- For risks and other matters for which it is difficult to measure value at risk, we qualitatively analyze their nature and maintaining systems capable of withstanding them to minimize the impact of the actual emergence of risks.

Integrated Risk Management Council

The Integrated Risk Management Council is a joint council with Tohoku Electric Power Network chaired by the President of Tohoku Electric Power. Its membership consists of all directors of both companies. Its purpose is to promote the Company's integrated risk management activities and to deliberate on and explore our response to key business risks in the Group from a management perspective while taking care to handle information in compliance with applicable laws and regulations.

Specifically, it meets twice annually to evaluate the state of management of important business risks and to provide guidance and advice on deployment of risk management activities while striving to enhance risk management activities through feedback to individual business execution sections and related deliberative bodies. It also reports periodically to the Board of Directors and other parties on the state of risk management.

See "Business and Other Risks" in the Financial Report for specific examples of important business risks.
https://www.tohoku-epco.co.jp/ir/report/security/

Corporate Governance

Message from the Chairman of the Board

Business environment

Two years have passed since I was appointed Chairman of the Board. Over this period, the Group's business environment has undergone dramatic change. COVID-19 and Russia's invasion of Ukraine have affected society in significant ways.

I regret the concern we caused stakeholders due to the losses recorded for two years in a row (in FY2021 and FY2022), as well as the incident involving the improper handling of information on PPS customers and other data. Currently, we are making thoroughgoing efforts Groupwide to restore our financial standing and rebuild our compliance structure.

Representative Director
& Chairman of the Board

Jun Masuhara

Our governance structure

On our Board, seven outside directors of diverse backgrounds engage in free and open discussions with internal directors to incorporate diverse viewpoints and judgments from outside the organization into management decisions. In the Board's activities, we strive to prevent informational asymmetries among directors and to ensure discussions take place on a level playing field by thoroughly explaining matters to outside directors in advance and helping them better understand the thoughts and goals of executives through this process. Through tours of frontline business sites, dialogue with employees, and other activities, we seek to create opportunities to deepen their understanding of our businesses based on two-way exchange.

Over the past year, the Board has devoted considerable discussion time to pressing issues, such as securing profits quickly, restoring our financial foundations, and rebuilding the compliance structure. I believe the Outside Directors have played a key role in promoting Company reforms by offering opinions that, at times, may have appeared harsh.

Structurally, we're taking steps to accelerate the decision-making process by delegating authority from the Board to individual directors. This has improved autonomy and speed in making decisions. At the same time, as its autonomy increases, it grows even more important to monitor the Board from the perspective of overall optimization. From my perspective as Chairman of the Board, I will continue thoroughgoing oversight to ensure the organization's vectors are in alignment.

Message to stakeholders

Given the uncertain business environment, I believe it is vital to have both the flexibility to adapt to sudden change and the strength that serves as a source of corporate value and competitive advantage. In addition to generating profits and restoring our financial footing, we will enhance our risk resilience in the face of business environmental changes and build on our strengths as electric power professionals—qualities attested by the fact that Unit No. 1 of the Joetsu Thermal Power Station has achieved the highest thermal efficiency in the world. We will aim for medium- to long-term growth by tackling the challenges of realizing a smart society, starting in Tohoku, as called for in the Group's Medium- to Long-Term Vision, Working Alongside Next, and achieving the Group's Carbon Neutral Challenge 2050 based on the Group's sustainability priorities (materiality topics), which act as guideposts.

To do so, it is essential to increase the Group's overall capabilities by enabling diverse human resources to demonstrate their individual strengths. We are determined to develop human resources, including those skilled in digital transformation (DX) technologies, to build workplaces in which diverse human resources can work with vitality, and to strengthen our human capital.

The Tohoku Electric Power Group seeks to cocreate social value and corporate value alongside our stakeholders into the generations to come. To do so, the Board of Directors must monitor each initiative closely and demonstrate highly effective oversight functions. While continuing to deepen communication with stakeholders, we will enhance corporate governance from the perspectives of transparency, management dynamism, and soundness. We are grateful for the continuing guidance and support of all our stakeholders.

Corporate Governance https://www.tohoku-epco.co.jp/ir/policy/governance/index.html

Basic concepts of corporate governance

The Tohoku Electric Power Board of Directors establishes basic corporate governance policies to clarify our basic corporate governance concepts and related practical initiatives. Under our management philosophy of prosperity in partnership with the community, as identified in Working alongside next, the Tohoku Electric Power Group's Medium- to Long-Term Vision and the Group slogan Yori, Sou, Chikara (The Strength to Work Alongside), we seek to grow in step with sustained progress within society by helping to establish a smart society in various ways: providing services centered on energy, working alongside customers, and engaging in sustained dialogue with stakeholders.

To ensure appropriate management consistent with this heading, the Company implements initiatives that enhance corporate governance, including those that ensure exhaustive compliance with corporate ethical standards and laws and regulations, promoting fair, honest, and transparent business administration, and improving internal control and risk management.

The Company sees strengthening and improving corporate governance as one of its priority management issues. Based on this perspective, the Company will advance initiatives to ensure sustained growth and enhanced corporate value on a medium- and long-term basis to meet the expectations of its stakeholders. Company initiatives will include activities that make management more flexible, sound, and transparent.

1 Guarantee of shareholder rights and equitable standing

The Company handles all matters based on laws and regulations, thereby guaranteeing shareholder rights and equality in real terms. At the same time, the Company advances efforts to prepare conditions that permit shareholders to exercise their rights, with due regard for minority and foreign shareholders.

2 Appropriate joint efforts with stakeholders beyond shareholders

Based on safety, consideration for the environment, and compliance with corporate ethical standards, laws, and regulations, we stress activities based on two-way dialogue with a diverse array of stakeholders. The Company targets sustained growth and medium- to long-term growth in corporate value.

3 Appropriate information disclosure and transparency

(1) In addition to the appropriate disclosure of information pursuant to laws and regulations, we engage in the timely disclosure of accurate and highly useful information through our website and various other media, in addition to press conferences and, as necessary, briefings, held by the representative director.

(2) We disclose financial, non-financial, and other information through fair, detailed, and simple methods, in accordance with the Companies Act, the Financial Instruments and Exchange Act, and other laws and regulations, as well as our own Disclosure Policy and other policies.

(3) To the extent feasible, we also strive to disclose this information in English.

4 Responsibilities of the Board of Directors

(1) The roles and responsibilities of the Board of Directors include measures to achieve the sustained growth of the Company and increasing corporate value over the medium to long term while soliciting diverse neutral and objective opinions from independent outside Directors, in light of the duties entrusted to them by shareholders and associated accountability and responsibilities. The Board of Directors also strives to foster a culture that encourages free and constructive debate and exchange of opinions and welcomes issues raised by outside Directors.

(2) In addition to its important role as a Company supervisory body, the Audit and Supervisory Committee serves as a statutory independent body charged with auditing the discharge of management responsibilities on behalf of shareholders by the Representative Director and other Executive Directors. By fulfilling these responsibilities, it contributes to a sound corporate governance structure commensurate with society's trust in the Company and promotes sound, sustained growth and medium- to long-term value creation.

See ▶ Internal controls, corporate governance chart ▶ P80

5 Shareholder dialogue

To further sustained growth and medium- to long-term growth in corporate value, the Company establishes opportunities for dialogue with shareholders beyond the General Meetings of Shareholders, while Directors and other members of top management strive to explain clearly in management policies and elsewhere matters such as the Company business environment and initiatives. The ultimate goal is to ensure understanding, and to promote constructive dialogue with shareholders.

See ▶ Communication with shareholders and investors ▶ P91

Internal Control and Corporate Governance Diagram (Tohoku Electric Power)

① Board of Directors

The Board of Directors consists of 15 Directors, including seven independent outside Directors unimpeded by potential conflicts of interest that may arise with general shareholders.
In principle, the Board meets once a month to decide on important matters related to management and matters and essential for Company operations. The Directors also report on the status of business execution to the meetings of the Board of Directors and monitor these reports and business implementation carried out by other Directors. The Board of Directors delegates certain important decisions on business execution to the Directors through a system whereby the Representative Director & President, Representative Directors & Executive Vice Presidents, and Managing Executive Officers (collectively referred to as "Executive Officers with titles") take charge of business execution.

② Nomination and Compensation Advisory Committee

The Company has established a Nomination and Compensation Advisory Committee comprised of two internal Directors (Representative Director & Chairman of the Board Jiro Masuko and Representative Director & President Kojiro Higuchi) and four independent outside Directors (Directors Tsutomu Kamijo, Osamu Kawanobe, and Mikito Nagai who do not sit on the Audit and Supervisory Committee, and Director Ikuko Miyahara, a Committee member). To ensure the objectivity, timeliness, and transparency of nomination and compensation, the organization of this body is based on a majority of its membership consisting of independent outside Directors and an independent outside Director serving as its chairperson. It deliberates and advises on consultation received from the Board of Directors regarding nomination and compensation of Directors and other executives. The Nomination and Compensation Advisory Committee fulfills the functions of both a voluntary committee equivalent in function to a nomination committee and a voluntary committee equivalent in function to a compensation committee.

③ Management Committee

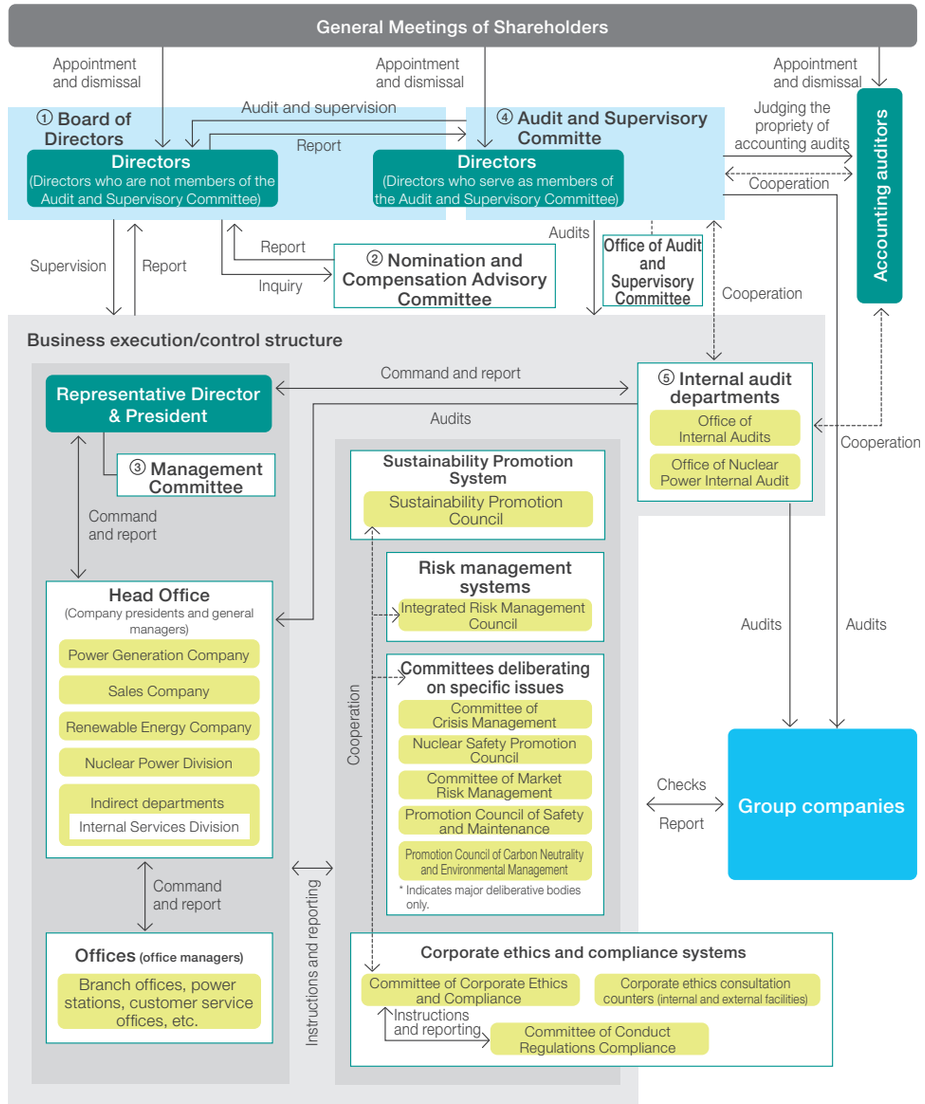
Consisting of Executive Officers with titles, the Management Committee meets weekly to discuss overall business administration policies and plans and the execution of important business based on basic management policies set by the Board of Directors. The Management Committee also promotes the development of effective, efficient business processes through an in-house company system, in which the Power Generation Company, Sales Company, Renewable Energy Company, the Nuclear Power Division, and the Internal Services Division independently explore autonomous business expansion.

④ Audit and Supervisory Committee

To ensure objectivity and neutrality in management supervision functions, three of the four members of the Audit and Supervisory Committee are outside members. One full-time member of the Committee is appointed to carry out, on a daily basis, activities such as attending important meetings of the Executive Committee and other bodies, inquiring with business execution sections concerning the state of business execution, inspecting sites, and joint efforts with internal audit sections, thereby making auditing and supervisory functions more effective. In addition to meeting monthly, the Audit and Supervisory Committee meets at other times when necessary to deliberate and report on matters relevant to its functions as an auditing and supervisory body.
In addition to attending meetings of the Board of Directors, the Executive Committee, and other important meetings, the full-time member also inquires with business execution sections concerning the state of business execution, reviews important documents, inspects the state of business and finances at business sites, and otherwise strives to ensure that auditing of matters such as the performance of Directors' duties and the maintenance and operation of internal control systems is fully addressed. He or she also strives to improve audit results by attending discussions with the Representative Director and engaging in the periodic exchange of viewpoints with the internal audit sections and the accounting auditors, as well as enhancing cooperation with the statutory auditors of affiliate companies. In particular, in the area of enhancing cooperation with internal audit sections and accounting auditors, tripartite auditing meetings are held among the full-time member, the Director with responsibility for internal auditing, and the accounting auditors. By providing information obtained through auditing activities and other activities, the full-time member helps ensure full and effective cooperation with outside members.
The outside members of the Audit and Supervisory Committee attend discussions of the Board of Directors and Representative Directors, asking questions and presenting views based on a wide range of perspectives and drawing on their wealth of personal experience, as well as touring facilities to inspect the state of operations. Member Miyahara attends the voluntary Nomination and Compensation Advisory Committee as a member.
In addition to the assignment of specially appointed auditing officers responsible for assisting in the duties of the Audit and Supervisory Committee, the Audit and Supervisory Committee Office functions as an organization charged with supporting the Committee in its duties.

⑤ Internal audit departments

At the Company, the Office of Internal Audits conducts internal audits on businesses from various perspectives, including the effectiveness and appropriateness of organizations and management systems, the economy and efficiency of business administration, and the effectiveness and efficiency of facility preservation activities. The Office of Nuclear Power Internal Audit performs internal audits associated with safety guarantees and reliability enhancements for nuclear power generation within the Company. These internal audit departments perform internal audits through interviews with the individuals concerned at the Company, its subsidiaries, and principal affiliates, documentary research, and on-site confirmation. The internal audit departments report their internal audit findings to the Representative Director & President, the Management Committee, the Board of Directors, and the Audit and Supervisory Committee. In addition, the departments urge the divisions concerned to resolve problems and issues that require improvement or correction. The departments also seek to raise the effectiveness of internal audits in cooperation with the Audit and Supervisory Committee and accounting auditors, through means such as semiannual joint audit meetings among the three parties of the Director in charge of internal auditing, full-time Audit and Supervisory Committee members, and accounting auditors, in addition to quarterly reporting to the Audit and Supervisory Committee on the results of internal auditing. The internal audit departments are independent from the respective executive bodies. The Office of Internal Audits and the Office of Nuclear Power Internal Audit fall under the direct control of the Representative Director & President.



Changes in corporate governance systems

Commencement of initiatives to strengthen governance and achieve flexible business administration

- Reducing the numbers of Directors and terms of office
- Introducing the Executive Officer system
- Introducing the system of stock options for stock-based compensation

Promoting governance reforms based on corporate governance codes

- Appointing two or more outside Directors
- Initiating assessments of the Board of Directors' effectiveness
- Establishing the voluntary Nomination and Compensation Advisory Committee

Strengthening governance to account for rapidly changing management environment

- Establishing Executive Officers with titles
- Changes in status to a company with an audit and supervisory committee
- Appointment of female Directors
- Adopting a stock-based compensation program linked to business performance

	April 2005 to March 2015	April 2015 to March 2018	April 2018 to the present
Governance system	■Company with an audit and supervisory board	■Company with an audit and supervisory board	**June 2018** ■Changes in status to company with an audit and supervisory committee
Committee		**January 2017** ■Establishing the voluntary Nomination and Compensation Advisory Committee (consisting of two members from the Company and two additional members from outside the Company)	**June 2018** ■Increase in the number of Nomination and Compensation Advisory Committee members from outside the Company (to change the numbers of members from the Company and those from outside the Company to two and four, respectively) **January 2020** ■Outside Director chosen as Chair of the Nomination and Compensation Advisory Committee
Chairman of the Board of Directors	■Representative Director & Chairman of the Board	■Representative Director & Chairman of the Board	■Representative Director & Chairman of the Board
Separation of supervision and execution	**June 2005** ■Introducing the Executive Officer system ■Decrease in the number of Directors specified in the Articles of Incorporation from 25 or fewer to 18 or fewer		**April 2018** ■Establishing Executive Officers with titles **June 2018** ■Delegation of a portion of the Board of Directors' authorities to Directors **April 2020** ■Expanding the authority delegated by the Board of Directors to Directors
Nomination of Directors	**June 2007** ■Reducing the term of office for Directors from two years to one year	**November 2015** ■Establishing criteria for judging the independence of outside Directors ■Establishing policies for nominating Directors	**November 2020** ■Clearly defining the abilities and qualities demanded of Directors
Compensation for Directors	**June 2007** ■Abolishing Retirement Benefits for Directors **June 2010** ■Introducing the system of stock options for stock-based compensation	**November 2015** ■Establishing policies for determining compensation for Directors	**June 2020** ■Adopting stock-based compensation program linked to business performance ■Stock option compensation program abolished
Assessment of the Board of Directors' effectiveness		**February 2016** ■Start of the assessment of the Board of Directors' effectiveness (using a questionnaire survey)	
Basic policies regarding corporate governance		**November 2015** ■Establishment	**March 2020** ■Basic Policy on Corporate Governance established
Outside Directors (Figures in ☐ are the ratios of outside Directors to total number of Directors.)		From June 2013 1 outside Director 6% From June 2016 2 outside Directors 13%	From June 2018 6 outside Directors 35% Including three outside Directors serving as members of the Audit and Supervisory Committee From June 2019 6 outside Directors 35% Including three outside Directors (one female Outside Director) serving as members of the Audit and Supervisory Committee Since June 2020 6 outside Directors 40% Including three outside Directors (one female outside Director) serving as members of the Audit and Supervisory Committee Since June 2021 7 outside Directors 44% Including three outside Directors (two female outside Directors) serving as members of the Audit and Supervisory Committee Since April 2023 7 outside Directors 47% Including three outside Directors (two female outside Directors) serving as members of the Audit and Supervisory Committee
Outside Statutory Auditors	3 outside Statutory Auditors		

Policies and procedures for appointing and dismissing executive team members and nominating candidates for Directors by the Board of Directors

The Company seeks to administer businesses to reshape their value alongside local communities by adapting to anticipated changes in the management environment and engaging in sustained dialogue with stakeholders, thereby maintaining the role of Tohoku Electric Power Group a group of companies that grow alongside and provide essential functions within communities. The Company has adopted the following policies and procedures for nominating and dismissing Directors to administer its businesses appropriately.

Policies

- The Board of Directors shall have members whose numbers are necessary and appropriate for building effective management systems in a company active in the electricity business and for monitoring substantive discussions and business execution. The Board of Directors shall consist of an appropriate number of members, totaling 18 or fewer, as specified in the Articles of Incorporation.
- In selecting and dismissing Directors, the Nomination and Compensation Advisory Committee, including two or more independent outside Directors, shall convene discussions to secure the objectivity, timeliness, and transparency of their selection and dismissal.
- Candidates for internal Directors (excluding candidates for Directors serving as members of the Audit and Supervisory Committee) are chosen from individuals with a wealth of experience in each field, based on a consideration of a sound balance of specialties, technical expertise and business experience in particular in the electric power industry, which involves high specialization and a broad range of business domains, knowledge concerning the electricity business in general, and new business fields, among others, thereby helping to achieve Working alongside next, the Tohoku Electric Power Group's Medium- to Long-Term Vision. The desired traits are:
  - The imagination needed to envision a forward-looking vision and creative business models and to lead the organization
  - The decisiveness needed to take personal responsibility for decision-making based on knowledge, experience, and principles
  - The tenacity needed to achieve goals without giving up, tackling challenges boldly, while bringing together wisdom and resources from inside and outside the organization
  - The sensitivity needed to identify business opportunities without overlooking signs indicating risk
  - The character needed to combine a strong sense of mission with lofty ethics as leaders of a business serving the public interest
- Candidates for outside Directors (excluding candidates serving as members of the Audit and Supervisory Committee) shall be selected by evaluating whether candidates can work to realize proper decisionmaking and management supervision by the Board of Directors, based on practical experience grounded in corporate management and other factors and insights into social, economic, and other trends.
- Candidates for Directors serving as members of the Audit and Supervisory Committee shall be selected by evaluating whether the candidates can apply their respective experience and insights to the proper execution of their duties as Audit and Supervisory Committee members and to the audit and supervision of job execution by Directors. Candidates for outside Directors serving as members of the Audit and Supervisory Committee shall be selected by evaluating whether the candidates can perform audits and supervision from an objective and neutral perspective.
- Whether candidates for outside Directors are independent or not shall be judged on the basis of the Independence Criteria for Outside Directors set by the Company.

Procedures

- Based on the above policies, to enable more objective, timely, and transparent decision-making, the Nomination and Compensation Advisory Committee, whose members include multiple independent outside Directors, including the chair, deliberates on the appointment. A decision is made by the Board of Directors. For candidates for Directors serving as members of the Audit and Supervisory Committee, the consent of that Committee is obtained before submission to the Board of Directors. The Audit and Supervisory Committee may also present opinions on candidate Directors (not including candidates for Directors serving as members of the Audit and Supervisory Committee) and submit them to the General Meeting of Shareholders.

Policies and procedures for determining compensation for Directors

Policies and procedures for determining compensation for Directors (excluding Directors serving as members of the Audit and Supervisory Committee) are as follows:

Policies

To help realize Working alongside next, the Tohoku Electric Power Group's Medium- to Long-Term Vision, decisions are made on the remuneration of Directors (not including Directors serving as members of the Audit and Supervisory Committee) in accordance with the following policy, intended to strengthen motivation among Directors to improve business performance and contribute to improvements in business performance over the medium to long term, by clarifying the relationship between remuneration and business performance and stock prices.

- The remuneration structure consists of fixed remuneration, remuneration linked to short-term performance, and remuneration linked to medium-/long-term performance. Remuneration amounts are determined for each position based on a consideration of Company business results, the business environment, and other factors, while also referring to remuneration at other publicly traded firms.
- To incentivize improved business results, the percentages of total compensation accounted for by fixed remuneration, remuneration linked to short-term performance, and remuneration linked to medium-/long-term performance are set to roughly 70%, 10%, and 20%, respectively, at the time the goals are achieved.
- Fixed remuneration is paid monthly as monetary remuneration in annual amounts determined so as not to exceed the total approved by the General Meeting of Shareholders.
- Remuneration linked to short-term performance is paid as annual remuneration that varies with the degree to which business performance objectives are achieved, so as not to exceed the total approved by the General Meeting of Shareholders.
- Remuneration linked to medium-/long-term performance is paid by awarding one share of Company common stock per point based on the total points earned annually during the time of service, at the time of retirement or resignation through an investment-trust- based remuneration system. This, too, is not to exceed the total approved by the General Meeting of Shareholders. Points are awarded as fixed points and variable performance-linked points awarded in accordance with the extent to which business performance objectives are achieved. If a recipient becomes ineligible to receive this remuneration, for example by having committed any of the acts prohibited under the Rules on Issue of Shares, and such fact has been discovered prior to the date of finalization of beneficiary rights, then the shares of common stock will not be issued. If the violation has been discovered after the date of finalization of beneficiary rights, then the Company may demand return of the amount corresponding to the remuneration paid.
- The indicator used in the portion corresponding to variable performance-linked points in remuneration linked to short-term and medium-/long-term performance is the financial target of consolidated cash income (excluding factors such as time lag effects of the fuel-cost adjustment system, an external variable factor) identified in Working alongside next, the Tohoku Electric Power Group's Medium- to Long-Term Vision. The target is set to 320 billion yen for each fiscal year. Amounts paid and other matters vary with the extent of achievement of this target and other factors.
- Remuneration of outside Directors, whose perspectives are independent of business execution, consists of fixed remuneration only.
- Allotments for the respective Directors shall be decided in accordance with the sizes of the roles assigned to the respective title holders, the details of deskwork and duties assigned to the respective Directors and their respective scopes of responsibility.

Procedures

- Overseeing the business as a whole, the President makes decisions each year regarding the amounts paid to each individual and other matters, through a Board of Directors resolution delegating full authority to him or her. To ensure its objectivity and transparency, the resolution on delegation of authority to the President is deliberated on by the Nomination and Compensation Advisory Committee, whose members include multiple independent outside Directors, including the chair. The amounts paid to each individual and other matters, decisions related to which are delegated to the President as described above, cannot exceed the total payment amounts and other amounts for Directors (excluding Directors serving as members of the Audit and Supervisory Committee) as specified in advance through deliberation by the Nomination and Compensation Advisory Committee. The actual amounts paid are reported to the Nomination and Compensation Advisory Committee.
- The Audit and Supervisory Committee may state its decided opinion on compensation for Directors (excluding Directors serving as members of the Audit and Supervisory Committee) at a General Meeting of Shareholders.

Policies and procedures for determining compensation for Directors serving as members of the Audit and Supervisory Committee are as follows:

- Remuneration for Directors serving as members of the Audit and Supervisory Committee, whose positions are independent of business execution, consists of fixed remuneration only, paid monthly so as not to exceed the total approved by the General Meeting of Shareholders. The amount paid to each Director is determined through negotiation among the Directors serving as members of the Audit and Supervisory Committee.

Compensation for Directors, etc.

(FY2022)

	Monetary remuneration				Nonmonetary remuneration	
	Fixed remuneration		Remuneration linked to short-term performance		Remuneration linked to medium-/long-term performance	
	Number of compensation recipients	Amount paid (millions of yen)	Number of compensation recipients	Amount paid (millions of yen)	Number of compensation recipients	Amount paid (millions of yen)
Directors (excluding Directors serving as members of the Audit and Supervisory Committee and Outside Directors)	13	319	—	—	8	39
Members of the Audit and Supervisory Committee	5	70	—	—	—	—

(Notes)
1. As of March 31, 2023, there were 12 Directors (including four outside Directors), excluding those serving as members of the Audit and Supervisory Committee. The Company has four additional Directors serving as members of the Audit and Supervisory Committee, including three outside Directors. Compensation for the Directors specified above includes compensation for one Director not serving as members of the Audit and Supervisory Committee who stepped down at the end of the 98th Ordinary General Meeting of Shareholders held June 28, 2022 and for one Director serving as a member of the Audit and Supervisory Committee who resigned.
2. The total compensation paid to the eight outside Directors above was 84 million yen, all paid as fixed remuneration.
3. In light of the consolidated ordinary loss recorded this fiscal year, we have not paid the entire amount of remuneration linked to short-term performance and the portion corresponding to performance-linked points of remuneration linked to medium-/long-term performance.
4. The Company has issued a total of 137,282 shares of stock as payment for execution of duties to two Directors (excluding Directors serving as members of the Audit and Supervisory Committee) who resigned on March 31, 2022. Each of these was paid under the stock-based compensation program linked to business performance.
5. Remuneration limits approved by the General Meeting of Shareholders are outlined below.

Fixed remuneration, remuneration linked to short-term performance

Directors (excluding Directors serving as members of the Audit and Supervisory Committee)	Up to 516 million yen/year (including up to 60 million yen/year for outside Directors)	Directors serving as members of the Audit and Supervisory Committee	Up to 12 million yen/month
(Based on resolution passed at the 96th Ordinary General Meeting of Shareholders held June 25, 2020. The resolution affects 11 Directors.)		(Based on resolution passed at the 94th Ordinary General Meeting of Shareholders held June 27, 2018. The resolution affects four Directors.)	

Remuneration linked to medium-/long-term performance

Directors excluding outside Directors (excluding Directors serving on the Audit and Supervisory Committee)	Under the investment-trust- based remuneration system, Company stock and monetary amounts equivalent to the convertible value of Company stock are issued/granted at the time of resignation. The trust contribution amount per three fiscal years is not to exceed 540 million yen in total; the total number of points awarded to Directors per fiscal year is not to exceed 400 thousand points (equivalent to 400 thousand shares of stock).
(Based on resolution passed at the 96th Ordinary General Meeting of Shareholders held June 25, 2020. The resolution affects eight Directors.)	

CEO (President) succession plan

The Board of Directors overseas the development of successors to the position of Chief Executive Officer (President) to ensure this occurs systematically and with an adequate investment of time and resources. The Nomination and Compensation Advisory Committee, whose members include multiple independent outside Directors, including the chair, deliberates on the development of successors in a systematic and continuous manner, to ensure its objectivity and transparency, while taking into consideration matters such as the Company's changing business conditions.

Message from the chair of the Nomination and Compensation Advisory Committee

Director
(Independent Outside Director)
Chairperson, Nomination and Compensation Advisory Committee
Tsutomu Kamijo

Initiatives to date

Our Nomination and Compensation Advisory Committee was established in 2016. The committee met seven times in FY2022. To ensure objectivity, timeliness, and transparency in nomination and remuneration, the committee is composed of a majority of independent outside Directors, including myself, its chair.

Committee meetings feature active discussions among member internal and outside Directors. To date, we have deliberated on ways to develop and evaluate the next generation of management based on the five abilities and qualities required for candidate Directors: imagination, decisiveness, tenacity, sensitivity, and integrity. We also used the skills matrix to select appointments that strike a balance in terms of the skills, specializations, and other qualities needed of the Board of Directors as a whole. We also adopted a stock-based compensation program linked to business performance as an incentive to achieve medium- to long-term performance on the path to realizing *Working Alongside Next*, the Tohoku Electric Power Group's Medium- to Long-Term Vision. We believe the steady establishment of these and other initiatives related to nomination and remuneration will make the Group's governance initiatives still more effective.

We share various information with Directors who are not members of the committee, including summaries of our discussions and agenda items, through reports submitted to the Board of Directors. We strive both to deepen understanding of matters such as nomination and remuneration systems and to make the committee even more transparent.

Into the future

To realize *Working Alongside Next*, the Tohoku Electric Power Group's Medium- to Long-Term Vision, Directors must continue to contribute to improving business performance and maximizing corporate value over the medium to long term under the appropriate governance. To adapt in appropriate and timely ways to the changing business environment and move to promote digital transformation (DX) and find and implement solutions to the Group's sustainability priorities (materiality topics) amid growing demand from society, we must promote development of the next generation of management, armed with the specialization and diversity needed to make bold, responsible decisions. We must also pursue progress on succession plans while considering matters such remuneration systems to increase incentives for Directors.

We will maintain our efforts to deepen understanding of the actual conditions under which individual businesses operate and the issues they face amid accelerating environmental changes and to ascertain the abilities, qualities, and other characteristics of candidates for the next generation of management through means such as study meetings and site tours for Directors, while monitoring the committee for objectivity, timeliness, and transparency. We will also seek to assess the next generation of management candidates in respect of competency and personality.

All members, each with their own practical management experience and extensive knowledge of social and economic developments, will strive to contribute to sustained growth by identifying optimal solutions for the Group through repeated multifaceted discussions of key matters based on their unique standpoint as outsiders.

Assessment of the Board of Directors' effectiveness

The Company undertakes a questionnaire survey of Directors to assess the Board of Directors' effectiveness and reports the findings of the survey to the Board of Directors annually. Based on the survey findings, the Board of Directors shares its understanding of the existing conditions and opinions for bettering the conditions and the like, assesses the effectiveness of the Board of Directors as a whole, and confirms initiatives for improving the Board's effectiveness, among other things.

Survey topics

The survey questions are grouped into the following main categories. Directors are asked to choose one of five answers for each question. A space is provided in each category for freeform comments.

I. Number of members and composition of the Board of Directors
II. Scope of matters submitted to the Board of Directors
III. Decision-making and oversight at the Board of Directors
IV. Operation of the Board of Directors, etc.
V. Support structures for Directors and members of the Audit and Supervisory Committee, provision of information to them, etc.
VI. Operation of the Nomination and Compensation Advisory Committee
VII. Priority initiatives for FY2022

FY2022 initiatives

In FY2022, we sought to increase the efficacy of the Board of Directors via the following initiatives:

1. Implementing validation of the plan-do-check-act (PDCA) cycle concerning business administration to enhance monitoring of the medium-term plan
2. Systemically holding colloquia and other activities outside of the Board of Directors, to enhance free discussions and exchange of opinions among inside and outside Directors

In addition to the above initiatives, efforts are underway to deepen the understanding of outside Directors of the Company's current conditions and related management topics. These efforts include the regular and routine provision of internal and industry-related information, as well as information on how customers, shareholders, investors, and our communities evaluate us, in addition to facility tours and study meetings to present and discuss management topics and related matters.

Overview of results of evaluation

The results of the survey carried out in February 2023 showed improvements from the two previous surveys in terms of overall average scores, as well as strong results in all evaluation categories. Based on this survey we have judged the efforts conducted in FY2022 to increase the efficacy of the Board to have generated positive results.

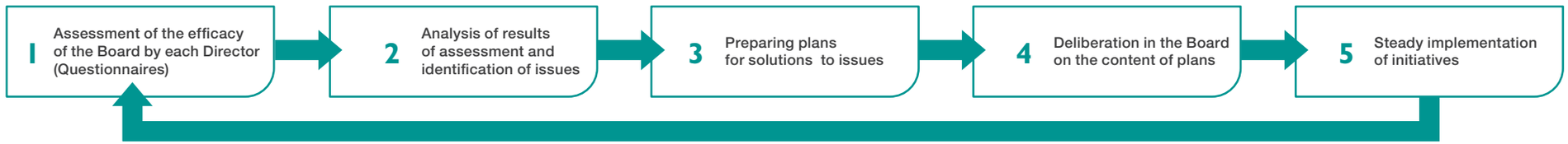
Referring to the results of exchange of opinions among all outside Directors in March 2023, after totaling the results of this survey, deliberations in a May 2023 Board of Directors meeting confirmed that the Board had demonstrated satisfactory efficacy in FY2022.

At the same time, to increase efficacy even more they recognized the need for initiatives on the following matters:

1. To enhance internal controls Groupwide, achieving a shared understanding of and deepening discussions on the state of Group internal controls and related essential issues
2. To increase the efficiency of business risk management, achieving a shared understanding and promoting effective discussion of matters such as overviews of medium- to long-term management topics and the state of progress on related initiatives

The Company Board of Directors will continue to strive to maintain and improve the efficacy of the Board of Directors on these and other points, thereby ensuring appropriate management oversight by the Board and to realize sustained growth in corporate value.

Process of assessing the efficacy of the Board



Directors (as of July 2023)

* Actual attendance is shown for FY2022. Sadao Kanazawa took office on June 28, 2023.
* Attendance for Satoshi Isagoda and Sadahiko Ohno is for meetings of the Board held since June 28, 2022.

Representative Director & Chairman of the Board

Jiro Masuko

Status of attendance at Board of Directors meetings 11/11 (100%)

Reasons for appointment

Since joining the Company, Masuko has worked in businesses centered on those assigned to the nuclear power divisions. He is familiar with the Company's businesses in general, as demonstrated by past service as an Executive Officer and the General Manager of the Aomori Branch Office, and as Executive Officer and General Manager of the Nuclear Power Department. He has served as Managing Director since June 2015, as a Representative Director and Executive Vice President since April 2018, and as a Representative Director and Chairman of the Board since April 2021. The Company reappointed him as Director in light of his extensive business experience within the Company and general knowledge of electricity business management.

Representative Director & President

Kojiro Higuchi

Status of attendance at Board of Directors meetings 11/11 (100%)

Reasons for appointment

Since joining the Company, Higuchi has worked in businesses centered on those assigned to the thermal power divisions. He is familiar with the Company's businesses in general, as demonstrated by past service as the General Manager of the Haramachi Thermal Power Station and as an Executive Officer and General Manager of the Thermal Power Department. He has served as Managing Director from June 2016, as a Director and Managing Executive Officer from April 2018, as a Representative Director and Executive Vice President from June 2019, and as a Representative Director and President since April 2020, in light of his extensive business experience within the Company and general knowledge of electricity business management.

Representative Director & Executive Vice President

Kazuhiro Ishiyama

Status of attendance at Board of Directors meetings 11/11 (100%)

Reasons for appointment

Since joining the Company, Ishiyama has worked in businesses centered on those assigned to the planning divisions. He is familiar with the Company's businesses in general, as demonstrated by past service as Executive Officer and General Manager of the Corporate Planning Department and Managing Executive Officer. He served as Director and Managing Executive Officer from June 2021 and as a Representative Director and Executive Vice President from April 2022. The Company reappointed him as Director based on his extensive business experience within the Company and general knowledge of electricity business management.

Representative Director & Executive Vice President

Hiromitsu Takano

Status of attendance at Board of Directors meetings 11/11 (100%)

Reasons for appointment

Since joining the Company, Takano has worked in businesses centered on those assigned to the general-affairs divisions. He is familiar with the Company's businesses in general, as demonstrated by past service as General Manager of the General Affairs Department, Senior Executive Officer and General Manager of the Niigata Branch Office, and Managing Executive Officer. He served as Director and Managing Executive Officer from June 2021 and as a Representative Director and Executive Vice President from April 2022. The Company reappointed him as Director based on his extensive business experience within the Company and general knowledge of electricity business management.

Representative Director & Executive Vice President

Satoshi Isagoda

Status of attendance at Board of Directors meetings 9/9 (100%)

Reasons for appointment

Since joining the Company, Isagoda has worked in businesses with a focus on those assigned to the business administration divisions. He is familiar with the Company's businesses in general, as demonstrated by past service as an Executive Officer and General Manager of the Human Resources Department, an Executive Officer and General Manager of the Iwate Branch, and a Managing Executive Officer. He was appointed Director & Managing Executive Officer in June 2022 and Representative Director & Executive Vice President in April 2023. The Company appointed him as Director based on his extensive business experience within the Company and general knowledge of electricity business management.

Director & Managing Executive Officer

Sadahiro Ohno

Status of attendance at Board of Directors meetings 9/9 (100%)

Reasons for appointment

Since joining the Company, Ohno has worked in businesses with a focus on those assigned to the thermal power divisions. He is familiar with the Company's businesses in general, as demonstrated by past service as an Executive Officer and General Manager of the Thermal Power Department and a Managing Executive Officer. He was appointed Director & Managing Executive Officer in June 2022. The Company appointed him as Director based on his extensive business experience within the Company and general knowledge of electricity business management.

Director & Managing Executive Officer

Sadao Kanazawa

Status of attendance at Board of Directors meetings ..... —/— (—%)

Reasons for appointment

Since joining the Company, Kanazawa has worked in businesses centered on those assigned to the nuclear power divisions. He is familiar with the Company's general businesses, as demonstrated by past service as an Executive Officer and General Manager of the Nuclear Power Department and as a Managing Executive Officer. The Company has appointed him as Director in light of his extensive business experience within the Company and general knowledge of electricity business management.

Directors (as of July 2023)

* Actual attendance is shown for FY2022.
* Attendance for Keiko Uehara and Katsuaki Fujikura is for meetings of the Board held since June 28, 2022.
* Attendance for Katsuaki Fujikura is for meetings of the Audit and Supervisory Committee held since June 28, 2022.
* The independence of independent Directors is judged based on the standards for independence established by the financial instruments exchange on which Company shares are listed.

Director (Outside Director) (Independent Director)

Tsutomu Kamijo

Status of attendance at Board of Directors meetings 11/11 (100%)

Reasons for appointment and summary of anticipated roles

Kamijo has served in positions including Chairman and Director of Sapporo Holdings Ltd. and brings experience in managing a company that manufactures and sells beverages, foods and other products. The Company appointed Kamijo as an Outside Director based on expectations that he will apply his extensive experience and rare insights to the management of the Company based on his past career and performance record.
Kamijo brings a wealth of experience as a corporate manager, playing a leading role in areas including large-scale domestic and international M&A and business alliance activities and global business development. He is expected both to oversee Company management and to offer advice on management policies and businesses from an independent perspective.

Director (Outside Director) (Independent Director)

Osamu Kawanobe

Status of attendance at Board of Directors meetings 10/11 (91%)

Reasons for appointment and summary of anticipated roles

Kawanobe is Representative Director and President of JR EAST MECHATRONICS CO., LTD. Previously held positions include those of Representative Director and Vice President of the East Japan Railway Company. He brings a wealth of experience in managing public-interest businesses and in other areas. The Company appointed Kawanobe as an Outside Director based on expectations that he will apply his extensive experience and rare insights to the management of the Company based on his past career and performance record.
Kawanobe brings a wealth of experience as a corporate manager, playing a leading role in business diversification efforts based on the rail transportation business. He is expected both to oversee Company management and to offer advice on management policies and businesses from an independent perspective.

Director (Outside Director) (Independent Director)

Mikito Nagai

Status of attendance at Board of Directors meetings 11/11 (100%)

Reasons for appointment and summary of anticipated roles

Nagai's previous positions include Representative Director and President of NIPPON STEEL KOWA REAL ESTATE CO.,LTD. He has also served as a Director and Vice President of Mizuho Corporate Bank, Ltd. (now Mizuho Bank, Ltd.), and he brings a wealth of experience in managing the real estate and banking businesses and in other areas. The Company appointed Nagai as an Outside Director based on expectations that he will apply his extensive experience and rare insights to the management of the Company based on his past career and performance record.
Nagai brings a wealth of experience and financial insights as a corporate manager. He is expected both to oversee Company management and to offer advice on management policies and businesses from an independent perspective.

Director (Outside Director) (Independent Director)

Keiko Uehara

Status of attendance at Board of Directors meetings 9/9 (100%)

Reasons for appointment and summary of anticipated roles

Uehara's previous positions include Executive Director of Daiwa Securities Business Center Co. Ltd., where she managed back-office business operations, and Executive Officer of Daiwa Securities Group Inc. The Company appointed Uehara as an Outside Director based on expectations that she will apply her extensive experience and rare insights to the management of the Company based on her past career and performance record.
Uehara brings a wealth of experience and financial insights as a corporate manager. She is expected both to oversee Company management and to offer advice on management policies and businesses from an independent perspective.

Director & Audit and Supervisory Committee Member

Katsuaki Fujikura

Status of attendance at Board of Directors meetings 9/9 (100%)
Status of attendance in Audit and Supervisory Committee meetings 10/10 (100%)

Reasons for appointment

Since joining the Company, Fujikura has worked in businesses with a focus on those assigned to the fuel divisions. He is familiar with the Company's businesses in general, as demonstrated by past service as an Executive Officer and General Manager of the Fuel Department, an Executive Officer and Special Remuneration Audit Executive, and a Senior Executive Officer and General Manager of the Niigata Branch. The Company appointed him as Director & Audit and Supervisory Committee Member based on his extensive business experience within the Company and general knowledge of electricity business management.

Director & Audit and Supervisory Committee Member (Outside Director) (Independent Director)

Ikuko Miyahara

Status of attendance at Board of Directors meetings 11/11 (100%)
Status of attendance in Audit and Supervisory Committee meetings 13/13 (100%)

Reasons for appointment and summary of anticipated roles

As university professor, Miyahara has experience in the real-world use of regional resources, research on support for reconstruction following major earthquakes, and joint industry, government, and academic projects. The Company appointed Miyahara as Outside Director and Audit and Supervisory Committee Member based on expectations she will apply her extensive experience and rare insights gained in her academic career toward the objective of providing impartial audits and supervision, drawing on her past career and performance record.
Miyahara brings a wealth of insights as an experienced academic and experience based on involvement in disaster recovery in the Tohoku region. She is expected both to audit and oversee Company management from an independent perspective.

Director & Audit and Supervisory Committee Member (Outside Director) (Independent Director)

Kazuo Kobayashi

Status of attendance at Board of Directors meetings 11/11 (100%)
Status of attendance in Audit and Supervisory Committee meetings 13/13 (100%)

Reasons for appointment and summary of anticipated roles

Kobayashi is a Standing Statutory Auditor of the Nippon Life Insurance Company. He offers considerable knowledge of financial affairs and accounting. He has also served in posts including a Representative Director and Executive Vice President of the Nippon Life Insurance Company, and he has experience in management of the life insurance business. The Company reappointed him as an Outside Director and an Audit and Supervisory Committee Member based on expectations that he will apply his extensive experience and rare insights toward the objective of providing impartial audits and supervision of the Company based on his past career and performance record.
Kobayashi brings knowledge of financial affairs and accounting and financial insights. He is expected both to audit and oversee Company management from an independent perspective.

Director & Audit and Supervisory Committee Member (Outside Director) (Independent Director)

Akiko Ide

Status of attendance at Board of Directors meetings 11/11 (100%)
Status of attendance in Audit and Supervisory Committee meetings 13/13 (100%)

Reasons for appointment and summary of anticipated roles

Ide's previous positions include Standing Statutory Auditor of Nippon Telegraph and Telephone Corporation, Statutory Auditor of NTT, Inc., and Executive Officer of NTT Docomo, Inc. The Company appointed her as an Outside Director and an Audit and Supervisory Committee Member based on expectations that she will apply her extensive experience and rare insights toward the objective of providing impartial audits and supervision of the Company based on her past career and performance record.
Ide brings a wealth of experience in management of public utilities and auditing experience and insights. She is expected both to audit and oversee Company management from an independent perspective.

Areas of specific expectations for skills individual Directors have (skills matrix)

Our outlook on areas of expectations for individual Directors

The seven items below have been identified as skills essential to Company Directors in general and skills essential for future strategic implementation to realize “Working alongside next,” the Tohoku Electric Power Group’s Medium- to Long-Term Vision:

● Chair ○ Member | Male Female

Name	Title	Nomination and Compensation Advisory Committee member?	Gender	Areas of particular expectations*1						
				Planning and management	Technology*2	Finance and accounting	Legal and risk management	Business development and marketing	Social communication*3	Personnel and human resource development
Jiro Masuko	Representative Director & Chairman of the Board	○		●	●				●	
Kojiro Higuchi	Representative Director & President	○		●	●		●			
Kazuhiro Ishiyama	Representative Director & Executive Vice President			●	●		●			
Hiromitsu Takano				●			●		●	
Satoshi Isagoda						●		●		●
Sadahiro Ohno	Director & Managing Executive Officer				●				●	
Sadao Kanazawa					●				●	
Tsutomu Kamijo	Director (Outside Director)	●		●			●	●		
Osamu Kawanobe		○		●	●		●			
Mikito Nagai		○		●		●	●			
Keiko Uehara			○			●			●	●
Katsuaki Fujikura	Director & Audit and Supervisory Committee Member						●		●	
Ikuko Miyahara	Director & Audit and Supervisory Committee Member (Outside Director)	○	○					●	●	●
Kazuo Kobayashi				●		●		●		
Akiko Ide			○	●				●	●	

*1 The above list describes the top three areas of particular expectations based on the skills possessed by individual Directors. It does not indicate all areas of specialization and experience of each Director.
*2 Technology refers to capabilities related to electricity, machinery, and other technologies in general, including environmental knowledge, to contribute to carbon neutrality.
*3 Social communication refers to capabilities related to communication with local communities and other stakeholders.

Messages from outside Directors

Osamu Kawanobe

Director (Outside Director)
(Independent Director)

The past year was marked by dramatic change. Just as we entered the final stages of operational resumption at the Onagawa Nuclear Power Station, we confronted power failures caused by an earthquake, the need to respond to soaring fuel prices and other costs, and a case of improper handling of customer and other information. While the Company responded appropriately and effectively in these cases based on deliberations by the Board, the improper handling of customer and other information demonstrated one major issue: certain risks related to matters such as employee training and the operation of computer systems had not been fully assessed. We will enhance oversight to prevent the recurrence of similar incidents.

Board meetings and study meetings include lively discussions reflecting the diversity of our membership. We may repeatedly discuss the same themes if required. We have also been able to identify certain trends thanks to the frequent provision of Company information to outside Directors. I strive to express external views and those of consumers based on this information.

Times of uncertainty require the flexibility to adapt to change, rather than sticking with the way things have been done in the past. Keeping in mind the risk of maintaining the status quo, we must take steps in new directions based on a thorough discussions of risks. I intend to contribute to the Group's evolution into an organization capable of demonstrating sustainability from *The Strength to Work Alongside* perspective and building a smart society based on the knowledge and expertise accumulated over years in the electric power business.

Mikito Nagai

Director (Outside Director)
(Independent Director)

Over the past year, The Company's business environment was highly challenging. These challenges include rising fuel prices, dramatic yen depreciation, and damage caused by the earthquake centered off the Fukushima Prefecture coast in March 2022. We recorded significant losses for the second year in a row. To the certain disappointment of our shareholders, we paid no dividends.

While the external environment remains fluid, I believe it is important to secure solid earnings and resume dividend payments based on continuing efforts to cut costs, optimize supply and demand, and procure the necessary fuel. At the same time, we must rapidly restore the financial footing needed for medium- to long-term investment. Other important management topics include thoroughgoing measures to put safety first in resuming operations at Unit No. 2 of the Onagawa Nuclear Power Station and regaining the trust lost through the improper handling of customer and other information while implementing and closely monitoring thorough preventive measures.

We must also accelerate efforts to give concrete form to the Medium- to Long-Term Vision, *Working Alongside Next*. We face the pressing need to shift toward investments in human resources and the human resource portfolio needed to support these efforts. I intend to provide advice and support as we move to become a more flexible, diverse organization while strengthening employee engagement.

Keiko Uehara

Director (Outside Director)
(Independent Director)

One year has passed since my appointment as an outside Director. During this year, the Company's earnings situation proved especially challenging. In the face of significant difficulties, including record high ordinary losses and the need to raise regulated rates, the Board undertook lively discussions among those on the executive side and the outside Directors, followed by timely and appropriate reporting on subsequent conditions. Outside Directors are also applying their experience outside the power industry to offer constructive, impartial advice on measures to rebuild the compliance structure in response to the improper handling of information on customers and other information. We will closely monitor these efforts. It should be noted that the Group has made progress even under these challenging business conditions, including achieving the world's highest level of efficiency at the Joetsu Thermal Power Station and diversifying fundraising by issuing hybrid bonds.

The Company's business environment remains harsh, but this should not be seen as discouraging. We face numerous challenges in various areas, including decarbonizing and diversifying our revenue sources. While we may see a faint glimmer of light at the end of the tunnel in certain respects, we will continue to move forward, step by step, as we transform Tohoku Electric Power. I will continue to support the Company as it tackles these challenges by doing my best to share this awareness while deepening my understanding of the Company through interactions with those in the field.

Messages from outside Director/Audit and Supervisory Committee Members

Ikuko Miyahara

Director/Audit and Supervisory Committee Member (Outside Director)

In FY2022, chaotic conditions continued in the global economy, as Russia's invasion of Ukraine entered its second year. The Company focused on responding to volatility in fuel prices and stabilizing procurement. At the same time, the first major compliance issue since the corporate split reminded us of the importance of sound business management and administration. Examples of good news during the period include rapid recovery at thermal power stations affected by the earthquake off the Fukushima Prefecture coast in March of last year and the start of operation of a state-of-the-art power source at the Joetsu Thermal Power Station in December. The latter facility achieved the world's highest generating efficiency. In the Tohoku region, power failures and damage to power stations and other infrastructure due to natural disasters are growing from year to year. The time and costs required for recovery have affected company revenues and expenditures. We must be prepared to mitigate the economic burdens of the damage sustained by business infrastructure in the future.

In the area of efforts to promote women in the workplace, I believe awareness within the company is rising, thanks to internal dialogue including Group companies and to training sessions, among other efforts. The Company has many young employees, both men and women, who take pride in and are inspired by their work As an outside Director, I would like to support the Company in exploring the best way to hire and promote the next generation.

Kazuo Kobayashi

Director/Audit and Supervisory Committee Member (Outside Director)

In FY2022, the Group's revenues, expenditures, and finances fell below even the levels observed right after the 2011 Great East Japan Earthquake.

In addition to matters affecting the overall industry, including rising fuel and other prices, some of our thermal power stations were severely damaged by an earthquake centered off the Fukushima Prefecture coast. These and other factors led to what could truly be called the most challenging business environment since the Company's founding. Under these conditions, the theme to be addressed by management in FY2023 became perfectly clear: making steady progress on the Group's Medium- to Long-Term Vision, *Working Alongside Next*, based on the steady restoration of our earnings and financial foundations. Structural management reforms, including the operational resumption of nuclear power stations with an emphasis on safety, continued growth in use of renewable energy, and efforts to improve management efficiency to reduce burdens on customers, will require enhancements of the underlying governance. The incident involving the improper handling of information on PPA customers and other data last year reminds us of the need to enhance governance Groupwide.

Such governance is based on the proper recognition of risks, appropriate decision-making processes, and a timely plan-do-check-act (PDCA) cycle. Checking on these is an important responsibility of the Board of Corporate Auditors. FY2023 is a crucial time for the Group, and I intend to do my best as an outside Director and member of the Board of Corporate Auditors.

Akiko Ide

Director/Audit and Supervisory Committee Member (Outside Director)

The Company revised electricity rates on high-voltage and special high-voltage power in November of last year and revised its regulated retail rates and unregulated low-voltage power rates in June of this year. It faces the pressing need to restore earnings and financial standing while enhancing management foundations to achieve operational stability. I believe it will be vital for the Company to control and remain highly resilient to risks in the face of changing business conditions, as it faces risks that may affect its business operations, including the volatility of fuel and electricity market prices, the growing frequency of natural disasters, and trends in energy policies.

In response to the incident of improper handling by the Company of information on PPA customers and other data, we studied and formulated preventive measures based on a thorough investigation and analysis of the factors leading to the incident. Keeping in mind the fact that doing business in compliance with the conduct regulations under the Electricity Business Act is an important precondition, as a member of the Board of Corporate Auditors, I wish to focus, reflecting the conditions encountered in the field, on steady progress with countermeasures, both tangible and intangible. In this way we can avoid loss of customer trust while maintaining a fair competitive environment.

I intend to do all I can to help realize the Medium- to Long-Term Vision, *Working Alongside Next*, through the Power Supply and Smart Society Building Businesses, as we overcome the challenges posed by the current business environment.

Enhancement of Group governance

The Board of Directors has established a basic policy on a structure to secure appropriate business operations and a structure to secure appropriate business operations at subsidiaries and other Group companies, under which we're striving to enhance governance at subsidiaries and other members of the Group.

Business administration structure

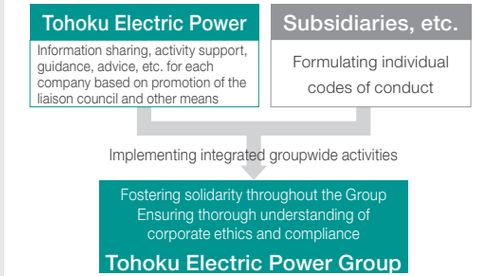
We've established Affiliate Business Rules and Affiliate Business Standards, and we demand prior consultations and reports from subsidiaries and affiliates concerning important matters, as well as providing appropriate guidance and advice.

Alongside ensuring a thorough understanding of the Group's Medium- to Long-Term Vision "Working alongside next" through means such as periodic corporate group management meetings, we're studying and implementing measures to improve efficiency and productivity on a continual basis.

Corporate ethics and compliance structure

We have established the Tohoku Electric Power Group Liaison Council on Corporate Ethics and Compliance Promotion to promote corporate ethics and compliance smoothly and steadily and to strengthen related activities throughout the Group, through means such as sharing information, improving knowledge, and improving skills through enhanced joint efforts among the Company and Group companies.

Group companies formulate and implement codes of conduct based on the Tohoku Electric Power Group Sustainability Policy and the Tohoku Electric Power Group Code of Conduct.



Structure for management of risks of losses

In accordance with the Affiliate Business Rules and Affiliate Business Standards, we demand prior consultations and reports from subsidiaries and affiliates concerning significant risks, as well as provide appropriate guidance and advice.

We have also established the Risk Management Response Manual and the Tohoku Electric Power Group Emergency Communication Rules, through which we have set up a structure for risk management and emergency response.

Any legal violations or other such incidents identified at a Group company in consultations with the Yori, Sou Hotline are duly reported to the Board of Directors and the Committee of Corporate Ethics and Compliance, then appropriately addressed.

Concept of emergency response structure

Enhancement of compliance

Tohoku Electric Power and Tohoku Electric Power Network have always pursued business efforts with an understanding that compliance with business ethics, laws, and regulations is the fundamental basis of all business activities. As such, we established a Committee of Corporate Ethics and Compliance chaired by the President and diligently run through the PDCA cycle to ensure that our initiatives are adequate in light of social needs and to make any improvements identified as necessary.

The Group formulated the Tohoku Electric Power Group Corporate Ethics and Compliance Activity Policy to establish basic courses of action for corporate ethics and compliance activities. The Group is currently pursuing activities in which all Group member companies comply with three priorities: eliminating all violations; acting in ways acceptable to society; and autonomous activities at individual workplaces.

Under this policy, we are pursuing various initiatives, including training targeting specific tiers of staff. Related efforts include Tohoku Electric Power Group Corporate Ethics Month and groupwide employee surveys on corporate ethics and compliance.

An incident involving the improper handling of information on PPA customers and other data occurred at Tohoku Electric Power and Tohoku Electric Power Network. This incident raised doubts about business operations premised on fair and equal competition under the system of deregulated electricity sales and eroded the trust we have with customers and the community. We take this incident very seriously. We plan to enhance corporate ethics and compliance activities based on the approach of paying attention, discussing concerns, and making corrections to prevent similar future incidents.

In the future as well, we will continue efforts to ensure that each and every employee implements thorough compliance in accordance with the Tohoku Electric Power Group Code of Conduct, keeping firmly in mind at all times the need to do business in fair and appropriate ways, paying close attention to how our customers see us, to continue to be worthy of the trust of customers in our community.

See ▶ Preventing the recurrence of a case involving the improper handling of information on PPS customers ▶ P13

See ▶ Compliance ▶ Sustainability Report 2023 ▶ P73

Communication with shareholders and investors

To promote constructive dialogue with shareholders and investors, we provide opportunities beyond the general meeting of shareholders whereby we strive to enhance dialogue through organic joint efforts with various sections, centered on the director in charge of IR, to deepen understanding of our initiatives.

Dialogue and discussions with shareholders and investors represent a valuable opportunity for the Company to gain various insights. In addition to feeding back such insights to Company Directors and management, we also use the information gleaned to enhance tools for communications with shareholders and investors (i.e., various explanatory materials and media).

We are firmly committed to strengthening corporate value through constructive dialogue with shareholders and investors, and kindly ask for the continuing understanding and support of our stakeholders with regard to these matters.

Policy on constructive dialogue with shareholders

To contribute to sustained growth and medium- to long-term increases in corporate value, we respond to various topics that interest and concern shareholders through opportunities for dialogue, in addition to opportunities provided by the general meetings of shareholders. Core members of management and directors strive to explain management policies as clearly as possible, to ensure that shareholders understand our efforts in light of our business environment.

We are also advancing the following initiatives as we continue to promote constructive dialogue with shareholders.

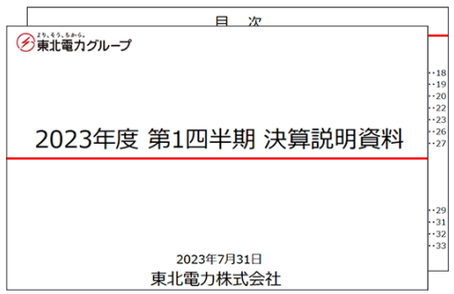
1. Appointment of a director in charge of IR, to coordinate dialogue with shareholders and investors overall
2. Organic coordination with individual sections through dynamically scheduled meetings in which Corporate Strategy Division as the section in charge of IR and related sections participate, in addition to the director in charge of IR and other relevant directors
3. Holding events such as shareholder colloquia and briefings on financial results, to enhance dialogue other than individual meetings
4. Sharing information with executives and related internal parties on summaries of dialogue with shareholders and investors and striving to put comments and requests received to use in Company management
5. Establishing Standards on Control of Insider Trading and asking executives, executive officers, employees, and other parties to manage material facts thoroughly as well as carrying out timely, fair, and appropriate disclosure in line with the Disclosure Policy of information that could have a material impact on decisions by shareholders and investors

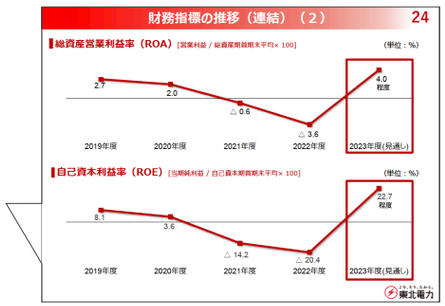
Major IR activities

Audience	Initiative	Details of FY2022 activities
Analysts, institutional investors	● Holding briefings on financial results for analysts and institutional investors twice annually (at the end of the second quarter and the fiscal year) ● Holding individual meetings on ESG and stewardship and individual meetings with bond investors to grow ESG finance ● Timely feedback to the Management Committee, IR Promotion Committee, and other bodies of views and requests from investors and the latest trends related to ESG investment and disclosure ● Efforts to enhance disclosure to improve our evaluations in capital markets	● Briefings on financial results held for analysts and institutional investors ● Small meetings ● Individual meetings held on ESG and stewardship ● ESG briefings on the Integrated Report ● Individual meetings with bond investors (debt IR) ● Facility tours for analysts and institutional investors ● Individual remote meetings with overseas institutional investors
Individual shareholders, individual investors	● Holding online briefings to maintain and secure new individual shareholders	● Company briefings for individual investors

Enhancing tools for communicating with shareholders and investors

- In the first quarter of FY2023, to facilitate communications with shareholders and investors, we updated the materials that present business results to reflect the opinions and other feedback received from shareholders and investors.
- We are striving to enhance data and information deemed to be of interest to shareholders and investors in various ways, including adding results from past fiscal years and forecasts for the current fiscal year that concern indicators of returns on capital.
- We will continue to enhance these and other tools to facilitate communication with shareholders and investors.





Chapter 05

Data

Financial Information

Financial data for most recent 11 years (consolidated)

(billion yen)		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 (FY)
Business results	Operating revenue*	1,792.6	2,038.8	2,182.0	2,095.5	1,949.5	2,071.3	2,244.3	2,246.3	2,286.8	2,104.4	3,007.2
	Electric utility operating revenue	1,575.7	1,815.4	1,932.2	1,853.2	1,727.2	1,854.3	2,012.7	2,022.2	2,067.0	1,840.3	2,716.9
	Other business operating revenue	216.9	223.4	249.7	242.3	222.3	216.9	231.6	224.1	219.7	264.1	290.2
	Operating expenses	1,848.5	1,953.2	2,012.3	1,905.8	1,819.1	1,963.7	2,160.6	2,130.0	2,198.8	2,133.1	3,187.2
	Electric utility operating expenses	1,626.4	1,732.4	1,782.0	1,686.3	1,618.7	1,763.7	1,943.0	1,916.4	1,995.6	1,888.5	2,906.9
	Other business operating expenses	222.1	220.7	230.2	219.4	200.4	199.9	217.6	213.5	203.2	244.6	280.3
	Operating income	(55.9)	85.6	169.7	189.7	130.4	107.6	83.6	116.3	87.9	(28.7)	(180.0)
	Ordinary income	(93.2)	39.0	116.6	152.6	104.7	88.4	65.7	99.9	67.5	(49.2)	(199.2)
	Net income attributable to owners of parent	(103.6)	34.3	76.4	97.3	69.9	47.2	46.4	63.0	29.3	(108.3)	(127.5)
Cash flow	Cash flows from operating activities	46.6	236.4	374.2	371.8	278.1	324.0	262.8	371.5	217.6	97.1	(93.7)
	Cash flows from investing activities	(236.7)	(247.5)	(247.7)	(250.5)	(256.3)	(273.9)	(250.5)	(310.6)	(254.9)	(322.1)	(275.7)
	Cash flows from financing activities	262.6	45.4	(211.2)	(104.1)	(55.9)	(36.2)	(69.3)	6.7	(5.7)	293.2	598.4
Financial standing	Total assets	4,284.3	4,243.0	4,131.2	4,152.4	4,145.9	4,222.1	4,258.6	4,323.0	4,471.0	4,725.6	5,211.9
	Property, plant, and equipment	3,645.1	3,536.5	3,497.2	3,502.7	3,475.4	3,557.4	3,620.9	3,679.0	3,731.3	3,809.1	4,005.1
	Current assets	639.2	706.4	633.9	649.7	670.5	664.6	637.6	644.0	739.7	916.5	1,206.7
	Net assets	522.7	574.5	651.2	684.3	755.6	798.7	833.7	864.1	901.5	778.9	631.0
	Interest-bearing debt	2,714.5	2,763.9	2,561.9	2,471.3	2,435.5	2,424.4	2,381.1	2,412.6	2,433.2	2,760.3	3,375.6
Main indicators	Consolidated cash income	187.9	360.4	376.2	368.2	357.5	345.3	317.4	321.9	302.3	257.3	136.6
	Equity ratio (%)	11.3	12.6	14.6	15.2	16.8	17.3	17.9	18.3	18.5	14.8	10.5
	Free cash flow	(152.8)	31.8	179.2	151.8	44.5	71.1	30.6	77.1	(22.6)	(211.5)	(352.5)
	Return on assets (ROA) (%)	(1.3)	2.0	4.1	4.6	3.1	2.6	2.0	2.7	2.0	(0.6)	(3.6)
	Return on equity (ROE) (%)	(19.4)	6.7	13.6	15.8	10.6	6.6	6.2	8.1	3.6	(14.2)	(20.4)
	Return on invested capital (ROIC) (%)	1.2	1.8	3.7	4.4	3.0	2.5	1.9	2.6	2.0	(0.6)	(3.5)
Per-share information	Payout ratio (%)	-	7.3	9.8	12.8	25.0	42.3	43.0	31.7	68.0	-	-
	Dividend yield (%)	0.00	0.47	1.10	1.72	2.32	2.81	2.83	3.84	3.83	4.92	0.00
	Net earnings per share (EPS) (yen)	(207.97)	68.78	153.35	195.01	140.10	94.61	93.12	126.32	58.81	(216.84)	(255.14)
	Book value per share (BPS) (yen)	969.97	1,073.45	1,206.38	1,261.40	1,392.24	1,463.42	1,526.66	1,584.30	1,654.46	1,399.90	1,097.95

* The Accounting Standard for Revenue Recognition has been applied since FY2021.

Partnerships, External Evaluations, Etc.

Participation in initiatives

UN Global Compact signatory

Seeking to build a sound global society through joint efforts between the United Nations and the private sector (companies and other organizations), the UN Global Compact is the world's largest sustainability initiative. Signatory organizations are required to conform to and put into practice 10 principles in the four areas of human rights, labor, the environment, and anti-corruption.

Participation in Challenge Zero

Challenge Zero is an initiative to communicate across the world and support innovative actions by companies and other organizations to take on the challenge of realizing a carbon-neutral society, a long-term goal under the Paris Agreement, through joint efforts between Keidanren and the Japanese government.

Support for the Challenge Initiatives for 30% of Executives to be Women by 2030

The Challenge Initiatives for 30% of Executives to be Women by 2030 program was launched by Keidanren to accelerate efforts to promote diverse human resources for inclusion and co-creation based on diverse values, the key to sustainable capitalism. The goal is to ensure that 30% of executives will be women by 2030.

Participation in Plastics Smart

Plastics Smart is a campaign launched by the Ministry of the Environment to promote joint efforts and partnership among a wide range of parties including individuals, NGOs, corporations, research institutes, and government agencies, to resolve the issue of ocean plastic wastes.

Support for the Keidanren Initiative for Biodiversity Conservation

The Keidanren Initiative for Biodiversity Conservation is an initiative launched by Keidanren and the Keidanren Committee on Nature Conservation. By promoting the Keidanren Biodiversity Conservation Statement and Guidelines, it strives to promote further mainstream adoption of efforts to preserve biodiversity.

Participation in the GX League

We participate in the GX League as we continue to enhance promotion of efforts to achieve carbon neutrality by accumulating knowledge and expertise on reducing CO_2 emissions.

Partnerships with local governments

Joining the Akita SDGs Partnership (Tohoku Electric Power Akita Branch)

The Akita SDGs Partnership program is an Akita Prefecture program whereby companies, other organizations, and local governments who are making active efforts to achieve the Sustainable Development Goals (SDGs) through their business activities and other efforts are recognized and publicly acknowledged. To help realize sustainable communities powered by public-private partnerships on SDG efforts, the program makes visible the efforts of registered companies and other members.

Participation in the Fukushima SDGs Promotion Platform (Tohoku Electric Power Fukushima Branch)

The Fukushima SDGs Promotion Platform was established by Fukushima Prefecture to promote prefectural development by creating opportunities for joint efforts and partnerships among organizations in the prefecture within the framework of the SDGs. It had 332 members as of July 26, 2023, including municipalities, companies, associations, and nonprofits. It carries out various activities from the perspectives of broadening efforts, connecting to each other, and learning.

External evaluations on sustainability

CDP* evaluation

We proactively disclose environmental information by responding continually to CDP climate change and water security questionnaires. Our scores in 2022 were A- for climate change and B for water security.

* An international NGO (formerly known as Carbon Disclosure Project) that promotes and assesses disclosure by companies and local governments on climate change and other fields

Kurumin certification

Under this certification program based on the Act on Advancement of Measures to Support Raising Next-Generation Children, the Minister of Health, Labour and Welfare certifies companies that actively support employees raising children.

2023 Certified Health & Productivity Management Outstanding Organizations Recognition Program

We've been chosen to the 2023 Certified Health & Productivity Management Outstanding Organizations (Large Enterprise Category) Recognition Program by the Ministry of Economy, Trade and Industry and the Nippon Kenko Kaigi.

Eruboshi certification

Under this certification program based on the Act on the Promotion of Female Participation and Career Advancement in the Workplace, the Minister of Health, Labour and Welfare certifies companies that carry out outstanding initiatives to promote women in the workplace.

Inclusion in ESG indices

FTSE Blossom Japan Sector Relative Index

This index developed by the global index provider FTSE Russell includes Japanese firms with outstanding ESG (environmental, social, and governance) initiatives in each industry.

Sompo Sustainability Index

This index developed by Sompo Asset Management Co., Ltd. includes about 300 issues chosen for their outstanding ESG initiatives, through a combination of annual ESG assessments and stock price assessments.

SASB Standards Index

Summarized below are Tohoku Electric Power Group results related to the Electric Utilities and Power Generators industry standard provided by the Sustainability Accounting Standards Board (SASB) of the United States.

Since the SASB standards were prepared primarily for use by US firms and in US markets, they include accounting metrics that do not apply to the Group's business activities. Nevertheless, we strive to disclose information to the fullest extent possible in line with the spirit of these standards.

Disclosure topic	Accounting metrics	Category	Unit	Code	Performance
Environment					
Greenhouse Gas Emissions and Energy Resource Planning	(1) Gross global Scope 1 emissions (2) Gross global Scope 1 emissions, percentage covered under emissions limiting regulations (3) Gross global Scope 1 emissions, percentage covered under emissions reporting regulations	Quantitative	t-CO_2·%	IF-EU-110a.1	(1) 31,069,000 t-CO_2 (2) 0% (because Japan lacks regulated markets) (3) 100%
	Greenhouse gas (GHG) emissions associated with power delivery	Quantitative	t-CO_2	IF-EU-110a.2	30,330,000 t-CO_2 (31,470,000 t-CO_2) * Figure in parentheses represents base CO_2 emissions not reflecting adjustments, etc. under the feed-in tariff (FIT) program for renewables.
	Long-term and short-term strategy or plans to manage Scope 1 emissions, emissions reduction targets, and analysis of performance against these targets	Discussion and Analysis	—	IF-EU-110a.3	In March 2021, in the Tohoku Electric Power Group Carbon Neutral Challenge 2050, we summarized our long-term course of action to achieve carbon neutrality by 2050. We have also set a CO_2 emissions target of halving CO_2 emissions by FY2030 vs. actual FY2013 levels. Under the Tohoku Electric Power Group Carbon Neutral Challenge 2050, the Group will accelerate CO_2 emissions reductions primarily by maximizing use of renewable energy and nuclear power and development of smart society building business, in addition to decarbonizing thermal power sources. Specifically, we will seek to swiftly achieve and expand 2,000 MW in renewable power generating capacity, based primarily on wind power, to make effective use of the wealth of renewable energy sources in the six Tohoku prefectures and Niigata Prefecture. We will also enhance the power network and make progress in aspects such as the use of storage cells and hydrogen in preparation for growing use of renewables. We will strive to advance energy management and put distributed energy to effective use in the region, by developing smart society building business, including providing VPP services. Our Scope 1 emissions were 30.6 million t-CO_2 in FY2019, 31.1 million t-CO_2 in FY2020, and 32.8 million t-CO_2 in FY2021. We plan to maintain this course through the above measures to achieve these goals.
	(1) Number of customers served in markets subject to renewable portfolio standards (RPS) (2) Percentage fulfillment of RPS target by market	Quantitative	Number, Percentage (%)	IF-EU-110a.4	The RPS system was abolished in Japan in 2012 when the nation migrated to a FIT program. We purchase electricity generated from renewables under the FIT program.
Air Quality	Atmospheric emissions of the following pollutants: (1) NOx (excluding N_2O) (2) SOx (3) Particulate matter (PM10) (4) Lead (Pb) (5) Mercury (Hg) Percentage of each in or near densely populated areas	Quantitative	t·%	IF-EU-120a.1	(1) 13,994 t, 100% (2) 7,285 t, 100% (3) Not disclosed (4) Not disclosed (5) Not disclosed * Although particulate matter, lead, and mercury are treated as part of the normal flow of powerplant operations, figures for these pollutants are undisclosed because their atmospheric emissions are not analyzed.
Water Management	(1) Total water withdrawn (2) Total water consumed Percentage of each in regions with High or Extremely High Baseline Water Stress	Quantitative	1000m^3·%	IF-EU-140a.1	(1) 10,580,000 m^3, 0% (2) 330,000 m^3, 0%
	Number of incidents of noncompliance associated with water quantity and/or quality permits, standards, and regulations	Quantitative	Number	IF-EU-140a.2	0
	Water management risks and strategies and measures to mitigate such risks	Discussion and Analysis	—	IF-EU-140a.3	In use of river water and other water sources, we strive to manage water resources in various ways, including compliance with water intake volumes permitted under laws and regulations. Measures to confirm water stress in the Tohoku and Niigata region using the WRI Aqueduct Water Risk Atlas tool to identify water risks resulted in a "low-medium" assessment at maximum. As such, the expected frequency of water-related risks, including drought, is low.
Coal Ash Management	Amount of coal combustion residuals (CCR) generated, percentage recycled	Quantitative	t·%	IF-EU-150a.1	894,000 t, 84.8%
	Total number of coal combustion residual (CCR) impoundments broken down by (EPA) hazard potential classification and structural integrity assessment	Quantitative	Number	IF-EU-150a.2	Five sites

Disclosure topic	Accounting metrics	Category	Unit	Code	Performance
Social capital					
Energy Affordability	Average retail electric rate (per kWh) for: (1) residential (2) commercial (3) industrial customers	Quantitative	Yen	IF-EU-240a.1	(1) Residential: 25.81 yen (2) Commercial: 27.33 yen (3) Industrial: 25.42 yen
	Typical monthly electric bill for residential customers for (1) 500 kWh (2) 1,000 kWh of electricity delivered per month	Quantitative	Yen	IF-EU-240a.2	(1) 500 kWh: 12,865 yen (2) 1,000 kWh: 26,720 yen
	Number of residential customer electric disconnections for nonpayment Percentage reconnected within 30 days	Quantitative	Number, Percentage (%)	IF-EU-240a.3	(1) Number of residential customer electric disconnections for nonpayment a. Disconnections under specific retail supply agreements: FY2022: 156,580 b. Cancellations of demand and supply contracts based on low voltage electricity standard agreements: FY2022: 11,162 (2) Percentage reconnected within 30 days N/A
	Discussion of the impact of external factors on affordability of electricity, including economic conditions within the territory served	Discussion and Analysis	—	IF-EU-240a.4	Japan's Electricity Business Act stipulates the following: "A General Electricity Utility shall not refuse to provide power transmission in its service area without due cause." In general, if an application is submitted for the supply of electricity in the Tohoku Electric Power Network service area, electricity is supplied to the subject location. We believe consumers should have equal opportunity to access affordable energy services. It is our understanding our service area lacks any areas not served by electricity. Factors affecting electricity rates include levies assessed by government policy to encourage use of renewables and amounts of fuel-cost adjustments on thermal power.
Human capital					
Employee Occupational Safety and Health	(1) Total recordable incident rate (TRIR: incidents/200,000 hours worked) (2) Fatality rate (incidents) (3) Near-miss frequency rate (NMFR: incidents/200,000 hours worked)	Quantitative	%	IF-EU-320a.1	(1) 0.06% (employees of Tohoku Electric Power and Tohoku Electric Power Network) (2) 0 (employees of Tohoku Electric Power and Tohoku Electric Power Network) (3) Not disclosed (not disclosed because we have no calculation made on a groupwide basis)
Business-model innovation					
End-Use Efficiency and Demand	Percentage of electric utility revenues from rate structures that (1) are decoupled and (2) contain a lost revenue adjustment mechanism (LRAM)	Quantitative	%	IF-EU-420a.1	Not applicable (since there are no subject customers in Japan) * To make up for lost revenue from progress in energy conservation, we aim to increase revenues through means such as provision of various services to meet customer needs.
	Percentage of electric load served by smart grid technology	Quantitative	%	IF-EU-420a.2	Penetration of smart meters at end of FY2022: 90.6%
	Customer electricity savings from efficiency measures in each market	Quantitative	MWh	IF-EU-420a.3	We propose solutions to the various challenges facing our customers, centered on energy. Specific examples include joint development with the manufacturer of Heat Edge air chillers, which offer improved capacity during times of harsh cold and improved energy conservation performance; provision of exEMS services with demand control functions that visualize electricity usage; and home solar power services supplied through one-stop services from adoption through maintenance, with no need for initial investment. Other activities include the development of equipment and services intended to help conserve energy and reduce CO_2 emissions. We have also launched an Energy Conservation Challenge Campaign intended to lower customer utility costs and improve electricity supply and demand. Numerous customers are current participants. We disclose the following quantitative data in place of customer electricity savings: ○ Number of energy solutions proposed (FY2022): 749 ○ Number of views of the Shou-ene Life service providing information on energy conservation (FY2022): 335,849 viewers • https://www.tohoku-epco.co.jp/dprivate/sl-denka/saving/ • https://www.tohoku-epco.co.jp/energy_saving_cp/2022winter/power_saving/ ○ Number of entries to the Energy Conservation Challenge Campaign (FY2022): 615,000 for low-voltage, 35,000 for high-voltage/special high-voltage

Disclosure topic	Accounting metrics	Category	Unit	Code	Performance
Leadership, governance					
Nuclear Safety and Emergency Management	Total number of nuclear power units, broken down by US Nuclear Regulatory Commission (NRC) Action Matrix Column	Quantitative	Number	IF-EU-540a.1	4 units (breakdown: 3 units at the Onagawa Nuclear Power Station*, 1 unit at the Higashidori Nuclear Power Station) * Unit No. 1 at the Onagawa Nuclear Power Station is in the process of decommissioning and is currently not operational.
	Description of efforts to manage nuclear safety and emergency preparedness	Discussion and Analysis	—	IF-EU-540a.2	Quality policies for nuclear safety (excerpt) We have a duty to enhance nuclear safety and reduce risks based on the keen safety awareness inherited from our predecessors and the many lessons gained from the Great East Japan Earthquake and other disasters. For this objective, each employee has resolved to gain the understanding and trust of society by demonstrating a strong sense of responsibility, contributing to the safety culture, and continually conducting PDCA activities, based on the formulated policies set forth below. 1. Put safety first at all times. 2. Comply with laws, regulations, and rules. 3. Establish a habit of constant review. 4. Enhance information sharing. 5. Take a proactive approach to improvements. See the following link for more on our quality policies for nuclear safety: https://www.tohoku-epco.co.jp/electr/genshi/safety/quality/index.html
Grid Resiliency	Number of incidents of noncompliance with physical and/or cybersecurity standards or regulations	Quantitative	Number	IF-EU-550a.1	Physical risk incidents: 0 Cybersecurity incidents: not disclosed (in light of risks posed by such disclosure)
	(1) System Average Interruption Duration Index (SAIDI) including major event days (2) System Average Interruption Frequency Index (SAIFI) including major event days (3) Customer Average Interruption Duration Index (CAIDI) including major event days	Quantitative	Minutes, Number	IF-EU-550a.2	(1) 127 minutes (including interruptions for work purposes) (2) 0.13 times (including interruptions for work purposes) (3) 206 minutes (including interruptions for work purposes)

Activity Metrics	Category	Unit	Code	Performance
Number of: (1) residential, (2) commercial, and (3) industrial customers served	Quantitative	Number	IF-EU-000.A	Left undisclosed (for reasons involving competition under deregulation of the electricity business)
Total electricity delivered to: (1) residential customers, (2) commercial customers, (3) industrial customers, (4) all other retail customers, and (5) wholesale customers	Quantitative	MWh	IF-EU-000.B	Retail: Lighting: 19,959,000 MWh Power: 45,982,000 MWh Wholesale: 15,885,000 MWh
Length of transmission and distribution lines	Quantitative	km	IF-EU-000.C	Transmission lines (circuit length) Aerial: 24,426 km Underground: 820 km Distribution lines (route length) Aerial: 145,665 km Underground: 3,852 km
Total electricity generated, percentage by major energy source, percentage in regulated markets	Quantitative	MWh, %	IF-EU-000.D	Total electricity generated: 57,933,659 MWh (volume at transmission destination) Incudes: 13.8% from hydroelectric power 85.2% from thermal power None from nuclear power 1.0% from renewables Percentage in regulated markets: Not applicable (because Japan lacks regulated markets)
Total wholesale electricity purchased	Quantitative	MWh	IF-EU-000.E	Left undisclosed for reasons involving competition

Corporate Information

Business Overview

Company Name

Tohoku Electric Power Co., Inc.

Head Office

1-7-1 Honcho, Aoba-ku, Sendai, Miyagi
980-8550, Japan

Date established

May 1, 1951

Capital

251.4 billion yen

Total Assets (as of the end of March 2022)

4,381 billion yen (consolidated: 5,211.9 billion yen)

Operating revenue (for FY2022)

2,301.5 billion yen (consolidated: 3,007.2 billion yen)

* Due to rounding, the sum of individual figures may not equal the total.

Ordinary income (for FY2022)

-220.8 billion yen (consolidated: -199.2 billion yen)

Representatives (as of the end of March 2023)

Jiro Masuko, Representative Director & Chairman of the Board
Kojiro Higuchi, Representative Director & President

Number of Shareholders (as of the end of March 2023)

185,988

Service Areas

Aomori Prefecture, Iwate Prefecture, Akita Prefecture, Miyagi Prefecture, Yamagata Prefecture, Fukushima Prefecture, Niigata Prefecture and other areas

Number of Employees (as of the end of March 2023)

4,901 (consolidated: 24,528)

Electricity Sales (for FY2022)

Lighting: 19,959 GWh
Power: 45,982 GWh
Retail total: 65,940 GWh
Wholesale: 15,885 GWh
Total: 81,825 GWh

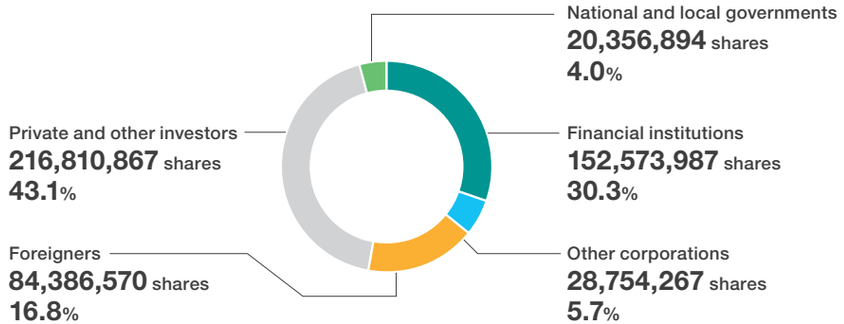
Total Number of Shares (as of the end of March 2023)

Total Number of Issuable Shares	1,000,000,000 shares
Total Number of Issued Shares	502,882,585 shares

Major Shareholders (as of the end of March 2023)

Name	Number of shares owned (thousand)	Ratio of shares owned to the total number of issued shares (%)
The Master Trust Bank of Japan, Ltd. (trust account)	70,157	14.01
Custody Bank of Japan, Ltd. (trust account)	28,109	5.61
Tohoku Electric Power Employee Shareholding Association	17,824	3.56
Nippon Life Insurance Company	13,727	2.74
Mizuho Bank, Ltd.	10,238	2.04
The 77 Bank, Ltd.	6,468	1.29
JP MORGAN CHASE BANK 385781	6,233	1.24
STATE STREET BANK WEST CLIENT - TREATY 505234	5,356	1.07
City of Sendai	5,196	1.04
SSBTC CLIENT OMNIBUS ACCOUNT	5,066	1.01
Total	168,374	33.61

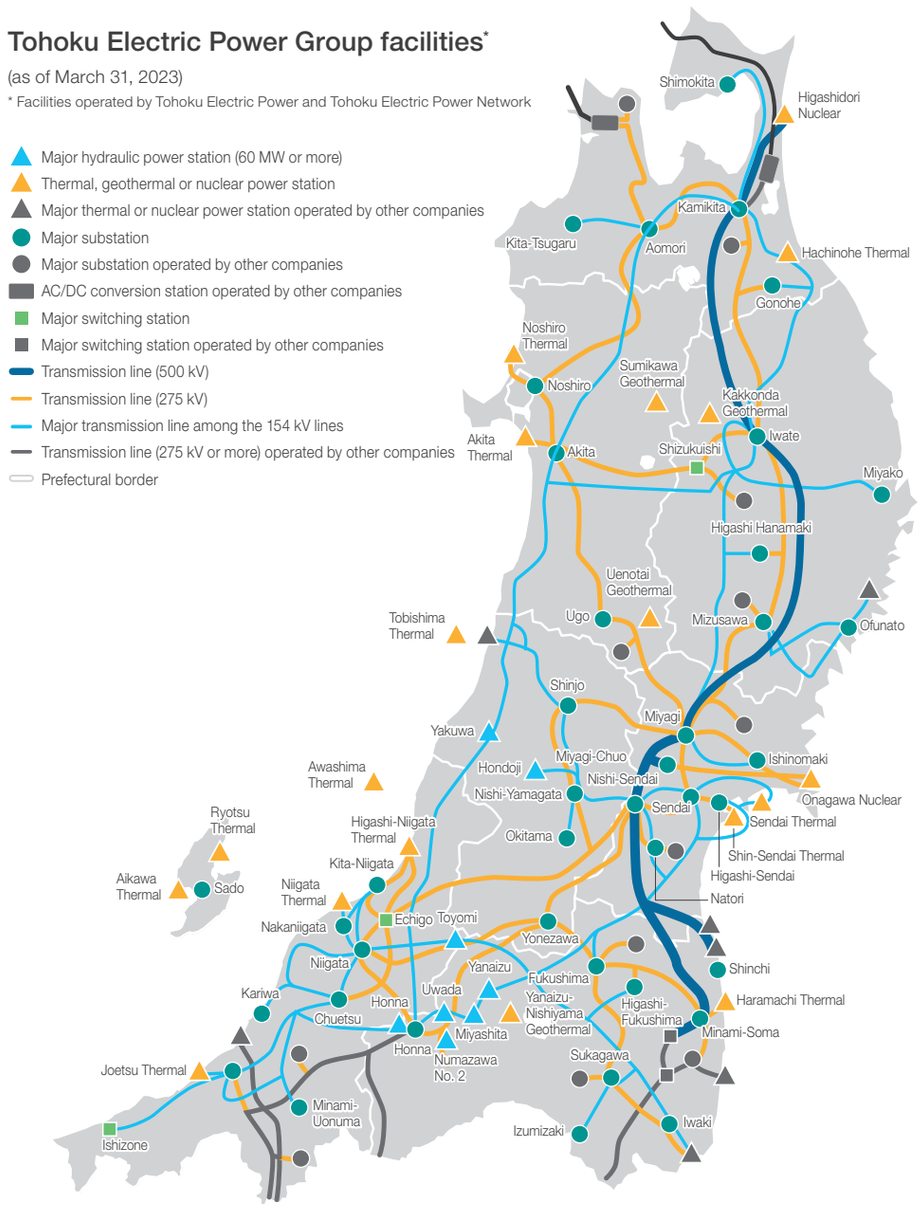
Distribution of Shares by Type of Shareholders (as of the end of March 2023)



Tohoku Electric Power Group facilities*

(as of March 31, 2023)

* Facilities operated by Tohoku Electric Power and Tohoku Electric Power Network



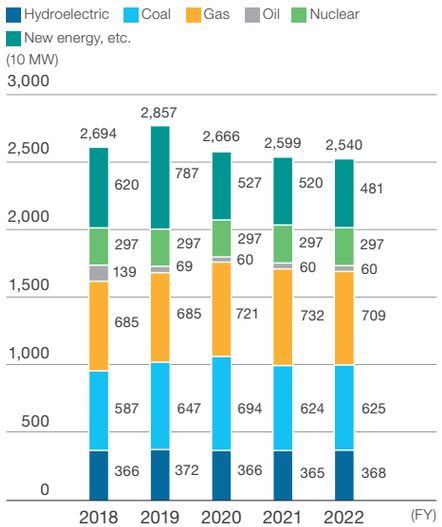
Facility Overview

		Tohoku Electric Power Co., Inc.		Tohoku Electric Power Group (major facilities)	
Power Stations	Hydraulic	203	2,450 MW	226	2,570 MW
	Thermal	9	11,170 MW	14	11,940 MW
	Geothermal	4	139 MW	5	162 MW
	Solar	4	4.8 MW	13	17 MW
	Wind	—	—	1	14 MW
	Nuclear	2	2,750 MW	2	2,750 MW
	Total	**222**	**16,510 MW**	—	—

		Tohoku Electric Power Network
Transmission Facilities	Route distance	15,506 km
	Circuit length	25,246 km
	Supports	58,604
Substation Facilities	Number of facilities	636

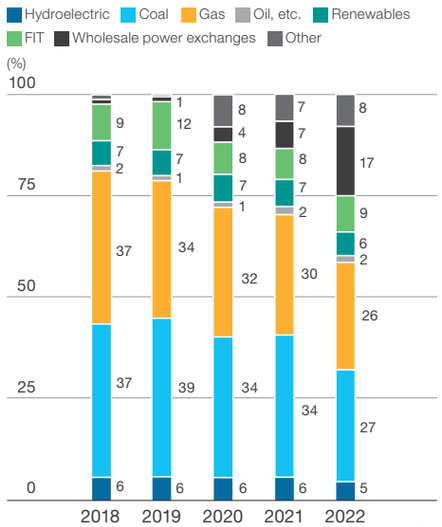
		Tohoku Electric Power Network
Power Distribution Facilities	Route distance	149,517 km
	Extended wire distance	592,950 km
	Supports	3,168,564

Annual power generation capacity*



* Totals for individual figures and total figures may not agree due to rounding. New energy, etc. refers to facility capacity on existing networks, including wind power, solar power biomass power, waste power, and geothermal power. The power transmission business is excluded from FY2020 due to a spin-off.

Annual shares of power sources*



* Includes transmission to and from other areas and power received from other companies. Totals may not add up to 100 due to rounding.

Organization chart

(as of April 1, 2023)

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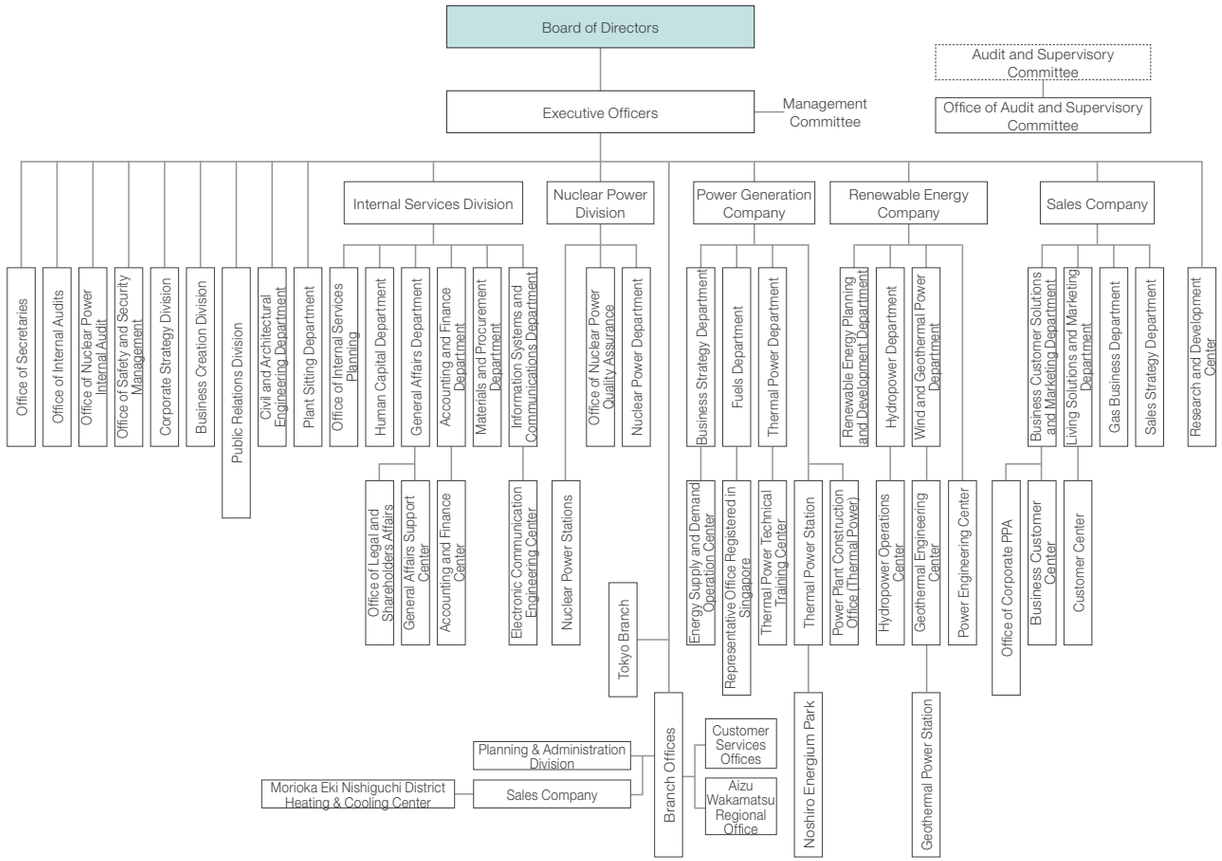
東北電力
Tohoku Electric Power Co., Inc.



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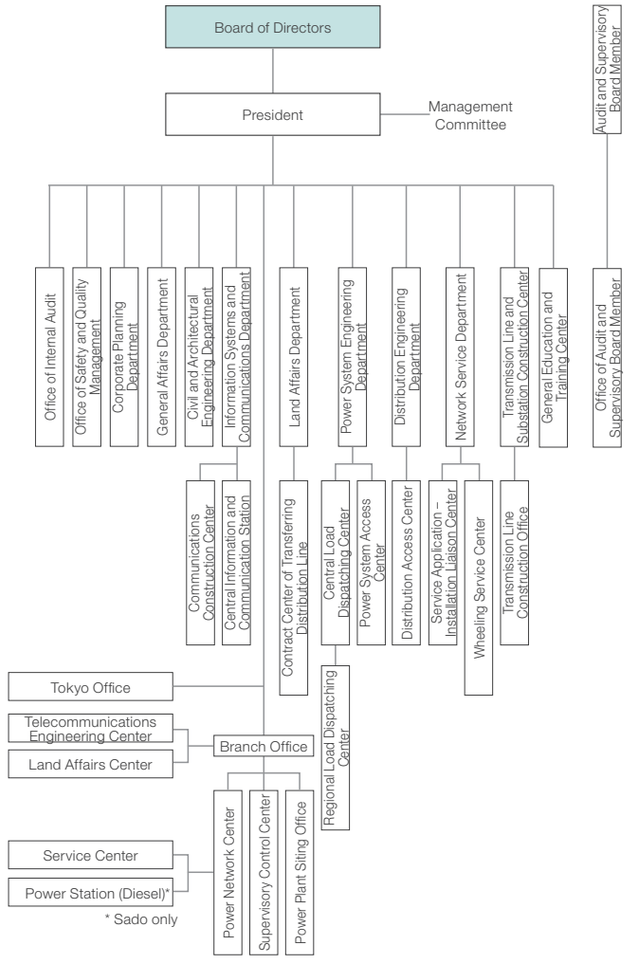
東北電力ネットワーク
Tohoku Electric Power Network Co., Inc.



Members of the Tohoku Electric Power Group

(As of July 1, 2023)

Seeking to realize the ideal form for the 2030s, the 77 companies that make up the Tohoku Electric Power Group will work as a united team to demonstrate their collective strengths.

A group of companies growing in step with sustained societal progress by helping to establish a smart society for a new age, starting in Tohoku

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東北電力グループ

Tohoku Electric Power Co., Inc. | **Tohoku Electric Power Network Co., Inc.**

Power generation

- Joban Joint Power Co., Ltd.
- Tohoku Sustainable & Renewable Energy Co., Inc.
- Arakawa Hydro-Electric Power Co., Ltd.
- Sakata Kyodo Power Company Ltd.
- Soma Kyodo Power Company, Ltd.
- Aqua Power Tohoku Co., Ltd.
- Yur Solar (Tomiya/Hobara/Zao) Co., Ltd.
- Fukushima Electric Power Corporation
- Chokai Minami Biomass Power Co., Ltd.
- 15 other companies

Overseas businesses

- Tohoku Power Investment Company B.V.
- Kyushu Tohoku Enrichment Investing SAS
- Yurtec Vietnam Co., Ltd.
- Merit Power Holdings
- Sigma Engineering JSC

Investment and trading

- Tohoku EPCO Energy Trading Co., Inc.
- TDRI G.K.

Information and telecommunications

- Toinx Co., Ltd.
- TOHKnet Co., Inc.

Gas and energy solutions

- Nihonkai LNG Co., Ltd.
- Tohoku Natural Gas Co., Inc.
- Tohoku Energy Service Co., Inc.
- Tohoku EPCO Solar e Charge Co., Inc.

Construction and maintenance of facilities related to the electric power business

- Yurtec Corporation
- Tohoku Electric Power Engineering & Construction Co., Inc.
- Tohoku development consultant CO., LTD
- Higashi Nihon Techno Survey Corporation
- YUTOS Corporation
- YURTEC SERVICE Corporation
- TECS FUKUSHIMA Corporation
- YURTEC MIYAGI SERVICE Corporation
- YURTEC HAIDEN TECHNO Corporation
- YURTEC KANTO SERVICE Corporation
- Air Conditioning Enterprise Co., Ltd
- Tohatsu Hydro Engineering Co., Inc.
- Tohoku Port Service Co., Inc.
- Tohoku Air Service, Inc.
- Tohoku Electric Power Renewable Energy Services Co., Inc.
- Tohoku Power Transmission and Distribution Service Co., Inc.
- 1 other company

Manufacture of equipment related to the electric power business

- Kitanihon Electric Cable Co., Ltd.
- Tsuken Electric Ind Co., Ltd.
- Tohoku Electric Manufacturing Co., Ltd.
- Tohoku Electric Meter Industry Co., Inc.
- Kitanihon Densen Service Co., Ltd.

Environmental preservation and recycling

- Tohoku Ryokka Kankyohozen Co., Ltd.
- GREENRECYCLE Corporation
- Noshiro Yoshino Gypsum Co., Ltd.

Retail electricity

- Tokyu Power Supply Co., Ltd.
- Tohoku EPCO Frontier Co., Ltd.

Life and business support

- HNK Co., Inc.
- Aquaclara Tohoku Corporation
- Eltas Tohoku Inc.
- TDG Business Support Corporation
- Tohoku-Electric Power Friendly Partners Co., Inc.
- E life Partners Co., Ltd.
- Tohcs Corporation
- New Lease Corporation
- Tohoku Electric Power Transcosmos Management Partner Co., Inc.

Tohoku Electric Power Group

Corporate Strategy Division
Tohoku Electric Power Co., Inc.

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