

To achieve a smart society, starting in Tohoku

### Tohoku Electric Power Group **Future Management Development** to Achieve Its Mid- to Long-term Vision

April 30, 2024



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To achieve its goal of "becoming a corporate group that contributes to the development of a smart society, originating from the Tohoku region but growing in step with the sustainable development of society" as shown in its medium- to long-term plan "Working alongside next" established in 2020, the Tohoku Electric Power Group has made concerted group-wide efforts to conduct structural reforms in the power supply business and achieve profitability in the Smart Society Building Business.

The Group posted recurring losses for the second year in a row, and its financial base was severely impacted due to two earthquakes off the coast of Fukushima as well as the Ukraine crisis. Although the revenues and expenditures improved in FY2023, its consolidated equity ratio remains at 15.4%. We need to transform our business and strengthen our financial base in order to stably supply power to local residents and continue to provide added value.

Accordingly, as the Group approaches the second half of the "Working alongside next" period, it newly formulated its future management development plan as "Working alongside next +PLUS."

The Tohoku Electric Power Group will continue to contribute to the realization of a smart society in which everyone in the region can experience a comfortable, safe and secure lifestyle through business development centered on electricity and energy.





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New Financial Goals

Idea of Cash Allocation

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### 1. Summary of "Future Management Development (Working alongside next +PLUS)"



- The two business domains will be reviewed in light of the ongoing convergence of the electricity supply business and the smart society realisation business, among other factors, and five areas will be set up and operated with a focus on electricity and energy.
- In addition, we will work to quickly recover our damaged financial base and form a 'virtuous circle of profit, investment and growth'.
- Furthermore, we will promote sustainability management and strengthen our management base in order to develop our business sustainably.
- Through these initiatives, the Group will contribute to the realisation of a smart society and achieve growth together with local communities and customers.



## 2. Business Environment and Review of the Past

**Business development** 

Financial base

Review of the past (2020-) and future outlook

## **Tohoku Electric Power Group**

#### **Future initiatives** and issues

### **External Environment**

The Group needs to address an "increase of volatility in the power supply business" and "indiscriminate internal and external progress" in addition to the 4 Ds, which were assumed when creating the medium- to long-term vision.

#### 4 Ds established when creating the vision



Internal Environment				
Power	<ul> <li>Steadily promoting initiatives for structural</li></ul>			
supply	reforms as the <u>core of the Group's</u>			
business	<u>businesses</u>			
Smart	<ul> <li>Paving the way for commercialization of</li></ul>			
society	electricity and energy-related fields through			
building	PPAs, etc. <li>Promoting fusion with the power supply</li>			
business	business			

Internal Environment

- The financial base was severely damaged due to natural disasters, the Ukraine crisis, etc., causing the Group's risk resilience to decrease.
- The Group's total assets and interest-bearing debts increased significantly.
- The level of the Group's profit has been recovering recently while its income and expenses are likely to fluctuate considerably in the future due to an increase of volatility in the power supply business.
- · Creating a sustainability policy and identifying materialities, thereby promoting sustainability management
- <u>Management base</u> · Necessity of strengthening human capital required to pass on skills related to sustainable business development and further growth

#### **Business issues**

- **O** Maintaining and improving electricity competitiveness
- O Continuing business reform and creating added value

### **Financial issues**

- **©** Recovering financial base at an early stage (strengthening risk resilience)
- O Investing in growth and securing cash

#### Management base issues

**O** Strengthening management base to sustainably develop business

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**Tohoku Electric Power Group** 

## 3. Goals of Tohoku Electric Power Group

- The smart society that the Tohoku Electric Power Group is aiming for (as stated in the medium- to long-term plan) refers to a society in which people in the local community can experience comfortable, safe, and reliable lifestyles.
- The mission that the Tohoku Electric Power Group, as electricity professionals, should fulfill in Tohoku and Niigata, where social issues have become increasingly apparent, is to supply power and provide added value with electricity as a starting point through the development of its electricity-related and other businesses, thereby contributing to the development of a smart society.
- The Tohoku Electric Power Group will continuously wave the banner of its future goal of becoming "a corporate group that contributes to the development of a smart society, originating from the Tohoku region but growing in step with the sustainable development of society," as stated in its "Working alongside next" plan. The Group will bond with local communities, develop trust, and discuss expectations with local communities, customers, thus fulfilling its mission of supporting society and growing together with local communities and customers.

Society (local communities and customers)	Trust and expectations from local communities and customers Growing together with local communities and customers	Tohoku Electric Power Group	
A society in which people in local communities can experience comfortable, safe, and reliable		Management philosophyProsper with Local CommunitiesSloganYori, Sou, Chikara	
lifestyles (= Smart society)	Deepening the	Goals for the 2030s, as stated in the medium- to long-term vision	
<u>Resolution of social issues</u> at Tohoku and Niigata	bond As electricity professionals	A corporate group that contributes to the development of a smart society, originating from the Tohoku region but growing in step with the sustainable development of society	
Decrease in population Decarbonization Decentralization Digitalization	Supplying power + Providing added value (e.g., services that utilize distributed power sources and DX), with electricity as a starting point	It will continue to create value in cooperation with local communities and customers by fulfilling its mission of supporting society and a member of the local community through the development of electricity, energy, and other businesses.	
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## 4. Future Management Development Policy



The Tohoku Electric Power Group will establish three policies for future management development, namely <u>"business</u> <u>development," "financial base," and "management base"</u> policies, and <u>promote its business by linking various</u> <u>initiatives to their respective policies</u>.

#### **Business development**

# Business development centered on electricity and energy, adapting to changes in the electricity business framework

The Group <u>will develop our business around electricity and energy through selection and concentration.</u> It will redefine the <u>changing electricity business more broadly</u> and work to capture demand across <u>renewable energy, distributed power</u> <u>sources, and related services</u> in addition to demand in the existing electricity business, thereby <u>contributing to the</u> <u>development of a smart society</u>.

#### Having respective businesses reform themselves and pursue profits and growth autonomously

The Group will <u>clarify the roles and expectations of respective businesses</u> and <u>encourage them to undergo reform and</u> <u>pursue profits and growth autonomously</u>. It will also take on the challenge of strengthening and expanding existing businesses and expanding into new business areas through innovation, etc.

#### **Financial base**

#### Recovering the current financial base at an early stage

The Group will work to recover its financial base at an early stage in order to increase its risk resilience, thus ensuring continuous, stable supply even in the event of natural disaster or high volatility.

#### Forming a virtuous cycle of profits, investment, and growth

By strategically responding to CN, DX, etc., we will create further added value and form a virtuous cycle of profit, investment, and growth.

#### Management base

#### Strengthening the Management base that supports sustainable business development The Group <u>will strengthen its management base for sustainably developing businesses</u>. Specifically, it <u>will work</u> to solve problems associated with <u>materialities</u>, especially <u>ESG</u> issues, <u>from a medium- to long-term perspective</u> and create value and trust together with its stakeholders.

## 4.(1) New Business Domains



In view of the fact that the boundary between the electricity supply business and the smart society realisation business is disappearing, among other things, five areas and 11 business segments have been set up, with electricity and energy at the centre, and each business will contribute to the realisation of a smart society by pursuing profit and growth in an autonomous manner.

Additionally, the Group views CN and DX as growth opportunities and will work to strengthen and expand businesses through initiatives to encourage innovation and new domains and expand into new business domains.



Aiming to achieve a smart society through the development of electricity, energy, and other businesses



The introduction of highly efficient thermal

power sources has curbed the use of fossil fuels and strengthened competitiveness.

#### **Power Generation/Wholesale**

Providing electricity that achieves both decarbonization and economic efficiency

Thermal power generation business

- · Acting strategically on a carbonneutral basis with a long-term perspective while strengthening competitiveness
- Exercising adjustment capability in association with the expansion of renewable energy introduction
- Optimizing the fuel procurement, power generation, and wholesale value chains



#### Nuclear power generation business

- Promoting the restart of this business while prioritizing safety and gaining the understanding of local communities
- Maintaining and increasing the use rate of the facilities as base load power sources and reducing costs

### **Major** initiatives

- Optimizing our power source portfolio and promoting decarbonization with a view to thoroughly strengthening competitiveness and achieving carbon neutrality
- Accelerating feasibility studies and demonstration tests for thermal power decarbonization
- Suspending, decommissioning, and replacing thermal power facilities, with a focus on economic efficiency
- Creating and developing new added values through digital innovation

# Joetsu Thermal Power Station Unit 1

#### Further promoting supply-demand optimization and increasing profitability throughout the fuel procurement, power generation, and wholesale value chains

<Fuel>

Developing and strengthening policies that contribute to increases in economic efficiency, flexibility, and stability of fuel procurement. Establishing, and strengthening the function of the fuel procurement framework, with a view to addressing supply disruption risks and taking steps towards carbon neutrality

<Power generation>

Increasing the sophistication of the operation of thermal power sources in order to exercise their adjustment capability and further reducing costs of existing power sources

Ensuring negotiation opportunities that do not discriminate between internal and external <Wholesale> contractors (e.g., through wholesale bidding) and the maximization of sales profits

Pursuing optimization and business opportunities in a way that takes into account futures market <Trading> expansion

Tohoku EPCO Energy Trading Co., Ltd

Promoting the restart of the nuclear power generation business while prioritizing safety and gaining the understanding of local communities, maintaining and increasing the facility use rate, and reducing costs

- Restarting Onagawa Unit 2 at an early stage, operating it safely and stably, and maintaining and increasing the facility use rate through measures such as shortening the regular inspection period
- Proceeding steadily with compliance examinations and preparations with a view to restarting the operation of Higashidori Unit 1 and Onagawa Unit 3 at an early stage and steadily proceeding with work to decommission Onagawa Unit 1
- Reducing operation and maintenance costs through the strengthening of integrated operations with affiliated companies, optimization of the facility inspection cycle and contents, and other measures Tohoku Electric Power Engineering & Construction Co., Inc.



**Onagawa Nuclear Power Station** 

Noshiro Port Offshore Wind Farm

(Source: Akita Offshore Wind Corporation)

### **Green Business**

Delivering new value of electricity to customers through maximum use of renewable energy

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Renewable energy power generation business

- Promoting new power resource development with an eye on profitability
- Improving the performance of existing power generation facilities
- Expanding business domains throughout the value chain

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Next generation energy service business

 Providing services that make the most of distributed energy resources

# Green energy service business

 Proposing combinations of a variety of solutions that utilize renewable energy



"We aim to develop over 2 million kW\* of renewable energy in the early 2030s. By providing a wide range of services that meet diversified needs for renewable energy, we will help achieve a carbon neutral society throughout the value chain."

\* Including output by large-scale renewable energy power sources to be newly developed as well as output increases as a result of updating existing power sources and internally developing new sources through corporate PPAs

### **Major initiatives**

- Accelerating initiatives for new development and existing facility maintenance and updates and expanding business opportunities throughout the value chain
- Promoting development of new power sources that take coexistence with local communities into consideration through strengthening of internal development, expansion of development areas, etc.
- Maintaining or increasing power output in kWh through thorough repair of aging hydropower/geothermal power generation facilities and other measures
- Promoting the wind power maintenance business and considering the commercialization of solar panel reuse and recycling



## Expanding VPP and renewable energy aggregation service businesses

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RENES

- Aggregating distributed energy resources (private generators, storage batteries, EVs, etc.) and returning a portion of profits earned from market transactions to customers (VPP)
- Providing services such as power generation forecast and supply and demand adjustment services to renewable energy power generation agencies (renewable energy aggregation service)

## Expanding the proposal of solutions that meet diversified needs, taking renewable energy as a starting point

 Proposing optimized services by combining corporate PPAs that sell renewable energy electricity and a variety of green energy solutions such as supply and demand operation agencies



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Expanding solar and storage battery services to households



### **Energy/Solution Service**

Providing comfortable, safe, and reliable services and maximizing value to the customer



Electricity retail business

• Selling electricity with rate plans tailored to customer needs

\*Including gas sales

Solution service business

Lifestyle service

• Proposing services that achieve comfortable, safe, and reliable lifestyles

illuminate today, create tomorrow

Energy solution

 Proposing solutions that support the resolution of energy and electrification system issues  Solution
 Proposing solutions that support the resolution of customers' operational issues

**Business** 

### **Major initiatives**

Strengthening proposals of rate plans and lifestyle services that achieve comfortable, safe, and reliable lifestyles

- Strengthening proposals combining flexible rate plans, which leads to lifestyle support, and a variety of other services under the catchphrase "Illuminate up today; create tomorrow."
- Establishing a value chain through product and service development based on customer needs, problems, etc. that originate mainly from house lifecycle issues, as well as taking measures such as expanding areas for provision, thereby strengthening proposals
- Strengthening proposals of smart life electrification, where safe, comfortable and eco-friendly electricity is consumed wisely, through the provision of group company products, including Tohoku Electric Power e-life leases and Aozora Charge Service





## Strengthening proposals of solution services that support customers' sustainable business operations

- Developing and proposing services that accurately capture business needs for energy management, resilience improvement, etc.
- Providing natural gas, which is a transition fuel with an eye towards carbon neutrality, as a solution to support the resolution of energy issues



#### Energy solutions by industry



Outsourcing utility equipment

E's support+



lizes energy servation and savings by ing energy use	Biz S
le.	



customers' business issues that are not limited to the energy field

Improving electricity retail profitability with a sales approach that incorporates changes in the business environment

- Accurately capturing market trends and demand trends and achieving optimized power source procurement that incorporates over-the-counter trading, market trading, etc.
- Strengthening the promotion of the electrification and sales system and promoting sales activities in light of carbon neutrality and DX trends

### 4.(1) Direction of Respective Businesses ④ (Power Transmission/Distribution)



### **Power Transmission/Distribution**

Supporting safe, reliable, and comfortable lifestyles in local communities through the stable supply of power



Power transmission/ distribution business

- Ensuring stable power supply while promoting efficiency and sophisticated services, with safety as a top priority
- Contributing to carbon neutrality • through power transmission/distribution, with a view to achieving a sustainable society
- Creating electricity demand through • the promotion of efficiency, the creation of new businesses, and a regional liaison function

Outlook for revenue based on wheeling charge system



### **Major initiatives**

Ensuring stable supply through appropriate configuration and operation of transmission and distribution network

- Renovation and repairs based on asset management (risk amount); efficient facility maintenance and configuration
- Systematic implementation of construction based on facilities expansion and maintenance plans
- Maintaining and strengthening disaster countermeasure capabilities on both the hardware and software sides

#### Building a next-generation network with a view to expanding the introduction of renewable energy

- Reliable handling of development of large-scale trunk lines
- Effective use of existing grid through the Japanese connect & manage system, etc.; improving the accuracy of renewable energy generation forecasts

#### Promoting streamlining, and expanding into new businesses and expanding electricity demand from a medium- to long-term perspective

- Improvements in Promoting streamlining and kaizen activities through the utilization of IoT, AI, drones, robots, and DX
- Capturing profit opportunities by leveraging proprietary assets and expertise
- Supporting invitation of companies to expand demand in area





Tohoku Electric Power Network Co., Inc.

Quantitative targets in business plans based on the wheeling charge system

Stable supply Annual power failures for lowvoltage (lighting) customers: 155MWh or less

renewable energy

service level

Expansion of

- Number of overdue responses on connection: zero
- Number of overdue responses to connection applications: zero
- Number of overdue responses to prior consideration of connection on the supply side: zero
- Mistaken notification of final power used: zero
- Mistaken charge calculation: zero
- Delayed notification of/billing for final power used: zero

#### **Related Domains**

Providing a wide range of services utilizing know-how and assets accumulated in the energy business



Comprehensive facility engineering business

 Further developing the Tohoku and Niigata engineering business, which is our base business, and also scaling it out to the Kanto region and overseas

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#### Real estate business

 Effectively utilizing the Group's assets and aiming to develop the business mainly in the Sendai city area

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# Telecommunication business

 Aiming to expand revenue with DX as the starting point, utilizing knowhow and assets accumulated in the telecommunication and information system businesses

#### Major initiatives

#### Comprehensive facility engineering business

- Increasing orders for telecommunication construction work combined with indoor wiring and air conditioning pipe work
- Further promoting sales activities for renewal work
- Strengthening business development in areas other than Tohoku and Niigata
- Proposing technologies for CO<sub>2</sub> reduction including introduction of ZEBs and renewable energy facilities
- Increasing orders and revenue from the overseas business including ODA projects originating from the Vietnam business

#### Real estate business

- Redeveloping the Group's symbolic Denryoku Building located in central Sendai
- Expanding revenue utilizing the Tohoku Electric Power Group's assets maintained in the Sendai city area, prefectural capitals, etc., and taking other measures

#### **Telecommunication business**

- Developing a solutions business where ICT plays a central role
- Using business matching website "Yori sou Tohoku Connect," which is run by TOHKnet, to solve local issues



Noi Bai international airport terminal 2 (Vietnam)





Redevelopment of Denryoku Building (images to show the scale of the building and lower floors of the building)





#### Power to connect TOHKnet

## 4.(2) New Financial Goals



- After steadily achieving the current financial target of "consolidated cash income of 320 billion yen or more in FY2024," we will focus on the early recovery of our financial base to cope with business risks, aiming for a consolidated equity ratio of around 20% by FY2026 and consolidated ordinary income of 190 billion yen to achieve this target. In addition, we will set a consolidated ROIC target of around 3.5% in order to efficiently utilize facilities and create corporate value that exceeds the cost of capital, even as assets increase in response to the stable supply of electricity and the need for CN.
- Even in an increasingly uncertain business environment, we aim to achieve consolidated ordinary income of 200 billion yen or more, a consolidated equity ratio of 25% or more, and consolidated ROIC of 3.5% or more in FY2030, so that we can form a "favorable cycle of profit, investment, and growth" and continue to provide a stable supply of electricity and further added value to the community and our customers.
  200.0 billion



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## 4.(2) Idea of Cash Allocation



- The Group will utilize earned profits to make strategic investments of around 300 billion yen by FY2030, aiming to restore its financial base as well as creating further added value, such as decarbonization of thermal power.
- In addition, considering the balance with the recovery of our financial base, we aim to pay a stable dividend as a guide to dividend on equity (DOE) ratio of 2% for the time being.



## 4.(3) Foundation that Supports Sustainable Management ①



- I The Group will promote sustainability management and <u>work on resolving materialities with a focus on ESG from a</u> <u>medium- to long-term perspective</u>, and create values together with stakeholders from present to future generations, thereby increasing trust.
- The Group will especially focus on long-term and strategic initiatives for carbon neutrality where the electricity business plays a significant role (CN strategy), innovation and operation reform utilizing DX (DX strategy), and strengthening of human capital, which is a source of growth (human resources strategy).



## 4.(3) Foundation that Supports Sustainable Management 2 - CN Strategy -

- In order to achieve carbon neutrality by 2050, the Tohoku Electric Power Group has been addressing: <u>1. Maximum utilization of renewable energy and nuclear energy</u>, <u>2. Thermal power decarbonization</u>, and <u>3. Achievement of electrification and a smart society</u>.
- Concurrently with the decarbonization of electricity, the Tohoku Electric Power Group aims to achieve decarbonization of business activities and society in general by expanding areas of electrification utilizing decarbonized electricity and areas of energy use by hydrogen.



### 4.(3) Foundation that Supports Sustainable Management ③ - CN Strategy -

In order to achieve carbon neutrality by 2050, the Group has an immediate goal of cutting CO<sub>2</sub> emissions in FY2030 to half the FY2013 level. The Group will reflect this goal in its initiatives while appropriately monitoring power supply and demand forecast and progress towards low carbonization/decarbonization.



The Group views DX as a powerful driver to support business transformation and will achieve business model and operational process reforms by promoting the utilization of digital technologies and the establishment of platforms throughout the Group.

#### **DX Promotion Policy**



### 4.(3) Foundation that Supports Sustainable Management (5) - Human resources strategy -

It is becoming more and more difficult to recruit people as the working population declines and work-related values diversify. Meanwhile, the mobility of human resources is also increasing. Under these circumstances, <u>strengthening human capital will become increasingly</u> <u>important in order to stably run the Group's business and achieve further growth</u>.

Accordingly, the Group will <u>improve the effectiveness of its human resources management cycles under the human resources</u> portfolio that interlink with business strategies and <u>strengthen its recruiting and nurturing activities</u>. Additionally, it will <u>improve the</u> growth potential of various organizations and individuals by improving engagement, thereby sustainably increasing its corporate value and generating profits.



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4.(3) Foundation that Supports Sustainable Management (6) - Safety, Intellectual Property, Compliance, etc. -



In order to strengthen its management base, the Group is determined to make continuous efforts to establish a corporate culture that places top priority on safety, strengthen its disaster response capability, perform strategic intellectual property activities, and ensure thorough compliance.

Promoting safety activities to eliminate deaths and serious accidents

- ✓ Ensuring that each employee acts in accordance with the Tohoku Electric Power Group Safety and Security Policy in order to establish a corporate culture that places top priority on safety
- Ensuring that all the parties involved in the work, including the Group and contract construction companies, work together to promote safety activities with a spirit of creativity and ingenuity



Conducting safety patrols

## Strengthening response capability in the case of a large-scale disaster

✓ Establishing a governance system that aims to strengthen response capabilities in the case of a large-scale disaster (including an earthquake or typhoon) in order to ensure stable power supply

Strengthening response capabilities in collaboration with related outside parties

Establishing a role-sharing framework in case of a complex disaster



Recovery training with the Ground Self-Defense Force assuming road impassability

#### Promoting strategic intellectual property activities

- Promoting intellectual property activities in accordance with the business domain strategy, based on the intellectual property analytics utilizing the IP landscape\*
- ✓ Strengthening support for prior-art search, etc., to promote effective studies and ensure that violation of third-party rights is avoided

#### Ensuring thorough compliance

- ✓ Ensuring that each and every employee will behave appropriately as a business operator delivering energy, both at work and in daily life
- ✓ Ensuring thorough compliance with related laws and ordinances in order to ensure fair and free competition and sound business development

\*Analyze intellectual property information and use the results for formulating business strategies and making corporate decisions

#### Risk management based on changes in the business environment

- ✓ Performing risk management activities through risk recognition, analysis and evaluation, and consideration and implementation of countermeasures
- ✓ Ensuring that relevant departments and the committee work together to respond to market risks and disasters depending upon the characteristics of the relevant risk





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