



## Japan Exchange Group Green Bond Framework

April 2022

### 1. Introduction

Japan Exchange Group, Inc. (JPX) was formed through the merger between Tokyo Stock Exchange Group and Osaka Securities Exchange in January 2013. With exchanges and the self-regulator as its subsidiaries, JPX establishes and operates financial instruments exchange markets to provide market users with reliable venues for trading listed securities and derivative instruments.

In addition to providing market infrastructure and market data, JPX also provides clearing and settlement services through a central counterparty and conducts trading oversight to maintain the integrity of the markets, and engaging in the establishment and operation of markets for commodity futures and more. In the course of working together as an exchange group to offer a comprehensive range of services, we continue to make every effort to ensure reliable markets and create greater convenience for all market users.

We have been contributing to driving sustainable growth in the Japanese economy for more than 140 years, since 1878 when Shibusawa Eiichi established Tokyo Stock Exchange and Godai Tomoatsu established Osaka Stock Exchange. JPX will aim for helping to achieve sustainable societal and economic development by evolving into a global, comprehensive finance and information platform which provides solutions for a wide range of societal issues, centered on the ability to raise and circulate capital by 2030.

In order to address rapid changes in the project environment and to advance initiatives intended to help improve corporate value, JPX has declared inadequate action on promoting sustainability as one of its significant risks and has been advancing the following initiatives as Green Strategy.

## Green Strategy Initiatives

- To support the shift to carbon neutrality in Japan, we will push forward with our environmental strategy both as a market operator and as a business corporation.

### Utilizing Market Mechanisms to Promote Sustainability

- Promotion of action on sustainability issues and information disclosure at listed companies, through the Corporate Governance Code
- Strengthening of sustainability-related information functions (launch of operation of information platform for publicly offered ESG bonds, enhancement of platform's functions)
- Calculation of ESG indices and listing of related ETFs/futures
- Vitalization of the energy market, advancement of an emissions trading market (contribution to building a carbon credit market)
- Research into issuance of a "digitally tracked green bond" utilizing digital securities
- Enhancement of the "JPX ESG Knowledge Hub" to support listed companies' ESG information disclosure

### Aiming for Carbon Neutrality across Group by FY2024

- Direct contribution to environmental conservation through owning our own renewable energy generation facilities - not just purchasing carbon credits
- Endorsement of METI's "GX League Basic Concept"

### Aiming for Carbon Neutrality in Securities Market Operations (Our Value Chain) by 2030

- Working towards securities market operations that underpin a sustainable society by utilizing and implementing JPX's own initiatives in cooperation with market participants

## 2. Action on Environmental Issues

Recognizing that resources are limited, JPX has created its Environmental Vision and Environmental Policy to aim for a sustainable economy where "economic development" and "environmental conservation" go hand in hand.

### Environmental Vision

Japan Exchange Group will maintain and further develop the capital market into one that can coexist with the environment, by creating a clear action plan on environmental issues and making ongoing efforts to reduce our environmental footprint.

### Environmental Policy

- 1. Contributing to a decarbonized economy**  
We will contribute to the decarbonization of the economy by eliminating 100% of our own GHG emissions.
- 2. Contributing to a circular economy**  
We will contribute to the development of a circular economy by reducing our resource consumption and waste output, as well as promoting green procurement.
- 3. Strong management of environmental policy**  
Recognizing action on the environment as an important management issue, we will continue to comply with all related laws, regulations and rules, and in addition, will enact dialogue with stakeholders and society through proactive disclosure of environmental information.
- 4. Encouraging environmental conservation initiatives**  
We will encourage environmental conservation initiatives across the whole of society through education to cultivate awareness of environmental issues.

## 2.1 Contributing to a Decarbonized and Circular Economy

As one of its actions on climate change, JPX will switch 100% of electricity consumed by the Group to renewable energy by FY2024 and is aiming for carbon neutrality across Group companies on the same timeline. In order to achieve this goal, JPX is studying the potential to invest in solar power generation facilities, to acquire biomass power generation facilities that rely on discarded cooking oil for fuel, thereby contributing to a decarbonized and circular economy by generating renewable energy using secondary resources (recycled material) for fuel.

In recognition that climate change will have an impact on the sustainable growth of the Group, JPX declared its support for the Task Force on Climate-related Financial Disclosures (TCFD) Recommendations in October 2018. Below are main possible risks and opportunities brought on by climate change based on the TCFD Recommendations.

Main Possible Risks and Opportunities Brought on by Climate Change

Risks	<ul style="list-style-type: none"> <li>• One trend that has been noted is the growing intensity of natural disasters, which present a risk to business continuity when social infrastructure is damaged in the event of wide-area disasters, for example.</li> <li>• There is a risk that the evaluation of JPX Group or the Japanese market as a whole by society could decline, if JPX's market operation or policies or Japanese companies' operational policies cause our or their responses to climate change to be judged inadequate.</li> <li>• In the event that policies and regulations regarding greenhouse gas emission reductions are made more stringent, leading to expectations for the introduction of carbon taxes or penalties incurred for failure to achieve emission reduction targets, further measures and capital expenditures may become necessary.</li> <li>• The energy market under Tokyo Commodity Exchange lists futures contracts on crude oil, refined petroleum products, and electricity. Future regulations on fossil fuels along with technological progress in renewable energy may lead to a decline in trading demand, and potentially cause a drop in liquidity or even delistings.</li> </ul>
Opportunities	<ul style="list-style-type: none"> <li>• TSE calculates and publishes indices that take into account climate change and other ESG factors, and lists ETFs and ETNs linked to these. In addition, TSE lists infrastructure funds that contribute to the spread of renewable energy, as well as green bonds related to businesses engaged in climate change issues. As greater focus is placed on these products in the future, JPX expects to see listings and trading of new products become more active.</li> <li>• As the operator of energy markets, Tokyo Commodity Exchange established and operates derivatives markets on crude oil, gasoline, and other petroleum products, as well as electricity futures markets, in accordance with industry needs. In the event of a shift in energy usage due to technological innovation intended to address climate change risks, however, Tokyo Commodity Exchange may have the opportunity to expand into new energy fields.</li> </ul>

In addition to efforts to reduce electricity usage at data centers through the implementation of appropriate system upgrades, JPX began calculating other CO<sub>2</sub> emissions in FY2020. In this respect, JPX will appropriately manage emissions throughout the value chain, while at the same time taking steps required to reduce greenhouse gas emissions.

## **2.2 JPX Participation in Initiatives**



JPX participates in initiatives at home and abroad which promote ESG investment and sustainable finance. Since December 2017, it has been a partner exchange to the Sustainable Stock Exchanges (SSE) Initiative, a platform for stock exchanges to explore how they can proactively work to build sustainable societies while collaborating with stakeholders such as investors and listed companies, and has been proactively taking part in the Initiative's work to promote sustainability.

## **2.3 Significance of Issuing Green Bonds**

Funds procured through this framework will be allocated to projects that create renewable energy through renewable energy generation facilities held by JPX. We are aiming to achieve carbon neutrality by fiscal year 2024 by introducing a clean and stable electricity procurement system.

## **2.4 Significance of Issuing Green Bonds by Utilizing Security Tokens**

Green bonds indicated in this framework will be issued as security tokens (tokenized security). Funds raised through this framework will be allocated to clean power generation. The volume of generated electricity and reduced CO<sub>2</sub> emissions at these renewable energy generation facilities will be measured, calculated, and daily disclosed, as well as recorded on a platform of security tokens, so as to improve transparency of disclosed information after fund allocation and ensure reliability of data such as the amount of power generated. A feature of security tokens is that they enable tracking of holdings by bond investors in real time. We will also take the advantage to help improve communication between investors and issuers.

### 3. Green Bond Framework



JPX will issue green bonds in accordance with the framework based on the Green Bond Principles 2021 established by the International Capital Markets Association (ICMA) and Green Bond Guidelines 2020 by the Japanese Ministry of the Environment, consisting of four elements as below.

1. Use of Proceeds
2. Process for Project Evaluation and Selection
3. Management of Proceeds
4. Reporting

#### 3.1 Use of Proceeds

Funds raised through the green bonds issued based on this framework will be allocated to eligible projects through a loan to JPX Market Innovation & Research, Inc. (JPXI).

##### Eligible project

Eligible project category	Category under ICMA GBP	Outline of criteria for eligible projects	SDGs
New construction of renewable energy generation facilities	Renewable energy	<p>Cost for construction of renewable energy generation facilities for in-house power generation</p> <p><u>Planned projects</u></p> <ul style="list-style-type: none"> <li>- Cost for constructing a biomass power generation facility fueled by cooking oil waste</li> <li>- Cost for constructing a solar power generation facility</li> </ul>	 

#### 3.2 Process for Project Evaluation and Selection

For projects to which proceeds from green bonds issued in accordance with this framework are allocated through a loan to JPXI, JPX's Sustainability Department will select candidates according to their alignment with the project eligibility criteria for the Use of Proceeds specified in 3.1. The selected candidate projects will be reported to the board of directors at JPX for consultation and approval in order to ensure consistency with the corporate philosophy, as well as environmental vision and policy.

We will confirm that all eligible projects have conducted the following matters to reduce environmental and social risks:

- Complying with environmental laws, regulations, and rules required in the areas where projects

- are conducted as well as carrying out environmental impact assessments if necessary;
- Complying with laws, regulations, and rules concerning safety for the construction and operation of renewable energy generation facilities required by local governments in the location where projects are conducted; and
  - Responding to substances of concern and managing waste.

### **3.3 Management of Proceeds**

JPX's Treasury Department will allocate funds raised through green bonds to eligible projects and manage them. The same amount of money as that of green bonds issued under this framework will be allocated to eligible projects within 12 months of issuance. During that period, JPX will trace and manage unallocated proceeds as cash or cash equivalents by using an internal accounting system on a quarterly basis.

If proceeds cannot be allocated to a certain eligible project, they will be promptly allocated to other projects.

### **3.4 Reporting**

JPX will report the status of allocation to eligible projects, effects on the environment, and impact on society annually on the JPX website and in corporate reports including the JPX Report. Impact reporting will be made not only annually but daily (details will be indicated in the following section.) It will be reviewed by an independent third party.

#### **3.4.1 Reporting of Allocation Status**

Until the proceeds from green bonds are fully allocated, JPX will report the following items concerning the allocation status of the proceeds to eligible projects as practically as possible:

- Total amount of proceeds allocated to eligible projects
- Allocation schedule if there are unallocated proceeds

The first report concerning the allocation status is scheduled to be made within one year of the green bond issuance. If there is a major change in the status after proceeds are allocated, JPX will disclose the fact in a timely manner.

### **3.4.2 Impact Reporting**

JPX will report the effects on the environment and society from eligible projects annually until the green bond is redeemed.

In addition, whether or not it is redeemed, we will disclose the following items on the JPX website or through other means during the operation of the renewable energy generation facilities.

Items to be reported:

- Outline of constructed renewable energy generation facility
- Amount of power generated by renewable energy generation facility (disclosed daily)
- Amount of CO<sub>2</sub> emissions reduced by using renewable energy generation (disclosed daily)

Specifically, we will set up a website allowing investors and others to check the amount of power generated and the amount of CO<sub>2</sub> emissions reduced by renewable energy generation facilities on a daily basis. This data will be automatically, electronically, and continuously recorded and disclosed to the fullest extent possible. This disclosure mechanism will enable investors to monitor progress while encouraging JPX to comply with rules in terms of transparency as an issuer. To make falsification difficult and enhance reliability, this data will also be automatically and electronically recorded on the security tokens platform. Not only encouraging the issuer to comply with rules, the system of automatic collection and calculation of measuring data is expected to make reporting operations accurate and efficient. The items indicated above as "disclosed daily" will be disclosed after the start of the operation at solar and biomass power generation facilities in which the JPX group invests by using the proceeds from green bonds.

### **3.5 Exclusion Criteria**

The green bond proceeds will not be allocated to projects related to the following matters:

- Unfair transactions that do not comply with the laws and regulations of the location or inappropriate acts including bribery, corruption, blackmail, and embezzlement; and
- Transactions that may cause social problems relating to human rights, the environment, etc.