

April 15, 2022

Japan Exchange Group, Inc.

Hitachi, Ltd.

Nomura Securities Co., Ltd.

BOOSTRY Co., Ltd.

## **Cooperation in the Issuance of Japan's First Wholesale Digitally Tracked Green Bond**

Japan Exchange Group, Inc. (JPX; Director & Representative Executive Officer, Group CEO: Akira Kiyota), Hitachi, Ltd. (President & CEO: Keiji Kojima), Nomura Securities Co., Ltd. (Representative Director, President: Kentaro Okuda), and BOOSTRY Co., Ltd. (Representative Director and CEO: Toshinori Sasaki) today announce their cooperation in the issuance of a publicly-offered wholesale "Digitally Tracked Green Bond"\*1, the first in Japan, using a corporate bond-type security tokens scheme (hereinafter, "digital bond") that utilizes a blockchain provided by BOOSTRY.

### **1. Characteristics of the Initiative**

- Japan's First Wholesale-Traded Digital Bond

The digital bond will be in the form of a publicly offered STO (Security Token Offering) issued by JPX. An STO is a scheme to raise funds using "security tokens", which are tokens issued by electronic means such as blockchain that represent stocks, bonds, or other securities, in place of conventional securities. Amendments to the Financial Instruments and Exchange Act and the corresponding amendments to ministerial ordinances that came into effect on May 1, 2020, defined such digital bonds as "electronically recorded transferable rights to be indicated on securities, etc.," enabling their use under laws and regulations. This digital bond will be the first issued for wholesale trading in Japan.

- Japan's First Digitally Tracked Green Bond

Being able to measure the effects of invested projects on the environment and society, and represent these with comparable metrics, is considered very beneficial to the green and other ESG bond markets. The Digitally Tracked Green Bond is a bond aimed at utilizing digital technologies to tackle issues that have long been recognized by both issuers and investors of green bonds, namely the lack of transparency of data needed for green investment and the complexity of gathering that data, by increasing efficiency in data collection and improving transparency. Through this scheme, we aim to contribute to carbon neutrality in society as a

whole by providing a highly convenient product that can be used by many issuers and investors.

## **2. Outline of the platform for issuing Digital Bond**

The digital bond will be issued and administered through a consortium-type blockchain network, "ibet for Fin"\*2, led by BOOSTRY, instead of the normal book-entry transfer by the Japan Securities Depository Center. Operational processes will be completed electronically, from issuance to administration during the bond's term and redemption. Using ibet for Fin will enable the management of a bond registry as well as allowing issuers to keep track of bond holders on an ongoing basis, which is difficult with conventional bonds.

## **3. Outline of the Digitally Tracked Green Bond**

To raise the transparency of the usage of funds raised through the digital bond, JPX and Hitachi will adopt a system that automatically measures the volume of electricity generated at the generation plants to which funds were allocated, and converts this into a volume of CO2 emissions reduced.

Utilizing these digital technologies, we will establish an external monitoring system accessible to investors at any time, aiming for transparency on a higher level than just annual reporting. In addition, sharing data with BOOSTRY and recording the volumes of generated electricity and reduced CO2 emissions on ibet for Fin will enhance data transparency and timeliness. Our view is that these initiatives could in future be considered for application in sustainability-linked bonds, which feature automatic changes in bond terms and conditions, such as the interest rate, depending on the achievement of sustainability targets. The launch of the system for investors to monitor the generated electricity volume (the digital tracking function) is expected to be implemented promptly after operation at each power generation plant listed under 5. below. The raised funds will be allocated to each power generation plant to be developed.

The digital bond received a second-party opinion regarding the green bond framework from Rating and Investment Information, Inc. (R&I), and GA1, the highest of five levels of evaluation, in a preliminary evaluation under the R&I Green Bond Assessment, which evaluates to what extent raised funds are being invested into businesses that contribute to addressing environmental issues. In addition, the digital bond is eligible for subsidies on costs associated with third party assessments and consulting fees for green bond issuance from the Ministry of the Environment and Tokyo Metropolitan Government.

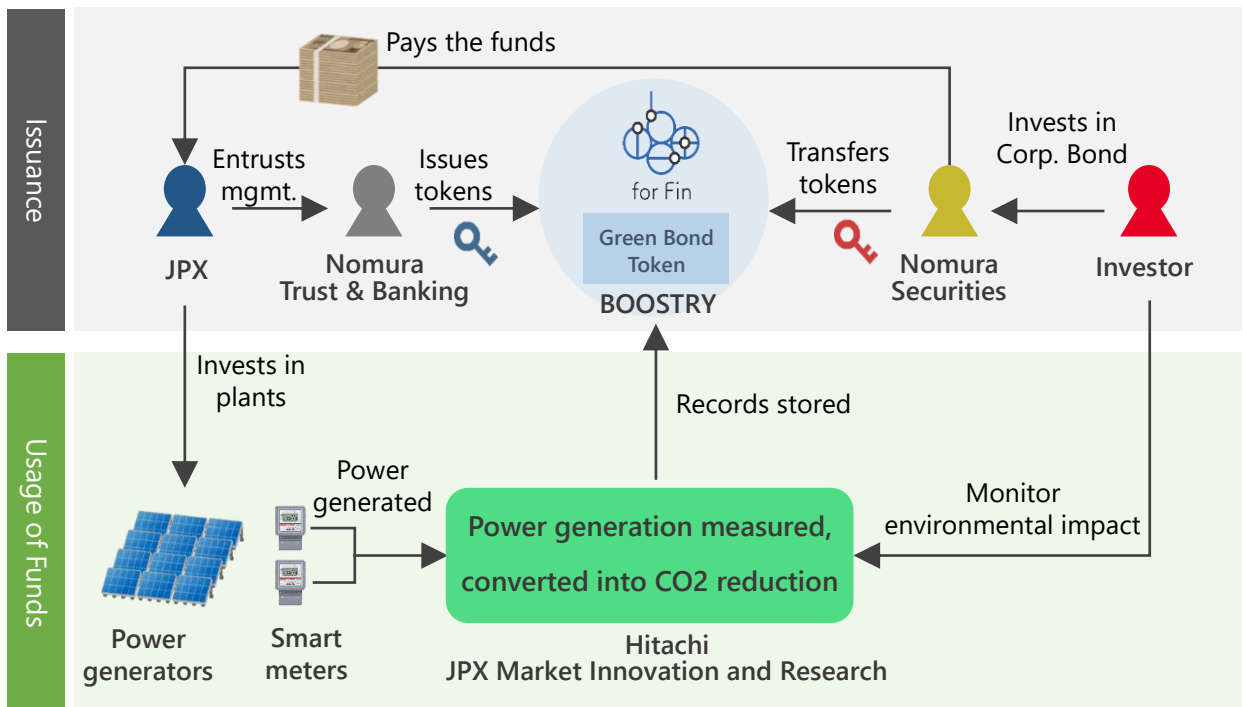
## **4. The Roles of Each Company**

Each company will cooperate as below in conducting the public offering of the Digitally Tracked Green Bond for wholesale trading. JPX, Hitachi, Nomura, and BOOSTRY will aim to contribute to carbon neutrality in society as a whole by sharing lessons learned from and issues identified during this

initiative.

Company Name	Major roles
JPX	<ul style="list-style-type: none"> <li>· Issuance of the Digitally Tracked Green Bond</li> </ul>
JPX Market Innovation and Research (a wholly owned subsidiary of JPX, commencement of operations in April 2022)	<ul style="list-style-type: none"> <li>· Provision and maintenance of a system that allows investors to track positive environmental impact</li> </ul>
Hitachi	<ul style="list-style-type: none"> <li>· Delivery and maintenance of the "Sustainable Finance Platform (monitoring data offering function*3)" that records and manages data on power generation/CO2 reductions.</li> </ul>
Nomura	<ul style="list-style-type: none"> <li>· Digital structuring agent*4 and green bond structuring agent*5</li> <li>· Underwriting of the Digitally Tracked Green Bond</li> </ul>
BOOSTRY	<ul style="list-style-type: none"> <li>· Provision and maintenance of a system connecting to the blockchain platform, "ibet for Fin"</li> <li>· Storing the records of generated electricity volume and CO2 reduction volume on ibet for Fin</li> </ul>

**Diagram of Digitally Tracked Green Bond Scheme**



**5. Outline of Power Generation Plants**

JPX plans to allocate the funds raised through the digital bond to the following biomass and solar power generation plants through a loan to JPX Market Innovation and Research.

**Biomass Power Generation Plant**

Location	Ibaraki Prefecture
Project summary	Biomass power generation plant fueled by waste cooking oil (soybean oil, rapeseed oil, or other oil discarded after use)
Site area	1,949 sq. meter
Equipment capacity	1,960 kW
Completion schedule	End of November 2022
Assumed month of operation	Beginning of December 2022

**Solar Power Generation Plant (1)**

Location	Ibaraki Prefecture
Project summary	Farming-type photovoltaic power generation equipment that combines farming and power generation on farmland
Site area	2,607 sq. meter

	(Since the location of this power generation plant is agricultural land, the site area shown is of agricultural land pertaining to the location of this power generation plant.)
Equipment capacity	207.36 kW
Completion schedule	End of July 2022
Assumed month of operation	Beginning of August 2022

### **Solar Power Generation Plant (2)**

Location	Chiba Prefecture
Project summary	Farming-type photovoltaic power generation equipment that combines farming and power generation on farmland
Site area	2,975 sq. meter
Equipment capacity	97.2 kW
Approval obtained for connection of transmission and distribution lines (planned)	June 2022
Conclusion of rights transfer agreement (planned)	End of June 2022
Start of construction (planned)	Beginning of July 2022
Completion schedule	End of September 2022
Assumed month of operation	Beginning of October 2022

(Note) As of today, JPX has not yet concluded an agreement with TEPCO Power Grid, Inc. to connect the solar power generation plant (2) but plans to start construction after the agreement is concluded. In the event that the funds procured through the digital bond cannot be allocated to the solar power generation plant (2) due to delays in the interconnection or other reasons, the funds will be allocated to the above biomass power generation plant or solar power generation plant (1).

- \*1 Please refer to the news release "JPX Begins Research on "Digitally Tracked Green Bonds" Utilizing Security Tokens" published on February 14, 2022.  
<https://www.jpx.co.jp/english/corporate/news/news-releases/0010/20220214-01.html>
- \*2 Please view the ibet for Fin website, run by BOOSTRY (Japanese only).  
<https://www.ibet.jp/ibet-for-fin>
- \*3 A platform under development by Hitachi that leverages IoT and blockchain to securely collect operational data on facilities in portfolio projects and automate the monitoring/reporting process.  
<http://innovate.hitachi.eu/en/case-studies/a-clear-view-of-sustainability>
- \*4 An entity which supports digital bonds' issuance with advice and support about the blockchain.
- \*5 An entity which supports the issuance of green bonds with advice and support on establishing the green bond framework and third party assessment.

#### **Disclaimers**

When bonds are purchased via public offerings, secondary distributions, or other OTC transactions with Nomura Securities, only the purchase price shall be paid, with no sales commission charged. Bonds carry the risk of losses, as prices fluctuate in line with changes in market interest rates. Bond prices may also fall below the invested principal as a result of such factors as changes in the management and financial circumstances of the issuer, or changes in third-party valuations of the bond in question.

#### **Nomura Securities Co., Ltd.**

Financial instruments firm registered with the Kanto Local Finance Bureau (registration No. 142)  
Member associations: Japan Securities Dealers Association; Japan Investment Advisers Association; The Financial Futures Association of Japan; and Type II Financial Instruments Firms Association.