

Third-Party Opinion on Transition Linked Loans to JX Nippon Mining & Metals Corporation Conducted by JOYO BANK, Ltd.

Japan Credit Rating Agency, Ltd. (JCR) provided a third-party opinion on the Transition Linked Loan (the "Loan") conducted by JOYO BANK, Ltd. (lender) to JX Nippon Mining & Metals Corporation ("JX NMM" or the "Company").

<Executive Summary>

This third-party opinion confirmed the conformity of the Loan extended by JOYO BANK to JX NMM, which is based on the Transition Linked Finance Framework formulated by JX NMM, with the Climate Transition Finance Handbook ("CTFH")¹, the Basic Guidelines for Climate Transition Finance ("CTF Basic Guidelines")² (CTFH and CTF Basic Guidelines collectively, "CTFH, etc."), the Sustainability Linked Loan Principles ("SLLP")³, the Green Loan and Sustainability Linked Loan Guidelines⁴ (SLLP and the Ministry of the Environment guidelines collectively, "SLLP, etc."). In order to ensure the transparency and objectivity of the valuations recommended by CTFH, etc. and SLLP, etc., JCR, as an independent third party organization, conducted third-party evaluations of the following: (1) JX NMM's Transition Strategy and Its Appropriateness, (2) JX NMM's Sustainability Strategy and Establishment of Key Performance Indicators (KPIs) and Sustainability Performance Targets (SPTs), and (3) Loan Terms and Monitoring Systems during the period.

(1) Business Overview of JX NMM, Transition Strategy and Its Appropriateness

JX NMM opened the Hitachi Mine in 1905 and started the resource development business and the metal smelting business. From its foundation to the present day, the Company has consistently conducted its business activities, seeing the stable supply of non-ferrous metal resources and materials as its social mission. In 2017, JX Holdings, Inc. and Tonen General Sekiyu K.K. established an integrated holding company, JXTG Holdings Inc. In 2020, JXTG Holdings changed its trade name to ENEOS Holdings. As one of the core operating companies of ENEOS Group, JX NMM and its consolidated subsidiaries (JX NMM Group) operate six business fields: Functional Materials, Thin film Materials, Mineral Resources, Metals & Recycling, Tantalum and Niobium, and Titanium. The JX NMM Group is globally engaged in non-ferrous metal businesses, centered on copper and rare metals, ranging from resource development and smelting to the manufacture and development of advanced materials indispensable to a society in which IoT and AI are advancing, as well as recycling of used electronic devices.

The JX NMM Group's social mission is "Ensuring a stable supply of non-ferrous resources and materials" With the purpose of "continuing its efforts to confirm the productivity of resources and materials by promoting recycling aimed at zero emissions," the JX NMM Group has established a Group Code of Conduct⁵ that should be kept in

¹ Established by International Capital Market Association (ICMA) in December 2020.

² Established by the Financial Services Agency, the Ministry of Economy, Trade and Industry, and the Ministry of the Environment in May 2021.

³ Established and revised by Loan Market Association (LMAs), Asia Pacific Loan Market Association (APLMA) and Loan Syndication and Trading Association (LSTA) in May 2021

⁴ Established by the Ministry of the Environment in April 2020.

⁵ <https://www.nmm.jx-group.co.jp/english/company/policy/moedl.html>

mind in the conduct of business. In all aspects of its business activities, including the production, sales, and development of minerals, from exploration, mining, refining, and smelting to metal processing and electronic materials products, the Company is pursuing technological rationality, efficiency, quality, and improvements in characteristics in accordance with the Code of Conduct, while continuing to work to innovate the productivity of resources and materials by promoting recycling aimed at zero emissions. At the same time, it aims to "maintain and improve coexistence relationships with various stakeholders, and through these, contribute to the sustainable development of society on a global scale." As a guideline for its activities, the Group has formulated the Group's Basic Environmental Policy, which stipulates that it will promote the formation of a carbon-free society and a recycling-oriented society in order to contribute to the conservation of the environment on a global scale.

In 2019, the JX NMM Group formulated a long-term vision 2040 as the "Vision" that the Group should aspire to be. The company has announced that it will aim to be a global company that contributes to the development and innovation of society with advanced materials. It has shifted from a "process industry-type firm" to a "technology-based firm," and its basic policy is to contribute to the realization of a sustainable society aimed by SDGs, while realizing high income amid intensifying international competition. In addition, it has identified important social issues that need to be prioritized in order to realize this long-term vision, and has set the protection of the global environment as one of them.

JX NMM set the following targets for fiscal 2050, 2040 and 2030, respectively.

- Achieving Net Zero CO₂ emissions for Scope1,2 by fiscal 2050
- Achieving 50% ratio of recycled raw materials in copper smelting by fiscal 2040
- Reducing CO₂ emissions for Scope1,2 by 50% compared to fiscal 2018 by fiscal 2030

To achieve the above targets, JX NMM plans to (1) introduce CO₂ free electricity, (2) create renewable energy, (3) reduce energy consumption, and (4) convert fuel and drastically develop processes in order to reduce CO₂ emissions.

JX NMM has established an ESG Promotion Committee chaired by the president, which meets twice a year in principle with the participation of directors, executive officers, corporate auditors, and other members of the Executive Committee to discuss ESG-related initiatives. In addition, it has established a system to promote ESG management throughout the Group by sharing the content reported and discussed at the ESG Promotion Committee at the ESG Promotion Managers' Committee, which is composed of representatives from each business site and group companies. Furthermore, in January 2021, JX NMM launched the Carbon Free Project, a group-wide cross-organizational structure, with the purpose of considering concrete initiatives for achieving the targets for fiscal 2050 and fiscal 2030 for reducing CO₂ emissions by the Group as a whole, and began preparing a roadmap for achieving the medium-to long-term CO₂ emission reduction targets and considering specific reduction measures. The project has been positioned as a subordinate organization of the ESG Promotion Committee as the Carbon Free Committee (CF Committee) since April 2022, and continues its activities.

In its medium-term management plan covering fiscal 2020 to fiscal 2022, JX NMM announced plans to allocate 160 billion yen out of a total of 300 billion yen for the three years of its investment plan to strategic investments in technology development, focus businesses, base businesses, and ESG investments. It plans to carry out capacity enhancement ahead of schedule to meet increasing demand for thin-film materials in line with growing demand for data communications, and to vitalize ESG activities such as decarbonization and resource circulation, using 20 billion yen as ESG investment quota. It also plans to disclose future investment plans in conjunction with the formulation of a medium-term management plan for fiscal 2023 and beyond.

JCR assesses that the above transition strategies and specific policies described above satisfy the four elements of CTFH, etc.

(2) JX NMM's Sustainability Strategy and Establishment of KPIs and SPTs

JCR has confirmed that JX NMM will set the following KPIs and SPTs in the Transition Linked Loan (the Loan)

to be executed under the Framework.

KPI1:CO₂ emissions (on a gross basis, Scope1, 2)

SPT1: Maintain a 50% reduction in CO₂ emissions (on a gross basis, Scope1, 2) compared to fiscal 2018 by fiscal 2030

KPI2: Ratio of recycled raw materials

SPT2: Raise the ratio of recycled raw materials to 25% by fiscal 2030

In this Framework, JX NMM has set CO₂ emissions (Scope1 and 2) and recycled raw material ratio as KPIs, and has set SPTs for fiscal 2030 goals.

The above KPIs are consistent with JX NMM's mid-and long-term goals for fiscal 2040 and fiscal 2030, and are significant, because demand for electronic equipment, electric vehicles, storage batteries, etc. is expected to expand due to the progress of decarbonization and digital transformation, and efforts to reduce CO₂ emissions and improve the ratio of recycled raw materials are important for the industry as a whole in order to secure a stable supply of non-ferrous metal materials in the future. In terms of SPTs, JX NMM has set targets for reducing CO₂ emissions well above industry standards compared to its industry peers, and initiatives related to the recycled raw materials ratio require initiatives that exceed the conventional business (Business As Usual) compared to the company's own historical track records. JCR has therefore evaluated these targets as highly ambitious.

(3) Loan Terms and Monitoring System during the Period

JCR has identified in the loan's contractual documents that it has in place arrangements to alter its financial profile if it achieves SPTs. Definition of KPIs, establishment of SPTs, and the assumptions will also be described in the said contractual documents. In the event that the definition of KPIs, the establishment of SPTs, and the assumptions are changed due to circumstances that cannot be foreseen at the time of the implementation of this loan, the borrower plans to report the content of the change to the lender through a change report or other means. JX NMM plans to make annual disclosures on its website on the progress of its KPI-performance goals related to CO₂ emission reductions and recycled raw materials ratios. CO₂ emissions for scope1, 2 and ratio of recycled raw materials will be verified by a third party. Should a significant change in SPTs occur during the period, JCR will continue to review the status of compliance with CTFH, SLLP, etc. and confirm whether the initially assumed level of ambition and significance will be maintained. In the year of maturity, JX NMM, lender, and JCR will conduct a review of the individual transition-linked loans made under the Framework to assess not only the achievement of the SPTs, but also the status of realization of impact of the loans on JX NMM and society.

As a result of the above considerations, JCR has confirmed that this finance for JX NMM, which is the subject of this third-party opinion, is in compliance with the CTFH, SLLP, and other relevant requirements.

*Please refer to the following pages for details of the opinions.

Third-party opinion on individual financing

Subject	Transition Linked Loans (Long-Term Loans (loans on deed))
Borrowing Amount	1 billion JPY
Lender	JOYO BANK, Ltd.
Date of the Loan Agreement	June 30, 2022 (planned)
Maturity Date	June 28, 2030 (planned)

JCR has confirmed that the Transition Link Loan described above meets all of the matters set forth in JX Nippon Mining & Metals Corporation's Transition Link Loan Framework, which JCR has pre-confirmed conformity with the following principles:

- (1) Climate Transition Finance Handbook (CTFH)¹
- (2) Basic Guidelines for Climate Transition Finance (CTF Basic Guidelines)²
- (3) Sustainability Linked Lending Principles (SLLP)³
- (4) Green Loan and Sustainability Link Loan Guidelines⁴

¹ Established by International Capital Market Association (ICMA) in December 2020.

² Established by the Financial Services Agency, the Ministry of Economy, Trade and Industry, and the Ministry of the Environment in May 2021.

³ Established and revised by Loan Market Association (LMAs), Asia Pacific Loan Market Association(APLMA) and Loan Syndication and Trading Association(LSTA) in May 2021

⁴ Established by the Ministry of the Environment in April 2020.

Important explanation of this third-party opinion

1. Premises, significance, and limitations of the JCR Third-Party Opinion

Third-party opinions granted and provided by the Japan Credit Rating Agency, Ltd. (JCR) are representations of JCR's overall opinion at the present time regarding the evaluation target, the Climate Transition Finance Handbook (CTFH), the Sustainability Linked Bond Principles (SLBP), the basic guidelines for Climate Transition Finance established by the Financial Services Agency, the Ministry of Economy, Trade and Industry and the Ministry of the Environment in May 2021, and the conformity of JCR to the Green Loan and Sustainability Linked Loan Guidelines formulated by the Ministry of the Environment in March 2020. These statements do not fully depict the extent of positive impact that such appraisal targets may have.

This Third Party Opinion evaluates current plans or circumstances based on information provided by the Client and information independently collected by JCR and does not guarantee an evaluation of future status. Also, this Third Party Opinion does not quantitatively prove the positive effects of the Transition Linked Bond and is not responsible for its effects. JCR confirms that the funding raised by this project is measured quantitatively and qualitatively by the issuer or by a third party requested by the issuer in terms of the degree of achievement of the impact indicators established by the Company, but in principle, this is not directly measured.

2. International initiatives, principles, etc. referred to in carrying out this evaluation

In conducting this evaluation, JCRs refer to the following principles and guides formulated by ICMA, UNEP FI and its ministries and agencies.

- Climate Transition Finance Handbook
- Basic Guidelines for Climate Transition Finance of the Financial Services Agency, the Ministry of Economy, Trade and Industry, and the Ministry of the Environment
- Principles of Sustainability Linked Bonds
- Ministry of the Environment's Green Loan and Sustainability Linked Loan Guidelines
- Positive impact financial principle
- Positive Impact Finance Model Framework without Limited Use of Funds

3. Relationship with activities related to credit rating business

The conduct of providing this Third-Party Opinion is conducted by JCR as a related business and is different from the conduct related to the credit rating business.

4. Relationship with credit ratings

This evaluation differs from credit ratings and does not constitute a commitment to provide or inspection a predetermined credit rating.

5. Third-party nature of JCR

There are no capital or personal relationships, etc. between the parties subject to this evaluation and JCR that may give rise to conflicts of interest.

■Points of Attention

The information in this document has been obtained by JCR from issuers and accurate and reliable sources. However, this information may contain errors due to human, mechanical or other reasons. Accordingly, JCR makes no representation, express or implied, as to the accuracy, consequences, accuracy, timeliness, completeness, marketability or fitness for any particular purpose of such information, nor does JCR assume any liability for any error, omission or consequence of the use of such information. JCR shall not under any circumstances be liable for any special, indirect, incidental or consequential damages of any kind, including loss of opportunity or financial loss, which may arise from any use of such information, whether contractual liability, tort liability, negligent liability or other cause of liability, and whether such damages are foreseeable or unforeseeable. This third-party opinion does not express an opinion on various risks (credit risk, price fluctuation risk, market liquidity risk, etc.) related to Positive Impact Finance, which is the subject of evaluation. In addition, this third-party opinion represents JCR's overall opinion at this time and is not a representation of facts, and does not constitute any recommendation as to risk judgments or any decision to purchase, sell or hold individual debt securities, commercial paper or the like. This Third Party Opinion may be changed, suspended or withdrawn due to changes in information, lack of information or other reasons. All rights associated with this document are reserved by JCR. Any reproduction, adaptation, or modification of this document, in whole or in part, without the permission of JCR is prohibited.

■Glossary of Terms

Third-party Opinion: This report was prepared by International Capital Market Association and expresses an opinion from an independent, neutral and equitable standpoint on the Transition Linked Bonds to be conducted by the issuer, as requested by the client, as well as on the conformity of Climate Transition Finance Handbook to the Sustainability Linked Bonds Principles.

■Registration status as an external evaluator of sustainable finance, etc.

- Members of the Working Group on the Impact Financial Initiative for the United Nations Environment Programme
- Registered as External Reviewer of Green Bonds, Ministry of the Environment
- Climate Bonds Initiative Approved Verifier (Accreditation Verification Agency for the Climate Bond Initiative)
- ICMA (registration with the International Capital Markets Association as an observer) Principles for Social Bonds, Members of Climate Transition Finance Working Group

■In addition, the status of registration as a credit rating agency, etc.

- Director-General of the Financial Services Agency (Credit Rating) No. 1
- EU Certified Credit Rating Agency
- NRSRO: JCR is registered in the following four classes of five credit rating classes of NRSRO (Nationally Recognized Statistical Rating Organization as defined by the U.S. Securities and Exchange Commission. (1) Financial institutions, broker-dealers, (2) insurance companies, (3) general business corporations, and (4) government and local governments. When subject to disclosure under Section 17g-7(a) of the Securities and Exchange Commission, such disclosure is attached to the news release appearing on JCR's website (<https://www.jcr.co.jp/en/>).

■For further information, contact

Information Service Department TEL: 03-3544-7013 FAX:03-3544-7026

Japan Credit Rating Agency, Ltd.

Jiji Press Building, 5-15-8 Ginza, Chuo-ku, Tokyo 104-0061, Japan
Tel. +81 3 3544 7013, Fax. +81 3 3544 7026