

July 7, 2023  
JX Metals Corporation

## **Calculation of Electrolytic Copper Carbon Footprint and Third-Party Assurance of Results**





JX Metals Corporation (President: Hayashi Yoichi; “the Company”) has calculated the carbon footprint of products (CFP) for electrolytic copper produced at the Company’s sites and is the first copper smelter in Japan to obtain third party assurance of the results. This is one of the measures the Company is taking to evolve and gain wider use of Sustainable Copper, as announced in August 2022.<sup>1</sup> The initiative aims to achieve both stable supply and ESG-oriented production and supply of copper, which is essential in diverse fields including automobiles, semiconductors, and ICT.

As part of these efforts, the Company calculated the carbon footprint of electrolytic copper based on a cradle to gate inventory study. The calculation is chiefly according to GHG Protocol standards, which is one of the international standards for calculation and reporting, for electrolytic copper manufactured in fiscal 2021 via a series of processes at the JX Metals Group’s Saganoseki Smelter & Refinery and Hitachi Works. The Company then obtained assurance of the calculation results from DNV Business Assurance Japan K.K., a third-party assurance body.

The Company are going to share the calculation results with customers that purchase electrolytic copper produced by the JX Metals Group. Based on the calculation results obtained, it will also hold discussions with companies participating in Green Enabling Partnerships<sup>2</sup> concerning supply of electrolytic copper with high environmental value, such as products with low CFP and high recycling ratios tracked using the mass balance approach.<sup>3</sup>

Through various measures set out in its Sustainable Copper Vision, the Company will continue to contribute to realizing a sustainable society as part of integrated management of advanced materials, metal smelting and refining, recycling, and resource development.

1. For details, see news release dated August 3, 2022, “Sustainable Copper Vision: JX Metals Aims to Supply Sustainable Copper” and its attachment, “Sustainable Copper Vision: The JX Nippon Mining & Metals Vision for Sustainable Copper.” This vision seeks to pursue the four measures below.

<p><b>1 Reduce CFP</b></p>  <p><b>Reduce CFP in Copper concentrates mining and the transportation value chain</b></p> <ul style="list-style-type: none"> <li>● Convert construction equipment used in mines to electric power</li> <li>● Use electricity derived from renewable sources</li> <li>● Improve efficiencies and optimize transportation, etc.</li> </ul>	<p><b>2 Increase recycling ratios</b></p>  <p><b>Develop technologies to increase the ratio of recycled raw materials for copper products and bolster raw materials collection systems</b></p> <ul style="list-style-type: none"> <li>● Develop technologies to increase the ratio of recycled raw materials</li> <li>● Expand facility capacity to increase recycled raw materials collection, etc.</li> </ul>
<p><b>3 Promote responsible procurement and other measures</b></p>  <p><b>Engage in a wide range of ESG measures, including sustainable sourcing, and certification acquisition</b></p> <ul style="list-style-type: none"> <li>● Pursue measures that consider and encourage global environmental conservation, human rights, and contributions to local communities</li> <li>● Acquire Copper Mark and other certifications that meet ESG standards set by the International Copper Association (ICA)</li> </ul>	<p><b>4 Form Green Enabling Partnerships</b></p>  <p><b>Evolve and gain wider use of sustainable copper</b></p> <ul style="list-style-type: none"> <li>● Form partnerships with companies that work together to promote sustainable copper, and accelerate the transition to decarbonized and circular economies</li> <li>● Engage in product and scrap collection, raw materials reuse, and joint technology development with partners, etc.</li> </ul>

2. Partnerships across industries aimed at promoting decarbonized and circular economies in relation to copper production, use, and recycling, as advocated in the Sustainable Copper Vision.

3. An approach that regards a portion of a product as having the attribute of deriving from a certain raw material, according to the input ratio of raw materials with specified properties.

Reference; Information on Carbon Footprint Calculations

Product	Electrolytic Copper
Production period	April 1, 2021 to March 31, 2022
Production sites	JX Metals Corporation Hitachi Works, JX Metals Smelting Co., Ltd. Saganoseki Smelter & Refinery,
Target life cycle stage	Cradle to gate (From raw material extraction to product at factory gate)