TYO : 5401 OTC : NPSCY(ADR)



Acquisition of interest in the steelmaking coal business in Canada

November 14th, 2023

NIPPON STEEL CORPORATION



1. Overview of the Investment

2. Purposes of the Investment

3. Appendix



Decision to Invest in Steelmaking Coal Business in Canada

Nippon Steel to indirectly acquire a 20% interest in Elk Valley Resources ("EVR JV") (the "Investment"), a newly-formed partnership sold by Teck, the second largest producer of high-quality steelmaking coal in the world



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Overview of EVR JV (Planned)

A superior mine that yields cost and quality competitive coal and which only produces hard coking coal



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Purposes of Investment in EVR JV

To secure a stable supply of high-quality steelmaking coal that is essential to Nippon Steel's carbon neutral strategy

Currently

Approx. **20**%

- While the ratio of coal use in carbon neutral steelmaking process is to decrease in the future, a certain amount of coal will still be required for the reduction process using hydrogen in blast furnaces
- Investment in steelmaking coal mine development is not expected to increase because of the decarbonization trend

Nippon Steel has decided to increase its investment in raw material assets



After acquiring

EVR JV interest Approx. **30%** Ratio of coal procured from mines following Investment will increase in the longterm as steelmaking shifts to a carbon neutral process and the total amount of coal use decreases

Stabilizing Nippon Steel's consolidated profit by increasing investment in highquality raw materials

Evolving into a more vertically integrated business structure to ensure resilience to externalities

In order to secure essential funds for substantial R&D and capital investment for the development and implementation of ultra-innovative technologies to be used towards net zero, Nippon Steel will seek to continue to build a more resilient business portfolio.



Purposes of Investment in EVR JV

Evolution to a more vertically-integrated and new business structure by integrating procurement, production and distribution



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Historical Steps Toward Agreement to Acquire Interest in EVR JV

Feb. 21st, 2023: Nippon Steel announced to acquire an interest in a steelmaking coal company spun-off from Teck

April 11th, 2023: Glencore plc proposed the acquisition of Teck

April 26th, 2023: Teck withdrew the separation proposal from the shareholders meeting and expressed its plan to "pursue a simpler and more direct separation."

Nippon Steel continued discussions with Teck on revision of the separation plan.

Nov. 14th,2023: Nippon Steel announces to indirectly acquire a 20% interest in EVR JV

Investment Structure as of Feb. 21st, 2023

Nippon Steel was to acquire **10%** of each of the common shares, preferred shares and royalty interests.

Total acquisition value: 1,150 million CAD (approx. ¥110.0bn)

(Elkview interest was to be exchanged for 125 million CAD of the above 1,150 million CAD)

- After closing Nippon Steel will have the right to acquire additional common shares up to a maximum of **17.5%** of all common shares.
- Nippon Steel and the company were to enter into an investor rights agreement that included a right to nominate one director for election to the board of directors of EVR.
- Preferred shares : Preferred shareholders were to have the right to receive dividends in preference to common shares for an agreed period of time.
- Royalty interests : Approximately 90% of free cash flow were expected to be distributed to the holders of the Royalty for an agreed period of time.



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1. Overview of the Investment

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Purpose 1) Securing High-Quality Steelmaking Coal

Nippon Steel has been promoting R&D of three breakthrough technologies to realize carbon neutral steelmaking process: (a) Hydrogen Injection into BF (circled in red), (b) High-grade Steel Production in Large Size EAF, and (c) Hydrogen Direct Reduction



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Purpose 1) Securing High-Quality Steelmaking Coal

To reduce CO₂ emissions and secure stable and efficient iron production using hydrogen injection into the blast furnace (BF), it is essential to procure high-quality steelmaking coal stably



High-quality steelmaking coal is essential

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Purpose 2) Stabilization of Consolidated Profit

The volatility of the steelmaking coal market has increased and prices have remained particularly high in recent years, even though the users of steelmaking coal are limited to steel manufacturers.



This structural change in the raw material market has created a significant challenge to the sustainability of profits in Nippon Steel's steelmaking business

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Purpose 2) Stabilization of Consolidated Profit

Evolved into vertically integrated business structure resilient to the external environment



Toward the realization of carbon neutrality, Nippon Steel will focus on research and development and commercializing innovative technology ahead of other countries. For securing essential funds for R&D and capital investment, Nippon Steel will seek to continue to build a more resilient business portfolio.





1. Overview of the Investment

2. Purposes of the Investment





Appendix: Overview of Teck Resources Limited

The second largest producer of high-quality steelmaking coal in the world

Name		Teck Resources Limited			
Head Office		Vancouver, British Columbia, CANADA			
Description of Business		A diversified resource company committed to responsible mining and mineral development with business units focused on copper, zinc, and steelmaking coal			
Name of Representative		Jonathan Price, President and Chief Executive Officer			
Number of Employees		Approximately 10,000			
Foundation		1913: Teck-Hughes Gold Ltd. Was established 2009: Changed trade name to Teck Resources Limited			
Major Share- holders	Class A share	Temagami Mining Company Ltd. SMM Resources Incorporated	Class A votes 55.4% 18.9%	Aggregate votes 33.6% 11.5%	
	Class B share	Fullbloom Investment Corporation	Class B votes 10.3%	4.1%	



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Appendix: Sustainability Highlights of Teck Resources Limited in 2022

	Vater & Tailings	Quadrupled wasCompleted third	ter treatment capacity at Elk Valley from 2020 to 2022 d-party reviews at all tailings facilities
Sa	fety and Health	 Zero fatality incidents High-risk incidence ratio: 23% lower than that in the previous year 	
	Human Rights	102 active agreements with Indigenous Peoples	
699	Inclusion & Diversity	 Ratio of new hir Female employee Indust Forbes World's 	res of women in 2022: 34% ee ratio in 2022 : 24% (+3% than the previous year) try average: 15.7%(according to Bloomberg, 2019) Best Employers 2022
	S&P Sustai	inability Award	2022 S&P Global Corporate Sustainability Assessment, 2 nd ranked in Metal & Mining sector
	Moody's	ESG Solutions	Top ranked North American Mining company, 3 rd ranked in North American companies
Ratings &	۶. FTS	E4Good	Top percentile Mining sector
Ranking	S	MSCI	"AA" rating performance in top 10% of subindustry
	IS	SS ESG	Rated Prime, Selected as "Leader" in Metals & Mining sector
	SUSTA		Top ranked in Metal & Mining sector



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Appendix: Financial results of Teck Resources Limited

17,316

CY2022 Gross Profit

Steelmaking coal business unit Profit attributed to shareholders

Selling price of steelmaking coal 355 (US\$/t)257 176 187 164 193 181 149 115 93 115 113 27.6 26.6 26.7 26.2 25.6 25.3 25.7 24.6 24.7 23.1 22.8 21.5 21.1 Production of Steelmaking coal (mtpa) 2010 '11 '12 '13 '14 '15 '16 '17 '18 '21 '22 '19 '20

Sales (Mn. CAN\$/y)



approx. 8.5 bn. CAN\$/y (approx. ¥865 bn.) approx. 6.4 bn. CAN\$/y (approx. ¥645 bn.) approx. 3.3 bn. CAN\$/y (approx. ¥335 bn.)





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Appendix: Overview of Glencore plc (As of Dec. 31st, 2022)

Top ranked in trading commodities and world top-tier supplier in the Mining Sector

Name	Glencore plc
Head Office	Switzerland, Baar
Description of Business	A multinational commodity trading and mining company supplying coal, copper, zinc, nickel, oil, and others
Name of Representative	Gary Nagle, Chief Executive Officer
Number of Employees	Approximately 81,700
Foundation	2011: Glencore plc IPOs on the London Stock Exchange 2013: Glencore plc merges with Xstrata plc



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Appendix: Sustainability Highlights of Glencore plc in 2022





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Appendix: Financial Results of Glencore plc

CY2022

Adjusted EBIT in Industrial Sectorapprox. 20.0 bn. USD/y (approx. ¥2.7trn.)incl. coal business unitapprox. 15.0 bn. USD/y (approx. ¥2.0trn.)Profit attributed to shareholders(for all Sector) approx. 17.0 bn. USD/y (approx. ¥2.3trn.)



Revenue in Industrial Sector (MUSD/y) 78,332





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Appendix: Securing High-Quality Steelmaking Coal

In order to achieve carbon neutrality, it is necessary to not only use steel scrap but also to reduce CO₂ emissions from reduction of iron ore



Crude steel production needed to meet global steel stock growth will continue to increase.

Global scrap availability 1.5 BT/Y Home scrap BT/Y Prompt scrap Obsolete scrap

Availability of scrap increases as steel stock increases.

Obsolete scrap: Available from end-of-life products Prompt scrap: Generated in production of steel-based products

Home scrap: Generated in the steelmaking process

Global pig iron production estimates



Even if all scrap is recycled, it is insufficient to meet the annual demand for crude steel production, and steel production from iron ore will need to remain at the same scale in the future.

Source: JISF, Long-term vision for climate change mitigation: A challenge towards zero-carbon steel



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Appendix: Progress of COURSE50 & Super COURSE50 Technology Development

Super COURSE50 development test in a small test furnace at Kimitsu area in East Nippon Works verified the world's highest level of CO2 emissions reduction (reduced by 22%) using heated hydrogen injection. Work on early establishment of Super-COURSE50 technology (targeting CO2 emissions reduction of 50% or more).



Appendix: Our R&D on CCUS Technology

Nippon Steel is Dedicated to Development of Technology to Capture, Transport, Store and Utilize CO₂

Capture	CO ₂ Capturing	 Development of CO₂ capturing at low cost of less than ¥2,000/t-CO₂ by use of high-performance absorbent and heat exchanger for waste heat recovery Nippon Steel Engineering Co., Ltd. commercializes CO₂ separation and recovery equipment R&D for CO₂ capturing from waste gas with RESONAC and 6 universities 	Absorption tower Absorbs CO ₂ at ambient temp.	Stripper Strip CO ₂ at high temp. 99% CO ₂ 120°C Waste heat Reboiler
Transport	R&D and FS of technologies for CO ₂ transport and storage	 Joint R&D and demonstration with ITOCHU and others on CO ship transportation. Joint Study Agreement to capture and transport liquified CO₂ toward flagship offshore floating CO₂ capture and storage huproject ("CStore1") in Australia. MOU with Mitsubishi and ExxonMobil to conduct research or capture, transportation and storing CO₂ 	b	CO ₂ Floating Storage and Injection Hub Permanent and safe CO ₂ underground
Storage	Utilization of our steel products for CO ₂ storage	 High alloy OCTG seamless pipe for CCS OCTG pipe and Special joint for EOR 		
Utilization	CO ₂ Utilization for chemical manufacturing CO ₂ absorption by	 Joint R&D with ENEOS GLOBE and two universities on technology and processes to produce LP gas from CO₂ Joint R&D with Australian Univ. on technology to produce medium-chain carboxylates from CO₂ using microorganisms Joint R&D with Toyama Univ. produce para-xylene from CO₂ Joint R&D with three universities to produce polyurethane intermediate from CO₂ at normal pressure Blue Carbon - regeneration of seaweed bed using steel 	Biomese H0, g. OH Dra Dra Dra Dra Dra Dra Dra Dra	Tengineering plastics Polyester
	forganisms	slag	States States	Galoie modified and Hystrated form & Inter supply unit

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Appendix: Participation in Advanced CCS projects

Participated in three leading joint projects coordinated by JOGMEC, "Survey on the Implementation of Advanced CCS Projects" (released Aug. 2nd and 3rd, 2023)

- Nippon Steel and other companies have been commissioned with other companies to conduct a feasibility study on the three advanced CCs project in 2023 coordinated by JOGMEC, Japan Organization for Metals and Energy Security
- Promote with each company the development of external conditions such as securing storage sites, development of storage infrastructure, and development of laws and regulations.
- Nippon Steel is proactively involved in studies related to CO₂ separation and capture, liquefaction, and shipping terminals, based on location restrictions of each steelworks.





Appendix: Nippon Steel's Investment in Mines (As of April, 2023) 24							
Ratio of raw mater procured from invested miner Iron ore Approx. 20%	erials Total n procurement s (FY2022) 5 50 MMT						
 Iron ore Coal Others 	25 ммт						
Year participated Equity ratio Major shareholder	Capacity MMT/Y						
Iron ore pelletAustraliaRobe River197714.0%Rio Tinto 53.0%	70						
Brazil NIBRASCO 1974 33.0% VALE 51.0%	10						
Moranbah North ^{*1} 1997 6.25% ^{*2} Anglo American 88.0	0% 12						
Warkworth 1990 9.5% Yancoal 84.5%	8						
Bulga 1993 12.5% Glencore 85.9%	7						
Australia Foxleigh 2010 10.0% Middlemount South 7	0.0% 3						
Boggabri 2015 10.0% Idemitsu Kosan 80.0)% 7						
Coppabella and Moorvale19982.0%*2Peabody 73.3%	5						
Canada Elkview 2005 2.5% Teck 95.0%	7						

*1 Grosvenor mine was integrated with Moranbah North in 2020

 $\ensuremath{^{\ast}2}$ Includes the following increase in Equity ratio of Nippon Steel

Trading Moranbah North 1.25%, Coppabella and Moorvale 2.00%

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