

Vale signs agreements to develop Mega Hubs in the Middle East and provide decarbonization solutions for steelmaking

Rio de Janeiro, November 1st, 2022 – Vale S.A. (“Vale”) announces that it has signed three agreements with local authorities and clients to jointly study the development of industrial complexes (“Mega Hubs”) in the Kingdom of Saudi Arabia, the United Arab Emirates, and the Sultanate of Oman to produce low-carbon products to the steelmaking industry.

The parties are seeking to cooperate in the development of these Mega Hubs to produce hot briquetted iron (“HBI”) and steel products to supply both the local and seaborne markets, with significant reduction of CO₂ emissions.

The production of HBI using natural gas emits around 60%¹ less CO₂, when compared to pig iron production through the integrated BF-BOF route. In the future, the replacement of natural gas by hydrogen and the usage of renewable energy could eliminate CO₂ emissions.

Vale is expected to build and operate iron ore concentration and briquetting plants within the hubs, securing supply of high-grade agglomerated products. Local parties are expected to promote the construction of the required logistics infrastructure. Investors and/or clients are expected to construct and operate the direct reduction plants and be off takers of HBI for either the export or domestic markets. These Mega Hubs shall supply different markets across the globe supporting the decarbonization of the steelmaking industry.

Vale’s Chief Executive Officer Eduardo Bartolomeo said: “We are very pleased to announce these partnerships, which we believe will be key to support the decarbonization of the steelmaking industry. With this initiative Vale will guarantee the availability of high-grade agglomerated products and foster the expansion of the low CO₂ emission steel industry.”

Marcello Spinelli, Vale’s Executive Vice President, Iron Ore, said: “We see a great potential in the direct reduction route, with the seaborne demand for these high-grade agglomerated products growing 100 Mt in the next 15-20 years. We shall structurally increase our supply of these highly valuable agglomerated products over the next years, improving the value of our product portfolio. We strongly believe that the Middle East, with its competitive energy prices, strategic location, and entrepreneurial mindset, has a unique set of conditions to successfully develop these integrated hubs.”

This initiative contributes to Vale’s commitment to reduce 15% of net Scope 3 emissions by 2035. Additionally, Vale seeks to reduce its absolute Scope 1 and 2 emissions by 33% by 2030 and achieve net zero by 2050, in line with the Paris Agreement, leading the evolution process towards sustainable mining.

About agreements signed

- On October 26th, 2022, Vale signed a Memorandum of Understanding (MoU) with the Saudi Arabia’s National Industrial Development Center (NIDC) to jointly study a Mega Hub development at Ras Al Khair Industrial City. Under the Ministry of Industry and Mineral Resources, the National Industrial Development Center (NIDC) is responsible for establishing the relationships with leading industrial organizations, driving the industrial development of the

¹ According to IPCC 2019 data, considering scope 1 emissions and a 75% of sinter and 370kg/t of coke rate in BF-BOF burden mix and not considering carbon capture and storage.

Kingdom of Saudi Arabia (KSA), being a reference and thought leader for the local industrial sector, supporting economic and technical leadership in the Kingdom.

- On October 27th, 2022, Vale signed a Memorandum of Understanding (MoU) with the Emirates Steel Arkan (“ESA”) to jointly study a Mega Hub development at Khalifa Economic Zones Abu Dhabi (KEZAD). ESA is a public joint stock company and the UAE’s largest steel and building materials manufacturer. The Group supply the domestic and international markets with high-quality steel finished products including wire rods, rebars, heavy sections and sheet piles. Additionally, the Group produces premium cement, blocks, pipes, and dry mortar, creating an one-stop shop for the manufacturing and construction sectors. The Group plays a major role in contributing to the diversification of the UAE’s economy in line with the UAE Industrial Strategy ‘Operation 300bn’ and the Abu Dhabi Economic Vision 2030. Through SENAAT, Emirates Steel Arkan is part of ADQ, one of the region’s largest holding companies with a broad portfolio of major enterprises spanning key sectors of Abu Dhabi’s diversified economy.
- On October 30th, 2022, Vale signed a Cooperation Memorandum with the Ministry of Commerce, Industry and Investment Promotion of the Sultanate of Oman to jointly study a Mega Hub development at Special Economic Zone at Duqm.

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