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Flexible pathways for green iron production

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Against the background of our industry's decarbonization, iron production is as essential topic for the steel industry and the availability of raw materials (e.g. technological requirement for virgin iron units when producing certain steel grades and –lagging - scrap availability in emerging economies) are two main driving forces.

Traditional, carbon-intense production route can be substituted with cleaner pathways and hybrid plant configurations combining different production routes (DRI, EAF, BF and/or BOF) and different reduction agents/sources of energy represent the main challenge for owners and operators of existing large-scale steel plants.

This article presents technical as well as logistical challenges connected to these hybrid configurations as well as their benefits and bottlenecks with respect to operating cost and carbon footprint.

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