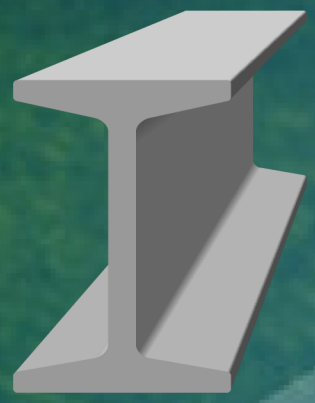
#H2OffThePress

The Green Steel case



A deeper dive into the economics of imports into the EU

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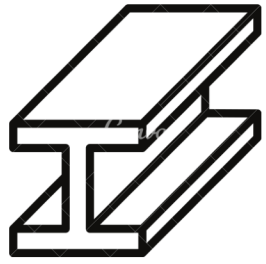
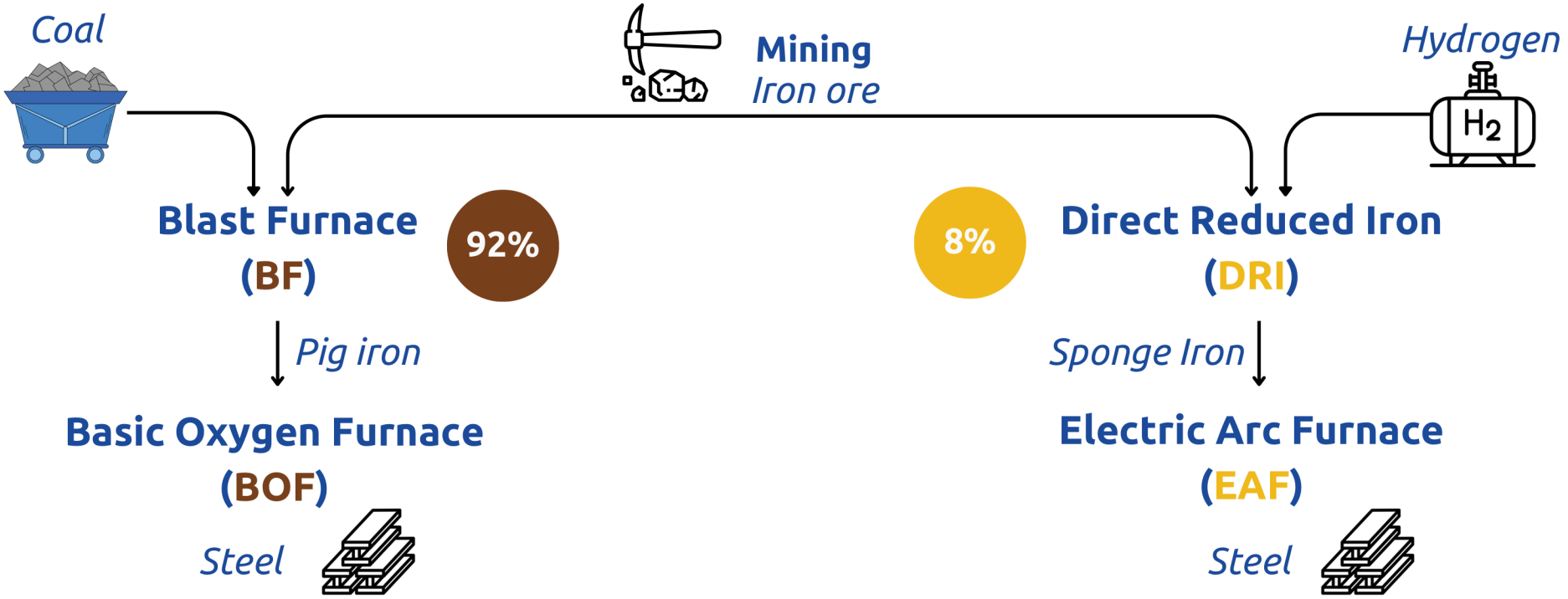
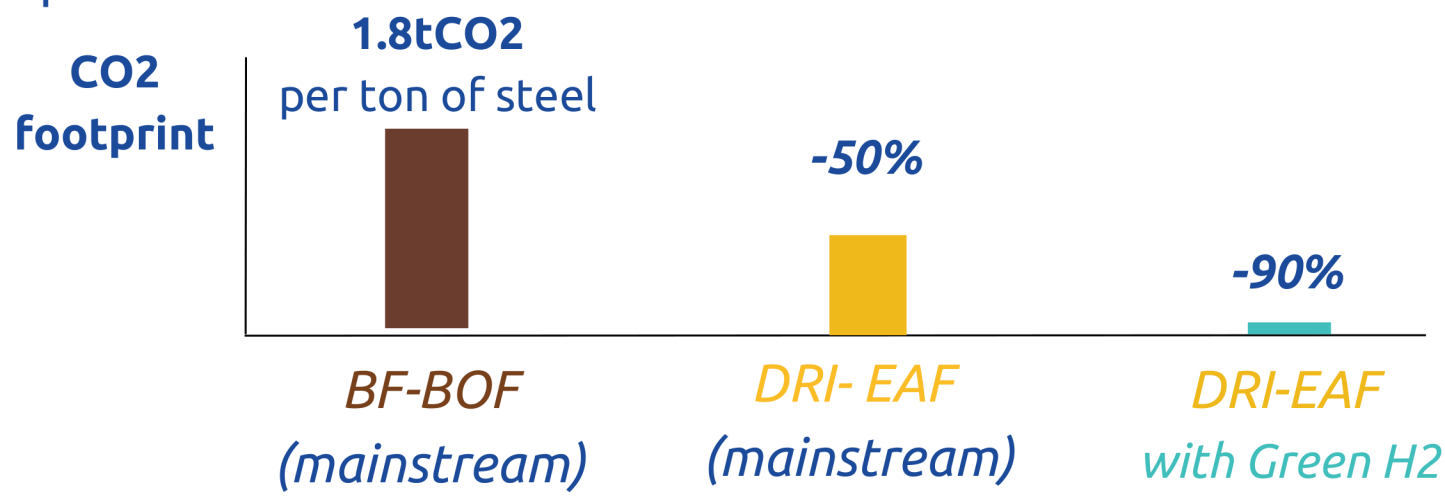
A recap into the different steel production pathways



Two ways of producing steel today



- Hydrogen is already used today in the steel value chain (in the DRI process) but only marginally compared to coal in BF (92% of global iron production)
- **Green hydrogen** use in DRI-EAF process can significantly reduce CO2 footprint



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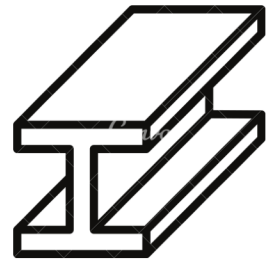
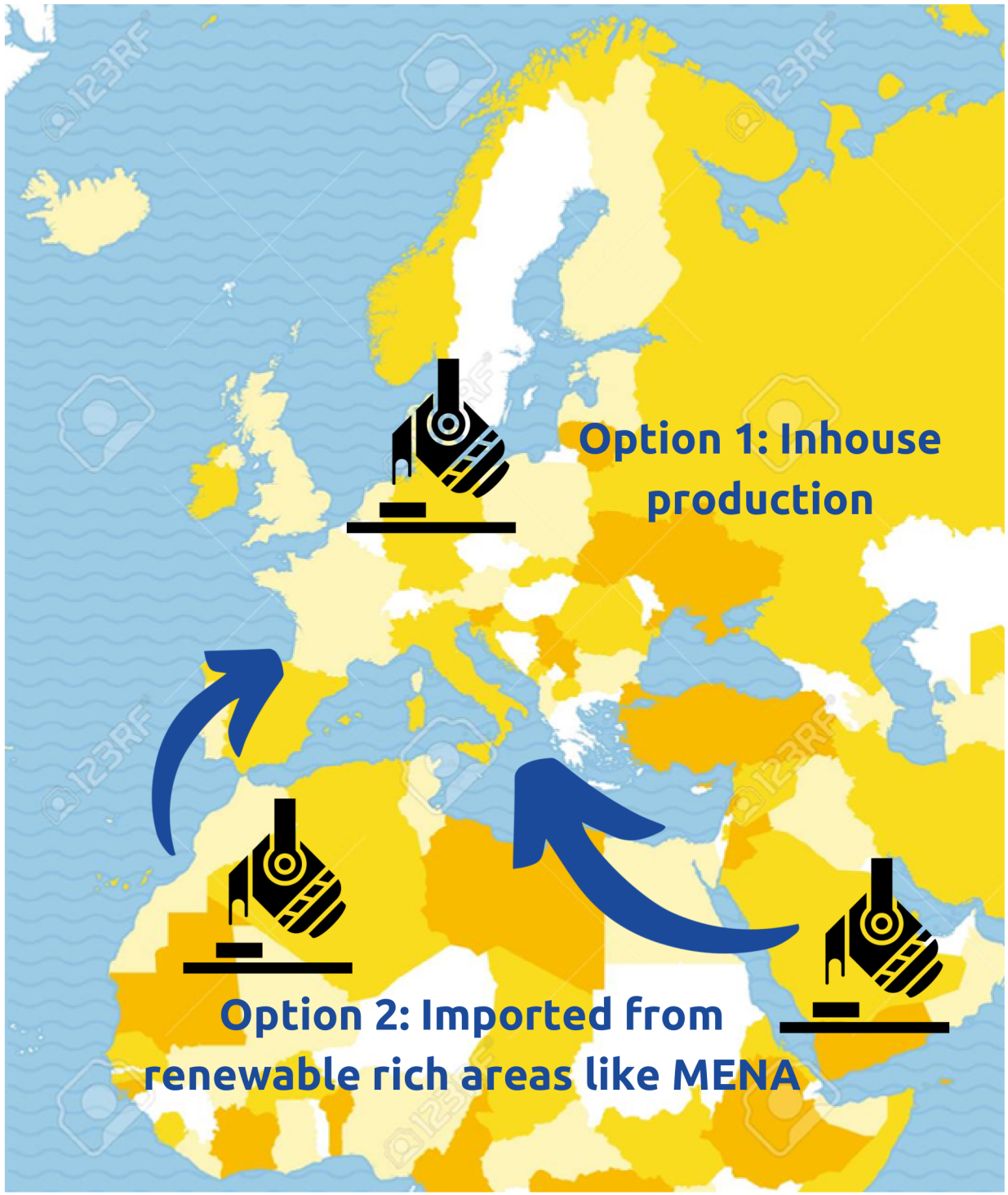
Satiating future green steel demand



With the global steel production set to grow by 36% by 2050 ,the demand for green steel in the EU can be met in two ways



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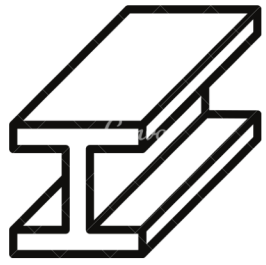
Import HBI into the EU?

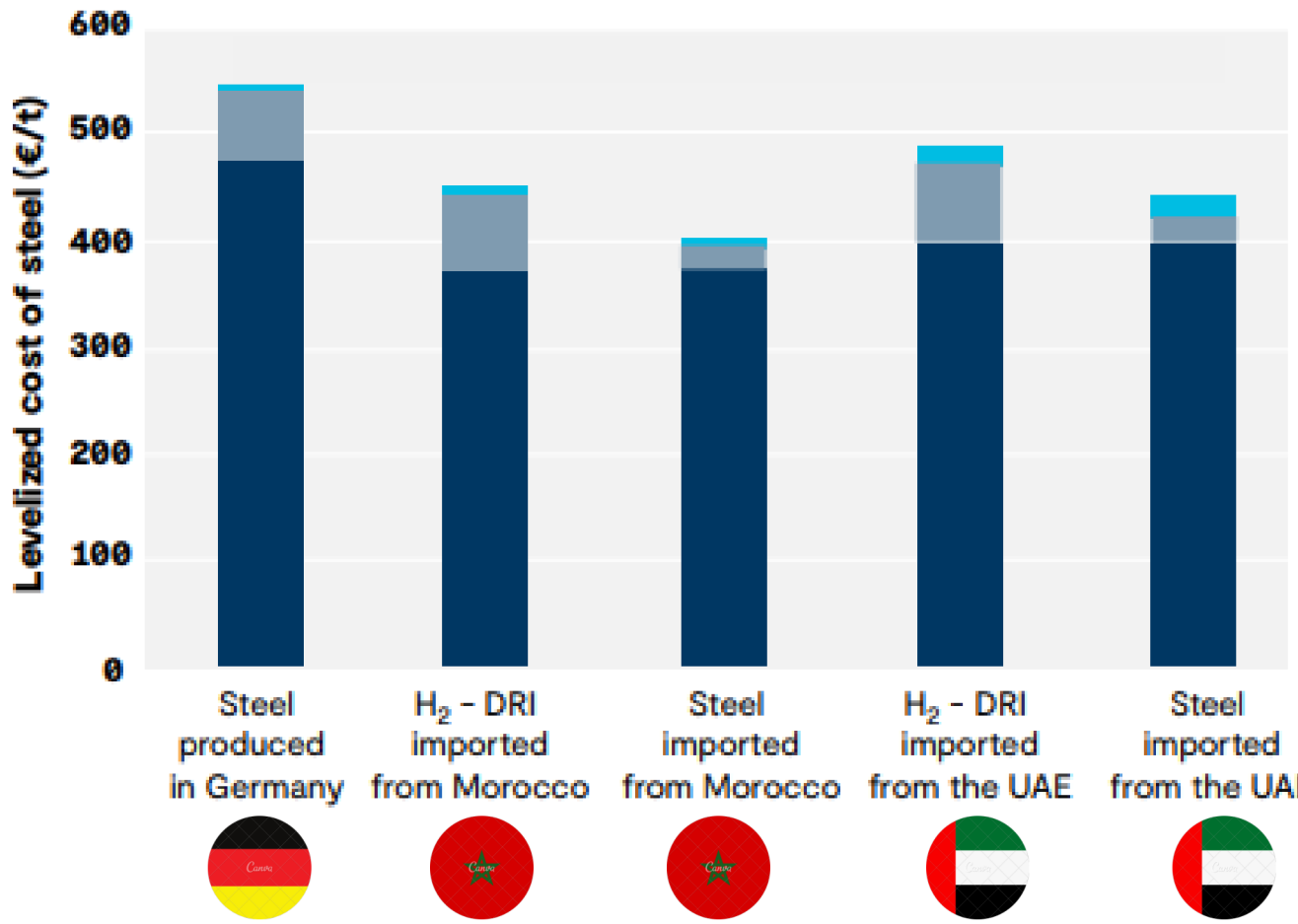


Lets take a case of inhouse production vs imports

Option 1: *An **integrated plant locally** that has a H2-DRI plant, feeding an EAF to produce steel in Germany (largest steel producer in EU)*

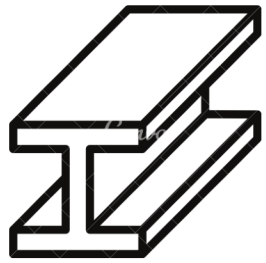
Option 2: *Having **imported H2-DRI as HBI (Hot Briquetted Iron) from overseas** such as Morocco and UAE to feed a local EAF plant in Germany*

Steel imports costs less than inhouse production, primarily due to the cost of fuel for the DRI/BF process according to GHD



*Importing H2-DRI and using an EAF in Germany for steelmaking makes sense today due to the **high number of existing EAF** (20+) in Germany and Europe*

Induction of CBAM makes green imports more plausible



Carbon Border Adjustment Mechanism (CBAM) will be introduced as carbon tariffs to reduce carbon emissions from imported goods and create a fair-trade environment, starting 2026

Currently the EU collectively is the largest steel importer globally with over 40 MT (2022), with imports rising at 7.8% p.a

With CBAM phasing out free allowances by 2034:

CBAM tariffs could increase the cost of steel delivered to the EU by around 56% for India and 49% for China,
both of which combined export 19% of EU's steel

With...

High production costs of green steel in the EU and high import charges on imported conventional steel

+

An existing demand that is rising for green steel such as EU's automobile sector
22 supply agreements despite the current "green premium"

Large scale imports to the EU from renewable rich regions such as MENA are crucial to meet demands economically

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References

GHD, 2023 What's the deal with Green Steel? The Hydrogen Solution

GMK Center, 2023 The implementation of CBAM may lead to an increase in prices for steel imports to the EU

Carbon Chain, **2022** Understand your steel emissions

International Trade Administration, 2023 Steel Imports Report: European Union