

H₂ green steel

An aerial photograph of a large industrial steel mill complex. The mill features several large, reddish-brown buildings and a prominent tall brick chimney. In the foreground, there is a large electrical substation with numerous power lines and towers. The facility is situated in a valley surrounded by dense green forests and rolling hills under a clear blue sky with some light clouds.

Marita Nilsson

Technology Lead Electrolyzer Systems



**Our purpose is to decarbonize hard-to-abate industries
for the sustainable benefit of:**

Customers

Employees

Investors

Society

Our planet

...and we start with steel

The Boden – Luleå region is an ideal location

~300ha land
in Svartbyn

Connection to
400kV national
grid at site

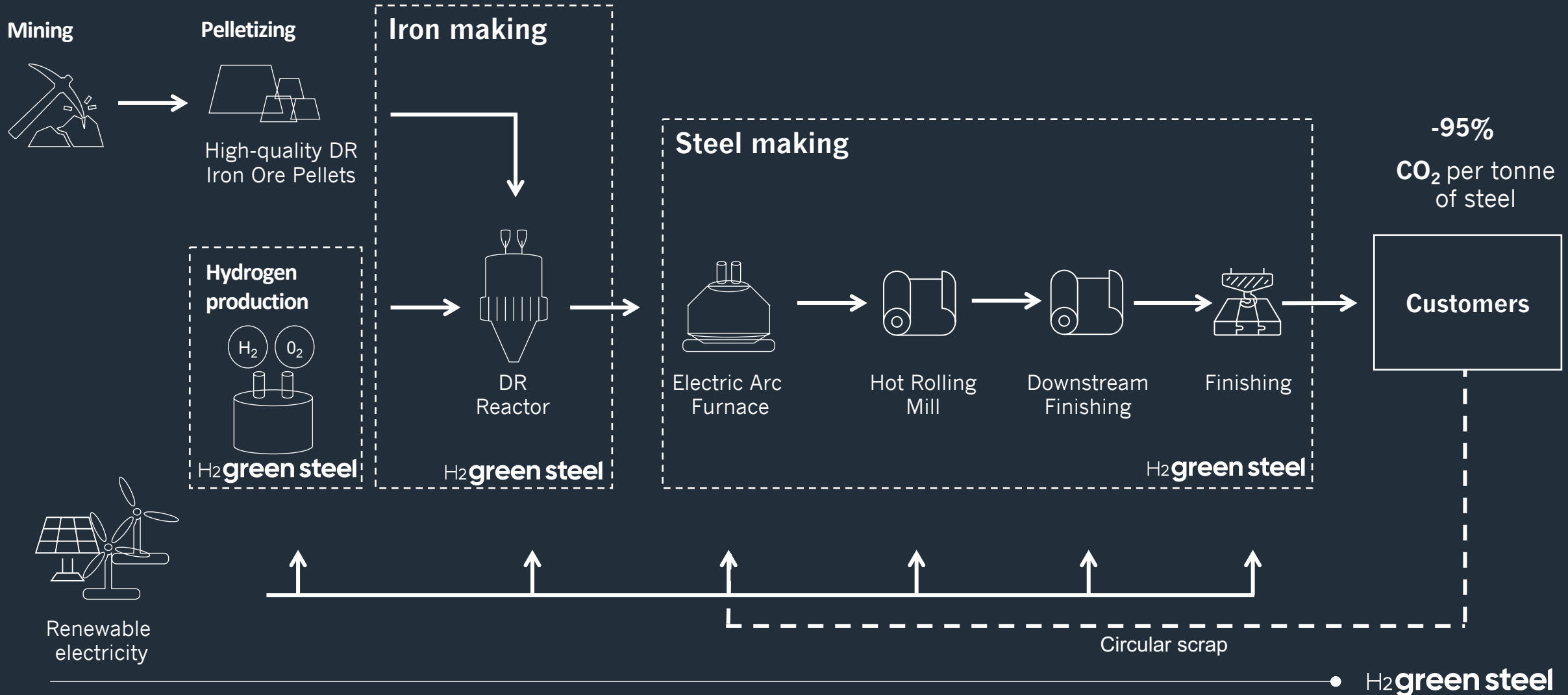
Direct rail access
to high-quality
iron ore from
Malmbanan

Large port
connection
in Luleå

World leading
expertise

H2 Green Steel Boden:

Building three scalable platforms



Q2 2021:

Closed series A financing at €86m

Q2 2023:

Operational permit (and full environmental permit)

H2 2023:

Closing of full financing Boden project €5+ bn

2026:

Ramp-up to full production of 2.5mt hot- and cold-rolled steel

2026-2028:

Expansion – ramp up to full 5mt capacity

Q3 2022:

Series B financing €260m + debt financing €3.5 billion

Q2 2022:

Permissibility permit and construction start

2025:

Production start

2028:

Yearly production of 5mt green steel



5 Mt

green steel

10 000

direct and indirect jobs

€3bn

increased net export value

Movie time



Site October – 2023



1st raise of steel – November 2023

One of the world's largest green hydrogen plants

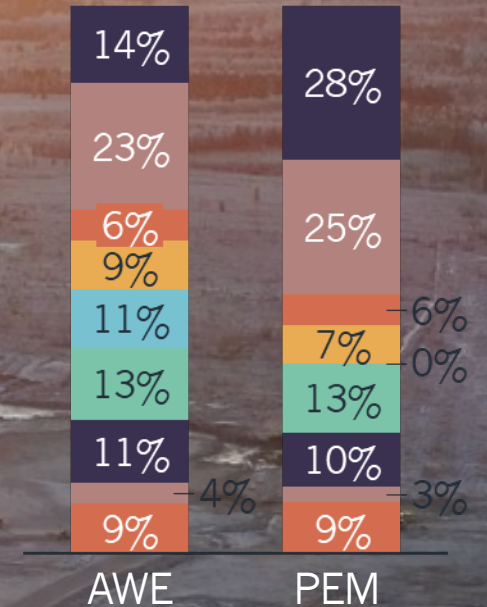
- ~700-800 MW electrolysis capacity
- Different technologies to be integrated into one flow
- Machine learning for optimized financial and operational gain

AWE in Boden – LCOH well below 2050 outlook*

*Source: Wood Mackenzie (On-site renewables, European markets)

- Good fit with mature alkaline technology
- Cost advantage for large scale systems
- Industry committed to scaling up capacity
- Energy efficiency competitive to other technologies
- Stack lifetime superior to other technologies
- 700 MW AWE and potential to integrate other technologies

2030 targets assuming PEM capex is closing in on AWE



H2GS and Thyssenkrupp Nucera have signed a contract for electrolyzer supply to Boden

SvD Näringsliv Nyheter Näringsliv Kultur Ledare Debatt eBvD

Dagens industri START BÖRS MARKNADSNYTT BEVAKNINGAR LEDARE DI TV

H2 Green Steel i mångmiljardavtal med tyska Thyssenkrupp

Klart med mångmiljardsatsning för H2 Green Steel



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H2 Green Steel and thyssenkrupp nucera to build one of the 'world's largest' electrolysis plants

Published 22nd May 2023 by Catherine Hill



REUTERS Business

Thyssenkrupp Nucera to supply electrolysis plant in Sweden

Reuters
May 22, 2023 2:22PM GMT+2 Updated 3 days ago

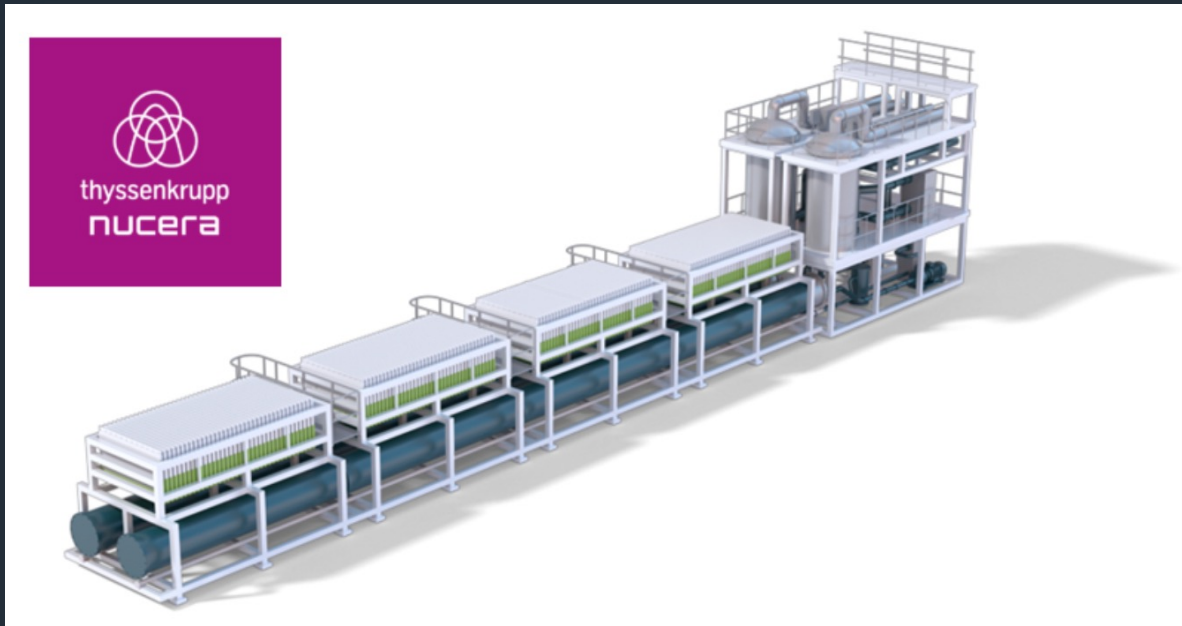


WASSERSTOFF Thyssen-Krupp Nucera liefert Elektrolyseure nach Schweden

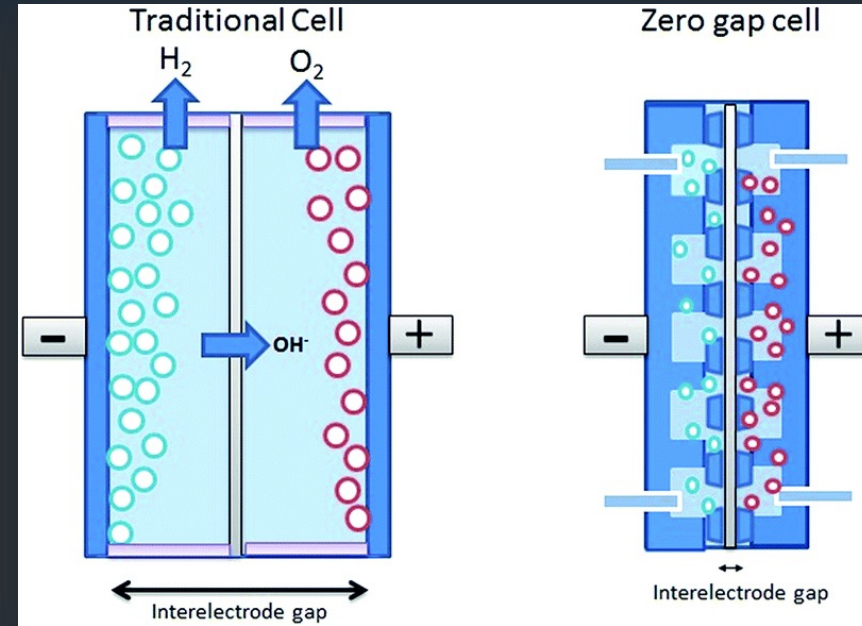
Thyssen-Krupp Nucera soll ein neues Stahlwerk in Nordschweden mit Wasserstoff versorgen. Der wird dringend gebraucht, um grünen Stahl zu erzeugen.

 Isabelle Wermke

Boden electrolyser technology



Economies of scale



Zero-gap design

H2 Labs Piteå



H2 green steel

Boden Phase 1:
700-800 MW electrolysis



H2 labs piteå

Phase 1:
1 MW electrolysis



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