



Vanessa Davidson

*Special Project Manager
Freeport Saldanha*



Vanessa Davidson has been a professional in the marine industry for 18 years. Holding an MPhil from the University of Cape Town (UCT), Vanessa has extensive experience in the boat and ship building and marine fabrication sectors in South Africa.

Ms. Davidson is a Special Project Manager at Freeport Saldanha focused on new port infrastructure in partnership with the Transnet National Ports Authority. She is responsible for Business Development in the marine and green hydrogen sectors. Ms. Davidson has served on a number of technical committees, and she is currently a SAIMI Advisory Board member and a founding Director of Blue Cape, a non-profit company supporting the Blue Economy in the Western Cape.

Internationally she is the Chair of the International Marine Certification Institute (IMCI) responsible for CE and NMMA certification of boats. She is a participating member of the International Council of Marine Industry Associations with representation on the Technical Committee, the Exporters Committee, and the Market Intelligence Committee.

Organization Overview:

The establishment of the Saldanha Green Hydrogen Hub and Western SADC Green Hydrogen Corridor will be catalytic to promote and develop the local, provincial, and regional green hydrogen sector and presents a significant market opportunity for Saldanha and Freeport Saldanha.

With the establishment of the Saldanha Bay GH2 Hub in the national GH2 programme, it is recognized that it can enable green hydrogen and or ammonia exports for South Africa due to significant existing port infrastructure, compared to hubs such as Boegoebaai which will require a new port development. Hence Saldanha can recognize the commercial interests of the country faster and create a further enabling environment for the industry in the region.

Commercial Advantages

- Freeport Special Economic Zone regime, incentives, and benefits



- Significant commercial interest from industry
- Significant commercial interest from financing institutions
- Strategic fit and benefits of a Saldanha Boegeobaai corridor
- Early participation in market and trade initiatives such as the SA EU Green Iron Ore Shipping Corridor Consortium

Opportunities

A major opportunity resides in the re-start of the Arcelor Mittal Steel plant in Saldanha using green hydrogen to produce green Direct Reduced Iron for export. A partnership between Arcelor Mittal SA, Sasol, and Mainstream renewables will enable a catalytic first mover advantage. Green hydrogen producers have already expressed interest in the Saldanha region for the location of green hydrogen production whilst others identify the major geographic advantage offered by the Port of Saldanha as well as existing port infrastructure.

1. Green hydrogen export in the form of ammonia or liquid hydrogen.
2. Green iron and steel production based on conversion of the Saldanha Works steel plant.
3. Bunker fuel produced and supplied as ammonia or e-methanol.
4. Import logistics supporting the development of green hydrogen value chains in South Africa, including the importation of bulky capital equipment for renewable energy generation and electrolysis, as well as for construction of hydrogen infrastructure such as the planned Boegoebaai port.
5. Supply chain enablers including fuel cell production and other component manufacturers.

Supporting Infrastructure

- Water electrolysis from renewable sources in the Western Cape, and potentially in the Northern Cape
- Desalination of sea water for electrolysis (An EA for desalination at Danger Bay is approved and there is an existing desalination plant used by TPT for dust suppression in the port).
- Conversion of green hydrogen produced in the Western and Northern Cape to Ammonia for export and industrial use
- Storage for hydrogen and ammonia
- Electron transmission infrastructure (powerlines)
- Pipelines to transport hydrogen/ammonia and water from desal plants



SOUTH AFRICA
GREEN HYDROGEN
BUSINESS BRIEFING
JANUARY 30, 2024 | HOUSTON, TX



Interests:

- Finance providers offering concessional loans
- Engineering development companies
- Offtakers
- Technology providers
- Regulatory and policy drivers in the U.S. (we are anticipating that it will follow a similar path as the EU Red III policy)