



Northern Cape: The road to the sun

REGIONAL INTEGRATION GH2 DEVELOPMENT PROGRAMME

A Western SADC regional approach for integration to be a global competitive producer

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Richtersveld National Park



Solar panels on a Karoo farm



Province of the
Northern Cape
REPUBLIC OF SOUTH AFRICA



A Western SADC regional approach for integration to be a global competitive producer

Consolidate production volumes while creating common use inputs volumes of consumables that will enhance global competitive prices GH2 derivatives and ensure localization.





2015



Major Milestone measurements

- Global emissions peak and begin to decline.
- Significant reduction in coal power usage.
- Large-scale adoption of electric vehicles (EVs).
- Enhanced energy efficiency measures widely implemented.



2050



Vision for Namibia's three green valleys

Illustrative

Northern Region

Hybrid renewable production (solar PV + onshore wind) will feed electrolysis plant and ammonia production near the new port facility



NH₃ and synfuels export

NH₃ export

hydrogen boats

Walvis Bay port

hydrogen locomotive

Confirmed pilot projects in Central Region

Project 1: Green Hydrogen Applications in the Port Environment

Project 2: Hydrogen-Diesel Dual Fuel Locomotive Pilot Project Proposal for Namibia

Project 3: Daure Green Hydrogen - agriculture

Project 4: hydrogen-Pilot Plant / Refueling Station in Walvis Bay

CO₂ import

Central Region

Solar PV power production with electrolysis, ammonia and terminal for synfuels for export from Walvis Bay port; hydrogen can be also used domestically for trains, agriculture, and boats



Southern Region

Hybrid renewable production (solar PV + onshore wind) will feed electrolysis and derivative plants for export from Luderitz port connected by a hydrogen pipeline

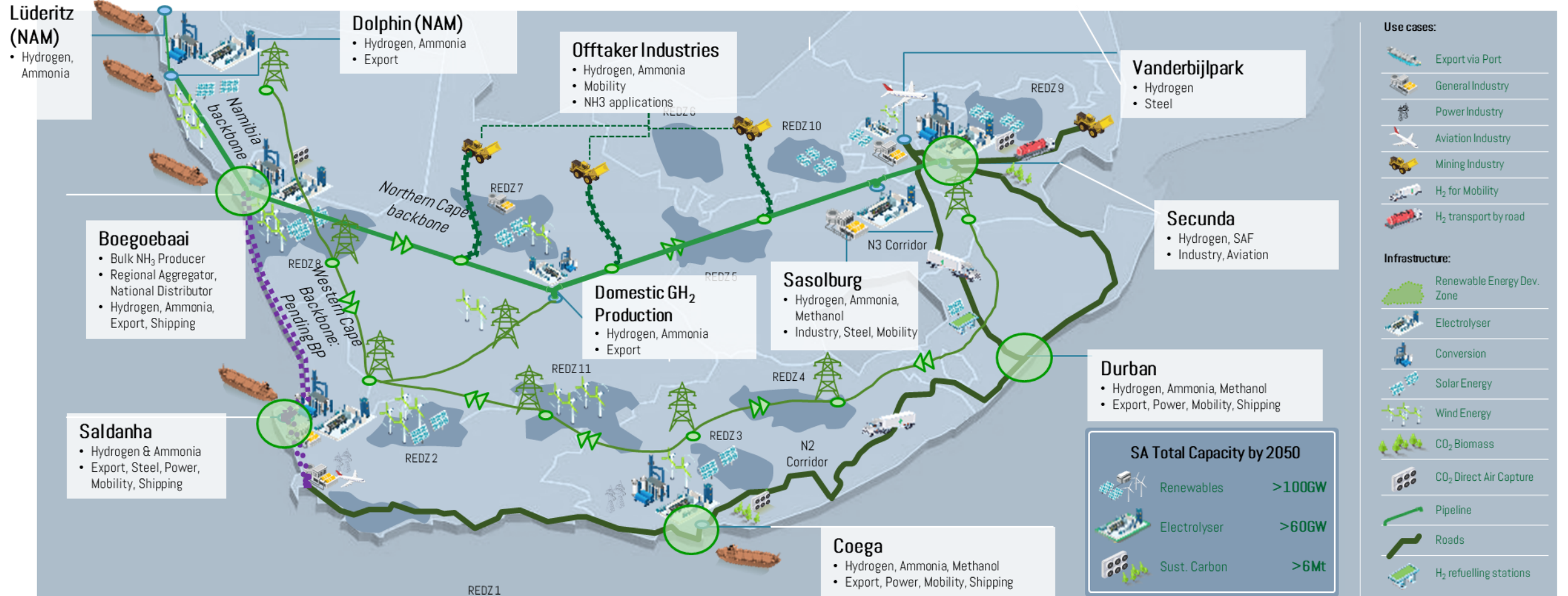
Luderitz port

NH₃ export

THE SOUTHERN AFRICAN GREEN HYDROGEN VISION



The Northern Cape wants to position itself as a leader in the GH2 economy, creating benefits for the province and South Africa and the Southern African Development Community (SADC), that ultimately feed into and leverage opportunities nationally and even regionally.



National GH₂ production capacity could be in the order of 10MT by 2050

Moving at speed with a co-ordinated approach across the SA landscape is critical to building optimal capacity and capabilities

GOVERNMENT NOTICES • GOEWERMENTSKENNISGEWINGS

DEPARTMENT OF TRADE, INDUSTRY AND COMPETITION

NO. 4850

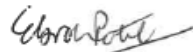
21 May 2024

DESIGNATION OF THE NAMAKWA SPECIAL ECONOMIC ZONE

I, Ebrahim Patel, Minister of Trade, Industry and Competition, hereby designate the Namakwa Special Economic Zone (SEZ), in terms of the Special Economic Zones Act No. 16 of 2014. The SEZ's total land area is 1270.06 ha and is located in Namakwa, Northern Cape, bordered on the north by the N14 road, which links to the town of Pofadder to the east and the town of Aggeneys to the west. The Namakwa SEZ land area will comprise of the following three (3) land parcels;

1. Remainder of the Farm Aroams, No. 57 with a total land area of 889.02825 ha, bordered on the north and west by the N14, in the east by Portion 4 of Farm Gams No 60 and the south by Portion 1 of Farm Bloemhoek, No.61;
2. Portion 1 of the Farm Gams, No. 60 with a total land area of 11.82596 ha, bordered on the north and west by Remainder of the Farm Aroams, No. 57, on the east by Portion 4 of the farm Gams No.60 and on the south by Portion 1 of Farm Bloemhoek No 61;
3. Portion 1 of Farm Bloemhoek, No.61 with a total land area of 369.21363 ha, bordered on the north by Remainder of the Farm Aroams, No. 57, in the west by the N14, in the south by remainder of Farm Bloemhoek, No 61 and in the east by Portion 1 of Farm Gams, No 60.

A table listing the erf numbers and maps indicating the boundaries of the SEZ are attached as Annexure A.



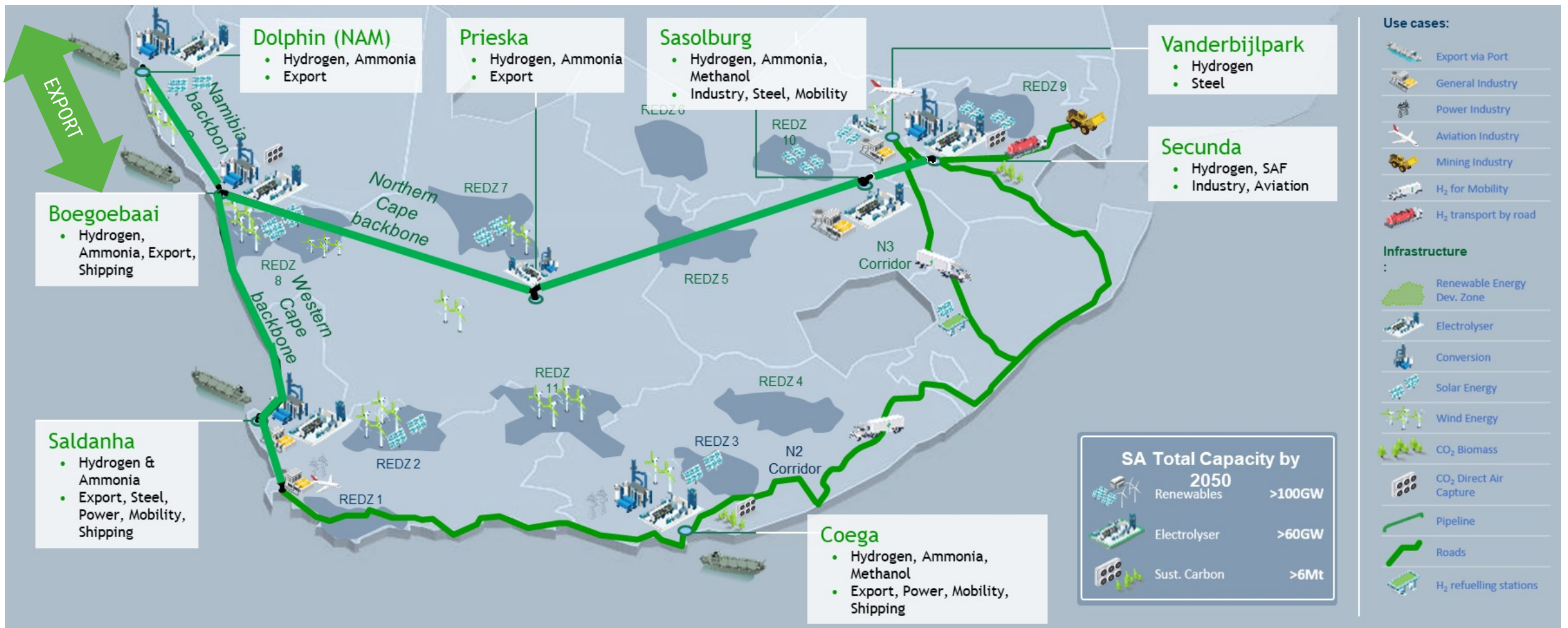
Ebrahim Patel

Minister: Trade, Industry and Competition

20 / 05 / 2024



SOUTHERN AFRICAN GREEN HYDROGEN VISION





Legend of Map: GH2 Production Centre and/ long-term offtakers

- ● Track 1: Existing industry composition
- Track 2: Existing industry that can expand and diversify
- Track 3: New industry establishment and GH2 opportunity

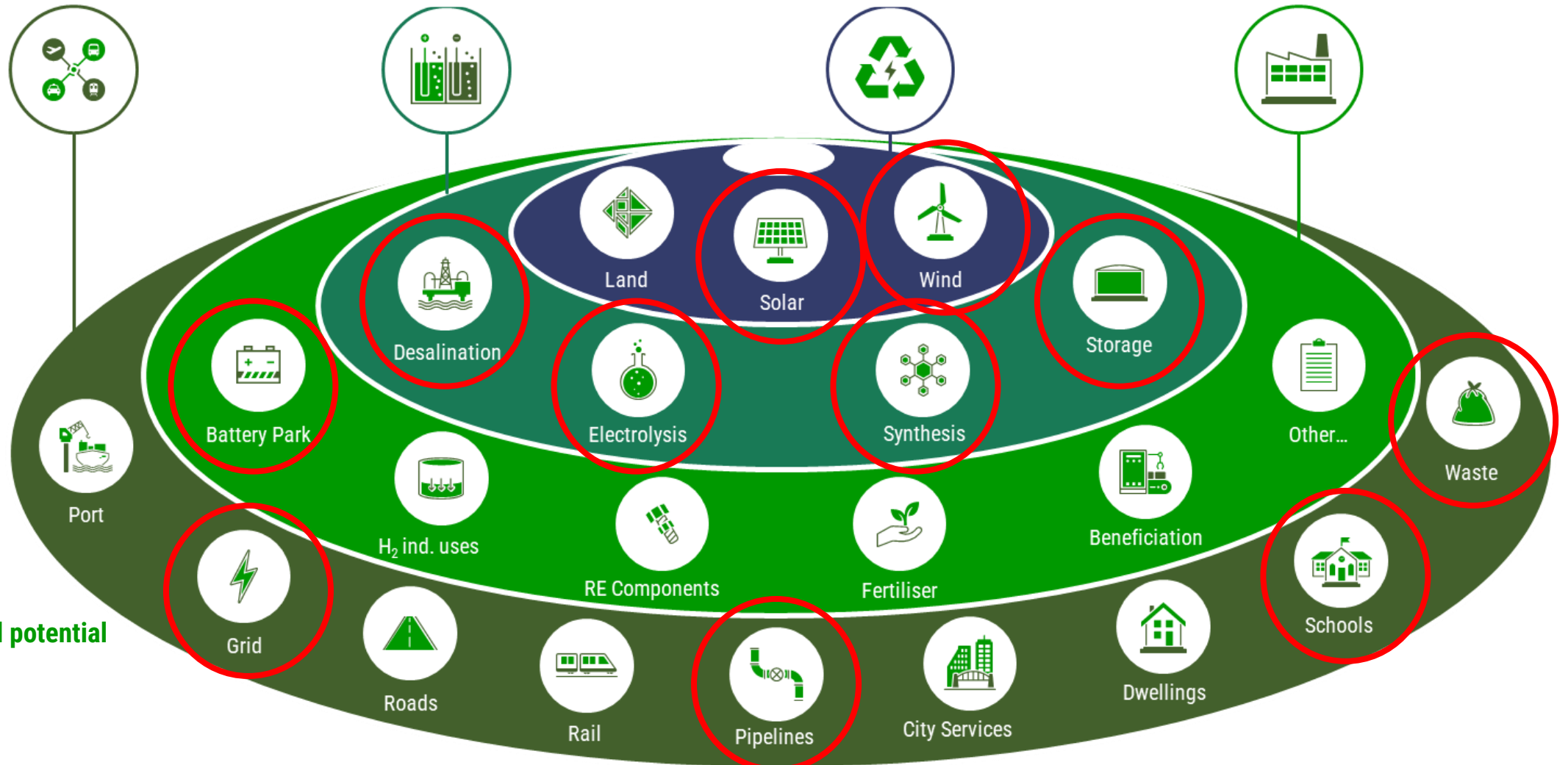
Production output and/ consumption potential:

- A: Complete 40GW throughput and impacted areas
- B: > 10 GW
- C: > 5 GW
- D: > 2 GW

Key common areas of need, use and potential:

Infrastructure

Industry



Legend:
Common need and potential



Opportunity: An extended term of regional volume of consumption will enhance the business case for co-location and localization of industry for inputs to value chain but also to upstream value addition.

Aggregation of GH2 volume and abovementioned will create a global competitive advance.

Areas of integration will be along common need, use and potential that entail:

- Common Human Capital demand warrant local training enhancement and local training institution.
- Industrialization via electrolyser, wind, solar, desalination, pipe, grid: The Boegoebaai Programme require for a 40GW Electrolyser capacity which translates to an estimated **9 700 wind turbines** and **160 000 000 solar panel** combined with the demand of the project and the southern Namibian ambition of 35GW, which effectively doubles the demand in terms of RE components.
- Value addition to local mineral resources.
- GH2 volume aggregation for export is key together with and South African 2 500 000 tons domestic utilization demand.
- Need to focus on certified export and balance demand with early offtake for FID on South African carbon intensive hard to abate sectors.

Northern Cape Green Hydrogen Ecosystem to support a Just Transition ...



Just Transition Framework



THANK YOU



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