Strategic projects that can realise Africa’s green hydrogen potential

Morocco
- Amun – CWP Global and Bechtel
  - 900,000 tonnes per annum
  - 15 GW RE
- Guelmim-Oued Noun – Total Eren
  - 710,000 tonnes per annum
  - $10 billion (investment required)
- Hevo Ammonia
- Morocco project
  - 31,000 tonnes per annum
- Masen Green Hydrogen
  - 8,400 tonnes per annum

Mauritania
- Project Nour – Chariot and TotalEren
  - 1.2 metric tonnes per annum
  - 10GW Electrolyser
  - $3.5 billion (investment required)
- Aman – CWP Global
  - 1.7 metric tonnes per annum
  - 15GW Electrolyser and 30GW RE required
  - $40 billion (investment required)
- Masdar-Infinity-Conjuncta
  - 8 metric tonnes per annum
  - 10GW Electrolyser
  - 15GW of electricity
  - $34 billion (investment required)
  - bp
    - Potential production capacity of 2mt per annum, up to 30GW of electricity

Angola
- Sonangol, Conjuncta and Gauf Engineering
  - 280,000 tonnes of green ammonia per year
  - 400MW of RE

Namibia
- Tsau Khaeb – Hyphen
  - 300,000 tonnes per annum (tonnes per annum)
  - 3GW Electrolyser, 5GW RE
  - $9.4 billion (investment required)
- Daures Green Hydrogen Village
  - 350 000 tonnes of ammonia
  - Phase 1 has the potential to provide over 50 ongoing sustainable jobs, 100 temporary jobs.
- Renewstable® Swakopmund – HDF Energy and EIB
  - Green Baseload Hydrogen Power Plant
  - 1,400 tonnes of green hydrogen per annum (storage)
  - $300 million (investment required)

South Africa
- Boegoeibaai hydrogen cluster – Sasol, ArcelorMittal
  - 40 GW
  - $5.3 billion (investment required)
- Freeport Saldanha Industrial Development Zone, Vanderbijlpark – Sasol, ArcelorMittal
  - Green Ammonia Plant – Hive hydrogen
  - 780,000 tonnes per annum green ammonia
  - $4.6 billion (investment required)
- Renewstable® Mpuumalanga – HDF Energy
  - Green Baseload Hydrogen Power Plant
  - 18,000 tonnes of green hydrogen per annum (storage)
  - $3 billion (investment required)

Egypt
- Amea Power, SCZone, Sovereign
  - Wealth Fund of Egypt
  - 800,000 tonnes of green ammonia per year
  - $4 billion (investment required)
- Masdar, Infinity and Hassan Allam
  - 2.3m tonnes per year of ammonia fed by 2 GW electrolyser
  - $7 billion (investment)
- Globeleq
  - 2 million tonnes a year of green ammonia
  - 3.6GW electrolyser
  - 9GW of solar and wind
  - $8.5 billion (investment required)
- Total Energies
  - 4.8 GW electrolyser
  - $1.43 billion (investment required)
- Fortescue-Egypt-gH2
  - 300,000 tonnes per annum, 9.2GW RE
  - $20 bn usd (investment required)
- SCZONE-SCZone Power
  - 200,000 tonnes per annum
  - $6.25 billion (investment required)
- Alfanar
  - 500,000 tonnes per year of green ammonia
  - $4 billion (investment required)
- EDF
  - 700MW Electrolyser capacity
  - $2 billion (investment required)
- SCZone and H2 Industries
  - Port Said waste-to-hydrogen plant
  - 300,000 tonnes of green hydrogen per annum
  - $4 billion (investment required)
- Egypt Green SPV Ain Sokhna, Scatec, OCI,Orascom, Sovereign
  - Fund of Egypt and Fertiglobe
  - 15,000 tonnes of green hydrogen per annum
  - 100 MW Electrolyser, 260MW RE capacity
  - $16.5 billion (investment required)

Ethiopia
- Fortescue planning to develop a project

Kenya
- Fortescue
  - 300MW of Green Ammonia based fertilizer using steam from Olkaria
- KenGen Green Hydrogen, Ammonia to Green Fertilizer
  - 5MW Demonstration Plant, commissioning 2025 (Phase 1)
  - $5 Million (investment required)
- Renewstable® Kenya – HDF Energy
  - Green Baseload Hydrogen Power Plant
  - 2,800 tonnes of green hydrogen per annum (storage)
  - $500 million (investment required)

Angola
- Sonangol, Conjuncta and Gauf Engineering
  - 280,000 tonnes of green ammonia per year
  - 400MW of RE

*Every effort has been made to provide information that is current and accurate. Nevertheless, inadvertent errors in information may occur.
The world does not stand a chance of keeping to 1.5 degrees without a massive scale up of renewable energy and the green hydrogen economy.

Unlocking this potential to decarbonise the economy and transition away from fossil fuels requires investments at unprecedented scale.

Realising the Africa Green Hydrogen Alliance’s potential will require nearly $1 trillion in cumulative investment by 2050. This translates to about $6 billion each year between now and 2030.

Significant additional investment will be required to build enabling infrastructure and end use equipment to transport and deploy green hydrogen and its derivatives in hard to decarbonise sectors.

The energy transition will not succeed unless public institutions crowd in private capital for investments in the green energy sector in developing countries and emerging economies.

Recognising that financial resources are limited, financing instruments need to be deployed effectively and in accordance with the Bridgetown Agenda.

The Africa Green Hydrogen Alliance represents governments with high renewable energy potential seeking to seize the opportunities the green hydrogen economy offers.

We call for public and private finance institutions to invest $6 billion each year between now and 2030 into renewable energy and green hydrogen projects.

These projects and related investments into grids and infrastructure need to be sustainable and drive domestic green industries and benefit African citizens.

An African renewable energy and green hydrogen economy financing vehicle could be established to pool capital from development finance institutions and institutional investors.

The vehicle could provide funding for project development, construction and infrastructure.

The Africa Green Hydrogen Alliance looks towards COP28 as a key opportunity for announcing firm financing commitments and investment partnerships.

### Production Target
- **2030**
  - 6 million tonnes
  - 97 GW of RE capacity
  - 56 GW of electrolysers
  - USD ~60 billion financing needed
  - Domestic Demand: 1.8 million tonnes
  - Export Potential: 4.1 million tonnes
  - Impact: 0.2 Gt of CO2e reductions globally
  - 0.4 million jobs created

- **2050**
  - 60 million tonnes
  - 975 GW of RE capacity
  - 560 GW of electrolysers
  - USD ~1 trillion financing needed
  - Domestic Demand: 18.2 million tonnes
  - Export Potential: 40.7 million tonnes
  - Impact: 6.5 Gt of CO2e reductions globally
  - 4.2 million jobs created