

# Trends to watch Hydrogen

## **HYDROGEN IN AFRICA**

By 2035, 50 million tonnes of green hydrogen produced in Africa could become the key to a global energy transition. Many African countries offer excellent conditions for the cost-effective production of hydrogen. Solar and wind energy to power the plants are abundantly available and the water needed can be obtained directly from the sea with the help of desalination plants. African countries are becoming key players in global energy supply, decarbonisation of industry and can make their own industrialisation green.

However, for the H2 economy to take off, strong partnerships, infrastructure development and financing offers for the capital-intensive H2 projects are needed.

## **POTENTIALS & FRAMEWORK CONDITIONS**

#### Algeria

Energy partner with logistics infrastructure to Europe and national H2-strategy

#### Morocco

Energy partner with logistics infrastructure to Europe, H2 investment from the private sector and cheap, green energy

#### Mauritania

Location with ideal solar and wind power and political will to build an H2-economy

#### Angola

Energy partner with H2 diplomacy office on the way to the energy transition from oil to renewable energy

#### Namibia

H2-partner and globally unique location for solar and wind energy and thus for green H2-production Tunisia

Energy partner with logistics infrastructure to Europe and well-qualified professionals

#### Egypt

H2-partner with H2-investments from the private sector and good framework conditions

#### Djibouti

Logistics hub with good solar and wind power for H2-production

#### Ethiopia

Energy partner with project for H2-aviation fuel

#### Kenya

Energy and climate partner with a good investment climate

#### South Africa

Energy partner with H2-research, private sector investment and high energy demand on the way to energy transition



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### **FUNDING PROGRAMMES & MEASURES**

<u>H2Global</u>: The H2Global programme aims to invest in the construction of H2-production plants on an industrial scale and in the associated supply chains, to transport the produced energy sources to Germany and sell them at competitive prices. The German government is providing €900 million for the programme in the first funding window and €3.53 billion in the second.

<u>PtX-Growth Fund</u>: The Growth Fund supports German and European companies with headquarters or operations in Germany. It is intended to subsidise investments that have an impact on the economy and can contribute to the global market ramp-up of green H2. The fund is to be endowed with €300 million.

<u>PtX-Development Fund</u>: The aim of the development fund is to support the establishment of local value chains and the use of hydrogen and derivatives in developing and emerging countries. The fund is to be endowed with €250 million.

<u>PtX-Hub</u>: The platform provides an international network for knowledge exchange to advance sustainable H2 and PtX production.

<u>H2Diplo | Diplomatic Offices</u>: The aim of H2Diplo is to outline options for a decarbonised energy export economy for partner countries. It also aims to create a network of various stakeholders from politics and business and offer expert advice on the opportunities and challenges of the H2-economy. In Africa, there are currently H2 diplomacy offices in Angola and Nigeria.

<u>Atlas of Green Hydrogen Generation Potentials in Africa</u>: The H2-Atlas identifies potentials for the production of H2 from renewable energy sources and possible partner countries for the import of green H2 in Western and Southern Africa.

<u>H2Uppp</u>: H2Uppp supports SMEs in identifying, preparing and implementing pilot projects for the production and use of green hydrogen in developing and emerging countries using innovative German and European technology know-how.

## POLICY DEMANDS AND RECOMMENDATIONS FOR ACTION

- Develop competitive financing and support instruments for capital-intensive H2 and renewable energy projects; expand existing instruments such as investment and export credit guarantees to enable project for production, conversion and use of H2.
- Promote qualification of skilled workers and professional exchange programmes with funds of development cooperation
- Establish energy and climate partnerships with fossil-dependent countries
- Form fair and sustainable partnerships through acceptance and inclusion of the local population