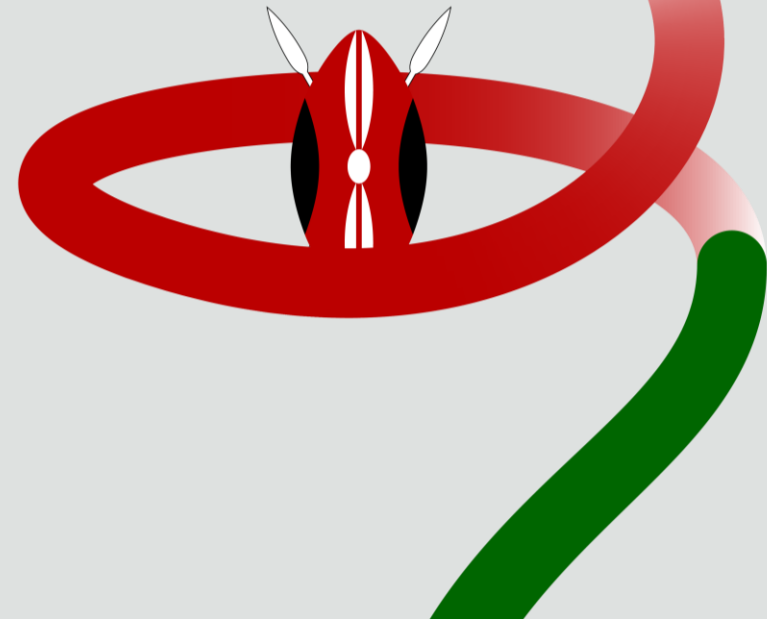


# Rödl & Partner

## KENYA

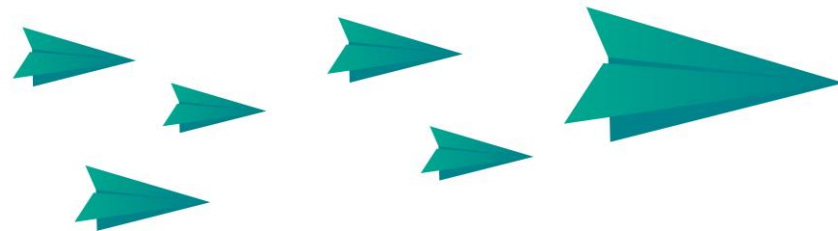
### REGULATION OF H<sub>2</sub> PRODUCTION

16<sup>th</sup> November 2023



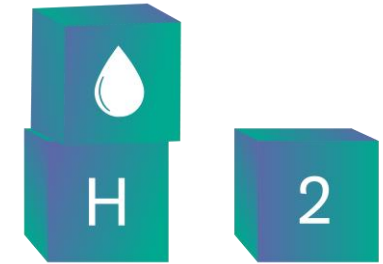
## Overview

- Kenya is a leader in terms of renewable energy production.
- More than 90% of the electricity generated and used comes from renewable energy sources.
- Kenya has an installed capacity of 3081 MW with IPPs supplying 35% of the capacity and accounting for about 60% of energy purchased by the national off-taker.
- Current demand closely meets available capacity however a new opportunity lies in green hydrogen, the topic of discussion today.



## Green Hydrogen Strategy and Roadmap for Kenya

- Launched in September, 2023 at the African Climate Summit by Kenya's President Ruto and EU Commission President Ursula von Der Leyen.
- It was developed by the Ministry of Energy and Petroleum in Kenya with support from European Union Global Technical Assistance Facility (GTAF), EU Delegation, GIZ.
- The implementation plan has 2 phases:
  - Phase 1 (2023 – 2027) Domestic Market Development
    - **Develop policy and regulatory instruments**
    - Operationalising the first commercial scale projects intended for fertilizer and methanol production.
    - Replacement of 20% of imported nitrogen fertilizer (100,000 tonnes) and 100% of methanol
    - Targeted creation of 150MW of dedicated renewable energy capacity, 100MW of electrolyser capacity
  - Phase 2 – (2028 – 2032) Domestic Market Growth
    - 50% replacement of imported nitrogen fertilizer (300,000 – 400,000 tonnes) and export
    - Pilot projects in other sectors – provision of baseload power and transport
    - Targeted creation of additional 350-450MW of dedicated renewable energy capacity, 150 - 250MW of electrolyser capacity





## Funding and Projects

### Funding and De-risking Opportunities

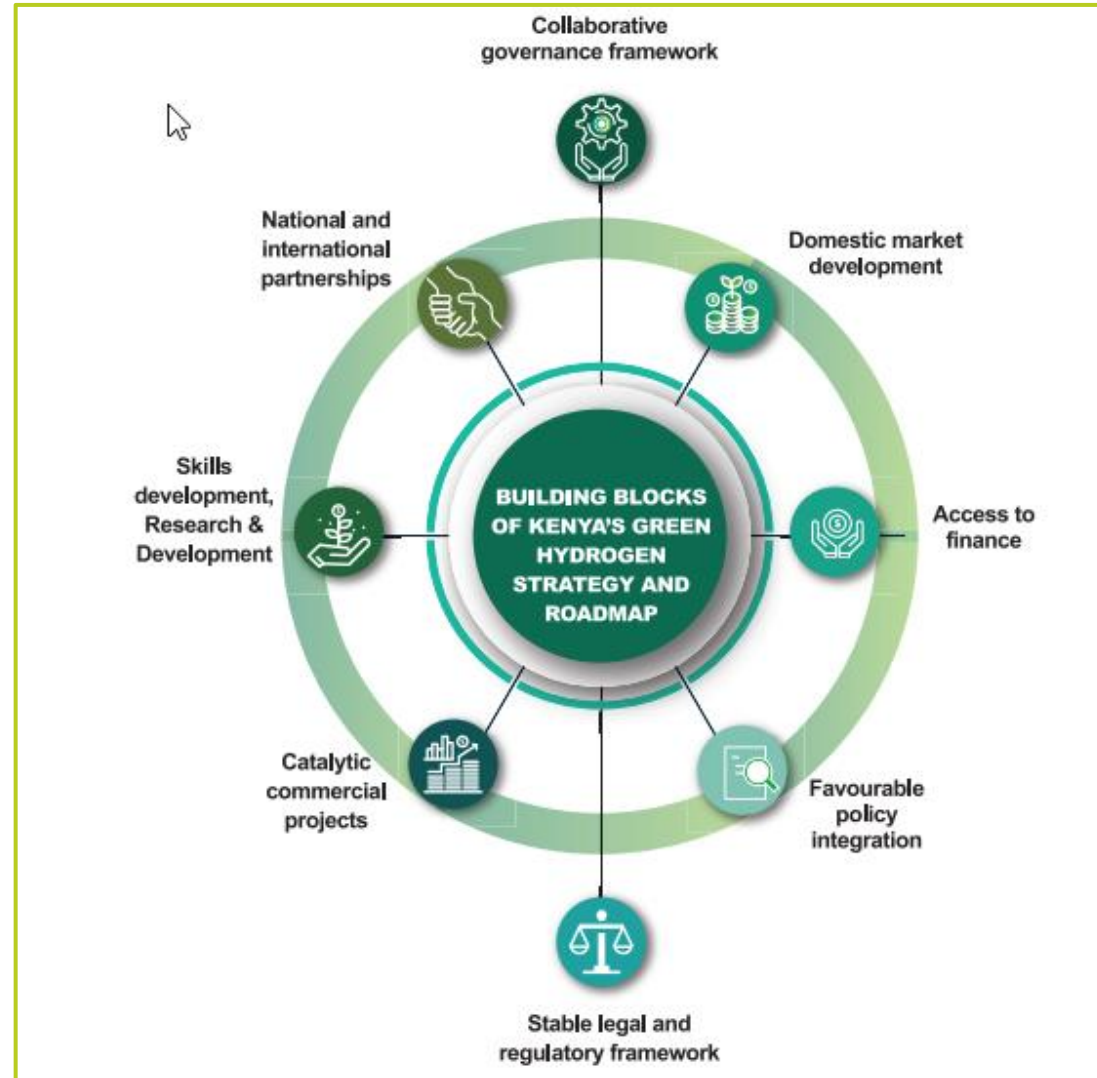
- **EU Hydrogen Bank** – Besides financing local (EU) production, has international component to support international hydrogen production aimed at international imports into the EU.
- **EU-EDFI Private Sector Development Facility EEDF (EIB)** - Support private sector projects in the energy sector that address the objectives at an early stage of development and/or have a higher risk profile than normally would be acceptable to them.
- **European Fund for Sustainable Development Plus (EFSD+)** – Provides guarantees for projects in challenging markets. Blending facilities through grants and loans where guarantees do not address risk.
- **H2Global instrument** – Uses the contracts for differences approach. Hydrogen Intermediary Company GmbH a government backed off-taker, compensates difference between supply prices and demand prices.

### Projects

- **HDF Energy (FR)** - Announced at the Nairobi Climate Summit its intention to set up a green hydrogen plant in Kenya. Intended to use 180MW of solar combined with 500 MWh of hydrogen storage. Investment of USD 500,000,000.

# BUILDING BLOCKS OF KENYA'S GREEN HYDROGEN VISION

Figure: Green Hydrogen Strategy and Roadmap for Kenya



# REGULATION CONSIDERATIONS

- **Appreciation of technology** (green hydrogen is still not being produced in large quantities)
- **Highly Capital Intensive** (assessing demand before making the investment in a new area)
- **Standard setting and monitoring** (This current list of standards in Kenya is not exhaustive and is expected to develop further. There is also need to ensure that the standards are also adhering to the international standards that seems to be varying from one region to the other)
- **Appreciating a reliable and coordinated supply chain** that manages the production, transportation, and all the potential uses. (potential uses including but not limited to industry, transport, and power. A feedstock in the chemical industry specifically for the production of ammonia (used in nitrogen fertilisers) and methanol. Decarbonising the road transport sector, and its derivatives can also decarbonise shipping (via ammonia or methanol) and aviation (via sustainable aviation fuels, SAF). As a means of energy storage and to provide baseload power in the electricity sector.
- **Political will power** (Tax incentives and supportive regulatory framework)

# RELEVANT LAWS

1. Environmental Management and Coordination Act , Act No. 8 of 1999
2. Water Act , Act No. 43 of 2016
3. Land Act, Act No. 6 of 2012 (land purchase, leasing or change of use)
4. Physical and Land Use Planning Act, Act No. 13 of 2019
5. Energy Act, No 1 of 2019 (Energy and Petroleum Regulatory Authority)
6. National Construction Authority Act, No 41 of 2011
7. Special Economic Zones Act, 2015 No. 16 of 2015
8. National Transport and Safety Authority Act, Act. No. 33 of 2012
9. Occupational Safety and Health Act, No. 15 of 2007
10. Standards Act, Chapter 496 of the Laws of Kenya
11. Fertilizer and Animal Foodstuff Board of Kenya Act, CAP 245 of the Laws of Kenya (FABK)

# GREEN HYDROGEN AND ITS DERIVATIVES GUIDELINES

## Current Regulatory Structure

### ➤ **Green Hydrogen Program Coordination Committee (GH2-PCC)**

(multisectoral committee comprising government ministries and state agencies relevant to the green hydrogen economy, private sector and civil society)

### ➤ **Kenya Green Hydrogen Secretariat (Secretariat) under the Ministry of Energy and Petroleum (MoEP).**

(Supports the functions of GH2-PCC)

(operates as a “one-stop-shop” to enhance efficiency and provides support to streamline project approval processes, fast-track implementation of flagship projects, and provide market research and value chain analyses.)

### ➤ **Energy & Petroleum Regulatory Authority (EPRA)**

(Its role includes consolidating the laws relating to energy; promotion of renewable energy; exploration, recovery and commercial utilization of relevant energy forms as are relevant to the national energy policy)

(Has issued draft guidelines in consultation with stakeholders to ease engagements between investors, the GH2-PCC and Secretariat, and other industry participants to accelerate investment in the sector.



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