



IPHE Country Update Jun 2025– Nov 2025:

South Africa

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1. New Initiatives, Programs, and Policies on Hydrogen and Fuel Cells

- **Regional Hydrogen Strategy: Development of the West Coast Green Hydrogen Masterplan**

The Council for Scientific and Industrial Research (CSIR) has been appointed to lead Phase 1 of the West Coast Green Hydrogen Master Plan for the Saldanha Bay region, marking a major step in advancing South Africa's ambition to establish Saldanha as a globally competitive green hydrogen production and export hub. Working in partnership with Freeport Saldanha, the project initiator, the CSIR will coordinate a multi-stakeholder effort across national, provincial, and local government, key state-owned entities such as the Transnet National Ports Authority, industry partners, and civil society. Phase 1 will focus on land-use assessments, infrastructure requirements, regulatory needs, and long-term investment pathways. The initiative aligns with the Western Cape's Green Hydrogen Strategy and leverages the region's renewable energy potential and desalinated water resources to serve hard-to-abate sectors like heavy industry, long-haul transport, and maritime shipping. Freeport Saldanha has expressed confidence that the partnership will deliver a robust Master Plan that enables sustainable development, energy security, economic growth, and job creation in the emerging hydrogen economy.

- **Just Energy Transition (JET) Skills Desk:**

South Africa has launched a JET Skills Desk to strengthen workforce development for the green economy, with a focus on renewable energy, green hydrogen, and new energy vehicles. Located within the Department of Higher Education and Training, the JET Skills Desk will act as a central hub for reskilling and upskilling adults, aligning curricula with industry needs, and ensuring that skills development becomes a core pillar of the Just Energy Transition Investment Plan. The initiative will establish "Skills Development Zones" in key provinces such as Mpumalanga, the Eastern Cape and the Northern Cape, linking training directly to emerging employment opportunities in clean-energy sectors. Supported by a Multi-Donor Initiative involving the South African government, the EU, Germany, Switzerland and GIZ, the JET Skills Desk is designed to promote inclusive job creation,



particularly for women, youth and coal-dependent communities, ensuring that the transition to a low-carbon economy is socially just and economically transformative.

- **Critical Minerals Strategy**

South Africa approved the Critical Minerals Strategy, which is a blueprint to boost the country's role in global critical minerals value chains by focusing on beneficiation, industrial development, and job creation. It aims to transform the mining sector to support the transition to a low-carbon economy by developing minerals like platinum, manganese, iron ore, coal, and chrome ore. Key pillars include geoscience mapping, increasing investment in value-added processing, improving infrastructure, developing skills, and using financial instruments to attract investment.

- **Integrated Resource Plan 2025**

The Integrated Resource Plan (IRP) 2025 is South Africa's official long-term electricity generation roadmap, approved by Cabinet on 15 October 2025 and gazetted on 28 October 2025. Replacing the IRP 2019, the new plan charts the country's energy mix through to 2050 and proposes an investment of R2.23 trillion to ensure a secure, reliable, and affordable electricity supply. Central to the IRP 2025 is the objective of minimising environmental impact and steering South Africa toward a net-zero electricity sector by 2050. The plan outlines more than 105,000 MW of new generation capacity by 2039, anchored by a diversified energy mix that includes 34,000 MW of onshore wind, 25,000 MW of utility-scale solar PV, 16,000 MW of distributed generation, and 8,500 MW of battery storage, positioning South Africa for a more resilient and sustainable power system.

2. Demonstration, Deployments, and Workforce Developments Update

- **Hydrogen Qualifications Approved:**

The Chemical Industries Education and Training Authority (CHIETA) has announced the approval of South Africa's first-ever green hydrogen skills programmes by the Quality Council for Trades and Occupations (QCTO), a milestone that significantly strengthens the country's readiness for a sustainable and inclusive energy future. These programmes establish the first formal training pathways that align directly with the emerging hydrogen economy, ensuring that South Africa develops the technical capabilities required for industrialisation, localisation, and job creation. Graduates from these programmes will be equipped for roles such as operators, artisans, maintenance technicians, logistics professionals, and other critical occupations across the energy, transport, manufacturing, and chemical sectors.



INTERNATIONAL PARTNERSHIP FOR HYDROGEN AND FUEL CELLS IN THE ECONOMY

The following national occupational qualifications have been approved:

- Green Hydrogen Production;
- Green Hydrogen Storage and Transfer;
- Green Hydrogen Technology;

These qualifications will enable South Africa's workforce to:

- Operate and maintain hydrogen production, storage, and transfer equipment;
- Coordinate technical activities, operations, and logistics;
- Monitor environmental impacts, performance, and compliance of hydrogen technologies; and
- Understand hydrogen-related safety protocols, regulatory requirements, and industry standards;

3. Investments: Government and Collaborative Hydrogen and Fuel Cell Funding

- **Hive Hydrogen Project:**

- **June 2025: Announcement of Final Investment Decision on Hive Hydrogen Project**

At the Africa Green Hydrogen Summit in Cape Town, the Minister of Electricity and Energy announced FID status of the Hive Hydrogen project in Coega SEZ, meant to produce 1 million tonnes of green ammonia per year. A R360-million development funding agreement for Hive Hydrogen to take the project to a final investment decision (FID) was announced.

- **September 2025: Announcement of front-end engineering design stage on Hive Hydrogen Project**

Environmental impact assessment work for all 3300 MW of Hive Hydrogen's renewable energy assets has now been completed. This milestone follows the successful granting of environmental authorisation for the 1000 MW Carissa Wind Energy Facility, located near Beaufort West in the Western Cape. The Carissa project, comprising 154 wind turbines, will supply clean power and desalinated seawater to produce green hydrogen, the primary feedstock for green ammonia destined for export markets in Asia and Europe. With this approval in place, the project remains on track to commence Front-End Engineering Design (FEED) in November, with Final Investment Decisions (FIDs) targeted for July 2026.