



IPHE Country Update Jun 2025 – Nov 2025: Brazil

| | |
|----------------------------|---|
| Name | Paulo Emílio Valadão de Miranda |
| Contact Information | pmiranda@coppe.ufrj.br, +55 21 98273-9477 |
| Covered Period | April 2025 - November 2025 |

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

- Perspectives for Hydrogen at COP30
 - Recent updates indicate that hydrogen will be included under Axis 1: Transition in the Energy, Industry, and Transport Sectors, whose main goals are to: (i) triple renewable generation and double energy efficiency; (ii) accelerate zero and low-emission technologies in hard-to-abate sectors; (iii) ensure universal access to energy; and (iv) promote a just, orderly and equitable transition away from fossil fuels.
 - The initiatives are organized as follows
 - Activation Group 2: Acceleration of Zero and Low-Emission Technologies:
 - *Hydrogen Breakthrough* (focal point)
 - Activation Group 4: Transition Away from Fossil Fuels:
 - *International Hydrogen Trade Forum (IHTF)*
 - *International Partnership for Hydrogen and Fuel Cells in the Economy (IPHE)*
 - *UNIDO's Global Programme for Hydrogen in Industry*
 - Detailed references can be found in the links below:
 - [COP30 Action Agenda](#)
 - [Activation Groups](#)
- ANP Publishes Authorization Manual for Low-Emission Hydrogen
 - A practical guide for permitting production, operation, import/loading, and commercialization until the final resolutions are issued. The document consolidates the necessary paperwork, procedures, and interactions with the Agency. It is important to note that the manual is advisory in nature: its items will still be discussed with market participants throughout the development of the specific resolutions. Moreover, the absence of a document or information will not automatically prevent the granting of an exceptional authorization, which will depend on a case-by-case analysis.
 - [Link](#)



INTERNATIONAL PARTNERSHIP FOR HYDROGEN AND FUEL CELLS IN THE ECONOMY

- Brazil H2 Risk Management
 - This webinar presented an overview of the evolution of Brazil's legal and regulatory framework for low-carbon hydrogen. The focus was on risk management requirements for hydrogen production facilities. The event is part of the Hydrogen Risk Management Project in Brazil, which is being implemented by the OECD with the financial support of the EU Delegation in Brazil, in partnership with the ANP. It covered the provisions of Laws No. 14,948/2024 and 14,990/2024, especially the requirement for companies to submit risk analysis studies, risk management programs, and emergency action plans to ANP.
 - [Link](#)
- CNPE Sets Carbon Intensity Levels for Energy Sources (ICE)
 - A technical reference (gCO₂eq/MJ) for the vehicle energy matrix and a basis for cross-cutting policies that influence demand for hydrogen and its derivatives. The measure establishes the Carbon Intensity (ICE) values for liquid and gaseous fuels, as well as electricity, used to meet the targets of the Green Mobility and Innovation Program (Mover), as outlined in the Future Fuel Law (Law No. 14,993/2024). This decision opens regulatory space for recognizing low-emission hydrogen and its derivatives as low-climate-impact options for mobility and industry when renewable or low-emission hydrogen is used as an energy vector.
 - [Link](#)
- Results of the H₂ Hubs Call for Industrial Decarbonization
 - This initiative by the Ministry of Mines and Energy (MME) represents a significant step toward identifying national projects that can contribute to the energy transition and the decarbonization of hard-to-abate industrial sectors, as part of Brazil's Investment Plan (a component of the Climate Investment Funds – CIF-ID). Out of 70 proposals submitted to MME, five projects were selected with strong implementation potential by 2035:
 1. H2Orizonte Green Project – Grupo CSN – RJ
 2. Camaçari Green Hydrogen Hub – Neoenergia S.A. – BA
 3. B2H2 – Copel GET – PR
 4. Uberaba Green Fertilizer – Atlas Agro Brasil Fertilizantes LTDA – MG
 5. Hydrogen and Ammonia Hub in MG – Cemig Geração e Transmissão S.A. – MG
 - [Link](#)
- MME and EPE Launch the Brazilian Hydrogen Portal
 - The Ministry of Mines and Energy (MME) and the Energy Research Office (EPE) have launched the Brazilian Hydrogen Portal, a central hub for structured data and analyses aligned with the pillars of the National Hydrogen Program (PNH₂). The platform connects initiatives ranging from scientific and technological capacity building to energy



INTERNATIONAL PARTNERSHIP FOR HYDROGEN AND FUEL CELLS IN THE ECONOMY

planning, while also promoting improvements in the legal and regulatory framework, fostering reindustrialization, market development, and competitiveness in Brazil's emerging hydrogen economy.

- [Link](#)

2. Hydrogen and Fuel Cell R&D Update

- EPE Releases Technical Note on Hydrogen and Biomass: Opportunities for Brazil
 - This Technical Note explores the synergistic relationship between low-carbon hydrogen and bioenergy, highlighting opportunities for mutual strengthening of both sectors and their potential contribution to Brazil's energy transition.
 - [Link](#)

3. Demonstration, Deployments, and Workforce Developments Update

- UFPR Inaugurates Pilot Plant Producing Renewable Hydrogen from Food Waste Without Using Water
 - On October 17, 2025, the Federal University of Paraná (UFPR) inaugurated a pilot plant for producing renewable hydrogen at its Polytechnic Center. This pioneering project in Brazil collects organic waste generated by the university's dining hall to produce high-purity renewable hydrogen without using water. The process is based on biogas obtained from the anaerobic digestion of organic waste, followed by dry catalytic reforming of the biogas to generate hydrogen.
 - [Link](#)

4. Events and Solicitations

- V Hydrogen Congress for Latin America and the Caribbean (H2LAC 2025)
 - São Paulo (SP), 15 to 16 July
 - Link: <https://newenergypevents.com/h2lac/>
- IV Brazilian Hydrogen Congress
 - Brasília (DF), 22 to 24 October
 - Link: <https://abh2.org/4-cbh2-o-evento>
- Hydrogen Expo South America 2025
 - Rio de Janeiro (RJ), 11 to 12 June
 - Link: <https://hydrogenexpo.com.br/>
- Latin America Green Energy & Hydrogen 2025
 - Rio de Janeiro (RJ), 25 to 26 March



INTERNATIONAL PARTNERSHIP FOR HYDROGEN AND FUEL CELLS IN THE ECONOMY

- Link: <https://www.peakevents.org/green-energy-latin-america/>

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

- Brazilian Government Launches Public Call of BRL 60 Million to Establish a Low-Carbon Hydrogen Research Center
 - As part of the Ecological Transformation Plan, the initiative aims to develop national technologies to position Brazil as a global leader in the low-carbon hydrogen economy. With an investment of BRL 60 million from the National Fund for Scientific and Technological Development (FNDCT), the Brazilian Company of Research and Industrial Innovation (Embrapii) will oversee the public call to select a research network composed of universities and technology institutes across Brazil. The selected institutions will receive funding to establish laboratories, hire researchers, train specialized professionals, and undertake joint projects with private companies. The call also supports the creation of startups and the development of international research partnerships in the field of low-carbon hydrogen.
 - [Link](#)
- ANEEL Approves R&D Projects Focused on Hydrogen Applications
 - The initiatives were presented under Call 23/2024 – Hydrogen in the Context of the Brazilian Electric Sector, announced in October 2025, with total R&D investments of nearly BRL 1.2 billion (USD 204 million)
 - Eletrobras – Pilot Plant for Renewable Hydrogen Production for Industrial Applications – BRL 109,321,470.07
 - Eneva – Pilot Plant for Renewable Hydrogen Production to Promote Energy Transition and Industrial Decarbonization in the Food Sector – BRL 18,897,748.00
 - Petrobras – Low-Carbon Hydrogen Production via Water Electrolysis Integrated into a Petroleum Refinery – BRL 238,000,000.00
 - CTG Brasil – Development of an H₂ Plant and Traceability & Certification Methodology Applied to the Pulp and Paper Industry – BRL 46,636,208.34
 - CTG Brasil – Pilot Project for Green Hydrogen Production in a Merchant Model – BRL 37,838,337.62
 - [Link](#)

6. Regulations, Codes & Standards, and Safety Update

- MME and Inmetro Discuss Guidelines for the Certification of Low-Carbon Hydrogen
 - The Ministry of Mines and Energy (MME) and the National Institute of Metrology, Quality, and Technology (Inmetro) held a meeting to discuss key aspects of the upcoming regulatory decree for the Low-Carbon Hydrogen Legal Framework, which is expected to be published by the



INTERNATIONAL PARTNERSHIP FOR HYDROGEN AND FUEL CELLS IN THE ECONOMY

end of 2025. One of the central elements to be defined is the designation of the institutions that will form the Brazilian System for the Certification of Low-Carbon Hydrogen (SBCH₂).

- [Link](#)

- Technical standards under work in ABNT CEE 067 – Hydrogen Technologies.

| CODE | TITLE | STATUS |
|-----------------------|--|------------|
| 067:000.000-003-7-1 | Fuel Cell Technology - Part 7-1: Test Methods - Single Cell Performance Tests for Polymer Electrolyte Fuel Cells (PEFC) | Commission |
| 067:000.000-007 | Hydrogen detection equipment - Stationary applications | Commission |
| 067:000.000-008-8 | Gaseous hydrogen — Fueling stations — Part 8: Fuel quality control | Commission |
| 067:000.000-010 | Hydrogen Technologies — Methodology for determining greenhouse gas emissions associated with the production, packaging and transportation of hydrogen to the consumer gate | Commission |
| ABNT IEC/TS 62282-7-2 | Fuel Cell Technologies - Part 7-2: Test Methods - Single Cell and Stack Performance Testing for Solid Oxide Fuel Cells (SOFC) | Commission |
| ABNT ISO/TR 15916 | Basic considerations for the safety of hydrogen systems | Commission |