

Changes Since the Last Iteration

Since the last iteration of the World Energy Issues Monitor, Uruguay has seen notable changes, particularly in the emphasis on hydrogen (H₂) and **power-to-X** (P2X) technologies. These technologies have emerged as critical uncertainties, driven by the global push towards cleaner energy solutions and Uruguay's commitment to decarbonizing its primary energy supply. The increased focus on demand management and energy storage also highlights the need for a more resilient and adaptive energy infrastructure. These changes are occurring due to technological advancements, policy shifts, and a growing recognition of climate impacts.

Uruguay's Green Hydrogen Derivatives Roadmap emphasizes electrolysis for production, a mature technology but not yet at the required scales for P2X and low-emission hydrogen. Another uncertainty is related to the lack of market dynamics for these new energy vectors where there are still no price or trade mechanisms sufficiently evolved. The last, is not exclusively Uruguay concern, since it is shared by every country with intentions to become part of the international green hydrogen map.

Country Trends Over the Last Five Years

Uruguay achieved a high share of renewable energy, with over 90% of its electricity generation coming from renewable sources. In recent years, once the first energy transition was successfully completed, the focus has shifted towards reducing emissions in other sectors such as transport and industry. In recent years, the rate of growth of [electric vehicles sales](#) has almost doubled from one year to the next, driven by government initiatives and tax incentives. However, the adoption rate still needs to rise further. Additionally, developing the necessary infrastructure for H₂ and P2X technologies and addressing the volatility of **commodity prices** remain key challenges. These efforts are crucial for maintaining momentum in the energy transition and ensuring long-term sustainability.

Emerging Leadership in Integrating People and Communities

Recognizing the need to educate communities on new energy trends and the urgency of decarbonization, Uruguay has developed a Communication Strategy to support the Green Hydrogen Roadmap. Emerging leadership focuses on **community consultation and integration** in hydrogen projects, involving communities in decision-making and incorporating their feedback into policy development. Through the H₂U Program, government bodies are creating regulatory frameworks to support these efforts, ensuring diverse voices are heard and inclusive policies are developed. This approach enhances transparency and builds trust, crucial for the hydrogen transition's success.

Insights on Energy Transitions

a) Progressing Faster, Fairer, and More Far-Reaching Energy Transitions:

Since the Energy Policy 2005-2030 became a state policy, Uruguay, regardless of the Government in power, is committed to a just, comprehensive and sustainable energy transition. That Policy was built around four main strategic pillars: Institutional, Supply, Demand, and Social. Thanks to the great commitment of both the public and private sectors, as well as the strong institutional security that supported investments, this state policy resulted in "The First Energy Transition".

This transition has had very important results for the country, highlighting among them, the high penetration of renewable energies to replace fossil sources, the diversification of energy generation and supply sources, as well as concrete measures to address energy efficiency.

Regarding employment and the just transition, the government has developed through the technological public university (UTEC) a Training Center in Sustainable Mobility, Energy Efficiency, and Renewable Energies (CEFOMER), whose objective is to provide training in specific areas of the wind, solar-photovoltaic, solar-thermal, and electric mobility sectors, while also operating as a job bank in the renewable energy sector. In this way, capacities are built in the various sectors associated with renewable energies, allowing for the reconversion of jobs that are threatened by the energy transition.

b) Policy and Ecosystems for Transparent, Transformational, Trustworthy Transitions:

Uruguay has implemented numerous regulations alongside the Energy Policy 2005-2030 to provide certainty to both public and private sectors. Key policies for the Second Energy Transition include:

- 2020: new powers related to green hydrogen were conferred to the Energy and Water Services Regulatory Unit (URSEA) (Arts. 171 AND 172 of Law No. 19,996).
- 2021: the National Fuel, Alcohol and Portland Administration (ANCAP) was authorized to participate in Green Hydrogen projects in a competitive scheme (Article 234 of Law No. 20,075).
- 2022: economic incentives were created for green H₂, which were incorporated in the Investment Promotion and Protection Law No. 16,906. Additionally, Presidential Resolution 294/022 created an Interinstitutional Group: H₂U Program which has the objective of promoting stakeholder coordination to implement the Roadmap.

Promptly, Safety Regulation will be published by URSEA for Hydrogen Projects (A Public Consultation was completed).

Regarding incentives for electromobility and fuel cells H₂ vehicles, the purchase is exempt from taxes. Fuel cell vehicles, where the engine is only electric, apply the existing exemptions with respect to the Global Tariff Rate and IMESI in the acquisition.

Institutionally, since 2022, the country has had an Electric Mobility Board, a forum for exchange with the main public and private actors in the transport sector aimed at promoting the development of electric mobility.

c) Climate Risk and Resilience:

Uruguay, reliant on hydropower for 31% of its electricity, faces frequent extreme weather events. In response to recent events that have stressed the national energy system, the country has launched the National Climate Change Adaptation Plan for the Energy Sector (NAP-E), currently open for public consultation. This plan aims to improve adaptation capacity, strengthen resilience, and reduce the climate vulnerability of Uruguay's energy system, ensuring quality access to energy and contributing to sustainable development. The [NAP-E](#) is structured into five lines of action: governance, capacity building and awareness, information management and knowledge generation, vulnerability reduction, and monitoring, evaluation, and learning.

d) Resource Allocation, Active Management, and Money Flows:

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WORLD ENERGY COUNCIL

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