

A Model for Energy Transition?

Uruguay Integrates Offshore Projects and Renewables Investment



Uruguay, population 3.4 million, is a small country with big ambition – becoming a regional leader in providing reliable, sustainable and affordable energy.

Surrounded by Brazil, Argentina and the Atlantic Ocean, the 176,215-square-kilometer country has the second smallest area of any country in South America, but the highest per-capita income.

Uruguay's geographical location, energy mix and favorable fiscal terms make the country the perfect laboratory for developing strategies to meet the demand for hydrocarbons while transitioning to renewable energies.

Alejandro Stipanovic, president of ANCAP, Uruguay's national energy company, described the organization's efforts to lead a "responsible energy transition," striking a balance between sustainability, energy security and affordability.

"ANCAP is fulfilling its present-day mission of delivering the required quality fuels to the local market at the lowest possible cost, while it is also taking care of the future, leading the energy transition in Uruguay to position it as a reliable and valuable energy supplier worldwide," he said. "Today we import fossil fuels, tomorrow we will export our wind and sun."

Hydrocarbon Potential

A World Bank report published in September 2023 credits Uruguay's sound macroeconomic management and favorable external conditions with supporting an economic expansion that has lasted for two decades, except for a brief recession induced by the COVID-19 pandemic in 2020.

The same report detailed robust economic growth coming out of the pandemic and noted that prudent fiscal management has helped Uruguay enjoy one of the lowest sovereign spreads in the region.

Potential investors in the energy sector seek more than sound economic terms; they also seek resource potential.

While the exploratory wells drilled in 1976 have oil inclusions and gas shows, there has not yet been a commercial discovery.

Bruno Conti, geologist and energy transition specialist at ANCAP, explained that, while Uruguayan basins have frontier status and represent high geological risk, they provide an opportunity highlighted by recent discoveries on the other side of the Atlantic.

The Graff and Venus oil discoveries by Shell and TotalEnergies in 2022 caught the attention of supermajors, independent and small energy companies who flocked to the Orange Basin, a frontier area straddling the maritime boundary of Namibia and South Africa.

"Discoveries in the Orange Basin revealed a hidden prospectivity, not only for offshore Namibia, but for all the South Atlantic segment, particularly the offshore basins of Uruguay, which represent Orange's conjugate margin," Conti said.

"Strong analogies between these basins can be observed in the petroleum systems, related to the presence of an Aptian source rock, responsible for the Venus accumulation, and the development of similar play types."

Open Uruguay Round

For the past sixteen years, ANCAP's has worked actively to attract investment by offering acreage through bidding rounds.

The Open Uruguay Round, in place since 2019, allows companies to qualify and submit offers for offshore areas at any time, functioning as two bidding rounds per year.

Pablo Gristo, chief of exploration and production at ANCAP, reported more than \$1.2 billion (U.S. dollars) spent on hydrocarbon exploration in Uruguayan basins, with financial risk incurred by

international oil companies and service companies through multilateral agreements.

Even with the investment, Uruguayan offshore basins remain underexplored.

"Despite the significant amount of data available – 41,000 kilometers of 2-D seismic, 41,000 square kilometers of 3-D seismic and 13,500 square kilometers of 3-D controlled source electromagnetic, among others – there is little well information (only three exploratory wells drilled in an area above 120,000 square kilometers)," he said.

Between 2012 and 2016, the most intense period of exploratory activity in the offshore of Uruguay took place, involving the acquisition of several 2-D and 3-D seismic campaigns and the drilling of an exploratory well in ultra-deep waters. The exploratory activity slowed down after 2016, subsequently entering a period of inactivity. The story began to change in 2022 when a renewed interest from oil companies was observed, materializing with the submission of new bids for offshore areas. On Dec. 12, 2023, with the authorization of Uruguay's Ministry of Energy, four new contracts were signed for the exploration and eventual development of oil and gas resources.

"APA, Shell and YPF materialized their interest in Uruguay and the exploratory period for the awarded offshore blocks begins, within the framework of the responsible energy transition strategy promoted by ANCAP," Gristo said.

APA received block OFF-6, Shell blocks OFF-2 and OFF-7 and YPF block OFF-5.

Contract signatures in progress include block OFF-3 with Challenger Energy and OFF-4 with a consortium formed by APA and Shell (50/50), with APA as operator.

Stipanovic described the bid round results as a "historic milestone" for Uruguay, noting that for the first time in the country's history, all offshore areas will have contracts in force.

"The oil industry has a renewed interest for the exploration offshore Uruguay,

due to recent discoveries in Namibia, but undoubtedly this success also arises from the country's reputation and prestige for democratic, economic, and legal stability, as well as its unquestionable adherence to contracts and commitments made," he said.

Committed exploratory work for the next four years has a nominal value of \$129 million, which includes seismic acquisition and reprocessing and, most significantly, a deep exploratory well expected to be drilled by APA in Area OFF-6 within the next four years.

Long-Term Benefits

Gristo attributes the recent bid round success to ANCAP's commitment to supporting secure and sustainable investments in energy projects.

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He noted that results from exploratory efforts will provide benefits both for the operators and the Uruguayan people.

"Uruguay will be able to take advantage of its resources in a sustainable way, providing opportunities for investors and respecting contracts, while at the same time using income generated from resources beneficial to its population," he said.

"We may not have the greatest, or the cheapest resources, but it has a combination of factors that make it the best country to invest in energy projects that are capital intensive and require stability in the very long term."

Advances in Renewables

Along with awarding offshore

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hydrocarbon blocks, ANCAP teams also work to enhance the company's portfolio in renewable energies.

Unlike other energy companies that separate traditional exploration and production from renewable energies projects, ANCAP integrates both divisions into a single working unit.

Santiago Ferro, ANCAP's energy transition manager, leads the company's E&P business as well as the renewable energy projects.

"Uruguay has large potential for energy transition and as a provider and exporter of renewable energy because of its combination of wind, solar, hydroelectric and biomass resources, that far exceed the national demand for energy," Ferro said.

In 2008, Uruguay's political parties unanimously approved the 2005-2030 Energy Policy Strategy, which established long-term strategies and guidelines for energy diversification, the incorporation of renewable energies, and improved energy efficiency.

"As a result of the implementation of this national strategy, Uruguay has achieved almost complete decarbonization of electricity generation, the first stage of our energy transformation," Ferro said.

The share of renewables in Uruguay's electricity generation mix varies depending on the climate in any given year. In 2022 renewables comprised 91 percent of the mix (32-percent wind, 3-percent solar, 17-percent biomass, 39-percent hydroelectric), but, on average, electrical power represents just 21 percent of Uruguay's total energy consumption.

Ferro noted that decarbonizing the electrical system in just 10 years provides Uruguay with a proven track record and leaves the country in a strong position to attract foreign investment in renewable energies.

With the first stage of the energy transition complete – electrical power generation, the country now has other opportunities to decarbonize. Uruguay has consolidated the industrial use of biomass, blending biofuels in diesel oil and gasoline, and is setting its sights on hydrogen.

"The stage is set for a second energy transition, in which the country takes advantage of its natural resources, to position itself as a producer of green hydrogen and its derivatives," Ferro noted.

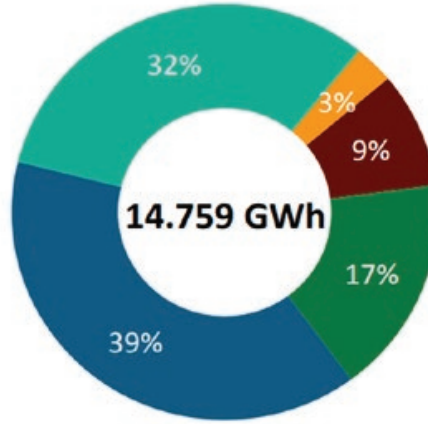
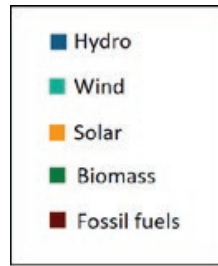
"ANCAP's long-term objective is to become an exporter of GH, taking into consideration the global demand of low carbon energy and the fact that GH is considered the most relevant energy vector for those hard-to-abate sectors (heavy industry and heavy-duty transport), where decarbonization through electrification is quite complex or technically unfeasible," he said.

Green Hydrogen Offshore Project

In 2023, Uruguay published a GH National Roadmap, which includes elements needed to support GH development in Uruguay: innovation, regulation, investment promotion, capacity building, international cooperation, infrastructure and logistics, including the hydrogen production from offshore energy projects.

The next important step for ANCAP is the H2U Offshore Round, offering offshore areas for energy companies to carry out feasibility studies and the potential installation of infrastructure to produce H2 and/or derivatives from renewable energy.

ANCAP presented the H2U Offshore Round to Uruguay's Ministry of Energy, who is reviewing the proposed bidding terms and a contract model. The model must be approved by the country's executive branch



Energy Balance 2022 Report. Uruguay's Ministry of Industry, Energy and Mining (MIEM), July 2023

to be implemented. The bidding round is expected to be officially launched during the first half of 2024.

Ferro leverages experience and best practices from hydrocarbon bid rounds to design the hydrogen offshore round.

"The H2U Offshore Round accomplishes the most valued factors by energy companies participating in a bidding round: transparency in the process of decision-making and a clear and predictable schedule. The proposed system works similarly to the E&P Uruguay Round, with comparable bidding terms and several analogies in the contract model," he said.

Attractive Place for Investment

Ferro said recent interest in the offshore blocks provide the impetus Uruguay needs to move forward with a long-term transition strategy.

"Energy transition is a major transformation of a global system that would take decades, and fossil resources will have a role to play during this period, and possibly afterwards. Renewable resources will continue to displace the use of fossil fuels, and at the same time, exploration and production of oil and gas will need to continue at a fair path

to compensate for natural declining worldwide reserves," he said.

"Our country could play a key role in this matter due to the high interest in exploration associated with the recent discoveries offshore Namibia," Ferro added.

"ANCAP continues to promote hydrocarbon exploration with an industry eager for new resources. The recent discoveries in Namibia and the direct analogies with the offshore basins of Uruguay show a promising future for E&P activities in future years. Uruguay was able to attract billions of dollars of investment in exploration in the past decade and is trying to extrapolate this capacity to attract investment in the H2U Offshore Round," he said.

Ferro noted that the exploration and eventual production of hydrocarbons does not imply a setback in the energy transition.

"Natural gas could provide an excellent low-carbon, dispatchable backup to intermittent renewable energy. For its part, the eventual production of oil and gas must be supported with carbon capture and storage projects that help reduce CO₂ emissions," he said, adding that ANCAP continually looks for successful models to serve as examples.

"Uruguay could be inspired by the

resource management carried out by other countries, such as Norway, and create a sovereign fund with part of the income from the oil industry, to invest in renewable energy and green hydrogen projects, further promoting the second phase of the energy transition," he said.

Energy Summit

ANCAP will promote best practices for sustainable development and energy transition as host of AAPG's 2024 Latin America and Caribbean Energy Summit, coming to Punta del Este, Uruguay, Nov. 19-21.

The Energy Summit is an executive-level event including keynote presentations, panel discussions, a commercial exhibition, International Pavilion and Business-to-Business session. The event builds on the success of AAPG Energy Opportunities Conferences held in Cartagena Colombia in 2018 and Mexico City, Mexico in 2023, and the Energy Opportunities Executive Forums and a Virtual Conference held during the COVID-19 pandemic.

On average, 48 percent of Energy Opportunities event attendees held the position of CEO, vice president, director or commissioner.

ANCAP participated in all the Energy Opportunities conferences, and looks forward to hosting the Energy Summit, which has a different name but a similar format.

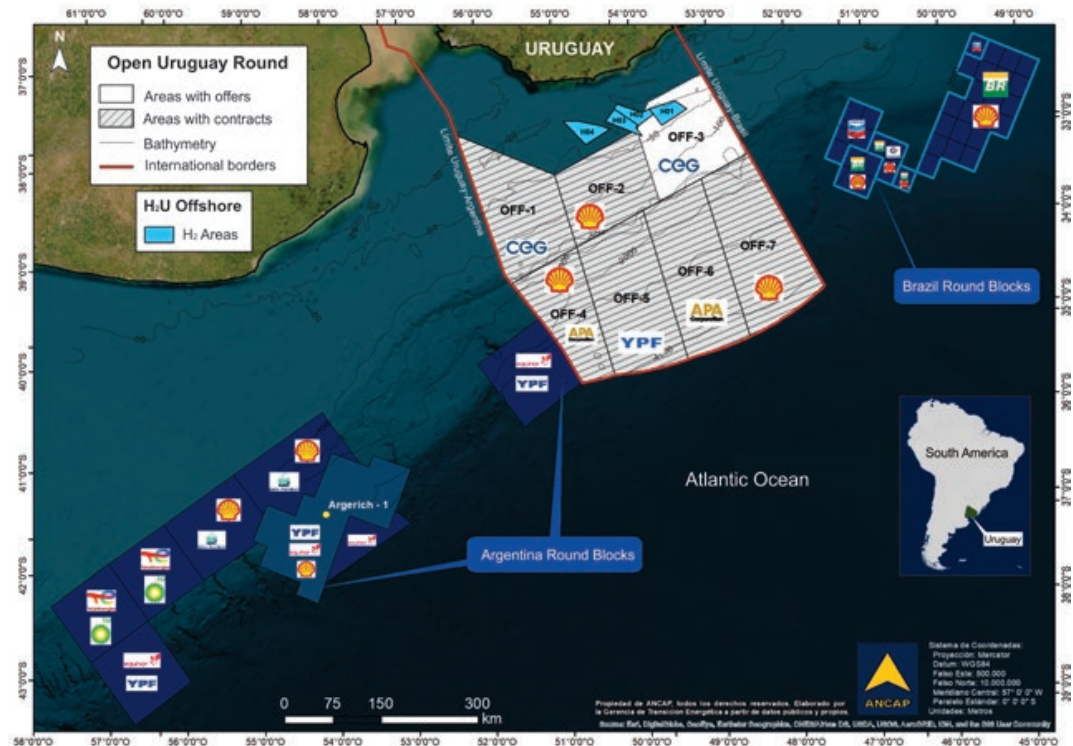
Ferro said ANCAP is thrilled to be hosting the 2024 Summit, themed "Strategy, Security and Transition."

"This event will facilitate the presence and interaction of energy companies operating in Latin America and the Caribbean, with a focus not only on oil and gas activities but also on energy transition projects," he said. "Considering the global significance of AAPG, it is an honor that they have chosen Uruguay as the location of this event."

For additional information about the Uruguay Open Round visit: exploracionproduccion.ancap.com.uy

For information on the H2U Offshore Round visit: ancap.com.uy/hidrogeno

To learn about the Energy Summit visit: aapg.to/lacenergysummit2024



Offshore energy map with E&P blocks in place and proposed H2 blocks. Map provided by ANCAP.