

ARPEL CONFERENCE 2026

REPORT



EVENT
REPORTS

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TOGETHER WE ARE ENERGY

Promoting Oil & Gas Sector Competitiveness,
Energy Security and Economic Growth in Latin America
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What conclusions can we draw?

By CARLOS GARIBALDI,
Executive Secretary of ARPEL



As an industry, we have spent more than a century operating and growing amid uncertainty driven by volatile prices, global geopolitical developments, domestic political shifts, imbalances between supply and demand, and socio-environmental pressures.

Today, that volatility appears to have intensified even further, to the point where it almost seems as though we have to operate in the midst of chaos.

Rather than an energy **transition** driven by the replacement of one energy source with another, we are witnessing an energy **evolution**, with renewable energy sources complementing fossil fuels to meet growing energy demand.

We cannot force a paradigm shift through reductionist approaches that ignore the **complexity of the energy-economy-climate system** and its boundary conditions.

I therefore do not ask whether we should stop exploring and developing hydrocarbon resources. Instead, I ask **whether we are exploring enough**.

Natural gas, in particular, is no longer a transitional bridge but a key driver of decarbonization and regional integration.

But we must not confuse a change of pace with a change of direction. Climate change is immune to electoral cycles and ideological shifts.

It is urgent that we properly manage both **transition-related climate risks and the physical risks** facing our facilities.

It is urgent that we continue decarbonizing our operations, processes, and facilities, paying particular attention to **methane emissions**.

It is urgent that we advance our **digital transformation**, so that we can operate more safely, more effectively, and more efficiently, with particular attention to cybersecurity.

It is urgent that we reinforce our pride in belonging to this industry of industries, so that we can continue **attracting, educating, and retaining** new generations of professionals, technicians, and managers.

Our region, in particular, has a **window of opportunity** to expand our industry and build a **promising future**.

Not only because we are demonstrating to the world a level of geological **prospectivity far greater** than our current hydrocarbon production would suggest, but also because most countries in the region seek to **attract private and international investment**, we are **far removed from areas of armed conflict**, and our hemisphere has **no strategic** chokepoints constraining our industry.

Beyond offering attractive contractual and fiscal terms, our governments must **manage the perception of political and economic stability, of institutional continuity beyond electoral cycles and ideological shifts, and of regulatory stability and predictability**, while also streamlining environmental permitting and upholding legal certainty and transparency.

Today, more than ever, we need **State policies**, not just government policies. We must combine strategic vision with public-private cooperation, pragmatism, and tactical agility.

We still have much work ahead of us, and we must do it together. Let us not squander this opportunity.

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**ARPEL
CONFERENCE 2026**

TOPIC 1

**GEOPOLITICS, ENERGY SECURITY,
AND BUSINESS SCENARIOS
FOR LATIN AMERICA**

Key Quotes

"We cannot say there will be 'net zero' by 2050; that is not realistic."

Daniel Yergin
Vice Chairman of S&P Global

"We are recreating the world."

Bob Fryklund
Vice President and Chief Upstream Strategist, S&P Global Energy

"The State neither plans nor executes; it removes obstacles from the path."

Federico Veller
Argentina's Undersecretary of Hydrocarbons

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38%

of global resources discovered between 2020 and 2024 are located in Latin America and the Caribbean.

Argentina recorded a

US\$7.8 billion energy trade surplus

in 2025, with a projected surplus of US\$10 billion in 2026.

Venezuela would require approximately

US\$40 billion

to increase production from 900,000 to 1.5 million barrels per day, and nearly US\$140 billion to reach 3 million barrels per day.

The region produces

25%

of the world's critical minerals

and its mining sector is expected to consume nearly 9% of regional electricity within the next decade.

More than 40 countries

are currently competing for the same pool of industry investment.

The **ARPEL Conference 2026** opened in Buenos Aires with energy once again at the center of the global geopolitical agenda. The crisis in the Strait of Hormuz, price volatility, the erosion of the multilateral order, and the shift of energy security to the forefront of the global agenda shaped the tone of the opening day and the discussions that followed.

From the conversation with Daniel Yergin to the analyses presented by S&P Global, from Argentina's reforms to Suriname's planning efforts, and from global associations to national organizations, a wide range of voices converged around a common diagnosis: the world is being reshaped and, in the midst of that transformation, Latin America and the Caribbean face a historic window of opportunity. Backed by production figures, resource potential, and geography, the region can capitalize on this opportunity only through clear rules, institutional stability, and a stronger collective voice.

Latin America's Decade

The opening session set the tone for the conference. **Martín Terrado, COO of GeoPark and Chairman of ARPEL's Board of Directors**, stated that "there are challenges that no company can solve on its own and that the region is stronger when it works together." He was unequivocal in asserting that, in a context of global disruption, "this is destined to be Latin America's decade." Supporting that ambition, he recalled that the region already produces "more than 8.8 million barrels of oil per day" and possesses the resources, expertise, and scale needed to meet growing global demand.

Ernesto López Anadón, President of the Argentine Institute of Oil and Gas (IAPG), focused on the international situation shaped by the conflict in the Strait of Hormuz, which has generated "tremendous volatility" in energy markets. The main challenge, he argued, is understanding "how we will emerge from this uncertainty" and how global markets will be reshaped. He emphasized that the ARPEL Conference provided a "unique opportunity" to discuss scenarios and strategies in the midst of the crisis.

The perspective of the Global South was provided by **N.J. Ayuk, Executive Chairman of the African Energy Chamber**, who defended the role of hydrocarbons in development. "This is a time to add energy, not reduce it," he stated, calling on the industry to "take pride" in its role and continue investing. Ayuk also highlighted the potential for cooperation between Africa and Latin America in addressing energy poverty: "Exploring new frontiers is not just for you—it is for everyone."

From a regional perspective, **Andrés Rebolledo, Executive Secretary of the Latin American and Caribbean Energy Organization (OLACDE)**, agreed that the region will play an increasingly important role: "All indications suggest that our region will likely become the fastest-growing source of non-OPEC hydrocarbons in the world," although he cautioned that countries are undergoing a process of "recalibration" of their policies in response to rising prices and the need to balance energy transition goals with energy security. The opening session concluded with remarks by **Daniel González, Argentina's Vice Minister of Energy and Mining**, who described the current moment as "a positive perfect storm" for the host country. "The future is very promising," he stated, summarizing the philosophy behind the country's new policy framework with a phrase that would reappear throughout the conference: "Our role is to create the conditions and step aside so that the private sector can develop our resources."

Daniel Yergin: Geopolitics and Energy Under Trump 2.0

The conversation between **Daniel Yergin, Vice Chairman of S&P Global**, and **Carlos Garibaldi, Executive Secretary of ARPEL** and the conference's lead moderator, was one of the most anticipated moments of the opening day and outlined the conceptual framework that would shape the rest of the event. Yergin described a global landscape marked by uncertainty, geopolitical realignment, and an energy transition that is slower and more complex than originally anticipated. "I wouldn't call it a turning point, but we are seeing changes," he said, describing the end of more than three decades of "easy globalization" and the emergence of "a less predictable and more complicated world where flexibility and competitiveness are essential."

For the author of *The Prize*, the energy business is no longer defined solely by resources. "The scope of the industry is much broader," he said, identifying infrastructure, investment, logistics, and minerals—with copper described as "the mineral of electrification"—as decisive variables.

In this context, he noted a "renewed interest in exploration," while warning that "shale has reached a plateau" and that the industry will need to "go beyond shale" in pursuit of competitiveness and stability, a shift from which Latin America could benefit directly.

On the geopolitical front, Yergin was unequivocal: "The war is not over." In his view, China is emerging as "a major winner thanks to its commitment

to electrification” and its aggressive push to export electric vehicles, while Russia continues financing its conflict “as long as the Ukrainians do not interrupt its oil exports,” and “Europe is preoccupied with its own energy supply challenges.” Regarding negotiations with Iran, he distanced himself from the announcements: “President Trump says the deal with Iran is done, although that is not yet apparent.”

The oil market, he said, “is at a crossroads.” Yergin dismissed the likelihood of a sharp decline in prices: “I don’t think prices will go much lower.” He noted that a substantial volume of supply has disappeared from the market over the last three months and estimated, based on S&P Global’s analysis, that damaged facilities in the Persian Gulf would require at least six months to recover to approximately 80% of their pre-crisis operating levels.

He also emphasized that this is “the first oil crisis of the electric vehicle era,” occurring amid structural shifts in demand and a return to coal use in parts of Asia due to cost and availability considerations. Regarding the structure of global supply, he described the United Arab Emirates’ departure from OPEC+ as significant, altering the group’s internal balance at a time when, as he observed, the Western Hemisphere had surpassed the Middle East in oil production before the war.

Against this backdrop, his message to the region was unequivocal: “This is an opportunity for Latin America... it encourages diversification, the development of new resources, and investment.” Along with Africa, he predicted, the region will become one of the industry’s main destinations for capital, as the “center of gravity of oil production” continues shifting southward. “Vaca Muerta in Argentina has quadrupled its investments,” he noted, while Brazil “produces nearly four million barrels per day.”

Garibaldi added a broader perspective on the region’s potential: Latin America contributes approximately 10% of global oil production and 5% of global gas production, yet accounts for 38% of global resource discoveries between 2020 and 2024. It is also far removed from conflict zones and lacks strategic chokepoints. Regarding Venezuela, however, Yergin remained cautious: “Until significant investments are made, there will be many questions.”

The conversation concluded with a discussion of the assumptions underpinning the energy transition. “We cannot say there will be net zero by 2050; that is not realistic,” Yergin stated. For him, the notion that oil and natural gas will disappear rapidly “is simply not correct.” The transition, he argued, resembles an “energy addition,” whose scale has

been underestimated and whose costs have been overestimated, while depending on minerals whose mines can take up to 17 years to develop.

For the region, he concluded, the subsurface already offers a competitive advantage. The challenge is ensuring that the “surface”—stability, predictability, reasonable terms, and consistent regulation over time—is up to the task of attracting long-term investment.

A World Being Recreated and a New Center of Gravity

The presentation by **Bob Fryklund, Vice President and Chief Upstream Strategist at S&P Global Energy**, provided one of the most thought-provoking analytical frameworks of the opening day. “We are recreating the world,” he stated, describing how institutions established after the Second World War “have not kept pace with change” and are increasingly losing their ability to fulfill their mission, creating a vacuum now contested by leaders seeking to leave a legacy. That vacuum, combined with the “abundance of energy”—oil, refined products, natural gas, and LNG—that existed before the recent conflicts, has reshaped the landscape on which the current crisis has unfolded.

Fryklund highlighted an unprecedented shift in U.S. foreign policy: “For the first time in decades, the United States has begun focusing more on the region.” He explained that this strategy rests on three pillars: combating drug trafficking, promoting leadership change in countries facing economic collapse—with Venezuela as the central case—and countering China’s growing presence in Latin America. China, he noted, has established positions across oil, gas, mining, refining, and the Belt and Road Initiative, while also holding claims of more than US\$21 billion on Argentina and nearly US\$17 billion on Peru. With five presidential elections taking place across the region this year, S&P Global’s outlook anticipates a shift toward more market-oriented policies, potentially aligning with this doctrine.

The strategist also highlighted evidence of the region’s growing prominence: “6.1 million barrels per day came out of the region to help the world” during the crisis, representing a 35% year-over-year increase led by Brazil, Guyana, and Argentina. Future growth in global supply, he noted, “is coming out of Latin America.” However, he also warned of intense competition for capital: investment “moves quickly to wherever it can obtain the best returns” in a landscape where more than 40 countries are competing for the same funding. Brazil, he emphasized, has become a model to follow because of its predictability. The country changed

its laws but “honored every contract” signed under previous regulatory frameworks.

In the subsequent panel, moderated by Garibaldi, **Roberto Brandt, International Energy Consultant and Non-Resident Fellow at the Baker Institute Center for Energy Studies (Rice University)**, summarized the global context in two words: “Volatility and uncertainty.” At the same time, he agreed that “a moment of opportunity” is emerging for the region’s hydrocarbons sector.

With irony, he compared the uncertainty surrounding the Strait of Hormuz to Schrödinger’s paradox: the strait is simultaneously open and closed; the agreement exists and does not exist. Brandt also presented one of the panel’s most discussed statistical comparisons: in 1970, Brazil produced 200,000 barrels per day, Argentina 400,000, and Venezuela 3.8 million. By 2025, Brazil had reached 4.3 million barrels per day, Argentina had recovered historic production levels after falling to a low of 500,000 in 2016, and Venezuela’s output had declined to 900,000. “What is the common thread?” he asked. “Respect for the rule of law.” Brazil maintained it, Argentina did so intermittently, and Venezuela abandoned it.

Regarding Venezuela, Brandt quantified the scale of the challenge: increasing production from the current 900,000 barrels per day to 1.5 million would require approximately US\$40 billion in investment in production and infrastructure, some of which has been dismantled over recent decades. Reaching 3 million barrels per day would require roughly US\$140 billion.

Jeremy Martin, Vice President of Energy and Sustainability at the Institute of the Americas (University of California San Diego), added a less visible dimension to Venezuela’s situation: “One of the fundamental problems is the electricity sector,” which has deteriorated to the point that, according to an anecdote he shared, only four of the country’s 32 installed gas turbines were operational. Without rebuilding the electricity system, he warned, there will be neither a productive recovery nor stabilization of the country. Martin also reviewed the case of Mexico, which imports between 70% and 75% of its natural gas from the United States—a fuel that accounts for 65% of its electricity generation—helping explain the renewed debate over fracking. He also highlighted a broader political trend across the region: persistent anti-incumbency sentiment that continues to penalize ruling parties.

Argentina’s case occupied much of the discussion. Brandt pointed out that the country risk premium, at around 500 basis points, is roughly double that of its main regional peers. However, he highlighted a revealing fact: in recent

corporate bond issuances by energy companies, the implied risk was only half that of the sovereign. “The Republic of Vaca Muerta is better than the Republic of Argentina,” he remarked. He also recalled that Argentina had been invited four times to join OPEC+ and had consistently declined, arguing that subordinating Vaca Muerta’s development to a quota system “would mean the end of Vaca Muerta.”

With an energy trade surplus of US\$7.8 billion in 2025 and a projected surplus of between US\$10 billion and US\$11 billion this year—where every additional US\$10 per barrel generates approximately US\$1.1 billion in additional revenue—the outlook is favorable. Nevertheless, he cautioned that macroeconomic and fiscal stability must be preserved “for at least two to three presidential terms.” Fryklund added that Vaca Muerta’s rocks “are among the best in the world,” that the RIGI is “a fantastic program,” and that the LNG projects currently underway will begin to build the credibility the country needs. Martin concluded on a note of social realism: success will be measured when “the Uber driver not only hears about Vaca Muerta as a panacea, but actually feels that opportunities are being created” as a result of its development.

The panel also offered a strategic reflection from Brandt on geography: Latin America’s Atlantic Basin—Guyana, Suriname, Brazil, and Argentina—provides direct transatlantic routes to Europe “without strategic chokepoints” and within a “zone of peace,” a logistical advantage whose value has been dramatically reinforced by the Strait of Hormuz crisis. Looking ahead to future demand, all three panelists agreed that the region—with Argentina, Chile, Brazil, and Mexico leading the way—is well positioned to attract data centers, provided it can offer reliable energy “24/7, 365” and advance regulatory frameworks for artificial intelligence, an area in which, Brandt noted, Argentina still lags behind Chile and Brazil.

Reforms, Natural Gas, and Integration: The Direction of Public Policy

During the second day of the conference, the energy policy panel, moderated by Andrés Rebolledo, brought the geopolitical discussion down to the level of concrete public policy decisions. **Flavio Fama, President of the Mining, Energy and Fuels Committee of the Argentine Senate**, reviewed the transformation underway in the host country. Despite its abundant natural resources, Argentina “has struggled to move forward,” but the new administration has restored macroeconomic order, opened

the economy to the world, and succeeded in passing structural reforms. “We have managed to pass key legislation without having the votes in Congress,” he noted, referring to the Bases Law and the Large Investment Incentive Regime (RIGI), as well as the recent amendment to the Glacier Law aimed at unlocking mining projects. His prescription for the mining sector—where Argentina remains years behind its peers—is to partner with those who already possess the necessary expertise. “We should partner with those who can help us learn and move forward,” he said, citing Chile’s experience as a model.

Federico Veller, Argentina’s Undersecretary of Hydrocarbons, provided the Executive Branch’s perspective and described the current moment as “the most extraordinary period in the country’s energy history,” driven by three defining factors: macroeconomic stability, deregulation, and the central role of the private sector. “The State neither plans nor executes; it removes obstacles from the path,” he summarized. The results, he noted, are already visible: the country has moved “from thinking about self-sufficiency to becoming a global supplier,” reversing 14 years of energy trade deficits and achieving a US\$7.8 billion energy trade surplus in 2025, with projections reaching US\$10 billion in 2026.

Looking ahead, Veller outlined three stages: unlocking the country’s potential through infrastructure development; large-scale export-oriented projects, led by LNG; and a third phase focused on industrializing the resource base, spreading competitiveness across the region. Chile, he argued, could even become “an export platform to the Pacific for Argentine gas,” while Brazil’s underutilized industrial capacity will be reactivated through access to competitively priced gas.

The most remarkable transformation, however, was presented by **Patrick Brunings, Suriname’s Minister of Oil, Gas and Environment**, who described his country’s development model as “a perfect collaboration between energy and the environment.”

Suriname, which already has experience in the industry through its historical onshore production, is preparing to “play in the World Cup.” Its first major offshore development is scheduled to begin production in 2028, its first natural gas production is expected around 2030, and the country aims to reach “half a million barrels per day by 2032”—an extraordinary scale for a nation of approximately 600,000 inhabitants that will multiply its GDP per capita several times over.

Most notable was the method behind the strategy: the “Suriname 3.0” vision, a long-term planning exercise developed jointly with the private sector, labor unions, and all political parties. The initiative defines which other industries—agriculture, ecotourism, and fisheries—will receive oil revenues, as well as the workforce and educational profiles that need to be developed in order to avoid the classic pitfalls of resource booms.

The global dimension of natural gas was addressed by **Rafik Amara of the Gas Exporting Countries Forum (GECF) Secretariat**, who offered a definition that would be repeated throughout the conference: natural gas “is not the fuel of the transition but its enabler,” and even “the destination fuel,” essential for providing stability in the face of renewable energy intermittency. Following the successive shocks of COVID-19 and geopolitical conflicts, he argued that energy security must occupy a central place in public policy and delivered a direct message to the audience: “Integration is no longer optional; it is a necessity for the region.”

Rebolledo concluded with two figures linking the energy and mining agendas: the region produces 25% of the world’s critical minerals—primarily lithium and copper—and, according to an OLACDE study of the 150 largest mining projects, the sector will account for nearly 9% of total regional electricity demand within a decade.

Pragmatism, Stable Rules, and a Collective Voice

The third day opened with a panel of global and regional associations moderated by **Pedro Miras Salamanca, President of WPC Energy**, where industry leaders agreed that the current environment combines heightened geopolitical risks, regulatory tensions, and an urgent need to sustain investment.

Carlos Garibaldi challenged simplistic approaches to the energy transition with one of the conference’s key remarks: “Reduction is not the solution.” He warned that the idea of “not giving money to oil and gas and giving it to renewables instead” is “counterproductive—it does not work,” because “hydrocarbons and electrification involve entirely different risks.” He called for public policies that are “immune to political cycles and short-term circumstances” and even joked about the famous energy trilemma, describing it as “inherently unstable—it is like balancing a ball on your head.” “That only works if we’re Messi,” he quipped to the Buenos Aires audience.

Jennifer Miskimins, President of SPE International and Head of Petroleum Engineering at the Colorado School of Mines, described the deterioration of the global environment in stark terms: “We are experiencing risk right now; that was not the case for a long time.” The trilemma triangle, she said, “has changed significantly because of wars,” with concrete and immediate threats such as the Strait of Hormuz. Her conclusion—“If we are going to need more energy, the energy mix will be different”—was accompanied by a call to attract young talent by demonstrating that “this is an industry where opportunities exist.” Along the same pragmatic lines, **Elizabeth Komiskey, Senior Manager for the Americas Region at the International Association of Oil and Gas Producers (IOGP)**, called for moving the energy transition from rhetoric to implementation: “We need practical guidance and technical expertise for the industry to succeed,” she said, reminding the audience that in a context where “concepts are becoming blurred,” the central objective must be “to provide access and guarantee energy.”

Andrea Stegher, President of the International Gas Union (IGU), emphasized the need for regulatory realism: “We cannot have regulations that are more stringent than necessary,” he said, adding that they “must be grounded in reality.” He proposed moving away from the idea of transition as replacement and instead speaking about sustainability, understood as “reducing poverty through energy.” He also called for consistency in capital allocation: “The same logic that supports renewable energy should also be applied to conventional energy sources.”

Brian Sullivan, CEO of Ipieca, illustrated political volatility with a story from London: “The United Kingdom’s energy policy changes almost every week,” he remarked, recalling that before the Strait of Hormuz crisis, oil CEOs entered Downing Street “through the back door,” whereas the day after the crisis they were entering through the front door. “Suddenly, we realized that we needed everyone.” For Sullivan, the current environment is driving a “recalibration of supply” and renewed investment momentum in oil and gas because “the importance of energy to progress cannot be underestimated.” As a result, the industry must strengthen its social license to operate by reducing emissions, eliminating gas venting, and improving efficiency.

Competitiveness Is Defined at Home

While the global associations focused on the international landscape, their national counterparts turned the spotlight inward. They agreed that the principal threat to the sector’s development is not only the global environment, but also the lack of predictability, competitiveness, and

domestic consensus. **Frank Pearl, President of the Colombian Oil and Gas Association (ACP)**, framed the issue in fundamental terms: “National sovereignty is largely defined by energy sovereignty.” He also offered a regional self-criticism: “In some countries, we had lost the battle over the political narrative.” In a continent where monetary poverty affects 25% of the population and extreme poverty stands at 9.8%, the sector, he argued, must “demonstrate that this sector holds many of the solutions.”

Luz Stella Murgas, President of Naturgas, linked uncertainty directly to “the rules of the game” and their instability. “Delays in strategic energy security projects are associated with administrative delays, consultation requirements, and government regulations,” she explained, referring to a country that has partially depended on imported gas to meet domestic demand since 2024. She also provided one of the panel’s most frequently cited figures regarding fiscal competitiveness: “Government Take in Colombia exceeds 80%” (close to 70% for natural gas), a level that conditions investment decisions when compared with alternatives such as Argentina, Brazil, or Peru.

A contrasting perspective was offered by **Roberto Ardenghy, CEO of the Brazilian Petroleum, Gas and Biofuels Institute (IBP)**, who tempered the dramatic tone surrounding current developments, noting that “there are problems in Hormuz, but there are alternative routes,” and emphasizing the resilience of the industry: “The industry is highly resilient and well prepared.” Brazil, he noted, had just announced a 20% increase in production and now produces 5.6 million barrels of oil equivalent per day, having moved from importing 90% of its crude oil to becoming the world’s eighth-largest exporter. His explanation was consistent with the broader diagnosis: half a century without dramatic changes to the country’s legal and fiscal framework. “If the rules are changed midstream, that is disastrous for investment,” he warned, while also offering a conceptual definition: “The energy transition is not an environmental phenomenon, but an economic one.”

Ernesto López Anadón returned to the issue from the perspective of IAPG, emphasizing a key factor in the global competition for capital: “We have to be extremely competitive.” The decisive factor, he argued, is “respect for investors,” together with stable rules and cost efficiency. The Peruvian cases closed the panel with a warning about the cost of political instability. **Felipe Cantuarias, President of the Peruvian Hydrocarbons Society (SPH)**, recalled that despite 35 years of growth and solid macroeconomic indicators, “we have had 10 presidents in the last seven years.” The country imports 75% of its liquid fuels despite having reserves capable of supporting significantly higher domestic production and maintains tariff disparities

that make natural gas up to 170% more expensive in the poorest regions than in Lima. **Raúl García Carpio, Hydrocarbons Manager at the National Society of Mining, Petroleum and Energy (SNMPE)**, which celebrated its 130th anniversary during the conference, completed the structural diagnosis: “The national energy policy has not been updated since 2010.” Energy planning, he argued, has become overly focused on the power sector, while dependence on imports exposes the country to every global price shock.

Conclusions and Key Findings

The first thematic track of the ARPEL Conference 2026 produced a remarkably consistent diagnosis across a wide range of perspectives. First: the world is undergoing a profound transformation—“we are recreating the world,” in Fryklund’s words—in which energy security has displaced the energy transition as the dominant priority on the global agenda, and energy has once again become an instrument of geopolitical power.

Second: this transformation has opened a historic and demonstrable window of opportunity for Latin America and the Caribbean. During the crisis, the region supplied 6.1 million barrels per day to global markets, accounts for a disproportionate share of recent discoveries, and offers export routes free of strategic chokepoints within a zone of peace.

Third: opportunity does not materialize on its own. The contrast between Brazil—with half a century of honored commitments and now the world’s eighth-largest exporter—and Venezuela, which holds the world’s largest reserves yet produces only a fraction of its historical output, highlights the central lesson: the decisive resource is not found underground but on the “surface”—in the form of the rule of law, macroeconomic stability, competitive fiscal regimes, and state policies that are insulated from electoral cycles.

Fourth: Argentina’s recent reforms, the RIGI framework, and the turnaround in its energy trade balance have positioned the country as the region’s most closely watched experiment. At the same time, speakers shared the view that credibility is built by maintaining the course over multiple administrations.

And fifth: in a world where more than 40 countries compete for the same pool of capital, the regional industry has embraced the need for integration—“no longer optional, but a necessity,” according to the GECF—as well as a renewed public narrative and a stronger collective voice, a spirit captured by ARPEL in the conference’s motto: Together, We Are Energy.



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TOPIC 2

**REGIONAL UPSTREAM
COMPETITIVENESS: VACA MUERTA
AND UNCONVENTIONAL POTENTIAL**

Key Quotes

"We are all looking at the full development of Vaca Muerta, but more than gas, it is LNG."

Horacio Marín
Chairman and CEO of YPF

"A well in Argentina is 45% more expensive in dollar terms than in the United States."

Ricardo Ferreiro
President of E&P at Tecpetrol

"When you understand that energy is strategic, you do things like those being done in Vaca Muerta."

Felipe Bayón
CEO of GeoPark

Key Figures

US\$20 billion in exports

could be generated by Argentina's LNG project, which YPF envisions as the largest in Latin America.

Drilling a well in Argentina remains

45% more expensive

in dollar terms than in the United States, a competitiveness gap the industry is working to close.

Oil takeaway capacity in the basin has increased from

250,000 to 750,000 barrels per day

since 2021 and is expected to reach approximately 1.5 million barrels per day by 2030–2031.

Vaca Muerta is estimated to contain

more than 16 billion barrels of oil and 300 TCF of natural gas,

enough to supply the country for more than 100 years.

If the first thematic track of the conference positioned Latin America before a historic opportunity, the second focused on the question that will determine whether that opportunity can be realized: how to transform resource abundance into competitive production. The answer had a name of its own—Vaca Muerta—and a central protagonist: YPF. Yet the discussion extended across the entire value chain, from upstream to midstream, and across the region as a whole.

From the interview with Horacio Marín to the panels featuring unconventional producers and oil and gas CEOs, speakers converged around a common diagnosis: the challenge is no longer geological, but rather one of execution, costs, infrastructure, and financing. They also shared a common conviction: the Argentine model has become a replicable “blueprint” for a region seeking to overcome bottlenecks and establish itself as a reliable energy supplier to the world.

YPF and the Ambition to Double Its Size

The interview with **Horacio Marín, Chairman and CEO of YPF, conducted by Nicolás Gandini, Director of EconoJournal**, provided a roadmap for the country’s leading energy company and, by extension, much of Argentina’s upstream sector. Marín outlined an expansion strategy based on the full development of Vaca Muerta, while emphasizing that the real breakthrough will not come from conventional natural gas: “We are all looking at the full development of Vaca Muerta, but more than gas, it is LNG.”

The scale of the project is what is reshaping expectations across the sector. Marín stated that LNG development could generate “US\$20 billion in exports” and become “the largest project in Latin America,” a scale that would allow YPF “to double in size.” To support that ambition, the company is seeking major global partners: “We are looking for companies with very deep pockets,” he explained.

The expected increase in oil production is equally significant: “Half a million barrels from Vaca Muerta alone,” as part of a national target of 800,000 barrels per day. Marín noted that YPF already exports “100,000 barrels to Chile today” and projected “180,000 barrels for export” in an initial phase by 2027. The company’s strategy is built around four pillars: YPF Oil, YPF LNG, the domestic market, and exploration. He illustrated the scale of the resource with a striking projection: “YPF will not need to explore for gas after 2028; associated gas alone will be enough.”

Beyond production volumes, Marín emphasized the structural impact of the resource on the broader economy. The large-scale development of Vaca Muerta, he argued, “will allow Argentina to become one of the countries with the lowest energy costs in the world,” thanks to the reduction in the marginal cost of natural gas. Far from defending a dominant position, Marín welcomed the entry of new players into the play: “I love seeing them come in. Vaca Muerta is for everyone.” Marín also anticipated progress in regional offshore development: “I am optimistic that, together with Eni, we will explore in Uruguay.”

He concluded with a comment on the company’s preparedness in the face of a volatile international environment: “We prepared for low prices, and high prices arrived. We will deliver strong results.” His final message captured the optimistic tone that would characterize the entire theme: “The future is bright, Argentina will move forward... we are going to become what we want to be.”

The discussion also offered a broader reflection on the energy identity that Argentina may be able to reclaim. Gandini noted that, by becoming an LNG exporter and bringing terminals such as the one in Río Negro into operation, Argentina is reconnecting with regional and global markets from a position of abundance rather than scarcity. Marín agreed that the outlook extends beyond the company itself: the full development of the resource will stimulate the oilfield services sector, “we are on everyone’s radar,” attract new operators, and, beyond energy, open the door for mining to become a second engine of development. The key condition, he stressed, is improving productivity to remain competitive when prices decline. The industry’s real cultural transformation, he argued, lies in moving from a sector accustomed to cycles to one relentlessly focused on efficiency.

The Challenge Is No Longer Geological, but One of Costs and Execution

The unconventional resources panel, moderated by **Leonardo De Lella, Managing Director and Partner at Boston Consulting Group (BCG)**, shifted the discussion from ambition to the detailed engineering of competitiveness. **Ricardo Ferreiro, President of E&P at Tecpetrol**, was unequivocal in identifying the core issue: the main gap is not technological, but economic. “A well in Argentina is 45% more expensive in dollar terms than in the United States,” he noted, while adding that the technological gap is only “one or two years” and that the limitation is often not knowledge itself but access to those technologies.

Ferreiro also drew a revealing distinction regarding where the greatest opportunities for improvement lie: only 30% to 35% of a well's total cycle time depends on drilling speed, while the remaining 65% to 70% consists of "flat time" activities such as running casing and logistics, where "there is still a great deal of work to be done." As an example of the resource's potential, he cited the case of Fortín de Piedra, which went from zero to 15 million cubic meters per day in just 18 months through an investment of US\$2 billion.

Rodrigo Ugarte, Senior Manager of YPF's Northern Area, explained how these costs are being addressed operationally based on a fundamental design principle: ensuring that projects remain profitable even under adverse market conditions. "We are working intensively to reduce costs and design projects that are resilient to low-price environments," he explained, citing the renegotiation of service rates, the decentralization of sand logistics, the standardization of facilities through a "well factory" model, and centralized control rooms using artificial intelligence to correct deviations in real time. As a result, he highlighted a lifting cost of around US\$4 per barrel, "highly competitive on a global scale."

For new entrants, however, the competitiveness equation is different. **Ignacio Mazariegos, Director of GeoPark's Argentina Business Unit**, explained that, without the scale of the major operators, the company's competitive advantage lies in collaboration and agility: "The ability to make decisions quickly is what makes the difference." He recounted that GeoPark entered Vaca Muerta in October and was already conducting operations that same day thanks to equipment provided by neighboring operators. Today, the company collaborates with seven firms across different areas and manages approximately 200 commercial agreements with a team of just 45 people. In his view, the "ecosystem" itself—the proximity of operators with spare capacity, shared infrastructure, and responsive authorities—is the asset that compensates for a lack of scale.

From the public sector, **Fabrizio Gulino, Undersecretary of Energy and Hydrocarbons of the Province of Neuquén**, explained how the provincial government is supporting this approach. Faced with a map of legacy conventional concessions originally designed for vertical wells and now ill-suited to 3,000-meter horizontal well sections, the province is working to convert concessions, create "virtual wells" that cross concession boundaries, and harmonize surveying practices among neighboring operators. "From the province's perspective, we see no issue with drilling a well in one concession and, if there is insufficient length remaining within the concession, continuing into the neighboring concession," he explained, summarizing a philosophy of "ramp up, maintain, and abandon" throughout the resource's life cycle.

The panel concluded by projecting Argentina's experience across the rest of the region. Ferreiro noted that "the know-how resides within the industry" and that countries such as Mexico—which "imports 80% of the natural gas it consumes"—and Colombia possess the necessary resources but need "clear signals" of regulatory stability to mobilize the capital-intensive investments required for unconventional development.

Mazariegos, drawing on three years of experience in Colombia, went even further. Vaca Muerta functions as a "blueprint" that can be applied elsewhere in the region, where unconventional development in the Middle Magdalena Basin alone could double Colombia's proven oil reserves and increase its proven natural gas reserves ninefold. The obstacle, the panelists agreed, is no longer geology, but rather public-private alignment and social license.

Oil: Efficiency, Infrastructure, and Clear Rules

The Oil CEOs Panel, moderated by **Ernesto López Anadón, President of the Argentine Institute of Oil and Gas (IAPG)**, brought together representatives from across the value chain—downstream, upstream, and midstream—and highlighted the different speeds at which the region is advancing. From the refining sector, **Julio Friedmann, General Manager of ENAP**, outlined a strategy focused on efficiency rather than expansion: "We are not currently looking to increase our production capacity, but rather to improve it," following what he described as "the best year in our history" in 2025. His concern, he noted, is not the present but the future: refining margins "will inevitably decline," and the industry is "in a race against time" to improve its operations.

Nicolás Spinelli, General Manager of ANCAP, offered the perspective of a company that derives more than 97% of its revenue from refining and operates as a monopoly in Uruguay: "We have to guarantee supply." Spinelli described a structural shift in demand. In Uruguay, 25% of all new vehicles sold are already electric vehicles, a level of penetration that foreshadows the challenge of placing surplus gasoline production in regional markets. He also highlighted the diversification of the company's crude slate, noting that Argentina's Medanito crude now represents 40% of the blend, supported by a supply agreement with Vaca Muerta valued at approximately US\$12 billion through 2033.

Felipe Bayón, CEO of GeoPark, illustrated Argentina's transformation through a historical comparison: at the 2009 World Gas Conference,

discussions focused on how quickly LNG import terminals could be built, whereas today the country is preparing to export LNG. “When you understand that energy is strategic, you do things like those being done in Vaca Muerta,” he said, highlighting the regional gap: the basin produces “five times as much gas as all of Colombia,” a country that has lost its natural gas self-sufficiency. Bayón confirmed GeoPark’s return to Argentina following the acquisition of two blocks and a planned investment of nearly US\$1 billion in approximately 55 wells. He also praised the RIGI framework as a source of stability that is “difficult to find elsewhere in the world.”

Carlos Gilardone, CEO of Quintana Energy, focused on what he considers the main financial bottleneck: “Argentina lacks a capital market,” as well as a banking system capable of supporting project finance, forcing emerging companies to rely on strategic partners such as Trafigura and Chevron. His diversified model—combining oil, gas, and storage—reached a record 23,300 barrels of oil equivalent per day and was designed to remain resilient even with oil prices at US\$55 per barrel. His conclusion was unequivocal: the basin’s ambition to reach two million barrels per day “requires a serious country, with stability and respect for the rules of the game.”

Gilardone also presented one of the panel’s most distinctive investment themes: natural gas storage as a strategic business opportunity. He predicted that Vaca Muerta will eventually mirror the dynamics of the Permian Basin, where abundant associated gas creates significant seasonal price swings between winter and summer. “Don’t be surprised if, this summer, companies pay you to take their gas,” he remarked, describing a market in which the ability to store, withdraw, and inject gas during peak-demand periods becomes a valuable trading position and a natural complement to oil development.

The midstream segment highlighted the most critical constraint to future growth. **Ricardo Hösel, CEO of Oldelval**, warned that “100% of takeaway capacity has already been nominated for July” to the Atlantic coast, driving a new wave of large-scale infrastructure projects: the expansion of Duplicar and the new Duplicar Norte pipeline. The project involves an investment of US\$380 million to transport an additional 200,000 barrels per day, with further expansion currently under negotiation.

Hösel quantified the transformation of the basin’s infrastructure: the basin has increased its takeaway capacity from approximately 250,000 barrels per day in 2021 to nearly 750,000 today, supported by more than US\$6–7 billion invested in pipeline infrastructure alone. He projected that, including

the VMOS project, total takeaway capacity will reach approximately 1.5 million barrels per day by 2030–2031. **Andrés Cavallari, CEO of Raízen**, completed the panel by emphasizing regional integration, technical cooperation, and the need to harmonize fuel specifications and technical standards in order to facilitate cross-border trade.

Natural Gas: Diversify, Invest, and Cooperate

The Natural Gas CEOs Panel, moderated by **Victoria Terzaghi, Head of the Energy Section at Río Negro newspaper**, began with a lesson drawn from the recent crisis. **Sergio Mengoni, Managing Director of TotalEnergies in Argentina**, summed it up in a single word: “The key word is diversification.” The conflict in the Middle East, he explained, demonstrated that “there is no longer any place on the planet that is immune,” a geopolitical risk that “still does not appear in the spreadsheets” used in economic analyses and one that gives the region additional momentum. Mengoni reaffirmed TotalEnergies’ ambition to remain Argentina’s leading natural gas producer, currently producing around 36–38 million cubic meters per day, and to lead regional exports, guided by two principles: “Collaboration and courage.”

Juan Manuel Rojas, President of Promigas, proposed redefining the very concept of energy security. After repeated shocks, he argued, it should be viewed “in terms of resilience to price and supply disruptions.” He identified three priorities: system redundancy, regulatory streamlining to reduce “time to market,” and diversification of supply chains. He also provided the panel’s most striking figure regarding the cost of inaction: according to the Inter-American Development Bank, the region failed to deliver energy equivalent to an opportunity cost of US\$7 billion, or 53 terawatt-hours, due to insufficient transportation capacity. “We need to invest US\$8 billion per year in transmission networks and transportation systems, and we are not doing it,” he warned.

The perspective of gas transportation infrastructure operators was provided by leading pipeline companies. **Oscar Sardi, CEO of Transportadora de Gas del Sur (TGS)**, described Argentina’s “unique position” as one of the few countries combining both fiscal and energy surpluses, supported by Vaca Muerta resources estimated at more than 16 billion barrels of oil and 300 TCF of natural gas. Sardi outlined two strategic projects: the expansion of the Perito Moreno pipeline, involving a US\$560 million investment expected to generate US\$700 million in trade balance savings, and an ambitious natural gas liquids (NGL) recovery project valued at approximately US\$3 billion, which is expected to generate annual exports exceeding US\$1.2 billion.

Horacio Pizarro, General Manager of Transportadora de Gas del Norte (TGN), agreed that Vaca Muerta represents a “historic opportunity” capable of supplying the country for more than a century, but emphasized one condition: “There cannot be an export structure without a solid and well-supplied domestic market.” He described the Tratayén–La Carlota project, aimed at relieving bottlenecks in the pipeline system serving the Buenos Aires market, as well as the pending reversal of the Northern Gas Pipeline. Both initiatives are critical to reactivating six underutilized pipelines and restoring exports to Chile, Bolivia, and Brazil.

For his part, **Andrés Mendizábal, COO of Transportadora de Gas del Perú (TGP)**, contributed a regional perspective built around a conceptual balance: the challenge is to combine “competition and collaboration,” because competition improves prices, while collaboration among companies, regulators, and governments makes integration possible.

María Julia Aybar, Senior Vice President and Country Manager of Hunt Oil Company, closed the panel with a reflection that echoed one of the conference’s central themes: events since 2022 have demonstrated that hydrocarbons “are not on their way out,” and that what the world is experiencing is less an energy transition than an “energy addition.” Drawing on Peru’s experience with the Camisea project, she offered both a warning and a self-critique that resonated as a regional lesson: “If I stand here today and look back, I feel like Argentina,” when the project was executed well; “but if I look to the future without doing what we should be doing, I see myself as Colombia,” forced to import natural gas. Her central question—how to remain competitive in order to attract capital that is “increasingly scarce”—became the defining takeaway of the discussion.

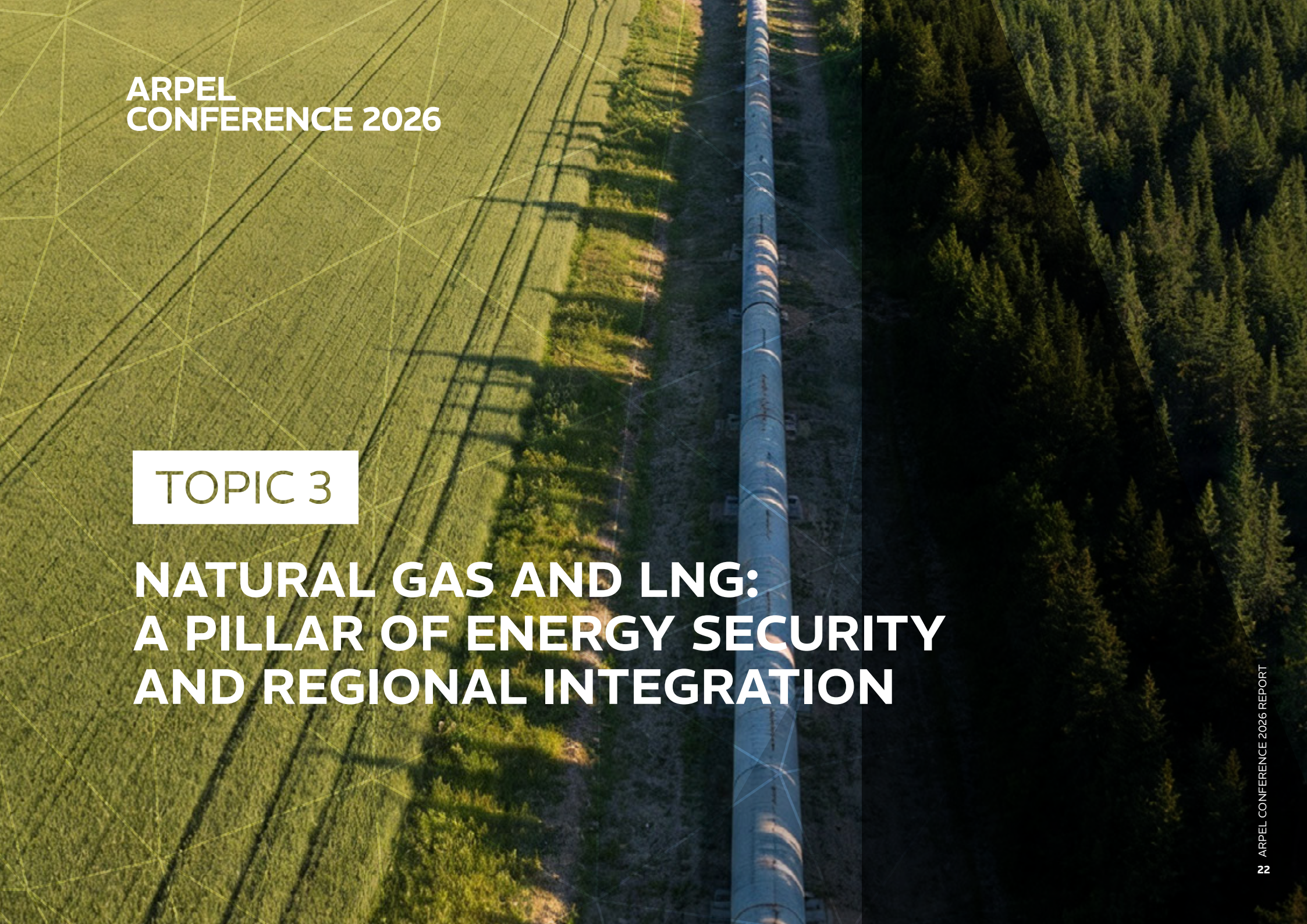
Rojas also offered what was perhaps the panel’s most forward-looking perspective: the region’s main bottleneck, he argued, is not physical but related to market design. Latin America continues to treat “molecule and electron markets” as completely separate systems, even though “customers want reliability, energy security, and resilience, regardless of where the energy comes from.” The integration of these regulatory systems, he suggested, presents significant value-creation opportunities that are currently being missed. Promigas has already begun pursuing this vision through the acquisition of a renewable energy operator, combining its gas networks with solar generation and energy storage projects in Colombia, Peru, and Chile.

Conclusions and Key Findings

The second thematic track of the conference produced one overarching conclusion: in the regional upstream sector, the resource itself is no longer the limiting factor. Whether in Vaca Muerta or in the unconventional basins of Mexico and Colombia, both geology and know-how are already available. What ultimately determines success is the ability to convert that potential into competitive production. That conversion depends on four variables that emerged consistently across all panels: costs, execution, infrastructure, and financing.

Regarding costs, the diagnosis was clear: an Argentine well still costs 45% more than a U.S. well in dollar terms, but the gap can be narrowed through technology, standardization and, above all, by reducing the “flat time” portions of the process. In terms of execution, one of the most significant findings was the value of the “ecosystem” itself: collaboration among operators, shared infrastructure and regulatory agility can serve as substitutes for scale for new entrants. With respect to infrastructure, the bottleneck has shifted from production to transportation. Oil takeaway capacity has tripled since 2021 and is on track to reach 1.5 million barrels per day, while natural gas development requires new pipelines, pipeline reversals, NGL recovery projects and LNG facilities to fully monetize the resource.

The fourth variable—financing—emerged as the least resolved constraint, particularly in Argentina, which “lacks a capital market” and whose country risk remains roughly twice that of its neighbors. This explains the recurring emphasis on clear rules, the RIGI framework and long-term policy stability as essential conditions for attracting capital that is scarce today and actively sought by more than 40 competing countries. Finally, the discussion confirmed the regional relevance of the model. Vaca Muerta has become established as a replicable “blueprint” and, together with diversification, resilience and integration—of molecule and electron markets, supply chains and cross-border infrastructure—has defined the agenda through which the region hopes to transform its resources into economic development and energy security for the world.



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TOPIC 3

NATURAL GAS AND LNG: A PILLAR OF ENERGY SECURITY AND REGIONAL INTEGRATION

Key Quotes

"There is no insurmountable geological, technological, or financial challenge; the central challenge is coordination."

Roberto Ferreira da Cunha
EnClim

"We have a unique location in the South Atlantic from which to supply markets with competitive and reliable natural gas."

Santiago Martínez Tanoira
Executive Vice President of LNG and Integrated Gas, YPF

"Latin America and the Caribbean do not face a shortage of resources or opportunities. The challenge is turning potential into action."

Pablo Ferragut
Managing Director of ARPEL

Key Figures

Global LNG trade has grown by

83%

in less than a decade, while the number of exporting countries has increased from 17 to 25.

80% of the energy

consumed in Latin America is produced domestically; the region imports only the remaining 20%.

Argentina currently supplies

**more than 60%
of Chile's natural gas consumption,**

reflecting a level of integration that would have seemed unthinkable just a few years ago.

Brazil's peak natural gas demand could reach

140 million cubic meters per day

when thermoelectric generation is included, making it the key anchor-market opportunity for Argentine gas.

If oil shaped the debate on upstream competitiveness, natural gas became the focal point of discussions about the region's strategic future. Throughout the conference, natural gas emerged as the true structural pillar of Latin America's energy system: not as a transition fuel, but as both an enabler and a destination fuel, capable of providing security, competitiveness, and integration to a continent that imports only a small fraction of the energy it consumes.

From the presentation of the Second Natural Gas Report to the debate on Southern Cone integration, and through one of the conference's most anticipated discussions—the export opportunities for LNG and NGLs—speakers outlined a common narrative: the region has the resource, global demand is assured, and the opportunity is historic, but capturing it depends on timely execution, infrastructure development, and improving the competitiveness of the molecule. Argentina, with Vaca Muerta and its LNG projects, stood at the center of that conversation; the rest of the region faced a choice between deeper integration and remaining at the mercy of imports.

From Diagnosis to Action: Natural Gas as a Regional Institution

The presentation of the Second Natural Gas Report, jointly produced by the International Gas Union (IGU), OLACDE, ARPEL, and Naturgas, marked the starting point of this thematic track and introduced a message that would resonate throughout the remainder of the track: moving from data to action. **Andrea Stegher, President of the International Gas Union (IGU)**, captured the spirit of the report by describing its approach as “Fact-Based Advocacy”—advocacy grounded in evidence and concrete data. His proposal was practical: develop a new document compiling evidence from real projects already underway across the region in order to establish benchmarks and identify replicable best practices. “The best thing for the region is to have real projects being developed,” he stated, convinced that Latin America can become a model to be shared with other regions of the world.

Guido Maiulini, Head of Strategic Advisory at OLACDE, provided the figure that frames the entire discussion on regional energy security: “Latin America imports only 20% of the energy it needs,” meaning that the region supplies 80% of its own energy demand. That relative self-sufficiency, he argued, provides the foundation for building a truly integrated regional market capable of decoupling local prices from global volatility through appropriate price signals, strong institutions, and long-term planning.

However, he also warned of the fragility of that process with a phrase that would resonate throughout the subsequent panels: “Trust arrives walking and leaves running.”

Pablo Ferragut, Managing Director of ARPEL, concluded the presentation with the report's central thesis: “Latin America and the Caribbean do not face a shortage of resources or opportunities.” The challenge, he argued, is turning that potential into action. He highlighted the complementary roles of natural gas, biomethane, and hydrogen in simultaneously contributing to energy security, economic competitiveness, regional integration, and emissions reduction. Moderator Camilo Morales, Secretary General of Naturgas, completed the picture with a sector-specific perspective: in segments such as heavy-duty transportation, “greater energy density is required,” an area where natural gas can provide near-term solutions while other renewable technologies continue to mature. The joint call from IGU, ARPEL, and OLACDE was unequivocal: move from diagnosis to implementation.

LNG and NGLs: The Historic Opportunity of the South Atlantic

The panel on opportunities to expand the use and export of Liquefied Natural Gas (LNG) and Natural Gas Liquids (NGLs) was one of the central moments of the second day. Moderated by **Gabriela Aguilar, President of the Argentina-Texas Chamber of Commerce**, it brought together representatives from across the gas value chain, from global market analysts to transportation and processing infrastructure operators. The message was unanimous and compelling: the global gas market is at a turning point, demand is assured, and Latin America faces a tangible window of opportunity that will not remain open indefinitely.

Andrea Stegher opened the discussion by highlighting the scale of the structural transformation taking place in the global LNG trade. In less than a decade, the market has expanded from 240 million to more than 440 million tonnes, while the number of exporting countries has increased from 17 to 25, creating “increasingly interconnected” markets in which price correlations between Europe and Asia have reached as high as 80%. This dynamism is being reinforced by a new wave of projects that, according to the International Energy Agency, will add substantial volumes to global supply. However, demand is growing at the same pace. Southeast Asia is turning to coal to compensate for physical supply shortages following disruptions in Qatari LNG supplies, leading Stegher to a clear conclusion: “Today, we need to execute.” The opportunity exists right now.

Argentina's role in the discussion was led by **Santiago Martínez Tanoira, Executive Vice President of LNG and Integrated Gas at YPF**, who described a project that "is moving forward steadily." The strategic shift, he explained, was moving from a dry gas-based model to one centered on wet gas, significantly improving the project's economics. LNG now accounts for approximately 50% of total revenues. Martínez Tanoira outlined the project's tangible progress: engineering work has been completed, tenders are underway, more than 17 bids have been received for the liquefaction plants, agreements have been reached with provincial governments, and work is progressing with partners on project financing. He also framed the opportunity in geographic terms: "We have to remain competitive because there are many projects out there," he warned, but Argentina benefits from "a unique location in the South Atlantic," free from straits and strategic chokepoints, allowing it to supply markets with reliable natural gas. The security Argentina offers, he emphasized, is not only about cost competitiveness but also about security of supply—an attribute whose value has been reinforced by the recent global crisis.

The global market perspective was provided by **Vinicius Romano, Vice President for Gas Markets in Latin America at Rystad Energy**, who introduced a premise that helped frame the debate: "A more competitive project secures better pricing and financing." Romano described the geography of global demand—with Asia accounting for nearly 60% of global LNG consumption—and anticipated changes in market structure, where Argentina will need to compete with the United States, whose Gulf Coast hosts the world's only major LNG pricing hub. For NGLs, however, the outlook is different. The market is already structurally export-oriented, and incremental regional production is unlikely to find sufficient local demand, meaning it will be directed toward major international demand centers.

From Colombia, **Juan Manuel Rojas, President of Promigas**, offered a cautionary example of the consequences of failing to act in time. "We have the fields, but we have not been able to develop them. As a result, we now import 25% of our natural gas needs, and we will import even more," he lamented, describing what he called a "self-inflicted" problem that transformed a once self-sufficient country into a gas importer. The consequences, he explained, have cascaded throughout the economy: residential consumers have faced price increases of between 30% and 40%, industry has been forced to switch to more expensive energy sources—resulting in a loss of nearly 15% of demand—and the government has forfeited royalty revenues. Promigas is expanding its regasification terminal from 475 million to 533 million cubic feet per day. The facility currently supplies more than half of the country's demand. Nevertheless,

Colombia will urgently require a second terminal in anticipation of an especially intense El Niño event.

The infrastructure bottleneck was described with particular precision by **Claudia Trichilo, Director of Operations at Transportadora de Gas del Sur (TGS)**: "Transportation capacity is essential" to evacuate and process an increasingly abundant and liquids-rich gas stream. Trichilo quantified the scale of the growth ahead: associated gas production linked to crude oil output is expected to increase from approximately 14 million cubic meters per day in 2025 to 44 million cubic meters per day by 2030, a volume that will require new processing plants and pipeline infrastructure. She outlined TGS's liquids processing and transportation project: a processing plant in Tratayén with a capacity of 43 million cubic meters per day, connected by pipeline to Bahía Blanca to transport approximately 8,000 tonnes per day of propane (C3) and heavier natural gas liquids for export markets. With framework agreements currently being finalized and an estimated construction period of 45 months, she projected that "it should be in service by the winter of 2030."

The perspective of destination markets was provided by **Nazareno Ferrero, Business Development Manager at Argus Media**, who described a global LNG market with clearly defined demand centers, where Asia accounts for approximately 60% of consumption and where Argentina will need to position itself in direct competition with the United States. The panel converged on a common conclusion: the region has a tangible opportunity to become a significant energy supplier, but capturing that opportunity will require addressing a set of shared structural challenges, including stable regulatory frameworks, access to financing, infrastructure development, and long-term commercial agreements. The Large Investment Incentive Regime (RIGI), the Argentine participants agreed, was the key element that made these capital-intensive, long-payback projects financeable. Without that framework, such projects would not have moved forward.

Southern Cone Integration: From Shared Diagnosis to Concrete Projects

The final session of this thematic track, held on the fourth day of the conference, brought the discussion to its most practical dimension: natural gas integration across the Southern Cone. Moderator **Roberto Ferreira da Cunha, CEO of EnClim**, described the new reality facing the region. Argentina's unconventional revolution in Vaca Muerta is transforming

supply dynamics, Bolivia's production is declining, and demand patterns are being reshaped—particularly in Brazil. The challenge, he suggested, is no longer geological, technological, or even strictly financial. It is now a matter of coordinating multiple stakeholders.

Esteban Kiper, Natural Gas Specialist at OLACDE, described the integration process as unfolding in two phases. The first phase, already well established, is the reintegration with Chile through existing infrastructure. After overcoming the mistrust created by the interruption of gas flows during the mid-2000s crisis, and thanks to policy continuity across four successive administrations, Argentina now supplies more than 60% of Chile's natural gas consumption. The second phase, which is considerably more complex, requires new infrastructure to reach northern Chile, Brazil via Bolivia, Paraguay, or directly to Brazil through Uruguaiana. Kiper emphasized that the key advancement is that there is now "a shared diagnosis" among the countries regarding the system's costs, constraints, and requirements—a common starting point that did not previously exist.

From the production side, **Leopoldo Macchia, Commercial Vice President of Tecpetrol**, described the outlook as "very positive," supported by the combination of Vaca Muerta's abundant resources, existing gas and power interconnections, and the growing need in Brazil and Chile for supplies that are "secure, reliable, and competitive." As evidence of this commitment, he cited annual investments of approximately US\$500 million in Fortín de Piedra to sustain production of 25 million cubic meters per day during winter peak demand—"roughly equivalent to all of Bolivia's production"—as well as a greenfield oil project with associated gas. For Brazil, where the third pillar of supply—Bolivian gas—is expected to disappear by 2029, he identified four essential conditions: competitive delivered prices, expanded transportation capacity, government-to-government agreements that protect private contracts, and customers willing to commit to long-term firm contracts.

Luciano Rojas, Commercial Director of Total Austral, contributed the perspective of an operator with a presence throughout the region and Argentina's largest natural gas producer, currently producing 38 million cubic meters per day. He argued that integration should go "beyond natural gas, with natural gas as the foundation," incorporating synergies with power generation and mining. The replacement of Bolivian gas in Brazil creates a significant opportunity, but the competitiveness of the molecule—from production through regulation, across the entire upstream and midstream value chain—will determine whether Argentine gas can displace both domestic Brazilian gas and imported LNG in a highly competitive market.

The infrastructure perspective was provided by **Pablo Erías, Commercial Manager of Transportadora de Gas del Norte (TGN)**, who emphasized that Argentina has undergone a process of market normalization involving tariff restructuring, a five-year tariff review, and the alignment of tariffs with physical gas flows, leaving the system "with the necessary order" to pursue regional integration. He identified a new pipeline connecting Tratayén and La Carlota, in southern Córdoba Province, as the key enabling project. The pipeline removes the system's principal bottleneck—transporting gas from Neuquén to central Argentina—and creates the possibility, depending on market evolution, of future expansions northward, toward Uruguaiana, or through increased exports to Chile. Local demand, he noted, is already mature enough to support long-term contracting. During the first stage of TGS's expansion project, 5 million cubic meters of available capacity attracted bids totaling 32 million cubic meters, a clear indication of market appetite.

The Brazilian perspective—crucial as the region's anchor market—was provided by representatives of Petrobras and the Brazilian Petroleum, Gas and Biofuels Institute (IBP). **Álvaro Tupiassu, Executive Manager of Gas and Power at Petrobras**, framed the opportunity within a business plan of approximately US\$100 billion over the next five years, 85% of which is allocated to exploration and production. He described a Brazilian market that, once thermoelectric demand is included, can reach peak consumption of up to 140 million cubic meters per day. Tupiassu was explicit about the role of Argentine gas: "It should be part of Petrobras' procurement portfolio," initially through interruptible and seasonal arrangements that take advantage of opportunities such as El Niño-related demand spikes, and eventually through firm contracts capable of underpinning new infrastructure investments. He also expressed interest in becoming an offtaker of future Argentine LNG exports.

A note of realism was introduced by **Sylvie D'Apote, Executive Director for Natural Gas at the Brazilian Petroleum, Gas and Biofuels Institute (IBP)**, who warned that Brazil currently faces a situation of "more supply than demand." With a market that has not grown over the past fifteen years, new domestic projects coming onstream, and a gas industry now dominated by private-sector participants—Petrobras markets approximately 65% of the country's gas, while the remainder is marketed by multiple players—contract tenors have shortened to one or two years, making it more difficult to secure the long-term commitments required to support new infrastructure.

Her message nevertheless pointed to an opportunity: rather than competing solely on price, Argentine gas can gain market share by providing flexibility and price stability to an increasingly volatile Brazilian market, while securing a place in the portfolios of the country's new gas marketers. The panel's final consensus was that integration is viable and that the real challenge is no longer the resource itself, but rather aligning competitiveness, infrastructure, financing, and regional coordination.

Conclusions and Key Findings

The third thematic track established natural gas as the structural pillar of the regional energy matrix and as the key enabler of both energy security and regional integration. The concept that ran throughout the conference—that natural gas is not a transition fuel but rather an enabler of the transition, and even a destination fuel—found its fullest expression here. Natural gas provides reliability in the face of renewable intermittency, supports industrial activity, enables exports and, above all, can serve as the foundation of a regional market capable of insulating the region from global volatility.

The first key finding is that resources are no longer the issue. With 80% of its energy demand met by domestic production and the vast resources of Vaca Muerta as a foundation, the region is not facing scarcity but rather an execution challenge: moving “from diagnosis to action.”

The second finding is that the LNG and NGL export opportunity is real but highly competitive. The global LNG market has more than doubled over the past decade, Asian demand is assured, and the South Atlantic offers a first-class geographic advantage. However, Argentina must compete with the United States and execute quickly and competitively if it is to capture this opportunity.

The third finding is that infrastructure has once again become the critical constraint. Whether for exports—through liquefaction plants, NGL processing facilities, and takeaway pipelines—or for regional integration, projects such as the pipeline to central Argentina, capacity expansions, and flow reversals are the key enablers of regional trade.

The fourth finding is that Southern Cone integration has entered a mature but demanding phase. The Chilean experience demonstrates that once trust is rebuilt, stable flows can follow. Brazil, meanwhile, offers an enormous anchor market, but one characterized by more variable demand and shorter contract tenors, requiring Argentine gas to compete not only on price but also on flexibility.

The concluding message was common across all three blocks: the region has the resources, the demand, and the technology. What is now at stake is the ability to coordinate, execute, and maintain clear and stable rules capable of transforming potential into energy security and economic development.

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TOPIC 4

**REGIONAL UPSTREAM
COMPETITIVENESS II:
DEEPWATER AND CONVENTIONAL FIELDS**

Key Quotes

"We have never produced more: deepwater production is at an all-time high and will continue to grow."

Jarand Rystad
CEO and Founder of Rystad Energy

"Conventional production is not opposed to unconventional production; it is a bridge."

Martín Gandolfo
COO of Quintana Energy

"Local content is the difference between a medicine that saves a life and a poison that kills: the difference lies in the dosage."

Roberto Ardenghy
CEO of the Brazilian Petroleum, Gas and Biofuels Institute (IBP)

Key Figures

Deepwater production currently exceeds

10 million barrels per day
globally, a record level that could potentially double by 2050.

Global deepwater investment has reached a new plateau of

approximately US\$70 billion
in 2025–2026, driven largely by Latin America.

A frontier exploration well costs

between US\$100 million and US\$120 million,

with only a 10%–15% probability of commercial success.

One conventional-field operator reduced its OPEX

by 35%–45%
in a single year, with a target of achieving a 50% reduction.

While unconventional resources dominated much of the discussion on upstream development, the conference devoted an entire thematic track to the other two frontiers that will help sustain regional supply in the decades ahead: deepwater resources and mature conventional fields. Far from competing with one another, both emerged as complementary to shale development and critical to energy security in an increasingly uncertain and volatile world.

From Jarand Rystad's keynote on the resurgence of deepwater development to the panel on the offshore potential of the South Atlantic and the discussion on extending the productive life of mature conventional fields, speakers outlined a common narrative that echoed throughout the event: having resources is no longer enough; the challenge is turning them into competitive production. In the offshore sector, that transformation depends on stable regulatory frameworks, sufficient scale, and sustained exploration campaigns. In conventional fields, it depends on efficiency, innovation, and frameworks that encourage reinvestment. In both cases, the region is competing with the rest of the world for increasingly scarce capital.

The Greatest Energy Disruption in History and the Return of Deepwater

The presentation by **Jarand Rystad, CEO and Founder of Rystad Energy**—one of the world's leading energy consulting firms—was among the most anticipated sessions of the third day and provided the analytical framework for understanding why deepwater resources are once again moving to the center of the global energy industry. His opening thesis was unequivocal: the world is experiencing "the greatest disruption of energy flows" ever recorded. The crisis triggered by the conflict with Iran and the closure of the Strait of Hormuz reduced vessel traffic along critical routes from approximately 60 ships per day to as few as 5 to 10 and removed between 4 and 5.5 million barrels of oil per day from the market. When natural gas is included, the disruption exceeds 14 million barrels of oil equivalent per day. According to Rystad, the crisis is "five times larger than the one in 2022."

What is remarkable, he argued, is not the magnitude of the shock but the relative moderation of its effects. Energy prices increased by between 50% and 100%, far below the dramatic spikes experienced in 1973 or 2022. The explanation lies in prior preparation. The year began with a significant energy surplus, including oversupply in oil, natural gas, and electricity markets. Countries belonging to the International Energy Agency (IEA)—created in 1974 specifically to strengthen energy security—held strategic

reserves equivalent to approximately 140 days of consumption, well above the required 90-day threshold. "We have been prepared for an oil crisis like this one, and we have survived it," he summarized. This cushion was complemented by bypass infrastructure, strategic reserves, and the return of Russian crude oil to global markets following the easing of sanctions, factors that collectively helped contain price increases.

Rystad placed the episode in historical perspective to emphasize that "energy has been used as a weapon many times throughout history," from the coal blockade of London during the English Civil War in 1645 to the Arab oil embargo of 1973 and Russia's gas war against Europe in 2021 and 2022. The lesson, he argued, is that energy security has returned as a permanent fixture of the global agenda, with countries increasingly seeking domestic control over their energy sources—whether fossil, bio-based, or hydrogen-based—while simultaneously expanding solar, wind, and battery capacity. He also anticipated a new wave of investment in bypass pipelines across the Middle East designed to circumvent the Strait of Hormuz in the future, including a major new Iraqi pipeline capable of transporting 2.25 million barrels per day by 2029.

The core of his presentation focused on the resurgence of deepwater development. Rystad recalled that when he founded his company in 2004, virtually all expected growth in oil production was attributed to offshore resources. However, the shale boom "stole" that growth during the following decade, collapsing the market for drilling equipment and depressing activity for nearly ten years. Today, however, the cycle is reversing. Global deepwater production has surpassed 10 million barrels per day, reached an all-time high in 2025, and is expected to continue growing through 2030, with the potential to reach 20 million barrels of oil equivalent per day. "We have never produced more," he exclaimed, addressing an audience filled with offshore operators.

The opportunity remains enormous precisely because so much remains to be developed. According to Rystad Energy data, only 37% of the deepwater volumes expected to be produced by 2050 are currently on stream. Another 15% is under development, nearly 29% corresponds to discoveries that have not yet been sanctioned, and almost 20% has not even been discovered. In other words, roughly half of the production expected by 2050 has not yet reached a final investment decision (FID), creating what Rystad described as a significant exploration opportunity. Investment in the segment reached a new plateau of approximately US\$70 billion in both 2025 and 2026, driven largely by Latin America. However, Rystad emphasized that the excessive spending peaks of 2012–2014 "will

never return,” because the industry has learned to operate much more efficiently. Today, the sector delivers roughly twice the drilling capacity per dollar invested compared with that earlier peak.

His concluding message was directed squarely at the region. Deepwater growth is currently being led by Brazil and Guyana, with Suriname—and later Argentina—joining what he described as the South Atlantic’s “golden corridor,” while Namibia is emerging as the world’s most promising new exploration frontier. In terms of supply and demand, Rystad projected that South America will remain a net oil exporter, reaching a peak of approximately 4.5 million barrels per day in the early 2030s. Argentina, meanwhile, is expected to consolidate its position as an oil-exporting nation, producing between 1.0 and 1.2 million barrels per day. In his view, deepwater resources and shale are the two engines of Latin America’s next growth cycle—strategic, efficient, and competitive sources capable of sustaining supply in a world that will require more energy while facing greater risks.

The South Atlantic Golden Corridor: Turning Potential into Development

The panel on offshore activity and potential, moderated by **Rob Cordray, Managing Director for the Americas at Rystad Energy**, brought the consultant’s analysis into the realm of the operators and regulators competing for that capital. The premise that framed the discussion was established from the outset: having potential is no longer enough; it must be converted into real, sustained development in a region characterized by very different stages of maturity, ranging from Brazil’s highly productive pre-salt province to the frontier basins of Uruguay and the North Argentine Basin.

Andrew Hepburn, Country Chair of Shell for Suriname, Guyana, and São Tomé and Príncipe, summarized the prerequisite for frontier exploration in a single word: commerciality. Projects, he explained, must be material in scale and resilient to price volatility, which requires certainty in the investment climate, firm contracts that remain unmodified, fiscal predictability, and energy policies that encourage investment. In this regard, he praised Suriname’s “open door” policy, which keeps acreage available and maintains investor interest, noting that there is no point in allowing companies to retain blocks without actively exploring them.

Later, he was unequivocal about the realities of the business: we are living in an era of selective exploration. A frontier well can cost between US\$100 million and US\$120 million while offering only a 10% to 15% probability of

commercial success, forcing international companies to rank and prioritize opportunities with strict capital discipline.

María Fernanda Raggio, Exploration Director at YPF, explained how offshore development and Vaca Muerta coexist within the company’s portfolio. Today, capital allocation is focused almost entirely on unconventional resources, but offshore exploration remains a strategic option because a significant discovery could rival a project on the scale of Vaca Muerta itself. Raggio described 2026 as a decisive year, when companies must decide whether to move into the second exploration period, which entails a drilling commitment. She anticipated that those continuing to invest will drill both deepwater and shallow-water wells over the next four years.

Her broader message was a call for a change in mindset. Argentina drilled the Malvinas well in 2011 and the Argerich well in 2024—a pace of one exploration well per decade that, in her view, the country must leave behind in favor of sustained exploration campaigns, encouraged by the new global environment and the returns generated by Vaca Muerta. Exploration, she added, has become increasingly pragmatic. The objective is no longer simply to accumulate reserves, but to accelerate monetization, with Guyana serving as the benchmark for a development cycle that moved from discovery to first oil in just five years—a timeline that the industry is now seeking to shorten even further.

Roberto Ardenghy, CEO of the Brazilian Petroleum, Gas and Biofuels Institute (IBP), presented Brazil as a country encompassing every stage of industry maturity: the Campos Basin, which has been producing since the 1980s and still has room to increase its recovery factor from the current 21–22% to the 35% achieved in Norway; the pre-salt province of the Santos Basin, which already produces close to 3 million barrels per day and is preparing for the auction of twelve new blocks; and the frontier exploration areas of the Pelotas Basin, adjacent to Uruguay and analogous to Namibia, as well as the Equatorial Margin, where Petrobras is drilling with high expectations. Regarding policy, Ardenghy warned that there are limits to Government Take, which currently stands at around 60–65% in Brazil. He also highlighted the country’s technological development model, under which, since the 1998 reform, a portion of industry revenues has been earmarked for research, channeling approximately US\$1 billion annually to 148 universities and research centers.

His remarks on local content, which resonated throughout the conference, captured the balance policymakers seek to achieve: the

difference between a medicine that saves a life and a poison that takes one lies in the dosage. Norway, which gradually increased local content from an initial 5–10% to approximately 70% today, serves as an example of a well-executed long-term policy.

Eduarda Pina, Tierra del Fuego Assets Director at Total Austral, brought a global perspective on the company's operations. TotalEnergies produces 2.5 million barrels per day worldwide, with more than 55% coming from offshore operations and over 85% of its exploration portfolio located in deepwater areas. In the region, the company operates deepwater projects in Brazil and Suriname and conventional offshore assets in southern Argentina, where it is the country's largest natural gas producer, supplying 38 million cubic meters per day, of which more than half—approximately 22 million cubic meters per day—comes from offshore fields.

Pina emphasized the strategic importance of southern offshore production and described the world's first hybrid project integrating an 8.4-megawatt wind farm and battery storage to power an offshore operation—an example of the company's strategy of delivering “more energy with fewer emissions.” Among the challenges, she highlighted the extreme weather conditions, strong winds, and the logistical complexities of operating on a remote southern island without the dense supplier network available in the Neuquén Basin, requiring greater planning and self-sufficiency.

Pablo Gristo, E&P Manager at ANCAP, presented the model of an emerging offshore province. Uruguay has been exploring offshore since the 1970s without making a commercial discovery and, after drilling a dry hole in a frontier basin, “you have to row through dulce de leche,” he remarked, using a local expression to illustrate the effort required to attract investors back. Uruguay's strategy has combined three key elements: an open acreage system with two application windows per year, making the process predictable and reducing political uncertainty; the offering of very large blocks, ranging from 10,000 to 15,000 square kilometers, providing companies with multiple opportunities within a single block; and full remote access to subsurface data under confidentiality agreements, complemented by transparency, low levels of corruption, and strong respect for contractual commitments.

The milestone that could define the future of the region, he noted, will be the well Apache plans to drill in Block 6 in 2027. The project represents a critical test not only for Uruguay but also for the North Argentine Basin and Brazil's Pelotas Basin, helping determine whether the same petroleum

system identified in Namibia is also present along this margin of the Atlantic.

The panel concluded with a consensus that echoed throughout the conference: the challenge facing the region's offshore sector is no longer merely geological or financial—it is increasingly institutional and social. Hepburn also emphasized the aspects that companies themselves can control, from shortening the time between discovery and first oil by applying “decision quality” methodologies and artificial intelligence to seismic reprocessing, to encouraging data sharing among operators in order to avoid redundant wells. He also highlighted a point that, in his view, the market tends to underestimate: transparency in the management of resource revenues and early engagement with institutions and local communities, both of which are essential for securing the social license to operate in countries that are not yet producers but may become so in the future.

Mature Fields: The Bridge That Sustains the Foundation of the System

The third segment of this thematic track, held on the fourth day of the conference, reaffirmed the importance of conventional fields, which still account for between 65% and 75% of global oil production and between 65% and 70% of natural gas production. In Argentina, however, the equation has shifted, with unconventional resources already representing more than 60% of output. Moderator **Luis Stinco, Associate Director at S&P Global Energy**, introduced a statistic that framed the discussion: every additional percentage point gained in the recovery factor of a conventional oil reservoir extends its productive life by approximately one and a half to two years. Efficiency, therefore, is not merely a matter of cost reduction but also of maximizing resource recovery.

Martín Gandolfo, COO of Quintana Energy, offered what became the panel's defining concept: “Conventional production is not opposed to unconventional production; it is a bridge.” It was this bridge, he explained, that served as the highway for shale development in the Neuquén Basin and one that can be replicated in the San Jorge Gulf and Austral basins. He described how his company increased production from approximately 200 barrels per day to 24,800 barrels of oil equivalent per day in just one year, supported by an agile operating model that combines close operational oversight, a strong sense of ownership among employees, trust-building with labor unions and service companies, detailed subsurface knowledge,

and rigorous economic analysis behind every decision. The result was an OPEX reduction of between 35% and 45%, with a target of reaching 50%, as well as the development of two gas reinjection projects designed to capture seasonal price differentials between summer and winter.

Jorge Buciak, Engineering, Development, and Logistics Manager at Capsa-Capex, focused on innovation as a tool for reducing costs, citing more than twenty improvement initiatives implemented across an asset base of 1,200 producing wells and 460 injection wells. He described proprietary developments such as a continuous lubrication system now operating in 350 units and reducing costs by approximately US\$8 per well, deep progressive cavity pumps reaching depths of more than 1,700 meters, and a chemical management initiative known as “Más 121,” which demonstrated that purchasing raw materials directly avoided paying a 121% premium over the actual cost of those inputs. Artificial intelligence, he suggested, will represent the next stage in this process, helping optimize chemical formulations and further reduce consumption.

Adrián Mascheroni, Vice President of Operations Services at CGC, agreed that successful cost reduction depends on addressing multiple fronts simultaneously rather than relying on a single source of savings. He described a program launched in late 2024 that brought previously outsourced services in-house, generating reductions of between 20% and 25% in operations and maintenance costs. The company also acquired its own drilling rig to launch a drilling campaign in the second half of the year and implemented an initiative known as “P150,” aimed at delivering US\$150 million in combined CAPEX and OPEX savings. The optimization of chemical usage reduced consumption by as much as 30% without affecting operational performance, while improvements in operational efficiency increased interventions per rig from six or seven to more than eight per month, reducing deferred production.

The perspective of the provincial government was provided by **Lucas Erio, Director of Hydrocarbons for the Province of Mendoza**, Argentina’s fourth-largest oil-producing province, accounting for approximately 9% of national crude oil production. Erio argued that “conventional production remains competitive, and we cannot do without that cushion,” which, together with Vaca Muerta, continues to support the country’s positive energy trade balance. He described an active policy centered on clear rules, predictability, and legal certainty, including royalty reduction schemes that have cut royalty payments for some assets to roughly half their previous levels. He characterized the approach as a deliberate trade-off in which foregone government revenue is transformed into reinvestment. The

result, paradoxical only at first glance, is that Mendoza has experienced the lowest decline in conventional production among Argentina’s provinces since the post-pandemic period and, in 2025, certified more reserves than in 2024, thanks to the combined effects of operational efficiency, a lower royalty burden, and stronger commodity prices.

Conclusions and Key Findings

The fourth thematic track completed the picture of the regional upstream sector by focusing on the two frontiers that coexist with shale development: deepwater resources and conventional fields. The first key finding is conceptual and runs throughout this chapter: these resources do not compete with unconventional production; they complement it. Conventional production serves as “the bridge” that sustains the foundation of the energy system and helps finance the transition toward shale development, while deepwater resources provide the large incremental volumes the world will need to ensure energy security. Rather than slowing hydrocarbon development, the Strait of Hormuz crisis reinforced the strategic importance of both.

The second finding is that deepwater is experiencing a genuine renaissance. After a decade in which shale captured most of the industry’s growth, deepwater production has reached record highs, and roughly half of the volumes expected to be produced by 2050 have yet to reach a final investment decision, creating a major exploration opportunity. Latin America—with Brazil and Guyana at the forefront, followed by Suriname, Uruguay, and Argentina—has become the epicenter of this cycle within the South Atlantic’s “golden corridor” and accounts for a significant share of the new global investment plateau.

The third finding is that unlocking this offshore potential depends on a recurring set of conditions across countries: project commerciality and scale, stable contractual and fiscal frameworks, open licensing systems, access to data and, above all, a shift in mindset that replaces isolated exploration wells with sustained exploration campaigns. Frontier exploration is expensive, risky, and ultimately a numbers game.

The fourth finding is that conventional fields remain highly relevant, provided they are managed through operational efficiency, technological innovation, and regulatory frameworks that encourage reinvestment. Every additional point of recovery factor extends the productive life of a reservoir, while the experience of agile operators and provinces willing to forgo short-term revenues to attract investment demonstrates that conventional production can remain highly competitive.

The common message across all three segments echoed the central theme of the conference: in a world where capital is fiercely contested, having resources is no longer enough. The challenge is to transform those resources into real, competitive, and sustainable development.

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TOPIC 5

**NEW TRENDS IN REFINING
AND THE FUTURE OF
THE DOWNSTREAM SECTOR**

Key Quotes

"The refining industry literally brought us here and will most likely continue to carry us forward."

Felipe Pérez,
Director of Fuels and Refining Research and
Strategy for Latin America, S&P Global Energy

"The most critical thing for the business is not postponing difficult decisions."

Mauricio Martín,
Executive Vice President of Midstream and
Downstream, YPF

"We cannot survive without competitiveness."

Joao Farah,
Acelen

Key Figures

Latin America will continue to import

more than 3 million barrels per day

of refined products, despite producing between 8 and 9 million barrels per day of crude oil.

Nearly 40 million barrels per day

of demand are expected to be displaced by efficiency gains and fuel substitution in the transportation sector by 2060.

**More than 50%
of a refinery's operating costs**

are energy-related, making access to competitively priced natural gas as critical as access to crude oil.

Downstream was the focus of one of the conference's most pragmatic discussions. While the region celebrates its growing potential as an exporter of crude oil and natural gas, it continues to import refined products—a paradox that both defines the sector's structural challenge and highlights its opportunity. As speakers emphasized, refining is the industry that literally keeps the world moving, yet it faces a future characterized by demand that has stopped growing, tighter margins, and intense competition driven by efficiency.

From Felipe Pérez's presentation on global industry trends to the panels featuring integrated energy companies and independent refiners, participants converged on a common diagnosis: refining will remain a cornerstone of the energy system, but its long-term viability will depend on integration, disciplined investment, a growing focus on petrochemicals and, above all, operational efficiency. In a business where demand is approaching a plateau, growth will no longer come from increasing volumes but from gaining market share at the expense of less competitive players.

The Refining Industry That Moves the World—and Is No Longer Growing

The presentation by **Felipe Pérez, Director of Fuels and Refining Research and Strategy for Latin America at S&P Global Energy**, provided the global framework for this thematic track and addressed the fundamental questions: Is refining still relevant? What supply and demand trends will reshape the sector? His starting point was a defense of the industry's role, one that often goes unnoticed despite sustaining modern life. As he illustrated, no one in the audience would have arrived at the conference without refining—from the fuel powering aircraft to the plastics used in electric vehicles—yet few appreciate the scale involved in extracting, processing, and distributing between 80 and 90 million barrels of oil every day. The industry, he summarized, “literally brought us here and will most likely continue to carry us forward.”

Pérez challenged the terminology of the energy transition, arguing that it incorrectly suggests the replacement of one energy source by another, when the real process involves diversifying the energy mix without necessarily eliminating any source. To the traditional pillars of energy security and availability, he added a third dimension that is often overlooked: affordability—that is, the cost at which energy reaches consumers. No government in the world, he warned, can ignore the price

of gasoline because of its direct impact on inflation and politics. As a result, policymakers are often tempted to subsidize fuel or reduce taxes in order to sustain consumption, a strategy that frequently postpones rather than resolves the underlying problem.

Regarding current market conditions, Pérez showed how the Strait of Hormuz crisis completely transformed the outlook for the refining business. The refining margin forecasts that S&P Global had been using in January were relatively modest, around US\$5 per barrel or less—a level that has historically been considered normal. However, the removal from the market of more than 40% of commercial jet fuel supply and nearly 30% of diesel supply pushed refining margins to exceptional levels. The analyst nevertheless urged caution. S&P Global's long-term forecasts do not incorporate wars or permanent supply disruptions, because doing so would not provide a sound basis for planning. The real analysis, he argued, must focus on structural trends.

And those trends are threefold, all pointing in the same direction. The first is that global demand for refined products will stop growing. An industry accustomed to adding between 1.5 and 2 million barrels per day of demand every year is moving toward a plateau around 2030, followed by gradual decline, to the point where global consumption in 2060 would be roughly the same as it was in 2005.

According to S&P Global, approximately 40 million barrels per day of demand will be lost to efficiency gains and fuel substitution in the transportation sector by 2060. The second trend is that the world is not homogeneous. Some regions will continue to experience demand growth, but not enough to offset declines elsewhere. The third trend qualifies the first two: within an overall flat demand environment, only jet fuel and petrochemical naphtha demand are expected to grow strongly. Yet the nature of refining means that a refinery cannot produce only one or two desired products without simultaneously producing the rest of the barrel.

From this diagnosis emerges the harshest conclusion of the analysis. In a business characterized by stagnant demand and structural excess refining capacity, margins will remain compressed, and some facilities will inevitably shut down. S&P Global anticipates a rationalization of between 500,000 and 700,000 barrels per day of refining capacity, concentrated primarily in Europe, along with additional pressure on gasoline prices resulting from the start-up of mega-refineries such as Dangote in Africa.

In this environment, growth will no longer come from volume expansion but from two sources. The first is petrochemicals, the only segment expected to

experience robust growth, driven by products such as ethylene and paraxylene. The second is market-share capture, as the most efficient operators survive by displacing competitors that are ultimately forced to close.

Pérez concluded his presentation by focusing on Latin America and warning against simplistic solutions. Although the region produces between 8 and 9 million barrels of crude oil per day, it will continue to require imports of more than 3 million barrels per day of refined products. The usual political response—building more refineries—does not solve the problem on its own. Pérez pointed to the cases of Mexico, with six refineries operating at roughly half capacity, and Venezuela, which saw its refining capacity fall from 1.3 million barrels per day to a fraction of that level despite seemingly having “everything,” including free gasoline—a bill that, sooner or later, someone ultimately has to pay.

The key, he argued, is not whether a country has refineries, but whether it provides the right business conditions: regulatory frameworks that attract investment and competitive markets that encourage efficiency. And because more than 50% of a refinery’s operating costs are energy-related—much of it natural gas—access to competitively priced energy is as critical as access to crude oil. His concluding message was that there is no single solution. Instead, energy security will require a combination of efficiency, supplier diversification, strategic reserves, and policy decisions that recognize that security of supply carries a cost worth paying.

Integrated Companies: Integration, Discipline, and the Value of Every Molecule

The panel of integrated companies, moderated by **Daniel Monzón, Partner and Head of Argentina at Arthur D. Little**, brought these global trends into the context of the region’s major companies operating across the upstream, refining, and marketing segments. The discussion was framed by the paradox that ran throughout the entire downstream track: Latin America exports crude oil while importing refined products, creating both a structural challenge and an opportunity for import substitution.

Mauricio Martín, Alternate Director and Executive Vice President of Midstream and Downstream at YPF, emphasized the importance of strategic discipline. The most critical factor for the business, he argued, is “not postponing difficult decisions,” especially during periods of crisis and volatility. He highlighted the investments in infrastructure and logistics

required to adapt refineries to process Vaca Muerta’s unconventional crude and maximize its value, while stressing the importance of consistent execution and the use of data, artificial intelligence, and real-time optimization to improve decision-making. One of the most widely discussed concepts to emerge from his presentation was “molecular tourism,” a term used to describe inefficiencies in regional product flows—for example, exporting crude oil outside the region only to reimport it later as refined products. According to Martín, addressing these inefficiencies offers a tangible opportunity to strengthen regional integration and ensure that each molecule reaches the market through the most efficient route.

Felipe Trujillo, Vice President of Refining and Industrial Processes at Ecopetrol, offered the perspective of the integrated business model as a buffer against commodity-price cycles. While acknowledging that current market conditions have enabled the company to maximize margins and asset utilization, he warned that increasingly stringent regulations and structurally tighter margins will continue to challenge the sector, echoing Pérez’s assessment. Trujillo outlined projects aimed at improving fuel quality and advancing co-processing initiatives, and defended integration as the mechanism that enables companies to optimize performance when each segment of the value chain is under pressure.

Diego Mouriño, Vice President of Engineering and Construction at PAE-Axion, was the most emphatic about the opportunity presented by current market conditions. “This is the time to do what needs to be done,” he argued, stressing the importance of taking advantage of the current environment to advance the investments needed to substitute imports and meet future demand associated with industrial growth. According to Mouriño, the operational challenge has fundamentally changed in nature. Plant reliability is no longer a competitive differentiator but rather an industry standard. The real objective now is to maximize the value of every molecule processed. Integration, he added, provides the flexibility required to manage evolving crude slates and sustain long-term competitiveness. The panel agreed that refining will remain a cornerstone of the energy system, but doing so will require greater integration, disciplined investment, and continuous adaptation.

Independent Refiners: Flexibility, Speed, and Market Intelligence

The independent refiners panel, moderated by Felipe Pérez, brought together a group of companies characterized by smaller scale but greater agility. They

share a common business model: purchasing crude oil, processing it, and marketing the resulting products, although their realities differ significantly depending on whether they operate in producing or importing countries. The panel's overarching conclusion was that, without the support provided by upstream integration, survival depends on operational excellence and a sophisticated understanding of market dynamics.

Fernando Plunkett of Trafigura exemplified the integration of a trading mindset into the refining business. His phrase, "conflict equals opportunities," captures an operating model designed to keep refineries running "at full capacity" by maximizing production of the products most in demand while finding outlets for secondary products wherever markets exist, even in rapidly changing environments. This ability to adapt to global demand patterns, identify niche opportunities, and maintain a long-term perspective through 2050 constitutes the competitive advantage of a refiner deeply connected to international trade.

Sergio Bergerman of Raízen argued that the Argentine refining sector has become "more robust and resilient" after years of investment, while warning that competitiveness depends on a combination of long-term strategic decisions and meticulous day-to-day management of costs and crude slates. **Joao Farah of Acelen** was unequivocal about the priority in Brazil: "We cannot survive without competitiveness," emphasizing the importance of competitive energy costs, operational efficiency, and transparent pricing mechanisms that provide predictability to the market. Several panelists agreed that price transparency is just as important as efficiency in sustaining investment.

Representatives from importing countries contributed the perspective of companies operating without domestic crude production. **Claudia Kalamar of ANCAP** explained that Uruguay operates a single refinery which, despite its relatively small size, is capable of supplying virtually all of the country's fuel demand. She highlighted the ability to process different crude grades as a key factor in maintaining operational flexibility under changing market conditions. **Álvaro Hillerns of ENAP** noted that in Chile, where a significant share of supply is imported, the challenge lies in maximizing margins through efficiency improvements and optimizing crude slates. The panel concluded with a broad consensus on the future: demand patterns will continue to evolve, with slower growth in some fuel segments and new opportunities emerging in fuel quality improvements and petrochemicals. Flexibility, energy efficiency, and selective investment will be decisive factors in enabling independent refiners to maintain their position in an increasingly demanding market.

Conclusions and Key Findings

The fifth thematic track provided a realistic counterpoint to the export-driven optimism that characterized the previous chapters. The first—and most structural—finding is the region's central paradox: Latin America is consolidating its position as an exporter of crude oil and natural gas, yet it continues to import more than 3 million barrels per day of refined products. Neither abundant upstream resources nor the construction of additional refineries alone is sufficient to close this gap. The experiences of Mexico and Venezuela offer a clear lesson: the issue is not whether a country has refineries, but whether it has the business conditions, competitiveness, and access to affordable energy required to make those refineries viable.

The second key finding is that the refining business is entering a historically new phase. Demand for transportation fuels is no longer growing and is expected to reach a plateau around 2030, with nearly 40 million barrels per day of demand projected to disappear by 2060 as a result of efficiency gains and fuel substitution. In a market characterized by excess capacity and compressed margins, growth will no longer come from volume expansion but from two sources: a shift toward petrochemicals—the only segment experiencing robust growth—and market-share gains by the most efficient operators at the expense of less competitive facilities that will ultimately be forced to close.

The third key finding is that, in response to this outlook, the strategies of integrated companies and independent refiners are converging around the same competitive levers. For large integrated companies, integration provides a buffer against market cycles and the flexibility needed to manage crude slates. For independent refiners, speed and market intelligence help compensate for their smaller scale. In both cases, operational efficiency, disciplined capital allocation, the use of data and artificial intelligence, and the maximization of value from every molecule processed—including reducing “molecular tourism” through greater regional integration—have become essential conditions for long-term survival.

The final message was unequivocal: refining will remain a cornerstone of the energy system, but only those companies that turn efficiency into their primary competitive advantage will endure.

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**ARPEL
CONFERENCE 2026**

TOPIC 6

**TECHNOLOGY, ARTIFICIAL
INTELLIGENCE, CYBERSECURITY,
AND THE FUTURE OF WORK**

Key Quotes

"The energy industry needs artificial intelligence to generate more value, but artificial intelligence depends on the energy industry."

Delfina Arambillet,
Senior Sustainable Business Associate, Globant

"Security is not a product; it is a continuous process."

Julio Ardita,
Industrial Cybersecurity Consultant

"Humans must stop being the engine of execution and become those who govern the systems."

Delfina Arambillet,
Senior Sustainable Business Associate, Globant

Key Figures

88% of companies

worldwide use artificial intelligence regularly, but only 39% report a direct impact on profitability.

Only 1% of companies

have fully operationalized responsible AI strategies.

More than 80% of employees

use AI tools that have not been validated by their technology departments.

More than 2,500 vulnerabilities

have been identified in industrial systems, many of them exploitable if equipment is not properly updated.

More than 84% of companies

have not yet redefined their workforce models in response to the advancement of artificial intelligence.

Digital transformation was a recurring theme throughout the conference, but in this track it took center stage. Artificial intelligence, cybersecurity, and the future of work emerged as three dimensions of the same transformation already reshaping the energy industry—not in terms of promises, but in terms of tangible business value, the defense of operations, and the redefinition of talent.

From Globant's presentation on the social impact of AI to the warning on industrial cybersecurity, and through the perspectives of universities, companies, and young professionals on the future of work, speakers converged on a common message: technology alone does not transform organizations; transformation occurs when it is applied with purpose, governed effectively, and supported by people capable of asking the right questions. The challenge is no longer adoption, but strategic, secure, and profitable implementation.

Artificial Intelligence: The Gap Between Adoption and Implementation

The presentation by **Delfina Arambillet, Senior Sustainable Business Associate at Globant**, was one of the most revealing sessions of the third day and challenged much of the uncritical enthusiasm surrounding artificial intelligence. Her starting point was the mutual dependency linking the two industries: "The energy industry needs artificial intelligence to generate more value, but artificial intelligence depends on the energy industry," because its rapid expansion requires ever-increasing amounts of energy.

The central finding of her presentation was the gap between adoption and results. Although 88% of companies worldwide use artificial intelligence on a regular basis, only 39% report a direct impact on profitability, and that impact accounts for just 5% of earnings. For Arambillet, this is not bad news but rather "a data point that enables action," because it forces organizations to rethink how technology is implemented. The challenge, she argued, is not access to AI but strategy: "There is a difference between adopting technology and implementing it strategically and responsibly."

She warned about the risks of uncontrolled use within organizations, where more than 80% of employees use tools that have not been validated by their technology departments, while only 1% of companies worldwide have fully operationalized responsible AI strategies. In response, she proposed three principles for effective implementation: AI must be acceptable,

with clear ethical and security boundaries; reasonable, aligned with business objectives and the efficient use of resources; and understandable, supported by traceable and explainable systems. To these principles she added governance, understood not as a formal role but as "the architecture of decision-making," together with the ability to explain why a system reached one conclusion rather than another.

Her closing remarks focused on the impact of AI on the workforce, a topic that connected directly with the rest of the track. According to Arambillet, artificial intelligence requires a redesign of work itself: "Humans must stop being the engine of execution and become those who govern the systems," placing greater value on capabilities such as ethical judgment, creativity, and empathy. With more than 84% of companies still having not redefined their workforce models, her conclusion was that the challenge is not slowing adoption, but implementing AI thoughtfully in order to create sustainable value for organizations and the broader ecosystem.

Industrial Cybersecurity: A Continuous Race, Not a Product

If artificial intelligence represents the expansive side of digitalization, cybersecurity embodies its defensive dimension. This was the focus of the presentation by **Julio Ardita, a consultant specializing in industrial cybersecurity**. His central thesis was unequivocal: "Security is not a product; it is a continuous process," and today, "digital transformation and artificial intelligence depend on a solid cybersecurity foundation." In an industry that is becoming increasingly automated and interconnected, cyberattacks—from ransomware to operational sabotage—can compromise business continuity and corporate reputation.

Ardita explained that threats have evolved and increasingly rely on technological vulnerabilities, credential theft, and compromised devices. In Latin America, the most common threats include data extortion, financial fraud, and attacks targeting system availability. Industrial networks, he noted, present a greater challenge for attackers because of their technical complexity. Nevertheless, more than 2,500 vulnerabilities have been identified in industrial systems, many of which remain exploitable if equipment is not properly updated. "If I do not protect myself, an intruder can exploit them."

The expert highlighted several structural weaknesses facing the sector: growing cloud integration, pressure to reduce costs, and the coexistence of

modern systems with legacy technologies. “We end up creating Frankenstein-type connections: highly secure systems integrated with others that are not,” he explained. These challenges are compounded by the need to operate continuously without interruptions, the shortage of specialized cybersecurity talent, and the difficulty of monitoring events in real time. In response, Ardita proposed a comprehensive strategy based on three pillars: processes, people, and technology. Particular emphasis was placed on cybersecurity governance, the identification of critical assets, simulation exercises, and the development of a strong organizational culture. From a technical standpoint, he stressed the importance of continuous monitoring, endpoint protection, and, above all, multifactor authentication. “That is where most intruders get in.” His concluding message reinforced the central theme of the presentation: cybersecurity is a continuous race that requires constant monitoring, ongoing updates, and commitment from the entire organization.

Technology with Purpose: From Pilot Projects to Scale

The panel on technology with purpose, moderated by **Tiphaine Le Moënnier, Managing Director of ARPEL**, was built around a premise that is no longer in dispute: the tools—artificial intelligence, IoT, and advanced analytics—are already available. The challenge is applying them with a clear purpose that generates tangible value in efficiency, safety, and reliability. **Dorlysu Moreno, Upstream Competitiveness and Supply Chain Director at YPF**, summarized the concept succinctly: “Technology alone does not transform organizations; it does so when it is aligned with the business.”

Carlos Andrés González, General Manager of Operational Planning and Logistics at Ecopetrol, identified what he sees as the real bottleneck: “The real challenge is not implementing pilot projects, but scaling them,” so that digital solutions generate impact across the entire value chain rather than remaining isolated initiatives. **César Bravo, Director of AI Solutions at Honeywell**, and Abby King, Vice President of Plant Services at Becht, agreed that systems integration and data quality are critical to any digital strategy. Without reliable data, digital transformation is not possible. **Milton Guerrero, Corporate Director of Information Security at Hunt Services Company**, connected the discussion with the cybersecurity concerns raised earlier by Julio Ardita: “Every connected asset is also a potential entry point,” making cybersecurity an inseparable component of digitalization. The panel reached a common conclusion: digital transformation rests on three pillars—technology, talent, and strategy—and is no longer an option but a prerequisite for competitiveness.

The Talent of the Future: The Universities’ Perspective

The first of three perspectives on the future of work came from academia. Moderated by **Carlos Garibaldi, Executive Secretary of ARPEL**, the panel produced a concise conclusion regarding the role of artificial intelligence in education: “Artificial intelligence is a tool, but humans are the ones who must ask the right questions.” The common challenge identified by the participants was how to combine strong foundational knowledge with new skills in a sector increasingly shaped by artificial intelligence and the energy transition.

Marta D’Angiola of the National University of La Plata, emphasized the need to adapt educational programs to the development of Vaca Muerta and to strengthen ties with industry, noting that “universities are the seedbed for the talent that companies will be able to benefit from.” She also observed that while “geology itself does not change, the way we approach it does.”

Rubén Caligari of ITBA, argued that the university’s primary role “is not so much to teach how, but rather to help formulate the right questions,” and warned that Argentina’s challenge is not a lack of interest in engineering, but rather the relatively low number of engineering graduates. From the United States, **Jennifer Miskimins of the Colorado School of Mines** highlighted the reputational challenge of attracting students “to disciplines that many people believe have no future,” while **Mohan Kelkar of the University of Tulsa** defended the social value of the industry with a direct appeal: “If you truly want to change the world, you should become a petroleum engineer.” **Eduardo Gildin of Texas A&M** concluded by underscoring the importance of strengthening foundational education and aligning academic training with the evolving needs of industry.

Companies Facing Talent Scarcity and Generational Diversity

The second perspective, moderated by **Pablo Ferragut, Managing Director of ARPEL**, brought together human resources leaders from major energy companies. **Florencia Tiscornia, Vice President of People and Culture at YPF**, emphasized that “artificial intelligence is changing the way we work” and is forcing companies to rethink everything from decision-making processes to team structures. She also cautioned that the objective is not “to apply artificial intelligence for the sake of applying it, but to understand the value it generates.”

María Laura García, Chief Human Resources Officer at Tecpetrol, identified talent development as one of the main bottlenecks to growth, particularly in Vaca Muerta. “We have to build the talent that will drive this development,” she stated, advocating closer collaboration among universities, technical schools, and governments. She argued that critical thinking will become an increasingly valuable skill because “artificial intelligence will not replace you in everything.” **Matías Vallebella of Trafigura** contributed an organizational perspective by describing three major tensions shaping today’s workplace: in-person work, technology, and generational diversity. “The hybrid-work paradigm is under review,” he noted, while emphasizing that the office continues to serve as “a critical hub for developing talent and building culture.” He also stressed that: “The future does not belong to a single generation; it is multigenerational.” The panelists agreed that artificial intelligence is likely to enhance productivity rather than replace human work, although it will require a strong commitment to continuous reskilling and workforce adaptation.

Young Professionals: Purpose, Impact, and Culture

The third perspective concluded the discussion with the voices of younger professionals, who placed purpose and social impact at the center of their career expectations. **Daniella Sevilla, Senior Process Engineering Lead at Hunt Oil,** highlighted challenge as a key driver of professional growth and emphasized the importance of diversity, noting that “engineers are problem-solvers,” while underscoring the need to continue increasing the participation of women across the industry. **Mariela Colombo, Future Energy Leader at the World Energy Council,** emphasized the attractiveness of the region: “We have a diverse energy mix that allows young people to make a real impact.”

Maximiliano Pellasio, Integrity and Corrosion Engineer at Oldelval, focused on the pace of change in an industry where “technology is advancing at a pace we have never seen before,” while **Lara Azul Fumarola, Geologist at Pluspetrol and President of the Young Professionals Committee of IAPG,** summarized the shift in priorities among new generations: “Young professionals want purpose, a strong workplace culture, and innovation.” Rather than interpreting this as a lack of commitment, Colombo described it as an evolution in expectations: “I do not believe young professionals are less loyal; they are looking for purpose and impact.” The panel agreed that retaining talent will require giving younger professionals a greater voice in decision-making, combining their development with the mentorship of senior professionals, and creating collaborative environments where they can feel part of meaningful solutions.

Conclusions and Key Findings

The sixth thematic track demonstrated that the digital transformation of the energy industry has entered a more mature phase in which enthusiasm is giving way to realism. The first—and most striking—finding is the significant gap between adopting technology and generating value from it. The fact that 88% of companies worldwide use artificial intelligence while only 39% report a direct impact on profitability encapsulates the challenge facing the sector's digital transformation. The central question has shifted from which tools to adopt to how to implement technology with purpose, governance, and sound judgment.

The second finding is that digitalization is inseparable from its defensive dimension. As connectivity expands, every asset becomes a potential entry point, and cybersecurity ceases to be a product that can be purchased and instead becomes a continuous process that must be managed. The “Frankenstein connections” between modern and legacy systems, the thousands of identified vulnerabilities, and the shortage of specialized talent collectively represent a structural risk that directly conditions the success of digital transformation itself.

The third finding emerged consistently across all three discussions on the future of work: technology is redefining roles, but it is not replacing people—it is repositioning them. Humans are moving from execution to system governance, from performing tasks to asking the right questions and contributing judgment, critical thinking, and empathy. For this reason, the true bottleneck to growth—particularly in Vaca Muerta—is talent development, which requires close coordination among universities, companies, and government.

A fourth finding, cutting across all discussions, is generational and cultural in nature. New generations are seeking purpose, impact, and continuous learning, and the industry will need to provide those opportunities by combining experience with new capabilities in organizations that are more agile, diverse, and multigenerational. The common message throughout the track was that the future of the industry will not be determined solely by the technologies it adopts, but by the judgment with which those technologies are governed and by the people responsible for putting them into practice.

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TOPIC 7

**CLIMATE RISKS, OPERATIONAL
RESILIENCE, AND FINANCIAL
DISCLOSURE**

Key Quotes

“Climate resilience is not an additional cost; it is a strategic advantage for the sustainable growth of the region.”

Sandra Carrillo,
Partner, Environmental Resources Management
(ERM)

“We have moved from a voluntary agenda to a mandatory one in sustainability and disclosure.”

Sophie Depraz,
Ipieca

“The investment in data is lower than the cost of responding to a failure.”

Laura Kennett,
Grupo Rosen

Key Figures

US\$137 billion

was paid by insurers for natural disasters in 2024, representing only the insured portion of total global economic losses.

More than 70% of Latin America

is affected by extreme weather events, in a region that is at the same time an energy powerhouse.

The final thematic track of the conference concluded the program with a shift in perspective: from climate as a declarative agenda to climate as a concrete factor affecting competitiveness, access to capital, and operational continuity. Climate risks—both physical and transition-related—have ceased to be distant projections and have become measurable realities that are already affecting financial statements, insurance premiums, and investment decisions across the energy sector.

From ERM's presentation on climate risks as a strategic opportunity to the panels on financial disclosure and adaptation to physical climate risks, speakers drew a common thread: what is not measured cannot be managed. Far from being an additional cost, climate resilience is establishing itself as a competitive advantage and a prerequisite for accessing financing in an ever more demanding environment.

Climate Risk as a Strategic Opportunity

The presentation by **Sandra Carrillo, Partner at Environmental Resources Management (ERM)**, provided the conceptual framework for this thematic track and proposed a change in perspective: climate risks have become a key strategic opportunity for the energy sector because they directly affect competitiveness, access to financing, and corporate decision-making. Her opening warning was unequivocal: the increase in extreme weather events—from heat waves and floods to wildfires—is already generating billions of dollars in costs worldwide, placing growing pressure on the financial system and driving up insurance premiums. "This is not a future projection; it is a measurable reality that is already affecting operating results, investment decisions, and asset values," she emphasized.

Carrillo illustrated how financial metrics such as EBITDA, CAPEX, and the cost of capital are already being directly influenced by climate-related risks, forcing companies to quantify impacts and incorporate long-term scenario planning into their decision-making processes. To illustrate the magnitude of the challenge, she noted that insurers paid approximately US\$137 billion in claims related to natural disasters in 2024 alone. That figure represents only the insured portion of total global economic losses and highlights the growing pressure climate-related events are placing on the financial system.

Carrillo described Latin America as occupying a dual position that defines the region's central challenge. On the one hand, it is a major energy-producing region, offering some of the world's most significant opportunities in energy development while playing a critical role in the

supply of critical minerals and the broader energy transition. On the other hand, it faces a high degree of climate vulnerability, with more than 70% of the region affected by extreme weather events. "To fully capitalize on this potential, we must integrate climate risk into project design, operations, and resilience models," she argued, in a context where markets, regulators, and investors are demanding ever-greater levels of transparency.

Her concluding message linked risk management to corporate strategy and set the stage for the two panels that followed. Companies that succeed in measuring, managing, and integrating climate-related risks into their decision-making processes will be better positioned to access financing and strengthen their competitive advantage. Carrillo recommended advancing adaptation plans, strengthening risk governance, and leveraging analytical tools—such as the one ERM developed for ARPEL—that enable companies to translate climate information into concrete financial decisions. Her conclusion captured the central message of the track: "Climate resilience is not an additional cost; it is a strategic advantage for the sustainable growth of the region."

Financial Disclosure: From a Voluntary Agenda to a Mandatory One

The panel on transition risks and financial disclosure, moderated by Irene Alfaro, examined how new transparency requirements are reshaping both access to capital and the credibility of the energy sector. **Sophie Depraz of Ipieca** described the underlying structural shift: "We have moved from a voluntary agenda to a mandatory one in sustainability and disclosure." She noted that the current geopolitical environment requires companies to balance energy security with decarbonization, while reconciling short- and long-term priorities in order to sustain both profitability and resilience.

María Archimbal of YPF argued that the ESG agenda has expanded the universe of corporate risks and elevated the discussion to the executive level, meaning that "transparency has ceased to be merely a regulatory requirement and has become a management and decision-making tool." **Florencia Carreras of IMEO (UNEP)** focused on the growing regulatory pressure surrounding methane emissions, which, she noted, "are no longer just an environmental issue, but a prerequisite for access to international markets." She highlighted that standards such as OGMP 2.0 are increasingly being incorporated into regulatory frameworks—particularly in the European Union—requiring companies to report emissions using verifiable data and empirical evidence.

Arturo Rodríguez of IFRS explained how the IFRS Sustainability Disclosure Standards enable companies to link climate-related risks with financial performance, reframing the very purpose of disclosure: “The objective is not to report for compliance purposes, but to use disclosure as a strategic tool to identify risks, improve management, and gain access to better financing conditions.” Panelists agreed that credibility is built on data quality, consistency between discourse and action, and robust measurement capabilities, summarizing the discussion with a principle that resonated throughout the session: “What is not measured cannot be managed.” They also warned about the gaps that still exist in data accuracy, particularly regarding methane emissions, where direct measurement is increasingly replacing traditional estimation methodologies.

From Vulnerability to Resilience: Physical Climate Risks Are Affecting Operations

The final panel of the thematic track, also moderated by Irene Alfaro, brought the discussion into the operational realm of physical climate risks—those that are already affecting infrastructure and business continuity. **Diego Agrelo of YPF** warned about the increasing frequency of extreme weather events: “Over the past decade, episodes of intense rainfall that were once considered extraordinary have become far more frequent,” forcing the company to redesign infrastructure, improve drainage systems, and develop operational protocols based on climate forecasts.

Andrés Mendizábal of Transportadora de Gas del Perú (TGP) provided a telling example of the changes already underway. In Peru, the rainy season has expanded from approximately five months to nearly nine months, fundamentally altering operational planning. “This is not theory,” he emphasized, describing landslides that disrupted service and led the company to implement intensive monitoring programs and deploy new inspection technologies. Representing Colombia, Geonavis Hernández of Ecopetrol highlighted water as a critical variable: “We must demonstrate efficiency in its use,” within the context of consumption-reduction targets and adaptation efforts aimed at addressing drought conditions that affect energy availability.

Laura Kennett of Grupo Rosen emphasized the role of technology and data in anticipating failures, summarizing the economic rationale behind prevention with a simple equation: “The investment in data is lower than the cost of responding to a failure,” supported by advanced analytics capable of identifying infrastructure risks before they materialize. Panelists agreed that operational resilience requires the integration of data, planning, and investment decisions; the prioritization of material risks; and the strengthening of monitoring, forecasting, and response capabilities. They also stressed the need to institutionalize climate-risk management across organizations, with active involvement from senior leadership.

Conclusions and Key Findings

The seventh thematic track concluded the conference with a message that evolved throughout its three segments: climate has ceased to be a declarative agenda and has become a core business variable affecting management, competitiveness, and access to capital. The first key finding is that climate risk is already affecting financial statements. This is not a future projection but a measurable reality that influences EBITDA, CAPEX, the cost of capital, insurance premiums, and asset values, as illustrated by the US\$137 billion paid by insurers for natural disasters in a single year.

The second finding is the dual reality that defines both Latin America's opportunity and its challenge: the region is an energy powerhouse while also being one of the areas most exposed to extreme weather events, with more than 70% of its territory affected. This combination makes the integration of climate risk into project design and operational planning a prerequisite for long-term viability rather than an optional consideration.

The third finding is that financial disclosure has evolved from a voluntary agenda into a mandatory one. Transparency has become both a management tool and a gateway to financing, with standards such as the IFRS Sustainability Disclosure Standards and OGMP 2.0 for methane establishing a new baseline built on data quality and verifiability.

The fourth finding comes from the operational front line: physical climate risks are already affecting infrastructure, with more intense rainfall, longer wet seasons, and droughts that threaten water and energy availability. The sector's response is a transition from vulnerability to resilience, supported by data, monitoring, and prevention, based on the premise that investing in anticipation costs less than responding to failure. The conference's closing message, in keeping with its slogan, was that climate resilience is not a burden but a competitive advantage, and that companies capable of measuring, managing, and integrating these risks into their strategy will be better positioned to compete and finance their growth in an increasingly demanding environment.

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APPENDICES

GOVERNANCE ACTIVITIES AND PARALLEL TECHNICAL EVENTS

Arpel's footprint in Latin America



6 of every 10 barrels in LAC are produced by Arpel members.



2 out of 3 units of gas in LAC come from Arpel companies.

~46% of LAC's refining runs on Arpel members' capacity.

~52,000 km of pipelines: Arpel's footprint keeps the region connected.



70% of oil transport capacity in LAC is operated by Arpel members.

The week of the ARPEL 2026 Conference was much more than four days of plenary sessions. Alongside the main event, a program of technical committee meetings, specialized workshops, and strategic dialogues brought together, for the first time in the Association's history, virtually all of ARPEL's committees in person during a single week.

A key factor that made this effort possible was the generosity of ARPEL's member companies. Pan American Energy, YPF, and Tecpetrol opened their corporate offices to host the committee meetings, transforming them into much more than working sessions. Participants had the opportunity to visit state-of-the-art facilities, observe real-time monitoring and control technologies in operation, and build the kind of informal professional relationships that are rarely fostered in a virtual setting. The decision by these companies to make their facilities, infrastructure, and time available reflects the depth of their commitment to the regional network that ARPEL represents.

The following section provides an executive summary of each activity held during the week: dialogues with external stakeholders, meetings of all ARPEL Technical Committees, a specialized technical workshop on pipelines and terminals, a process optimization workshop with participants from six countries, and an unprecedented alignment session bringing together the Chairs of all ARPEL Technical Committees.



Natural Gas Stakeholder Dialogue

The platform established by ARPEL, the IGU, and OLACDE, and promoted by the region's national natural gas associations, held a new edition on June 1 with expanded regional scope. The event brought together 50 participants representing 40 companies and institutions from ten countries: Argentina, Bolivia, Brazil, Chile, Colombia, Peru, Suriname, Uruguay, Italy, and Qatar. Sponsored by EnClim, the dialogue focused on regional integration, LNG, and energy security. The dialogue was led by Andrea Stegher, President of the IGU; Andrés Rebolledo, Executive Secretary of OLACDE; Carlos Garibaldi, Executive Secretary of ARPEL; Luz Stella Murgas, President of Naturgas and IGU Regional Coordinator; and Rafik Amara, Senior Analyst at the Gas Exporting Countries Forum (GECF).

The event opened with the presentation of the report Opportunities for Natural Gas Development in Latin America and the Caribbean, jointly prepared by the three organizations. The report identifies five key pathways for advancing natural gas development across the region: regional infrastructure integration, LNG expansion, the use of gas in heavy-duty transportation, the development of low-emission gases, and their contribution to local socioeconomic development. Roberto Ferreira da Cunha, CEO and Founder of EnClim, complemented the discussion with an analysis of the evolving dynamics of natural gas supply and demand in the Southern Cone. Esteban Kiper, of OLACDE, presented the



conclusions of the Regional Gas Integration Project, developed in partnership with CAF. The discussion, moderated by Mauricio Roitman, former Director of Enargas and President of Energeia, included contributions from delegates representing Argentina, Uruguay, Brazil, Bolivia, and Chile, focusing on infrastructure needs and the regulatory changes required to achieve greater regional integration.

The final segment was devoted to LNG, featuring a presentation by Ariel Gordon, YPF's LNG Public Affairs Manager. He noted that the projects currently under development in Argentina could reach a combined liquefaction capacity of 24 MTPA over the next five years, positioning the country among the world's leading LNG exporters. The Dialogue marked the beginning of a series of regional initiatives to share ARPEL's work on this topic. These efforts will be complemented by workshops and presentations in different countries to highlight the role of natural gas in building sustainable and resilient energy systems across Latin America and the Caribbean.



Meeting of Hydrocarbon Regulatory Agencies

Against a global backdrop of geopolitical tensions and increasingly demanding environmental requirements, representatives of hydrocarbon regulatory agencies from the Dominican Republic, El Salvador, and Uruguay met with ARPEL and S&P Global to discuss regulatory design as a tool for enhancing competitiveness in attracting exploration investment. The discussions focused on open-round licensing frameworks, multi-client seismic models, and improving access to data in frontier and offshore basins.

The Dominican Republic presented its market-opening process following decades of state control, highlighting a regulatory framework that combines environmental sustainability criteria with a high government take. The framework is currently under review to improve its competitiveness for international investors. El Salvador presented the initial steps toward a multi-client seismic project in the Pacific, expressing interest in adapting open-round licensing models and strengthening regional technical cooperation. Uruguay outlined progress under its open-round licensing framework and offshore data acquisition program, highlighting the role of multi-client contracts in supporting new deepwater exploration campaigns.

The participants reached a clear conclusion: rules matter as much as resources. Clear, stable, and technically robust regulatory frameworks have become a key differentiator in attracting exploration investment. The agencies agreed to advance toward open-round or hybrid licensing models, strengthen the exchange of fiscal and environmental best practices, and develop a common narrative linking energy security, the energy transition, and financing for low-carbon technologies, while capitalizing on the “Atlantic premium” in security of supply.

Sustainability Management

The working group met to develop ARPEL’s sustainability agenda for the period leading up to the next Conference, examining how this work aligns with the Association’s broader strategic review. The discussions helped identify priorities and opportunities for collaboration among member companies while laying the groundwork for the deliverables of the next work cycle. Representatives from ANCAP, GeoPark, YPF, and TGN attended the meeting in person, while Petroperú and Tecpetrol participated virtually.

Environment, Health and Safety Committee

Pan American Energy’s corporate offices hosted the meeting of the Environment, Health and Safety Committee (CASYSIA), which brought together representatives from more than 20 companies and organizations in a hybrid format: ANCAP, Chevron, ENAP, Ecopetrol, EP Petroecuador, GeoPark, Honeywell, ICSI, IOGP, OPITO, Pan American Energy, Petrobras, Petroperú, Raízen, RECOPE, Repsol, Tecpetrol, TGN, TotalEnergies, Trafigura, and YPF. The breadth of participation reflects the Committee’s maturity as a regional forum for technical exchange on industrial safety.

The meeting reviewed the year’s activities in Occupational Health and Process Safety and presented the preliminary results of the safety benchmarking exercise. The value of this benchmarking initiative lies in its regional foundation. Rather than relying on standards developed in other contexts, it is based on metrics derived from the operational realities of Latin America and the Caribbean, enabling companies to benchmark their performance, identify gaps, and prioritize improvements based on real-world data.

A Masterclass on Human Performance, co-organized with the IOGP, followed, featuring presentations by Repsol, Pan American Energy, and the Institut pour une Culture de Sécurité Industrielle (ICSI). The session explored the five principles for building resilient, error-tolerant systems: error is normal; blame fixes nothing; context drives behavior; learning is essential; and how leaders respond matters. The discussion sparked a collective reflection on how these principles can be embedded in operational culture and on the critical role leaders play in enabling that transformation.





Energy Transitions Committee

With the support of Pan American Energy as host company, the Energy Transitions Committee (CTEA) held an in-person meeting to review its priority areas and reflect on the strategic value of its role in supporting ARPEL's member companies. The agenda addressed climate risks, carbon markets, and emerging trends, with particular emphasis on translating these topics into practical deliverables aligned with the sector's real needs.

Participants included Sergio Bergerman (Raízen), Santiago Martínez (GeoPark), Álvaro García, Alejandra Rabasedas, and Fernando Guzmán (Pan American Energy), Ana Sofía Ruiz (ANCAP), Rodrigo Vaz (S&P Global), Andrea Monroy and Stephen Wharton (Tecpetrol), Sebastián Sánchez (Shell), Nelson Elizondo (TGN), Silvina Oberti (YPF), and Celeste Moscetta (Oldelval), among others.

The Committee reaffirmed its role as a forum for bringing a regional perspective to international debates of increasing relevance, particularly those related to climate-related financial disclosure, carbon pricing mechanisms, and the management of physical climate risks. The meeting also highlighted the importance of strengthening collaboration with other ARPEL committees as their agendas converge.

Digital Transformation Committee

The Digital Transformation Committee, established in 2025, held an in-person meeting at YPF's corporate offices, bringing together representatives from ANCAP, Becht, EP Petroecuador, Honeywell, Pan American Energy, Petropar, Raízen, S&P Global, Tecpetrol, TGN, Trafigura, and YPF. The agenda included a review of the Technology Map and the Digital Maturity Index, a questionnaire developed in collaboration with the consulting firm Inteligentia that enables each company to assess its progress across dimensions such as strategy, culture, data, technology, and talent. Both tools are designed as starting points for peer-to-peer dialogue: the Technology Map identifies available options, while the Digital Maturity Index positions each company along its digital transformation journey and enables benchmarking against regional peers.

At the conclusion of the meeting, participants visited YPF's Commercial Real-Time Intelligence Center (RTIC), a platform that provides real-time monitoring of fuel distribution logistics and service station performance across the country. Seeing an operational data integration platform of this scale in action made tangible the type of transformation the Committee seeks to promote and sparked a spontaneous exchange on the organizational and technological conditions required to replicate this model across other companies in the region.

Communications Committee Artificial Intelligence Workshop

Tecpetrol's corporate offices hosted the Communications Committee for a session dedicated to the impact of artificial intelligence on corporate communications. The presentation was delivered by Sebastián Flexas, Digital & Technology Manager at the Techint Group, who structured the analysis around seven dimensions: the AI models currently available and their practical differences; the evolution of information retrieval and its impact on content visibility; the transformation of content creation processes; advanced tools and emerging formats that are reshaping editorial production; the risks associated with automated content generation, including misinformation and loss of attribution; the new role of communications professionals; and a forward-looking reflection on the future of the profession.

"This session allowed us to go well beyond technology. We talked about the challenges facing our profession, the paradigm shift we are experiencing, and even the new skills that young communications professionals entering the field today will need," Flexas reflected at the conclusion of the session. His remarks captured the spirit of the event: rather than a purely technical training session, it became a space for collective reflection on the future of a profession undergoing profound transformation.

Twenty-two representatives from companies and regional associations participated: Claudia Escobar (ACP), María Torrenco (Pluspetrol), Diana Gacharná (Naturgas), Natalia Arralde (ANCAP), Tomás González Casartelli (Pan American Energy), Vanesa Volpini and Agustina Pascotto (Raízen), Agustina Lombardi, María Martha Rabasedas, and Daniela Vargas (Tecpetrol), Mariana Araujo (TGN), Pilar Ibero (YPF), Glenda Bezerra Lustosa (Petrobras), María Camila Casallas (GeoPark), Fernando Rivas, Carolina Villar, Soledad Morales, Fernando Estévez, Claudia Cardemil, Bernardita Camus, and Pamela Biott (ENAP), and María Eugenia Guzmán (ARPEL). The session concluded with a visit to Tecpetrol's Real Time Operation Center (RTOC)."





Technical Workshop | Pipelines and Terminals Committee

The Pipelines and Terminals Committee (CODYTE) held a hybrid technical workshop attended by 52 professionals from eleven countries: Argentina, Uruguay, Chile, Peru, Bolivia, Ecuador, Colombia, Costa Rica, Brazil, the United States, and Mexico. Of these participants, 24 attended in person and 28 joined virtually. Participating companies and organizations included TGP, YPF, TGN, TGS, ROSEN, and Becht, together with other operating companies and specialized service providers, under the coordination of CODYTE's Pipeline Integrity Team (EPID).

The workshop featured three technical panels addressing issues of major operational relevance. The first focused on storage tank integrity management, including updates to API standards that directly affect inspection and maintenance criteria. The second examined the principal threats to gas transmission system integrity, ranging from corrosion and mechanical fatigue to risks associated with third-party interference. The third explored the evolution of operators' oversight of third-party activities, an issue of growing importance as the outsourcing of specialized services continues to increase.

Each panel fostered peer-to-peer exchange among participants from different countries and operating environments, enabling them to compare approaches and share practical solutions. This peer-to-peer learning is one of the Committee's most valued assets and one of the strongest arguments in favor of the in-person format for this type of technical workshop.

Exploration and Production Committee

The second 2026 meeting of the Exploration and Production Committee (CEPA) was held in a hybrid format, with in-person participation from Rafael Rengifo and Aldo Sarelli (Becht), Pablo Giampaoli (YPF), Pablo Gristo (ANCAP), Javier Leiva (Tecpetrol), and Pablo Amoedo (ARPEL). Committee members reviewed the 2026 calendar of webinars and technical talks, which had previously been prioritized through a vote among members, and confirmed the technical dissemination program for the second half of the year.

The Committee also agreed to organize a virtual decarbonization workshop on November 19, focusing on methane emissions, energy efficiency in exploration and production operations, and fugitive emissions detection technologies. The selection of decarbonization as the central theme reflects the increasingly cross-cutting role this agenda now plays in the technical work of ARPEL's member companies, extending beyond regulatory requirements.

At the same time, planning advanced for an in-person workshop to be held in 2027 on reservoir engineering, with a focus on unconventional resources, Enhanced Oil Recovery (EOR), and digitalization. The event will follow an academic format featuring technical papers, panel discussions, and a field visit. It will be hosted by one of ARPEL's member companies and financed through a mixed model combining sponsorships and a technical exhibition, further consolidating the industry co-organization approach that ARPEL has adopted for its major events.

Real-Time Oil & Gas Process Optimization Workshop

Held as a parallel event to the Conference, the workshop took place in the Sauce Room at the Hilton Hotel in a hybrid format combining in-person and virtual participation. Ricardo Buyatti, from ARPEL, welcomed the 95 registered professionals, including 40 attending in person, representing refineries in Colombia, Brazil, Uruguay, Peru, Chile, and Argentina. The workshop was designed for automation and advanced process control engineers, process engineers, operations planning specialists, and economic optimization professionals, with the objective of exploring technological alternatives and proven implementation experiences in different operating environments.

Three successful case studies on real-time economic optimization were presented. José Carlucci (YPF) presented the implementation of digital process twins for Topping units. Nicolás Heredia and Carolina Fiori (Pan American Energy) presented Real-Time Optimization (RTO) applications for the crude distillation train and diesel blending, with measurable results in refining margins. Pedro Ferrada (Ecopetrol) concluded the workshop with a presentation on the application of GDOT to the middle distillates train, a platform that continuously maximizes the economic value of fuel production.

In each case, the discussion examined both the operational results achieved and the human resources required to implement, operate, and maintain the solutions. This combination of technical and managerial perspectives was highlighted as one of the workshop's greatest strengths: understanding not only which technologies work, but also the organizational capabilities required to sustain them over time.



Meeting of National Industry Associations and Institutes

ARPEL convened national industry associations and institutes to identify opportunities for regional collaboration and develop a shared work agenda. Participants included Carlos Garibaldi, Irene Alfaro, and María Eugenia Guzmán (ARPEL); Sylvie D'Apote (IBP, Brazil); Claudia Escobar (ACP, Colombia); and Daniel Rellan and Martín Kaindl (IAPG, Argentina). The open-dialogue format fostered a meaningful exchange on priorities, shared challenges, and opportunities for coordinated action at the regional level.

The discussion produced broad consensus around six key themes: reducing methane emissions as an urgent environmental commitment that can be addressed using technologies already available; advancing unconventional gas development as a key driver of energy security in the short and medium term; developing and engaging young professionals as a prerequisite for the industry's operational continuity; strengthening the social license to operate as a strategic asset that requires sustained, proactive engagement; promoting just energy transitions that take into account both cost and security of supply; and advancing the opening and integration of regional natural gas markets.

The meeting also generated a forward-looking proposal that was well received by all participants: exploring the creation of a regional network of young industry professionals, building on the national initiatives already in place within each association and coordinated by ARPEL, as a practical mechanism for strengthening the connection of younger generations with the energy industry.

Industrial Cybersecurity Committee

The second 2026 meeting of the Industrial Cybersecurity Committee, held in a hybrid format, confirmed an assessment that has been steadily emerging across the sector: artificial intelligence is no longer merely a support tool but has also become an active risk vector in industrial systems. The same capabilities that make AI valuable for anomaly detection also make it a sophisticated attack vector, requiring companies to establish dedicated governance frameworks for its use in industrial control environments.

Attending in person were Nicolás Martínez and Dayana González (Pan American Energy), Milton Guerrero (Hunt), Ángel Leiva (Raízen), Fernando Ponce and Leonardo Iglesias (YPF), and Pablo Amoedo (ARPEL). Participants joining virtually included Gonzalo Vilanova (TGN), Helvecia Castro (ENAP), Ronald Rodríguez (OCP), José Valiente (CCI), and Ignacio Peña (Oldelval). Committee members agreed on three initiatives: an AI maturity benchmarking exercise for cybersecurity, an update of the general industrial cybersecurity benchmarking exercise, and the development of an inventory and mapping of applications and hardware currently in use to identify protection gaps. The Committee also confirmed upcoming webinars with Ecopetrol and RECOPE, together with an expanded training program offered by CCI and WisePlant, including benefits for ARPEL member companies.

EPPRE | Emergency Response Planning Project Team

Hosted by YPF and held in a hybrid format, the Emergency Response Planning Project Team (EPPRE) meeting brought together 41 participants (21 in person and 20 virtually) representing 20 companies and organizations from 13 countries across Latin America, the Caribbean, North America, and Europe. The meeting served as a platform for technical exchange, project review, strategic planning, and regional cooperation in emergency preparedness and response.

Among the most significant developments was the expansion of the MEDIR© tool, led by Linda Manka (Shell), Arthur Powers (ExxonMobil/Ipieca), and Diego Formica (Pan American Energy), to encompass the comprehensive management of all types of emergencies. Carlos Gómez (GeoPark) presented the Mutual Aid Plan Guide, which has been technically finalized and is scheduled for publication, together with a webinar, in September 2026. Hernán Luna (YPF) and Andrew Le Masurier (ITOPF) championed an ARPEL-ITOPF webinar on Hazardous and Noxious Substances (HNS), scheduled for December 1, in response to the growing presence of LNG, methanol, ammonia, and hydrogen in



the region's logistics chain. Maria Hartley (Chevron) presented the growing relevance of artificial intelligence in emergency management, highlighting the importance of human oversight and the governance of validation processes.

The meeting also reviewed case studies that yielded valuable lessons. The Esmeraldas pipeline spill (Rodrigo Arcos, EP Petroecuador) and the La Pampilla incident in Peru (Michael Hernandez, OSRL; Valeria Ruoppolo, OceanPact/Aiuka) provided insights into crisis leadership, mutual aid, and the mobilization of specialized response resources. Juan Hinojosa Vera (Petrobras) presented the RETOS™ benchmarking initiative for marine terminals, while Rodrigo Zapelini Possobon (Petrobras) shared Petrobras' experience in developing mutual assistance agreements for transboundary oil spills in the Equatorial Margin. The meeting also defined the topics to be included in the prioritization survey for the EPPRE 2027+ Work Plan and confirmed ARPEL's participation in the 2027 International Oil Spill Conference (IOSC), to be held in Savannah, Georgia, in May 2027.



Meeting of Technical Committee Chairs

The technical week concluded with a meeting of the Chairs of ARPEL's Technical Committees—an unprecedented gathering made possible because the Conference brought them together in person in Buenos Aires. The meeting pursued three objectives: to gather preliminary feedback on the ARPEL 2026 Conference; to exchange proposals for strengthening committee governance and active participation; and to identify opportunities for collaboration across the Association's different technical areas.

The discussion helped establish the initial outlines of the technical agenda for the 2027–2028 cycle, with particular emphasis on cross-committee coordination and stronger engagement by member companies. Participants explored opportunities to establish cross-cutting initiatives in areas where committee agendas converge. The intersection of digital transformation and cybersecurity, as well as that of energy transitions and climate risk management, were highlighted as examples where collaboration could generate significant value.

The Committee Chairs valued the fact that having virtually all ARPEL Technical Committees meet in person during the same week represented a historic opportunity to align agendas and build a shared technical vision. The experience also raised an important question: could this format—a dedicated committee week organized around the Conference—become a permanent feature of ARPEL's institutional life?

Taken together, these fourteen activities—with their hundreds of participants from across the region, technical case studies, governance discussions, and agreed courses of action—paint a picture of ARPEL operating at its full potential: a vibrant network of companies, professionals, and institutions that come together to exchange ideas, learn from one another, and take concrete action. The ARPEL 2026 Conference demonstrated that this potential exists and that meeting in person remains irreplaceable in unlocking it.

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