

April **2025**

Arpel Publication
IN01-2025

2024 Arpel **Annual Report**



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GOVERNANCE

Board of Directors

President:

ANCAP

Vice Presidents:

YPF

PAE

Directors:

EP PETROECUADOR

PETROPAR

STAATSOLIE

S&P GLOBAL

TEMA

TECPETROL

TGN

Fiscal Commission

President:

GEOPARK

Alternate Members:

OCP ECUADOR

HONEYWELL

We are driving the transformation of the O&G sector, to enable energy transitions in our region.

ABOUT US

Arpel is the only regional association of oil, gas and renewable energy in Latin America and the Caribbean.

Founded in 1965, our members include private and state-owned operators, as well as service providers operating in more than 30 countries in the Region.

VISION

To be a regional reference in strengthening the industry as a provider of sustainable energy that contributes to the energy transition.

MISSION

To promote the integration, operational excellence and sustainable development of the oil, gas and renewable energy industry in the region, through cooperation among members and collaboration with its main stakeholders.

STRATEGIC VECTORS

ENERGY
TRANSITIONS

OPERATIONAL
EXCELLENCE

SUSTAINABLE
MANAGEMENT

RELATIONSHIP WITH
STAKEHOLDERS

MESSAGE

This third year of my tenure leading the Executive Secretariat was the final year of my contract, but the Board of Directors honored me with a two-year extension. This increases the satisfaction I feel in continuing to serve our membership, supported as always by the commitment and professional quality of our staff. I want to highlight that Miguel Moyano (an Arpel institution) chose to retire as a full-time employee at the end of the year after 32 years of service, but we managed to convince him to continue cooperating with us part-time, managing the specialty that has given him and Arpel worldwide recognition. I also want to highlight Irene Alfaro, who is now replacing Miguel as head of the Secretariat's technical responsibilities. But I must say that all our colleagues have grown in knowledge, experience, and management skills.

We have continued to build and grow on the transformation we embarked on since 2022. Among the most notable achievements of 2024, we can highlight:

- **Addition of five new members:** Becht, TAG, Rosen, Peru LNG/Hunt, and Trafigura.
- **A very successful Arpel-Naturgas Week 2024**, which projected our traditional Arpel Conference to a new level.
- Launch of the **White Paper** on Just Energy Transitions (at Arpel-Naturgas Week).
- Incorporation of a **Sustainability Manager**.
- **Testimonial participation in public hearings** on oil exploration in the Argentine Sea.
- **Creation of the Digital Transformation Committee**, our eleventh, thus expanding the range of topics of interest to our membership.
- Launch of the **new Arpel website**.
- **Update** of the Process Safety **Self-Assessment Tool**.
- **Launch of the RETOS™ WebApp** and the update and translation of the International Guide, which extends beyond our regional sphere of influence and is being used in more than 100 countries.
- In response to the need to preserve the influx of young professionals into our sector, we offered **master classes to undergraduate and graduate students at prestigious universities** in Mexico (Panamericana), Ecuador (UDLA and ESPOL), and Peru (Universidad de Ingeniería).

My recognition also goes to a committed Board of Directors and my special thanks to those who, due to life stage or organizational changes in their companies, decided to step down from the Board. At the risk of committing an injustice by omitting someone, I want to recognize Carlos Colo, Luis Fredes, Alejandro Stipanovic, and Fernanda Raggio. I must also be thankful for the time, interest, and enthusiasm of the professionals from our member companies who have participated in our committees, webinars, courses, and benchmarks, and who have shared their knowledge in our workshops and reciprocal technical assistance instances.

- Thanks to the success of our Press Workshop in Ecuador in 2023, we offered a **Press Workshop in Peru**. We provided our perspective to interested journalists, supported by hard data.
- **Signing of Memorandums of Understanding** with OLADE and CIER.
- **Participation of eight Arpel professionals in conferences throughout the region:** APEDE (Panama), IGEF (Asunción), SPE (Buenos Aires), RAC/REMPEITC (Curaçao), IOSC (New Orleans), Perú Energía (Lima), Honeywell (Bariloche), SEOGS (Paramaribo), S&P Global (Buenos Aires), ACP (Barranquilla), ACP (Cartagena), CCPS (Buenos Aires), Energy Chamber of T&G (Port of Spain), Gas Natural Perú (Lima), LARCT (Cartagena), SLOM (Punta del Este), OLADE (Bogotá), OLADE (Asunción), Getulio Vargas Foundation (Brasília), LACPS (Barranquilla), ROGe (Rio de Janeiro), ENAEP (Quito), AMPP (Villa Hermosa), IGIPE (Lima), B20 (São Paulo), Environmental Facilities (Viña del Mar), AAPG (Punta del Este), ANH (Cartagena) and Oil Day (Buenos Aires).
- **Arpel's presence at global events**, bringing the perspective and voice of our region: CERAWEEK (Houston), WEC (Rotterdam), IPIECA (London), IEA (Paris), and Institute of the Americas (La Jolla).
- **We have given interviews as well as written articles** for the Gaceta Informativa of the National Hydrocarbons Commission (Mexico), Latin America Advisor (Inter-American Dialogue, USA), ACP Magazine (Colombia), AAPG Explorer (USA), BNAméricas (Santiago), Energiminas (Peru), Radio Sucesos (Quito), Forbes Colombia (Bogotá), Bloomberg Línea (USA), and Gulf Intelligence (Dubai).



What messages do we send?

Our messages are validated by our Communications Committee, composed of specialists in institutional relations and communications from our member companies.

We remain focused on driving the evolution of our sector, promoting natural gas as the ideal fuel, emphasizing the urgency of decarbonizing our processes, operations, and facilities, and relying on technological innovation and digital transformation to achieve greater energy efficiency, minimizing venting, and eliminating routine flaring and methane leaks.

We show that several of our member companies are also diversifying their energy product portfolios, incorporating renewable energies, leveraging their inherent capabilities for technological innovation and complex project management. They are already venturing into lithium mining, geothermal, photovoltaics, onshore and offshore wind power, and blue and green hydrogen.

We promote multidimensional, plural, just, and inclusive energy transitions, defending the right of our countries to sustainably develop their natural resources. We illustrate the barriers, boundary conditions, technological and commercial shortcomings, and investment gaps that make it impossible to achieve laudable climate goals in a timely and appropriate manner, but which continue to be aspirational. In this way, we aim to highlight the need for realism, pragmatism, and technological neutrality to meet the growing energy demand with multiple energy sources that provide security and affordability.

Energy supply and demand suffer from great uncertainty and volatility due to the inherent influences of global geopolitics, social and economic development, and the sectoral and regulatory policies of our countries. Today, even more than yesterday, we must combine strategic vision with tactical agility. With the knowledge, technology, creativity, and resilience to disruptive events that mark our century-long industrial history, we have a moral obligation to lead toward a future that combines progress with sustainability. Thank you very much for allowing me to work side by side with you in this endeavor.

Carlos Garibaldi
Arpel's Executive Secretary

ARPEL MEMBERS

Arpel's membership
rose to

31

members in 2024

+5

Major Oil and Gas companies in
the region joined Arpel

Becht Engineering

[LEARN MORE](#)

Transportadora
Asociada de Gás

[LEARN MORE](#)

Rosen Group

[LEARN MORE](#)

PERU LNG/Hunt Oil

[LEARN MORE](#)

Trafigura

[LEARN MORE](#)



MEMBERSHIP

ACTIVE MEMBERS



PARTNERSHIPS





CREATION OF NEW TECHNICAL COMMITTEE: **DIGITAL TRANSFORMATION**

Through our 11 Technical Committees, the Association broadens the range of topics of interest to member companies.

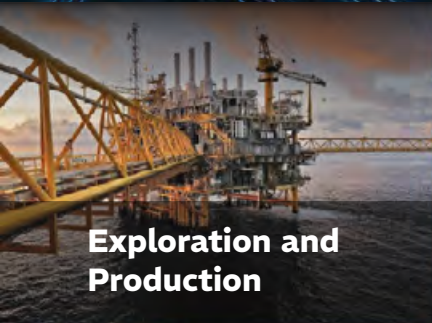
Digital Transformation is a cross-cutting process that impacts three strategic vectors of the Association: Operational Excellence, Sustainable Management and Energy Transitions. This new Arpel Committee will offer a comprehensive approach to addressing this key issue for the sector, with the aim of promoting synergies and facilitate cooperation and orientation of efforts in this topic.

10 + 1

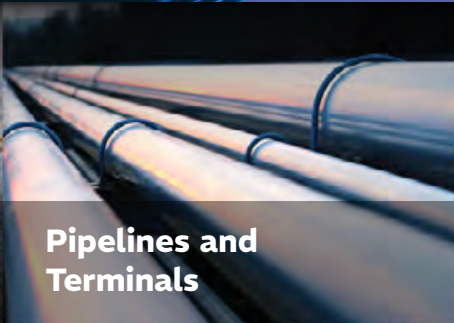
The objectives of the Committee are the following:

- Provide support for Digital Transformation in all areas of the member companies, working in coordination with all Arpel Committees.
- Promote collaboration and cooperation between member companies in aspects related to innovation and digital transformation, accelerating the learning process of the members.
- Contribute to the sustainability and adaptation of the industry to changes in the environment.
- Cooperate in the technical organization of the biannual event "Innovarapel" on Digital Transformation and Industrial Cybersecurity. The 2025 edition of Innovarapel will be on June 24 and 25 in Rio de Janeiro, Brazil.

The creation of the Digital Transformation Committee was approved at Arpel's 2024 Board of Directors Meeting, held on October 23, whose main objective was to validate the work plan for 2025.



**Exploration and
Production**



**Pipelines and
Terminals**



Refining



Gas and Energy



**Energy
Transitions**



**Environment,
Health and Safety**



**Sustainable
Management**



**Industrial
Cybersecurity**



**Human Talent and
Knowledge Management**



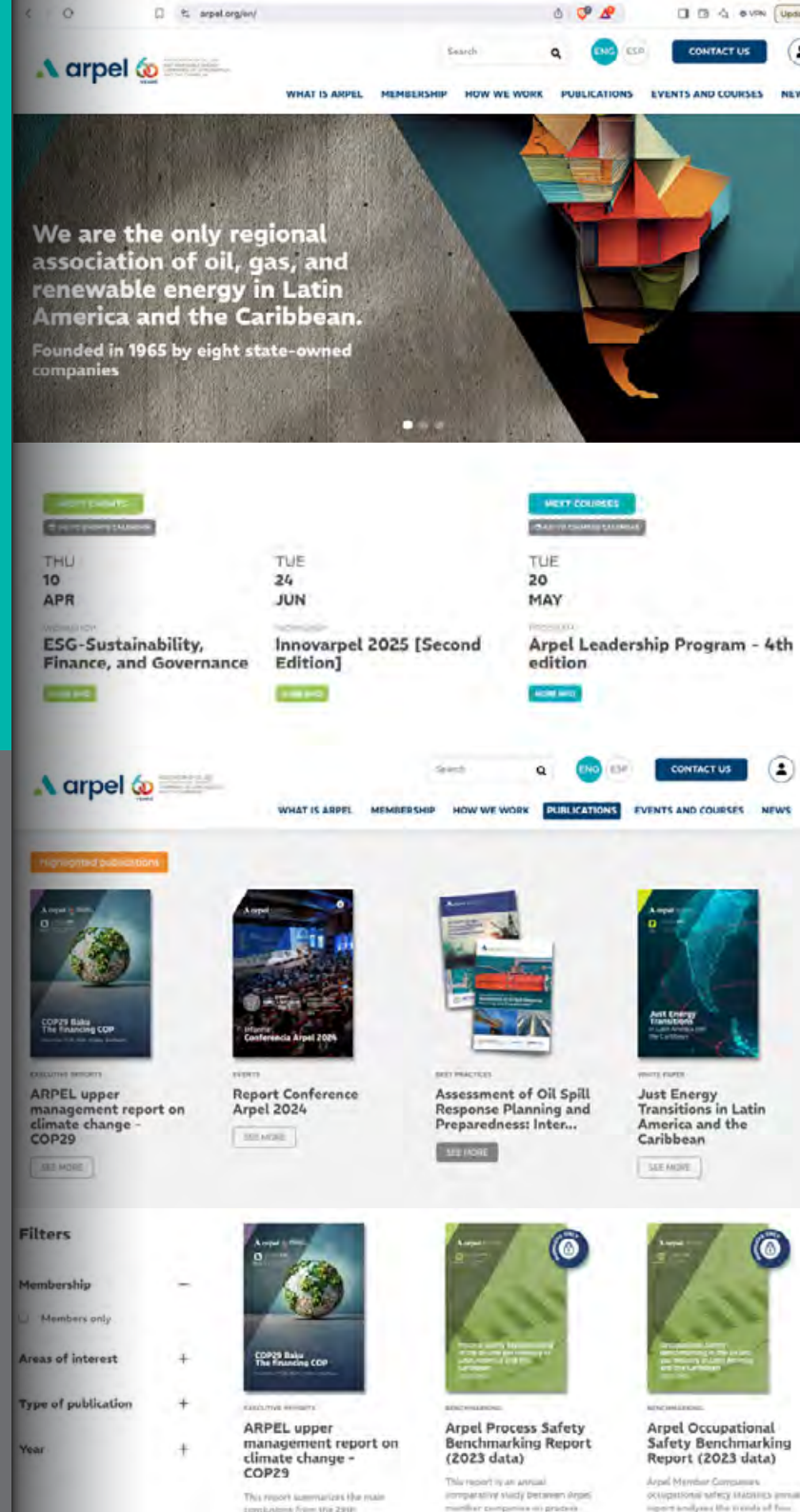
Communications

LAUNCH OF NEW WEBSITE

VISIT WEBSITE

Arpel launched its new website mid-year, a much more modern page with new features designed especially to facilitate communication with members. The new website allows for quick downloads of the latest publications and provides information on upcoming webinars and in-person events. Additionally, users can filter content by Areas of Interest, making it easier to quickly find activities and products relevant to each user. If your company is a member of Arpel, we invite you to complete the registration process to access exclusive content for members.

For inquiries or assistance with the registration process, please do not hesitate to contact us at info@arpel.org.uy



SESSIONS

28,620

VISITORS ARRIVING FOR
THE FIRST TIME

58.84%

AVERAGE DURATION
SESSION

4 mins

PAGE/SESSIONS
VISUALIZATIONS

3,14



Direct traffic, email marketing, and organic search

are the top three traffic sources that drove website visits during 2024.

DIRECT TRAFFIC

12,033

EMAIL MARKETING

5,221

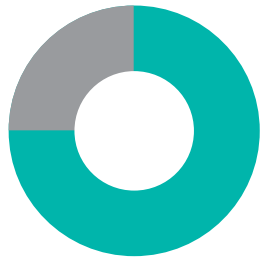
ORGANIC SEARCH

8,214

866

NUMBER OF REGISTERED USERS ON THE SITE
(June to December)

Visitors sessions of the website by type of device



PC 75.12%
MOBILE 24.87%
OTHERS 0.01%



Countries with the highest number of website visits:

- | | |
|--------------|--------------------|
| 1. Argentina | 6. Brazil |
| 2. Uruguay | 7. Ecuador |
| 3. Colombia | 8. Chile |
| 4. Peru | 9. Mexico |
| 5. USA | 10. United Kingdom |

The screenshot displays the Arpel website interface. At the top, there is a navigation bar with the Arpel logo and links for 'WHAT IS ARPEL', 'MEMBERSHIP', 'HOW WE WORK', 'PUBLICATIONS', 'EVENTS AND COURSES', and 'NEWS'. Below the navigation bar, there are several featured sections:

- Webinar:** 'Top O&G issues to watch in 2025' scheduled for 19 MAR 2025 (ECONOMICS PARTIAL).
- Workshop:** 'ESG-Sustainability, Finance, and Governance' scheduled for 10 APR 2025 (VIRTUAL).
- Membership:** A sidebar menu with options like 'Members only', 'Type of event', 'Cost', 'Modality', 'Areas of interest', 'Language', 'Simultaneous translation', 'Month', and 'Year'.
- Workshop:** 'Innovarapel 2025 (Second Edition)' scheduled for 24 / 25 JUN 2025.
- Workshop:** 'ESG-Sustainability, Finance, and Governance' scheduled for 10 APR 2025.
- Webinar:** 'Top O&G issues to watch in 2025' scheduled for 19 MAR 2025.

At the bottom, there is a section titled 'Expert a delegates work cooperatively in the Technical Committees, forming the driving force of the Association to carry out its strategic lines.' This section includes text about the Technical Committees' role in developing work processes for continuous improvement and organizing workshops. It also mentions the production of publications like White Papers, Guides, and Best Practice Manuals. The bottom of the page features a footer with the Arpel logo and navigation links.

ARPEL- NATURGAS WEEK 2024

ARPEL 2024 CONFERENCE
REPORT

DOWNLOAD



We invite you to review the topics covered during the Arpel-Naturgas Week developed in the Report:

1. Just energy transitions, regional perspectives and opportunities
2. Hydrocarbons, geopolitics, and regional competitiveness: Opportunities amid the energy transition
3. Major projects: decarbonization and diversification
4. Energy, artificial intelligence and the future of work
5. Energy sector: social license and governance

Arpel and Naturgas, the Colombian Natural Gas Association, organized the Arpel-Naturgas Week, thus combining the 7th Arpel Conference with the 26th Naturgas Congress, creating an unprecedented event in the region.

"Driving just energy transitions for Latin America and the Caribbean" was the motto of this important meeting, which took place from April 8 to 12 in Cartagena de Indias, Colombia.



1,600
PEOPLE

FROM
24 countries

COLOMBIA
UNITED STATES
BRAZIL
ARGENTINA
CHILE
URUGUAY
PERU
ECUADOR
UNITED KINGDOM
SURINAME
MEXICO
VENEZUELA
BOLIVIA
GERMANY
CANADA
COSTA RICA
CUBA
SPAIN
ITALY
TRINIDAD AND TOBAGO
PANAMA
KOREA
JAPAN
FRANCE

126
SPEAKERS



35
FEMALE
SPEAKERS

24
MODERATORS

70
SPONSORING
COMPANIES

14
PARTNER
INSTITUTIONS

67
INTERNATIONAL
SPEAKERS

112
JOURNALISTS

112
EXHIBITORS

70
STAFF



For five days, international experts on energy issues, senior executives from the main oil and gas companies in the region, and government and regulatory authorities from different countries discussed issues that govern the sustainability of the oil and gas industry.

Speakers and panelists included senior executives from Ecopetrol, Petrobras, YPF, Staatsolie, Enap, Ancap, Petroecuador, Petroperú, NGC of Trinidad & Tobago, Promigas, GeoPark, Frontera, Parex, Hocol, Tecpetrol, TGI, Raizen, Shell and TotalEnergies, among other important companies.

Also participating were executives and experts from institutions such as IGU, WPC, IEA, Ipieca, OLADE, IATA, ILO, and the University of Barcelona, as well as global firms Honeywell, S&P Global, Accenture, Arthur D. Little, Scania, Maersk, and Goldman Sachs.

"There is no emissions reduction scenario, no matter how aspirational, that precludes oil and, above all, natural gas from the global primary energy matrix. We are therefore part of the solution, key players in the energy transitions that are not only just, but that are also viable. Therefore, we are not envisioning the end of oil and gas, because we are dealing with a transition, and not an abrupt replacement. We should be focused on reducing emissions, not on canceling a sector.

Regarding global energy security, 38% of the hydrocarbon resources discovered globally since 2020 are in Latin America and the Caribbean region. The advances, results and plans of the oil and gas industries of Brazil, Argentina, Peru, Guyana, and Suriname, as examples, position Latin America as a potential key player to help meet the growing demand in a manner that is reliable, safe and affordable."

Carlos Garibaldi at Arpel-Naturgas Week 2024

ARPEL 2024
CONFERENCE
REPORT

DOWNLOAD



VIDEO
SUMMARY

WATCH



PHOTO
GALLERY

VISIT



THE ARPEL CONFERENCE
2024 PRESENTATIONS
CAN BE VIEWED IN FULL
ON ARPEL'S YOUTUBE
CHANNEL

WATCH



NATURAL GAS STAKEHOLDERS DIALOGUE

ARPEL, IGU AND NATURGAS

Within the framework of the Arpel- Naturgas Week 2024, the second edition of the Natural Gas Stakeholder Dialogue took place, an event co-organized by Arpel, the International Gas Union (IGU) and Naturgas.

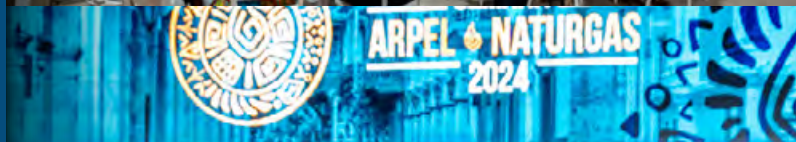
The main objective of the event was to exchange views on the role and development potential of natural gas in Latin America and the Caribbean.

As part of the work carried out during this meeting, IGU, Arpel, and Naturgas jointly developed a declaration seeking to positively contribute to the global energy dialogue, with the aim of promoting an orderly and just energy transition that effectively reduces greenhouse gas emissions while promoting the economic development and prosperity of the communities of the region.

The meeting was attended by representatives from the leading companies and associations in the sector, primarily from Colombia, Argentina, Brazil, Chile and Peru.

The event featured a keynote talk by Carlos Pascual, Senior Vice President of Global Energy and International Affairs at S&P Global.

The II Natural Gas Stakeholder Dialogue was sponsored by Frontera Energy.



NEW ARPEL PUBLICATIONS

TOP 5
MOST DOWNLOADED PUBLICATIONS IN 2024

2,540

DOWNLOADS ON
ARPEL'S WEBSITE

1º

WHITE PAPER
**JUST ENERGY
TRANSITIONS**



DOWNLOAD



2º

**ASSESSMENT OF OIL SPILL
RESPONSE PLANNING AND
PREPAREDNESS: INTERNATIONAL
GUIDE AND RETOS V3.0**

DOWNLOAD



4º

**ARPEL
CONFERENCE
REPORT 2024**



DOWNLOAD



5º

**ARPEL GUIDELINES FOR
THE EXECUTION OF CIVIL AND
GEOTECHNICAL WORKS IN THE
INTEGRITY MANAGEMENT OF
HYDROCARBON TRANSPORT
PIPELINES IN THE FACE OF
GEOTHREATS**



DOWNLOAD



3º

**ARPEL
ANNUAL REPORT 2023**

DOWNLOAD



WHITE PAPER JUST ENERGY TRANSITIONS IN LATIN AMERICA AND THE CARIBBEAN

DOWNLOAD



Just Energy Transitions in Latin America and the Caribbean is the central theme of the latest published position paper by Arpel, which was developed within the framework of the Energy Transitions Committee and was disseminated in different ways throughout 2024.

"Talking about a just energy transition for the region implies recognizing the urgency of promoting initiatives to mitigate climate change within a path that considers the social and economic impacts on developing communities with high levels of unemployment, inequality, and energy poverty," is one of the key messages expressed in the document, which was prepared by professionals from TGN, Petrobras, EP Petroecuador, OCP Ecuador, S&P Global, Pan American Energy, Petroperú, Staatsolie and Geopark.

The co-authors of the White Paper themselves presented the key messages and main conclusions during the webinar launch held in early September, where they shared the collective understanding of Arpel's member companies on the significance of justice for the sector in our region.

"Our goal with this document is to open a dialog on this topic, its challenges and opportunities, and to build development pathways for the region in a competitive business environment," the authors expressed.

"We understand the complexity of energy transitions and are aware that they require real-world transformation that impacts all communities and nations," they added. They also highlighted that: "We must respect the legitimate right of developing nations to use their hydrocarbon resources responsibly while working toward their social and economic development priorities."

The launch webinar was attended by Claudio Moreno, Head of Social Responsibility at TGN; Patricia Marques, Climate Change Specialist at Petrobras; Lorena Bracho, Energy Efficiency Coordinator at EP Petroecuador; Hugo Cuenca, Energy Management System Specialist at OCP Ecuador; and Rodrigo Vaz, Upstream Director at S&P Global.

The session was moderated by Josefina Ibarra, Public Affairs Leader at YPF.



Key messages



Talking about a just energy transition for Latin America and the Caribbean implies recognizing the urgency of promoting initiatives to mitigate climate change, aligned with the NDC, within a trajectory that considers the social and economic impacts on developing communities with a high percentage of unemployment, inequality, and energy poverty.

ARPEL and its member companies are committed to the search for a just energy transition in Latin America and the Caribbean. We recognize the importance of balancing the path of environmental sustainability with social and economic development. We believe that by promoting a competitive environment to attract investment, providing adequate financing, and fostering collaborative dialogue, we can achieve a just energy transition that benefits all stakeholders and contributes to building a sustainable future in the region.

We recognize the urgency of addressing global challenges related to the energy transition and the fight against climate change, and we are committed to playing a proactive and constructive role in this journey.

08 | Training, technological development, and supplier development



The trajectory of energy transitions requires the development of new technologies and a workforce with new knowledge. This is why it is a priority to establish mechanisms for the participation of future professionals in specific training in technologies related to renewable energy sources and other low emissions technologies. This requirement suggests that plans or agreements be made with the academic sector to encourage R&D of technologies, as well as

the implementation of training campaigns. Many of the countries in the region already have a scientific community, from public and private sectors, and a population educated in environmental issues, with the capacity for local innovation and regional cooperation. Another requirement that arises because of the above is the need to develop suppliers to diversify the supply chain. These requirements are developed in more detail below.

THE ROLE OF NATURAL GAS IN THE REGION

Looking ahead to the energy demand and population growth projections for 2050, Latin America and the Caribbean need an increase in the supply of secure, affordable, and, preferably, clean energy to support their growing industrialization and meet the basic needs of their expanding population.

Regarding the region’s share of global greenhouse gas emissions (8.1%), it is proportional to its share of the world population (8.4%).

On this point, the authors noted that the region has significant potential in renewable energy resources; currently, these account for 33% of the region’s total energy supply, compared to 13% globally.

The document states that natural gas can complement the introduction of new energies on the path to reducing GHG emissions.

“Our region has an abundance of this energy source, representing a great opportunity to use it, with

appropriate technologies and high operational standards, as an energy source for industry and transportation, and a highly reliable complement to an energy matrix with a high percentage of renewables.”

“If we add the potential of natural gas in the region to the existing renewable energies, we achieve 86% of the available energy. This would significantly contribute to the transition process, providing the energy to offset the intermittency of renewables and replacing part of conventional energies,” said Hugo Cuenca from OCP Ecuador.

In line with the development of natural gas in the region, Claudio Moreno from TGN in Argentina referred to the public-private Presidente Néstor Kirchner Gas Pipeline project, which will transport hydrocarbons extracted from Vaca Muerta and enable the provision of LNG to the world.

DECARBONIZATION AND DIVERSIFICATION OF THE OIL AND GAS SECTOR

In relation to renewable energies, Latin America has the potential to increase its commercial-scale solar and wind energy capacity by over 460% by 2030 if the 319 gigawatts (GW) of new potential projects in the region are realized, according to a 2023 report by Global Energy Monitor.

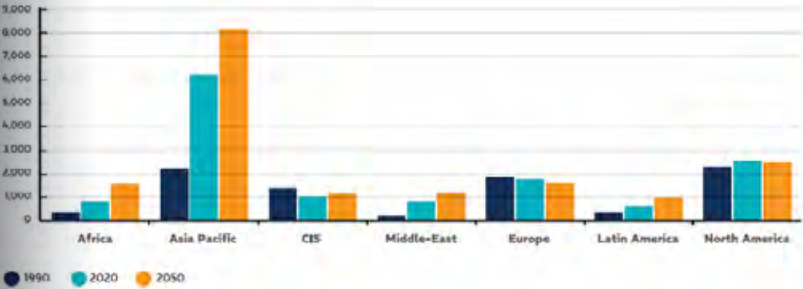
“Although oil and gas companies have historically been linked to fossil fuels, many of these companies are beginning to diversify their activities into renewable energy sources, carbon capture technologies, and

energy efficiency. Their capacity to invest in research and development, combined with their global infrastructure, allows them to lead initiatives that promote a more sustainable energy supply,” said Lorena Bracho from EP Petroecuador.

The authors state that energy transitions could create more than 1 million new jobs in energy supply by 2030, particularly in the electricity sector and in mining and processing of critical minerals, as well as in the oil and gas sectors -as the region increases its production.

WATCH THE LAUNCH WEBINAR >

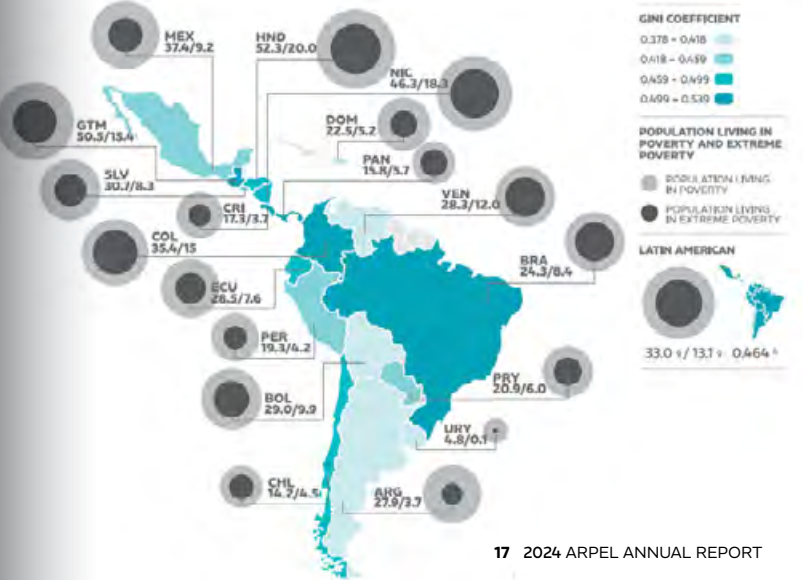
Primary energy regional demand (TOE) Source: IEA Global Energy Outlook 2023



Regional percentage of total GHG emissions 2019 Source: OECD et al. (2022)



Poverty and income distribution Population in situations of poverty^a and extreme poverty and Gini index^{(a)(b)} In percentages and values between 0 and 1 2021 Source: ECLAC (2023)^a



PRESENTATION AT ARPEL- NATURGAS WEEK 2024

The White Paper had its first public presentation within the framework of the Arpel- Naturgas Week 2024.

The presentation was led by Raquel Campos, Decarbonization Manager at Petrobras, and was part of the panel titled “Convergence of Perspectives on Just Energy Transitions in Latin America and the Caribbean.”

In this panel, discussions focused on perspectives regarding just energy transitions in the region and the need to combat climate change, close energy poverty and social inequality gaps.

“Our region has a unique energy mix, with significant opportunities in natural gas and renewable energy,” stated Raquel Campos.

26th WORLD ENERGY CONGRESS, IPIECA WEEK 2024 AND IEA GLOBAL SUMMIT IN PARIS

As part of the 26th World Energy Congress, Arpel held a side event dedicated to Just Energy Transitions in Latin America and the Caribbean.

The event, held on April 23 in Rotterdam, Netherlands, featured a panel comprising Silvina Oberti from YPF, Patricia Marques from Petrobras, Camilo Torres from GeoPark, and Santiago Ferro from Ancap.

Irene Alfaro and Carlos Garibaldi were present on behalf of Arpel. The objective of this academic activity was to present Arpel's recently published White Paper on this topic in an international setting. The presentation of the White Paper was complemented with concrete cases from member companies to enrich the dialogue and identify global synergies and cooperation opportunities that promote the region's decarbonization without violating its right to sustainable development.

In the same week, Arpel participated in Ipieca Week 2024.

Irene Alfaro shared the Latin American perspective in the panel

“Regional Perspectives on Achieving Net Zero Emissions” during the Climate Change Working Group meeting held on April 25 in London. The panel also featured Bob Larocque from the Canadian Fuels Association representing North America; Hiroyuki Ishikawa from INPEX, Japan; Matthew G. Bateson from Aramco, Middle East; and Anibor Kragha from ARDA, Africa. The panel was moderated by Arthur Lee from Chevron and Chair of the Working Group.

Arpel's representation in Europe concluded on April 26 at the first Global Summit on People-Centered Clean Energy Transitions, held by the International Energy Agency at its headquarters in Paris. The important event was attended by more than 200 participants from 50 countries.

Some of the topics addressed during the Summit included leveraging the opportunity to achieve just and inclusive clean energy transitions; responses to changing labor dynamics; advances in gender equality; designing policies to maximize positive social impacts; and engaging people as active participants.



WHITE PAPER ARPEL AT PERU ENERGY CONGRESS

Another instance of presentation of the White Paper to professionals in the region was at the latest edition of the Peru Energy Congress.

On this occasion, Irene Alfaro, Managing Director of Arpel and coordinator of the Energy Transitions Committee, shared the main ideas developed in the document.

"Energy interconnection between countries is key to accelerating the energy transition, leveraging idle infrastructure, resources, and complementarities between countries," highlighted Alfaro during her keynote speech.



PETROBRAS AND S&P GLOBAL PRESENT WHITE PAPER AT ROG.E

Another opportunity to disseminate Arpel's White Paper on Just Energy Transitions in Latin America and the Caribbean was at ROG.e, an event organized by the Brazilian Institute of Petroleum and Gas (IBP) from September 23 to 26 in Rio de Janeiro.

On this occasion, the presentation was led by Patricia Marques, Climate Change Specialist at Petrobras, and by Rodrigo Vaz, Director of Upstream at S&P Global.

According to Vaz, this was a high-level discussion on the technical document published by Arpel on Just Energy Transitions with industry experts who represent the views of different energy sector associations in Brazil.

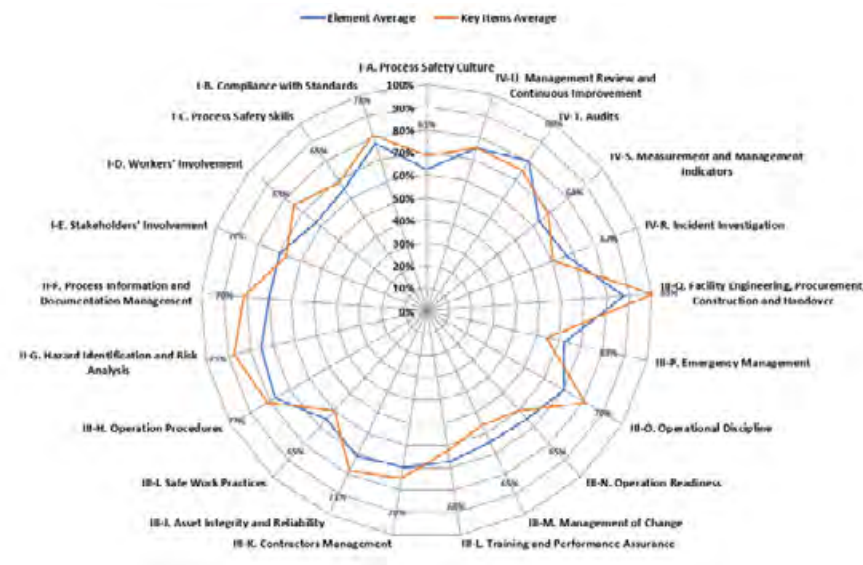


ARPEL PROCESS SAFETY SELF-ASSESSMENT METHODOLOGY AND TOOL

In 2024, the English version of the Process Safety Self-Assessment Methodology and Tool, developed by Arpel and its members was published with the aim of also being applied to member companies in non-Spanish-speaking countries. The Spanish version of the tool is being used by several companies and integrated into their Management Systems, as in the case of GeoPark (presentation of a paper at the CCPS Conference). RECOPE also began using it in November 2024 to advance the development of a more robust management system.

This is a friendly and useful tool to oil and gas companies so that they can identify their gaps in process safety management systems at both company and facility levels.

The tool consists of 21 short questionnaires to assess the 21 defined elements, which can be used for both upstream and downstream operations. Four types of evaluation were defined in order to make it easier, more agile and adaptable to different companies and levels of maturity.



PRESENTATION OF ARPEL PROCESS SAFETY SELF-ASSESSMENT TOOL AT THE CCPS CONFERENCE

From September 18 to 20, the tenth Latin American Process Safety Conference organized by the CCPS (Center for Chemical Process Safety) took place in Barranquilla, Colombia. During the three technical sessions, all aspects of process safety in different industries, particularly oil and gas, were addressed.

Tiphaine Le Moënner, Senior Project Manager and coordinator of the Environment, Health and Safety Committee, participated on behalf of Arpel, presenting the paper "Self-assessment of Process Safety Systems as a tool towards comprehensive risk management" together with Raúl Manga from Tema-Litoclean and Eduardo Díaz from GeoPark.

The main objective of the participation of Arpel and the two member companies was to present the self-assessment methodology and tool of the process safety management system, developed by Arpel's member companies, and the benefits of its implementation.



DOWNLOAD



AVAILABLE IN SPANISH
AND ENGLISH





OPERATIONAL EXCELLENCE

DEVELOPMENT, PROMOTION
AND IMPLEMENTATION OF
BEST PRACTICES

PERFORMANCE BENCHMARKING

ON PROCESS SAFETY AND INDUSTRIAL SAFETY

2024

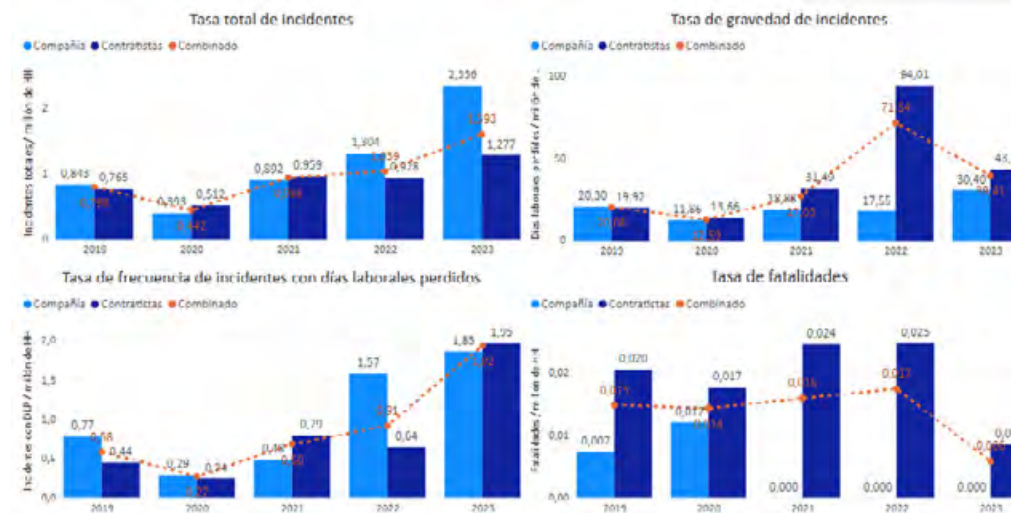
NUMBER OF MEMBERS
WHO PARTICIPATED

10

BENCHMARKING IN
INDUSTRIAL SAFETY

10

BENCHMARKING IN
PROCESS SAFETY



In 2024, 10 companies present in 10 countries contributed data to the Industrial Safety study, and 10 companies present in 10 countries contributed data to the Process Safety study. The number of man-hours reported was similar to the previous year.

In Industrial Safety, we noticed a substantial increase in the total incident rate and the frequency of Lost Workdays (compared to the average over the past five years). Fortunately, this increase was not accompanied by an increase in fatalities.

On the contrary, in 2023 there were 3 reported fatalities, 7 fewer than in 2022. We must maintain our efforts to minimize incidents at our facilities, always with the goal of reaching zero fatalities.

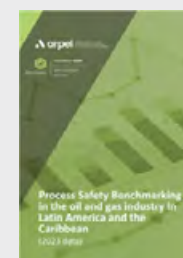
In Process Safety, the results were very similar to those of the previous year (2023 data vs. 2022 data).

These two ARPEL reports help identify gaps in the performance of member companies and implement exchange activities to improve them.

From the Executive Secretariat, we encourage and support all operating member companies to participate in these two studies, as the Association's Benchmarking Reports are an exclusive benefit for member companies.

To that end, in March 2024, we organized a webinar specifically dedicated to Process Safety Indicators, presented by specialists from API and IOGP.

ARPEL's Benchmarking Reports provide a comprehensive and unique regional benchmark of oil and gas companies' performance in process safety, industrial safety, and environmental management.



**ARPEL PROCESS SAFETY
BENCHMARKING REPORT**
(2023 DATA)

DOWNLOAD



**ARPEL OCCUPATIONAL SAFETY
BENCHMARKING REPORT**
(2023 DATA)

DOWNLOAD



MUTUAL TECHNICAL ASSISTANCE ACTIVITIES

**EXCLUSIVE
BENEFIT
FOR ARPEL
MEMBERS**



During 2024, new cooperation and mutual technical assistance (ATR) activities took place among Arpel's member companies.

The ATRs are managed and monitored by Arpel Directors and Project Managers of the Executive Secretary.

These technical exchanges aim to find solutions to specific problems by sharing the knowledge and experience of professionals from the various member companies.

[REQUEST ASSISTANCE >](#)

2024

33

MUTUAL
TECHNICAL
ASSISTANCES

18

ARPEL MEMBER
COMPANIES
PARTICIPATED

TOPICS FROM **JANUARY TO MARCH**

ELECTRICAL GENERATION
SYSTEM FOR REFINERIES
IN COLOMBIA, PERU AND
URUGUAY

USE OF PORTABLE
COMPRESSORS AT FCC

RISK AND ARCHITECTURE
SURVEY FOR TO

FUEL STEALING IN
PIPELINES

LABORATORY ANALYSIS
METHODS RELATED TO THE
H2 GENERATING PLANT
(HMU)

ELECTRICAL GENERATION
SYSTEM FOR REFINERIES
IN COLOMBIA, PERU AND
URUGUAY

TOPICS FROM **APRIL TO MAY**

TURNAROUNDS TO LOW-
DENSITY POLYETHYLENE
PLANTS

DETERMINATION
OF USEFUL LIFE OF
EQUIPMENT

LABORATORY ANALYSIS
METHODS RELATED TO THE
H2 GENERATING PLANT
(HMU)

CERAMIC FIBER
INSTALLATION

INTEGRITY
MANAGEMENT TOOL

USE OF THE
METHODOLOGY AND SELF-
ASSESSMENT TOOL OF THE
PROCESS MANAGEMENT
SYSTEM

TOPICS FROM **JUNE TO AUGUST**

REVAMPING AND GENERAL
UPDATING OF AN INDUSTRIAL
PLANT

ASSET SECURITY IN
REFINERIES

STORAGE AND INJECTION OF
CETANE IMPROVER INTO DIESEL

CATALYST DISCHARGE IN
ULSD UNIT

BENCHMARKING ON
OPTIMIZATION AND DISCIPLINE
CONTROL

ENGINEERING OF THE FACILITIES
TO LOAD LIQUEFIED GAS INTO
TRUCKS

STATE OF THE ART IN
COKER BOTTOM REFLUX
CONFIGURATION

PRODUCED WATER
MANAGEMENT

EARTHQUAKE PREPAREDNESS
AND RESPONSE

TOPICS FROM **SEPTEMBER TO OCTOBER**

ANTICORROSION SYSTEM
FOR HYDROCARBON TANKS

RISK TRANSFER TO
INSURERS IN THE
HYDROCARBON SECTOR

STATE OF THE ART OF
BOTTOM COKER REFLUX
CONFIGURATION

PRODUCED WATER
MANAGEMENT

POLYMER INJECTION

MANAGEMENT OF ILLEGAL
TAPSPETROT

TOPICS FROM **NOVEMBER TO DECEMBER**

KEY RISK INDICATORS FOR EXPOSURE TO
THE RISK OF FAILURE IN THE CRUDE OIL AND
GASOLINE STORAGE TANK FARM

CLEANING OF EXCHANGERS IN
PROGRESS

ROTATING EQUIPMENT

CLEANING OF EXCHANGERS IN
PROGRESS

VIRTUAL AND IN-PERSON WORKSHOPS

DEVELOPED BY ARPEL IN 2024

+4,000
PROFESSIONALS
EXCHANGING
KNOWLEDGE AND
EXPERIENCES AT
35
EVENTS

IN-PERSON EVENTS

REFINING

ENAP HOSTED ARPEL WORKSHOP ON "BEST PRACTICES IN ENVIRONMENTAL PROCESSES IN REFINERIES"

ENAP hosted the Workshop for the Exchange of Best Practices in Environmental Processes of Refineries, which took place from November 6 to 8 in Concón, Chile.

The meeting promoted by the Arpel Refining Committee brought together operation personnel, process engineers, plant managers, maintenance and inspection managers, as well as those in charge of relations with the communities and professionals from service providers in the sector from all over the region. "In a context where the energy transition is a priority, we recognize that our industry is essential," said Ricardo Buyatti, Arpel Downstream Manager. The opening of the workshop was attended by

Gloria Maldonado, President of the Board of Directors of ENAP, and Julio Friedmann, General Manager of ENAP.

The agenda had 4 thematic axes: Legal Responsibility; Best practices in Slop reduction, new additives, and final disposal; Biological Treatment Systems, and Optimization of water consumption, which were presented by representatives of ENAP, YPF, Halliburton, PAE, Ecopetrol, Honeywell UOP, Becht, Nalco Water, Worley Comprimo and SGS Sulphur Experts.

As part of the program, the workshop included a visit to the Aconcagua Refinery and the wetland at the mouth of the Aconcagua River.



PIPELINES

AXION ENERGY AND GEOPARK TECHNICIANS PARTICIPATED IN CONTROL ROOM CROSS-CHECKS

During May, under the coordination of Arpel's Committee on Pipelines and Terminals (CODYTE), two control room cross-checks were conducted between member companies Axion Energy and GeoPark. This exchange included technical visits from GeoPark delegations to Axion Energy facilities and vice versa.

During the cross-checks, specialists shared work sessions in the control rooms to verify ongoing processes, get firsthand knowledge of the physical and technological infrastructure, and receive feedback from the visiting delegations to improve processes.

Axion Energy's visit to GeoPark took place from May 20 to 22 and included the Jacana and Tigana Stations in the Llanos 34 field, located in the municipalities of Villanueva and Tauramena, in the department of Casanare (Colombia).

Representing Axion were Claudio Gomina, Operations Coordinator, and Hugo Cortea, Terminal Brandsen Console Operator. Representing GeoPark was José Isaías Ramírez, Control Room Operator. Meanwhile, GeoPark's visit to Axion took place from May 28 to 30 at the Terminal Brandsen. Gladys Fuentes, GeoPark's Pipeline Operations Coordinator, was received by Claudio Gomina and Hugo Cortea from Axion Energy.

CODYTE, coordinated by Fabián Sánchez from Arpel, highlights the opportunities provided by the Cross-Checks for member companies. These opportunities allow for knowledge of other operations, exchange of best practices, feedback from experienced professionals, and the expansion of contact networks among technicians in the region.



IN-PERSON EVENTS

PIPELINES

PETROPAR PROFESSIONALS
CARRIED OUT A TECHNICAL VISIT
TO ECOPETROL FACILITIES

Under the coordination of the Arpel Pipelines and Terminals Committee, a delegation of Petropar professionals carried out a technical visit to Ecopetrol and Cenit facilities at the end of July to learn about the operations and the latest applied technologies. The visit began at Ecopetrol’s headquarters in Bogotá. It continued with a tour of the Cartagena refinery, where professionals were able to delve into the processes, organization and infrastructure. The Petropar team also toured the Pozos Colorados Maritime Terminal to observe the collection, storage and transportation processes of white products. During their stay in Colombia, the professionals shared work sessions in the control rooms to learn about the processes carried out, the physical and technological infrastructure, and the personnel organization.



PIPELINES

YPF’S LA PLATA INDUSTRIAL COMPLEX
HOSTED THE WORKSHOP ON FACILITY
INTEGRITY MANAGEMENT

The Best Practices Exchange Workshop on “Facility Integrity Management”, organized by Arpel and YPF as host, brought together 80 professionals from Ancap, Becht, Cenit, ENAP, EP Petroecuador, GIE Group, GeoPark, HEMPEL, OCP Ecuador, PAE , Petromark, Raízen, Refinor, Rosen, Tecpetrol, TGN, TGP, Trafigura, and WisePlant. The technical event took place at the La Plata Industrial Complex from October 23 to 25 and was developed by the Pipeline Integrity Team of the Arpel Pipelines and Terminals Committee, which is coordinated by Fabián Sánchez. The program included 20 technical presentations and two panels on “Integrity strategy

management” and “Use of digital tools.” The main topics addressed during the Workshop were: Risk management; Integrity in rotating equipment; Tank integrity; Pipeline integrity; Internal inspection; Coatings, and Cybersecurity Threats. The third day included technical visits to YPF Energy Space and the topping area of the La Plata Refinery. During these three days of the workshop, Arpel brought together the Integrity Management teams of the member companies, who were able to exchange experiences and continue strengthening the network of contacts.





TALLER INTERCAMBIO DE BUENAS PRÁCTICAS EN
LA GESTIÓN DE INTEGRIDAD DE FACILIDADES

23 AL 25 DE OCTUBRE, 2024



IN-PERSON EVENTS

REFINING

PLANT SHUTDOWNS
BEST PRACTICES EXCHANGE
MEETING

From December 11 to 13, the Latin American Best Practices Exchange Meeting on Plant Shutdowns was held in Barrancabermeja, Colombia, organized by Arpel Refining Committee and Ecopetrol Group.

The technical workshop brought together 100 professionals from Ancap, Axion Energy, Becht, Enap, Envtech, EP Petroecuador, Honeywell, Hunt LNG, Raízen, Refidomsa, Solomon, Tecpetrol, YPF, ZymeFlow, RSL Chile, Prometheus Group, Essentia and Consorcio Tabarca.

The welcome address was given by Henry de Jesús Castaño, Maintenance Manager of Ecopetrol's Barrancabermeja Refinery, and Ricardo Buyatti, Downstream Manager of Arpel.

Experiences and lessons learned in plant shutdowns; planning and safety in plant shutdowns and new technologies and management processes were the key topics covered during the exchange sessions. The workshop concluded with the presence of Walter Canova, Vice President of Refining and Industrial Processes at Ecopetrol Group. On the last day, participants visited the Barrancabermeja Refinery.



VIRTUAL EVENTS

ENERGY TRANSITIONS

CARBON MARKETS TRAINING WORKSHOPS BY IETA

Arpel's Energy Transitions Committee held two virtual training workshops on Carbon Markets on September 12 and November 26, led by professionals from IETA, a leading international organization in the field.

This series of meetings is part of the Committee's work plan and is exclusively for Arpel member companies. The first edition, titled "Definitions and basic concepts regarding carbon markets, offset mechanisms, and carbon taxes" focused on the general fundamentals of these markets. It aimed to align knowledge among all our members and to present the main terms governing the topic and the tools available.

The second virtual workshop focused on: "Carbon market policies and regulations and implications for the sector in our region. Where are regulations going?"



OCCUPATIONAL HEALTH

MENTAL HEALTH WORKSHOP BY PETROBRAS

In 2024, within the framework of Arpel's Health, Environment, and Safety Committee (CASYSIA), the Occupational Health team began working on Mental Health, an aspect of Occupational Health that became even more critical after the pandemic: the mental health of employees.

The team aims to exchange and collaborate on the various aspects of mental health, including well-being. In October, Petrobras presented to the team how the company structured itself to address the mental health of its employees, both preventively and reactively.

ANCAP, Chevron, ENAP, GEOPARK, PETROBRAS, PETROPERU, RAÍZEN, RECOPE, TEMA, TGP and YPF are actively participating in these meetings.



PROCESS SAFETY

ARPEL WEBINAR ON PROCESS SAFETY WITH API & IOGP

The Arpel Environment, Health, and Safety Committee conducted a new webinar on Process Safety. This session focused on "Improving Process Safety Performance through reporting and benchmarking, using the latest versions of API 754 & IOGP 456."

The meeting was attended by 80 professionals from Arpel member companies. The presentations were given by Lex Rossello, Program Manager, Statistic Department at API; Rodney Reibold, Refining Process Safety Manager at Marathon Petroleum; and Margarita Malaspina, Process Safety Lead at Woodside Energy. The moderation was handled by Tiphaine Le Moenner, Senior Project Manager at Arpel and coordinator of the Committee.

The main objective of the activity was to share knowledge about the latest versions of API RP 754 and IOGP 456, and to understand how reports and benchmarking studies can support the improvement of process safety performance in the industry.

[WATCH THE FULL WEBINAR RECORDING](#)



VIRTUAL EVENTS

PROCESS SAFETY

ARPEL AND SLB: PROCESS SAFETY IMPLEMENTATION FOR AN EARLY PRODUCTION FACILITY

At the beginning of November, Arpel's Environment, Health and Safety Committee held a webinar on "Process Safety Implementation for an Early Production Facility (EPF) – Upstream", which was exclusive for members and was led by SLB.

The presentation was made by Leonel Romero, Operations Integrity SESS Champion, SLB Digital & Integration for Ecuador, Colombia and Peru.

This webinar showed the upstream experience in implementing Process Safety for Early Production Facilities (EPF) in the development of an oil field in Latin America.

[WATCH THE FULL WEBINAR RECORDING](#)



UPSTREAM

WORKSHOP ON REDUCING METHANE AND CO2 EMISSIONS IN UPSTREAM OPERATIONS



Over 300 professionals from industry companies, academic institutions, and regulatory agencies attended the workshop on "Reducing Methane and CO2 Emissions in Upstream Operations," organized by the Arpel Exploration and Production Committee on June 27. The event featured four presentations from the International Energy Agency (IEA), Honeywell, GeoPark and Petrobras.

The commitment by many governments to reduce greenhouse gas emissions to achieve "Net Zero" by 2050 is leading to stricter regulations on emissions in the oil and gas industry. Investors are also financially punishing those companies that produce high emissions and are migrating their portfolios towards cleaner energy.

This situation makes the reduction of greenhouse gas emissions a critical issue for the oil and gas sector, not only as a commitment to environmental protection but also as a matter of survival.

The main objective of this workshop, coordinated and moderated by Pablo Amoedo, Arpel Project Manager and leader of the E&P Committee, was to promote knowledge exchange among professionals, review best practices and technologies for emissions monitoring and management, and understand the challenges and opportunities of the energy transition in the hydrocarbons sector.

[WATCH THE FULL WEBINAR RECORDING](#)

UPSTREAM

WEBINAR ON UPSTREAM STRATEGIES FOR THE ENERGY TRANSITION BY S&P GLOBAL

In mid-June, the Arpel Exploration and Production Committee organized a new webinar on Best Practices in Upstream, which was attended by professionals from Argentina, Bolivia, Brazil, Colombia, Costa Rica, Ecuador, the United States, Peru, and Uruguay. This session focused on "Upstream Strategies for the Energy Transition" and was led by Claudia Pessagno, Director of Corporate Research and Transactions at S&P Global Commodity Insights.

The event, coordinated by Pablo Amoedo, Arpel Project Manager, aimed to exchange updated information on the energy transition in the Upstream sector of the oil and gas industry. During the webinar, investment trends in Upstream and the allocation of cash flow were analyzed. Pessagno highlighted the key role of Latin America in hydrocarbon exploration, mainly focused on offshore activities. She also emphasized that acquiring oil reserves is 50% cheaper than discovering and developing them. Finally, strategic trends for the energy transition of global integrated companies were analyzed, highlighting the different approaches between European and American companies.



VIRTUAL EVENTS

UPSTREAM

WEBINAR "FAIR MARKET VALUATION IN UPSTREAM"

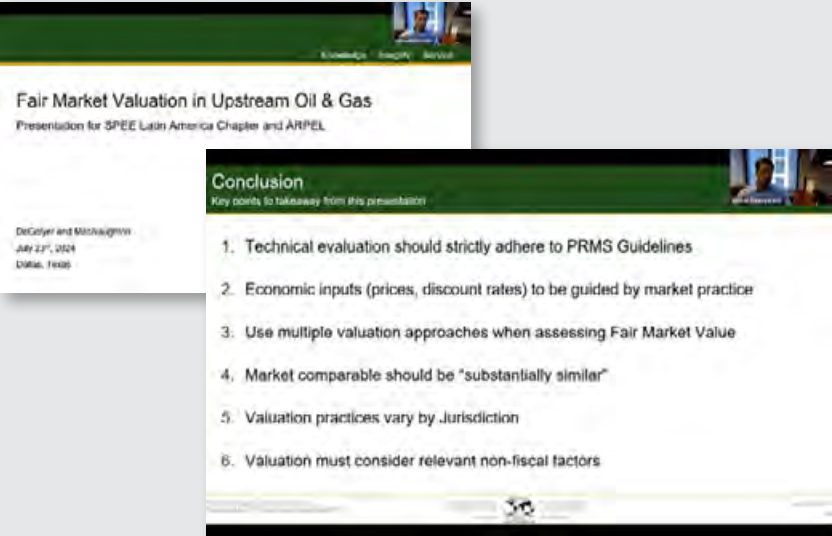
Nearly 200 professionals from 80 organizations—including operating and supplying companies, universities, and government agencies—participated in the webinar on "Fair Market Valuation in Upstream," held on July 23 as part of the best practices exchange series by the Arpel Exploration and Production Committee.

The presentation was delivered by Nathan Baumgartner, Reservoir Engineer at DeGolyer and MacNaughton. The session was moderated by Raúl Belkenoff from YPF and Pablo Amoedo from Arpel.

During the virtual activity, common valuation methodologies, U.S. versus international valuation practices, and the challenges that affect the estimation of fair market value were addressed as main topics. The presentation aimed to assist professionals with practical knowledge on the fair market valuation process, supplemented with illustrative examples.

According to Baumgartner, the fair market valuation of an upstream asset involves three stages: Technical Evaluation, Economic Evaluation, and Fair Market Valuation.

WATCH THE FULL WEBINAR RECORDING >



UPSTREAM

ANCAP AND ECOPETROL UPSTREAM WEBINARS

More than 200 professionals participated in the last two webinars to exchange best practices in Upstream organized by the Exploration and Production Committee of Arpel.

The first took place on September 19 and was about "Reducing failures and energy consumption in artificial lifting systems". The dissertation was by Laura Matheus, Senior Production Engineer at Ecopetrol.

The talk focused on how to improve operational efficiency through failure management methodologies and the use of key indicators to evaluate the performance of different artificial lifting systems.

The second webinar was held on October 10 and was led by Pablo Gristo, Head of Exploration and Production at Ancap.

The webinar presented by Ancap focused on exploration data management in the hydrocarbon sector, highlighting the importance of data for decision making and how to transform this data into useful information.

The different types of data that are managed in the Upstream were addressed, and how to establish the value of the data was discussed. In addition, the importance of data confidentiality and security was highlighted.

The moderation and coordination of both technical activities were carried out by Pablo Amoedo, Arpel Project Manager.

WATCH THE ECOPETROL WEBINAR RECORDING >

WATCH THE ANCAP WEBINAR RECORDING >



UPSTREAM

PREVENTION OF MAJOR EMERGENCIES IN THE EXPLOITATION OF UNCONVENTIONAL FIELDS

On November 12, professionals from 20 companies in the sector participated in the best practices exchange talk on “Prevention of Major Emergencies in the Exploitation of Unconventional Fields,” organized by the Arpel Exploration and Production Committee (CEPA). The presentation was given by Héctor Morán, Process Safety specialist at EP Petroecuador. The moderation was by Pablo Amoedo, Arpel Project Manager and CEPA coordinator. The hydrocarbon industry handles highly dangerous chemicals and is, therefore, susceptible to major emergencies such as fires, explosions, or spills that can contaminate fresh water sources. The objective of this webinar was to review the OSHA 1910 regulation, which dictates guidelines to be followed in a multidisciplinary manner in order to prevent major emergencies, which can be applicable in drilling, workover and even stimulation operations of conventional and unconventional wells. In addition, specific case studies were provided.

WATCH THE FULL WEBINAR RECORDING >



CYBERSECURITY

ARPEL-CCI WEBINAR ON THE DESIGN OF THE MATRIX OF ROLES AND RESPONSIBILITIES IN INDUSTRIAL CYBERSECURITY

More than 110 professionals from Ancap, Ecopetrol, Enap, EP Petroecuador, Honeywell, Petroperú, Recope, Tema, TGN, TGP, YPF and YPFB, among other companies in the region, participated in the webinar held at the end of August entitled “Designing a matrix of Roles and Responsibilities in Industrial Cybersecurity”. The technical activity, promoted by the Arpel Industrial Cybersecurity Committee, featured a presentation by José Valiente, director of the Industrial Cybersecurity Center of Spain, and aimed to present the preliminary steps to create a matrix, along with the essential roles and best practices to ensure it is clear, understandable and

accepted by all departments involved. Useful mechanisms and tools for their management and maintenance were also addressed. As explained in the webinar, it is essential to establish matrices of roles and responsibilities for the management of cybersecurity incidents and business continuity, and for this matrix to be effective it is critical to identify the processes, those responsible, and the technologies involved. In closing, he maintained that the role matrix must be dynamic and reviewed periodically to adapt to organizational and regulatory changes.

WATCH THE FULL WEBINAR RECORDING >



PIPELINES

EVALUATION OF PIPELINE ANOMALIES IN INTEGRITY MANAGEMENT SOFTWARE

Arpel Pipelines and Terminals Committee (CODYTE) held a new webinar to exchange best practices at the end of November. On this occasion it was led by Rosen and the topic was “Evaluation of pipeline anomalies through integrity management software.” Fabio Fernández, Business Line Manager of Integrity Management Systems, and Luzby Stiwenzon López, Senior Engineer at Rosen, were in charge of developing the topic. The main objective of the webinar was to present the trends in integrity software, highlighting its benefits and give a live demonstration of software that facilitates the evaluation of anomalies in pipelines. The moderation was by Fabián Sánchez, Arpel Project Manager and CODYTE coordinator.



PIPELINES

GUIDED WAVES TECHNIQUE WEBINAR

On February 29, the Pipeline Committee, under the coordination of Fabián Sánchez, held a webinar dedicated to Pipeline Inspection Using the Guided Waves Ultrasonic Technique. This exclusive event for Arpel members was attended by 75 professionals. The presentation was led by Paula

Farfán, integrity engineer at GeoPark. During the activity, participants explored the capabilities and conditions for pipeline inspection using the Guided Waves Ultrasonic Technique, with a special focus on its advantages and disadvantages from an operator’s perspective.



PIPELINES

WEBINAR ON PIPELINE INTERNAL CLEANING



More than 50 professionals from Arpel member companies attended the webinar on Pipeline Internal Cleaning, organized by the Pipelines Committee in early October. The presentation was delivered by Cristian Alfaro Molina on behalf of Pan American Energy (PAE). The objective was to show

participants the importance of having a pipeline internal cleaning program using pigs to ensure flow assurance and maintain the integrity of hydrocarbon transportation pipelines. During the webinar, the benefits achieved with the program and the challenges faced during its implementation were presented.

GLOBAL LAUNCH OF RETOS™ AND THE INTERNATIONAL GUIDE FOR THE ASSESSMENT OF OIL SPILL RESPONSE PLANNING AND PREPAREDNESS



In early July, Arpel carried out the global launch of the new web application of RETOS™ (Readiness Evaluation Tool for Oil Spills) through three virtual meetings.

These events were designed to reach the largest number of professionals related to the topic and who live in different parts of the world.

RETOS™ is a unique tool developed by Arpel used by governments and companies in over 100 countries.

For this reason, Arpel, along with the International Maritime Organization (IMO) and Ipieca, decided to update this tool and transition it to a web application.

Along with the web application, the "International Guide for the Assessment of Oil Spill Planning and Preparedness" and its Manual were also updated.

According to Miguel Moyano, Senior Managing Director of Arpel, in his introductory presentation to the webinar, "as awareness of the risk of spills to the terrestrial and aquatic environment increased, as did the experience of government agencies personnel, countries established legal requirements for spill prevention and response, and the number and level of sophistication of plans increased as well." He pointed out that it was only in 2008 that the first proposal for a guide for the evaluation of response capacity was made, and that, in response to the request from the international community to have a more user-friendly tool, Arpel developed RETOS™ (Readiness Evaluation Tool for Oil Spills) in 2011.

During the three webinars held on July 8 and 9, Elliott Taylor, the principal consultant responsible for the development of RETOS™ and the International Guide, presented the details of this process and these tools.

[WATCH THE FULL WEBINAR RECORDING](#)



RETOS™ GUIDE AVAILABLE IN ENGLISH, SPANISH AND FROM 2024 ALSO IN PORTUGUESE

Since December 2024, the Portuguese version of the International Guide for the Assessment of Oil Spill Response Planning and Preparedness has been available on the Arpel website.

DOWNLOAD



ARPEL PRESENT WITH RETOSTM AT IOSC 2024 IN NEW ORLEANS

At the latest edition of the International Oil Spill Conference (IOSC), Arpel conducted the RETOSTM course for the first time using the new web application.

At the IOSC 2024, held from May 13 to 16 in New Orleans (United States), Elliot Taylor, spill expert and Senior Scientist at Polaris Applied Sciences, presented the paper "The RETOS Experience: International Guidelines and Tools for Assessing Oil Spill Response Planning and Readiness" along with Miguel Moyano, Senior Managing Director of Arpel, Darío Miranda, RETOS instructor in Spanish, Will Griffiths from IMO, and Ian Sealy from Ipieca as co-authors.

Additionally, two members of the Arpel Emergency Response Plans Project Team (EPPRE), Tomás Lastra Milone from YPF and Linda Manka from Shell, as well as Miguel Moyano moderated different sessions at the conference.



RAC/REMPEITC BIENNIAL MEETING IN CURAÇAO

Arpel participated in the biennial Steering Committee meeting of the Regional Marine Pollution Emergency, Information and Training Centre – Caribe (RAC/REMPEITC-Caribe) on May 7 and 8 in Curaçao, with whom it has been a partner for nearly 30 years.

With the aim of improving spill preparedness and response in the Caribbean, the recommendations of the meeting included proposals presented by Arpel to strengthen cooperation between the government and the sector.

Miguel Moyano represented the Association at the meeting with government delegates and professionals from renowned international organizations.



PRESENTATION OF RETOSTM AT A NATIONAL WORKSHOP IN GUYANA

Arpel was invited to participate in a national workshop that brought together senior officials from Guyana to improve the country's preparedness and response capabilities for potential oil spill incidents.

The meeting took place from August 27 to 30. It was organized by RAC/REMPEITC-Caribe (Regional Marine Pollution Emergency, Information and Training Center – Caribbean) through the Integrated Technical Cooperation Program (PICT) of the International Maritime Organization (IMO).

The workshop focused on the skills and knowledge required to effectively manage and mitigate oil spill incidents in the maritime and coastal areas of Guyana.

Miguel Moyano, Senior Managing Director of Arpel, was in charge of training participants on the RETOSTM tool, and assisted those government institutions present to evaluate the level of preparedness and response planning of the Guyana National Oil Spill Contingency Plan.



TRAINING

INDUSTRIAL CYBERSECURITY TRAINING PROGRAM

On May 7 and 8, the **EN-50 course** "Industrial Cybersecurity Management for projects in the energy, oil and gas sector" was held as part of the Industrial Cybersecurity Training Program developed for Arpel by the renowned firm WiseCourses Academy.

The Industrial Cybersecurity training program, which trained more than 50 professionals in 2024, continued with module **EN-60**, "Cyber Risk Assessment in New and Existing Industrial Systems in Energy, Oil, and Gas," conducted from May 28 to 31 and September 17 to 19. Upon completing this module, participants will be able to accurately assess cyber risks, make informed decisions, and develop effective action plans to reduce risks within their organizations, thus contributing to the creation of more resilient infrastructures.

The training continued with module **EN-61**, "Security Design and Implementation in New and Existing Industrial Systems," which was held from June 25 to 27, and a second session from October 15 to 17.

EN-62 module was dedicated to "Monitoring and Maintenance of industrial cybersecurity in zones and conduits" held from June 16 to 18, and for the second time this year from November 5 to 7. The Industrial Cybersecurity training program, conducted by Arpel and WisePlant, culminated with the fifth **EN99 module** on "Handling and Management of Industrial Cybersecurity Alerts Applying the ISA/IEC-62443 standard" held on August 22 and 23, and November 26 and 28. Pablo Amoedo, the coordinator of Arpel's Industrial Cybersecurity Committee, emphasizes that "industrial cybersecurity is no longer an option, but an unavoidable priority. Training in this critical field is the first step to protecting the most valuable assets and creating a resilient infrastructure in the face of emerging threats." The program is taught by Maximilian Kon, CEO and founder of WisePlant. He is an electronic engineer specializing in industrial automation, director of the WiseSecurity consulting services division, and an official ISA RTP Training instructor for Industrial Cybersecurity.

CURSO VIRTUAL SINCÓNICO

PROGRAMA DE CAPACITACIÓN EN CIBERSEGURIDAD INDUSTRIAL PARA EMPRESAS DE ENERGÍA, PETRÓLEO Y GAS

EN50: Gestión de Ciberseguridad Industrial para proyectos en el Sector de Energía, Petróleo y Gas

7 Y 8
DE MAYO
2024

10:00 a 14:00 GMT-3
Argentina, Uruguay
8:00 a 12:00 horas GMT-5
Guatemala, El Salvador

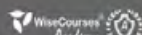
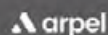
EPN
WisePlant

REGÍSTRESE AHORA

INSTRUCTOR



Maximilian Kon
Director General
WisePlant



100

PROFESSIONALS WHO TOOK
TRAINING COURSES DEVELOPED
BY ARPEL IN 2024

ENERGY MANAGEMENT AND ISO 50001 STANDARD

A new edition of the course on Energy Management and ISO 50001 for the oil and gas industry was held in 2024. The virtual training lasted seven weeks (August 5 to September 20) with a total duration of 62.5 hours. This course aims to provide an introduction to the ISO 50001 standard, including the requirements for establishing, implementing, maintaining, and improving an energy management system in process industries, with a focus on the oil and gas sector. The training includes the analysis of case studies. The instructor in charge is Andrea Afranchi, chemical engineer with a master's degree in Energy Management and a leading auditor of the ISO 50001 standard, with more than 25 years of experience in the energy sector.



VIRTUAL COURSE ON THE USE OF THE RETOS™ TOOL AND IN-COMPANY TRAINING FOR EP PETROECUADOR

From September 25 to 27, a new virtual edition of RETOS™ course was held. The purpose of this course is to encourage and facilitate participants in developing skills to implement the RETOS tool in evaluating planning and preparedness for oil spill response, identifying gaps, and exploring alternatives to move from basic management stages to excellence, in line with the best international standards. This edition brought together twenty professionals from Ancap, OCP Ecuador, Clean Pacific Peru, Dangerol,

Varichem of Colombia, COPEC, Enap, National University of Engineering (UNI) of Peru, and the Mexican Navy. The course instructor was Darío Miranda from DM Contingency Planning Specialists. On the other hand, from October 14 to 16, Miguel Moyano delivered an in-company training course on the use of the RETOS tool was conducted for a group of 16 technicians from Arpel member company EP Petroecuador.



SUSTAINABLE MANAGEMENT

DEVELOPMENT, PROMOTION
AND IMPLEMENTATION OF
BEST PRACTICES



A second major strategic vector for Arpel is Sustainable Management, led by the committee of the same name, an area in full expansion that is taking on a greater role every day on the energy sector's agenda. Under this vector rests the efforts of companies in the oil, gas, and energy sector of the region to be a pillar of sustainable development, promoting excellence and best practices in social impact, transparency and compliance, sustainability reports and access to financing.

STUDY "STATE OF NET ZERO REPORTING IN THE LATIN AMERICAN OIL AND GAS SECTOR" BY GLOBAL REPORTING INITIATIVE

More than 250 professionals from the sector participated in the Arpel webinar dedicated to the Status of Net Zero Reporting in Latin American Oil and Gas Sector.

The virtual meeting took place at the end of April and was organized by Arpel's new Sustainable Management Committee, coordinated by Mónica Ospina, Project Manager of the Association.

The main objective of the activity was to present the findings of the study "Status of Net Zero Reporting in Latin American Oil and Gas Sector" conducted by the renowned Global Reporting Initiative (GRI). This study focuses on establishing an initial reference for emissions reporting (Scope 1, 2, and 3) by Latin American companies in the oil and gas sector.

This analysis, published in July 2023, was carried out through the evaluation of 50 Latin American companies listed on national stock exchanges, with a specific focus on 9 countries in the region: Argentina, Brazil, Ecuador, Chile, Colombia, Guatemala, Peru, Mexico, and in the Caribbean, Trinidad and Tobago.

Among the identified challenges are the need to improve accurate measurement of emissions, the implementation of emerging technologies, adaptation to climate change, and increasing regulatory and social pressure.



On the other hand, different opportunities for the sector were identified, including technological innovation, sectoral collaboration, portfolio diversification, and improving communication and transparency regarding emissions and mitigation strategies.

The presentation was given by Lina Camargo, Manager of GRI Latin America.

[WATCH THE FULL WEBINAR RECORDING](#)



IN-COMPANY WORKSHOP ON SUSTAINABILITY INTEGRATION

At the beginning of May, Arpel developed an in-company workshop dedicated to the Integration of Sustainability within organizations, which was designed especially for companies in the oil and gas sector.

More than 40 representatives from the different areas of Ancap participated in the activity: CSR, Communication, Institutional Relations, Audit and Risks, Management Control, Commercial Planning, Supply, Logistics, Business Development, Human Management, Industrial Safety, Environment, Occupational Health, Logistics, and Exploration and Production, among others.

The objective was to facilitate the understanding and practical application of sustainability, local content and obtaining the social license to operate through exchanging experiences between participants.

The agenda of the Arpel Workshop on Sustainability Integration included the topics: Integration of Sustainability in the Organization; Sustainability and Transparency Report – Risk Management; and Inclusion and Social Participation in Projects.

The activity was coordinated by Mónica Ospina and Pablo Ferragut, on behalf of Arpel, and by Soledad Rodríguez, Head of Corporate Social Responsibility at Ancap and member of Arpel's Sustainable Management Committee.



GEOPARK HOSTED AN IN-PERSON WORKSHOP ON ESG-SUSTAINABILITY

GeoPark, Arpel's member company, hosted the Arpel Sustainable Management Committee Strategy Workshop, which took place on June 11 and 12 in Bogotá, Colombia. The activity was inaugurated by Martín Terrado, Chief Operations Officer, and by Clara Sofía Gómez, Sustainability Manager, of GeoPark.

The agenda of the first day included the address of "Material issues in ESG and Sustainability in oil and gas in Latin America and the Caribbean", and a Roundtable on Social Impact and Benefit in the ESG-Sustainability Framework, which it included presentations by Carlos Aya from Shell, Leonardo Cellini, from YPF, and Soledad Rodríguez from Ancap.

The agenda of the second day was about "Integrating ESG-Sustainability into company performance", and with a discussion on "Transparency and Compliance in ESG-Sustainability", presented by María Archimbal from YPF, and by Catalina Espinosa from GeoPark.

It was followed by a space dedicated to "Development of the Sustainability Report" with Mónica Tangarife from Ecopetrol and Clara Sofía Gómez from GeoPark.

The activity was coordinated by Mónica Ospina and Pablo Ferragut, on behalf of Arpel.



WEBINAR ON THE ESCAZÚ AGREEMENT WITH ACP

On September 24, Arpel's Sustainable Management Committee, in collaboration with the Colombian Oil and Gas Association (ACP), held a webinar on the Escazú Agreement and its impact on the oil, gas, and energy industry.

The "Regional Agreement on Access to Information, Public Participation, and Access to Justice in Environmental Matters in Latin America and the Caribbean", adopted on March 4, 2018, in Escazú, Costa Rica, responds to growing global environmental trends and the commitment to active citizens' participation.

This introductory dialogue on the topic included presentations by Germán Zarama from the OECD Centre for Responsible Business Conduct; Claudia de Windt of the Inter-American Institute on Justice and Sustainability, and Luis Felipe Guzmán of Universidad Externado of Colombia.

The session was moderated by Paulo Pérez from CONSGA.

The activity was coordinated by Mónica Ospina and Pablo Ferragut on behalf of Arpel.



WATCH THE FULL WEBINAR RECORDING



ESSENTIAL STEPS IN PRODUCING THE SUSTAINABILITY REPORT: ARPEL, IPIECA, IOGP AND API WEBINARS

Arpel and Ipieca, IOGP, and API carried out a series of webinars on Introduction to Sustainability Reports with a special focus on companies in Latin America and the Caribbean.

The first webinar took place on October 17 and was about "Sustainability reporting 101: introduction and essential steps in producing your sustainability report." This webinar focused on how companies can communicate their environmental, social and governance (ESG) performance to stakeholders. The meeting was attended by Beatrix Wiecezorek, Sustainability Reporting Manager at Shell; Cláudia Krüger, Sustainability Reporting and Indicators Manager at Petrobras; Duygu Guven, Sustainability and Social Performance Senior Manager at Ipieca; Gabrielle van Melkebeke, Senior Policy Manager ESG & Environmental Policy at IOGP, and Mónica Ospina, Sustainability Manager at Arpel. The experts pointed out that the Sustainability Report is a communication tool that helps strengthen the transparency and credibility of the company, thereby supporting the decision-making processes of both internal and external stakeholders.

The second webinar was held on October 29, it's the main topic: Materiality Assessments for Sustainability Reports.

On this occasion, Beatrix Wiecezorek, Sustainability Reporting Manager at Shell, participated; Mónica Tangarife, Head of Corporate Responsibility at Ecopetrol; Duygu Guven, Sustainability and Social Performance Senior Manager at Ipieca; Gabrielle van Melkebeke, Senior Policy Manager ESG & Environmental Policy at IOGP, and Mónica Ospina, Sustainability Manager at Arpel.

The meeting highlighted the importance of engaging in, and learning from, the perceptions and feedback of diverse stakeholder groups to create effective sustainability strategies tailored to each company's environment and operations.

Both webinars were designed for companies in the region that are considering the development of sustainability reports, beginning their path in the development, or for new members of sustainability teams.



FULL RECORDING OF THE FIRST WEBINAR



FULL RECORDING OF THE SECOND WEBINAR



SUSTAINABILITY REPORTING GUIDE FOR THE OIL AND GAS INDUSTRY

DOWNLOAD





RELATIONSHIP WITH STAKEHOLDERS

ARPEL & THE ACADEMY

TALKS AT UNIVERSITIES IN MEXICO, ECUADOR AND PERU

In response to the need to preserve the flow of young professionals into the oil and gas sector, Arpel held a series of activities in 2024 with undergraduate and graduate students and faculty from prestigious universities in the region.

The first was a master class by Carlos Garibaldi on Energy Transition for graduate law students, Energy Law Module, at the Universidad Panamericana de México (CDMX), which was delivered virtually on May 7. The second activity took place at the end of June to an audience full of young engineering students from the University of the Americas (UDLA) in Ecuador.

"For our industry, as an indispensable agent of energy transitions, to be sustainable, it must preserve its social license. In addition to decarbonizing its traditional operations and diversifying its energy product portfolio with renewable sources, it must also make its voice heard among all social stakeholder groups. This is also essential to attract and retain future

generations of its human capital," said Garibaldi during his visit to the educational center.

For his part, Diego Buenaño, Dean of the Faculty of Engineering and Applied Sciences at UDLA, said, "As an academic institution, we firmly believe in the importance of offering these spaces for reflection to our students."

Garibaldi was also invited by the Escuela Superior Politécnica del Litoral (ESPOL) in Guayaquil. On this occasion, he spoke about Arpel's role in the region and its mission to promote operational excellence and sustainable development of the oil and gas industry.

The last activity carried out in 2024 with the Academy was in Peru with a conference for undergraduate and graduate students at the National University of Engineering, which was organized by the SPE UNI Student Chapter.

Carlos Garibaldi and María Eugenia Guzmán, head of communications at Arpel, participated in this activity.

ARPEL & THE PRESS

WORKSHOP FOR THE MEDIA IN PERU

Building on the success of the Media Workshop held in Quito in 2023 and aiming to create more opportunities to engage with the local press, we held a meeting with journalists from Peru.

The workshop was held on October 22nd as part of the Peruvian Oil and Gas Congress, organized by the Peruvian College of Engineers, and was very well received by the media.

During the meeting, Carlos Garibaldi delved into the topic "Energy Transition: Urgency, Aspirations, Alternatives, Uncertainties, and Conditions. The Case of Latin America and the Caribbean."

María Eugenia Guzmán, Communications Manager at Arpel, also participated in the activity.



EXPANSION OF THE INSTITUTIONAL NETWORK

INSTITUTE OF THE AMERICAS AND ARPEL SIGN MEMORANDUM OF UNDERSTANDING AT LA JOLLA ENERGY CONFERENCE 2024

Within the framework of the XXXIII La Jolla Energy Conference, which took place on October 16 and 17 in California, the Institute of the Americas and Arpel signed a memorandum of understanding and cooperation focused on promoting sustainability and good management in the energy sector. The agreement was signed by the Executive Secretary of Arpel, Carlos Garibaldi, and by Richard Kiy, president and CEO of the Institute of the Americas. The Chairman of the Board of Directors of Arpel and President of ANCAP, Alejandro Stipanovic, also participated of the event. Among the main objectives of this alliance is to promote systematic exchange and the search for synergies in activities and projects relevant to the industry that are developed by both organizations. Likewise, based on this agreement and to promote closer inter-institutional cooperation and coordination, the Institute of the Americas appointed the Executive Secretary of Arpel as an "Energy Non-Resident Fellow", joining the network of experts from across the Western Hemisphere and Europe with recognized experience in academia, industry and government, who are an integral part of the Institute in the fulfillment of its mission.



ARPEL AND OLADE SIGNED A COOPERATION AGREEMENT TO PROMOTE SUSTAINABLE ENERGY DEVELOPMENT IN THE REGION

Arpel and the Latin American Energy Organization (OLADE) recently signed an agreement to promote technical and institutional cooperation actions in energy matters.

The agreement was signed by the representatives of both organizations, Carlos Garibaldi, Executive Secretary of Arpel, and Andrés Rebolledo, Executive Secretary of OLADE, within the framework of Energy Week, an event organized by OLADE from October 28 to November 1 in Asunción, Paraguay.

With regards to the agreement, Garibaldi expressed: "OLADE and Arpel, as complementary institutions, can promote the unavoidable multi-sector dialogue to achieve successful just, plural and inclusive energy transitions in Latin America and the Caribbean. Under this role, technical and institutional cooperation actions fit, including joint work related to sustainable energy development and its integration in the region, considering all the players involved in the activities and processes that make up the energy chain. Arpel is proud to have the opportunity to work side by side with OLADE."

"This agreement is a milestone in the consolidation of strategic alliances that seek to strengthen sustainable energy development in our region," said Andrés Rebolledo, Executive Secretary of OLADE. "The cooperation between OLADE and Arpel will allow not only to enhance technical and institutional capacities but also to promote an energy transition approach that is inclusive and adapted to the specific needs of Latin America and the Caribbean," added Rebolledo.

Among the cooperation actions expressed in the document, the incorporation of Arpel as a strategic ally of the OLADE Observatory of Methane Emissions in Latin America and the Caribbean stands out, providing technical support for its development and implementation.

Likewise, through the recent agreement, the joint implementation of projects, specific studies, events and training instances related to the energy sector in Latin America and the Caribbean is promoted.



TECHNICAL ADVOCACY ACTIVITIES

GLOBAL ENERGY OUTLOOK FORUM 2024

JANUARY 2024

Carlos Garibaldi represented Arpel at the 14th Global Energy Outlook Forum 2024, organized by Gulf Intelligence on January 10. This virtual forum explores the future of energy through the perspectives of 50 energy sector analysts and spans the globe in 12 hours, across multiple time zones. It begins in the Far East with the first session from China and moves on to Dubai, Europe, and the Americas, concluding the day in California and Caracas.



XII ENERGY FORUM 2024 – PANAMANIAN ASSOCIATION OF BUSINESS EXECUTIVES

FEBRUARY 2024

The Energy and Fuels Commission of the Panamanian Association of Business Executives (APEDE) organized, on February 7, the XII Energy Forum 2024 in Panama City under the theme "Energy and Fuels Agenda towards a Just and Equitable Energy Transition". The meeting was an important contribution to the discussion on the energy transition in Panama and future prospects, focusing also on the challenges and opportunities in the region.

Miguel Moyano, Senior Managing Director of Arpel was in charge of the opening speech, entitled "A realistic vision of just energy transitions in Latin America and the Caribbean". Afterwards, he participated in a panel with Rosilena Lindo Riggs, Secretary of Energy; Julio Cohen, Senior Director of AES Corporation; Arturo Alarcón, Senior Energy Specialist of the Inter-American Development Bank and Cynthia Camargo, Director of Naturgy.



CIRCULAR ECONOMY FORUM BY ECOPETROL GROUP

FEBRUARY 2024

Arpel was part of the agenda at the Circular Economy Forum held from February 14 to 16 in Bogotá, Colombia. The event was organized by Ecopetrol University, the Colombian Petroleum Institute of Ecopetrol, and the Ecopetrol Group.

Irene Alfaro represented Arpel in a virtual presentation entitled "Energy Transitions in Latin America and the Caribbean - The Circular Role of the Oil and Gas Industry." In her session, Alfaro presented the sector's opportunities to contribute to circularity within the framework of energy transitions and the actions Arpel is undertaking to drive these efforts.

The forum aimed to support the implementation of Ecopetrol Group's Circular Economy Roadmap, based on both internal and external experiences in R&D&I, operational risks, and enablers to promote more sustainable and responsible production and consumption.



CERAWeek 2024

MARCH 2024

Arpel participated in CERAWeek 2024, a key industry event organized by S&P Global from March 18 to 22 in Houston, Texas. From the notes taken by Carlos Garibaldi during his participation in CERAWeek, it is highlighted that:

- Energy transition has shown to be multidimensional: multispeed, multifueled, multi-technologies with different starting points, road maps, and end points for different countries.
- We need more energy with less emissions, but meanwhile maintaining an available, reliable, flexible, and affordable energy supply. No either-or between molecules and electrons; we will need them both.
- Gas is not a transition fuel; it is a destination fuel.
- Artificial Intelligence has the potential to accelerate the Energy Transition.



Bob Fryklund, Chief Strategic Upstream S&P Global
Renée van Heusden, World Economic Forum
Felipe Bayón, Former President of Ecopetrol
Carlos Garibaldi, Executive Secretary of Arpel

TECHNICAL ADVOCACY ACTIVITIES

16TH INTERNATIONAL GAS & ENERGY FORUM (IGEF) IN PARAGUAY

APRIL 2024

From April 3 to 5, the 16th International Gas & Energy Forum (IGEF) took place in Asunción, Paraguay, gathering leaders and experts from the energy industry and investment sources.

In this context, Carlos Garibaldi gave a lecture on "Energy Transitions in Latin America and the Caribbean: Uncertainties, Peculiarities, and Contextual Conditions." In his presentation, Garibaldi noted that, in contrast to Western Europe, Latin America and the Caribbean is a heterogeneous region in terms of socioeconomic development, energy matrix, physical infrastructure, ideology, culture, poverty, and reliance on hydrocarbons as a driver of its fiscal balance and economy. Continuing this point, he maintained that "each country must chart its own energy transition path based on its situation, with reliable, flexible, and affordable energy supply."



IX STRATEGIC SEMINAR ORGANIZED BY SPE ARGENTINA

APRIL 2024

On April 24 and 25, Arpel participated in the IX Strategic Seminar organized in Buenos Aires by SPE Argentina, with the slogan: "The Relevance of Oil & Gas in the Development of Argentina."

The event, where Arpel was represented by its Upstream Manager Pablo Amoedo, focused on five relevant aspects: the huge potential of Vaca Muerta and the challenge to accelerate oil and gas production; the importance of exploration and the current offshore developments in Argentina; the revitalization of conventional mature fields; public policies and infrastructure required to promote investment in the hydrocarbons area; and the critical role hydrocarbons play in the energy transition.

In this context, YPF's CEO and President Horacio Marín presented the "4X4" plan to obtain a fourfold increase in the Company's value over the next four years based on 4 pillars: focus management on the most profitable: Vaca Muerta; divestment of conventional assets (sale of mature areas) and review of YPF's participation in other companies; develop a more efficient operation in downstream and upstream, and acceleration of LNG projects.



ARGENTINA ENERGY FORUM BY S&P GLOBAL

JUNE 2024

In early June, the Argentina Energy Forum took place at the Hilton Hotel in Buenos Aires, organized by S&P Global, a member company of Arpel. The event featured a diverse agenda, including the refined products and oil landscape; Upstream sector prospects in Latin America; Gas and energy markets; The Lithium market; and Challenges and opportunities in Argentina's transportation Sector.

There was also an interesting debate on the Energy Future of Argentina with contributions from Horacio Marín, CEO and President of YPF, and Carlos Pascual, Senior Vice President of S&P Global.

Pablo Amoedo, Upstream Manager and coordinator of the Arpel Exploration and Production Committee, participated on behalf of Arpel.

III ACP FORUM: SUSTAINABILITY FACTS

JUNE 2024

Pablo Ferragut, Managing Director of Arpel, participated in the III ACP Forum: Sustainability Facts held on June 5 and 6 in Barranquilla, Colombia, by the Colombian Oil and Gas Association.

The event aims to highlight the contributions of companies in the sector towards achieving the Sustainable Development Goals (SDGs). The Forum brought together national and international experts in sustainability, industry professionals, opinion leaders, and the media.

On this occasion, Ferragut gave a presentation titled "Transforming the hydrocarbon sector: advances in decarbonization."



He also moderated a panel on the hydrocarbon sector's contributions to decarbonization and industrial transformation, led by Alberto García, general manager of Drummond Energy, and Alejandro Zotti, CEO of Decimetrix.

TECHNICAL ADVOCACY ACTIVITIES

ARPEL AT SEOGS 2024 IN SURINAME

JUNE 2024

From June 4 to 7, Arpel participated in the fourth edition of SEOGS 2024, an event organized in Paramaribo, Suriname, hosted by Staatsolie. Carlos Garibaldi, Executive Secretary of Arpel, moderated the CEOs Panel on the theme "Global Implications, Challenges and Risks, Regional Dynamics, and Potential for Production Growth." The panel featured Annand Jagesar, CEO of Staatsolie; Joseph Khan, Chairman of the National Gas Company of Trinidad and Tobago; and Erik Kesula, Executive Director of Heritage Petroleum Company. Garibaldi also served as a panelist in the session dedicated to "The Role of Natural Gas in Economic Development and Decarbonization," along with Camilo Morales of Naturgas; Riverson Oppong of AOMC; Armando Zamora of the Centre for Carbon and Energy Management Studies; Rudolf Elias of EY Caribbean; and Mechelle Smith of the National Petroleum Corporation.



Additionally, Miguel Moyano, Senior Managing Director of Arpel, was a speaker in the panel on "Prevention, Preparedness, and Response to Spills – National and Regional Perspectives," which included Simon Byrne of TotalEnergies, EP Suriname; Tristan Barston of Oil Spill Response Ltd.; Michel Amaof of the Maritime Authority Suriname; and Jerry Slijngard of the National Coordination Centre for Disaster Management, moderated by Wakif Beydoun of IOGP. Moyano also facilitated the panel dedicated to Health, Safety, and Environment.

SUSTAINABLE ENERGY CONFERENCE IN TRINIDAD & TOBAGO

JUNE 2024

Carlos Garibaldi visited Trinidad & Tobago to participate in the Caribbean Sustainable Energy Conference, held from June 10 to 12 in Port of Spain, organized by The Energy Chamber of T&T. In this framework, Garibaldi gave a keynote lecture on "Just and Plural Energy Transitions, and the role of Natural Gas", in which he highlighted the plural and fair nature that energy transitions must have and the opportunity for natural gas.

XIII NATURAL GAS PERU CONFERENCE 2024

AUGUST 2024

Carlos Garibaldi participated in the XIII Gas Natural Peru Conference 2024 organized by Doble T Comunicaciones and RevistaEnergia. He participated on August 12 in Lima.

Garibaldi was part of the panel on "Impact of Natural Gas on the Economic and Social Development of Latin America" along with Álvaro Ríos Roca, Managing Partner of Gas Energy Latin America; Gastón Siroit, technical advisor at OLADE; and Camilo Morales, Secretary General of Naturgas. The moderation was led by Eleodoro Mayorga Alba, former Minister of Energy and Mines. In his presentation, Garibaldi explained that Latin America and the Caribbean's primary energy matrix uses 31% natural gas and 33% in electricity generation (one and a half times the global average). It is the matrix that uses the least coal: 5% compared to 27% globally. "Natural gas has helped our region have the cleanest primary energy matrix on the planet", Garibaldi added.



"We could increase the role of natural gas in our region with better integration through LNG, thus boosting our socioeconomic development while improving energy equity," he concluded.



TECHNICAL ADVOCACY ACTIVITIES

FIRST LATIN AMERICA AND CARIBBEAN REGIONAL METHANE SUMMIT

AUGUST 2024

Bogotá hosted the First Latin American and Caribbean Regional Methane Summit organized by Olade and the Colombian Ministry of Energy and Mines at the end of August.

In his conference on “Methane Leaks in Latin America and the Caribbean”, Carlos Garibaldi, Executive Secretary of Arpel, highlighted the key roles of oil and gas companies as well as those of the State and the financial sector in addressing this problem. Garibaldi expressed that, although the region has a clean energy matrix, methane emissions (vents, flares and leaks) are a serious problem for the planet and this industrial sector. “Not being the main emitters does not exempt us from the responsibility of mitigating them”, he said. Oil and gas will continue to be part of the global energy matrix even in the case of “Zero Net GHG Emissions” by 2050, so it is essential to correct the problem, Garibaldi stressed.

In this sense, he highlighted that several companies in the sector in Latin America and the Caribbean are making progress in their commitments to moderate or neutralize them but that it is necessary to improve detection and measurement methodologies.

In addition to the incorporation of new technologies to achieve greater energy efficiency, Garibaldi emphasized the need to minimize venting, recover vapors, and eliminate non-emergency flaring, while companies in the O&G sector can opt for the use of natural gas as operating fuel or electrify their operations.

Ancap, Ecopetrol, ENAP, NGC, Petrobras, YPF, and EP Petroecuador are some of Arpel's national member companies that have begun to decarbonize their operations, processes, equipment, and facilities, as well as incorporating renewable energies into their portfolios.

ARPEL AT GETULIO VARGAS FOUNDATION'S NATURAL GAS EVENT IN BRASILIA

SEPTEMBER 2024

Arpel participated in another important event for the energy sector in Brazil which took place on September 11 in the auditorium of the Brazilian Ministry of Mines and Energy in Brasília.

The event focused on the role of natural gas and biomethane in a fair, affordable, and sustainable energy transition and was organized by the Getulio Vargas Foundation Study Center, ABEGÁS and the International Gas Union (IGU).

The activity aimed to provide a space for the exchange of knowledge and recommendations to industry leaders and decision-makers in Brazil on the use of natural gas and biomethane as fuels for the transition.



XX SLOM CONGRESS IN PUNTA DEL ESTE

SEPTEMBER 2024

Arpel was invited to participate in the XX Conference of Oil and Gas Marine Terminal Operators and Monobuoys, an event organized by the Latin American Society of Maritime Oil Terminals and Monobuoy Operators (SLOM) from September 11 to 13 in Punta del Este, Uruguay. Arpel was represented by Miguel Moyano, Senior Managing Director of Arpel, and Fabián Sánchez, coordinator of the Arpel Pipelines and Terminals Committee.

On this occasion, Moyano was a panelist on the main panel on “Oil Infrastructure and its reconversion to the Energies of the Future,” along with Renata Campagnaro, Vice President of Frontera Energy; Jorge Durán, Secretary General of the Inter-American Committee of Ports (CIP) of the OAS; and Ignacio Horvath, Executive Director of Grupo RAS. The moderation was led by Diego Oroño, Executive Secretary of the Uruguayan Association of Renewable Energies (AUDER).



TECHNICAL ADVOCACY ACTIVITIES

ARPEL AT THE VII ACP OIL, GAS AND ENERGY SUMMIT

OCTOBER 2024

Arpel was part of the agenda of the VII Oil, Gas and Energy Summit, organized by the Colombian Oil and Gas Association (ACP) from October 1 to 3 in Cartagena de Indias. In this framework, Carlos Garibaldi, Executive Secretary of Arpel, was invited to discuss "The energy transition in Latin America and the Caribbean and its particular environmental conditions." Asked about the region's outlook regarding the energy transition, Garibaldi said that "we are not comparable to rich economies; Latin America and the Caribbean is a heterogeneous region concerning levels of development, energy matrices, hydrocarbon resources and exposure to the effects of climate change." Meanwhile, he pointed out that the region has the cleanest primary energy matrix on the planet. With 8% of the world's population, we emit 7% of global GHG emissions and 5% of global CO2 emissions.



"However, we are not passive, and we are doing our part to mitigate the effects of climate change," he said. Another of the ideas highlighted by Garibaldi during his speech was that "there is no universal recipe for the energy transition, not even a regional one. To be accepted, sustainable and successful, the pace of each transition must be just in terms of the circumstance and starting point of each country, putting people first to ensure their energy inclusion."

ARPEL PRESENT AT ENAEP 2024

OCTOBER 2024

On October 2, the XIX Annual Oil and Gas Meeting (ENAEP) was held in Quito, organized by Seminarium. The event was attended by more than 12 CEOs of companies in the sector that operate in Ecuador, investors, experts and those interested in the development of the sector. On this occasion, Garibaldi gave a conference titled "How to make LAC attractive for investments in energy transitions?" To encourage investments in hydrocarbons, renewable energies and mining, "we need better quantitative frameworks (contractual and fiscal) and qualitative (state policies, governance, institutional and regulatory quality, independence of powers, legal and personal security, and transparency)." he highlighted. Garibaldi was also the moderator of the panel on "Energy Transition and Climate Change", made up of Inés Manzano, Minister of Environment, Water and Ecological Transition of Ecuador; Silvana Pástor, Vice President of Gente Oil; Francisco Do Picco, Country Manager of Tecpetrol, and Claudio Vázquez, Country Manager of Pluspetrol.



ARPEL AT ROG.e

SEPTEMBER 2024

Arpel was part of the ROG.e Expo and Conference 2024, an event organized by the Brazilian Institute of Petroleum and Gas (IBP) from September 23 to 26 in Rio de Janeiro, which received more than 60,000 people under the motto "Connecting energies." Carlos Garibaldi, Executive Secretary of Arpel, was part of the session "The role of natural gas for a safe and fair energy transition in Brazil and worldwide", together with Sindre Knutsson from Rystad Energy, Álvaro Tupiassú from Petrobras, and Andrés Sannazzaro from Repsol Sinopec Brazil. It was moderated by Ieda Gomes from the Oxford Institute for Energy Studies.



TECHNICAL ADVOCACY ACTIVITIES

ARPEL PARTICIPATED IN THE I PERUVIAN GAS AND OIL CONGRESS ORGANIZED BY THE COLLEGE OF ENGINEERS OF PERU

OCTOBER 2024

Arpel was invited to participate in the I Peruvian Gas and Oil Congress, organized by the College of Engineers of Peru and the Peruvian Institute of Gas, Oil and Energy Engineers under the motto "Proposals to make investments in hydrocarbon exploration and production attractive within the energy transition in Peru." The event took place from October 21 to 23 at the headquarters of the Departmental Council of Lima.

During the opening, Carlos Garibaldi, Executive Secretary of Arpel, gave a keynote talk on "Energy Transition: The Meaning for the Exploration and Production of Oil and Natural Gas in Latin America and the Caribbean."

In his presentation, Garibaldi maintained that despite the improvement in energy efficiency, economic growth demands more energy, and the contribution of renewables remains relatively marginal. He added that "transitions must be accelerated, but since alternative energies are not yet fully scalable, we must continue to provide energy security."

Garibaldi indicated that "under any scenario, oil and gas will be needed" and that natural gas is the ideal fuel for the transition since it complements renewable energies.

"The oil and gas sector has the experience and capacity for technological innovation to continue offering energy security while being an unavoidable protagonist of the transition," he said.

Regarding the role of the States, Garibaldi pointed out that "the business sector leads investment in decarbonization, but the State must enable it by offering an attractive ecosystem. Each country must internally agree on a clear State policy, long-term and immune to electoral and ideological swings."

IX ENERGY WEEK OF OLADE IN PARAGUAY

NOVEMBER 2024

Arpel participated in the IX edition of the Energy week organized by OLADE (Latin American Energy Organization), held from October 28 to November 1 in Asunción, Paraguay.

The event seeks to promote collaboration between governments, companies, academia, and international agencies to innovate and foster equity in the energy sector.

Representing Arpel, Irene Alfaro, Senior Managing Director, and Carlos Garibaldi, took part in the Open Dialogue "Towards a regulatory framework for methane in the energy industry" and in the side event on "Methane emissions observatory of Latin America and the Caribbean and low-emission natural gas."

During her presentation, Alfaro addressed the current state of the industry in the region regarding methane, the ongoing efforts led by Arpel, and the importance of developing regulatory frameworks aligned with each country's specific situation, incorporating existing recommendations and best practices already established in the industry.



ARPEL PRESENT AT AAPG ENERGY SUMMIT 2024

NOVEMBER 2024

In addition to providing institutional support, Arpel participated in different spaces in the latest edition of Energy Summit 2024, an event organized by the American Association of Petroleum Geologists (AAPG) from November 19 to 21 in Punta del Este, Uruguay.

On the first day, Carlos Garibaldi, Executive Secretary of Arpel, presented jointly with Rodrigo Vaz, Upstream Director of S&P Global, an analysis on the tax competitiveness of E&P in Latin America and the Caribbean during the Industry-Regulatory Agencies round table, which was attended by representatives of different Agencies and important companies in the oil and gas sector in the region.

Arpel's participation in the Energy Summit 2024 continued with Garibaldi's presentation on the panel dedicated to the role of natural gas. The panel included Nikki Morris, Executive Director of the Ralph Lowe Energy Institute TCU Neeley School of Business; Carla Damasceno, Joint Venture Coordinator at Petrobras; and Vinicius Romano, Vice President of Latin American Gas Markets at Rystad Energy.

Meanwhile, on the last day of the Summit held in Punta del Este, Garibaldi was moderator of the Regulatory Agencies panel in which Alejandro Stipanovic, President of Ancap, and Orlando Velandia, President of the ANH of Colombia, participated.



ARPEL AT THE CONGRESS OF ANH OF COLOMBIA

DECEMBER 2024

Carlos Garibaldi, Executive Secretary of Arpel, gave a notable conference within the framework of the first edition of the Congress of the National Hydrocarbons Agency (ANH) of Colombia on "Hydrocarbons in the energy transition and the role of the State." During his presentation, Garibaldi highlighted that complex and multidimensional systems such as Energy-Socioeconomic Development-Climate do not respond well to simplistic or reductionist solutions. He cited as an example the restrictions on access to capital or the discriminatory increase in tax burdens on the hydrocarbon sector, which discourage necessary investments and threaten energy security.

Finally, about the role of the State as a catalyst, Garibaldi maintained that it is necessary to offer an attractive ecosystem for investments, which translates into: State policies (not just governmental), rationality, contractual and regulatory clarity and predictability, tax, customs, exchange and regulatory stability, governability, independence of powers, legal and personal security, and transparency.

The ANH Congress was attended by national and international experts, leaders, representatives, and delegates from government and private institutions, academia, and unions.



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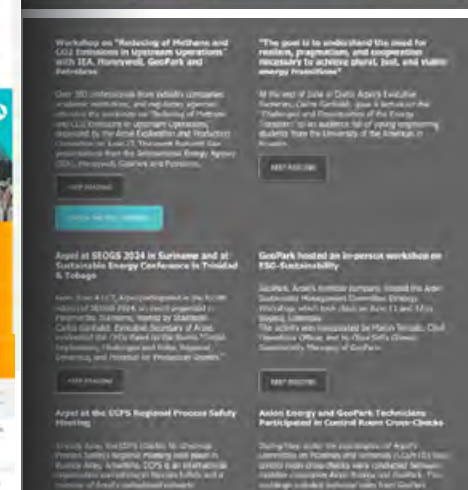
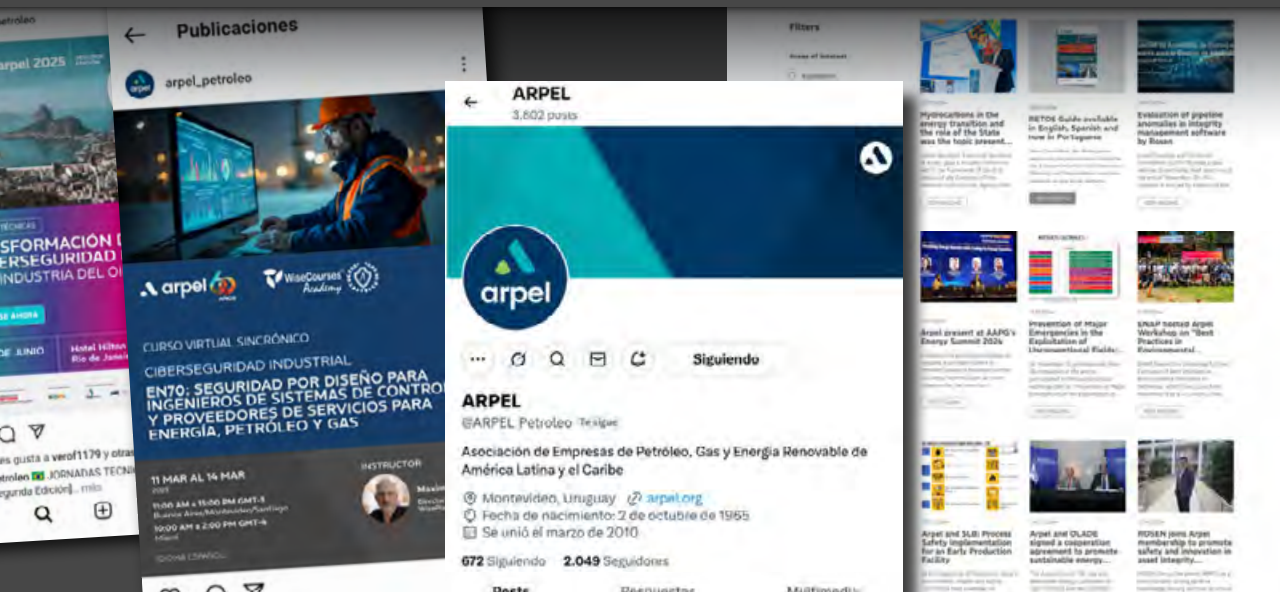
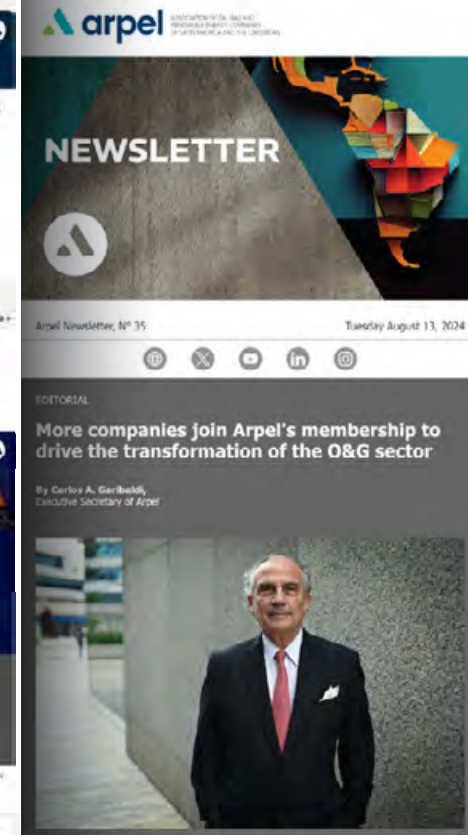
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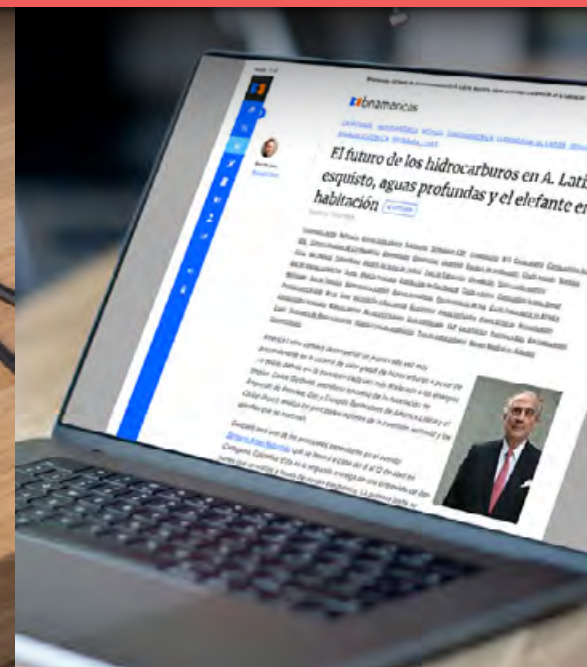

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ABOUT US

ARPEL EXECUTIVE SECRETARY



CARLOS GARIBALDI
Executive Secretary



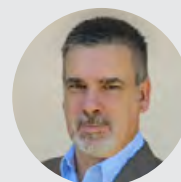
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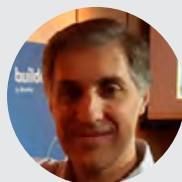
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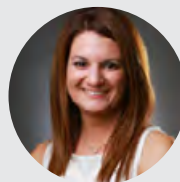
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The material disclosed during 2024 is also available on Arpel website (<https://www.arpel.org/>) and on the following social media: Youtube, Linkedin, X and Instagram.

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2024 Arpel Annual Report



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ARPEL is a non-profit association gathering oil, gas and renewable energy sector companies and institutions in Latin America and the Caribbean. Founded in 1965 as a vehicle of cooperation and reciprocal assistance among sector companies, its main purpose is to actively contribute to industry integration and competitive growth, and to sustainable energy development in the region.

Its members currently operate in more than 30 countries in Latin America and the Caribbean, including national and international operating companies; technology, goods and services providers for the value chain, and national and international institutions in the sector.



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