



INSTITUTIONAL



# ARPEL 2019 ANNUAL REPORT

April 2020

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# GOVERNANCE

## Board of Directors 2018-2020

### Chairman:

Carlos Colo (YPF)

### Vice Chairmen:

Benito Piñeiro (ANCAP)

Roberto Díaz (PLUSPETROL)

Marco Antonio Toledo (PETROBRAS)

Miguel Ángel Lozada (PEMEX)

### Members:

Gabriel Méndez (ENAP)

Bob Fryklund (IHS-MARKIT)

William Wilka (PETROPAR)

Cristina Fung (PETROPERU)

Evandro Correa Nacul (REPSOL)

Humberto Ribera (TGS)

## Fiscal Commission

Alejandro Muñoz Villalobos (RECOPE)

Albert Tacias (TEMA)

Brian Richardson (PCJ)

# MEMBERSHIP 2019

## Active Members

ANCAP  
AXION ENERGY  
CENIT  
CHEVRON  
COGA  
CUPET  
ENAP  
EP PETROECUADOR  
OLDELVAL  
PAN AMERICAN ENERGY  
PCJ  
PEMEX  
PETROAMAZONAS EP  
PETROBRAS  
PETROPAR  
PETROPERU  
PLUSPETROL  
RECOPE  
REPSOL  
STAATSOLIE  
TECPETROL  
TGN  
YPF  
YPFB

## Cooperative Members

BAKER HUGHES  
HONEYWELL-UOP  
IHS-MARKIT  
KBR  
SCHLUMBERGER  
TGS  
TEMA

## Alliances

ALADI  
CAF  
CEPAL  
COCATRAM  
GANAR GANAR  
OEA  
OLADE  
RAC/REMPEITC-Caribe

## Institutional Members

ACP  
Colombian Petroleum Association

AIHE  
Oil Industry Association of Ecuador

AIPN  
Association of International Petroleum Negotiators

CBHE  
Bolivian Chamber of Hydrocarbons and Energy

CCI  
Industrial Cybersecurity Center

CCPS  
Center for Chemical Process Safety

CIER  
Regional Energy Integration Commission

CYTED  
Ibero-American Program of Science and Technology for Development

ENERCLUB  
Spanish Club of Energy

BARILOCHE FOUNDATION

IAPG  
Argentinean Oil and Gas Institute

IBP  
Brazilian Institute of Petroleum, Natural Gas and Biofuels

IGU  
International Gas Union

ILTA  
International Liquid Terminals Association

IOGP  
International Association of Oil & Gas Producers

IPIECA

OSRL  
Oil Spill Response Limited

SIGTTO  
Society of International Gas Tanker and Terminal Operators

SLOM  
Latin-American Society of Monobuoy Operators

SNMPE  
Peruvian Mining, Oil and Energy Society

SPH  
Peruvian Hydrocarbons Society

WEC  
World Energy Council

WPC  
World Petroleum Council

# MESSAGE FROM THE PRESIDENT OF THE BOARD OF DIRECTORS

*“On this occasion, I would like to begin by thanking ARPEL member companies, which year after year continue with the strong commitment to our unique organization in the region, whose mission is to promote integration, growth, and operational and management excellence.*

*In these times of unprecedented challenges, ARPEL is a valuable collaborative space for companies in the industry. As it has done for more than 54 years, and particularly in times of crisis, the Association has allowed the search for solutions to everyday problems of our companies through cooperation, exchange of experiences and lessons learned among professionals from different companies and countries.*

*In 2019, we made progress with the implementation of the four lines of work defined in the Strategic Plan: Operational Excellence, Sustainable Management, Energy Transitions and Communication.*

*The White Paper “Energy transitions in Latin America and the Caribbean - The role of the oil and gas industry” was recently published. This represents a contribution toward a roadmap for the sector in this area.*

*In the same vein as providing a strategic look at the energy sector, the second edition of ARPEL Leadership Program was successfully developed in order to prepare the leadership of the organizations to face the challenges dictated by the new business trends.*

*In the area of sustainable management, we have created the Sustainable Development Goals (SDGs) Working Group and have signed an agreement with UN Women to support the implementation of the Women’s Empowerment Principles in member companies, two highly significant topics.*

*As regards Operational Excellence, the successful exchange, development and implementation of best practices among companies has been followed up, highlighting the work done on process safety, asset integrity, cybersecurity, evaluation of plans and oil spill response readiness.*

*In addition, in order to promote sectoral collaboration at the regional level, this year a series of activities were carried out in Argentina to disseminate best practices and lessons learned for the development of hydrocarbons from unconventional reservoirs. In this context, a delegation representing companies and officials from the Colombian Government was received, repeating the successful experience for a delegation from the Brazilian Government.*

*This year we have also continued to expand our institutional network, incorporating the National Society of Mining, Petroleum and Energy of Peru (SNMPE) and the Colombian Petroleum Association (ACP), thus consolidating an increasingly dense collaborative network with the main players in the sector in the region.*

*We are witness to revolutionary changes in information and communication technologies, business models, economic development and energy supply. The transition to less carbon-intensive economies. This marks the agenda of the Association in order to strengthen the contribution of companies in the sector to sustainable development.*

*However, standing in the present we are still not able to imagine with certainty the new future scenario that, without a doubt, will severely affect our industry and in which our Association will be immersed.*

*Faced with these scenarios, our industry has been characterized by its resilience, something that will surely emerge again and that will enable us to successfully tackle these new challenges.*

*Finally, I would like to add that history has placed us at a difficult time and that, in this context, our Association -with more than 50 years of life- will be challenged and will depend on all those who are part of it, to emerge strengthened toward the new future of the next 50 years.*

*As a final remark and as the culmination of this four-year cycle in which I have represented YPF as the Chair of the Board of Directors of ARPEL, I would like to thank again the Board members, the representatives of member companies and the staff of the Executive Secretariat for their contribution. I have worked closely with them throughout this time and we have set as our goal to grow as an institution and add value to our members.”*



**CARLOS COLO**

President of the Board of Directors  
ARPEL

# STRATEGIC PLAN

## Vision

To be an innovative and proactive organization, recognized as a reference in the consolidation of the industry as provider of reliable, safe and sustainable energy.

## Mission

To promote the integration, growth, operational excellence and effective socio-environmental performance of the industry in the region, facilitating the dialogue, cooperation, development of synergies among players as well as the shared creation of value among members through the exchange and expansion of collective knowledge.

## Guidelines



### Energy Transitions

- Climate change mitigation and adaptation strategies
- Energy integration
- Support to the energy transitions process throughout the region
- The role of natural gas in the energy mix
- Promotion of technological innovation and development



### Operational Excellence

- Best practices for operation and maintenance of units
- Process safety
- Energy efficiency
- Digital transformation
- Cybersecurity
- Asset integrity management
- Oil spill preparedness and response



### Sustainable Management

- Sustainable Development Goals (SDGs)
- Governance, transparency and compliance
- Responsible leadership
- Human rights
- Relations with communities
- Gender equality



### Communication

- Facilitator of dialogue in emerging issues
- Relations with governments and stakeholders
- Drive toward sustainability reporting



# Energy Transitions

Climate Change and the need to foster a transition to less greenhouse gas (GHG) emissions-intensive economies in response to the growing demand for energy needed for development are setting the international agenda and that of oil and gas companies. As it is one of the main concerns of the sector, ARPEL has adopted the theme

of Energy Transitions as one of its strategic lines for the coming years in order to encourage oil and gas companies to contribute to climate change mitigation as well as the development of more resilient energy systems, and the economic and social development of the countries in which they operate.

In this regard, a series of activities have been developed with a focus on raising awareness among senior management of companies and government authorities, which include:

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Release of the white paper **Energy Transitions in Latin America and the Caribbean** - The role of the oil and gas industry

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Second edition of **ARPEL Leadership Program**

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Publication of a new edition of the **Annual Report to Senior Management on Climate Change**

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Second edition of the **Latin America Gas Conference**

WHITE PAPER

# Energy Transitions in Latin America and the Caribbean

## The role of the oil and gas industry



The document is the result of a collaborative work among member companies that began with an exchange workshop at the Assembly of Representatives held in Mexico City in April 2018, and for which a specific working group with first-level specialists in the topic was defined.

It is a contribution from the oil and gas sector to the development of a roadmap for energy transitions in Latin American and Caribbean countries (LAC).

It describes some of the main issues that the oil and gas industry and key stakeholders in Latin America and the Caribbean must address. These include **access to energy, energy efficiency, technological neutrality, carbon capture, carbon pricing, and regional integration**. In turn, it contains **ARPEL and member companies' commitments** to collaborate with governments, companies, investors, consumers and the civil society and thus advance the energy transition processes in Latin America and the Caribbean.



Several instances of dissemination of the document will be held in 2020. This will mark the Association's agenda on the subject, seeking to support companies in the sector to contribute to the energy transition processes in the countries in which they operate.



<https://arpel.org/library/publication/519/>



SECOND EDITION OF  
**ARPEL**  
**Leadership**  
**Program**



The main objective of this program is that high-potential professionals expected to hold decision-making positions in the industry in the coming years will gain a broad view of the sector, addressing key questions arising from potential future scenarios and the factors and skills that will be needed to successfully lead businesses in an increasingly challenging business environment.

The Program is divided into three modules, as follows:

Module I  
**Global Factors and their Effect on the Latin American Upstream Sector**  
 May 8 - 10  
 Rio de Janeiro, Brazil

Module II  
**Downstream Sector, the New Normal Refining's Role in a World of Changing Demand**  
 August 28 - 30  
 Cartagena de Indias, Colombia

Module III  
**Gas, Coal and Renewables and their Roles as Power Fuels in an Increasingly Decarbonized World**  
 November 20 - 22  
 Monterrey, Mexico

In the 2018 and 2019 editions, a total of 60 future leaders from 16 different companies from Argentina, Brazil, Colombia, Costa Rica, Cuba, Mexico, Paraguay, Peru, Suriname and the United States were trained. The program will hold its third edition in 2020.

**60**  
 future leaders

**16**  
 companies

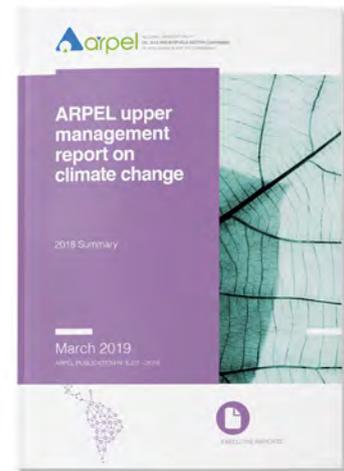
**10**  
 countries

Argentina, Brasil, Colombia, Costa Rica, Cuba, Estados Unidos, México, Paraguay, Perú y Surinam



# Report to Senior Management on Climate Change

2018 SUMMARY



This annual publication, released in the first months of the year, summarizes the most important events in the previous year regarding Climate Change, its impact on the oil and gas industry and ARPEL activities in this matter, with special emphasis on the outcome of the Conferences of the Parties (COPs).

It is a way of communication with senior management on the subject and a tool for raising awareness to promote actions on climate in member companies.



This report was developed by **ARPEL Climate Change Working Group**, composed of experts from the following member companies: **Ancap, Chevron, Cupet, Enap, EP Petroecuador, Honeywell, KBR Technology, Oldelval, Pemex, Petroamazonas EP, Petropar, Petroperú, Tecpetrol, YPF.**





# Sustainable Management

Sustainability is an increasingly important aspect in the strategies of companies in the energy sector.

In order to support the integration of sustainability issues in the day-to-day management of companies in the sector, four lines of work were incorporated in 2019, which were added to the preparation of the report entitled “Analysis of Sustainability Reports by ARPEL Member Companies”:

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**Sustainable Development  
Goals (SDGs)**

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**Gender equality**

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**Compliance**

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**Sustainability  
benchmarking**

# Sustainable Development Goals (SDGs)



In May, a **Working Group** composed of **experts from member companies** was created. Its main objectives are to:

- i. map the situation of companies of the sector in the region
- ii. generate a common understanding on the issue and give visibility to the value of the SDGs for the business strategy in order to incorporate them into the agenda of oil and gas organizations in the region
- iii. identify key opportunities and define lines of work to develop the SDG agenda of the sector in the region by 2030
- iv. assess and communicate progress to stakeholders

The team worked during the year in the development of a report to be released in the first half of 2020 that will allow mapping the status of companies regarding SDGs. This will lead to the definition of a roadmap to focus on those SDGs that can have higher positive impact while minimizing the potential negative impacts. Its publication is scheduled for the second half of 2020.

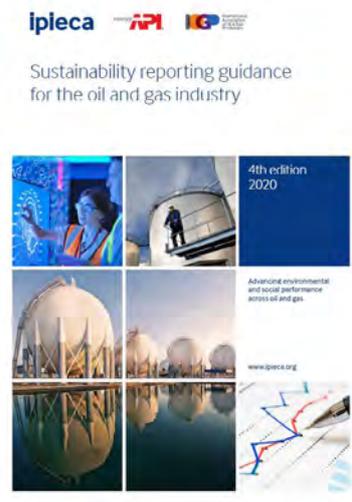


In addition, ARPEL is working in collaboration with **IPIECA** to define a roadmap for the oil and gas sector on a global scale.

## SUSTAINABLE DEVELOPMENT GOALS



# Reporting



**Sustainability reporting** is good practice because it allows systematic management based on indicators and showing the commitments and the progress of the companies in this area.

In order to encourage this practice, ARPEL endorsed the third edition of the “Oil and gas industry guidance on voluntary sustainability reporting” of **IPIECA-APPI-IOGP**. In addition, the document entitled “Analysis of sustainability reports by ARPEL member companies,” which describes the baseline of ARPEL member companies on this issue, was published in 2018, with the second edition of this report planned for 2020 and further editions every two years.



**In 2019, ARPEL contributed with IPIECA** in the update of the above-mentioned guidance for the preparation of sustainability reports by the global oil and gas industry. The fourth edition of this document will be published in April 2020.



<http://www.ipieca.org/our-work/sustainability-reporting/sustainability-reporting-guidance/>

## Gender Equality



On March 25, ARPEL signed the statement of support to the Women's Empowerment Principles (WEPs) promoted by UN Women and the United Nations Global Compact. The Principles were established in 2010 and provide a framework for the implementation of actions aimed at promoting gender equality.

This line of work aims to foster greater implementation of the principles in the oil and gas industry in Latin America and the Caribbean.

In this framework, a webinar entitled "Gender Equality: Good Business" was conducted in mid-June. The introduction to the issue was in charge of Ms. Teresa Pérez del Castillo, representative of the Win-Win Program of UN Women in Uruguay, while Ms. Ericka Brenes Mora of **RECOPE** and Ms. Paola Argento of **YPF** presented the experience of their companies.

### Women's empowerment principles

1. Establish high-level corporate leadership for gender equality.
2. Treat all women and men fairly at work - respect and support human rights and nondiscrimination.
3. Ensure the health, safety and well-being of all women and men workers.
4. Promote education, training and professional development for women.
5. Implement enterprise development, supply chain and marketing practices that empower women.
6. Promote equality through community initiatives and advocacy.
7. Measure and publicly report on progress to achieve gender equality.

#### WEBINAR

### Igualdad de Género: un buen negocio

Cómo incorporar la perspectiva de género en la estrategia corporativa

11 de junio de 2019 | 11:00 a.m. (Uruguay)



The next edition of the ARPEL Conference will include a workshop to further explore issues from a gender-equality perspective.

## Compliance



In order to address one of the main problems which have affected the sector in Latin America in recent years, the Executive Secretary, **Mr. Izeusse Braga, spoke in the workshop “Initiative of the O&G industry to promote integrity and fight against corruption”** organized by the Argentine Institute of Oil and Gas (IAPG) and held in early May in Buenos Aires. During the workshop, progress was made in the development of an agreement on best practices in the field.

In addition, in order to raise further awareness of the importance in transforming leadership, the motto of the sixth edition of the ARPEL Conference selected was: **“Responsible Leadership of the Oil and Gas Industry in Latin America and the Caribbean.”**

Among other activities regarding this issue, there will be a keynote presentation by international expert **John Knights**, founder of LeaderShape Global and author of the book **“Leading Beyond the Ego: How to Become a Transpersonal Leader”**.



## Sustainability Benchmarking

This **new report** is added to those on Environment, Safety and Process Safety with the purpose of generating a **systematic measurement of performance in sustainability by member companies** so as to identify gaps and promote activities to improve management in this field.

In 2019, the **Social Responsibility Committee (SRC)** completed the design of the indicators to be included in sustainability benchmarking and the corresponding manual.

The study consists in the evaluation of different key aspects for sustainability management:

- energy intensity
- intensity of greenhouse gas (GHG) emissions
- social investment
- complaints and claims
- social conflicts
- human rights
- indigenous peoples
- biodiversity
- asset integrity and process safety
- corporate governance



In December, a **pilot test was implemented with member companies**, members in the SRC, to corroborate that the tool designed clearly responds to the research objectives proposed. The release of the first Sustainability Benchmarking Report is planned for the second half of 2020.



# Operational Excellence

One of the founding mandates of the Association is to promote the continuous improvement of operations through the implementation of projects and cooperation activities among its members.

In 2019, conferences, workshops, training and implementation courses were organized, and best practices documents and benchmarking studies were developed.

The main lines of work on this issue are:

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**Asset  
integrity**

---

**Process  
safety**

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**Environmental  
management**

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**Oil spill  
management**

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**Operation of  
refining units**

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**Management  
of mature  
fields**

---

**Energy  
efficiency**

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**Digitalization**

---

**Cybersecurity**

# Development, Promotion and Implementation of Best Practices

## Process Safety

### Self-assessments performed at member companies

2019 was marked by the implementation of the **process safety self-assessments program** using the tool developed by the Health, **Safety and Environment Committee of ARPEL** in 2018



**3**  
pilot self-assessments

**Petroperu**  
**ANCAP**  
**Oldelval**



Within the framework of this program, three pilot self-assessments were performed in **Petroperú, ANCAP** and **Oldelval**. This allowed not only the analysis of gaps in terms of maturity in the implementation of process safety in these companies, but also as an input to further develop the tool.



In 2020, this series of self-assessments will continue in other member companies, and update of the same will continue in 2021. The Association intends to promote this easy-to-implement tool to improve management in different companies in the sector.



## Workshop in Talara, Piura, Peru PETROPERÚ

7  
companies



**COGA, Pan American Energy, Petroperú, Raízen, Reficar, YPF and YPFB Refinación.**



In July, a workshop was held in the city of Talara with the participation of safety management leaders in Petroperú and process safety experts from **COGA, Pan American Energy, Petroperú, Raízen, Reficar, YPF and YPFB Refinación**. The purpose of the workshop was to validate the results of the self-assessment of process safety performed by Petroperú and to provide recommendations to move forward in the implementation of improvements.



## Workshop at Estación Allen, Río Negro, Argentina OLDELVAL



Also with the purpose of validating the results of a self-assessment and exchanging best practices and experiences to bridge gaps, **Oldelval**, with the support of the Neuquén section of the IAPG, held a workshop in its facilities.

## Workshop Advances in Safety Process Management YPF



The workshop “Advances in Safety Process Management” and the Annual Meeting of the Health, Safety and Environment Committee (CASYSIA) of the Association were held September 27. Both events were hosted by **YPF**. This meeting brings together the managers of these areas in member companies and offers a forum for collaboration and exchange of experiences.



Discussions during the workshop dealt with the experiences of different companies present, focusing on the challenges for the implementation of process safety management systems and of risk-based management, and also on emergency preparedness and management.

# Pipeline Integrity

## Control Rooms



The **Guidelines for Management of Pipelines and Terminals Control Rooms**, intended to provide operators and controllers of pipelines and terminals with best management practices, was published in March. The document is an important contribution for companies to achieve excellence through the support of strategic decision-making processes regarding the operation of control rooms. It also includes checklists that make implementation easier. Over the course of 2019, several companies started self-assessment exercises. A program of cross-checks will begin in 2020.



The guidelines were developed by the **Project Team for Certification of Pipeline Operators** -made up of members of ARPEL Pipelines and Terminals Committee- with the participation of professionals from the following member following companies and institutions: **COGA, Ecopetrol, Enap, IBP, Oldelval, Petrobras, Pluspetrol, TGN, YPF and YPFB.**



## In-Line Inspection Process



The “Guidelines on In-Line Inspection Process Management” launched in July provide general guidelines to manage all stages of the in-line inspection process in order to promote its standardization at the regional level with the purpose of reducing costs and making better use of the results obtained.



Professionals from **Ecopetrol, Cenit, Coga, Enap, EP-Petroecuador, Oldelval, Petrobras, Petroperú, Pluspetrol, YPF and YPFB** participated in the development of these guidelines.



<https://arpel.org/library/publication/515/>



## New Guidelines in Preparation



Three new guidelines on best practices are in the final stages of development:

- i. Execution of Civil and Geotechnical Works in Pipeline Integrity Management to Face Geohazards
- ii. Repair of Illegal Taps in Pipelines
- iii. Management of Stress Corrosion Cracking in Pipelines



**These guidelines will be published in 2020 and aim to provide guidance to manage different threats to pipeline integrity, generating knowledge from the experiences of companies.**

With the development of these guidelines, a total of ten documents on best practices in pipeline integrity management developed by the Pipelines and Terminals Committee over the past five years will be reached.

# Performance Benchmarking and Mutual Technical Assistance Instances

## Process Safety, Industrial Safety and Environmental Performance Benchmarking



New editions of these three annual reports were released to **identify gaps in the performance of companies and implement exchange activities for their improvement.**

These reports are the only regional reference on the performance of oil and gas companies regarding process safety, industrial safety and environmental management, and constitute an **exclusive benefit for member companies.**



### Environmental Performance

<https://arpel.org/library/publication/518/>



### Process Safety

<https://arpel.org/library/publication/513/>



### Industrial Safety

<https://arpel.org/library/publication/514/>



## Instances of mutual technical assistance



**New instances of mutual technical cooperation among member companies** were offered during the year. These activities consist in seeking solutions to specific problems of the companies through the experience gained by other companies.



The main activities were carried out within the Health, Safety and Environment Committee, the Refining and Fuels Committee and the Gas and Energy Committee. **In total, 14 companies benefited from these activities.**

### List of Mutual Technical Assistance Instances:

Date	Committee	Issue
Feb. 2019	COMREF	Reliability in back-up co-generation electricity systems in refineries
Feb. 2019	CGEA	Development of LPG markets
Feb. 2019	COMREF	Promotion of biofuels
Feb. 2019	COMREF	Steam and electricity generation systems in refineries
Mar. 2019	CEPA	Opportunities for natural gas exploration and production projects
Apr. 2019	COMREF	Major tank maintenance
Apr. 2019	COMREF	TSS / deasphalting technology
July 2019	COMREF	Comprehensive asset management
July 2019	CASYSIA	Process safety implementation
July 2019	COMREF	Tank cleaning
Aug. 2019	CASYSIA	Digital work permits
Aug. 2019	CASYSIA	Inquiry - Installing blanking plates in LOTO-locked systems
Aug. 2019	CGEA	Natural gas import schemes
Sept. 2019	CASYSIA	Online blending
Sept. 2019	CASYSIA	Vehicles in plants
Nov. 2019	CEPA	Use of NOC's storage and treatment facilities by companies under a PSA.

# Technical Exchange Events



## International Pipeline Geotechnical Conference (IPG 2019) ARPEL/ASME



The fourth biennial Pipeline Geotechnical Conference, and the **89th ARPEL Meeting of Experts (RANE)**, co-organized by ARPEL and the American Society of Mechanical Engineers (ASME) were held June 25-27 in Buenos Aires.

The International Pipeline Geotechnical Conference (IPG 2019) is the main point of reference for the community of geotechnical professionals to share knowledge and promote technical progress by advancing the management of natural forces impacting pipelines – protecting the public, environment, energy infrastructure assets, and ensuring safe and reliable operations.



The event was attended by 84 professionals from the following companies: **ATMOS International, BGC Engineering Inc., CENIT, COGA, Gasoducto GasAndes S.A., GieGroup, Golder, IDS GeoRadar, Ingeciencia, Ingeniería y Geotecnia SAS, Micron Optics Inc., Morken, Naviq Consulting Inc., Nepta, Ocesa, OCP Ecuador S.A., Oiltanking Ebytem S.A., Oldelval, Omnisens, Pluspetrol, RCP Ingenieros, Rosen Group, SLOM, SRK Consulting Argentina S.A., TBG, Techint, TGI, TGN, TransCanada and YPF.**



**International Pipeline Geotechnical Conference**  
**Conferencia Internacional de Geotecnia de Ductos**

June 25, 2019  
**Pre-Conference Courses**

June 26-27, 2019  
**Conference and Exhibition**

Catholic University of Argentina (UCA)  
Buenos Aires, Argentina



  
SETTING THE STANDARD

  
ARPEL

  
Y.P.F.

  
OLDELVAL

  
CENIT

  
INGECIENCIA

  
TRANSPORTADORA DE GAS DEL NORTE S.A.

  
BGC

  
MORKEN

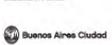
  
OMNISENS+

  
ROSEN

  
AIHE

  
CBHE

  
IBPE

  
Buenos Aires Ciudad

  
ViviArgentina

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# Workshop Management of Threats of Damage to Hydrocarbon Pipelines by Third Parties



A workshop on damages to hydrocarbon pipelines by third parties, intentional and unintentional, was held October 22-23 in Cartagena de Indias, Colombia. The workshop brought together **operating companies in the region and technology solutions providers with the purpose of promoting global awareness** of the issue and thus be able to raise the standards of response.

During two mornings, more than 100 professionals from **42 companies and institutions and 13 different countries** shared their experiences, good practices and lessons learned in the prevention, detection and awareness of damage by third parties. During the afternoons, regional and international suppliers presented solutions, cases of application and possible developments.



**100**  
professionals

**13**  
countries

**42**  
companies and institutions



In this context, a meeting of the Project Team in charge of developing the Guidelines for Repairing Illegal Taps in Pipelines was held.





# Training

## Oil Spill Preparedness and Response Management

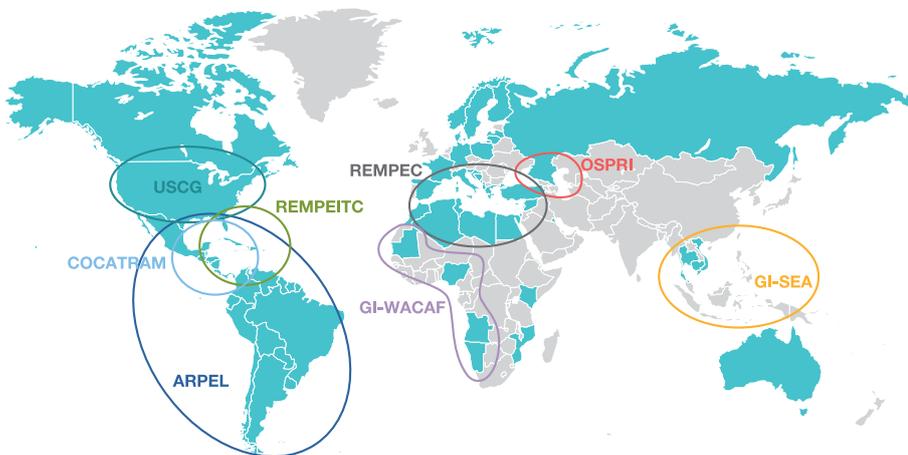


A new edition of the course **“Evaluation of Programs to Address Oil Spills using the Tool RETOS”** was held September 4-5 in Buenos Aires, Argentina, with the support of IAPG.

RETOS (Readiness Evaluation/Excel Tool for Oil Spills) constitutes an assessment tool that provides guidance for operators in the oil and gas sector and in governments to verify their own oil spill preparedness and response management. It has become an international reference on the subject, and is currently used by companies and governments in the five continents.



The course has already been given directly by ARPEL in a number of countries since 2013, reaching 350 professionals, and has also been held in parallel by member institutions.



Link to free download of tool RETOS  
<https://arpel.org/library/publication/341/>



## Course Energy Management and ISO 50001



Energy efficiency is one of the main axes of energy transitions, as it reduces the impact on the environment, gaining productivity and generating savings for companies and society as a whole. **Energy consumption is also one of the main manageable costs in process industries.**

In order to disseminate best practices on this issue, ARPEL held the first edition of the **course “Energy Management and ISO 50001,” conducted on-line, with the participation of professionals of ANCAP, HYTECH, OLDELVAL, PEMEX, PLUSPETROL, REPSOL YPF, YPFB and ENAP** from Uruguay, Argentina, Mexico, Peru, Venezuela, Bolivia and Ecuador.



9  
companies

7  
countries



The main objectives of the course are to **establish guidelines for the implementation of an energy management system in process industries, with a focus on the oil and gas sector, to introduce ISO 50001**, and to **provide tools** to manage the continuous improvement of the energy performance of the company.



ARPEL   
CURSOS DE ESPECIALIZACION

 On-line





## Course on Pipeline Integrity Management



Santa Cruz de la Sierra, Bolivia, hosted a new edition of **Module III of the course on Pipeline Integrity Management devoted to “Forces of Nature, Operational Errors and Third-Party Actions.”**

Professionals from **Recope, YPFB Transporte, TGI, YPF and the National Agency of Natural Gas and Biofuels de Gas of Brazil** participated in this training.



This course aims to **provide the knowledge and necessary skills to identify, diagnose, prevent, control and mitigate all the potential problems** generated by these types of events.

This course is part of the **Training and Accreditation Program for Pipeline Integrity Management Evaluators** that began in 2012 and is structured in four theoretical-practical modules. Since then, there have been 14 editions of the different modules, with 280 professionals trained.



**5**  
companies and  
institutions



# Technological innovation

The technological innovation agenda covers two major issues: digitalization and better use of data, and cybersecurity.



## Cybersecurity

The main objective of the work done on cybersecurity is that companies improve their defense against cyberthreats that are an emerging risk to critical infrastructures.



In this regard and in order to level knowledge and provide management tools, a new edition of the **virtual course “Introduction to Industrial Cybersecurity and Critical Infrastructures”** was presented. In addition, the **webinar** entitled **“Industrial Cybersecurity Maturity Model and Total Cost of Control System Ownership,”** was given through Innov@arpel ([www.innovarapel.org](http://www.innovarapel.org)).



In addition, an agreement was signed in August with **WisePlant** to promote maturity diagnosis and to provide tools to make progress on this issue.



CURSO  
VIRTUAL

# Introducción a la Ciberseguridad Industrial e Infraestructuras Críticas



## Course on Design of Scenarios in Security and Cybersecurity held at YPF



The course “Design of Scenarios in Security and Cybersecurity” was given on September 9 at YPF by international expert Jeimy J. Cano, who has more than 20 years of experience as an academician, professional and executive in information security, privacy, cybersecurity, digital evidence, information systems, government and IT audit.

The purpose of this course was to present and discuss the scenario analysis technique applied to security and cybersecurity as a new capacity in the challenge to anticipate emerging threats and risks.

It was attended by professionals from **Pluspetrol, Tenaris, BBVA, Lightech, Deloitte, Relational, KPMG, Metrogas, Prisma and YPF.**



**Pluspetrol, Tenaris, BBVA, Lightech, Deloitte, Relational, KPMG, Metrogas, Prisma, and YPF.**

## Webinar: Big Data, IIoT & Analytics in Oil & Gas: What can we do with this?



In early October, this webinar was held through **Innov@arpel** to **disseminate some introductory concepts** on this issue and present the **potential** for efficiency gains through **better use of operational and commercial data**.



With the participation of over **100 professionals**, it marked the first milestone on a topic that will continue to be increasingly strategic for management and, therefore, for the work of the Association.

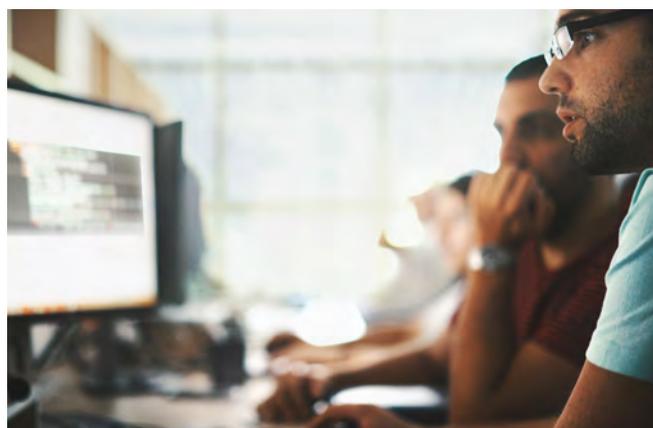
**100**  
professionals



## Innov@arpel



Great efforts were made to develop **version 2.0** of Innov@arpel, a more interactive and dynamic version of our virtual platform, which will be online in the first half of 2020. One of the novelties will be the **“Working Groups”** section in which each ARPEL Committee, Project Team and Working Group will have its own collaborative workspace, facilitating interaction, information consultation and project follow-up.



Meanwhile, **eight tutorial videos** on the features offered by this tool were developed to facilitate its use.



In 2019, Innov@arpel **grew** both in the number of registered users, companies and organizations, and in its use.



# Communication

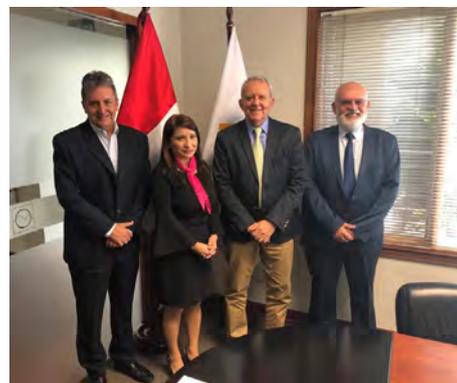
In order to maximize the impact of the Association's initiatives and to multiply the collaboration networks, new cooperation agreements were signed, work continued on various projects with other organizations, and a number of activities were carried out that helped increase the relations with governments, disseminate the importance of the role of the sector in energy transitions and disseminate best practices in operational management and sustainability in important international forums.

# Institutional Network Expansion

## Cooperation Agreements with the Colombian Petroleum Association (ACP), the Peruvian Mining, Oil and Energy Society (SNMPE) and UN Women.



In order to further expand the **network of collaboration with national institutions** of reference in the sector, **agreements** were signed with **SNMPE** of Peru and **ACP** of Colombia. In addition to these two institutions, cooperation agreements are currently maintained with the following national institutes and chambers, covering almost all the countries in South America: **IAPG** from Argentina, **IBP** from Brazil, **CBHE** from Bolivia, **AIHE** from Ecuador and **SPH** from Peru.



Firma con SNMPE



On the other hand, in order **to expand the institutional network with the major international agencies**, an agreement was signed in March with **UN Women** in an effort to promote the implementation of the Women's Empowerment Principles (WEPs) at the business level.

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## First Global Meeting of Industry Associations



On February 21, the **first Global Communication Network of Oil & Gas Associations Meeting** took place in Houston, USA. The meeting was organized by the International Association of Geophysical Contractors (IAGC) and was attended by the International Association of Oil and Gas Producers (IOGP), the Society of Petroleum Engineers (SPE), the American Petroleum Institute (API) and IPIECA. In this first edition, **ARPEL was represented by Richie Miller of TGS**, an ARPEL member company.



This would allow **proper coordination of international industry associations** at the international level and would support the efforts of the oil and gas sector on sustainability and relations with their stakeholders.

# Spaces for Dialogue

## Promotion of exploration and production of unconventional reservoirs in Colombia - Support from Argentina

September 11-13 – Argentina

**OLADE/ARPEL/IAPG/ACP**



**ARPEL coordinated the International Task Force** responsible for organizing the visit of **Colombian authorities to Argentina** to develop collaborative activities and exchange best practices for the development of unconventional.



The **institutions** that contributed to the success of this activity included the Energy Secretariat of Argentina, the Ministry of Energy and Natural Resources of Neuquén, the Vice-Ministry of Energy of Colombia, the **Colombian Petroleum Association (ACP)**, the **Argentine Institute of Oil and Gas (IAPG)**, **YPF**, **Tecpetrol**, **Pluspetrol** and other companies and institutions linked to the hydrocarbon sector as well as technicians from six Colombian departments and ministries.

The collaboration of the **Latin American Energy Organization (OLADE)**, as a regional intergovernmental body, was very valuable in formalizing this activity of regional integration among governments of the region. Together with the leadership provided by ARPEL, as a regional association of oil and gas companies, a real regional government/industry cooperation activity was carried out.



The activities carried out in Buenos Aires included a high-level meeting between authorities of the Colombian government and the Ministry of Energy of Argentina, a visit to the YPF Research Center (Y-TEC) and a seminar with high-level technical presentations. Then, the Colombian delegation and ARPEL went to Neuquén where a day of exchange took place that was attended by the Minister of Energy and Natural Resources of Neuquén, and then a field visit to YPF operations in Vaca Muerta.

In late 2019, the Colombian Ministry of Mines and Energy drafted a decree to set guidelines for **advancing exploration activities in comprehensive pilot research projects on unconventional hydrocarbon reservoirs using hydraulic fracturing technique.**

# Promotion of Best Practices to Improve Recovery Factors of Oil Resources

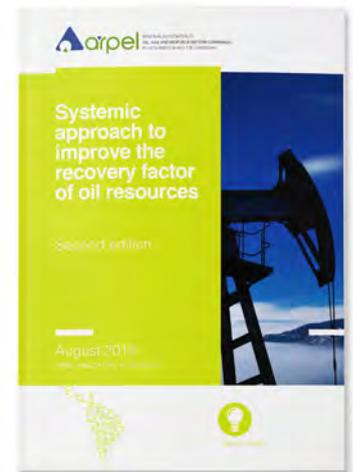
## Workshop Alternative Technologies - Future of Petroleum

Quito, Ecuador – May 28 - 29

### Petroamazonas EP and the Government of Ecuador



The event had over 50 participants and represented the first opportunity to share the ARPEL White Paper “**Systemic Approach to Improve the Recovery Factors of Oil Resources**” (<https://arpel.org/library/publication/512/>), which was published in March, with industry stakeholders and the Government of Ecuador.



<https://arpel.org/library/publication/512/>



Besides the participation of **Petroamazonas EP** professionals, the following member companies operating in Ecuador participated: **Repsol, Tecpetrol, ENAP/Sipetrol, BHGE and Schlumberger**. Other industry players in Ecuador also participated in the event, which focused on case studies in Ecuadorian depleting oil fields as well as on the advances of enhanced oil recovery (EOR) technologies.

**+50**  
participants

**6**  
companies

**Petroamazonas EP, Repsol, Tecpetrol, ENAP/Sipetrol, BHGE and Schlumberger.**



The optimization in the exploitation of mature fields represents an alternative of great potential both for Ecuador and for other countries of the region, as it is estimated that, at the global level, 70% of production comes from mature fields.

## Oil and Gas Expo

Mossoró, Brazil – November 26-27

Government of Brazil



ARPEL presented its **White Paper “Systemic Approach to Improve Recovery Factors of Oil Resources”** as a contribution to the efforts of the government and industry of Brazil to improve the recovery factor of onshore mature fields in order to extend their life, as well as to address the exploitation of potential unconventional reservoirs, the essence of the REATE program of Brazil.



The event –attended by over 1,000 participants from local government, operating companies and the whole industry value chain- was part of the **government exhibition to launch the REATE 2020 program with the involvement of ABPIP** (Brazilian Association of Independent Oil and Gas Producers) and **ONIP** (Brazilian Petroleum Industry Association) and other local associations.



# The Role of Natural Gas in the Energy Mix

## Latin America Gas Conference (LGC2019)

Lima, Peru - November 14-15

ARPEL-IGU-OLADE



The event was attended by government authorities from Argentina, Brazil, Cuba, Ecuador and Trinidad and Tobago, among others, as well as the Vice Minister of Mines and Energy of Peru, the Chairperson of the Board of Perupetro, Mr. Seferino Yesquén, the Deputy Director of the International Energy Agency (IEA), the Executive Secretary of OLADE and the Secretary General of the International Gas Union (IGU).





## 2nd International Forum of Gas, Petrochemicals and Green Fuels

Santa Cruz, Bolivia – August 19-23  
Government of Bolivia/YPFB/CBHE



The Executive Secretary of ARPEL, Mr. Izeusse Braga, participated in the panel on “Global Gas Market and its Challenges” together with Mr. Alfonso Blanco, Secretary General of OLADE (Latin American Energy Organization), Mr. Luis Bertrán, Secretary General of IGU (International Gas Union), and Mr. Dmitri Sokolov, Head of the Department of Forecasting and Economic Energy of the GECF (Gas Exporting Countries Forum).



# Dissemination Activities

## Energy Transitions

### Latin America Energy Forum

Miami, USA - February 25-27

### EnergyNet and International Gas Union



The Association was the moderator of the panel entitled **“Overview 2025: Argentina, Bolivia, Brazil and the regional energy cooperation.”** Participants in this panel included Mr. Carlos Quispe, Deputy Minister of Hydrocarbons of Bolivia; Mr. Andres Guevara, Business Development Director for Gas Value Chains of British Petroleum; Mr. Philippe Dupuis, Director General of Total Gas Marketing Southern Cone; and Ms. Lida Fitts, Regional Director for Sub-Saharan Africa, U.S. Trade and Development Agency.



### 7th Latin American Energy Economics Meeting

Buenos Aires, Argentina - March 10-12

### Latin American Association of Energy Economics (ALADEE), regional affiliate of the International Association for Energy Economics (IAEE)



**More than 300 people** participated in the event, mainly from the academic community, and professionals from companies in the energy sector in **Latin America** as well as from the **United States, France and Germany, among other countries.**



**Energy transition, sustainability, climate change, energy efficiency and access to energy** were the main topics discussed during the event.



On behalf of **ARPEL, its Project Manager, Mr. Pablo Ferragut,** made a technical presentation on **“Energy Transition and the Oil and Gas Industry,”** which analyzed the characteristics and the drivers of the current energy transition, the role of oil and gas in the global and Latin American energy and economic world, and the medium-term prospects.

## South American Regional Forum

Buenos Aires, Argentina - October 22

## Society of International Gas Tanker and Terminal Operators (SIGTTO)



During the “South American Regional Forum”, one of the main issues discussed was the **Tango FLNG Project**, which is a milestone on the way of Argentina toward the **export of large volumes of LNG and the monetization of Vaca Muerta**, in addition to the promotion of the exchange of experiences, best practices and lessons learned from incidents.



In this context, the **Association offered a speech entitled “South America’s Gas Markets - trends and future LNG development”** to an audience of more than 150 experts from the natural gas sector, mainly from Argentina.

## Global Production Report

### IOGP



**ARPEL contributed with the chapter on Central and South America** in a new edition of the Global Production Report of IOGP, a high-level document on the evolution of production and reserves at the global level.



<https://www.iogp.org/global-production-report-2019/>

# Sustainable Management

## XII Argentina Oil&Gas 2019

Buenos Aires, Argentina - September 23-26

### Argentine Institute of Oil and Gas



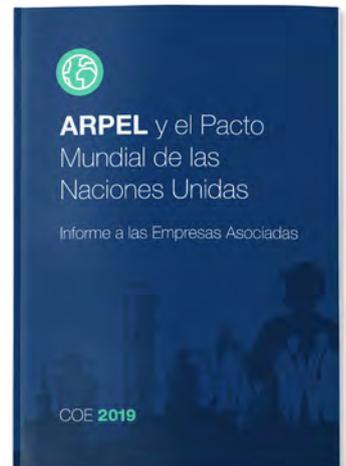
In the framework of the **XII Argentina Oil & Gas Expo 2019 and the 4th Latin American and 6th National Congress on Health, Safety and the Environment in the Oil and Gas Sector**, the Chairperson of ARPEL Social Responsibility Committee and Global Manager of Corporate Social Responsibility of Pluspetrol, Ms. Sandra Martínez, made a presentation entitled **“Sustainability and its Value for Business.”**



## Third communication of engagement to the Global Compact



The report was published in October and has been released every two years since 2015, this being the third edition. Its purpose is to **present to the Global Compact the contribution of the Association to promote the 10 Principles of the Global Compact** within its network of companies. Such principles are related to the following four axes: Human Rights, Labor, Environment and Anti-Corruption.



The report entitled “ARPEL and the Global Compact (COE 2019)” is available in the website of the Global Compact and in ARPEL web library.



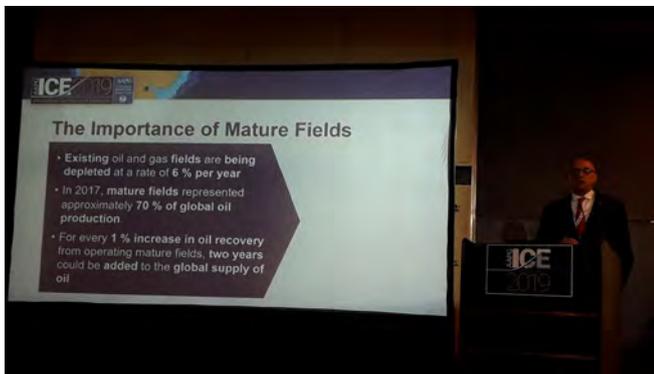
<https://www.unglobalcompact.org/participation/report/cop/create-and-submit/detail/434045>

<https://arpel.org/library/publication/517/>



# Operational Excellence

## Mature Fields



## International Conference & Exhibition ICE 2019

Buenos Aires, Argentina – August 27-30

The American Association of Petroleum Geologists (AAPG)

Mr. Carlos Colo, Chairperson of the Board of Directors of ARPEL, was the General Chair of the Organizing Committee of the event. In addition to a booth in the Exhibition Area, in the session on Mature Fields, the **Association presented the White Paper “Systemic Approach to Improve Recovery Factors of Oil Resources.”** It aims to share, with various stakeholders, options to improve the recovery factors of mature oil reservoirs in a systemic way.

# Oil Spill Preparedness and Response

## Dissemination of the toola RETOS™ Mediterranean and Brazil



There were important instances of dissemination of the tool RETOS (Readiness Evaluation Tool for Oil Spills) developed by ARPEL, one for the countries of the Western Mediterranean and another for Brazil, helping to facilitate the use of this tool of international reference in a greater number of countries, both by governments and by industry.

The first was the subregional workshop organized by the Regional Mediterranean Pollution Emergency Centre (REMPEC), in Valletta, Malta, April 24-26, in the framework of the Project Western Mediterranean Region Marine Oil and HNS Pollution Cooperation (West MOPoCo).

The second instance included two courses for the Brazilian Institute of Environment and Renewable Natural Resources (IBAMA) in Brasilia and Rio de Janeiro. Professionals from the National Waterway Transportation Agency (ANTAQ) and the Special Secretariat of the Investment Partnership Program (SPPI) also participated in these training sessions.

Lastly, Mr. Marcus Lisboa Brandao, former Corporate Manager of Crisis and Emergency Response Plans of Petrobras and Consultant of ARPEL on this subject, made a presentation of RETOS to the authorities of the Brazilian institutions participating in the “Second Workshop on Technology and Environmental Licensing” held in Brasilia and organized by the Civil House of the Presidency of the Republic through the Secretariat of the Investment Partnership Program (SPPI).



The Manual and the RETOS Tool are currently used by companies and governments in 70 countries worldwide.

# Cybersecurity

## CISO Summit

July 5 - Lima, Peru

CisoBeat / UPC



The event, organized by CISObeat -a non-profit association whose mission is to improve the level of information security in the Peruvian society- and the School of Postgraduate Studies of UPC University (Peruvian University of Applied Science), aimed to share the latest trends in Cybersecurity, Information Security, Risk Management and Privacy from the point of view and experience of recognized national and international presenters.



In this context, **ARPEL made a presentation on “The keys to assessing the maturity of industrial cybersecurity in critical infrastructures.”**



The agenda featured professionals from Chile, Colombia, Ecuador, Uruguay and Peru.

# Pipeline Integrity



## Rio Pipeline

Rio de Janeiro, Brazil - September 3-5

IBP



The event was supported by the Association, which participated in two panels. The first panel was on Management of Control Rooms, where Mr. Adrián Mérida, Manager of Operations and Maintenance of OLDELVAL and Leader of ARPEL Project Team for Management of Control Rooms (EPCOD), presented the work being done by the group, in particular **ARPEL Guidelines for Management of Pipelines and Terminal Control Rooms** published this year. The second focused on Operational Risks, where **ARPEL gave a conference on illegal taps in pipelines and its actions to help its member companies address this problem.**





# ARPEL 2019 ANNUAL REPORT

April 2020

ARPEL PUBLICATION N° IN01-2020



ARPEL is a non-profit association gathering oil, gas and biofuels 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 membership currently represents a high percentage of the upstream and downstream activities in Latin America and the Caribbean and includes national and international operating companies, providers of technology, goods and services for the value chain, and national and international sector institutions.



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