REGIONAL ASSOCIATION OF
OIL, GAS AND BIOFUELS SECTOR COMPANIES
IN LATIN AMERICA AND THE CARIBBEAN

How to remain profitable in a low oil prices environment

ARPEL Workshop

February 2017

ARPEL PUBLICATION N° EV02-2017

EVENT REPORT

Table of contents

1. Introduction

Oil prices have shown a steep and protracted decline since 2014, reducing margins and forcing the industry to restructure and reinvent itself to sustain operations and investment levels. The barrel of crude oil, which was traded in the international market above US$ 100 during a sustained period, collapsed in only a few months until it touched floor just above US$ 20 and stabilized by mid-2016 at around US$ 45 per barrel.

The impact on oil and gas activities occurred in several ways and affected very differently not only companies but also the economies of the region, in many of which oil is the main export product. The companies' response has basically been cuts in expenditure and investments, contracts' renegotiations, redefinition of portfolios and the search for technology and innovation alternatives that allow for the optimization of production costs to remain economically viable in the short term and sustainable in the long term.

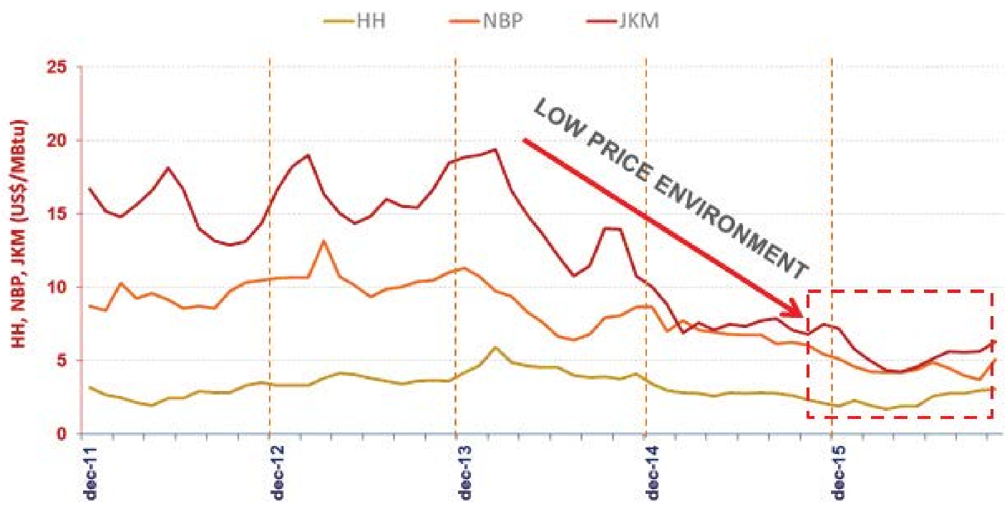
Between January 2014 and June 2016, drilling equipments in Latin America and the Caribbean were reduced to half. Cutbacks in CAPEX budgets for oil and gas exploration and production of large Latin American companies plunged about 30% between 2014 and 2015 (about US$ 40 billion), and a similar decline is expected for 2016.

Within this context, ARPEL coordinated the workshop **"How to remain profitable in an environment of low oil prices"**, which brought together professionals from 17 companies, in Lima, PERU, on November 11, 2016 in order to exchange and discuss different alternatives that companies have adopted to operate in a new price scenario, which conclusions are summarized in this report.

2. Context of low oil prices and resilience of the companies

In order to survive, the petroleum industry had to adapt to the steep decline of oil and natural gas prices that started by mid-2014.

Gas Price Markers
December 2011 - October 2016



Source: Both figures were extracted from the presentation of Alejandro Ponce, Repsol

Alejandro Ponce, Repsol

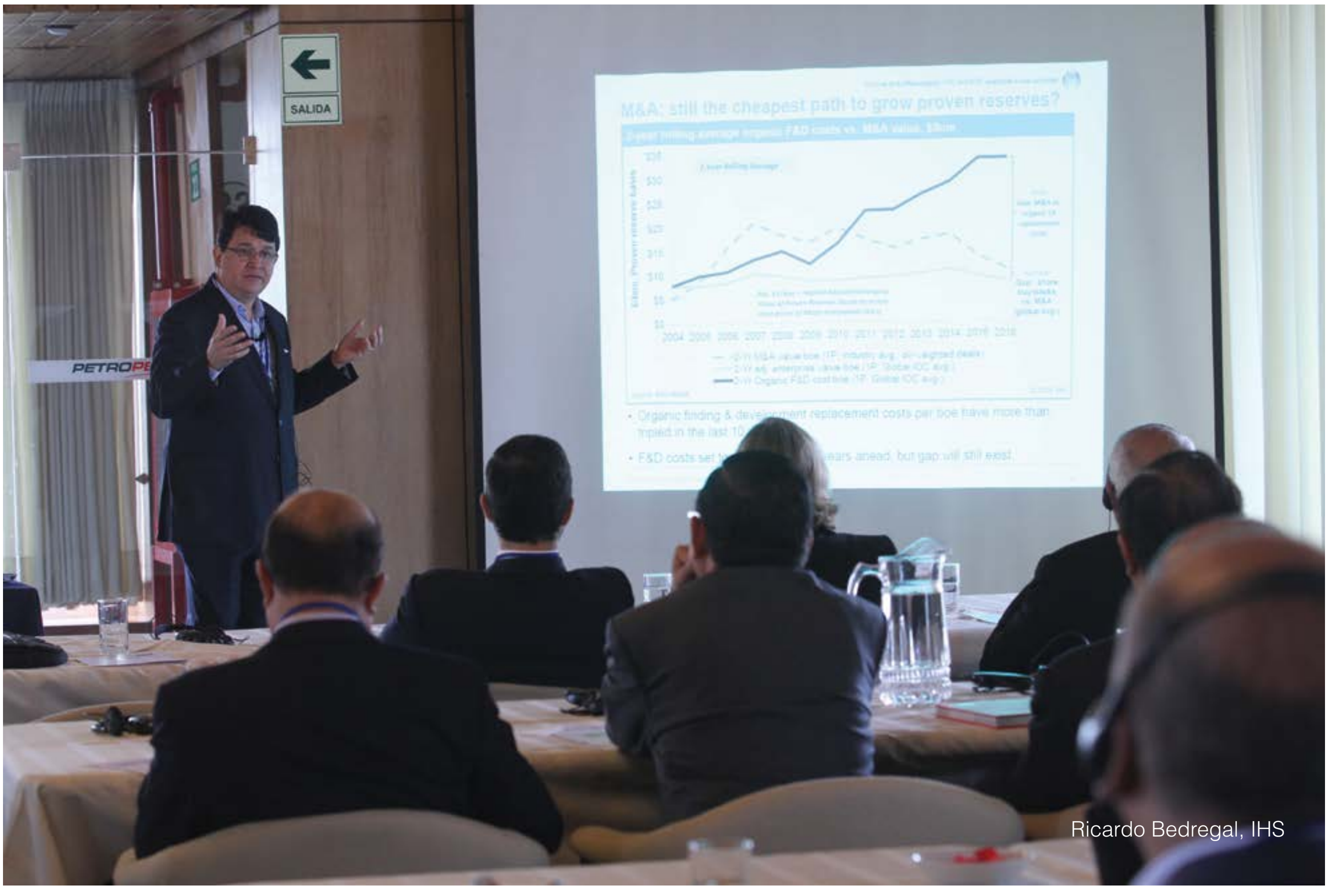
Unlike other price cycles, both the fall in oil prices and the price of natural gas have structural components that suggest that prices will not rise again to previous levels, at least in the short term.

2.1 Strategies adopted by companies

The main strategies adopted by companies to deal with the crisis have been divestments, the reduction of CAPEX and OPEX, the focus of the innovative effort on the optimization as a way to reduce costs, and a stricter management of the investments portfolio.

Within these courses of action, there have been different responses between International Oil Companies (IOCs) and National Oil Companies (NOCs), due to the different role they have within countries' economies and the possibilities of taking risks of each group.

On the one hand, IOCs have opted to reduce investment, with average cuts of 40-50% (2015 vs. 2014), and present many difficulties for reactivation, since returns to investments in E&P remain very low and greenfield projects in the most profitable fields are in the hands of NOCs. On the other hand, NOCs in their portfolio management tend to deleverage through the privatization of assets, due to high levels of debt because of sustained investment while period of high prices, but the divestment faces the difficulty of being in a "buyers' market, without buyers".

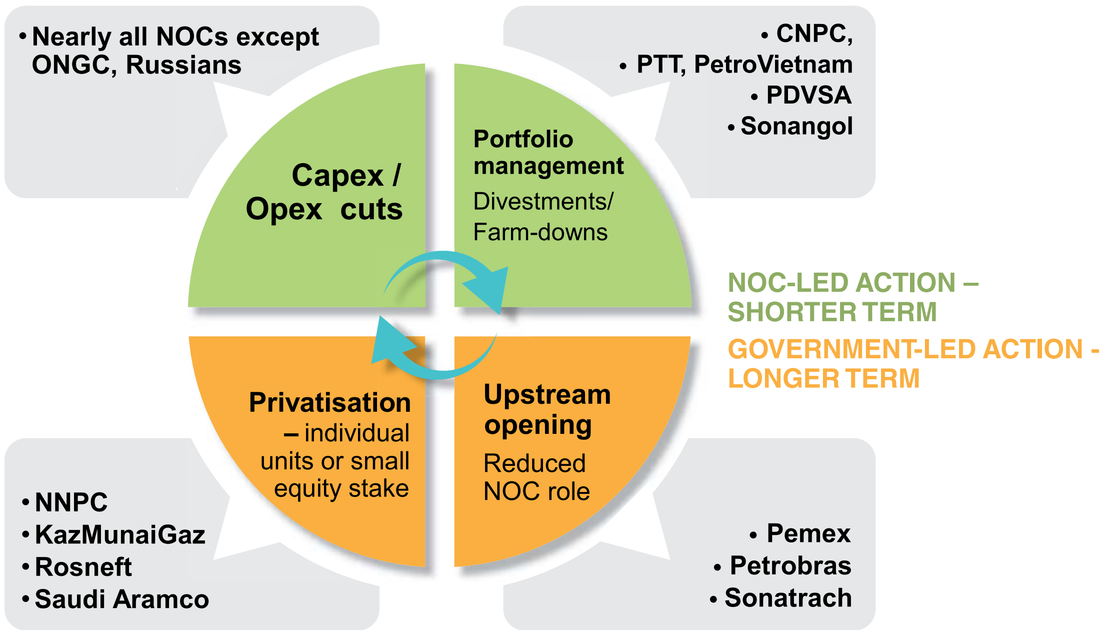


Ricardo Bedregal, IHS

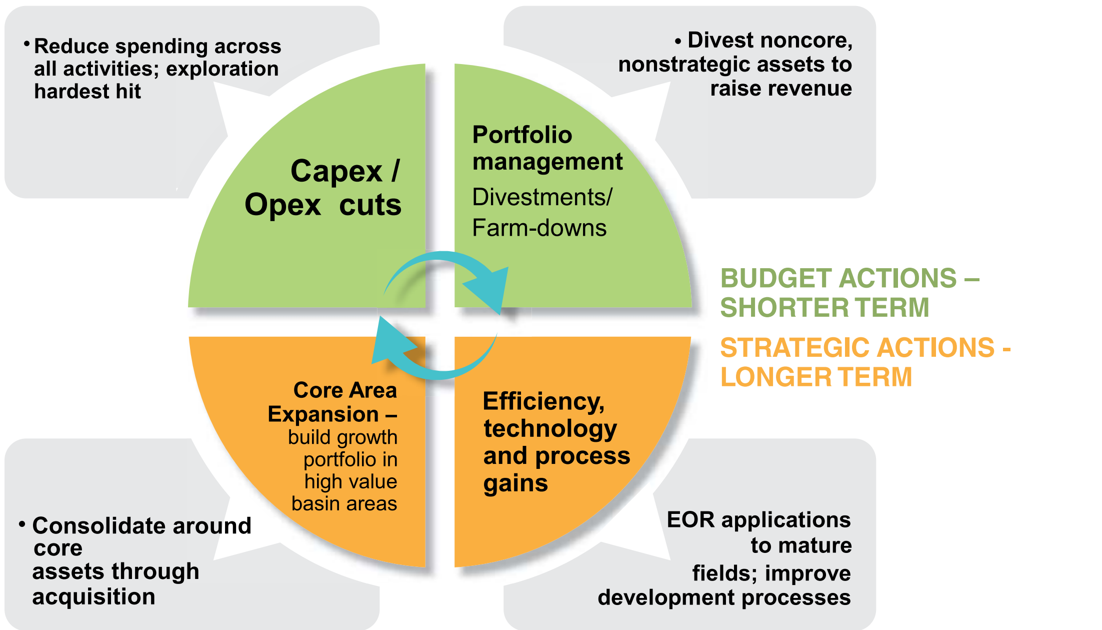
2.2 Survival and differentiation: NOCs and IOCs responses

NOCs and IOCs strategies are described in the figure below

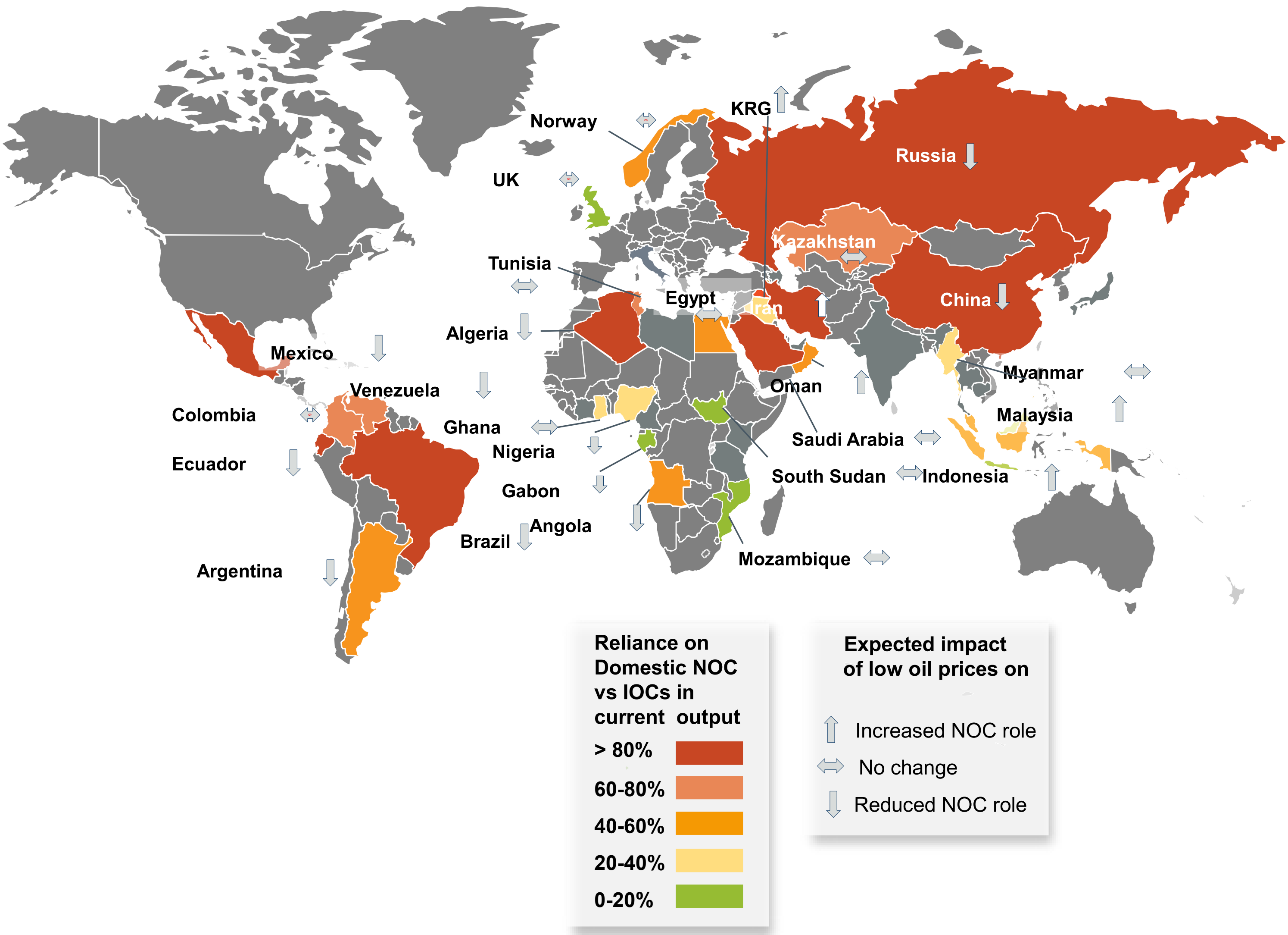
NOCs' Strategies



IOCs' Strategies



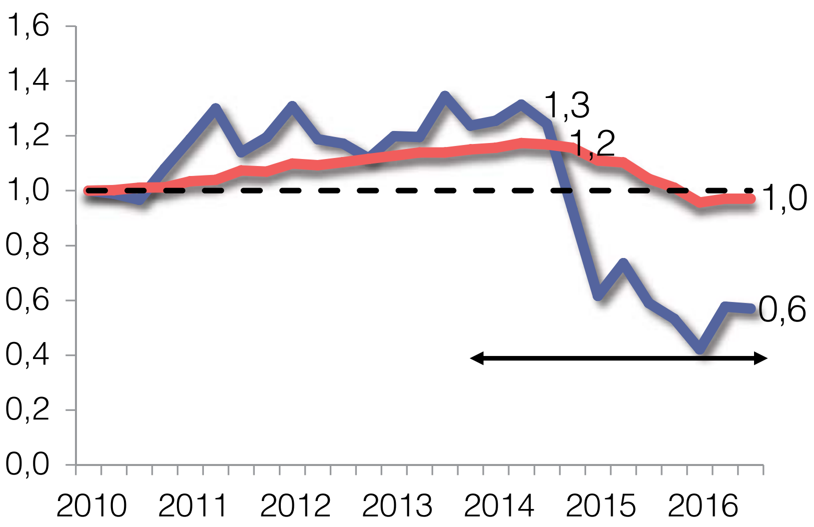
The reliance of selected countries on domestic NOCs vs foreign investors for current oil and gas production

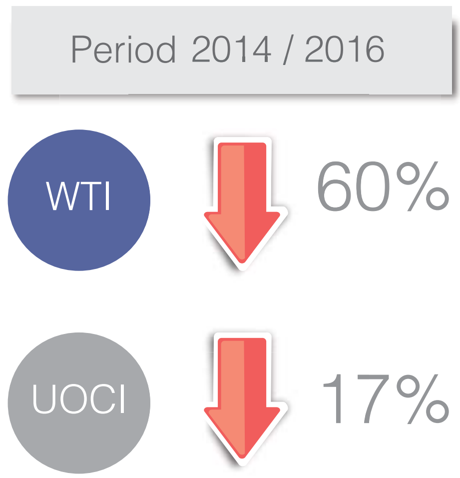


Source: Both figures were extracted from the presentation of Ricardo Bedregal, IHS-Markit

3. Reduction of prices, with cost inertia and years of inflation

The extended period of high prices generated cost inflation, due to agents' rent-seeking behaviour. In addition, due to the specific characteristics of these costs in a capital intensive industry, there is a strong inertia that prevents rapid adjustment to sudden changes of prices, forcing the producer to absorb any price falls in the short term. According to IHS data, the UOCI (Upstream Oil Costs Index) was only reduced by 17%, while prices were reduced by 60% between 2014 and 2016. If we analyze IHS' UCCI (Upstream Capital Costs Index), the indicator rose 133% between 2000 and 2014, to decline only 28% with the fall of oil prices.





UOCI: Upstream Operating Cost Index

Source: Figure extracted from the presentation of Juan Schijmann, Pluspetrol

Juan Schijman, Pluspetrol

4. **A new way of doing things**

The cost optimization schemes used in some companies were presented and everyone agreed that the strategy should be participatory, including operational areas, but with a strong leadership from the corporation. It was emphasized that it should exist **a change in the way of thinking, placing more focus on efficiency rather than effectiveness**, generating a culture of continuous improvement; and that the real challenge is to ensure the sustainability of the optimization program. In times of crisis, it is important to be resilient and that implies **changing the way things are done at all levels**, working on costs, organizational and process structures, and also in standards and procedures.

In addition, emphasis was placed on the fact that changing the way of thinking implies breaking paradigms and breaking with a certain institutional inertia that is usually resistant to change. Although this meant a challenge, some companies were able to successfully advance in various processes (air transportation, employee's regime, well service contractors with permanent presence in the field from the beginning of the license agreement, etc.), some of which had remained unchanged for decades.

Some solutions for integrated management of the reservoir lifecycle were also shown, and it was emphasized the importance of working cooperatively in decision making between oil companies and service providers while focusing on technology. It was highlighted that -at present- most of the research and development is being done in companies that provide services and that the challenge is to integrate a multidisciplinary team that allows to simultaneously address the technological and financial management issues.

Ernesto Ordóñez
Schlumberger

Ramón Cavero
Pluspetrol

Jim Rangel
Weatherford

5. **Key Findings**

1. Structural fall in prices, which will not return to pre-crisis levels, at least in the short term.

2. Strong cost inertia after years of inflation, little flexibility and instant adaptability of operators.

3. The main strategies adopted by companies to deal with the crisis have been the divestment, the reduction of CAPEX and OPEX, the focus of the innovative and sustainable effort on optimization as a way to reduce costs, and stricter management of the investment portfolio. Besides, it should also be considered that:

    - The changes in the portfolio are within a "buyers market", but without buyers, and with the NOCs in need to reduce their leverage after having contracted high levels of debt. Depending on the situation of each country, there will undoubtedly be institutional changes that could strengthen or weaken the NOCs in order to encourage investment.
    - The large plunges in investment, may have an impact in the short term but could generate difficulties in the medium term.

4. A scenario like today requires a change of mindset, a new way of doing things, based on efficiency. This change of mentality finds resistance inside the companies due to institutional inertia.

5. This change of mindset also implies addressing the challenge with collaborative business models between operators and suppliers that allow for "win-win" schemes. These models must go through a process that takes time to be implemented and therefore must begin to be developed as soon as possible.

Agenda

Speaker	Company	Session
Ricardo Bedregal	**IHS**	Survival and differentiation: IOC and NOCs response to low oil prices
Juan Schijman	**PLUSPETROL**	How to remain profitable in a low prices environment?
Alejandro Ponce	**REPSOL**	Low price context and company resilience
Jim Rangel	**WEATHERFORD**	Proactive asset management: Rejuvenate your field and optimize production
Ramón Cavero	**PLUSPETROL**	Cost optimization
Ernesto Ordóñez	**SCHLUMBERGER**	Collaborative business models

Disclaimer

Although efforts were made to ensure the accuracy of the information contained in this document, neither ARPEL nor any of its Member Companies, neither the authors or reviewers, nor the companies and institutions they represent, assume any responsibility for any use made hereof. No references made to names or trademarks of equipment manufacturers and/or processes represent any endorsement by the authors, ARPEL or any of its Member Companies.

EVENT REPORT

How to remain profitable in a low oil prices environment

REGIONAL ASSOCIATION OF
OIL, GAS AND BIOFUELS SECTOR COMPANIES
IN LATIN AMERICA AND THE CARIBBEAN

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 over 90% of the upstream and downstream activities in the region and includes national, international and independent operating companies, providers of technology, goods and services for the value chain, and national and international sector institutions.

Regional Headquarters:
Javier de Viana 1018. CP 11200, Montevideo, Uruguay
Ph.: +(598) 2410 6993 | info@arpel.org.uy

www.arpel.org