

A New Americas?

2013 EIA Energy Conference

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The New Americas (excluding USA, Canada)

Points for Discussion

Latin America post Chavez? Can Mexico deliver on reforms?

Can state NOCs in Brazil, Venezuela and Mexico deliver on mega projects?

Can emergent energy trends, such as rising LNG imports, petroleum product demand growth and deteriorating refining sector, be reversed?

What is the supply outlook of the region and future industry structure?

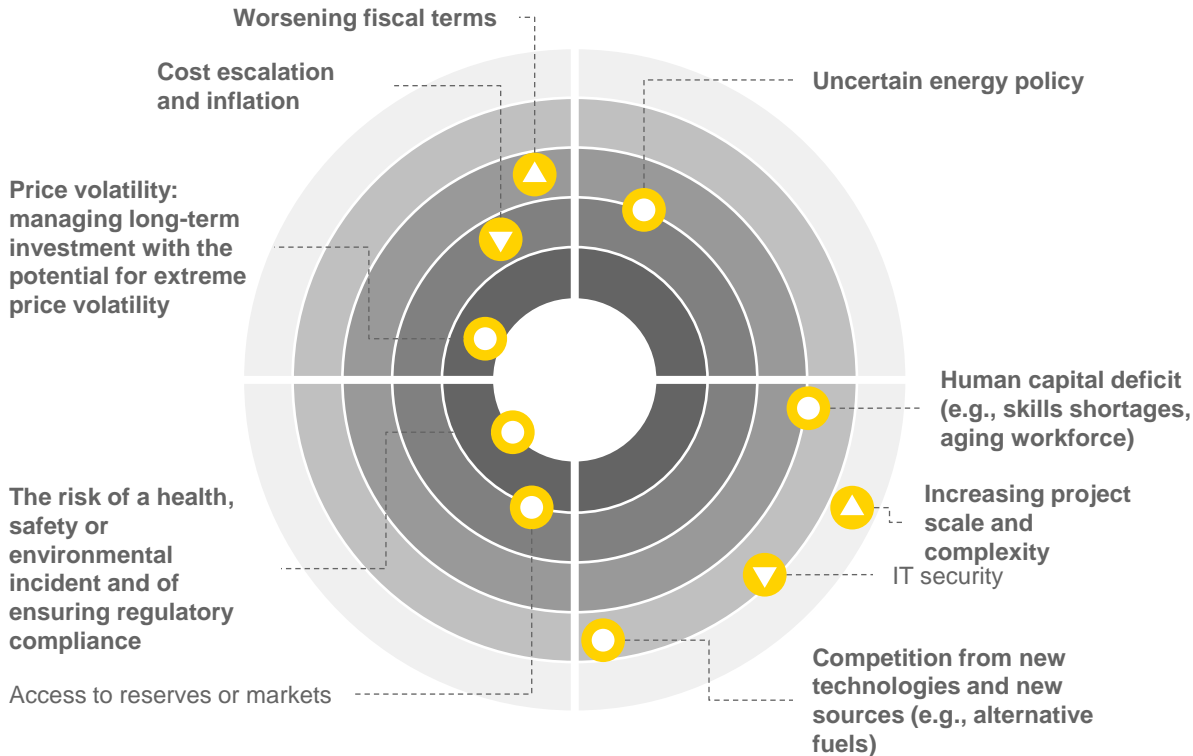


Oil & gas business risks 2013

Global risks are relevant for the New Americas

Cost competitiveness

Stakeholder confidence



Customer reach

Operational agility

The top 10 risks:

1. The risk of a health, safety or environmental incident and of ensuring regulatory compliance
2. Price volatility: managing long-term investment with the potential for extreme price volatility
3. Access to reserves or markets
4. Cost escalation and inflation
5. Uncertain energy policy
6. Worsening fiscal terms
7. Human capital deficit (e.g., skills shortages, aging workforce)
8. Competition from new technologies and new sources (e.g., alternative fuels)
9. IT security
10. Increasing project scale and complexity

2013 ranking and expected 2015 ranking



Up in 2015



Same in 2015



Down in 2015

Political landscape

New Americas

Latin America post Chavez?

Can Mexico deliver on reforms?

	Revolutionaries	Incrementalists
Countries	<ul style="list-style-type: none">▶ Argentina▶ Bolivia▶ Cuba▶ Ecuador▶ Nicaragua▶ Venezuela	<ul style="list-style-type: none">▶ Brazil▶ Chile▶ Colombia▶ Mexico▶ Peru▶ Uruguay
Politics	<ul style="list-style-type: none">▶ Concentration of power▶ From revolution to?	<ul style="list-style-type: none">▶ Incremental reforms and preservation of institutions
Economy, Social	<ul style="list-style-type: none">▶ Direct state participation▶ Limited role for non-aligned private sector▶ Heavy promises to poor sector of the economy	<ul style="list-style-type: none">▶ Economic diversification▶ Market model, negotiate with private sector▶ Focus on regulation, policies and social contract

Source: EIG

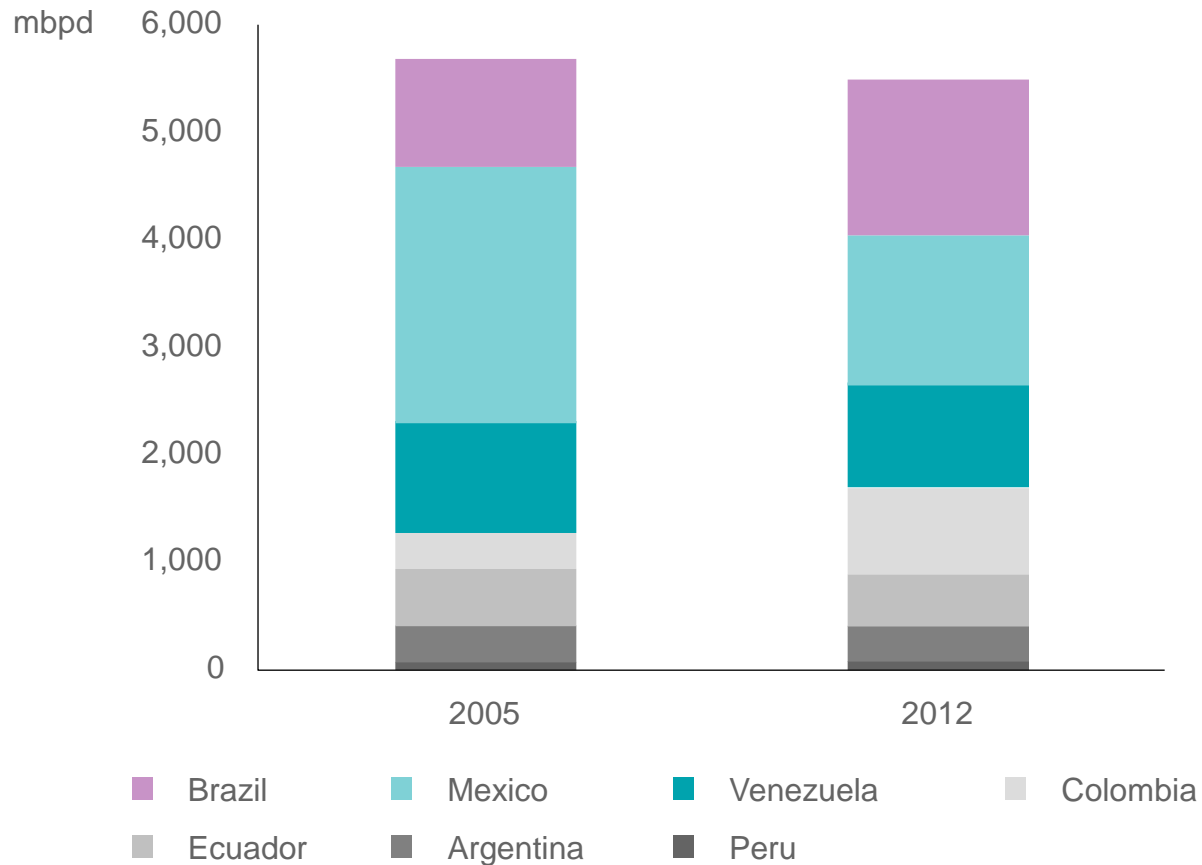
Key energy themes: fundamentals

New Americas

	Supply	Demand
Established	<p>Conventional oil/gas, tight gas</p> <p>Heavy oil</p> <p>Deepwater oil — conv</p> <p>Shallow water</p> <p>Biofuels</p> <p>LNG (small)</p>	<p>Gasoline</p> <p>Domestic gas, LPG</p> <p>Biofuels</p>
Emerging	<p>Shifting HO trade</p> <p>Shale gas</p> <p>Deepwater — pre salt</p> <p>Tight oil</p> <p>Offshore Pacific</p>	<p>Refining expansion plans</p> <p>Gasoil/Diesel</p> <p>LNG</p> <p>PetChem</p>

Heavy oil: limited increases on the horizon?

Key energy themes: fundamentals



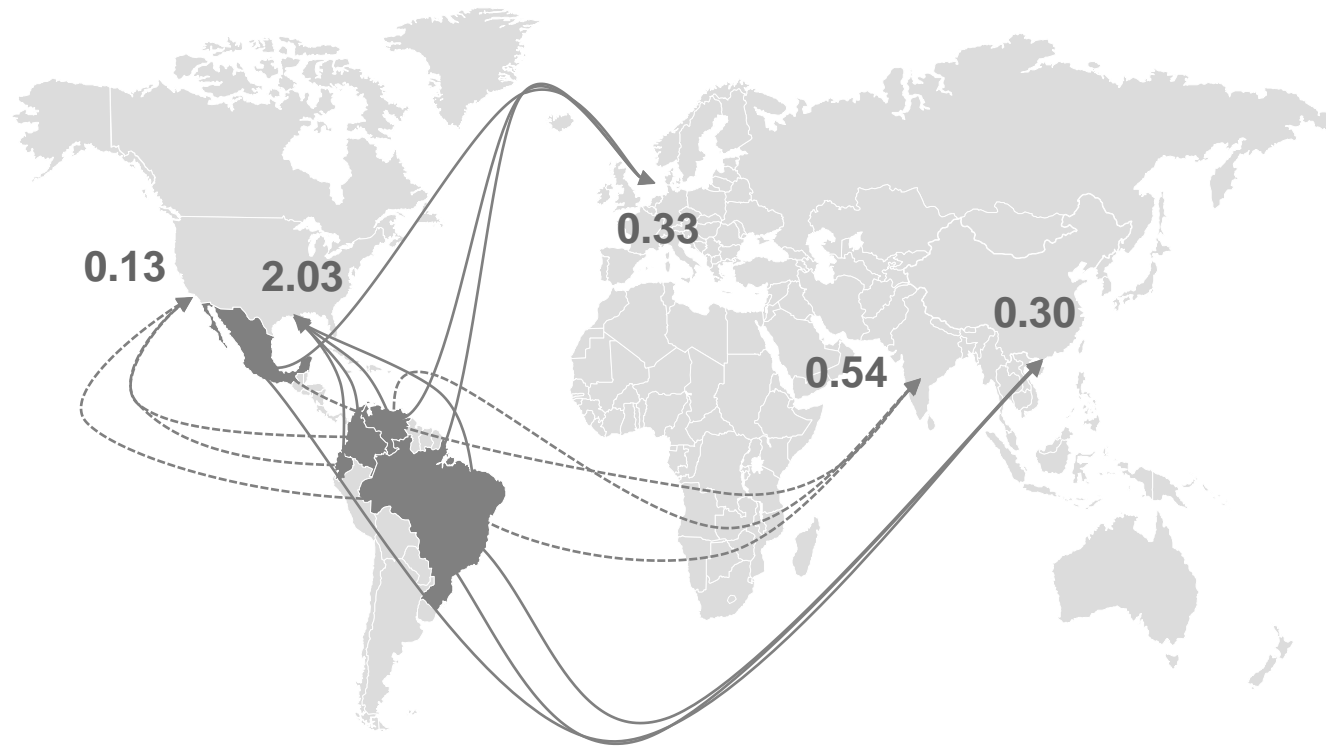
Source: Carmona, OIES 2013

Heavy oil: changes in trade ...

Key energy themes: fundamentals

Latin America heavy trade crude flows – last 12 months

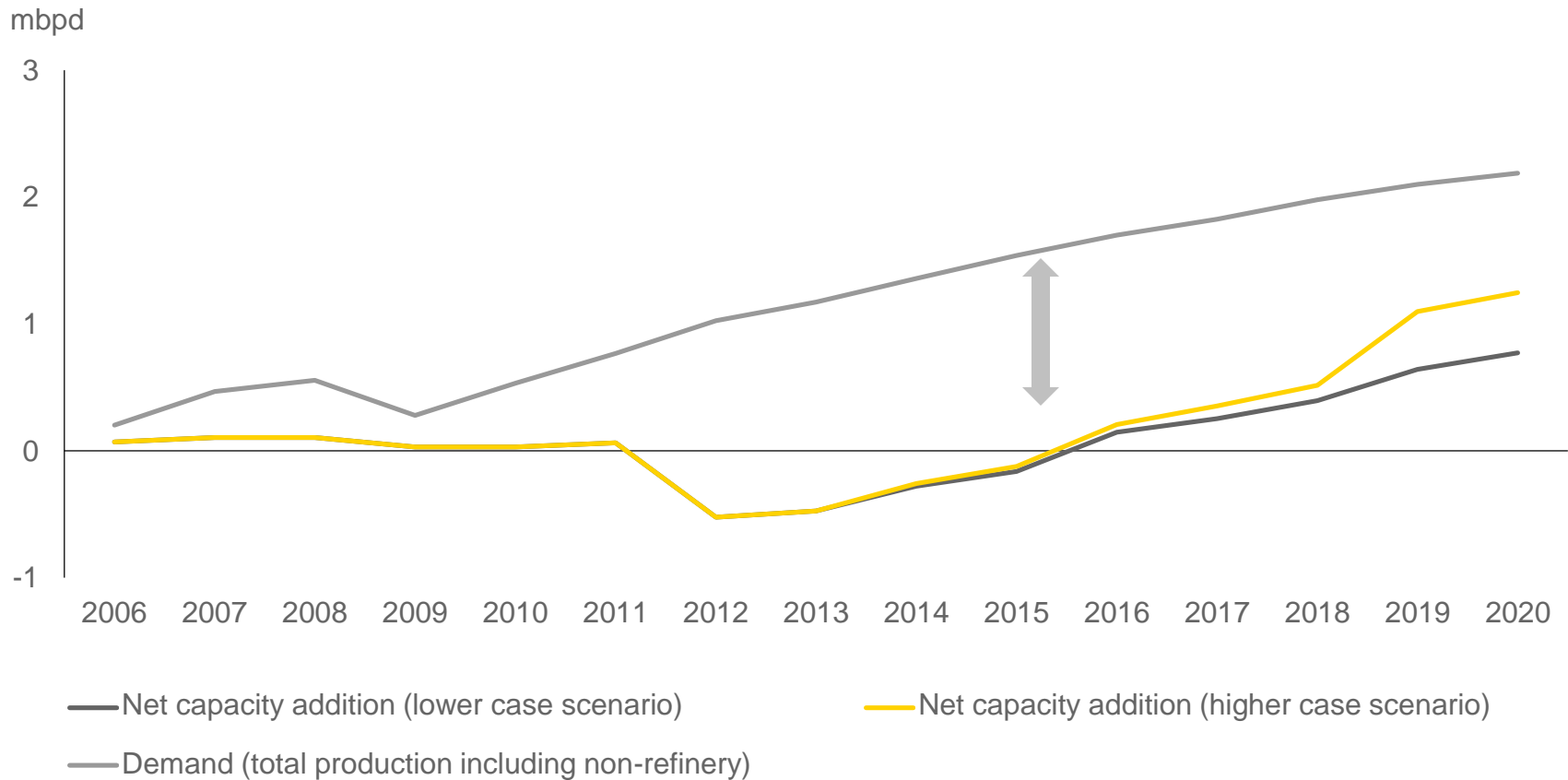
Exports 3.5 mbpd



Source: OIES

Product demand vs. refining expansions: gap to persist

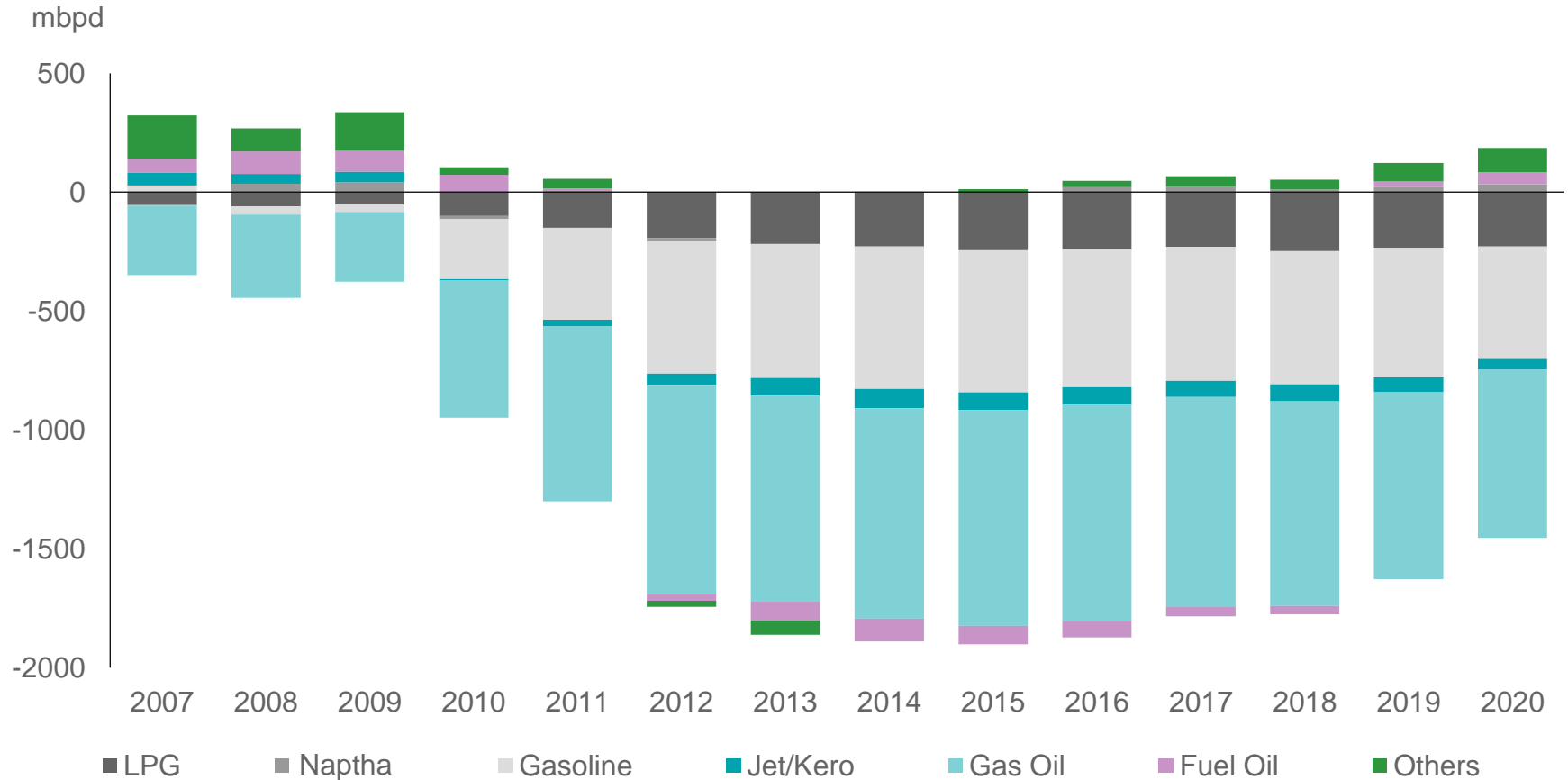
Key energy themes: fundamentals



Source: FACTS, OIES 2013

Projected net product balance: a new major importer?

Key energy themes: fundamentals



Source: FACTS, OIES 2013

Shale gas and tight oil: number one?

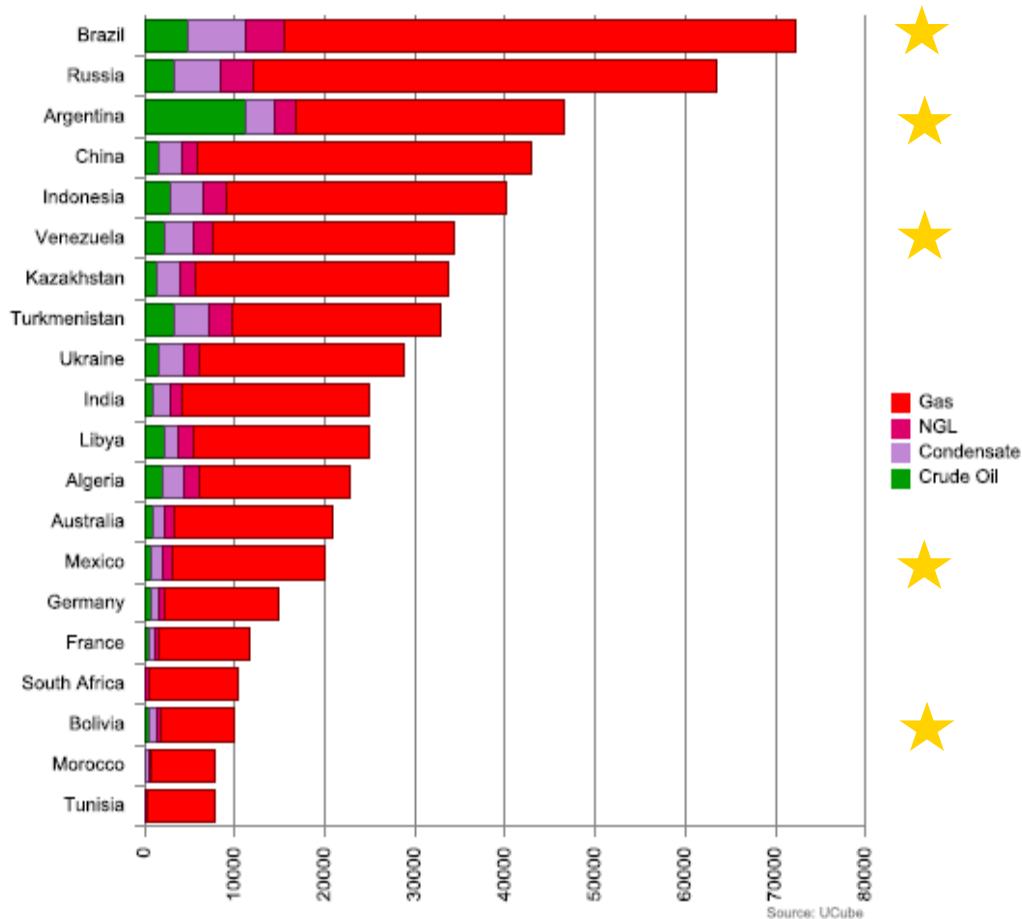
Key energy themes: fundamentals

Likely to be the most promising region outside North America and Australia

More than 150bn boe in the region to target

Top commercialization potential Brazil, Argentina, Colombia

Top other potential Venezuela, Mexico and Bolivia



Source: Finding Petroleum; Rystad estimates that globally commercially recoverable unconventional (excluding heavy oil) resources are 700Bn boe or 50% of last EIA report

Shale gas and tight oil: number one?

Unconventional regulatory outlook

	Economic and energy security drivers	Environmental and social concerns	Strength of political interests opposing activity	Regulatory outlook
Argentina	High	Low	Low	Regulatory framework will continue to support unconventional development, but weak incentives, questions over contract sanctity and energy policy volatility remain investment deterrents.
Brazil	Low	Medium	Low	Growing interest in unconventional is attracting a closer look by regulators.
Colombia	High	Low	Low	Regulatory framework in place, activity is rising.
Mexico	Low	Low	Low	Limited progress likely to be made in near term due to more pressing priorities.

Text color guide: Green denotes a score that is supportive of unconventional gas development, red denotes a score that is an investment deterrent.

Source: EIG

LNG: a major force in the market

Key energy themes: fundamentals

	Exporters	Importers
Established	Trinidad Peru (24.5 Bcm)	Argentina Chile Puerto Rico (6.8 Bcm)
Emerging	Colombia? Venezuela? Brazil?	Mexico Brazil Caribbean* (3.2 Bcm)

Source: EY, BP Statistical Review; * Jamaica, Dominican Republic

Deepwater pre salt: a giant new play

Key energy themes: fundamentals

- ▶ Petrobras has surpassed 300kbpd from its operated Brazilian pre-salt oil fields
- ▶ 300kbpd milestone comes 7 years after the first pre-salt discovery in 2006, whereas the ramp-up to 300kbpd took 17 years in the GoM, 9 years in the North Sea and 11 years in the Campos basin
- ▶ Production is being sourced from eight different platforms presently. Seventeen wells were required to achieve the milestone, equal to c17.5kbpd per well
- ▶ The ramp-up in the Santos basin pre-salt is set to continue. Between 2014 and 2016, another 10 platforms will be brought onstream.

**Target is to reach
1 mbpd by
2017 and 2.1
mbpd by 2020**

Source: Bernstein 2013; BG, Petrobras press releases; refers to operated production

Venezuela/PDVSA: new dynamic to manage?

Key energy themes: fundamentals

Refined products imports grew **182%** between 4Q 2011 (73.500 b/d) and 4Q 2012 (207.500 b/d).

Growing imports of gasoil and fuel oil used for electric plants
(20% of EG in 2012)

Estimated cost of imports in 2012: **\$7.8b**

Domestic operational costs also suffered from overvalued currency and high inflation

Cash-flow restriction since 2010:

▶ **Reduced actual revenues from exports in 28%–30%** in 2011–12.

- ▶ PDVSA oil-for-loan with China: used for non-oil spending.
- ▶ Subsidized oil sales to Central America and Caribbean countries (oil diplomacy) plus systematic arrears.

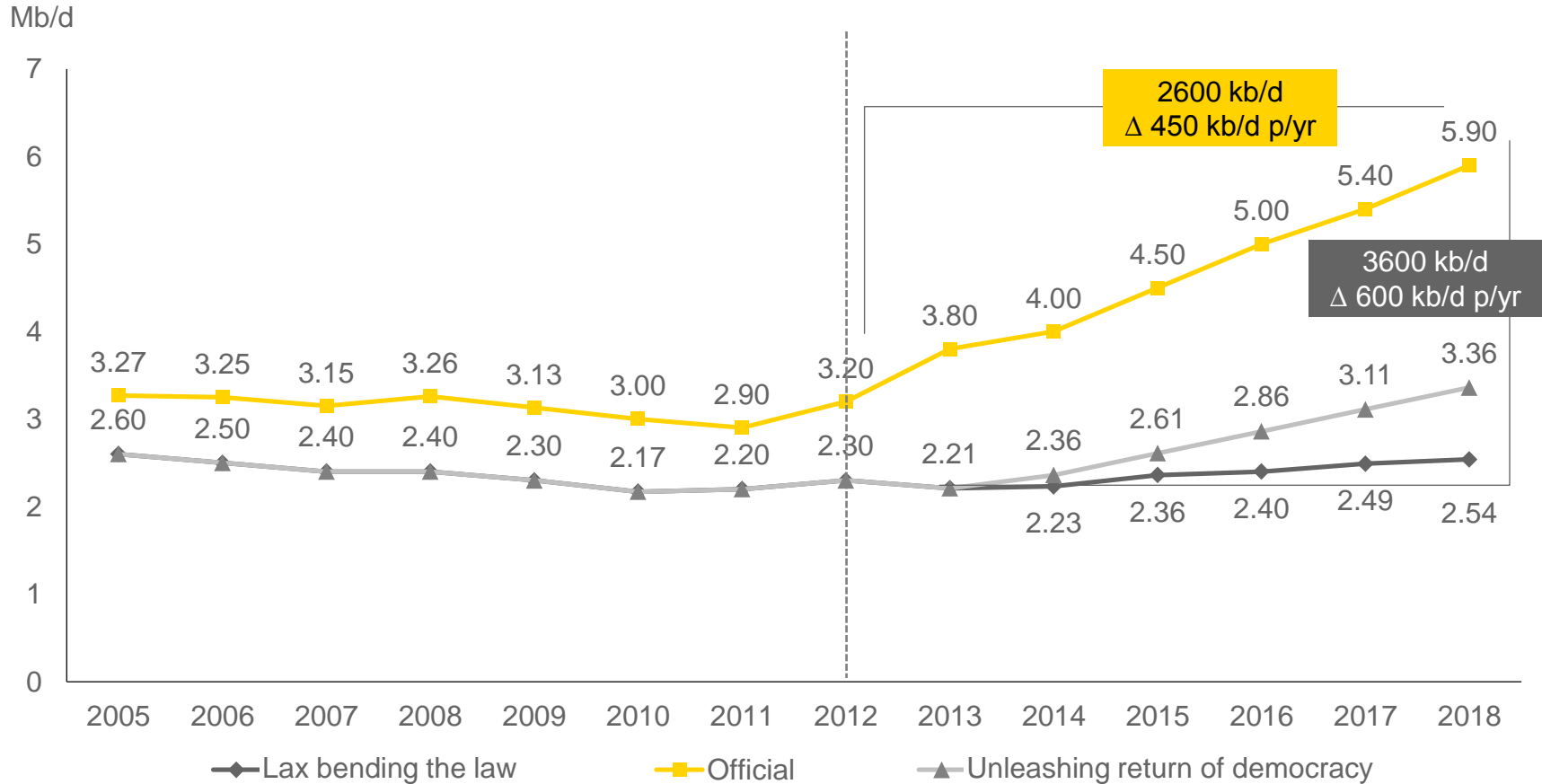
▶ Of the total gross revenues from exports, **31%–34% was transferred** to government funds and social programs (2011–12).

- ▶ PDVSA has accumulated **large unpaid sums ~\$27b** and gave promissory notes to the National Treasury since 2010. The actual balance at Banco Central de Venezuela is **\$38.5b**
- ▶ **Other debt in BS totals \$147b (100% in 2 years).**

Source: Dr Ochoa, EPRINC, PDVSA accounts, press reports

Venezuela/PDVSA: new dynamic to manage?

Production potential at risk



Source: PDVSA, CERI, LAEPDDB 2012

Welcome to the New Americas

Latin America post Chavez?
Can Mexico deliver on reforms?

Can emergent energy trends, such as rising LNG imports, petroleum product demand growth and deteriorating refining sector, be reversed?

Can state NOCs in Brazil, Venezuela and Mexico deliver on mega projects?

What is the supply and demand outlook of the region?

▶ Most will continue unless major steps are taken...

▶ Gradually, and at very high cost to the economy

- ▶ Stable HO, rising deepwater
- ▶ Rising LNG, products imports
- ▶ Players in shale gas/tight oil

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Oil and gas across the Americas: an energy axis for the 21st century

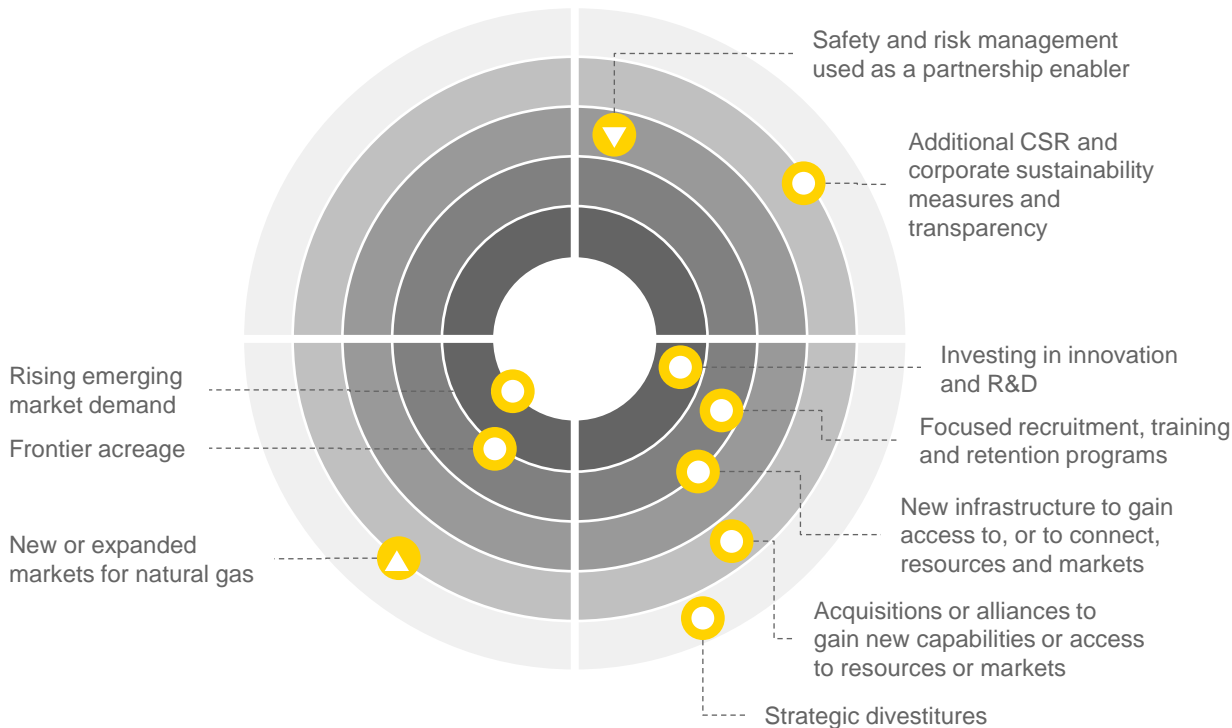


Oil & gas business opportunities in 2013

Global opportunities relevant for the New Americas

Cost competitiveness

Stakeholder confidence



Customer reach

Operational agility

The top 10 opportunities:

1. Rising emerging market demand
2. Investing in innovation and R&D
3. Frontier acreage
4. Focused recruitment, training and retention programs
5. New infrastructure to gain access to, or to connect, resources and markets
6. Safety and risk management used as a partnership enabler
7. New or expanded markets for natural gas
8. Acquisitions or alliances to gain new capabilities or access to resources or markets
9. Additional CSR (Corporate Social Responsibility) and corporate sustainability measures and transparency
10. Strategic divestitures

2013 ranking and expected 2015 ranking



Up in 2015



Same in 2015



Down in 2015