



Tendencias mundiales del GLP y su impacto en Colombia

29 de Agosto de 2018

1er Congreso internacional del GLP

GASNOVA

Asociación Colombiana del GLP

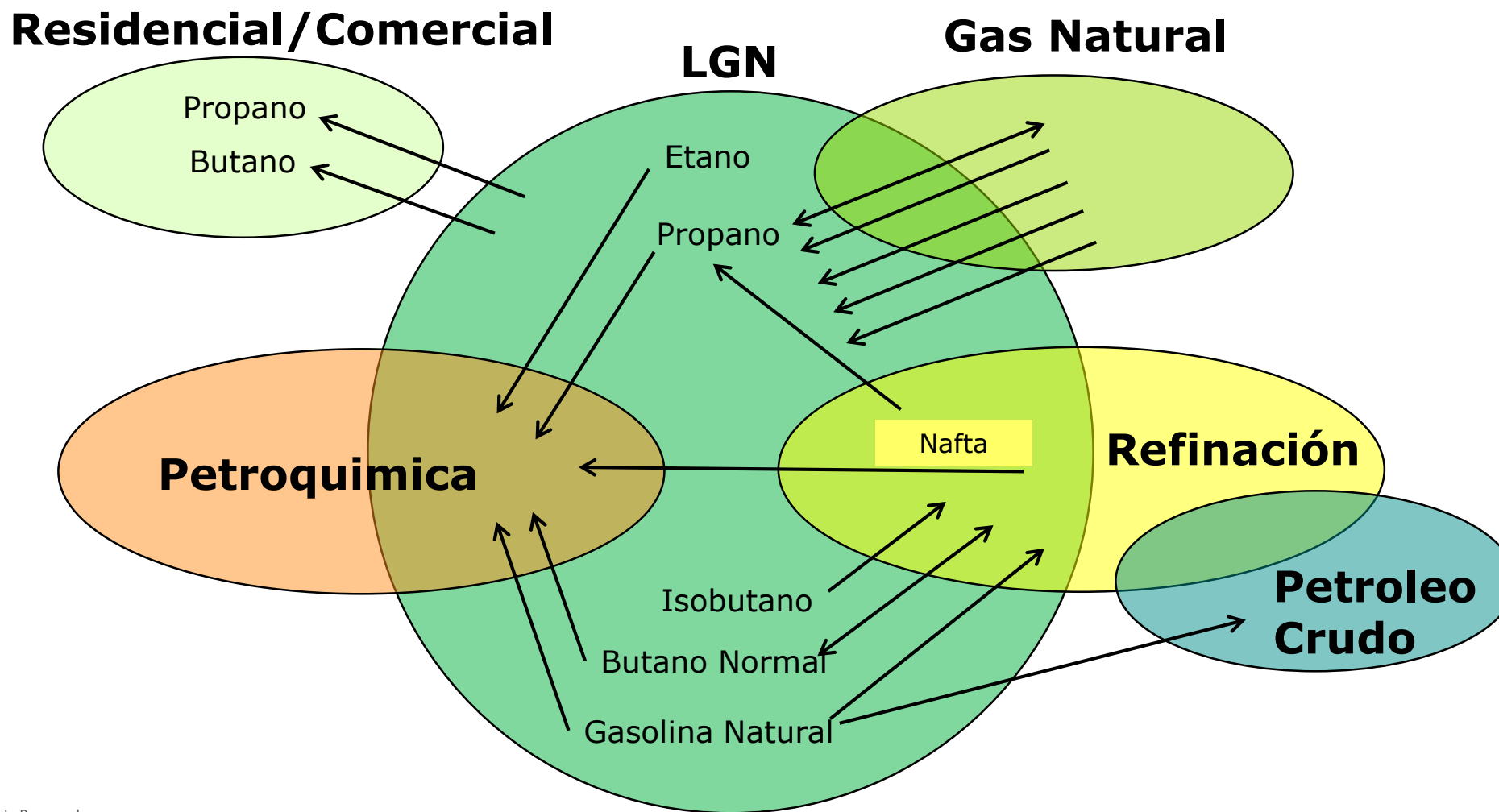
Adrian Calcano, Director – Líder de Petroleo y Gas Midstream para América Latina
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AGENDA

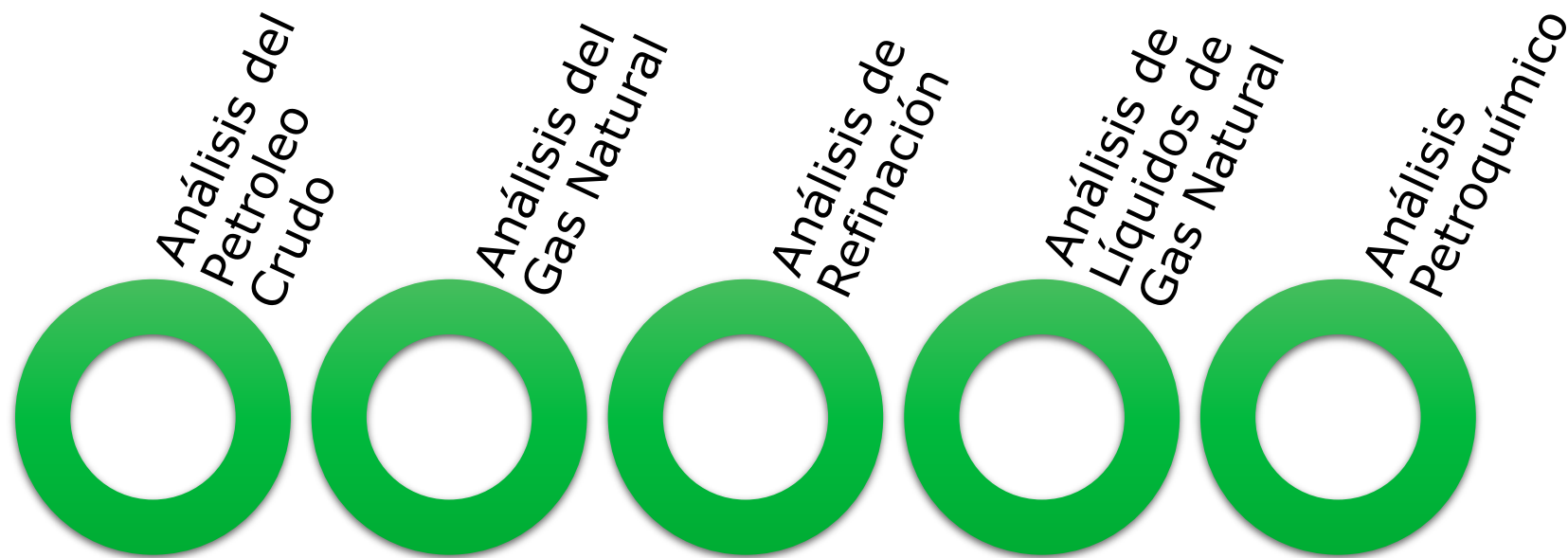
- Metodología IHS
- Panorama Mundial
- Panorama Regional
- Panorama de Colombia
- Panorama de Precios
- Conclusiones
- Seminario Gas LP en América Latina
- Apéndice

Metodología

Los Líquidos del Gas Natural (LGM) se ven afectados por varios mercados.

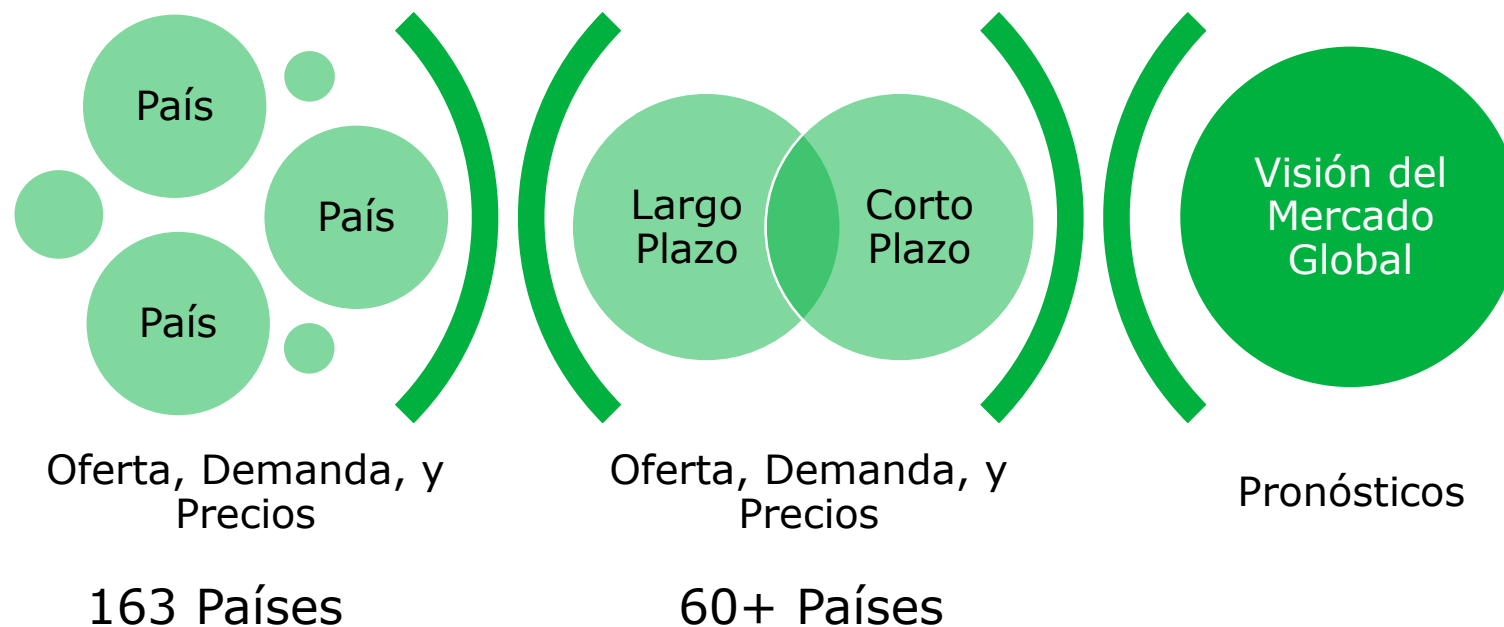


Nuestro proceso de análisis e investigación



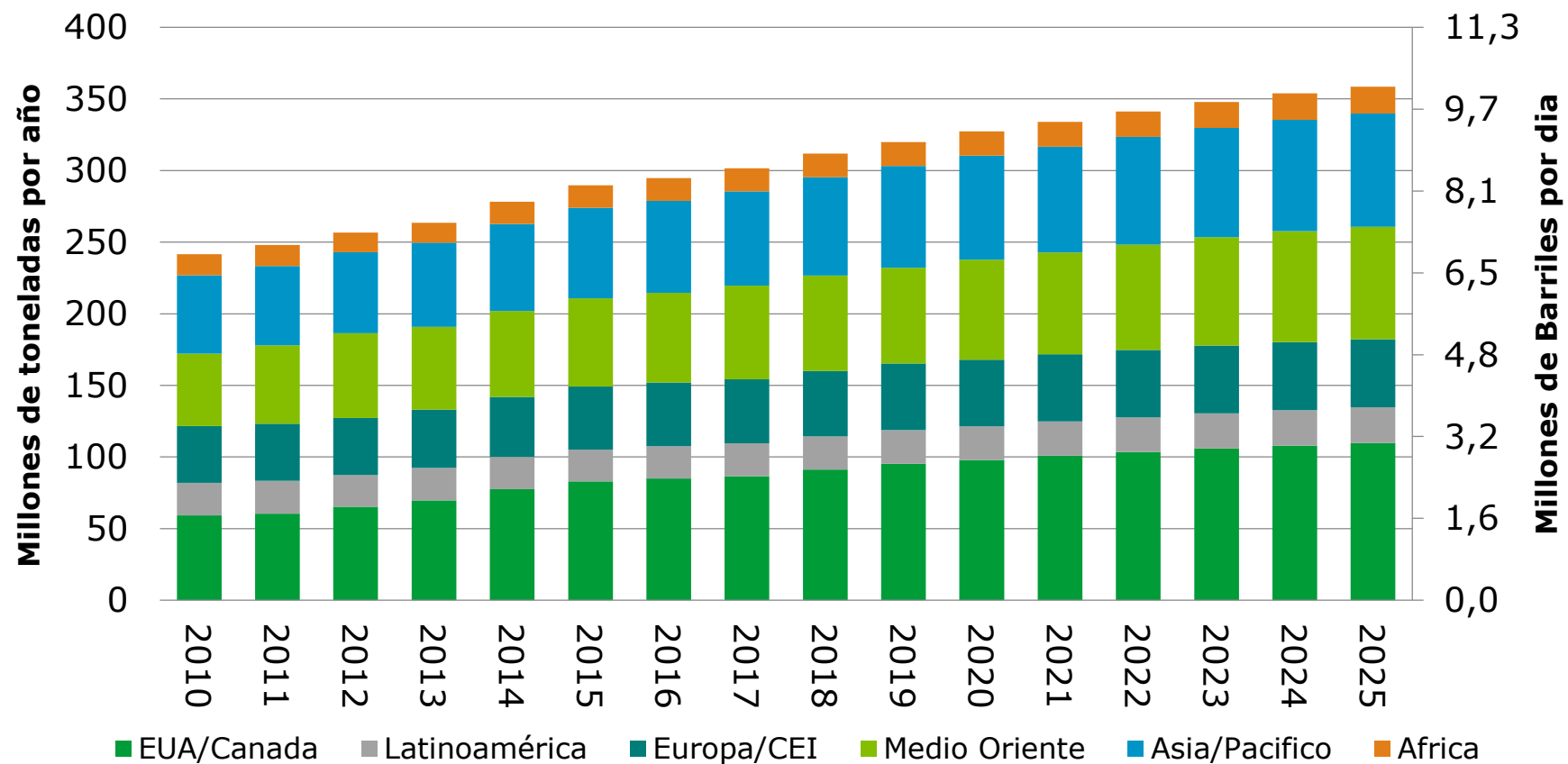
Reporte Anual Servicio de Líquidos de Gas Natural

- Análisis independiente del propano y butano.

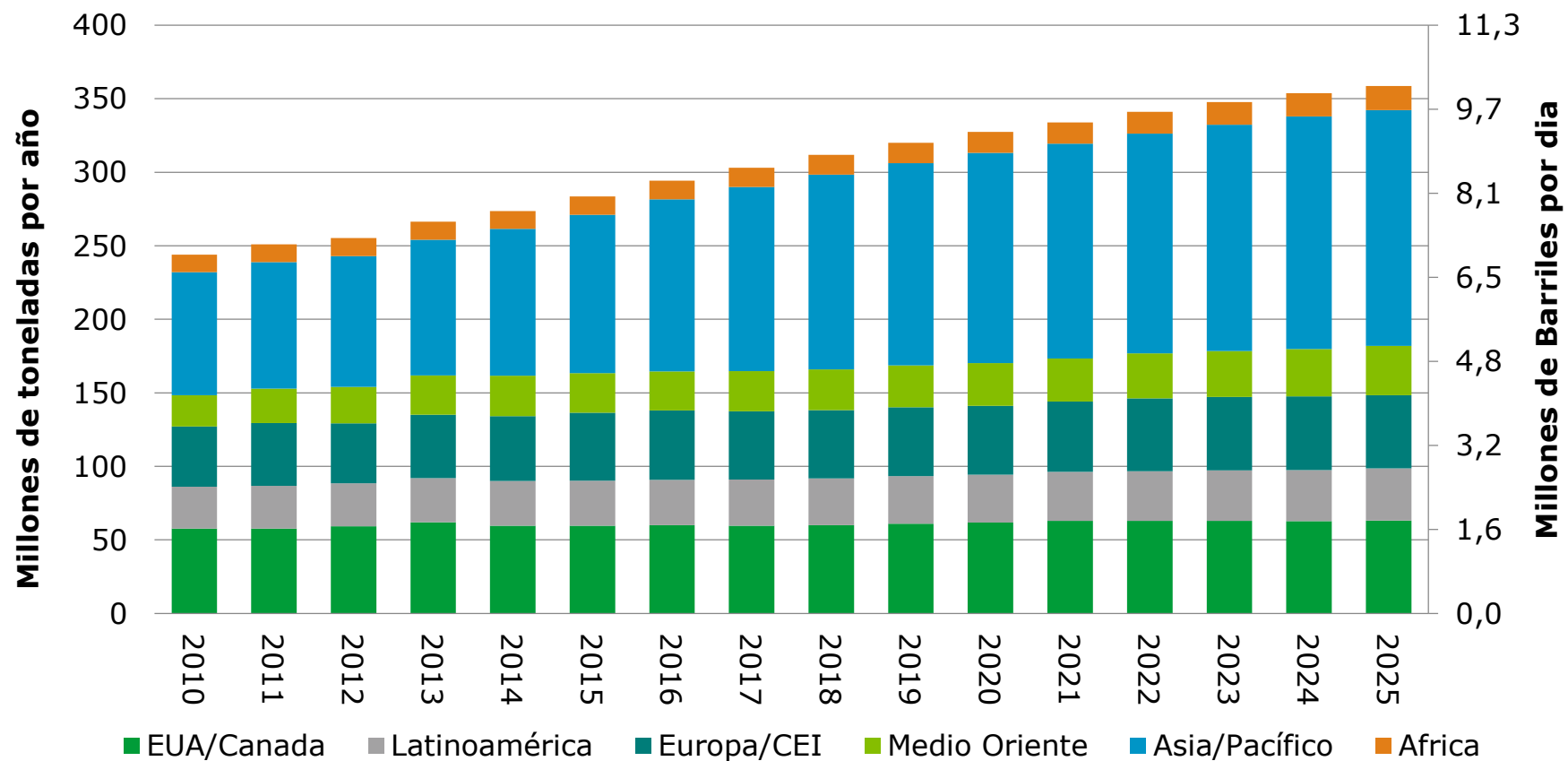


Panorama mundial

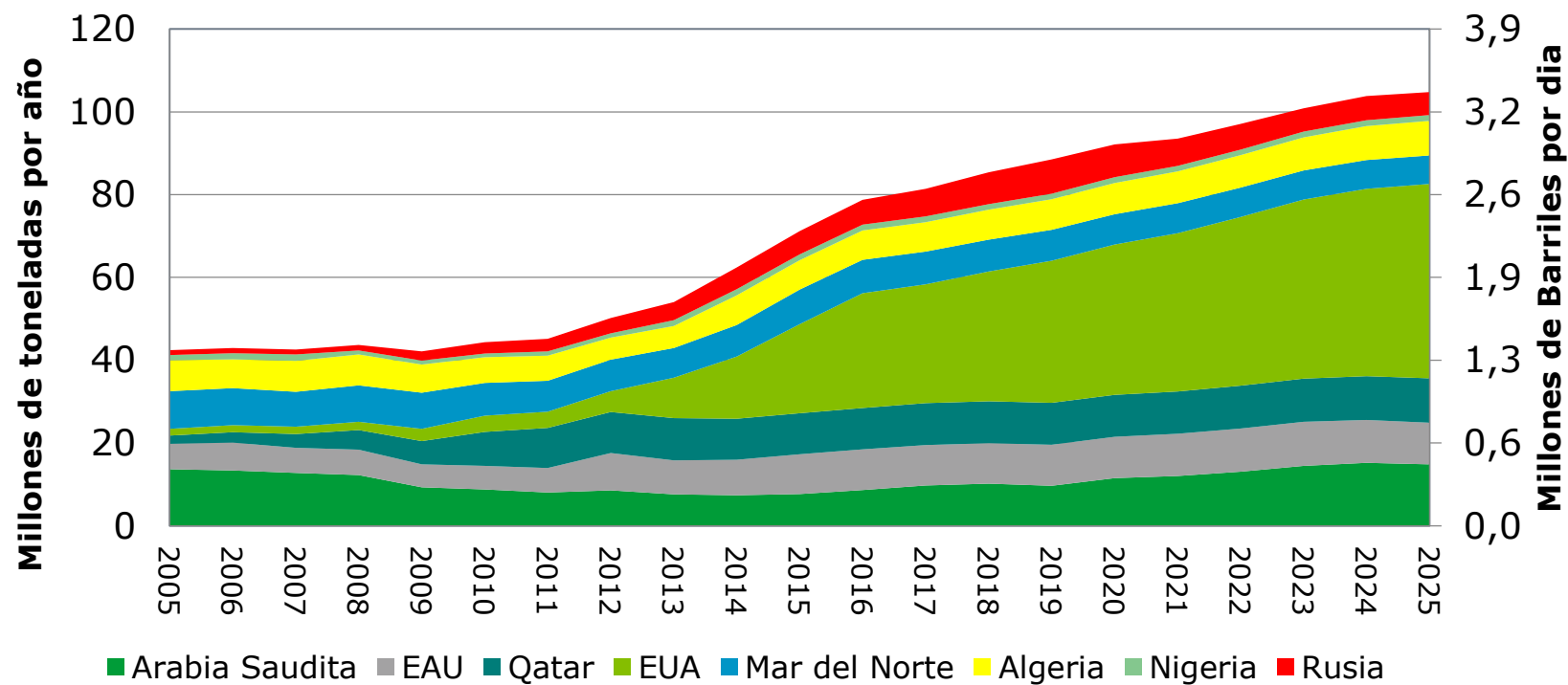
Producción de Gas LP Global



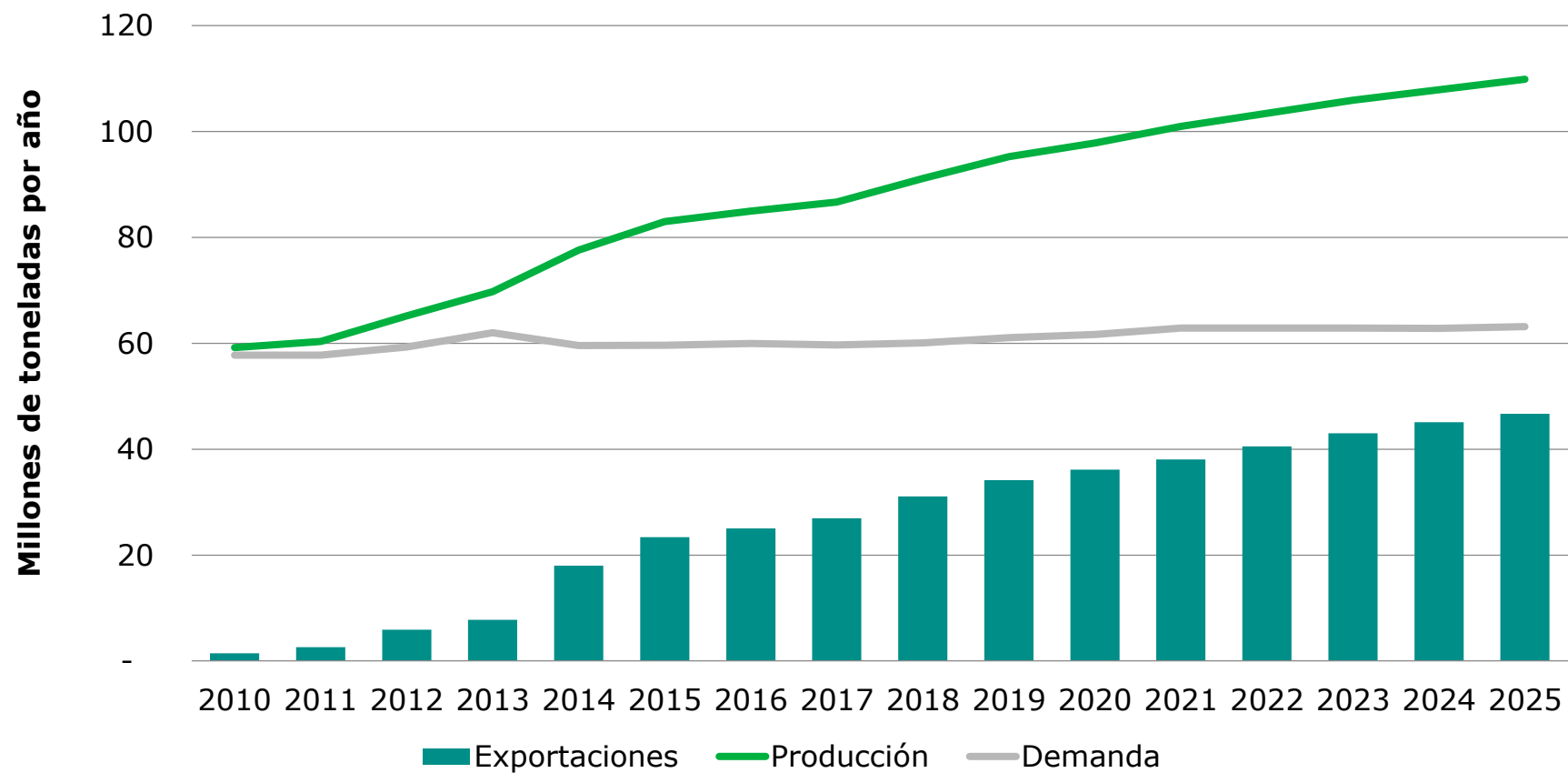
Demanda de Gas LP Global



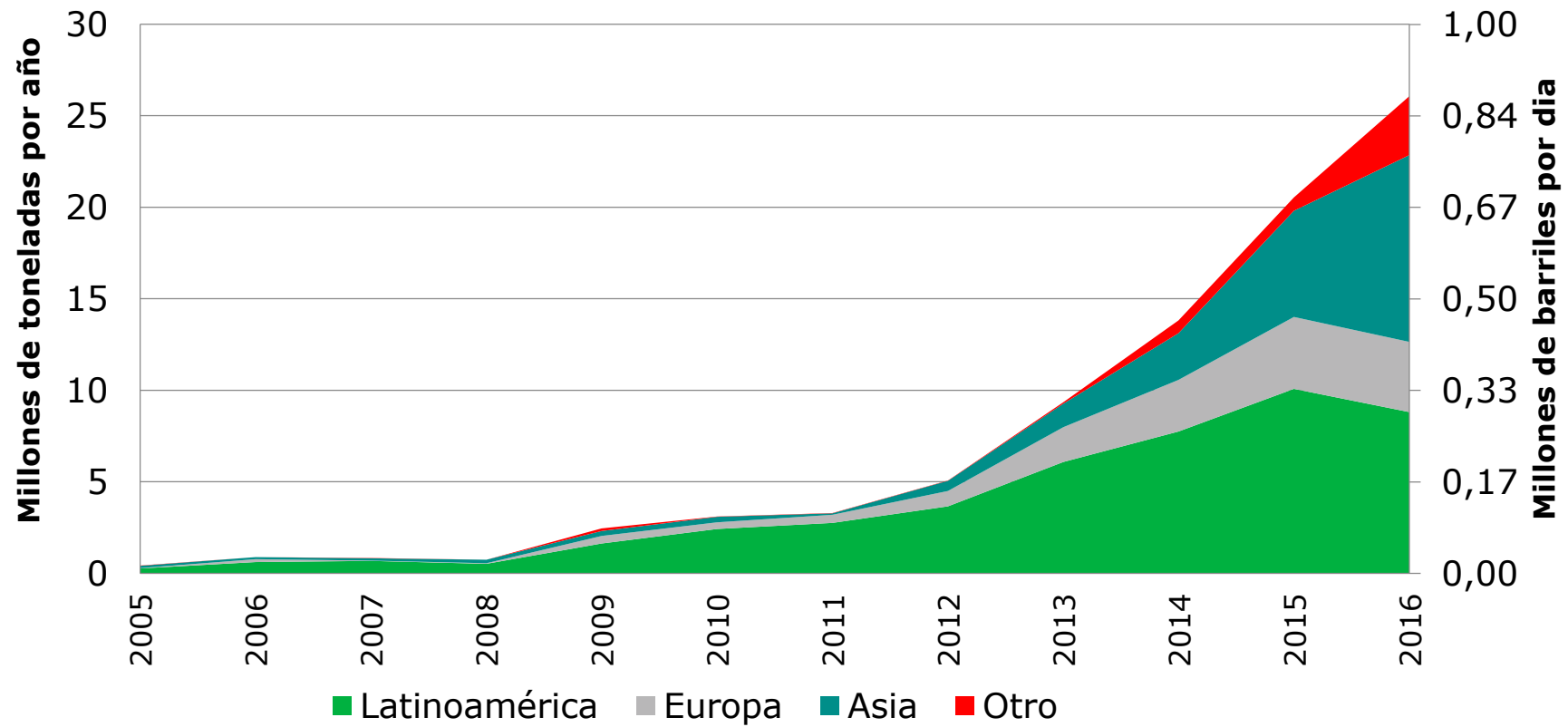
Exportaciones totales de GLP por exportador



Mercado Gas LP en Estados Unidos y Canadá

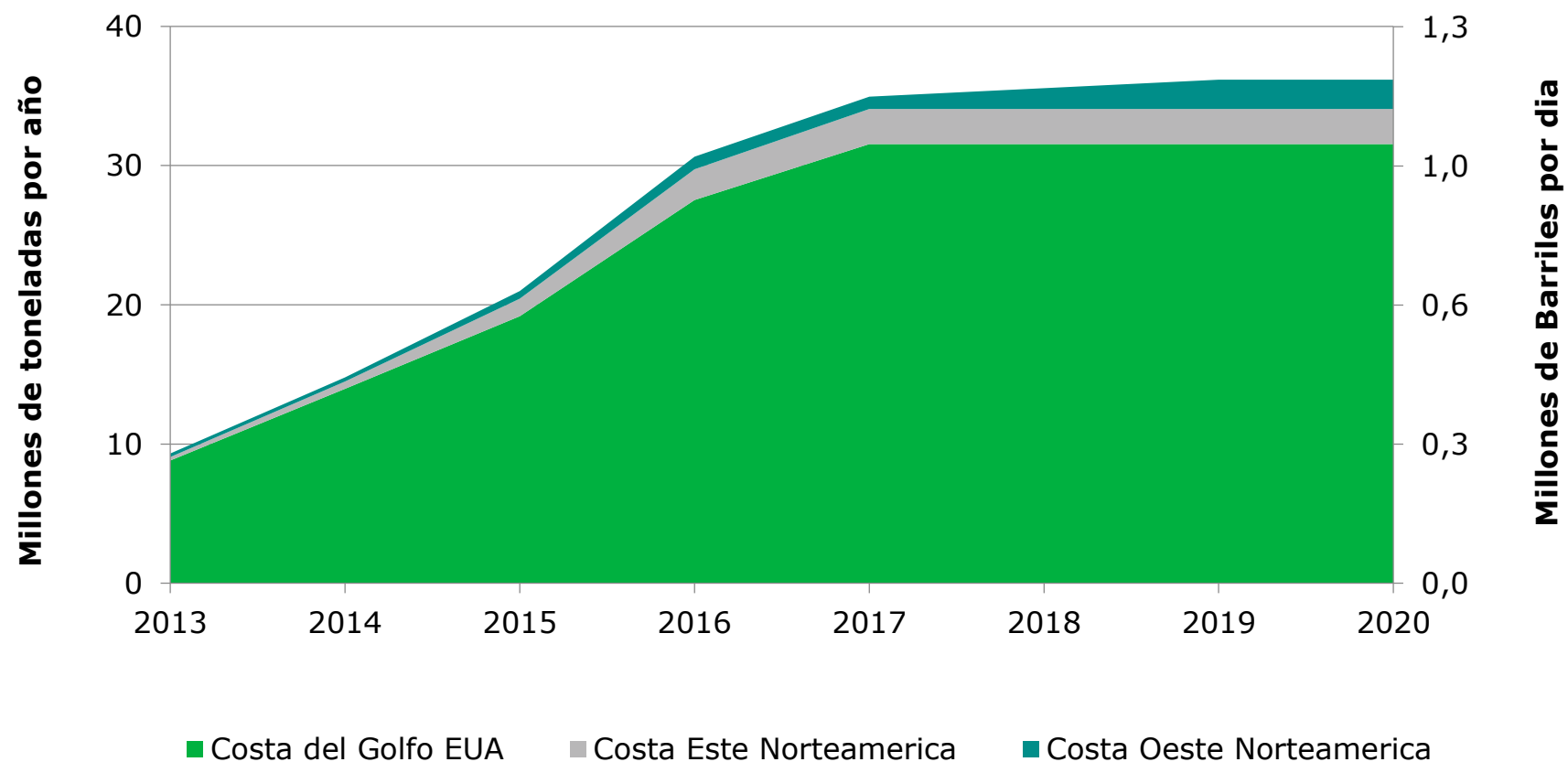


Destino de exportaciones de Gas LP de EUA



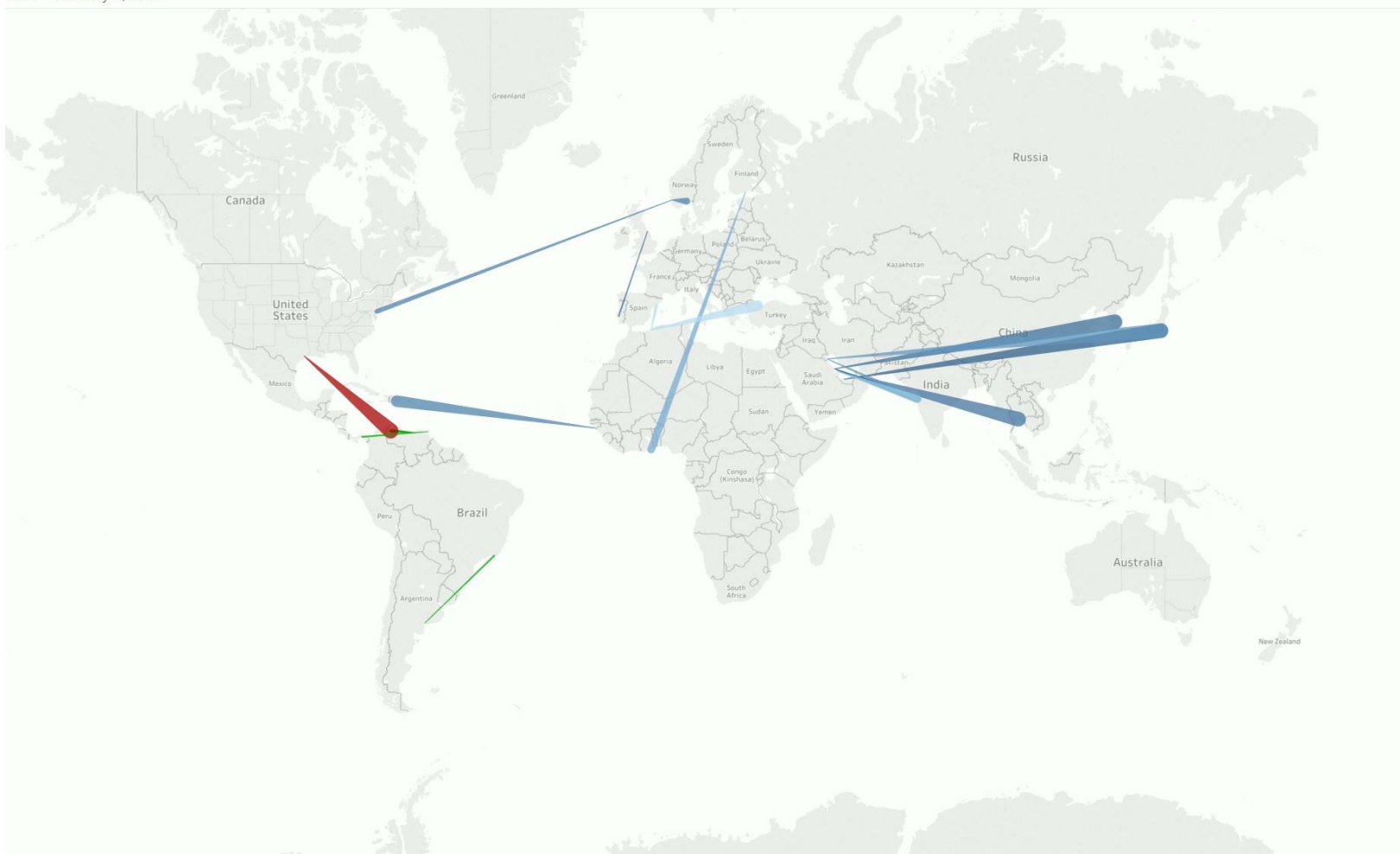
Source: IHS Energy - Waterborne

Capacidad de exportación terminal de Gas LP en EUA



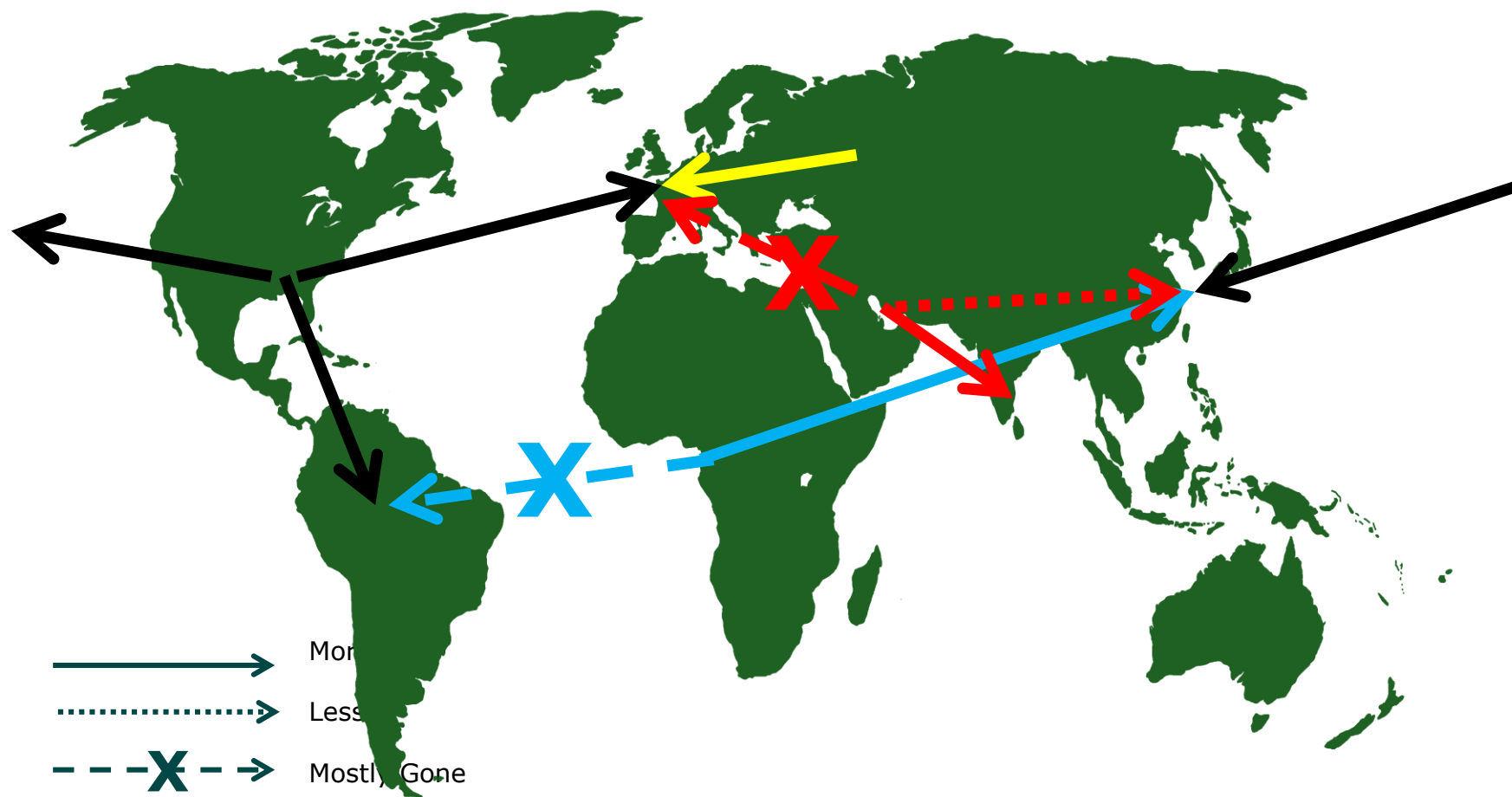
Comercio Marítimo durante los últimos 5 años

MAP - January 1, 2012



Fuente: IHS Energy – Waterborne LPG

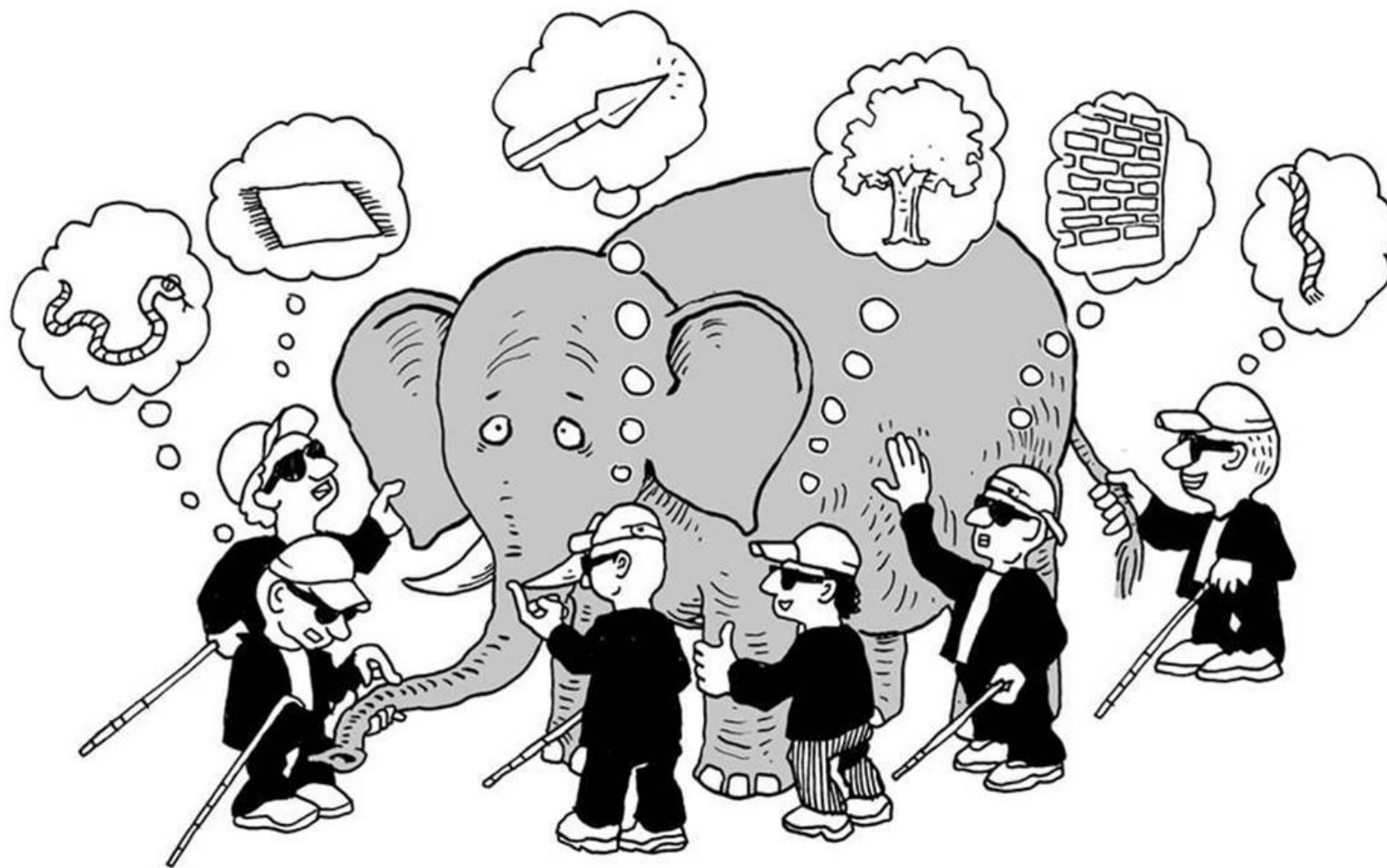
Flujo del comercio global de Gas LP



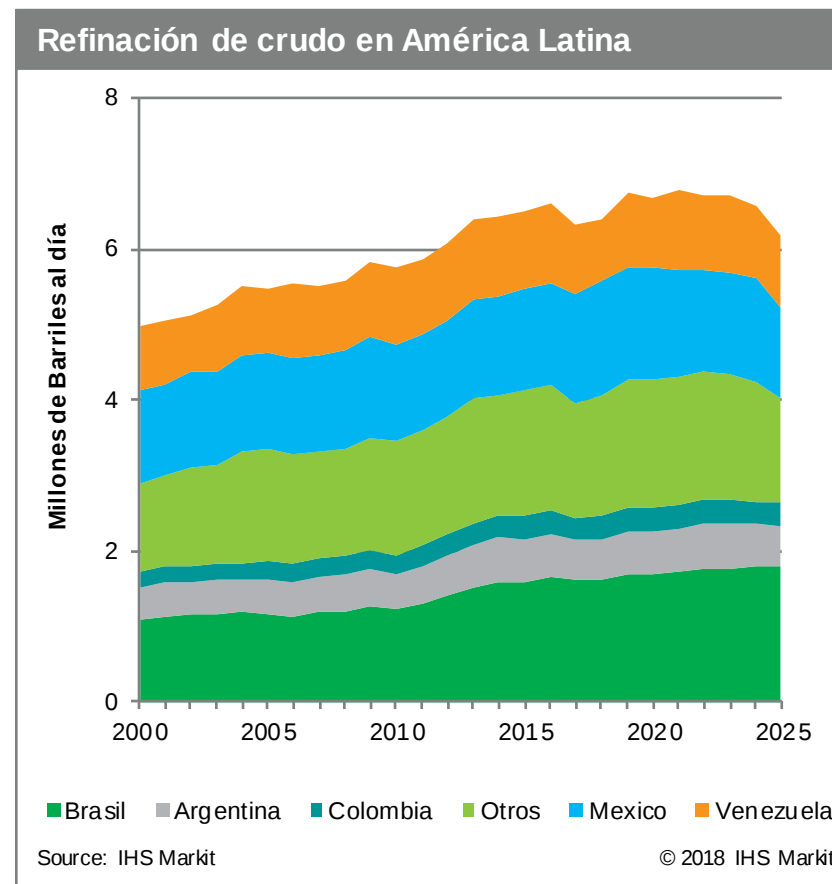
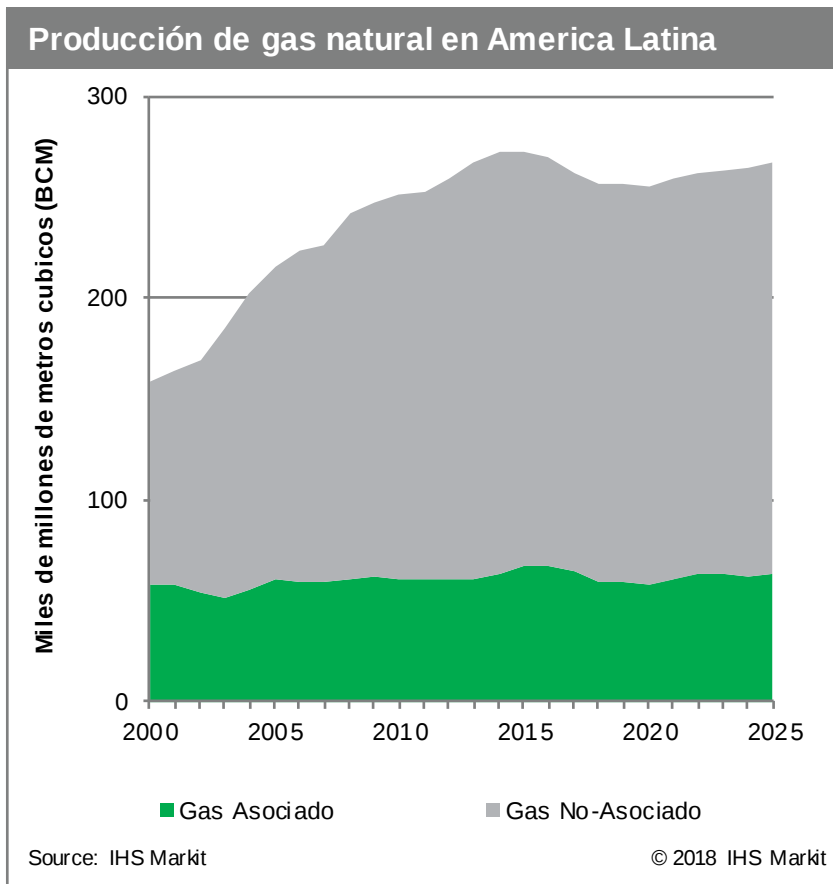
Source: IHS Energy – Waterborne LPG

Panorama Regional

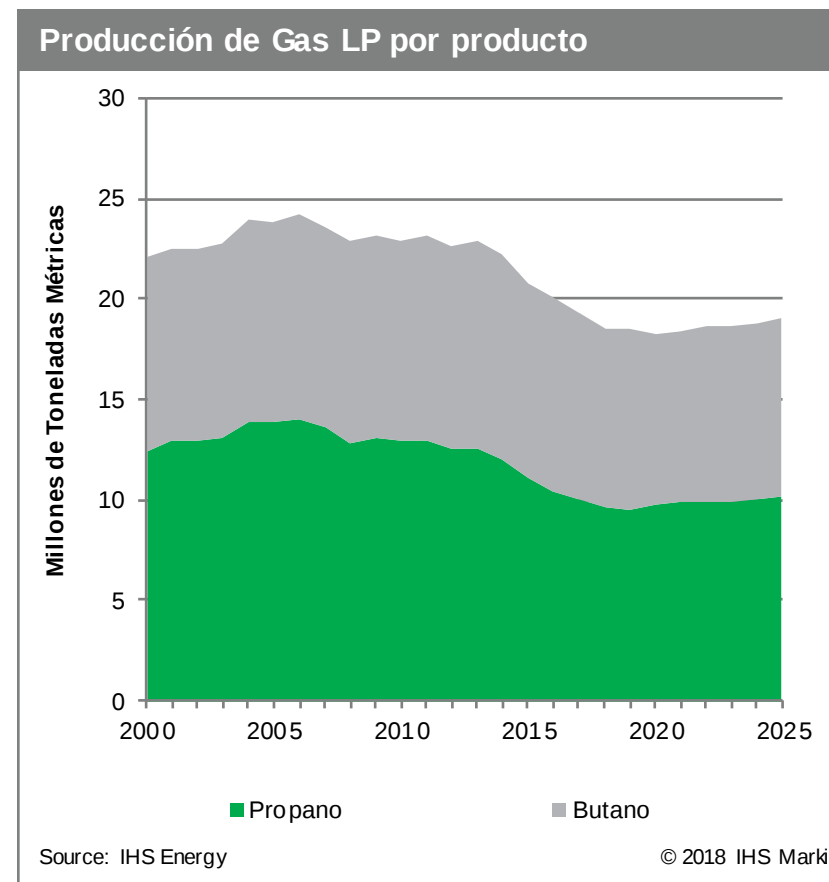
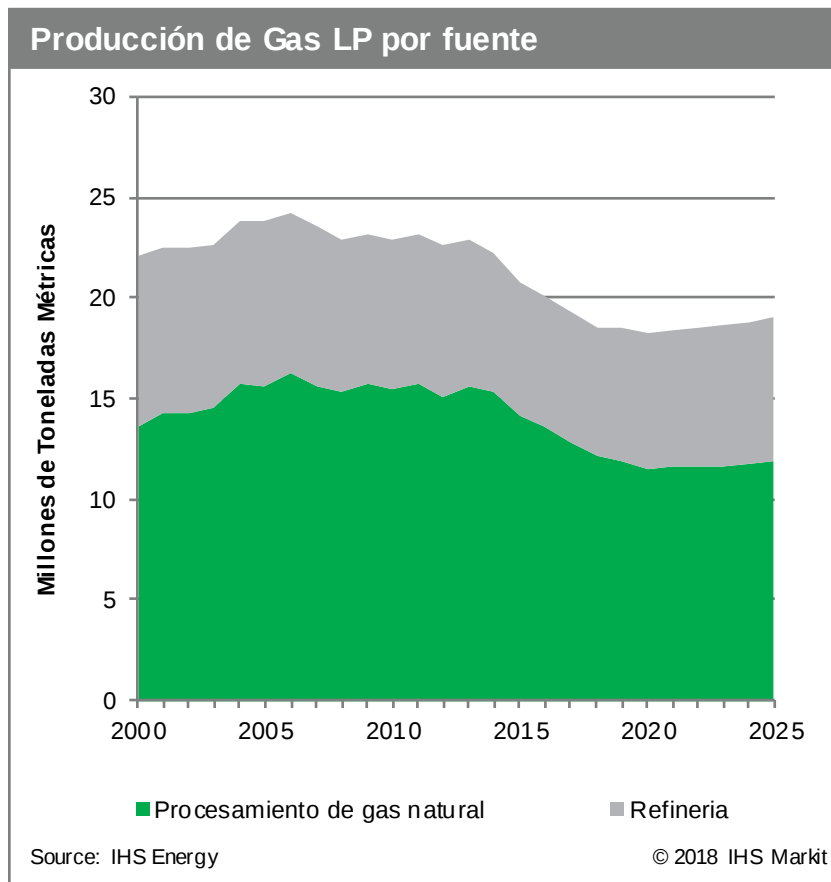
El elefante y el grupo de ciegos



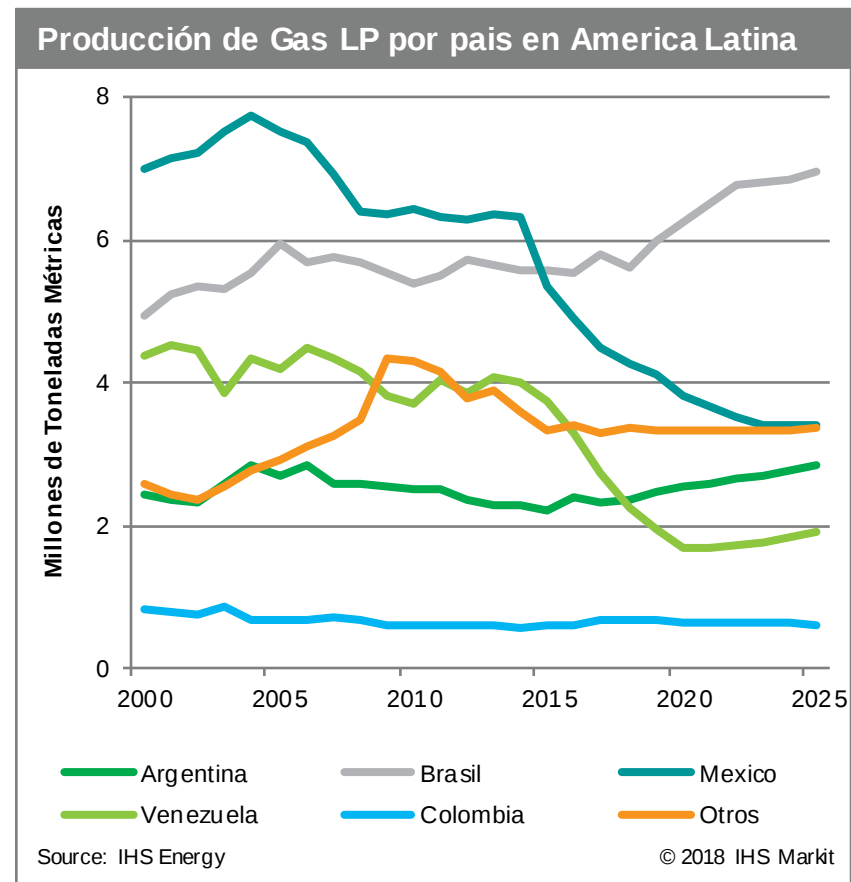
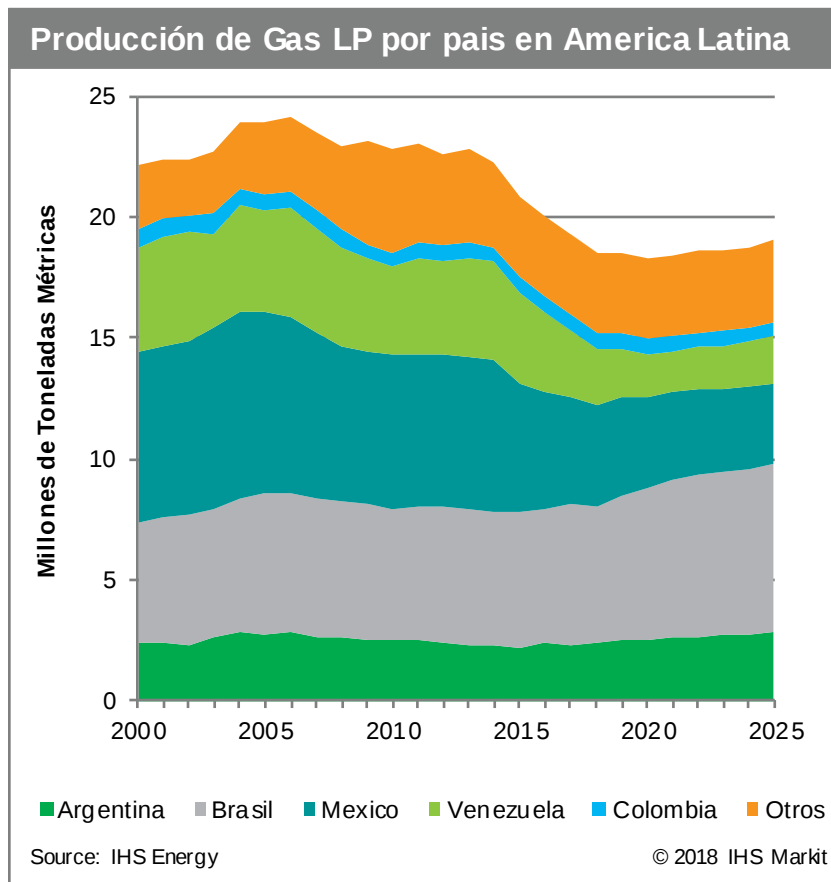
América Latina: Producción de hidrocarburos



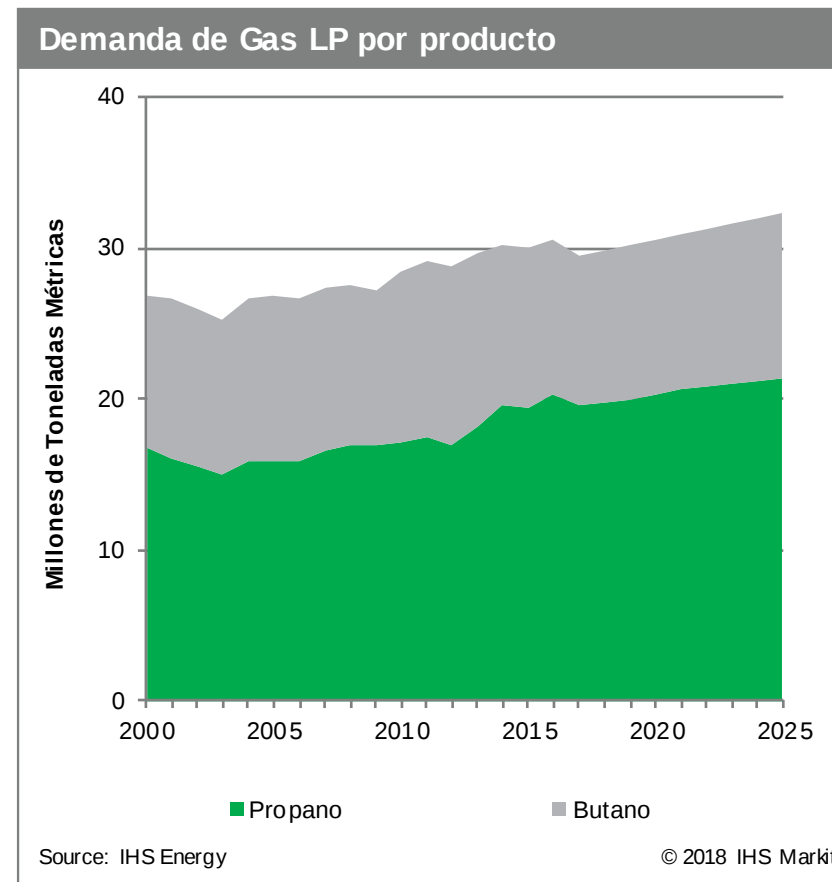
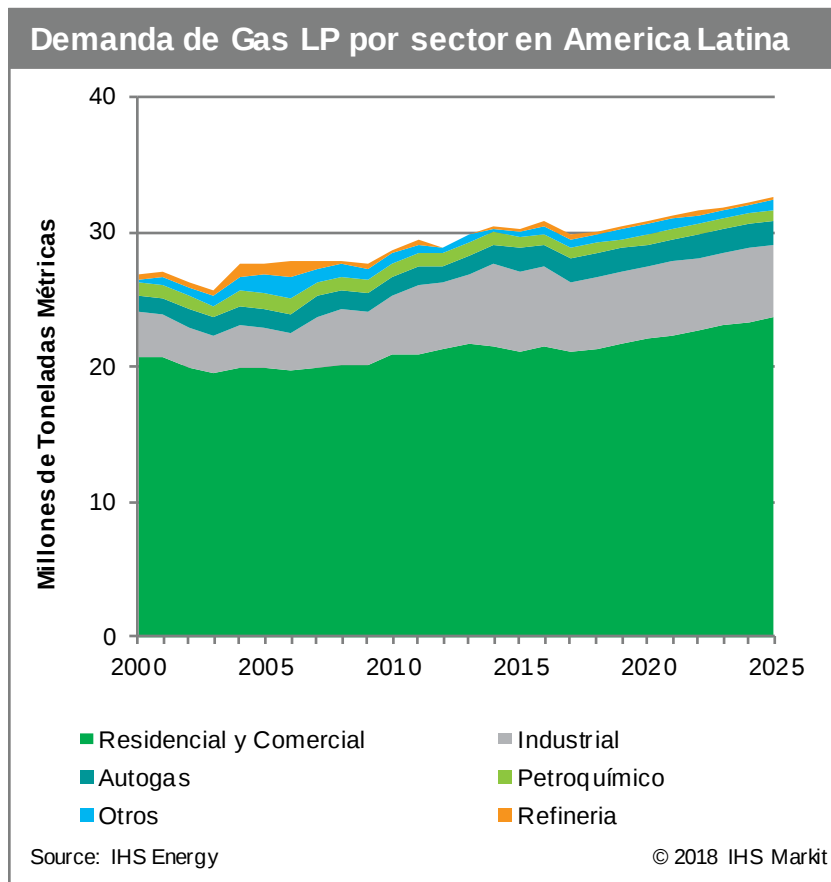
América Latina: Producción de GLP



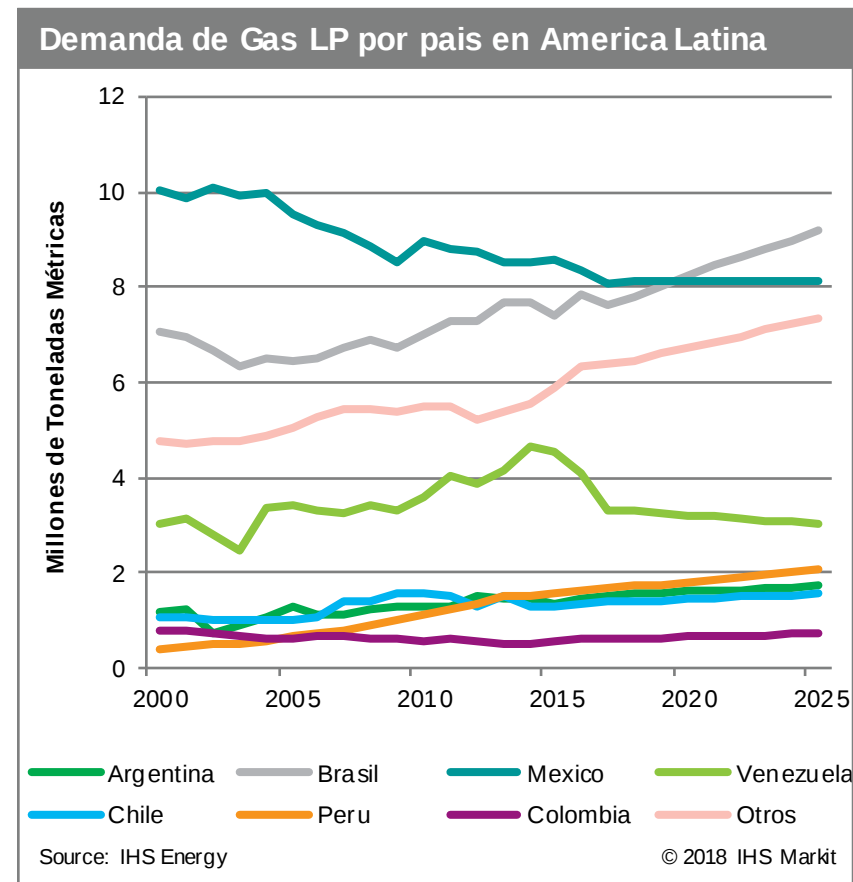
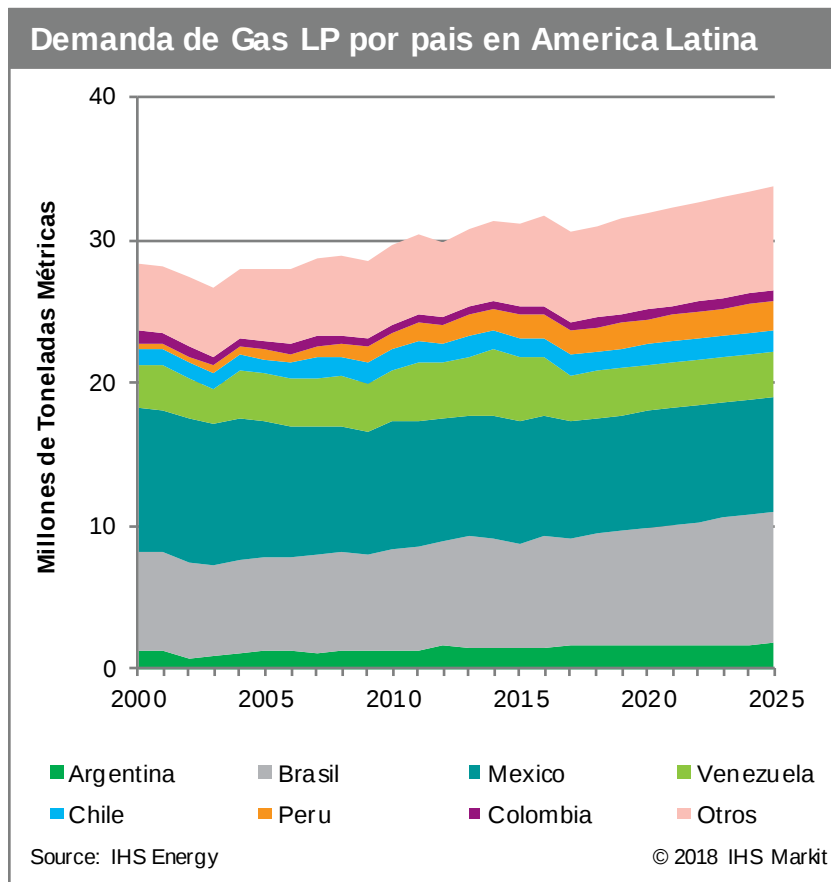
América Latina: Producción de GLP por país



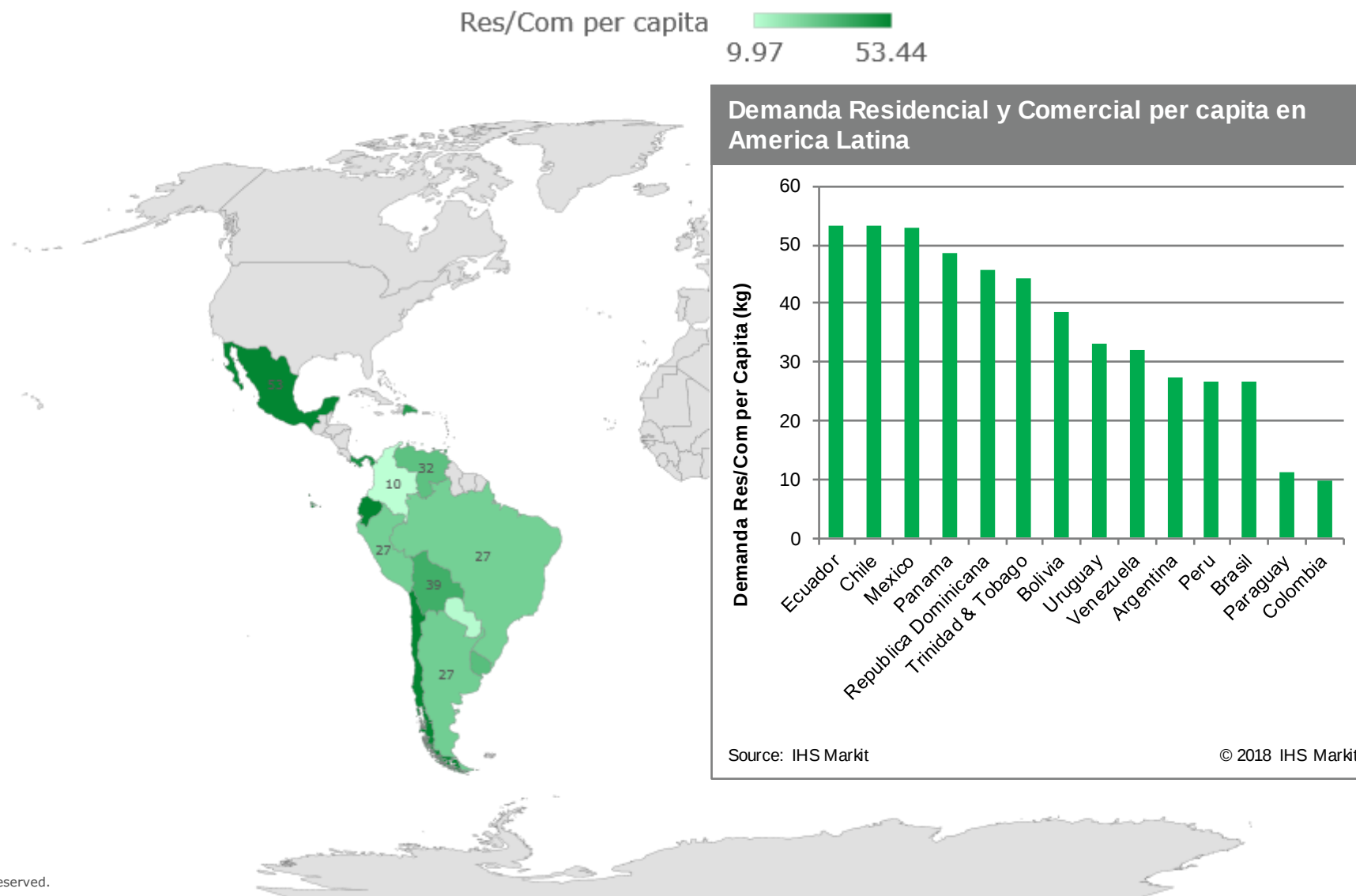
América Latina: Demanda de GLP



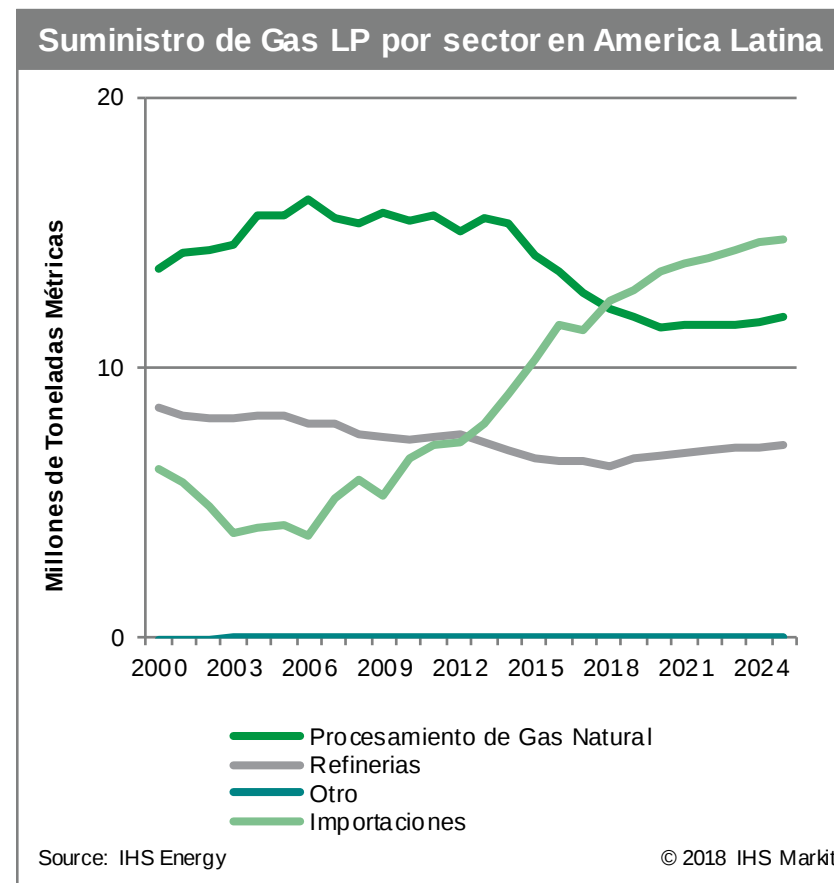
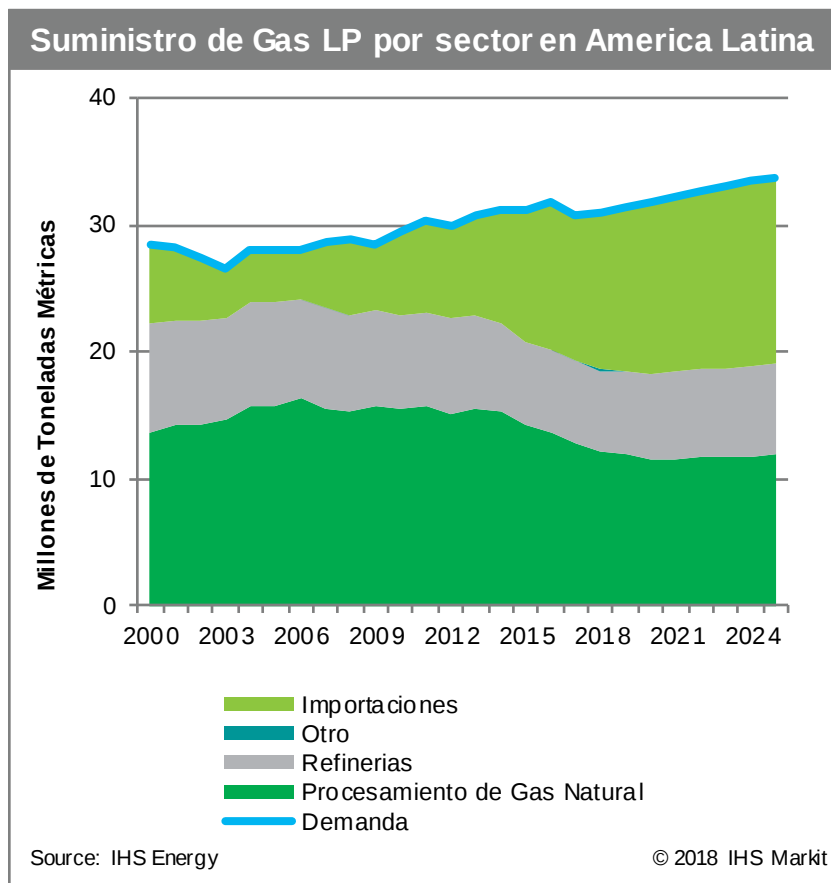
América Latina: Demanda de GLP



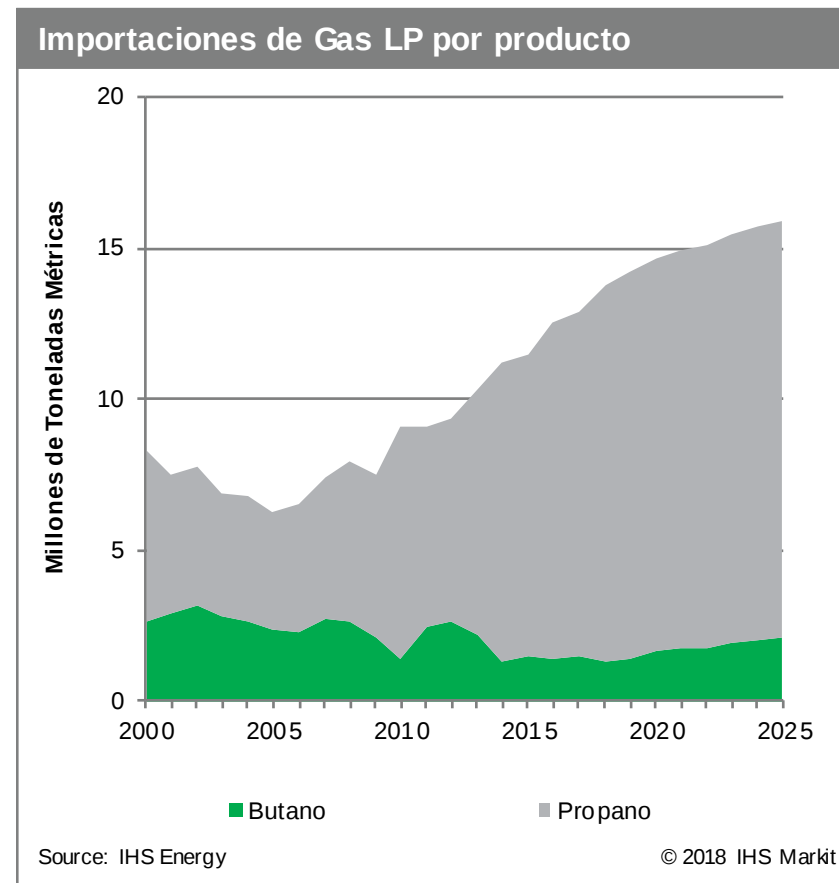
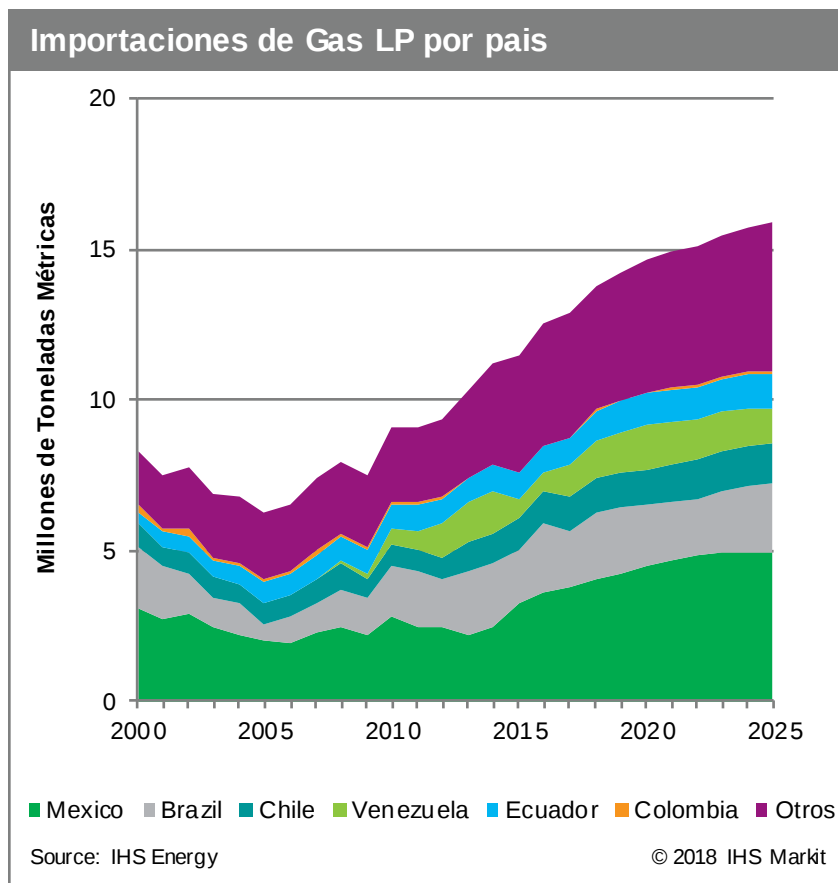
Consumo residencial y comercial de Gas LP per cápita



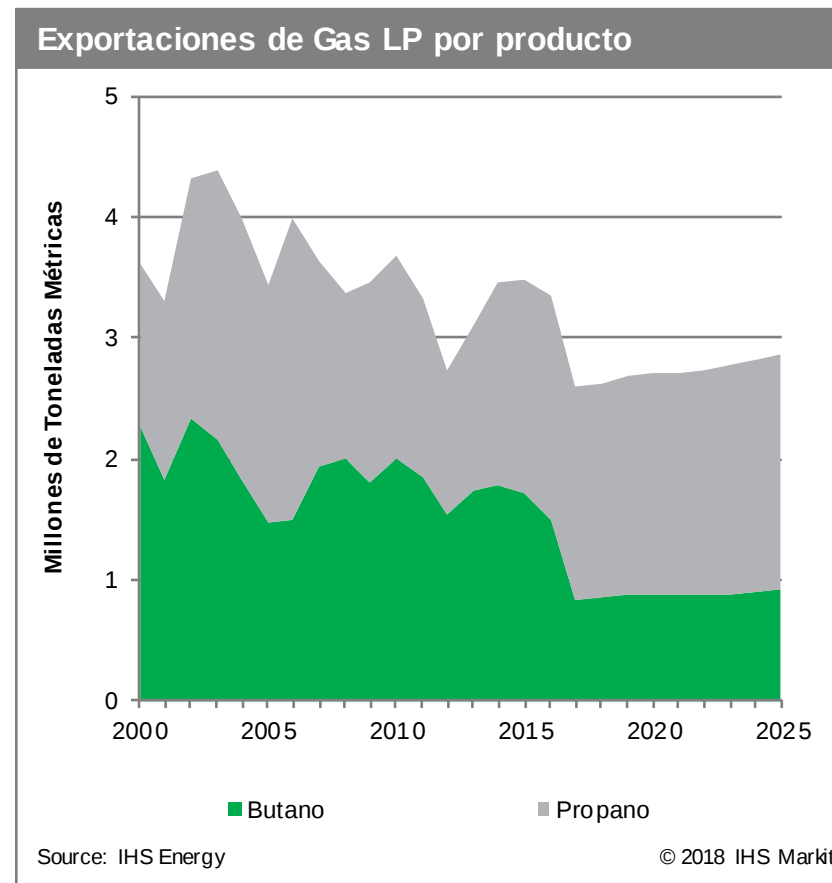
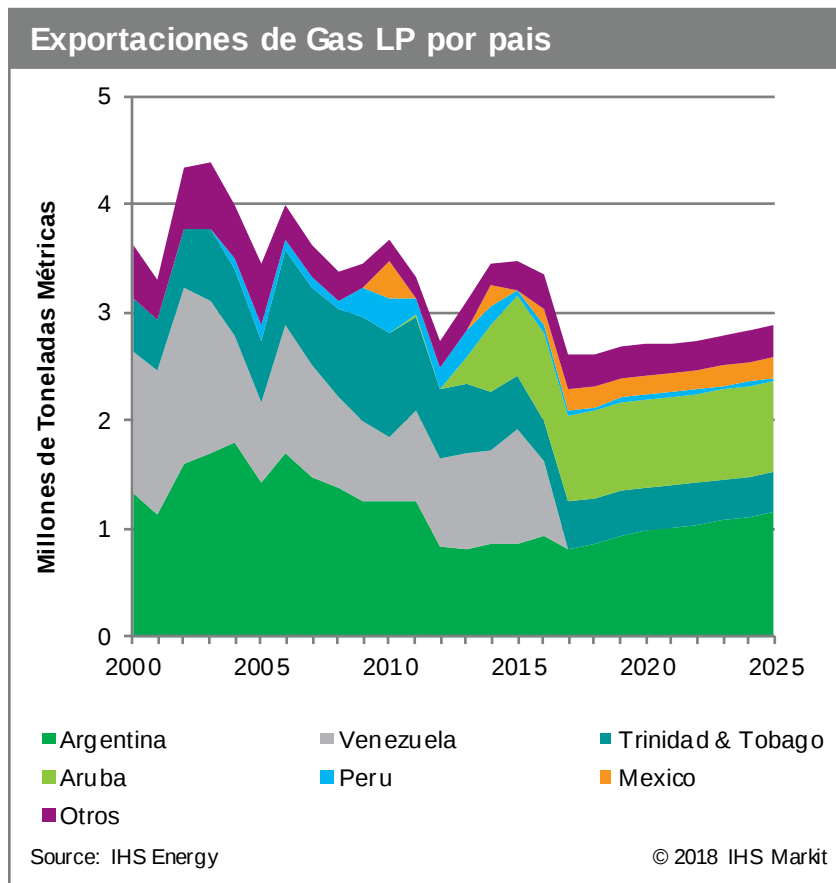
América Latina: Producción de GLP por país



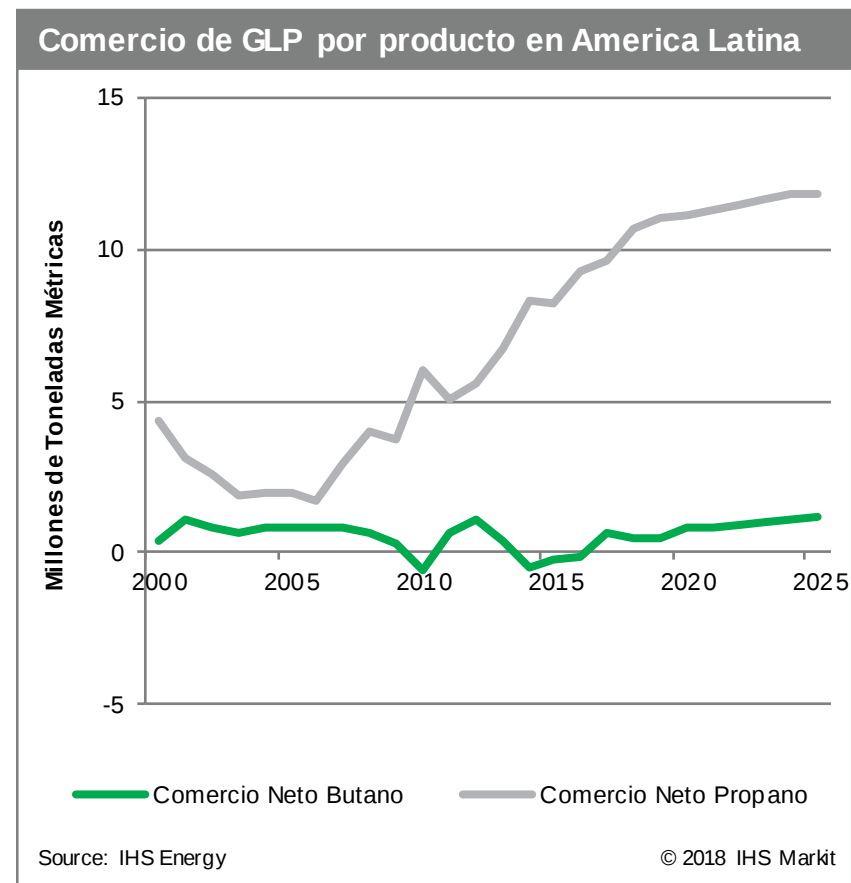
America Latina: Importaciones de GLP



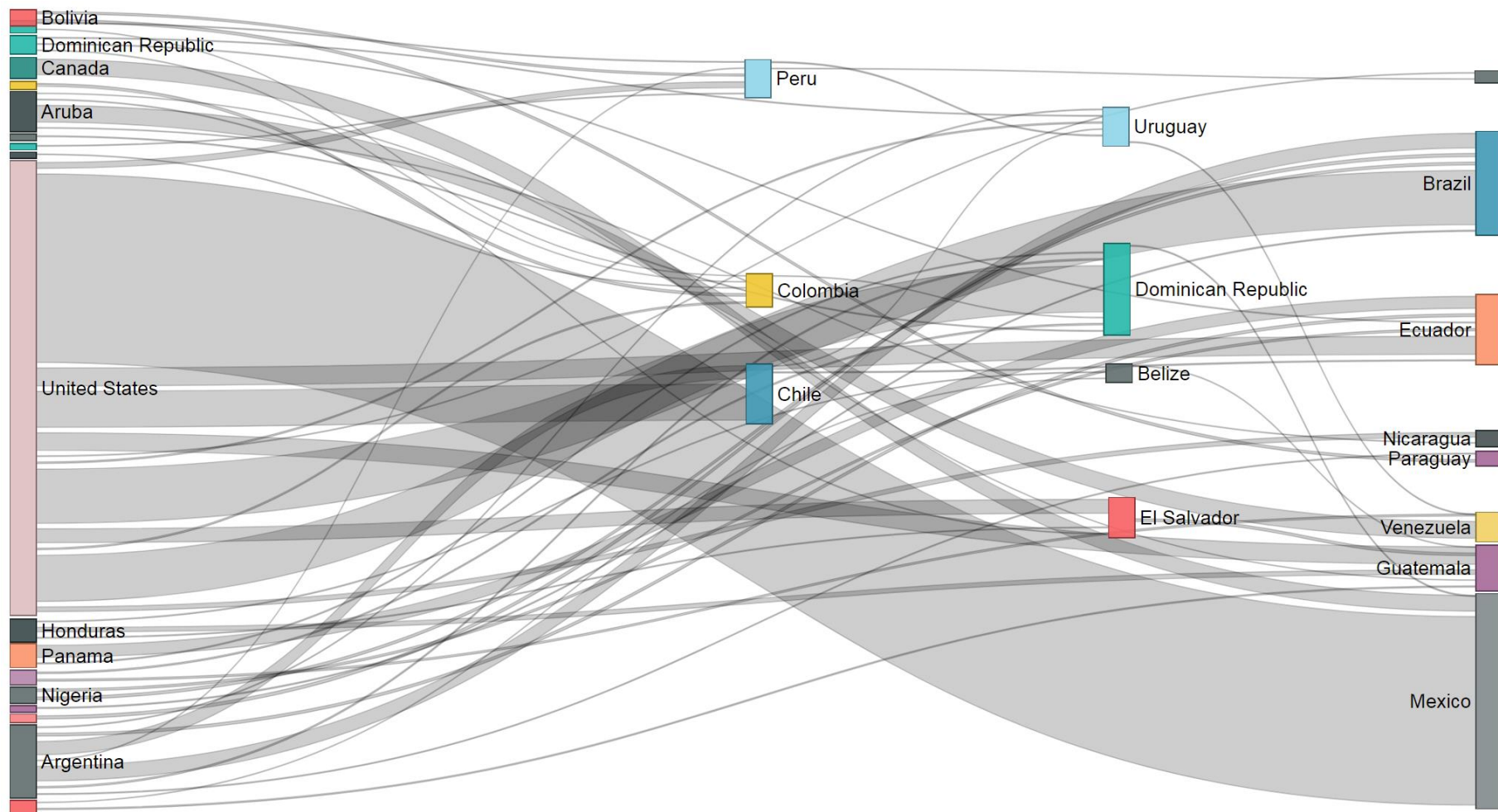
America Latina: Exportaciones de GLP



Comercio de Gas LP en America Latina

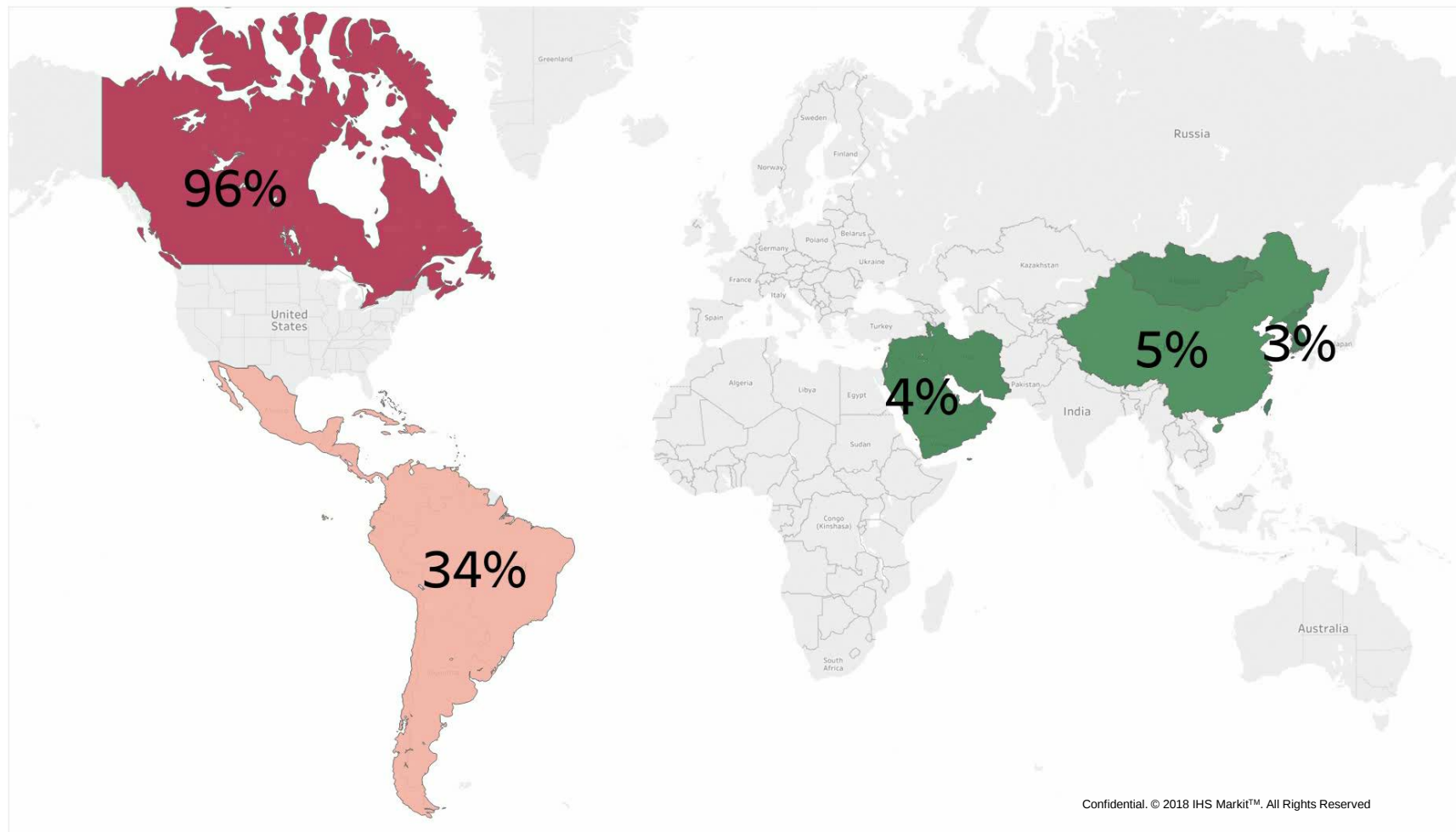


Importaciones de Gas LP en America Latina



Proporción de GLP importado proveniente de los Estados Unidos

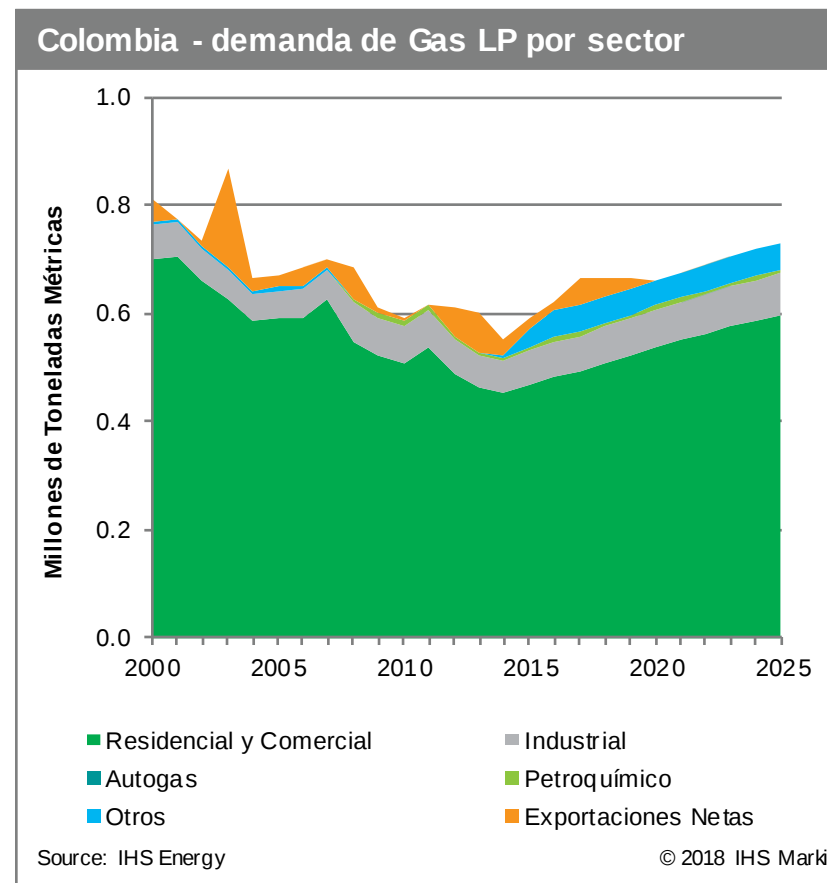
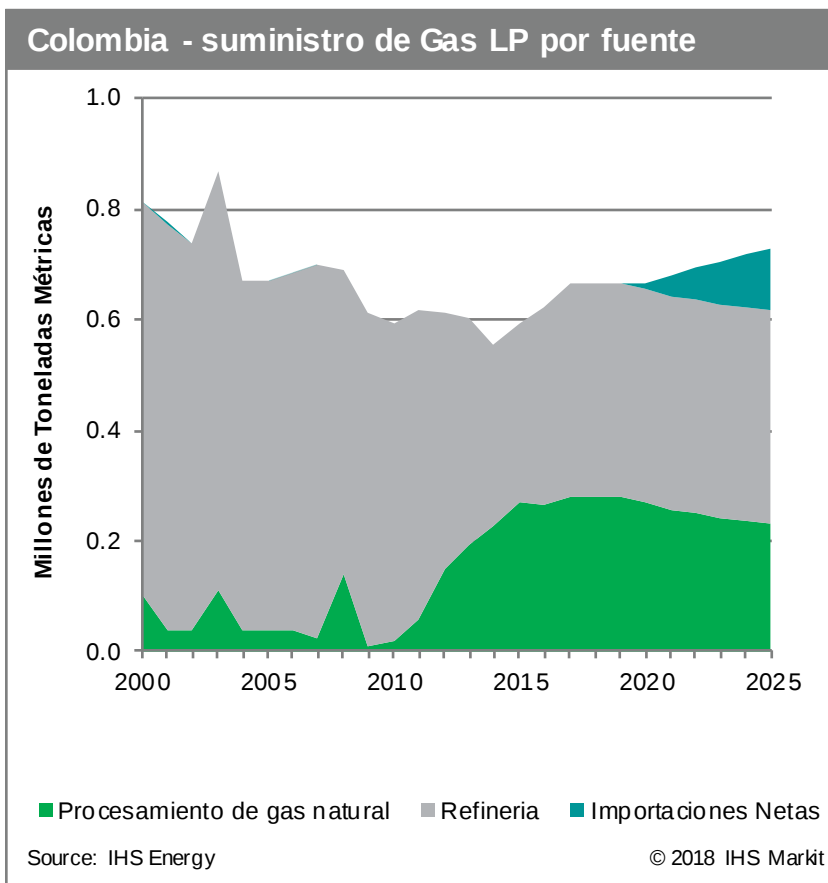
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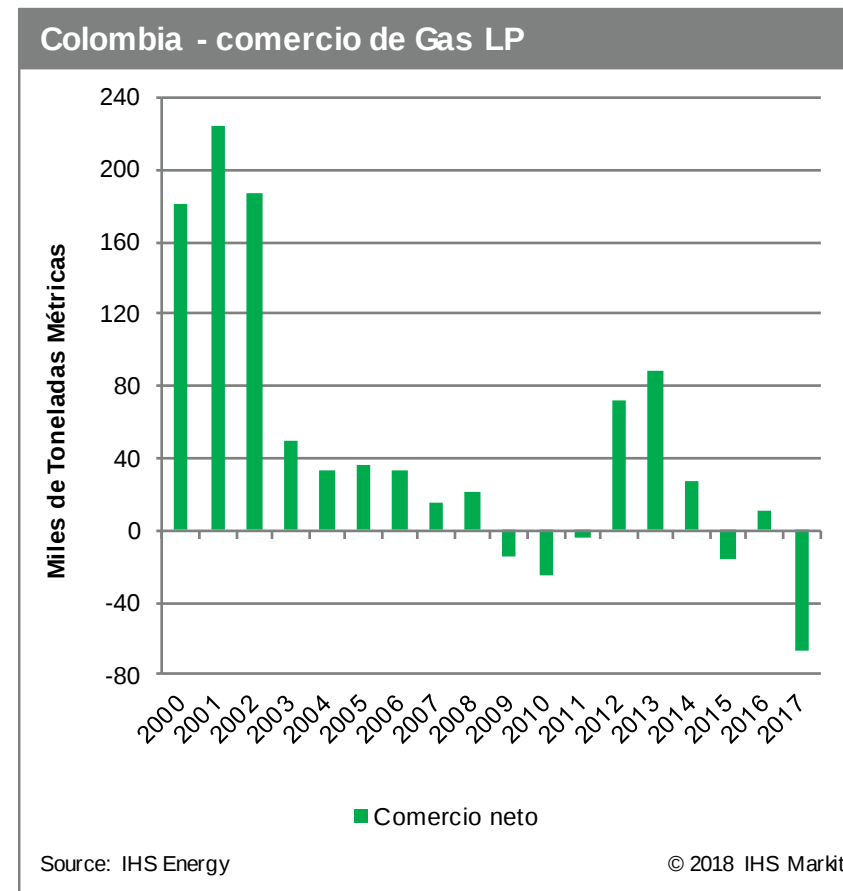
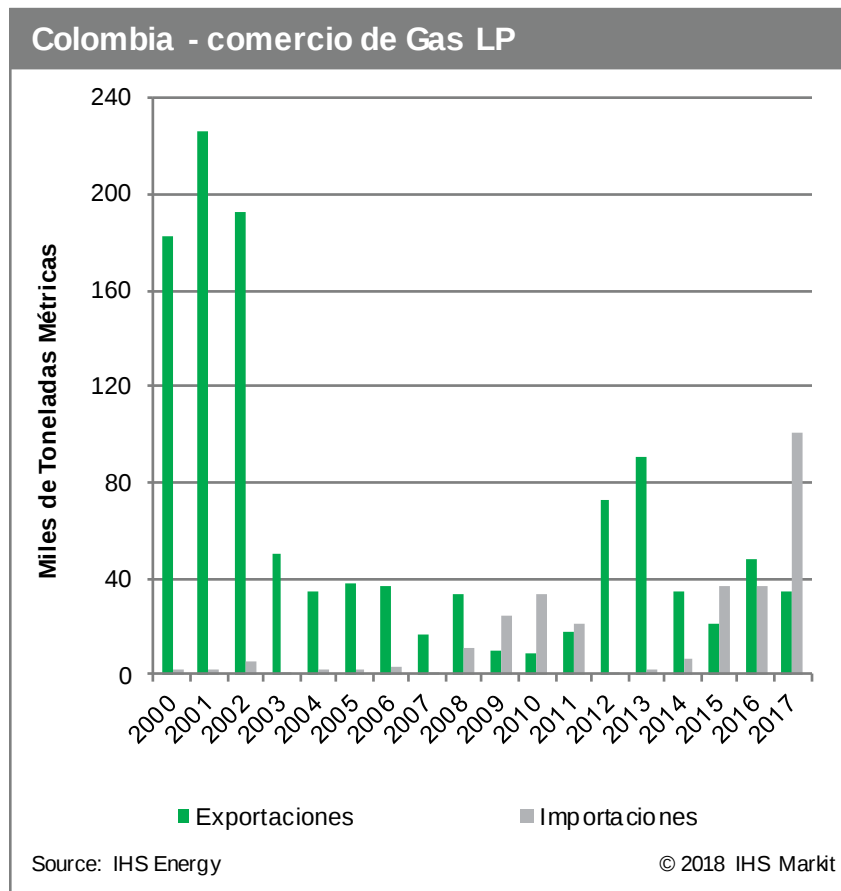
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Perspectiva de Colombia

Colombia: Oferta y demanda de Gas LP

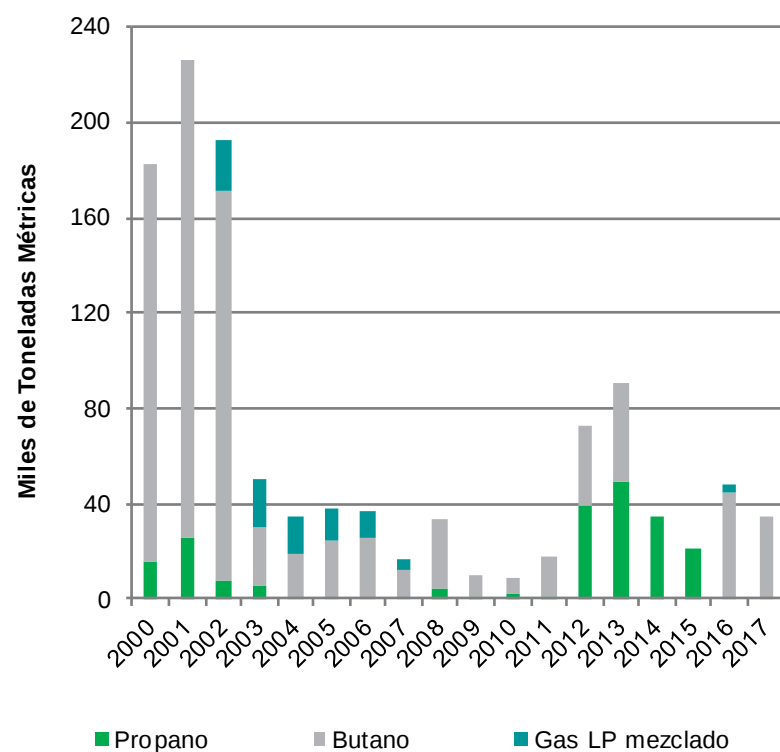


Colombia: Comercio de Gas LP



Colombia: Exportaciones de Gas LP

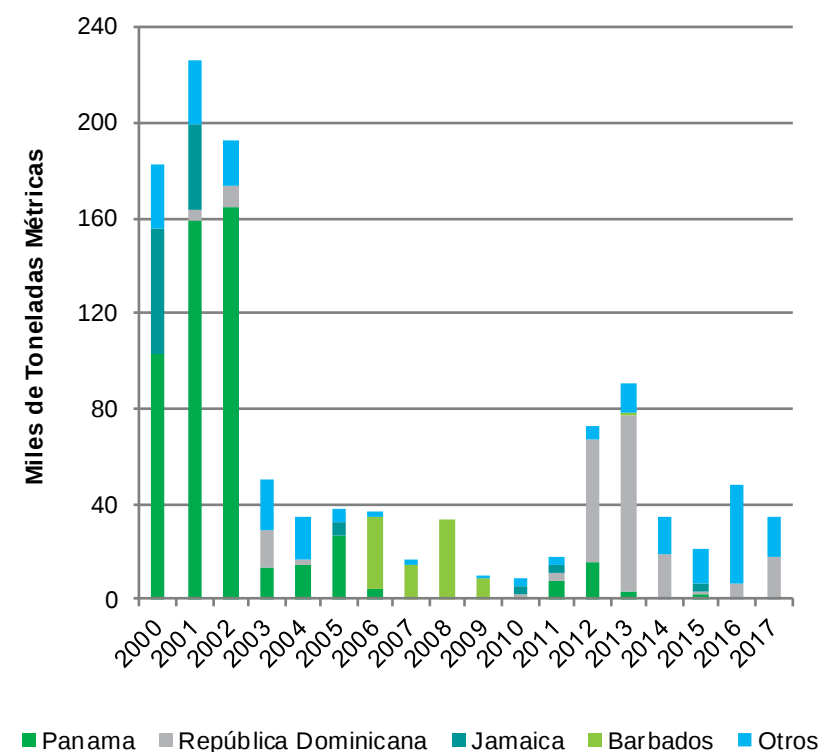
Colombia - exportaciones de Gas LP por producto



Source: IHS Energy

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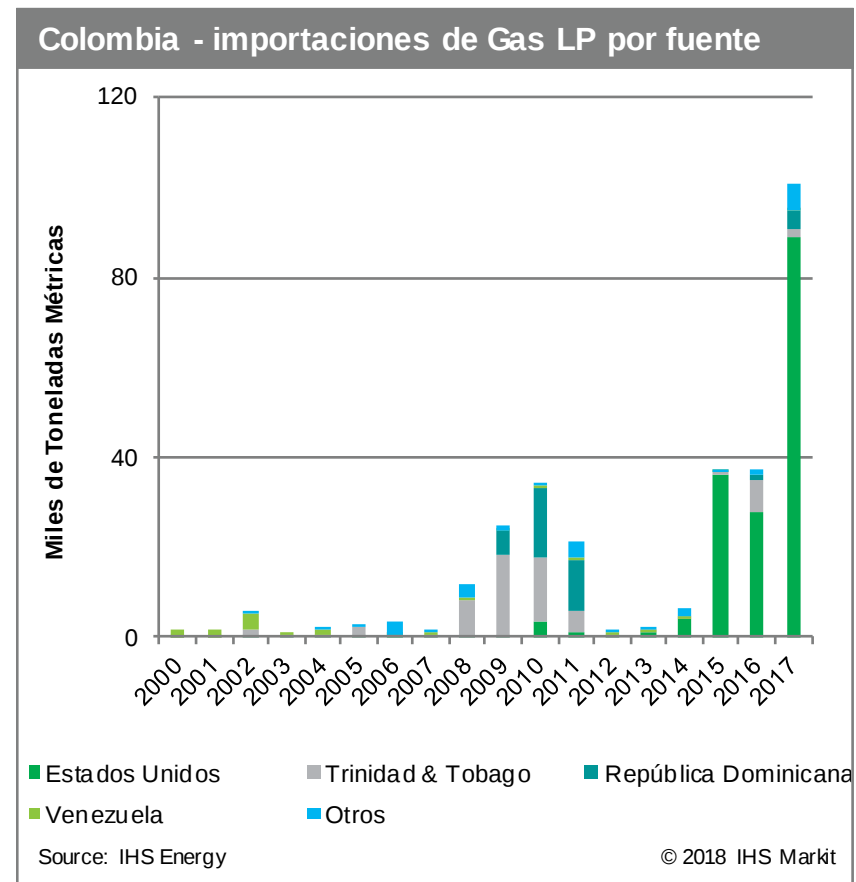
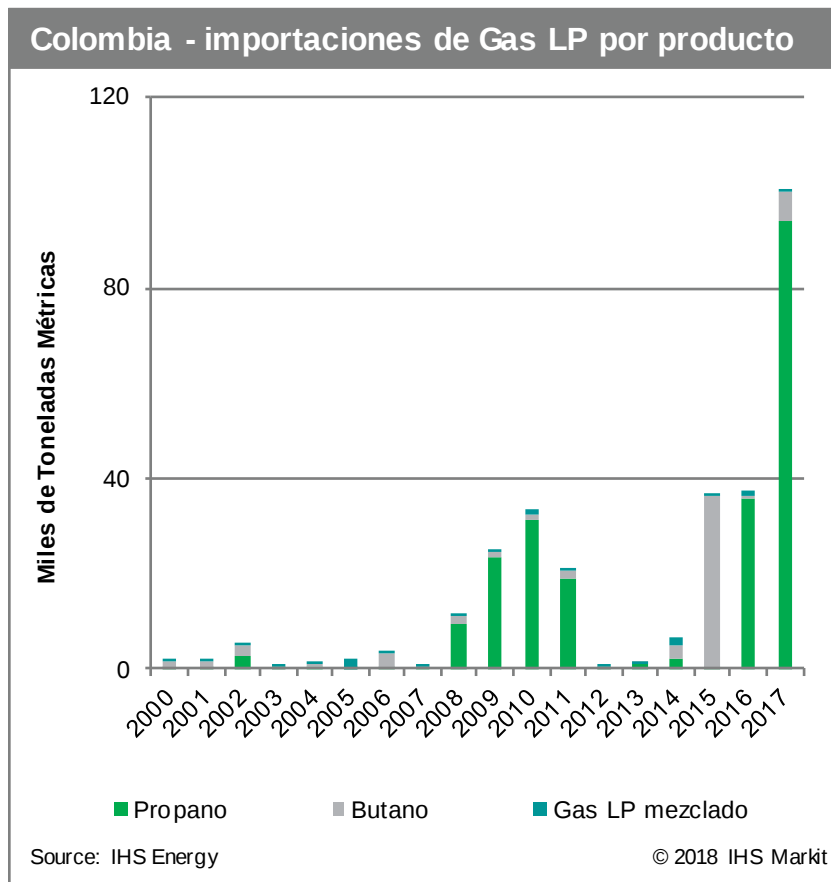
Colombia - exportaciones de Gas LP por destino



Source: IHS Energy

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Colombia: Importaciones de Gas LP

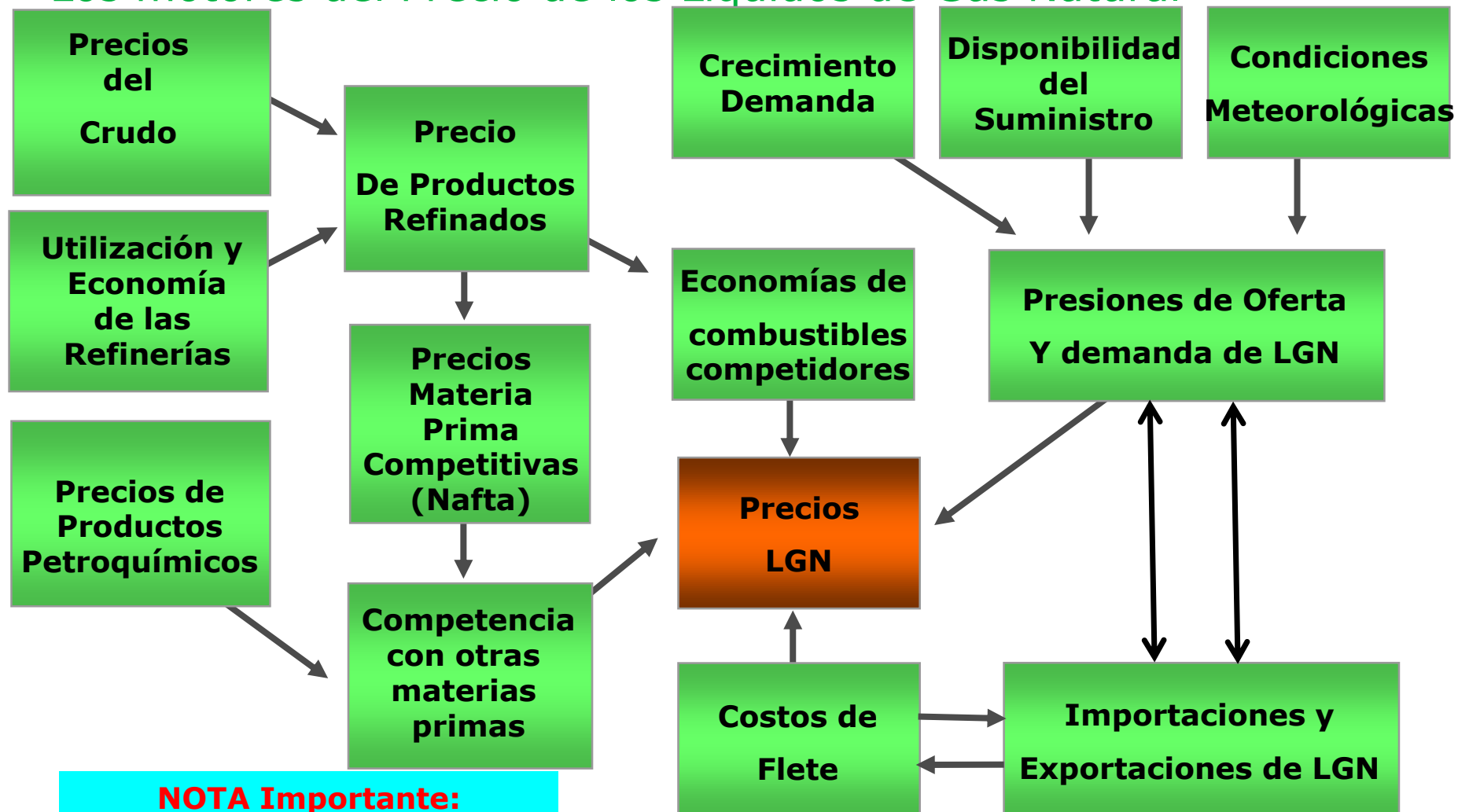


Panorama de Precios

Implicaciones para un mercado basado en la oferta.

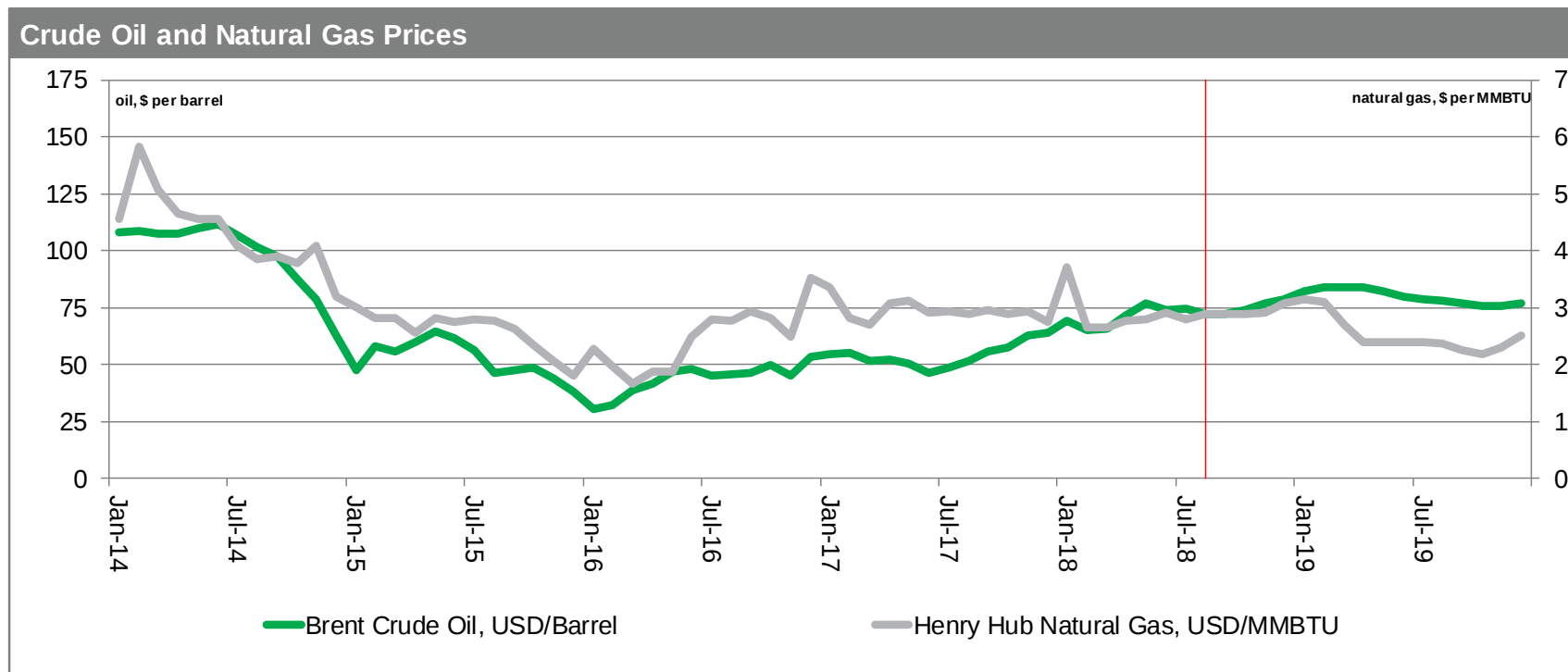
- Los precios de los Líquidos de Gas Natural (LGN) tienden a seguir los precios del gas natural y / o el precio del petróleo crudo o refinado
 - > Los precios del propano tienden a seguir los precios del crudo
 - > Los precios del butano y la gasolina natural siguen los precios de la gasolina
 - > Los precios del etano generalmente siguen los precios del gas natural
- Sin embargo, estas relaciones de precios son estacionales
- En el corto plazo (mensual), los factores de oferta / demanda a menudo prevalecen sobre las relaciones entre los precios de los productos. Sin embargo, las relaciones de precios tienden a ser correctas a la larga (anual).

Los motores del Precio de los Líquidos de Gas Natural

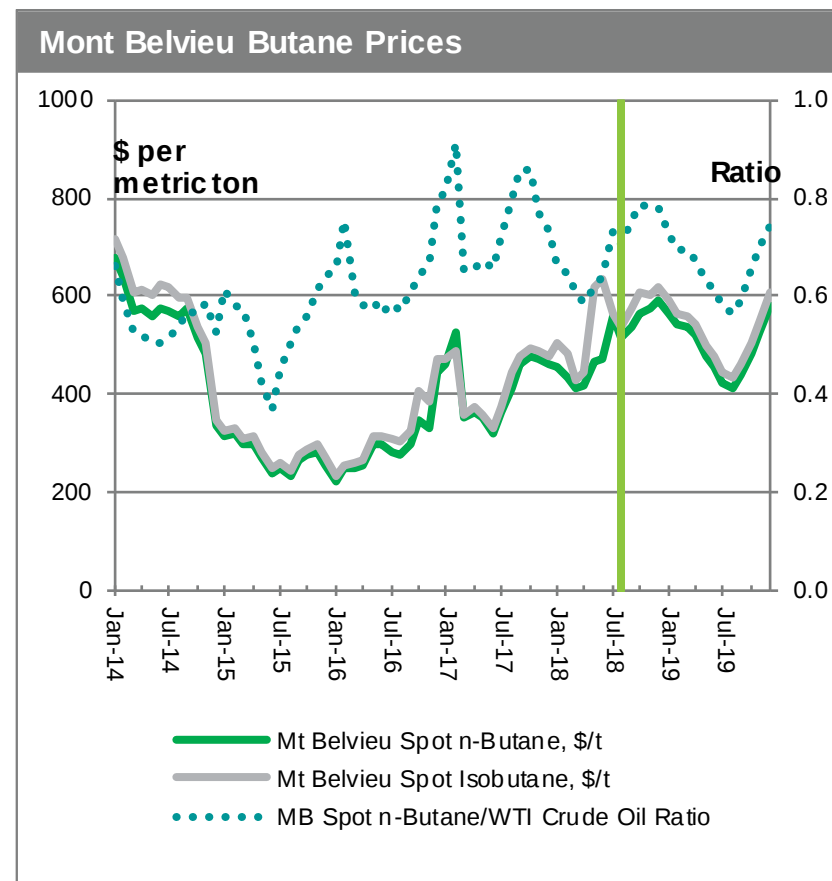
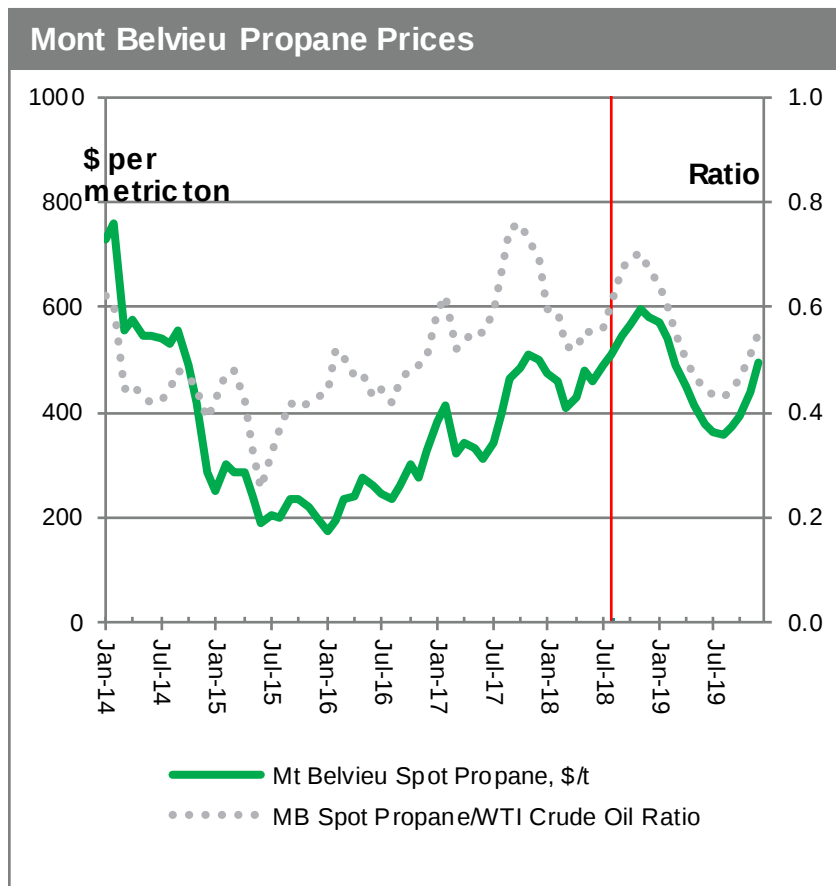


NOTA Importante:
Los Precios también afectan
la Oferta y la Demanda

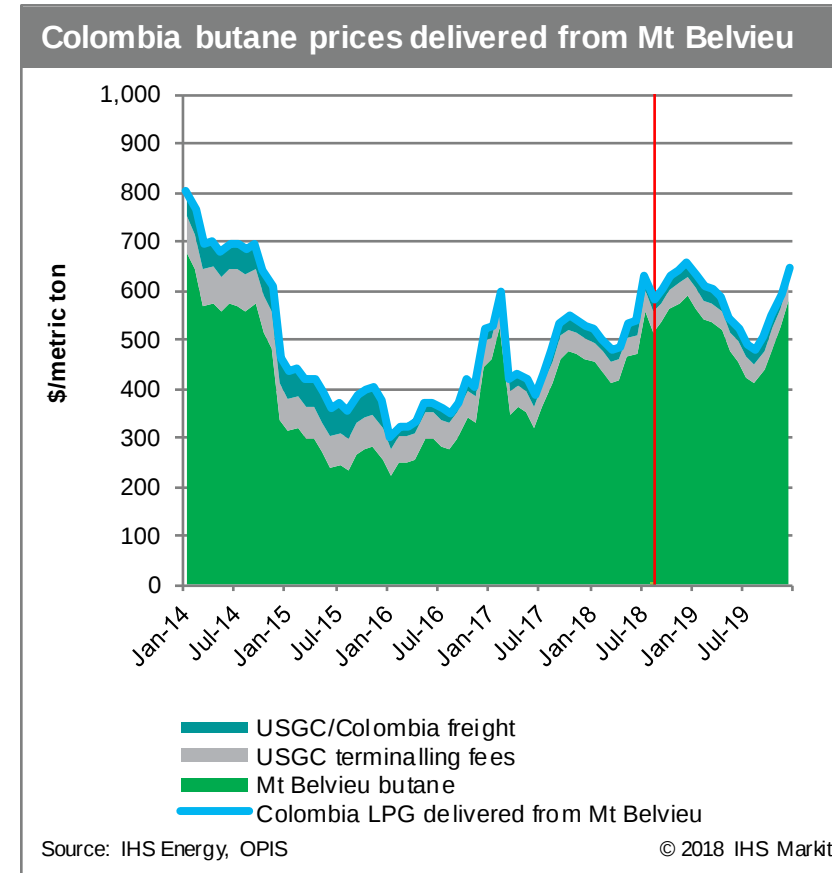
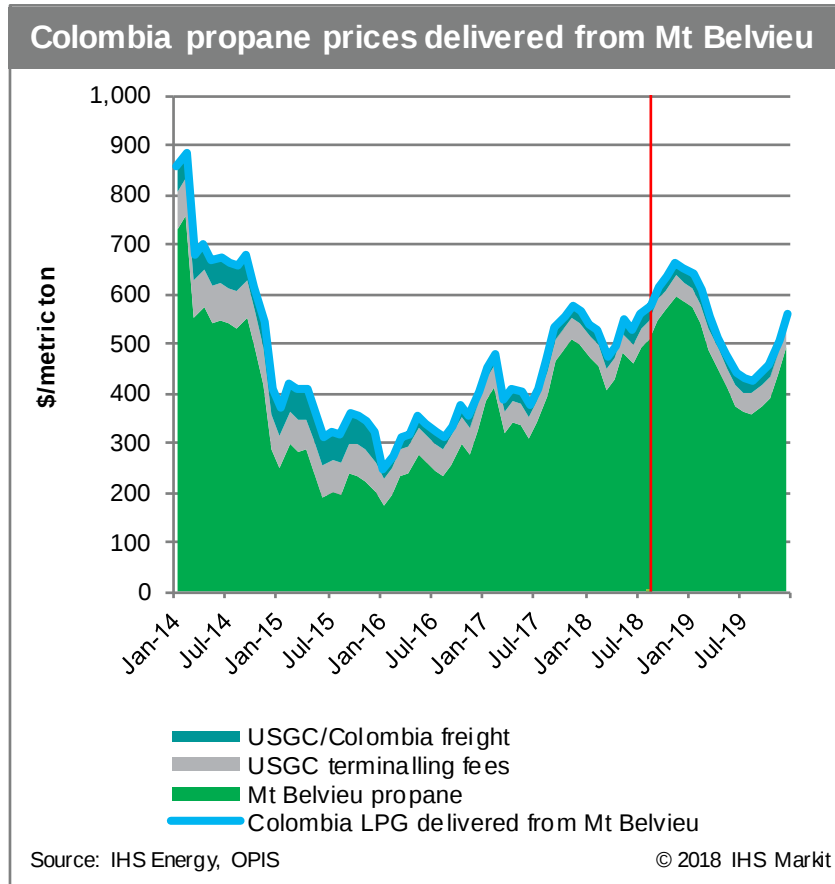
Precios del crudo y de gas natural



Precios propano y butano en Mt. Belvieu



Colombia: Precio de importación de Propano y Butano



Conclusiones

- El crecimiento de la producción de los Estados Unidos puede cubrir el crecimiento de la demanda de propano no nada mas en Latinoamérica sino a nivel global.
- Dada la creciente proporción de las importaciones a América Latina que provienen de los Estados Unidos, Mont Belvieu se ha consolidado como el precio de referencia en la región y se espera que la tendencia a la alta de su importancia en el mercado continúe.
- El mercado residencial y comercial es, sin duda, el mercado más importante para el Gas LP en América Latina. Aunque los mercados mas grandes se encuentran saturados, aun existen posibilidades de crecimiento en la región sobre todo para el reemplazo de combustibles primitivos como la leña.
- En Colombia, como en otros países importadores de la región, a medida que las importaciones crezcan, la importancia del precio de referencia de Mt. Belvieu aumentará en los precios locales.



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Seminario y talleres de Gas LP en América Latina 2018

6-8 de Noviembre del 2018 | Ciudad de México, México

¡Aparten los días!

El Seminario y talleres de Gas LP en América Latina es un evento internacional que reúne a los actores encargados de la toma de decisiones para intercambiar perspectivas sobre los temas mas relevantes de la industria de Gas LP en América Latina y el mundo.

El evento incluye :

- A un día y medio de seminario
- La opción de tres talleres
- Una visita planeada especial

Traducción simultanea en ingles y español disponible.

Para saber más visite:: ihsmarkit.com/latGas LP2018



¡Gracias!

Adrian Calcano, Director – Líder de Petróleo y Gas Midstream
para América Latina

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Apéndice

La Suscripción al servicio de Líquidos de Gas Natural de IHS Markit

Subrepción al servicio de Mercados de Líquidos de Gas Natural (NGL): Cobertura completa de las perspectivas de oferta, demanda, y precios

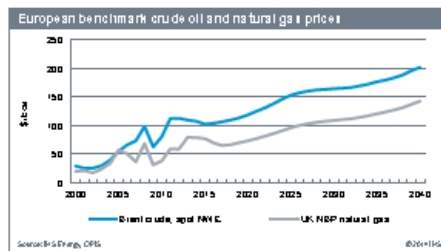
- Cobertura de propano, butanos, etano, y gasolina natural.
- Modulo global: Incluye la oferta y la demanda global y regional así como los precios de referencia globales de las moléculas y de flete.
- Los módulos regional modules contienen información y datos específicos de cada país con precios locales y regionales.
- Cada modulo contiene prospectivas de corto y de largo plazo.
- Los entregables incluyen reportes en formato de presentación, holas de Excel con la información, y reportes de Alertas y/o Estudios de lo que sucede en el mercado.
- Nuestro trabajo esta basado en el legado en el estudio de los Líquidos de Gas Natural. IHS Markit ha publicado estudios de NGL por mas de 40 años (incluyendo la antigua Purvin & Gertz)

Entregables servicio de suscripción de Líquidos de Gas Natural	Global	América del Norte	América Latina	Europa / CEI / África	Asia / Pacifico / Oriente Medio	Frecuencia
Oferta y Demanda a Largo Plazo	✓	✓	✓	✓	✓	Anual
Pronostico de Precios a Largo Plazo	✓	✓	✓	✓	✓	Trimestral
Oferta, Demanda, y Precios a Corto Plazo	✓	✓	✓	✓	✓	Mensual
Alertas y Estudios de Mercado	✓	✓	✓	✓	✓	~Cuando se requiera

Natural Gas Liquids Long-Term Outlooks

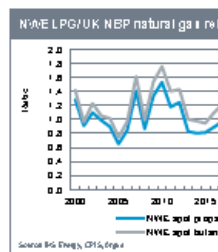
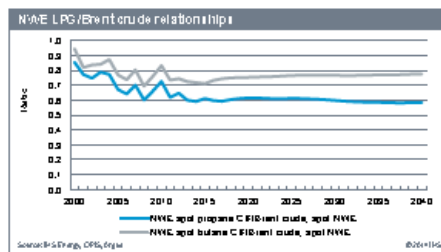
Annual Data Projected For the Life of Your Project

Crude oil and natural gas prices and LPG ratios in NWE



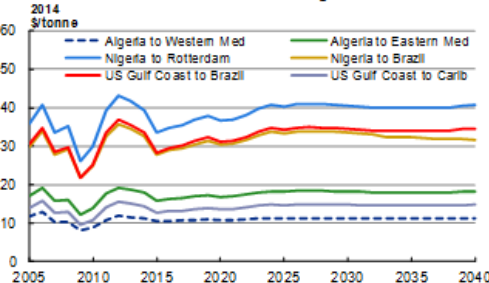
- Crude prices have moderated in the short term and are expected to increase in nominal terms over the long term.
- Brent currently trades at a premium to WTI (spot, NBP), and this relationship is maintained over the long term.

- NBP is the most liquid gas market in Europe and is used in this report and the data has been converted to USD per barrel.



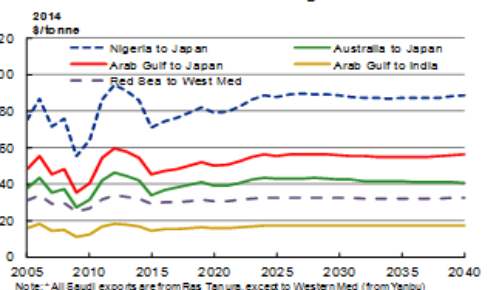
International LPG freight rates are impacted by the fleet size and fuel costs

Atlantic Basin Waterborne Freight Costs

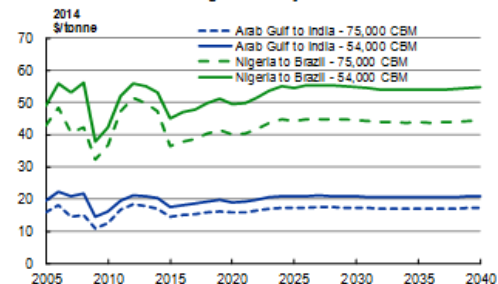


- Contract freight costs for movements of LPG are seeing upward pressure due to a tight shipping market but downward pressure from weaker fuel prices.
- The shipping industry is expected to add about 35 VLGCs in 2015 but LPG exports are growing rapidly.
- Continued expansion of the LPG shipping fleet will eventually temper the increase in long term LPG freight costs. We don't expect a decline in the medium term because the increase in VLGC freight capacity is not sufficient to stay ahead of the expected increase in global LPG trade.

East of Suez Waterborne Freight Costs



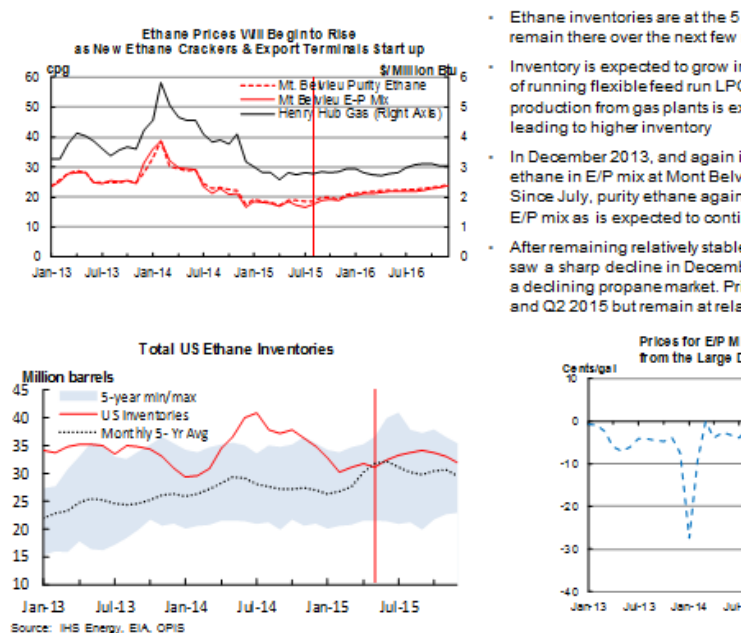
Waterborne Freight Costs by Vessel Size



Natural Gas Liquids Short-Term Outlook

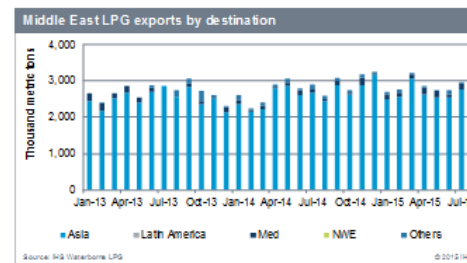
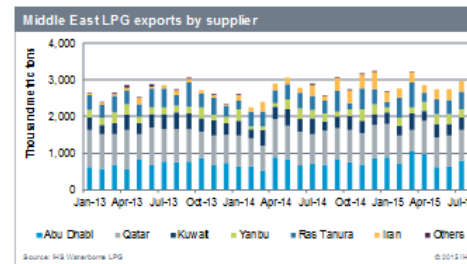
Monthly NGL Pricing, Supply, Demand and Trade to Stay on Track

US ethane prices and inventories

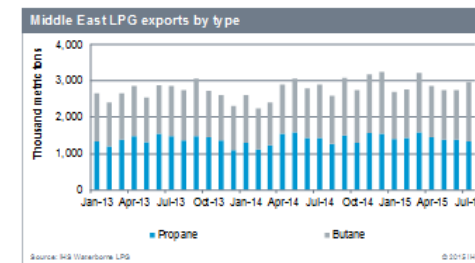


Middle East LPG exports

NGL Asia/Middle East/Pacific Short-Term Outlook, August 2015



- Middle East LPG exports recovered to nearly 3 million metric tons in July after a three-month streak of declines.
- Qatar was the largest LPG shipper in the Middle East in July, with about 837,000 metric tons of LPG exports. Saudi exports were reported at 700,000 metric tons. UAE exports increased to about 800,000 metric tons in July. On average Qatar has been the largest exporter in the Middle East in 2014 and 2015, responsible for about 30% of regional exports.
- About 93% of Middle East exports were sent to Asia in July. About 94% were sent to Asia in 2014 overall, as compared to 93% year to date (through July 2015). Most of the balance of the exports have been sent to the Med.



Natural Gas Liquids Topical Market Studies

Timely Analysis of the Implications of Critical Market Developments

IHS ENERGY

Natural Gas Liquids

Insight

25 September 2014

ihs.com

Liquid Ethylene versus Ethane

A better feedstock alternative for Europe?

William Veno, Senior Director, NGL Research

Walter Hart, Senior Director, NGL Research

Steve Lewandowski, Global Business Lead—Olefins, IHS Chemical

Key implications

Recently announced plans to export ethane from the United States will help to support continued rapid shale gas production growth by providing new outlets for the ethane that accompanies wet-gas production in major US shale plays. Waterborne US ethane exports have previously been too costly, but with the current low ethane prices they are now being viewed as economically viable. Exports of Mexican ethane from the US East Coast to Europe are scheduled to begin in the first half of 2015. And a second major initiative was announced earlier this year to build a large marine terminal to export ethane from the US Gulf Coast to unspecified markets.

The market for US ethane exports to Europe may be limited, however. European chemical companies lacking ethane-capable capacity would face capital investment costs either in new capacity or in expensive retrofits. An alternative would enable the European chemicals companies to realize some of the benefit of low-cost US ethane by importing US ethylene as feedstock for ethylene derivative products; chemical manufacturers would find these lower-cost ethylene imports highly competitive with locally produced ethylene using naphtha, gasoline, and liquefied petroleum gases.

- Avoid capital costs. Ethane exports to Europe will be most favorable for companies with existing ethane-capable capacity but less favorable if investments in retrofits or new cracking capacity are required.
- One more step. Competitively priced US ethylene could be an attractive alternative to ethane exports, providing access to a larger market in Europe than that available forethane.
- New markets. There may be opportunities for significantly larger US ethylene exports to Asia and other growing chemicals markets.

US ethylene exports: An alternative to ethane exports?

Ethane has traditionally been shipped overseas primarily by pipeline. But export options opened up following the 2nd announcement by Range Resources and Sunoco Logistics Partners LP of plans to ship ethane by sea to an Indian Ocean carrier in Norway. At present, all ethane produced from Marcellus shale gas (in contrast to the United States) are expected to start in the first half of 2015.

IHS[®] ENERGY

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Analyzes Trends

IHS Energy

Energy Alert

30 April 2014 IHS.com

Exporting US Gulf Coast Ethane to Points Unknown

The Enterprise ethane marine terminal announcement

*Scott Gray, Senior Director, IHS Waterborne
Walt Hart, Senior Director, IHS Natural Gas Liquids
Will Holzman, Senior Research Analyst, IHS Natural Gas Liquids*

Key Implications

The newly announced Enterprise ethane export terminal on the Texas coast is a provocative development to address the ethane surplus in the United States, and it raises many questions. A tremendous amount of surplus ethane is currently available—our estimate for 2014 is 340,000 barrels per day—but in a few years new ethylene plants will start up to take advantage of the relatively cheap supply.

Enterprise did not disclose some important details, such as where the terminal will be located on the US Gulf Coast, what kinds of ships might be employed to transport that ethane, and who might buy the ethane (where and for what purpose). Further, what impact would such exports have on the domestic ethane market? This IHS Energy insight provides some possible responses, but the final answers remain unknown for now.

Enterprise announces plans for a US Gulf Coast terminal for waterborne ethane exports

On 22 April 2014, Enterprise Products Partners, L.P., announced that it “plans to build a fully refrigerated ethane export facility on the Texas Gulf Coast.” Furthermore, Enterprise has “executed long-term contracts to support the development of the facility, which is designed to have an aggregate ballfloat rate of approximately 10,000 barrels per hour, or up to 240 thousand barrels per day [240,000 barrels per day (bbl)]. The export facility is expected to commence operations in Q3 2016,” according to Enterprise.

Enterprise is the first on the US Gulf Coast (USGC) to announce such a project and the second (behind Sunoco) in the United States.

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Analyzes Events

IHS Natural Gas Liquids

NGL Services In Addition to Our NGL Modules

- Single-client proprietary consulting
- Annual LPG Seminars – 2016
 - > International, Houston, TX, USA April 5-7 2016
 - > Asia, Singapore, June 2016
 - > Latin America, Buenos Aires, November 2016
- Workshops (at our LPG Seminars, or at your site)
 - > Fundamentals of Global LPG Markets
 - > NGL Pricing
 - > Global Ethane Markets and Exports
 - > Waterborne LPG Shipping and Trade Dynamics
 - > Naphtha – Feedstock and Fuel
 - > Custom workshops upon request
- Waterborne Live LPG
 - > Waterborne Live LPG provides continuously updated critical information on all shipborne liquefied propane, butane, and isobutane (**coming soon: ethane**) trade flows globally
- Sessions at CERAWEEK and IHS Integrated Energy Research Briefings

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