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Fuels, Chemicals & Resource Solutions

S&P Global
Commodity Insights

Panorama del Mercado Global de Gas LP

Riesgos y oportunidades

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Midstream Assets & LPGs/NGLs

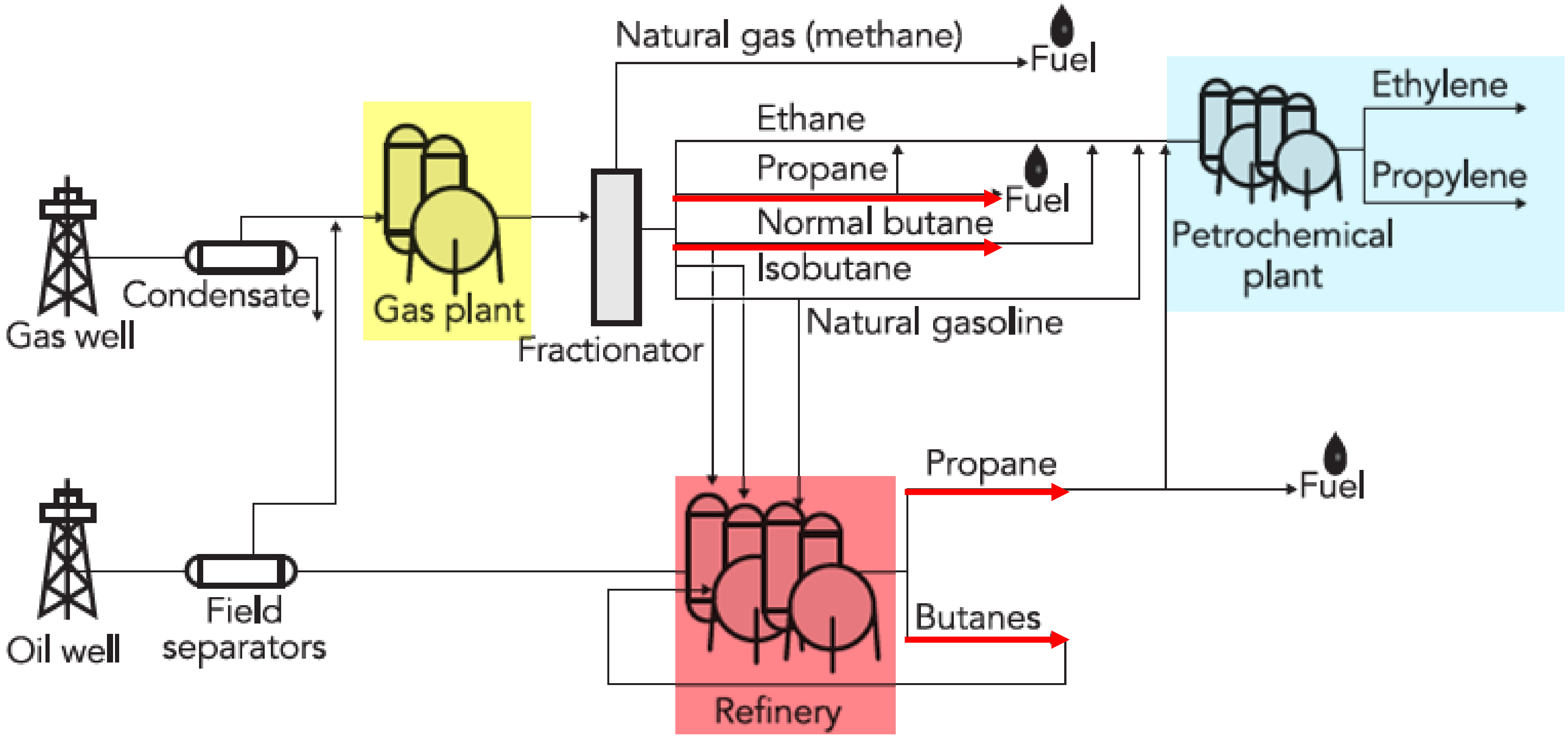
Fuels, Chemicals & Resource Solutions

March 24, 2023

GASNOVA
Asociación Colombiana del GLP

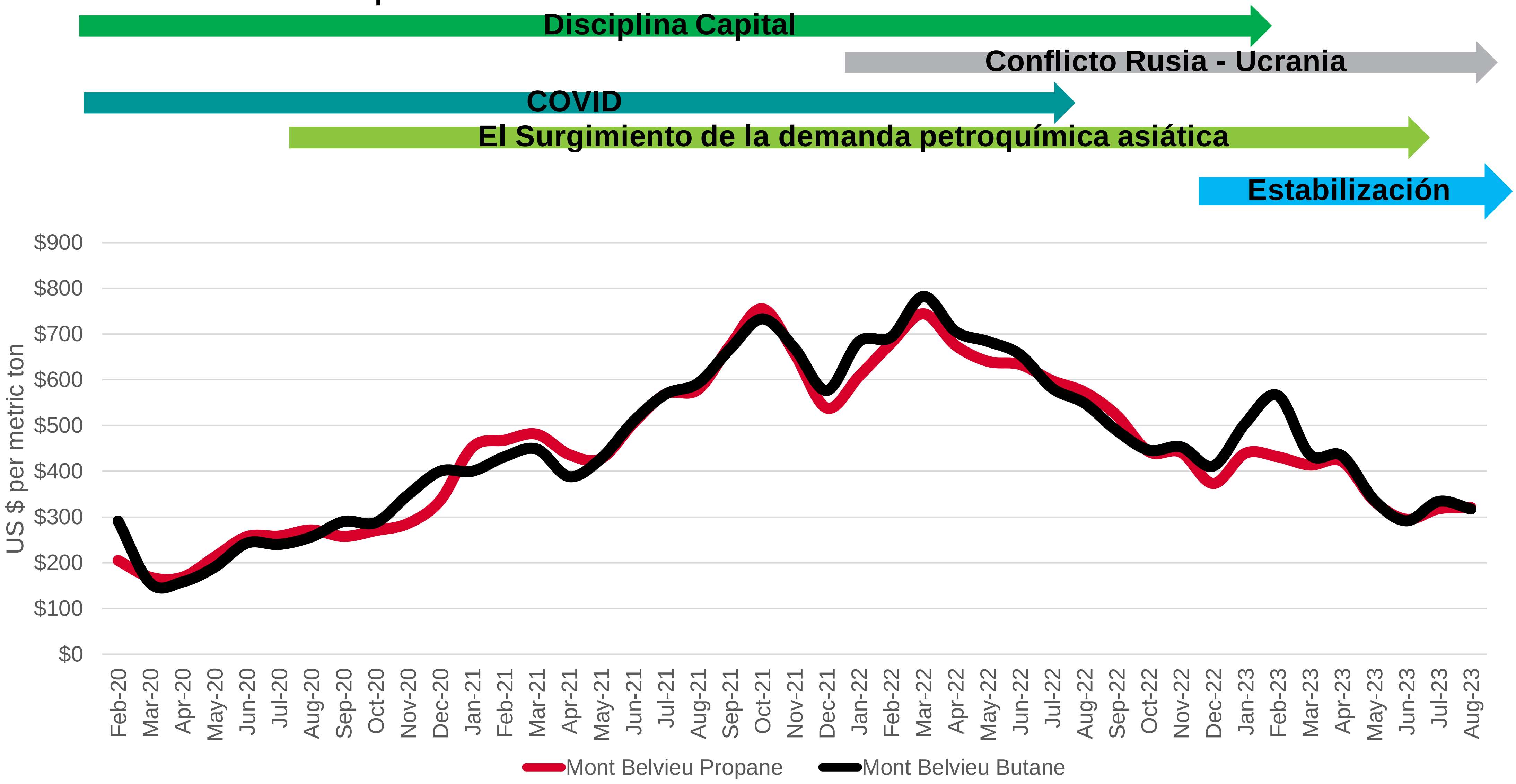
Perspectiva Global

Suministro y demanda del Gas LP



Source: **Natural Gas Liquids: A Nontechnical Guide, William Leffler**

Causas del alza del precio referencia desde el 2020:



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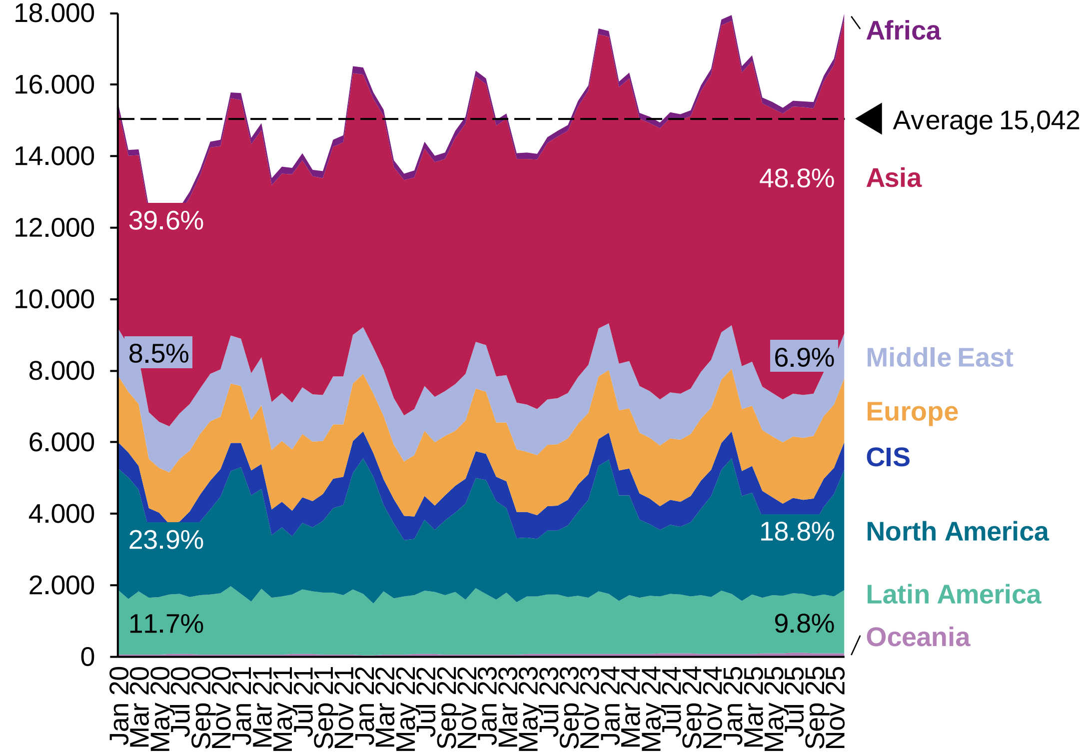
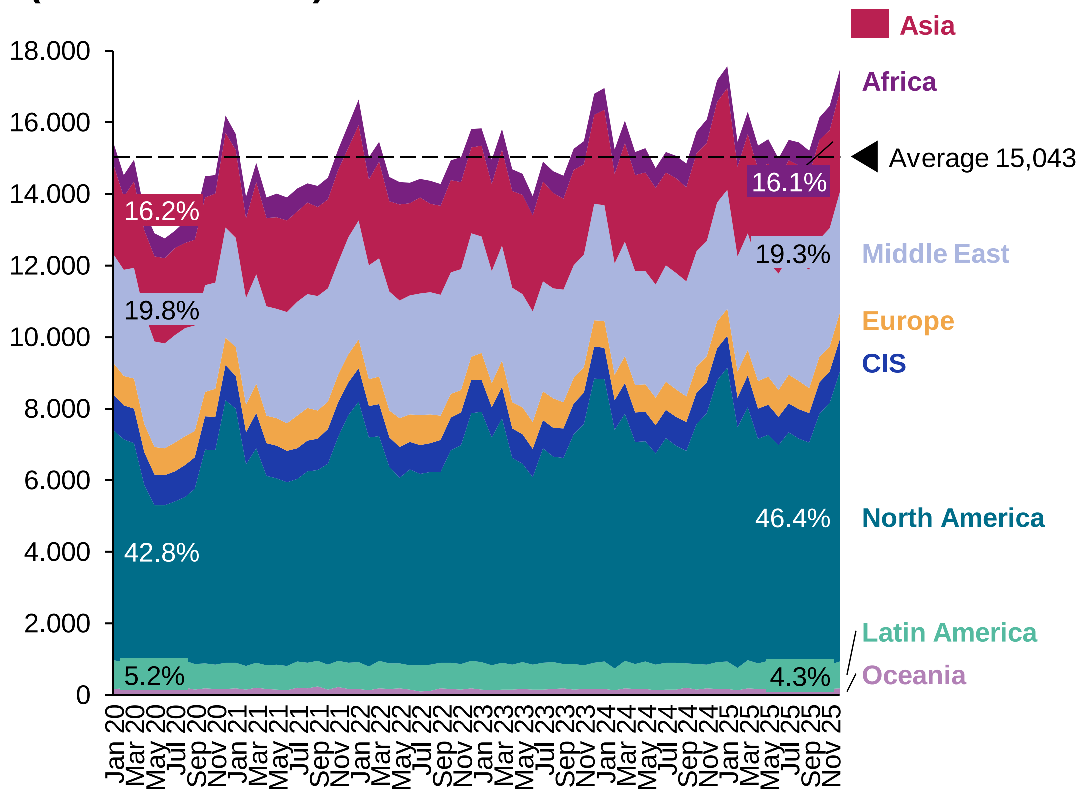
El exceso de oferta esta en Norteamérica y la demanda esta creciendo en Asia.

Global Propane Demand by Region (Thousand tons)



Global Propane Supply by Region (Thousand tons)



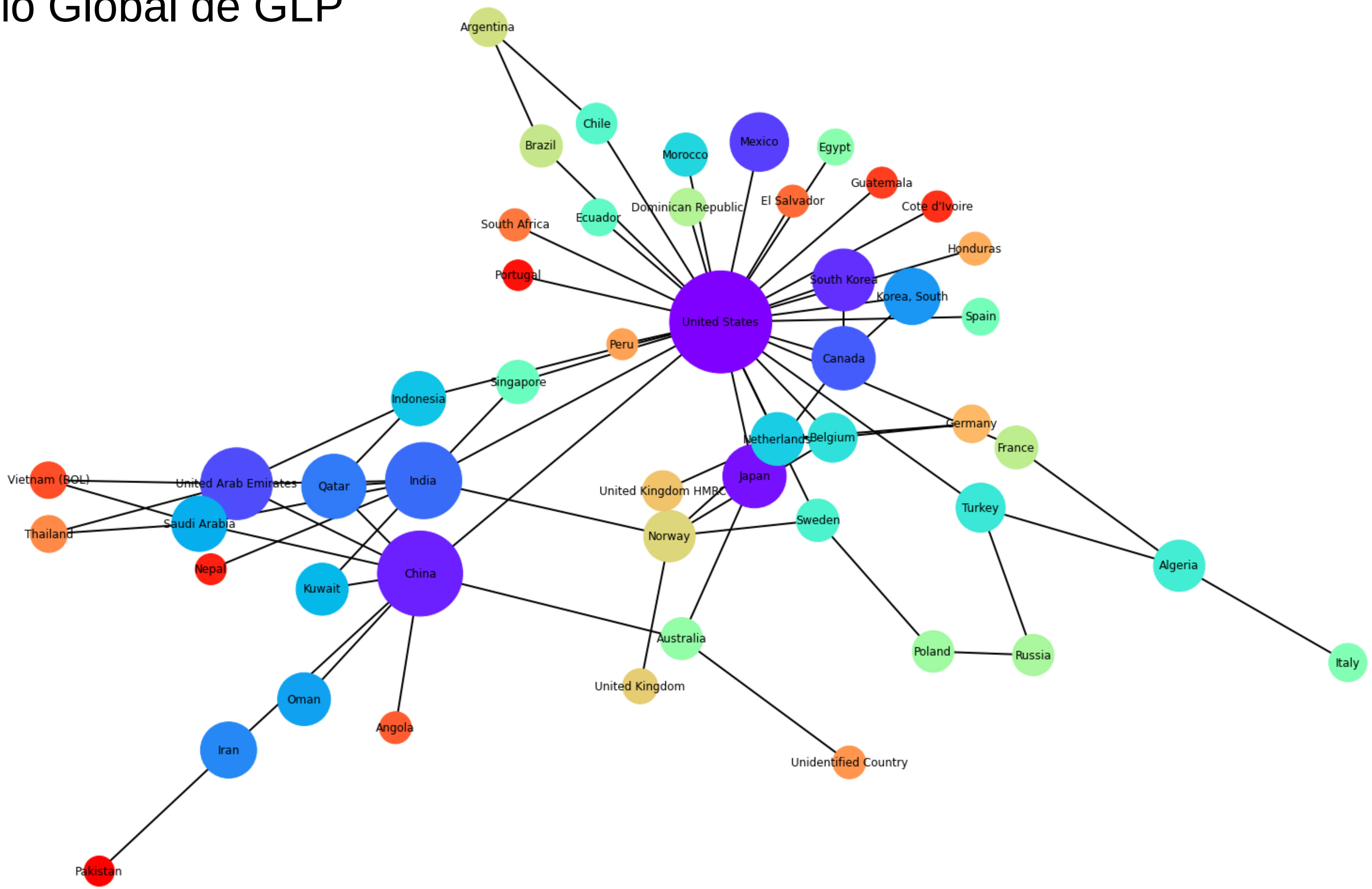
Data compiled Jul. 31, 2023.

Notes: Global demand/supply estimates based of monthly STO and ASW reports (May 2023). Global demand/supply balance based off prior month regional outlooks. Supply includes net storage withdrawals.

Source: S&P Global Commodity Insights

SOURCE : Waterborne LPG Live

Comercio Global de GLP



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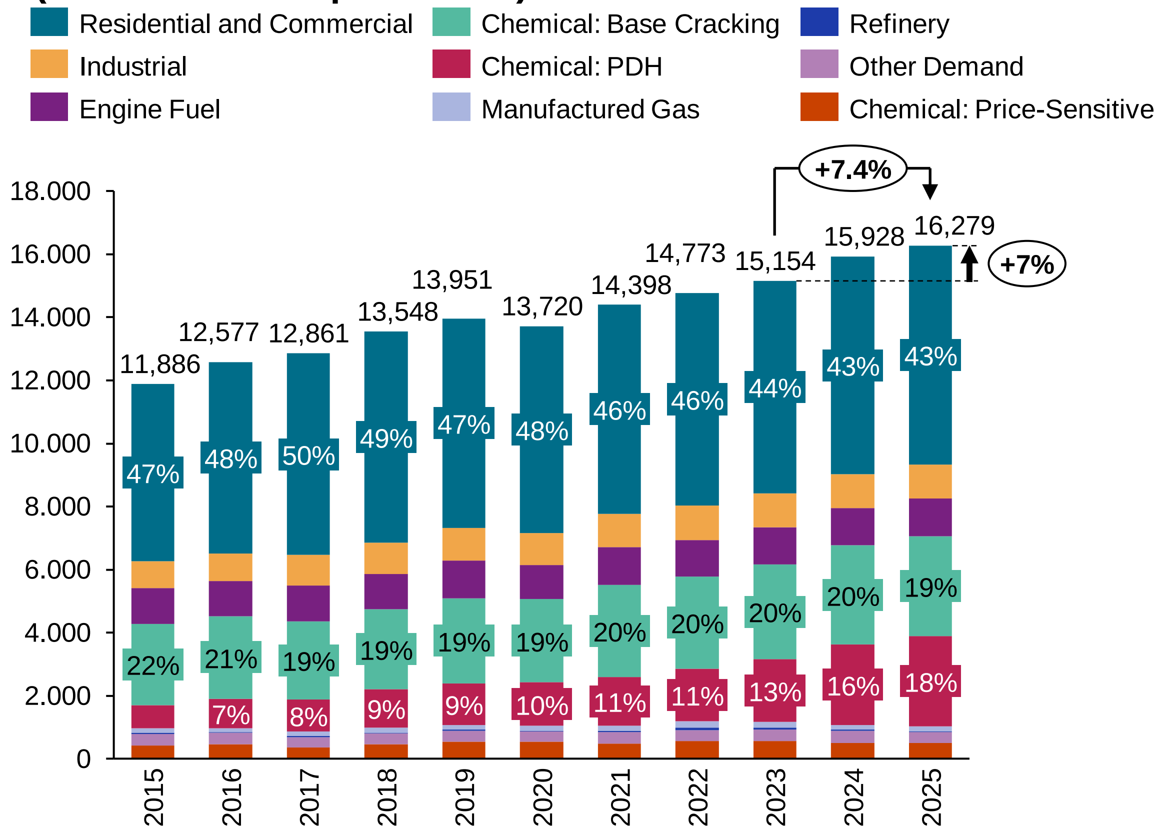
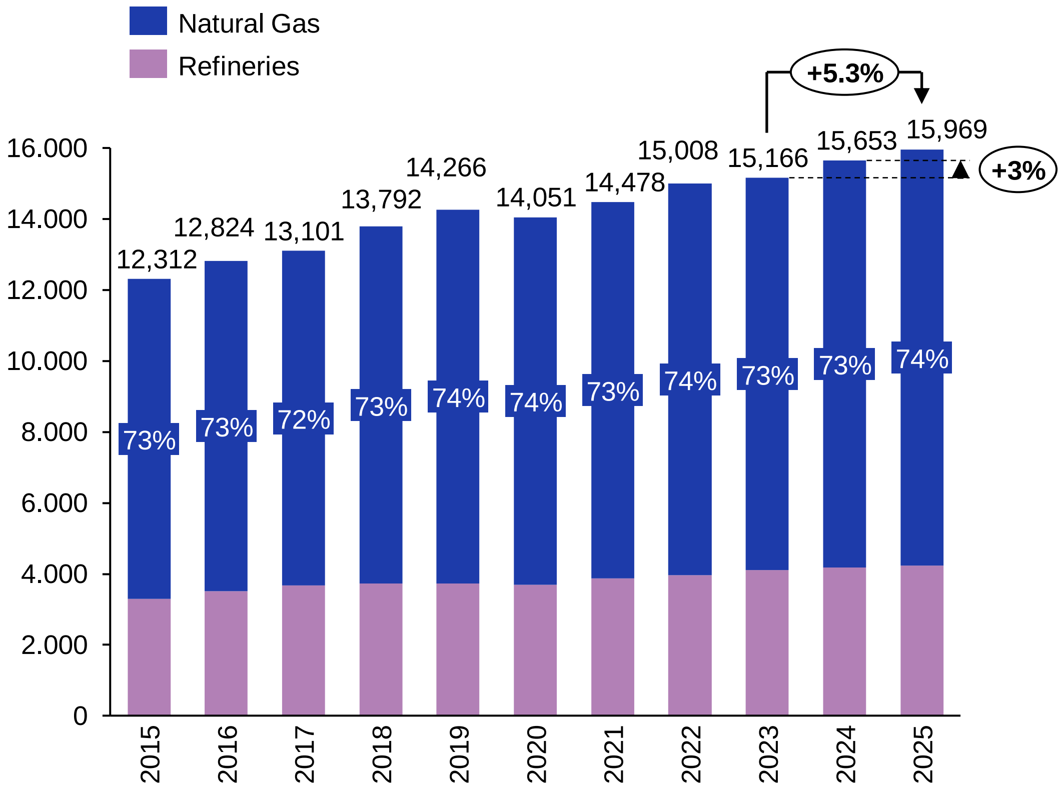
La demanda petroquimica de gas LP continua ganando terreno a nivel mundial a expensas de la demanda residencial.

Global Propane Demand by Source (Thousand tons per month)



Global Propane Supply by Source (Thousand tons per month)



Data compiled Jul. 31, 2023.

Notes: Global demand/supply estimates based of monthly STO and ASW reports (May 2023). Global demand/supply balance based off prior month regional outlooks. Supply includes net storage withdrawals.

Source: S&P Global Commodity Insights

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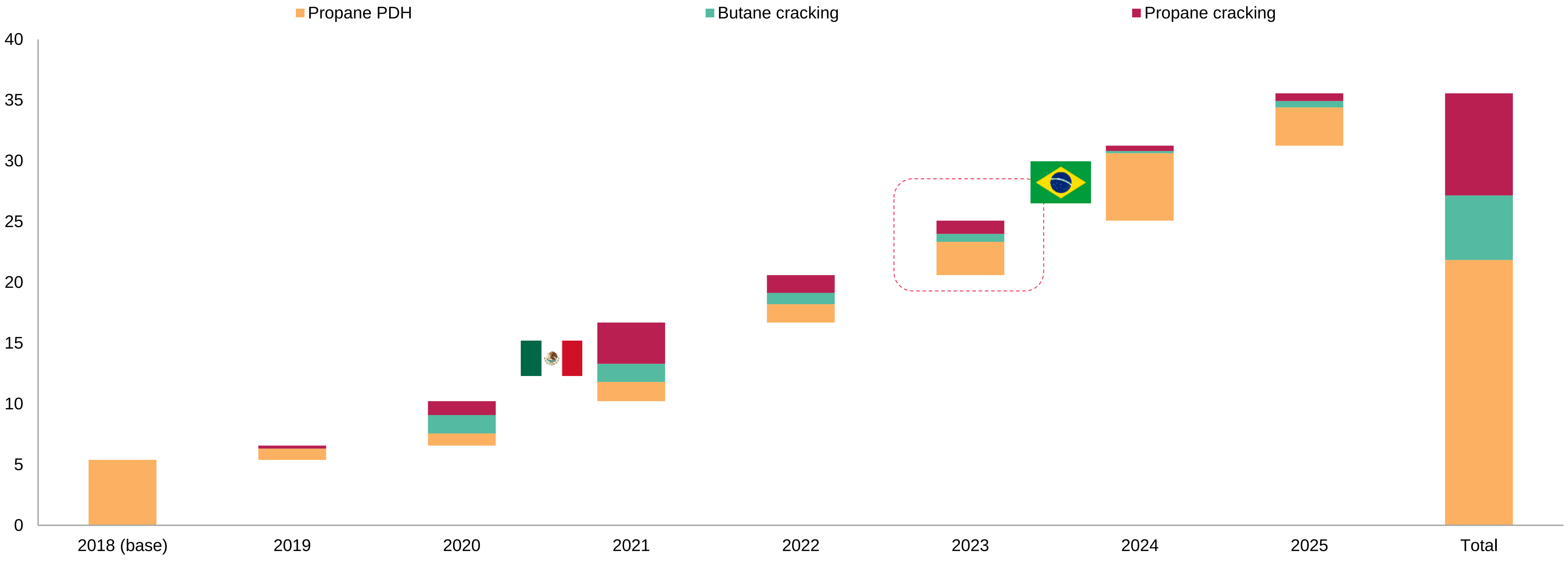
Commodity Insights

Crecimiento de la demanda petroquímica de Gas LP en China

Year-over-Year growth of new olefins plants-driven LPG demand in mainland China (Million metric tons)



Data compiled Jul. 2023
Source: S&P Global Commodity Insights.

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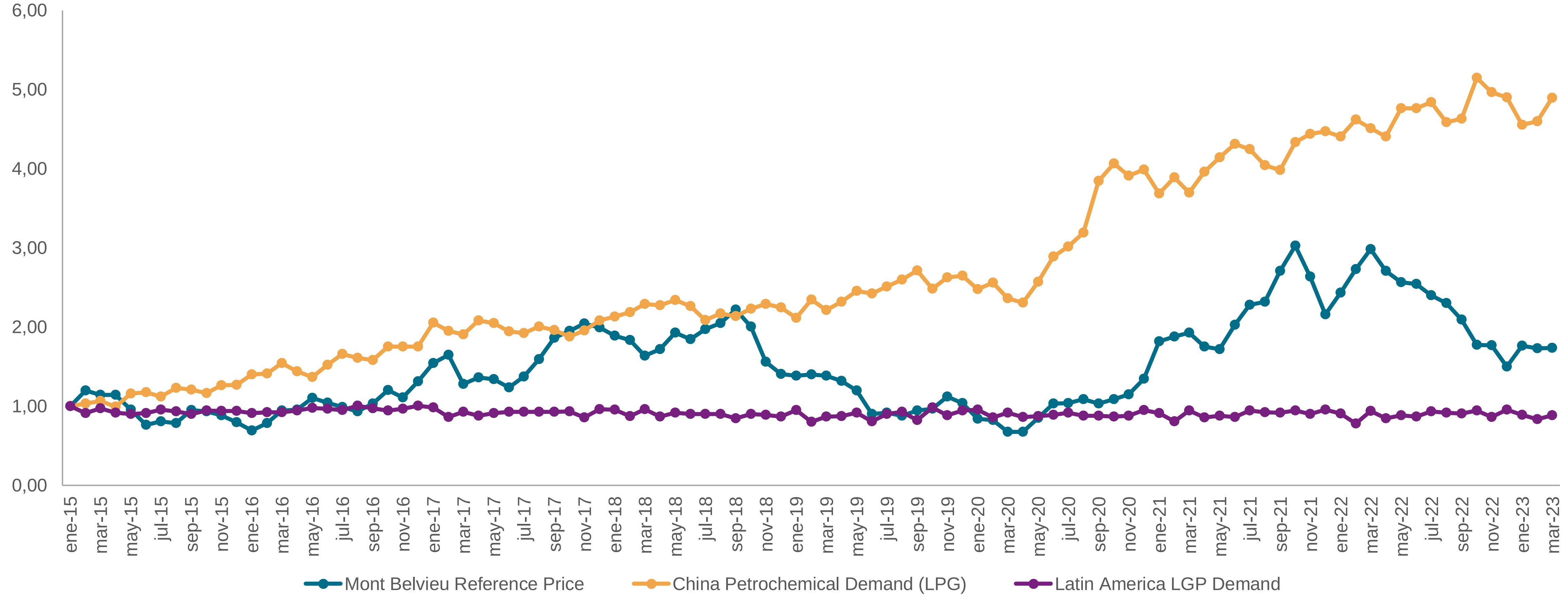
Demanda de América Latina vs Demanda Petroquímica asiática.



Year-on-year growth of Chinese petrochemical vs Latin America LPG Demand

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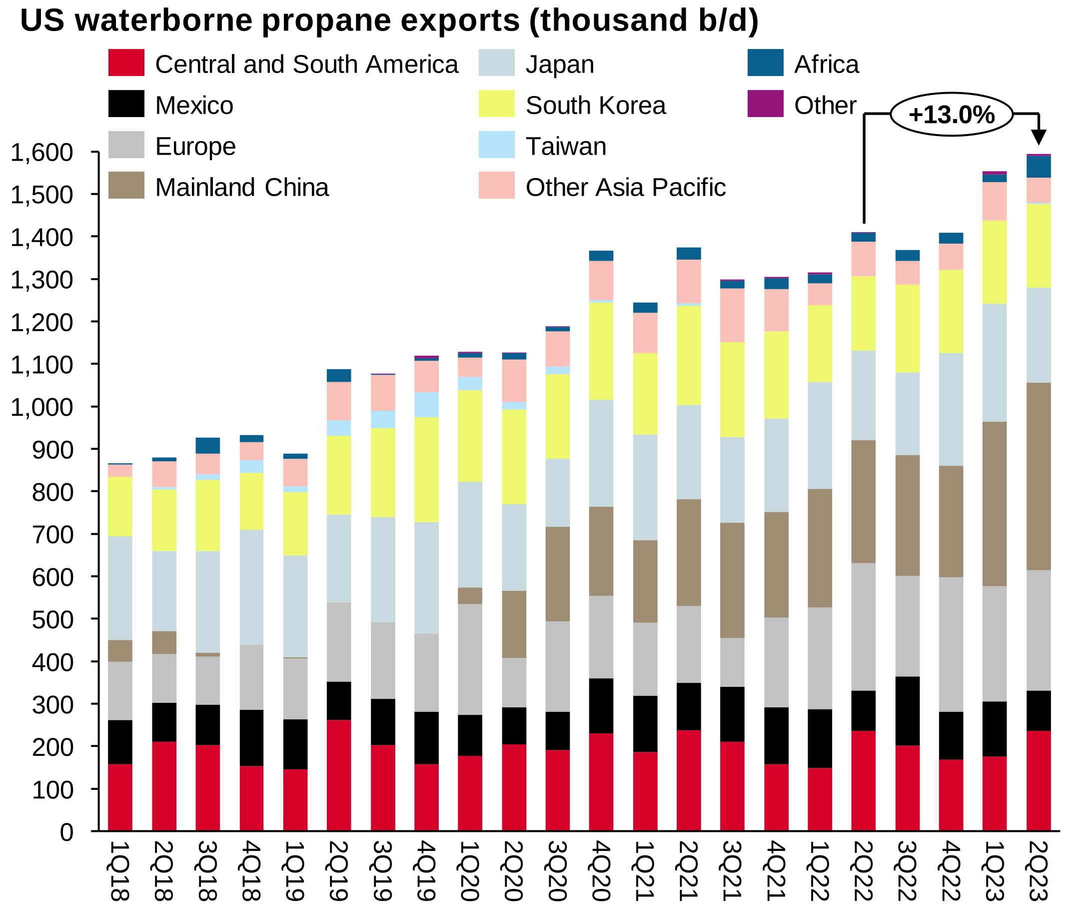
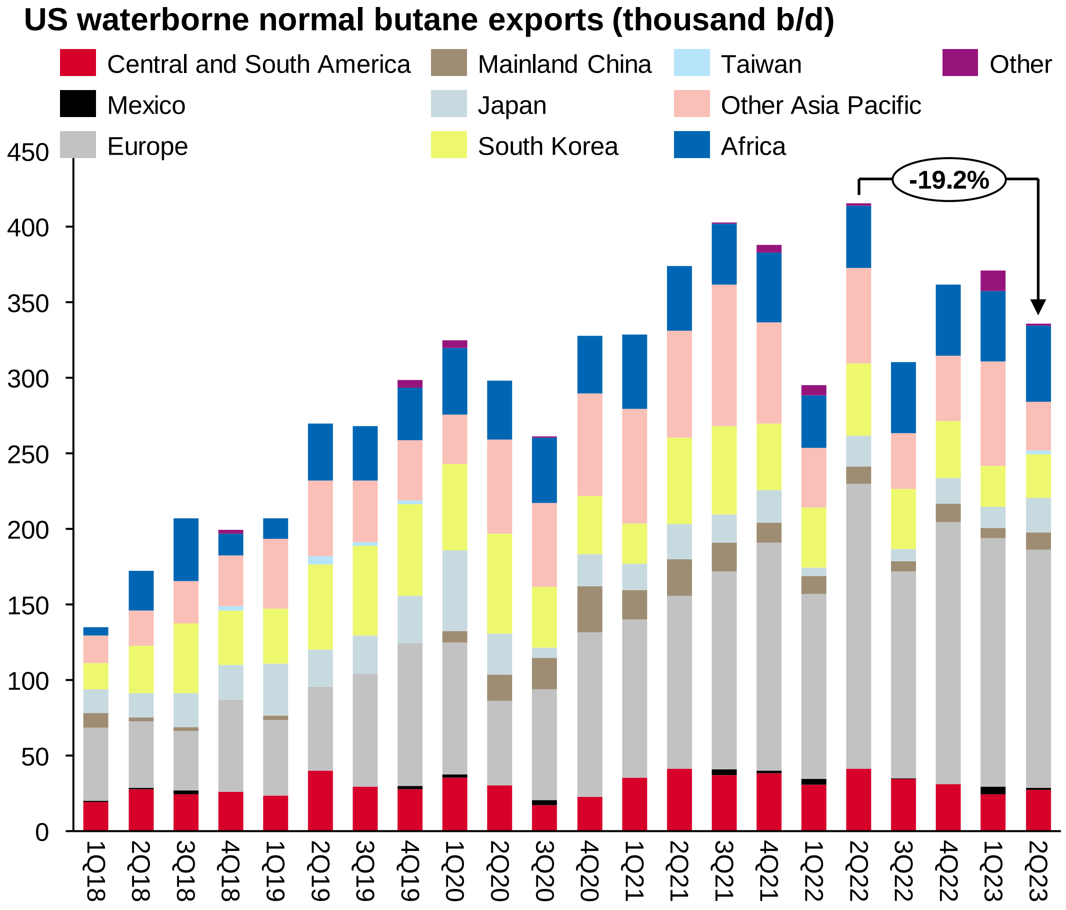
El destino de las exportaciones de EUA se diversifica y la demanda por el producto continua creciendo





Data compiled Jul. 31, 2023.

2Q 2023 exports numbers are not final and are subject to change.

Source: S&P Global Commodity Insights.

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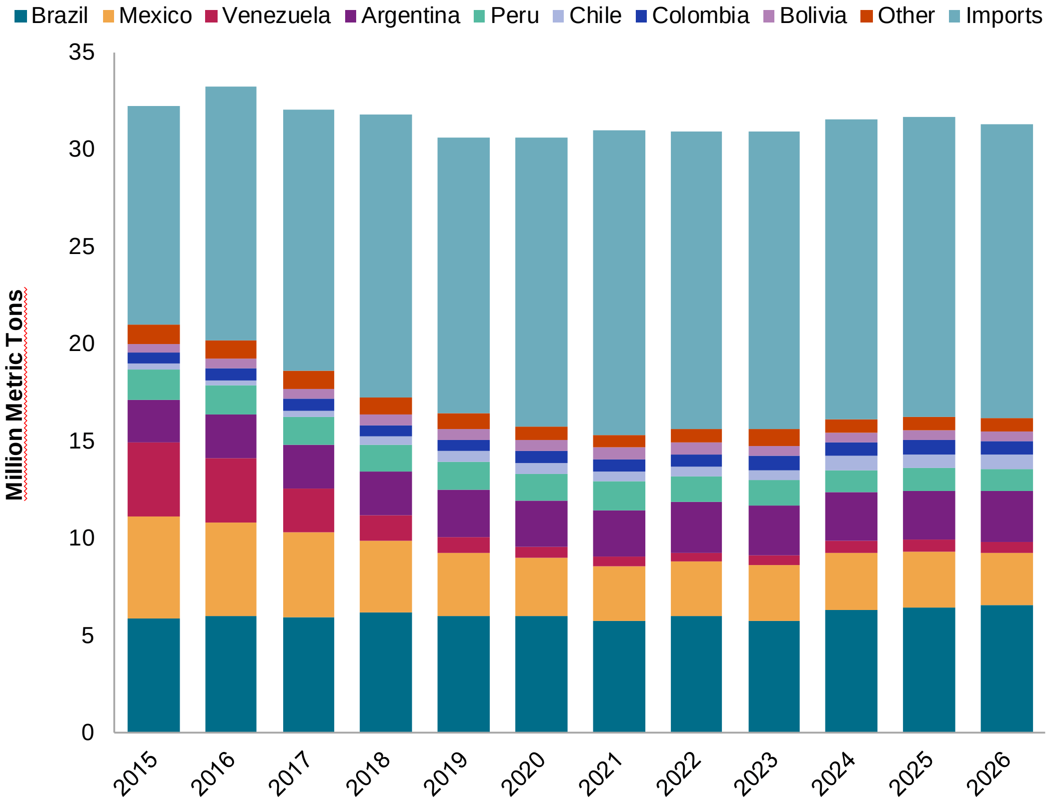
América Latina

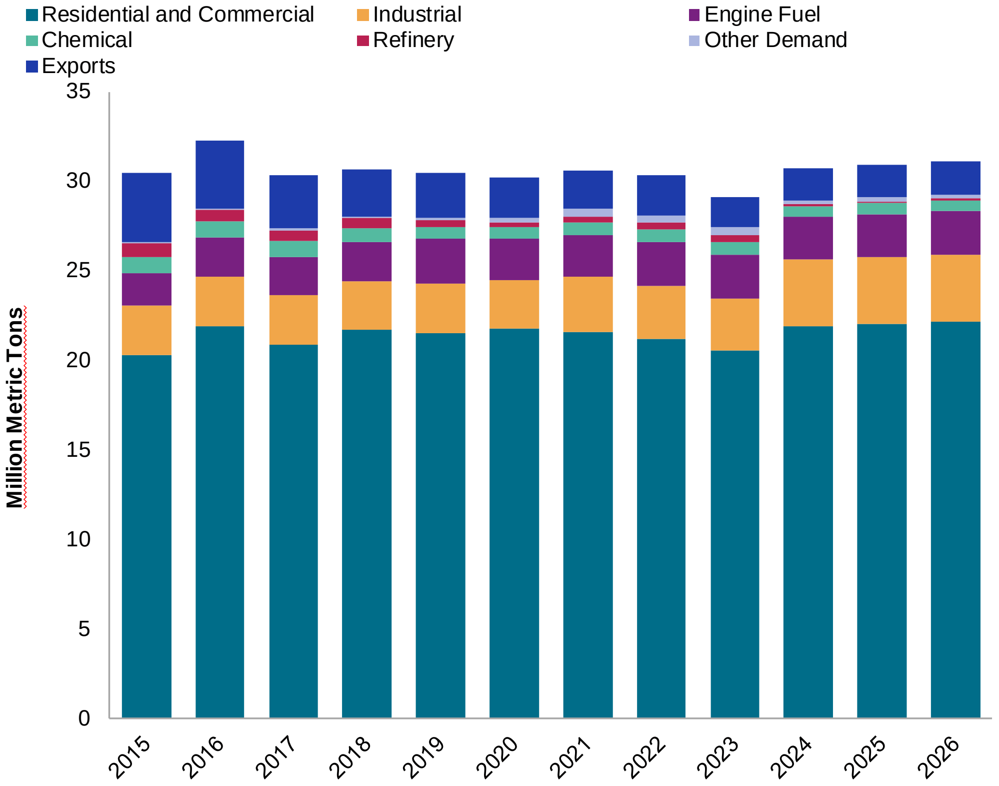
Balance regional

Latin America LPG Supply



Source: S&P Global Commodity Insights, formerly IHS Markit

Latin America LPG Demand



Source: S&P Global Commodity Insights, formerly IHS Markit

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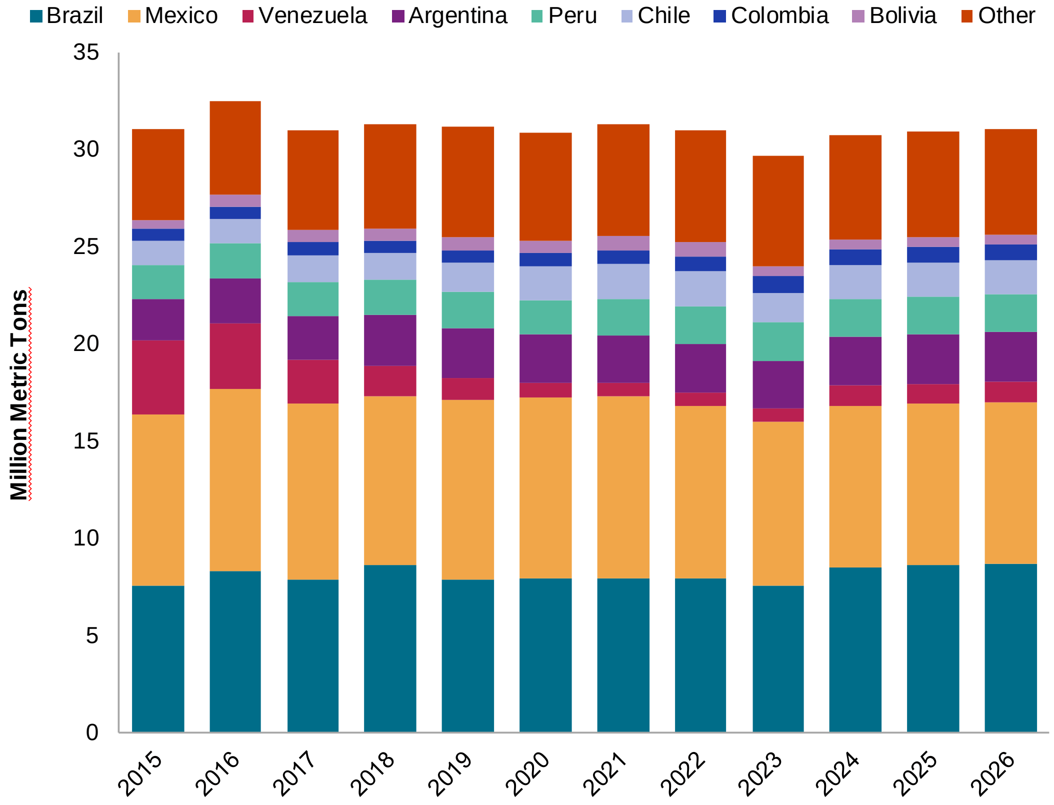
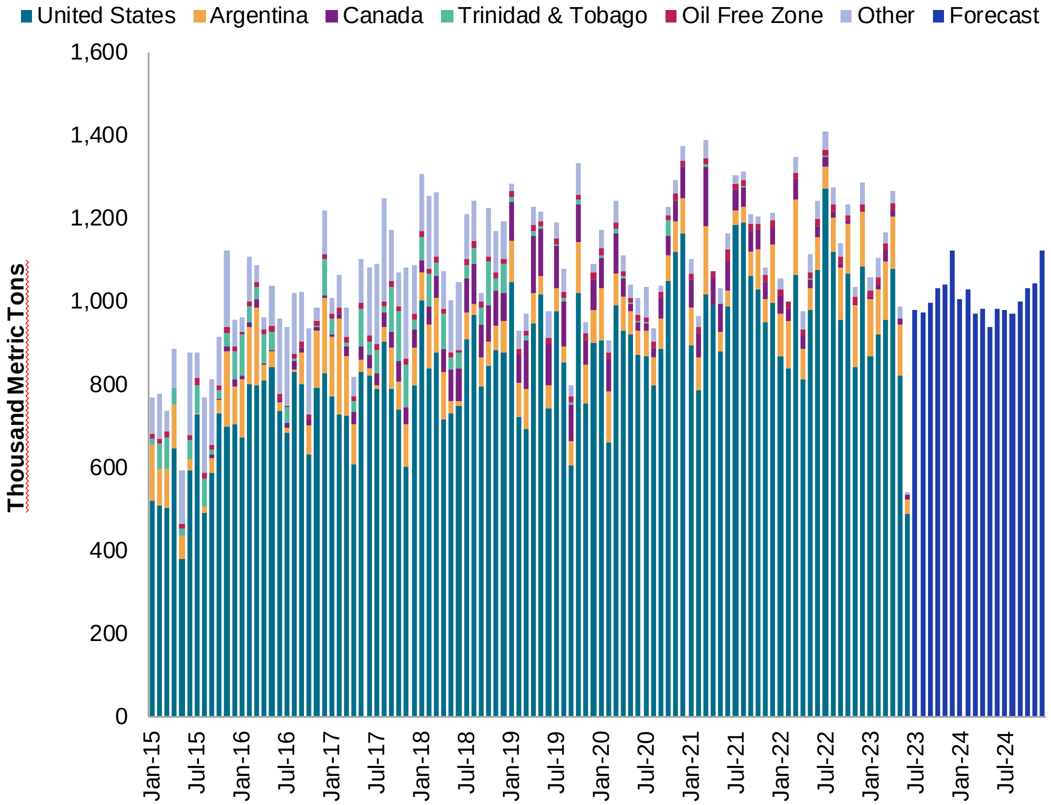
Balance Regional

Latin America LPG Demand by Country



Source: S&P Global Commodity Insights, formerly IHS Markit

Latin America LPG imports by source



Source: S&P Global Commodity Insights, formerly IHS Markit

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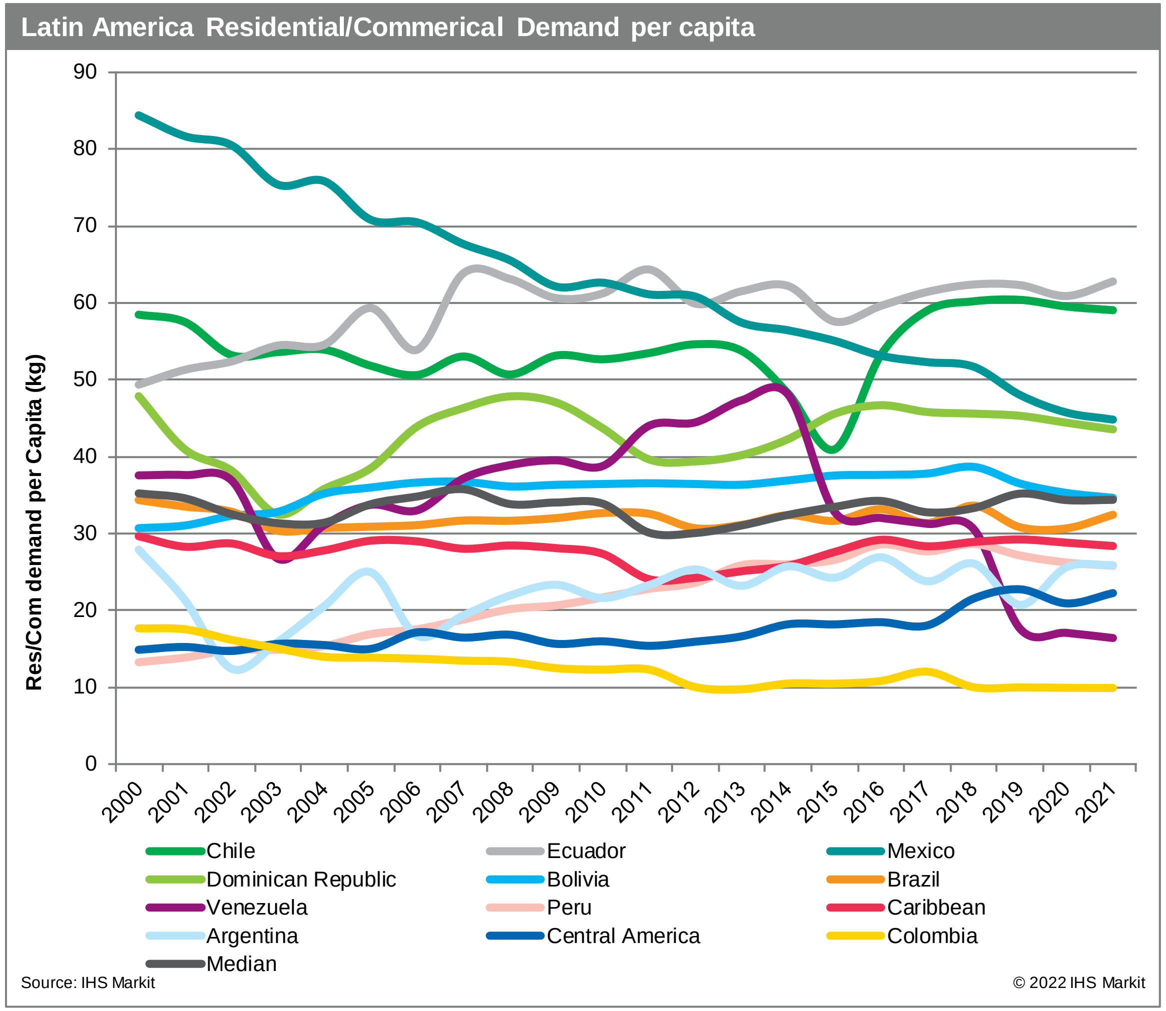
Demanda residencial de Gas LP per cápita en América Latina



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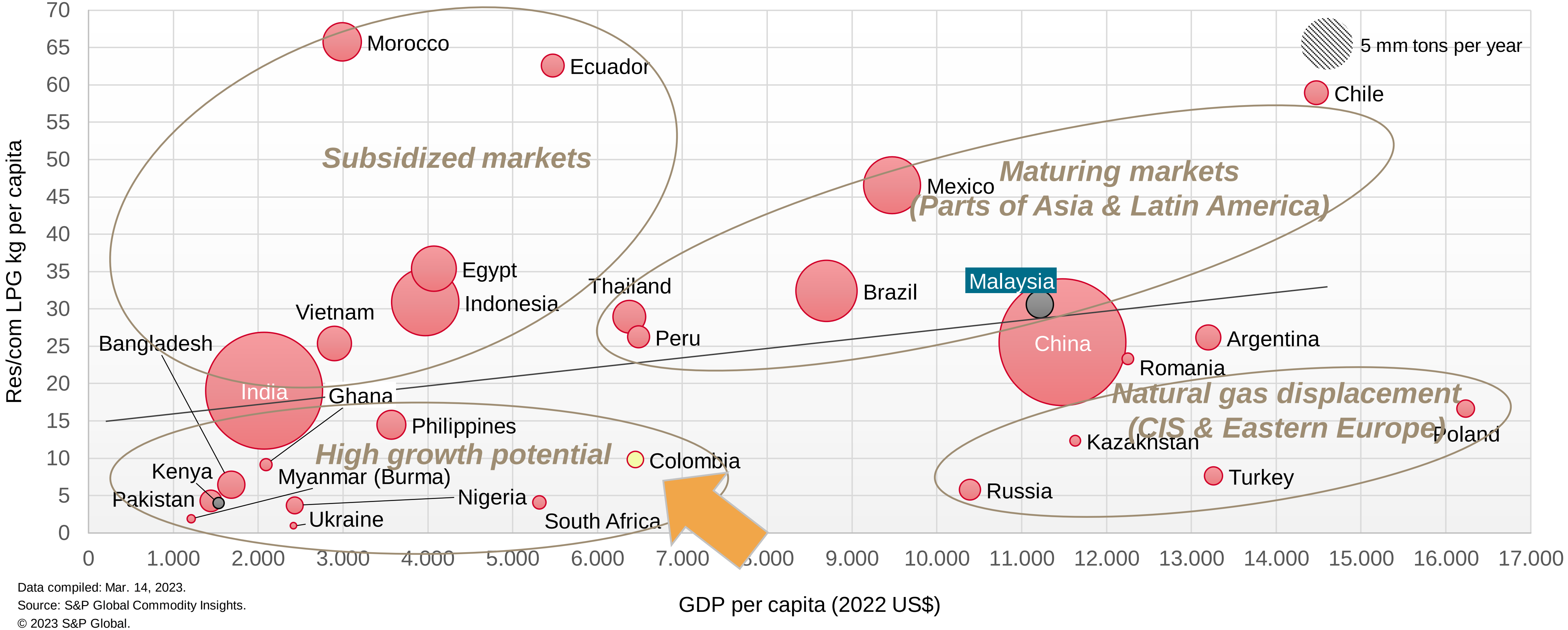
Mercados Globales del Gas LP

LPG market development versus GDP per capita in selected countries



Data compiled: Mar. 14, 2023.
Source: S&P Global Commodity Insights.

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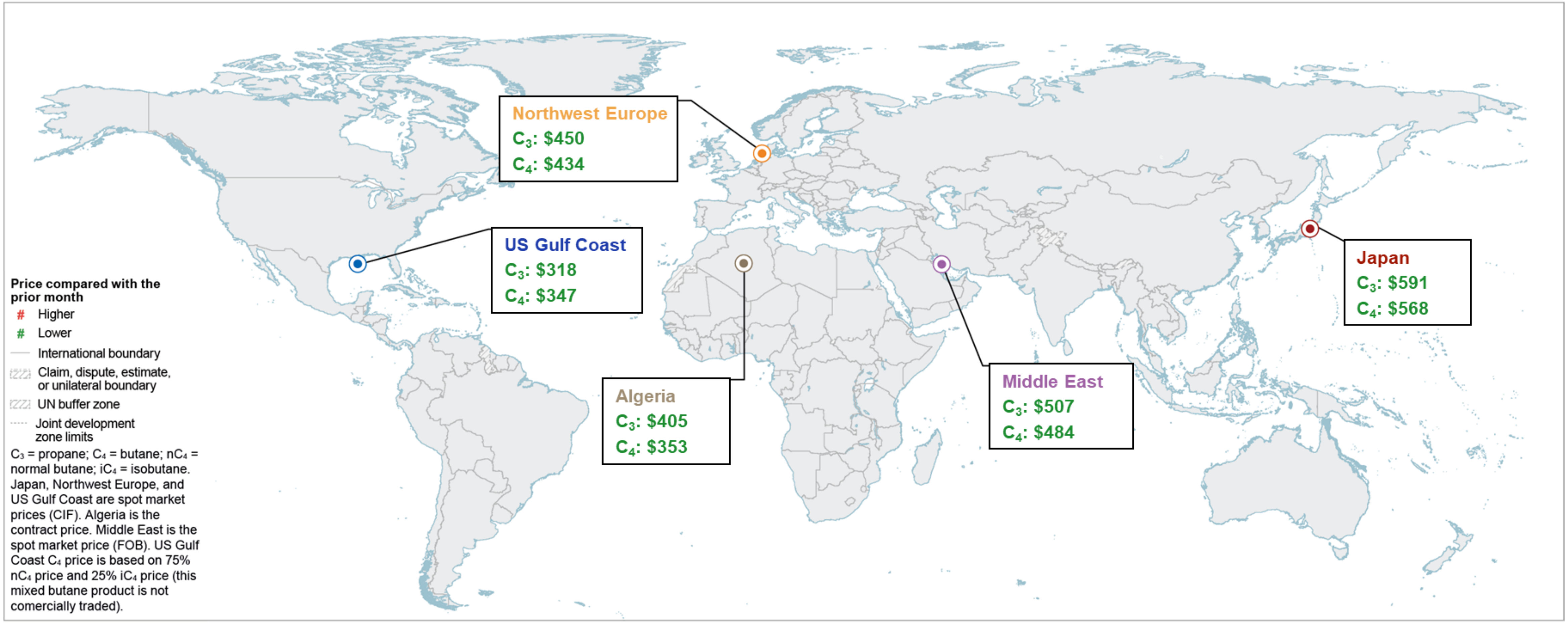
Precios

International LPG prices for July 2023

International LPG prices (per metric tons)

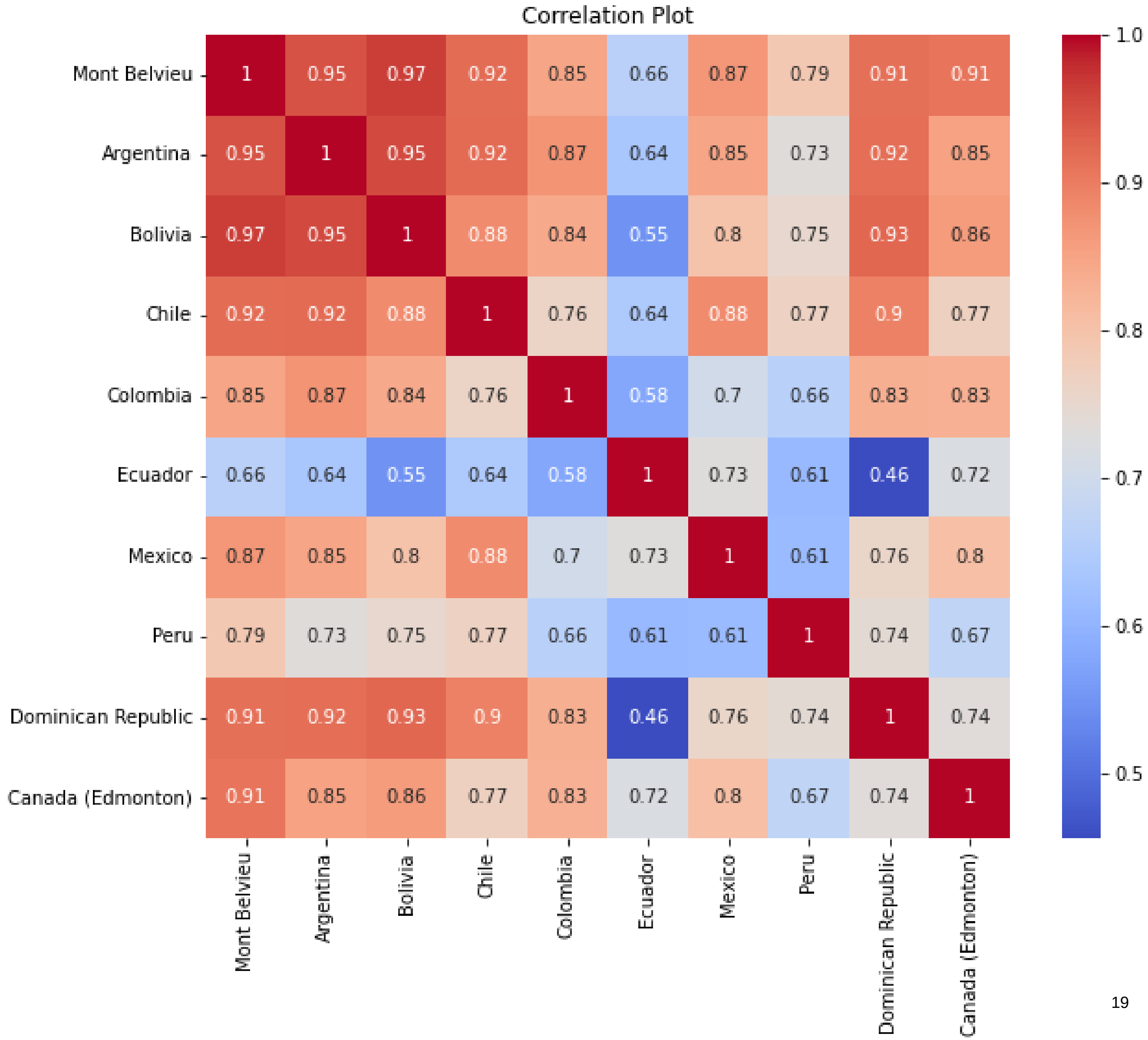


Data compiled Jul. 31, 2023.

Sources: Argus Media Limited, OPIS a Dow Jones Company, S&P Global: 2008450

Relación de los precios al consumidor en América Latina en relación con la referencia internacional

Pais	**R^2**
Argentina:	*0.89*
Bolivia:	*0.93*
Chile:	0.84
Colombia:	0.72
Ecuador:	0.29
Mexico:	0.75
Peru:	0.62
Dominican Republic:	0.84
Canada (Edmonton):	*0.83*



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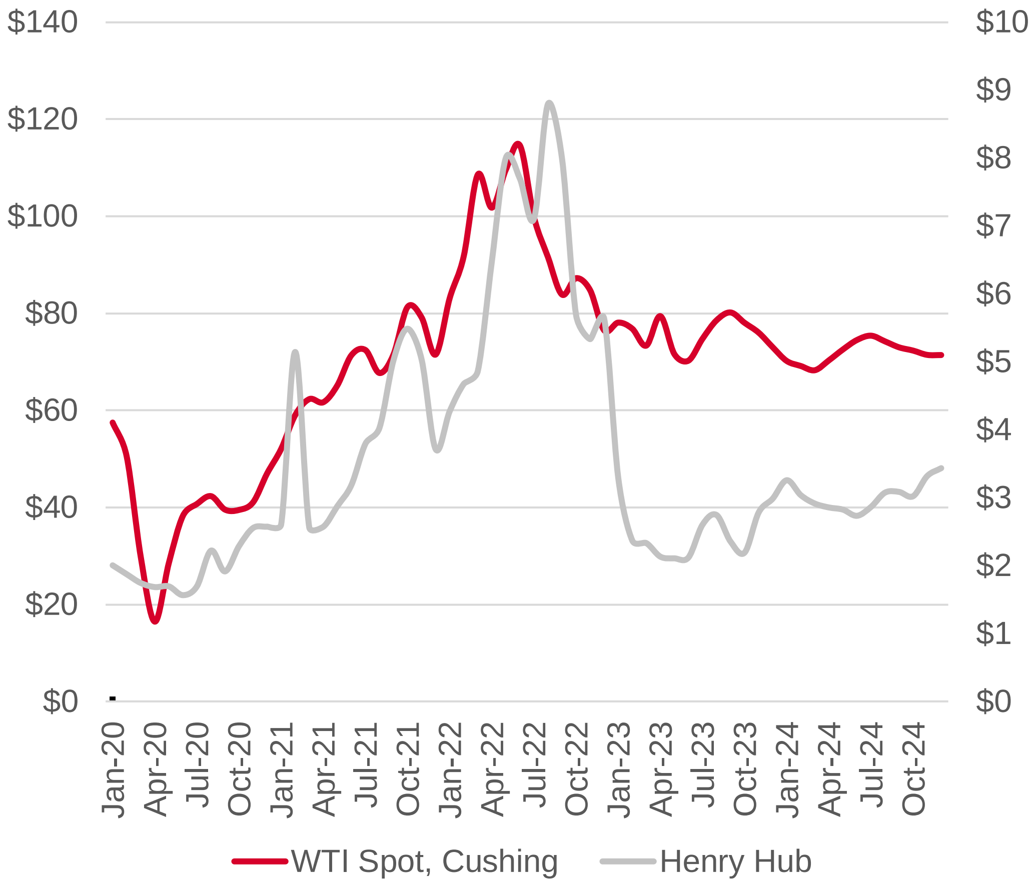
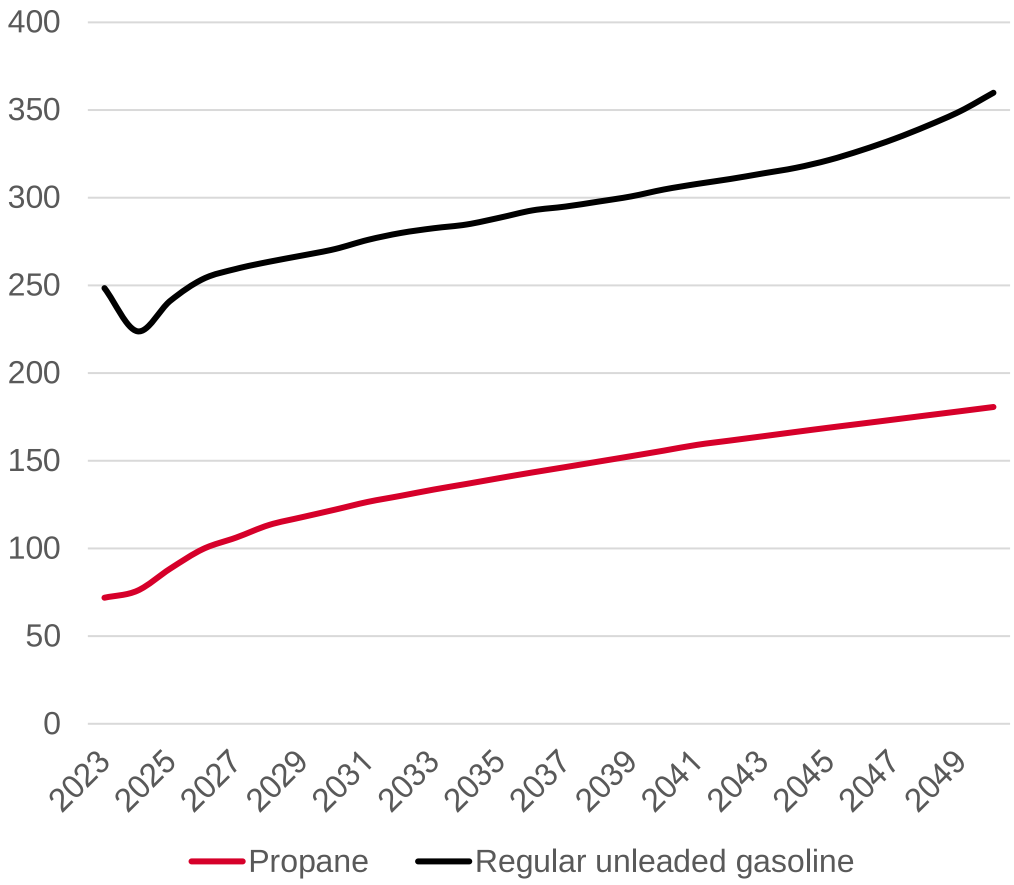
Comparativa de Precios

Crudo, Gas Natural, Gasolina y Propano





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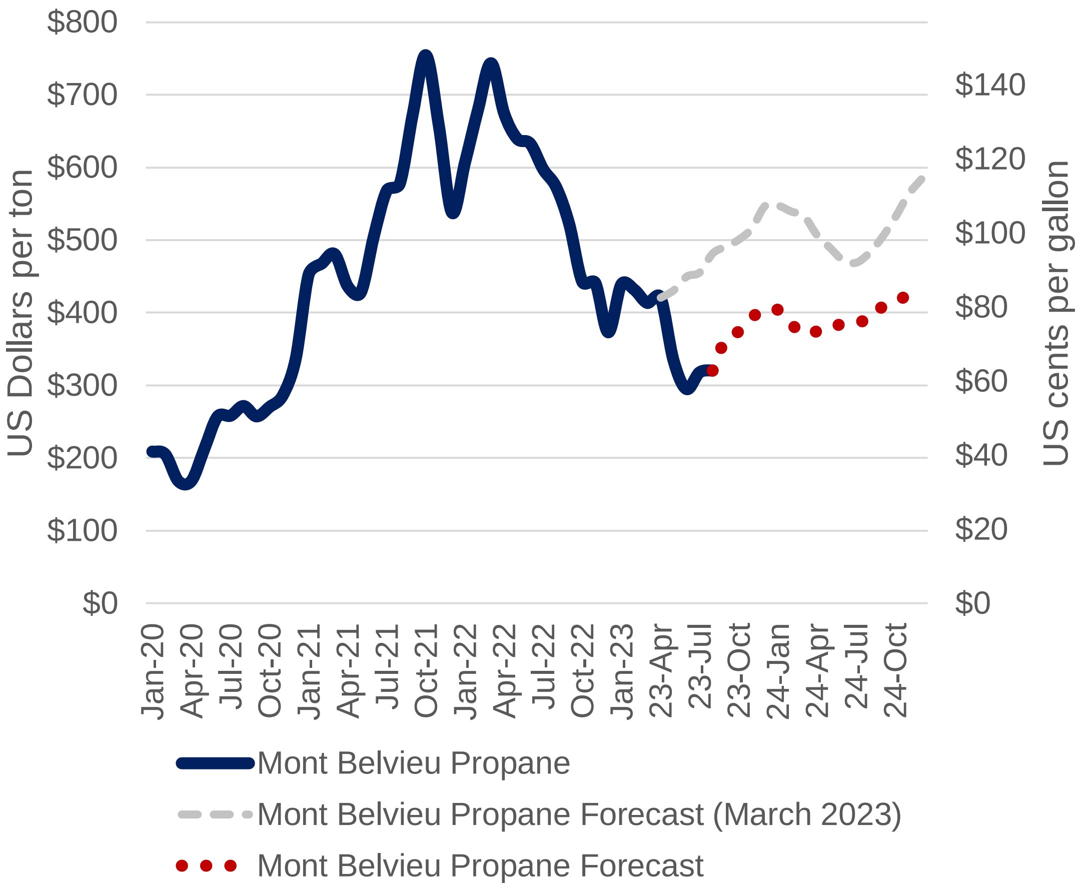
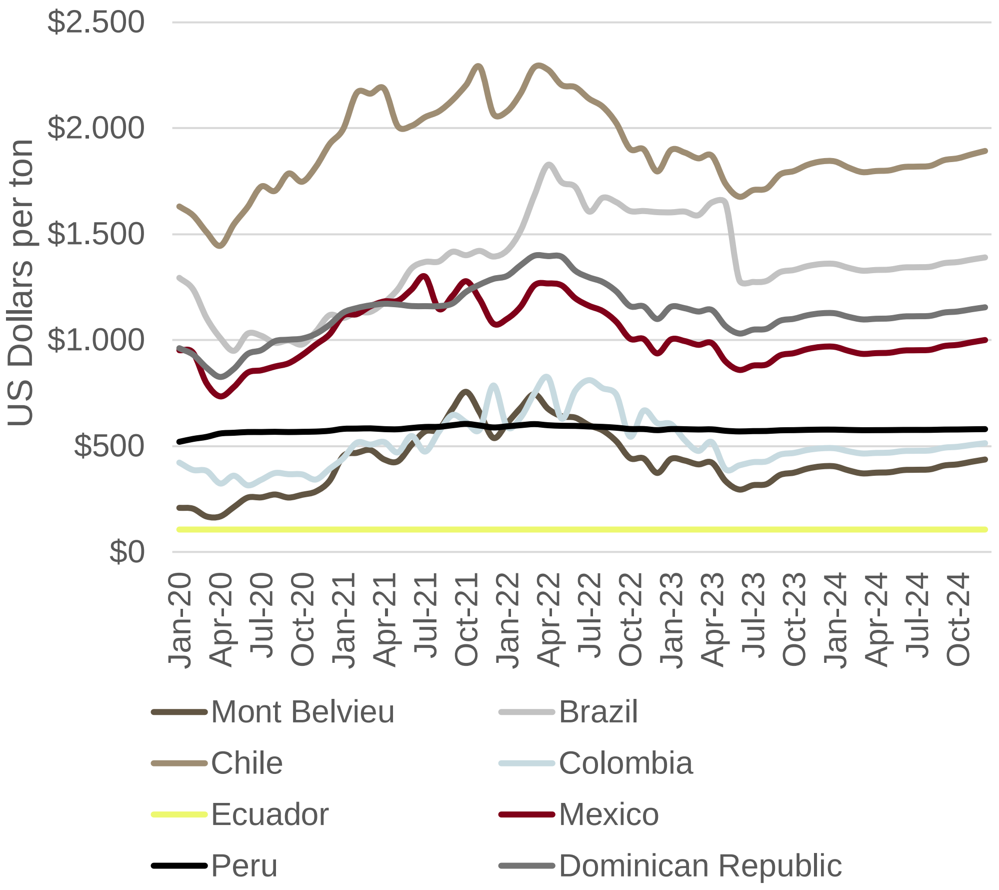
Pronostico de precios para los siguientes meses:





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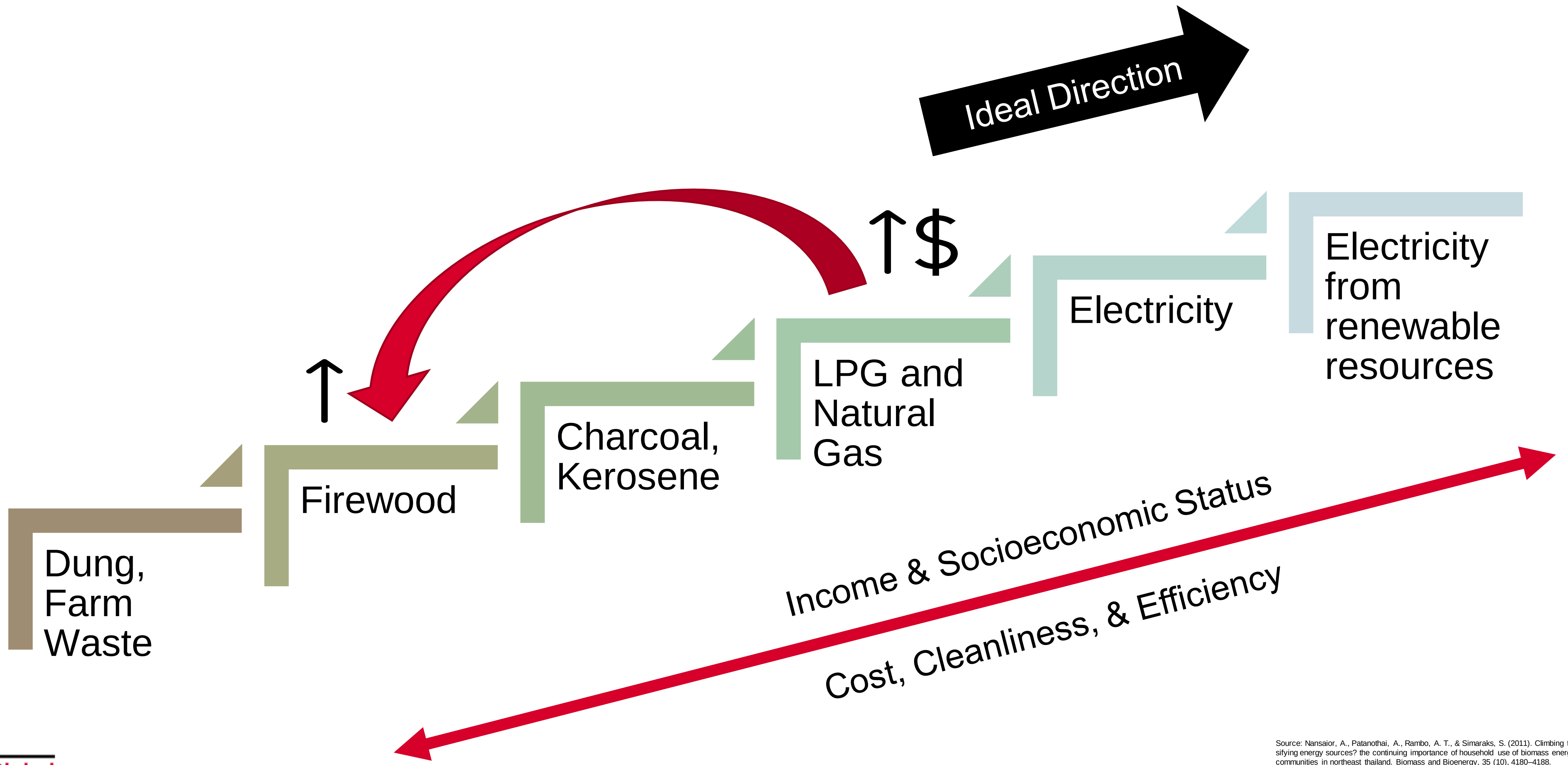
Reflexiones

La intervención en el mercado de Gas LP por parte de los gobiernos ha tenido consecuencias negativas y debe ser el ultimo recurso

Case studies of Latin American government intervention in the retail LPG market

Country *2022 Res/com demand*	**Initiatives**	**Outcome/Implications**
Mexico *5.7M MT*	• Pemex's distributor "Gas Bienestar" began operations locally with mixed results • Retail price cap often lower than the cost to serve a market was extended indefinitely	• Up to 10% of demand served by the black market • Cost $1.4B to distributors in lack of investment • Cylinders lost into cylinder park • Gas Bienestar put on pause
Colombia *0.5M MT*	• Ecopetrol ended discount for locally-produced LPG • Government to implement focalized subsidy to low-income consumers • Further intervention unlikely due to global price stabilization	• Temporary Ecopetrol discount to distributors • Transition of LPG customers to firewood
Chile *1.1M MT*	• Government-backed distributor "Gas de Chile" began operations • With the intent of promoting competition, trying to change distribution structure	• Limited market share and growth for Gas de Chile • Paused congressional proposal limiting LPG distributor retail ops
Peru *0.9M MT*	• LPG stabilization fund re-established • Disincentivize Autogas with government-financed conversions from LPG to CNG	• Financial liability will eventually have to addressed by the national treasury
Ecuador *1.1M MT*	• LPG subsidy in place for 30+ years; retail prices lower than Mont Belvieu hub (USA) • Two Ecuadorian presidents ousted for attempting to eliminate the LPG subsidy	• Residential subsidy cost $1.2B between 2020-2022 • Demand did not change during the increase in global LPG prices, as it did in other markets
Guatemala *0.4M MT*	• Temporary government subsidy implemented to lower LPG prices	• Government forced to discontinue subsidy
Costa Rica *0.1M MT*	• Reduction of LPG prices by reduction of taxes paid by consumers • Development of a West Coast import terminal to diversify supply away from USGC	• Tax relief and terminal project eliminated

La definición de “Transición Energética” depende del contexto



Source: Nansaior, A., Patanothai, A., Rambo, A. T., & Simaraks, S. (2011). Climbing the energy ladder or diversifying energy sources? the continuing importance of household use of biomass energy in urbanizing communities in northeast thailand. Biomass and Bioenergy, 35 (10), 4180–4188.

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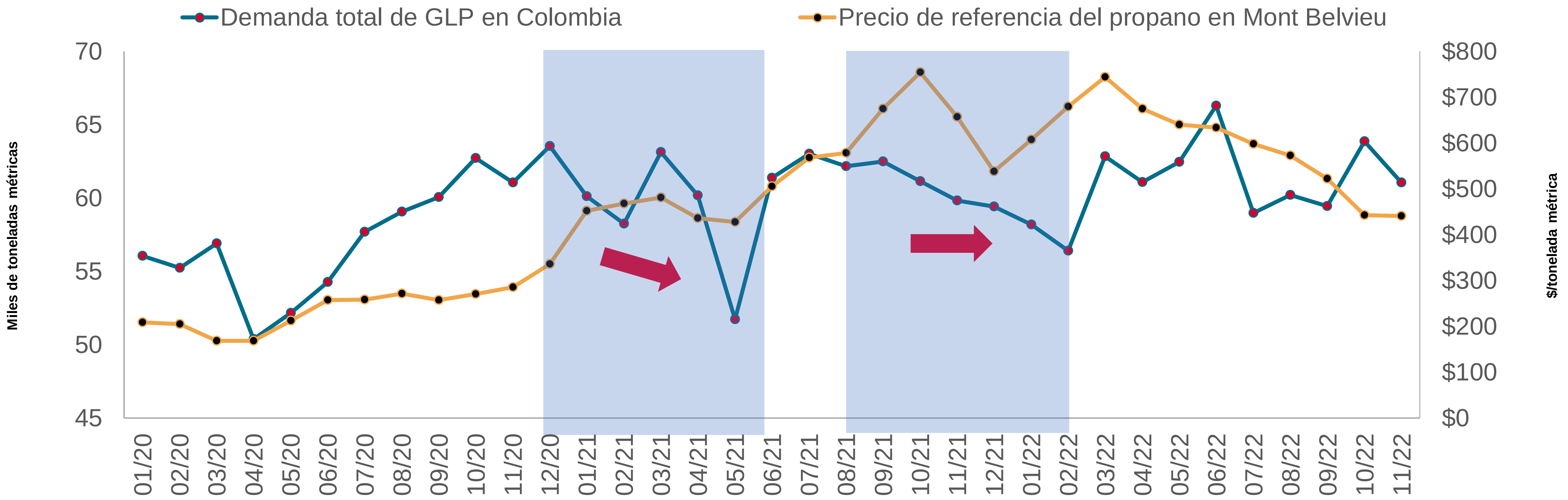
Elasticidad precio de la demanda del Gas LP en Colombia.

Demanda de Gas LP en Colombia vs. precio de referencia del propano Mont Belvieu



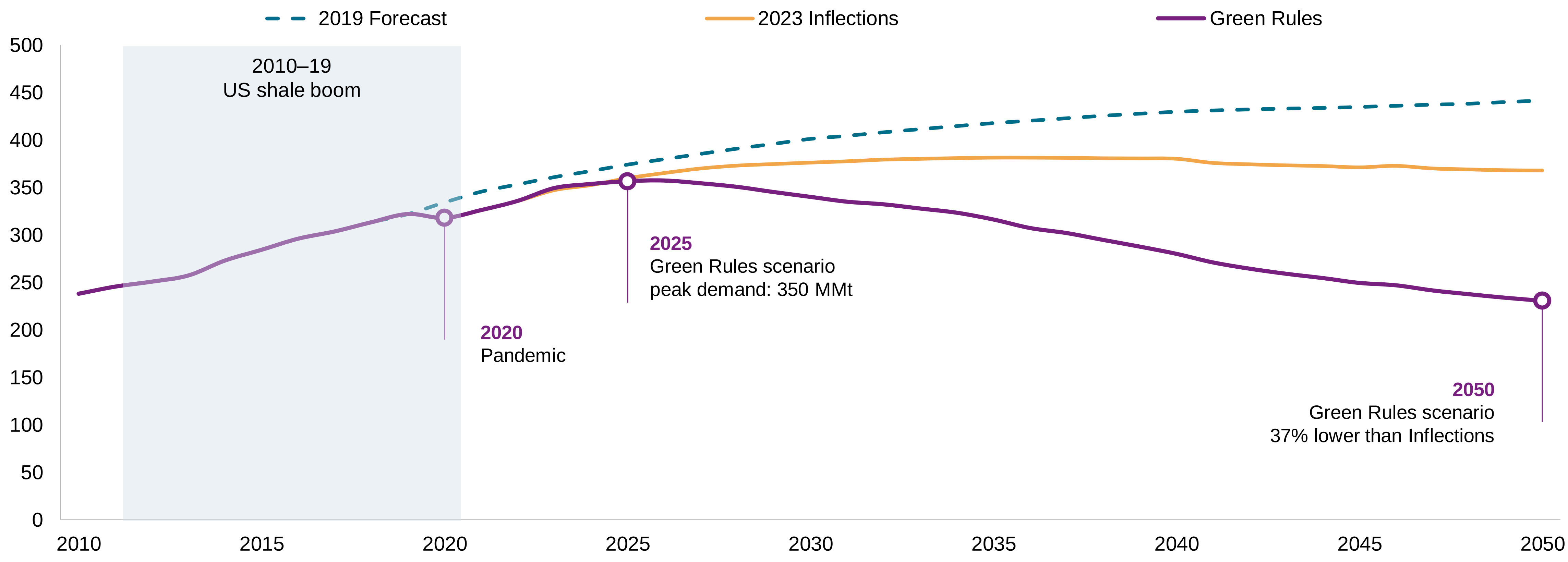
Data compiled March 22, 2023.

Source: S&P Global Commodity Insights.

La transición energética

El impacto en el corto plazo es mínimo. En el largo plazo es mas considerable.

Global LPG total production: 2023 (million metric tons)



Data compiled Jan. 30, 2023.
Source: S&P Global Commodity Insights.

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Conclusiones

- Diferencia entre factores internos vs factores externos
  - Fundamental para el diseño de la política publica
- Controlar lo que se puede controlar
  - La importancia de la inversión y la ganancia de eficiencia.
- Hay mercado de Gas LP para rato.
  - Demanda residencial estable
  - La transición energética tomara tiempo.
  - Nuevos usos/oportunidades

¡Muchas Gracias!

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