



Natural Gas Liquids Fundamentals

MARCH 2022

This presentation includes “forward-looking statements.” Such forward-looking statements are subject to a number of risks and uncertainties, many of which are beyond AR’s control. All statements, except for statements of historical fact, made in this presentation regarding activities, events or developments are forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. All forward-looking statements speak only as of the date of this presentation. Although AR believes that the plans, intentions and expectations reflected in or suggested by the forward-looking statements are reasonable, there is no assurance that these plans, intentions or expectations will be achieved. Therefore, actual outcomes and results could materially differ from what is expressed, implied or forecast in such statements. To the extent a forward-looking statement contained in this presentation speaks as of a period covered by prior guidance, the information in this presentation is intended to supersede, and investors should not rely on, such prior guidance.

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NGLs today are globally priced commodities, with the pricing outlook benefiting from moderate supply growth and strong demand, particularly from Asia. Storage levels at five year lows provide an attractive set up for 2022.

U.S. NGL Market Overview and Outlook



Supply

- U.S. NGL supply growth has been moderate, due to significant barriers to entry that require long term commitments in processing plants and other infrastructure
- Producer capital discipline and maintenance level capital programs result in a low growth outlook
- Record setting LPG exports have driven U.S. propane inventories below the 5-year average



Demand

- Resilient domestic and international demand from petrochem and residential/commercial sectors
- New LPG demand continues to come online, including over 500 MBbl/d of new PDH demand expected in China through 2023
- Rising living standards in developing countries, particularly in Asia, create an inelastic demand pull for LPG and NGL derivative products



Outlook for NGLs

- The impact of a decline in shale oil activity on “associated NGL” production has been even more pronounced than the impact on associated gas production while global NGL demand increases
- U.S. NGL export capacity expansions tighten Mont Belvieu differentials to premium Brent-linked international pricing
- **Bullish** – Robust demand and flat supply has already driven C3+ pricing from an average of ~\$21/Bbl in 2020 to over \$70/Bbl in early 2022



3%

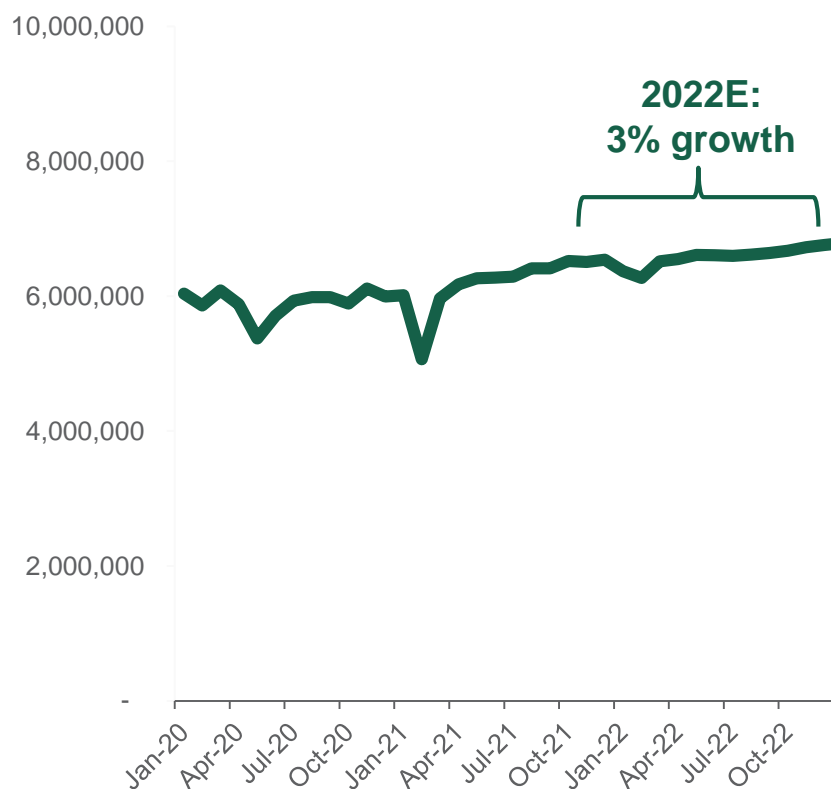
MODEST C2+ NGL PRODUCTION
GROWTH FORECAST FOR 2022



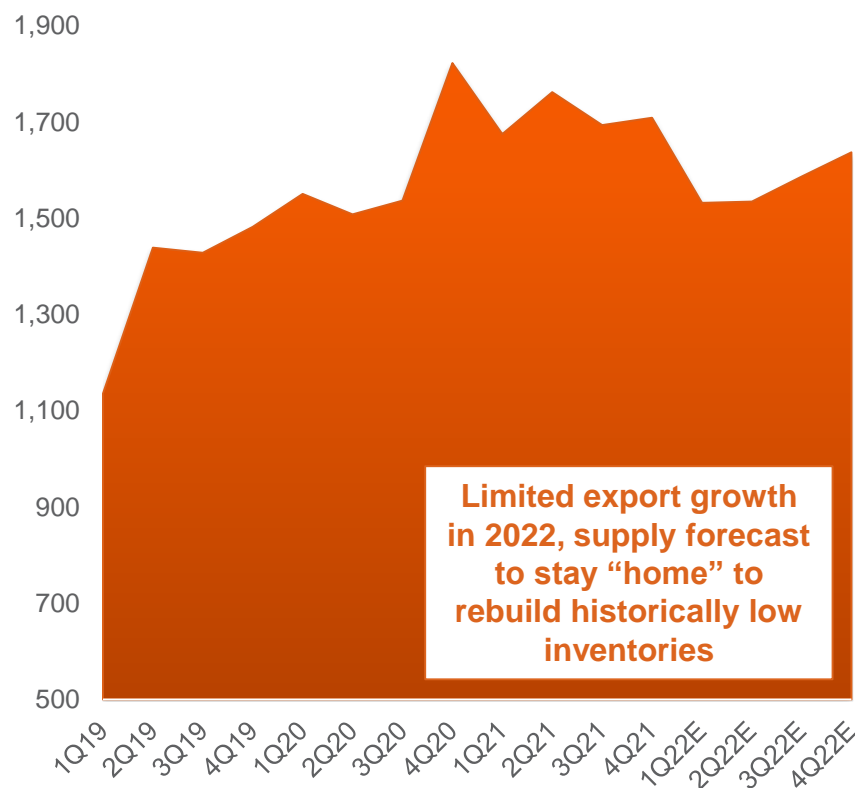
+50%

GROWTH IN LPG
EXPORTS 2019-2021

U.S. C2+ NGL Production Forecast (MBbl/d)



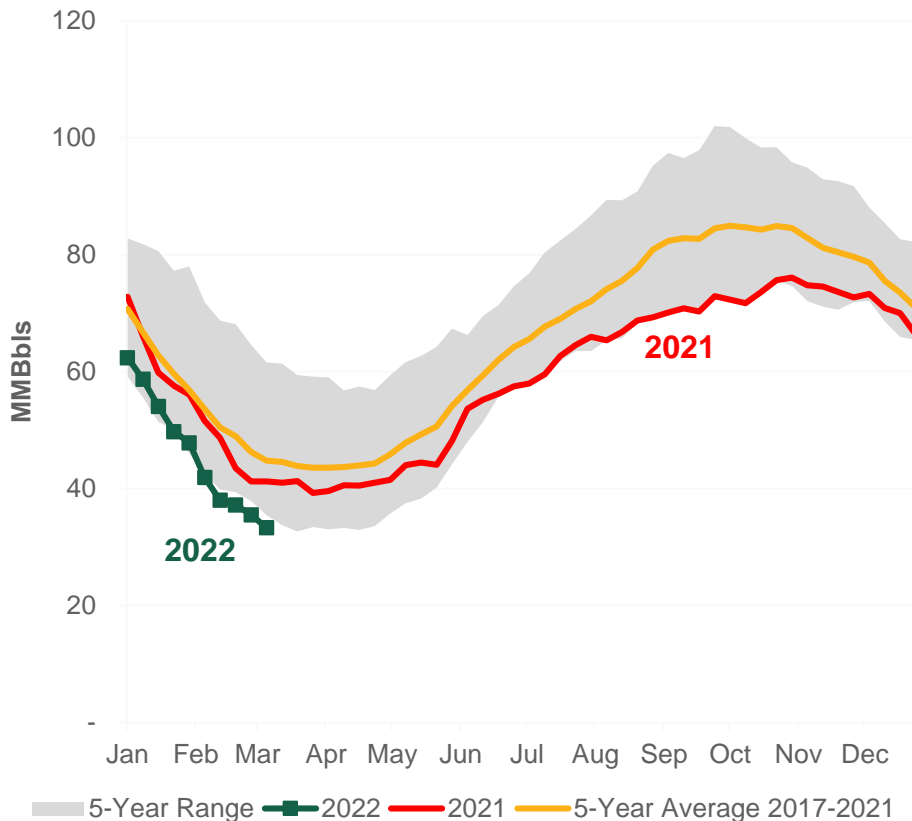
U.S. Waterborne LPG Exports (MBbl/d)



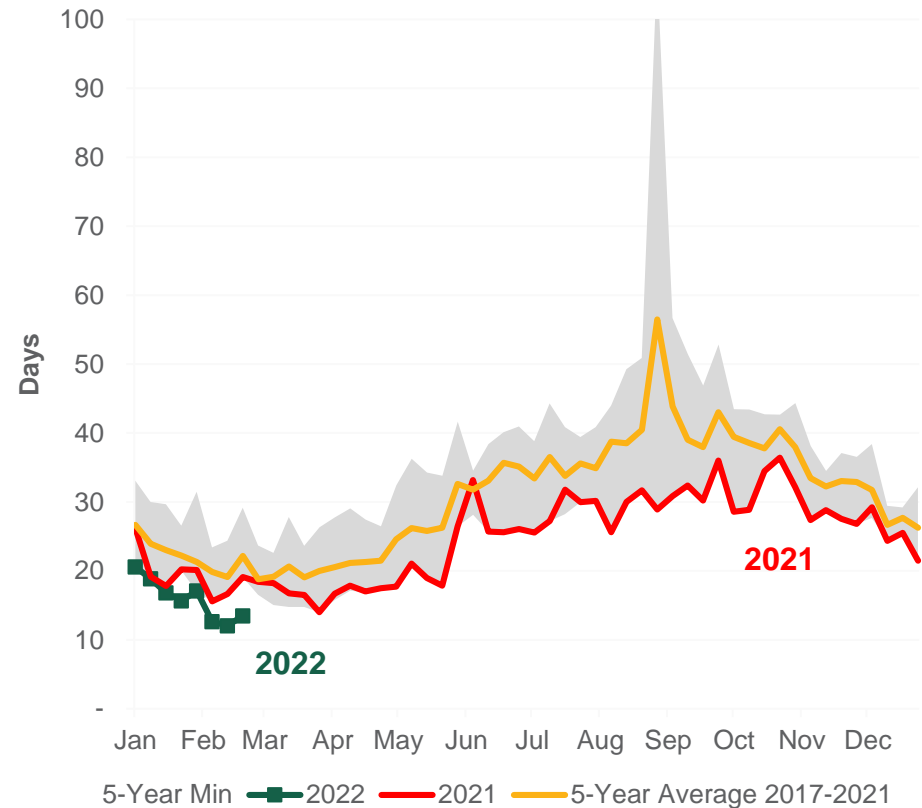
Propane Storage at Historical Lows

A repeat of the same weekly withdrawals as last winter would result in the U.S. ending withdrawal season with only about 12 million barrels in storage, significantly below 5-year minimum storage level

U.S. Propane Inventories (MMBbls)

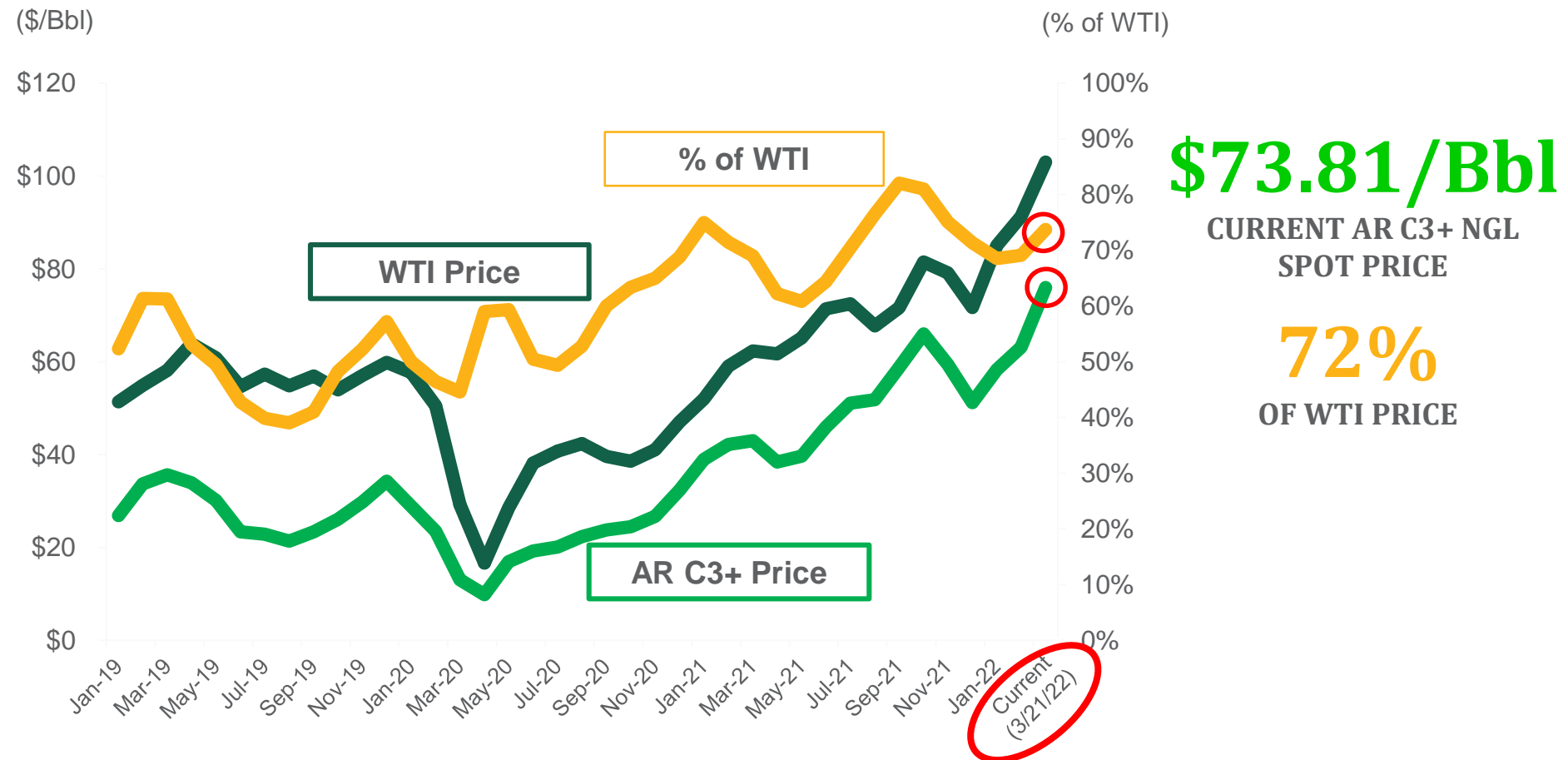


Propane Days of Supply (Days)



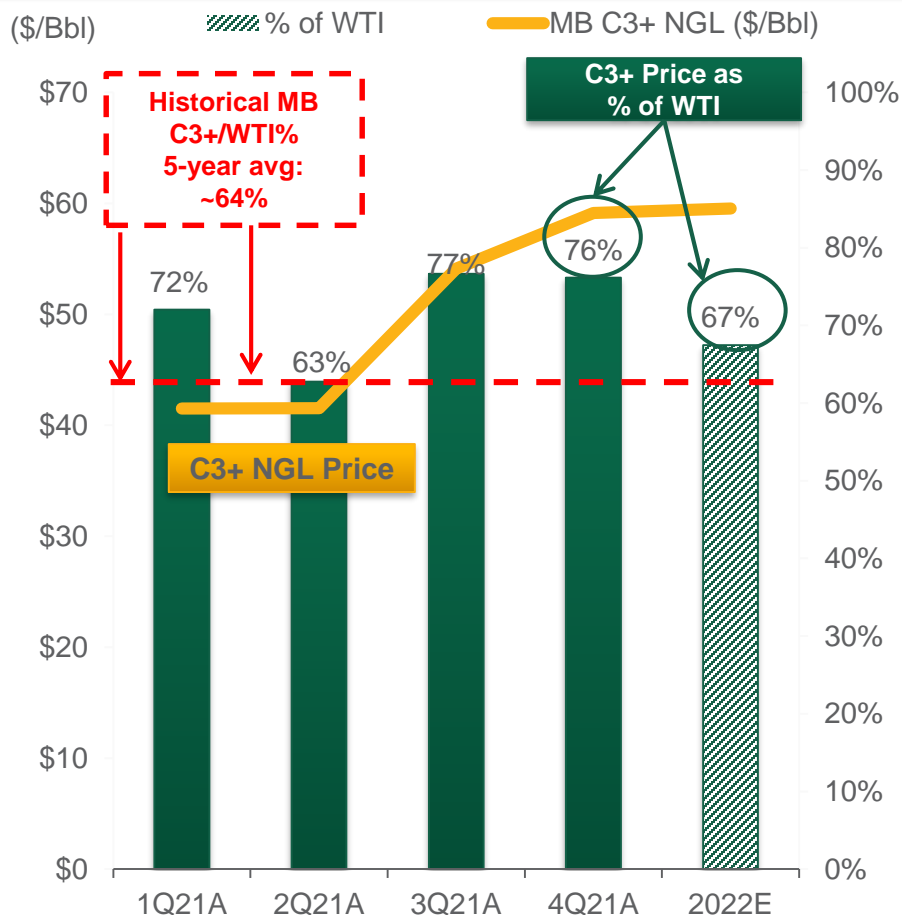
Antero continues to benefit from the strength in NGL prices

AR Monthly Realized C3+ NGL Price

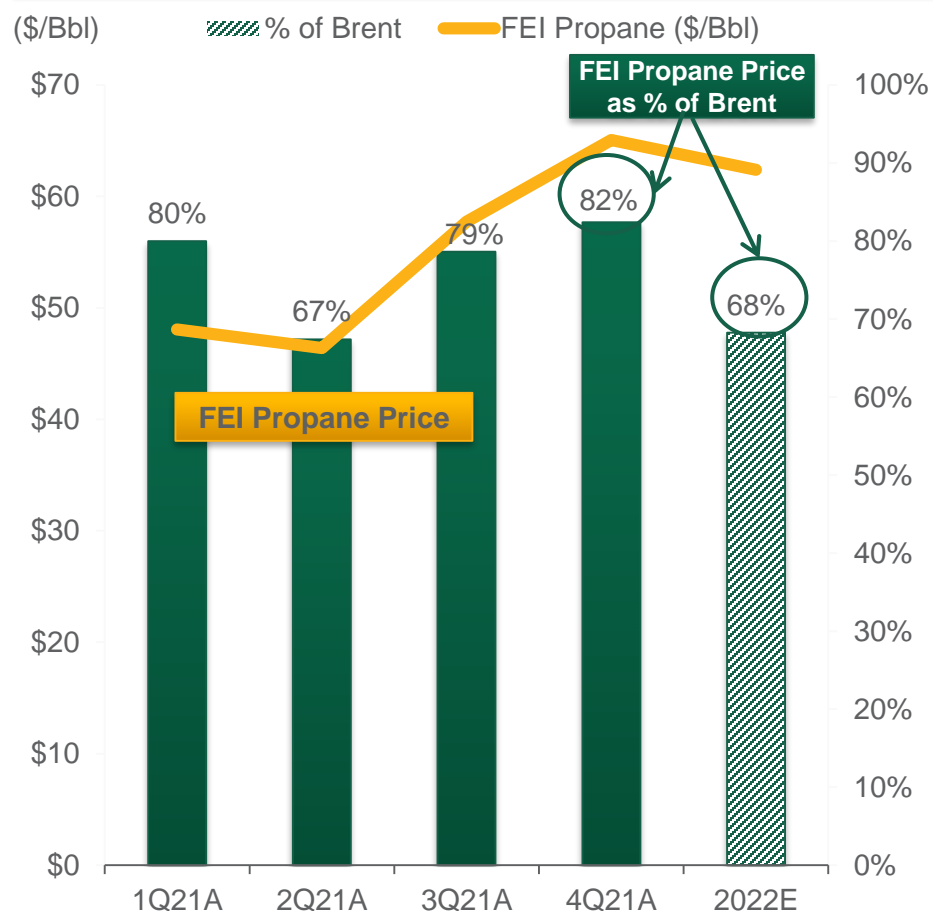


Domestic and international LPG prices have improved on a relative basis to crude oil, driven by resilient global demand for LPG from petrochemicals and res/comm

C3+ NGL Prices & % of WTI ⁽¹⁾



Far East Index (FEI) Propane Prices & % of Brent



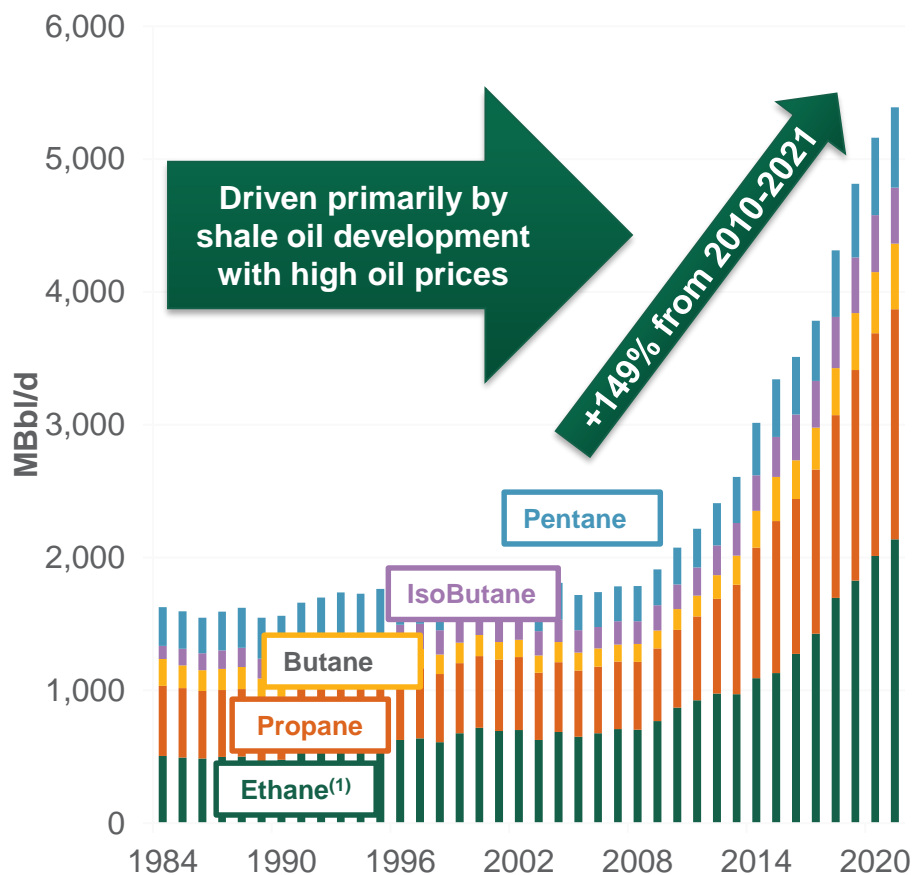
Source: ICEdata Mont Belvieu, Far East Index, WTI and Brent strip pricing as of 3/16/2022.

1) Based on Antero C3+ NGL component barrel consists of 56% C3 (propane), 10% isobutane (Ic4), 17% normal butane (Nc4) and 17% natural gasoline (C5+).

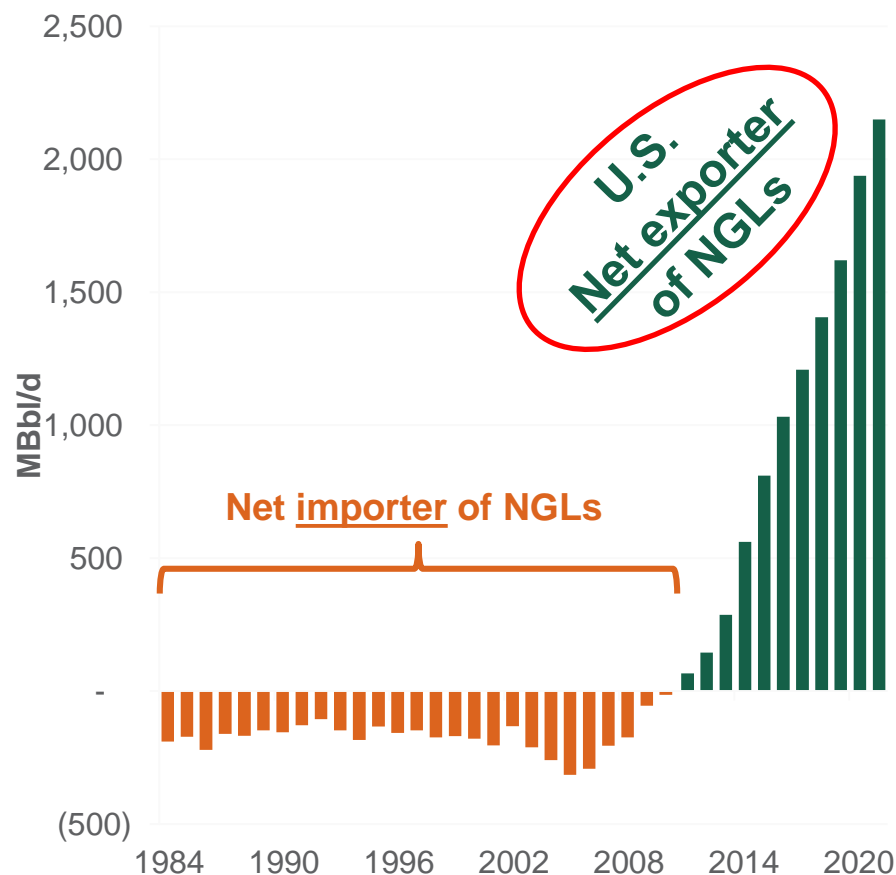
The Impact of the U.S. Shale Revolution

The Shale Revolution dramatically changed the NGL landscape, turning the U.S. into a net exporter after decades of importing NGL products

U.S. NGL Production (MBbl/d) ⁽¹⁾



U.S. NGL Exports / (Imports) (MBbl/d)

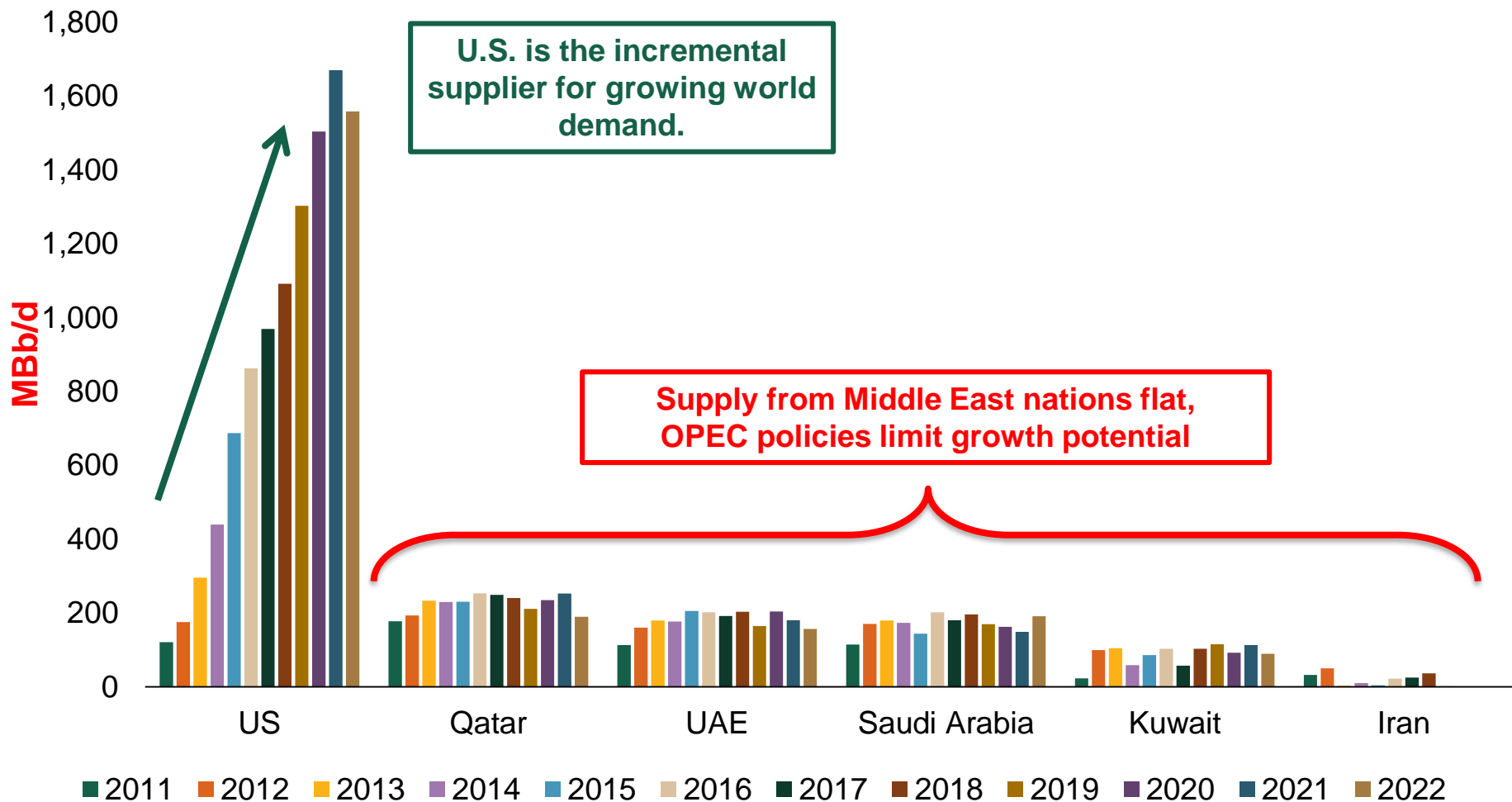


¹⁾ Includes recovered ethane volumes and natural gasoline (C5).

Source: U.S. Energy Information Administration 1984-2021. NGL exports/imports includes ethane, propane, normal butane, isobutane and natural gasoline.

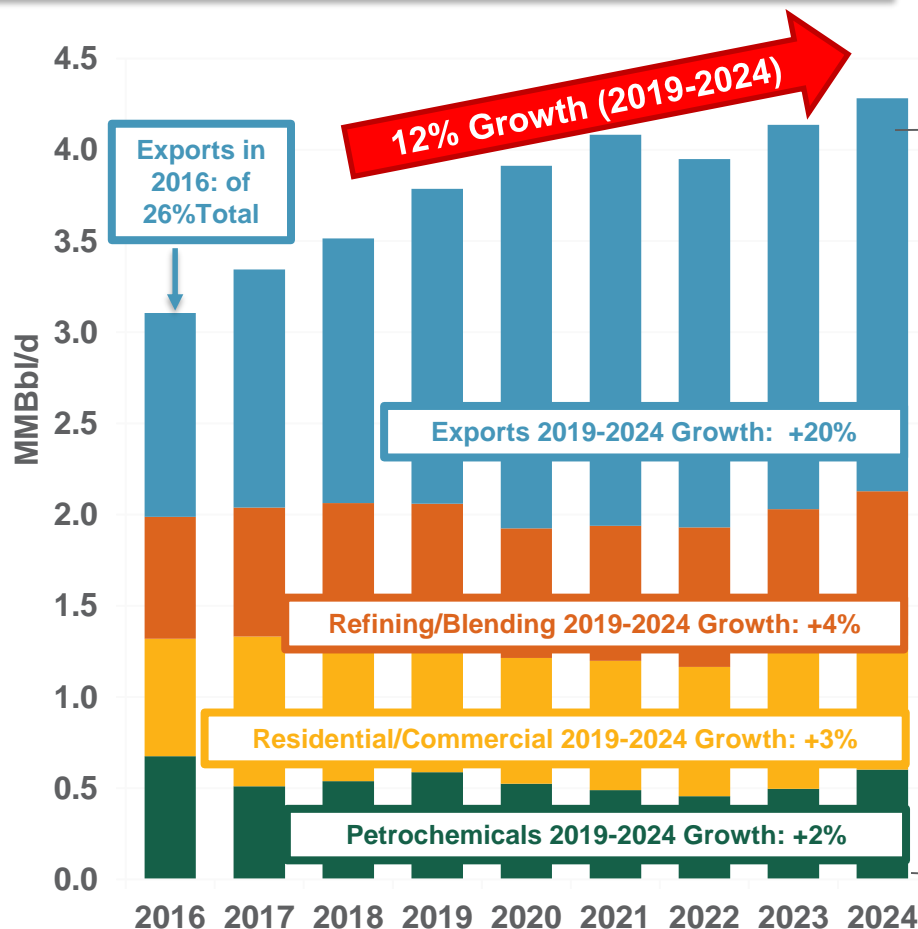
U.S. exports surpassed the entire Middle East region combined starting in 2019

LPG Exports: U.S. versus Middle East

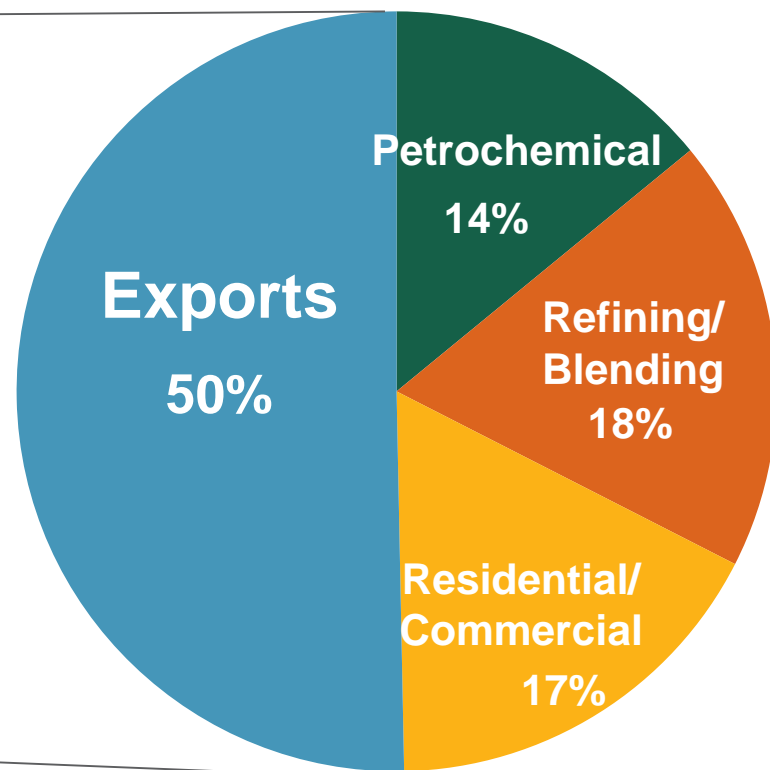


NGL demand growth driven primarily by exports of LPG (propane/butane)

U.S. C3+ Demand by Sector (MMBbl/d)



Estimated U.S. C3+ Demand – 2024



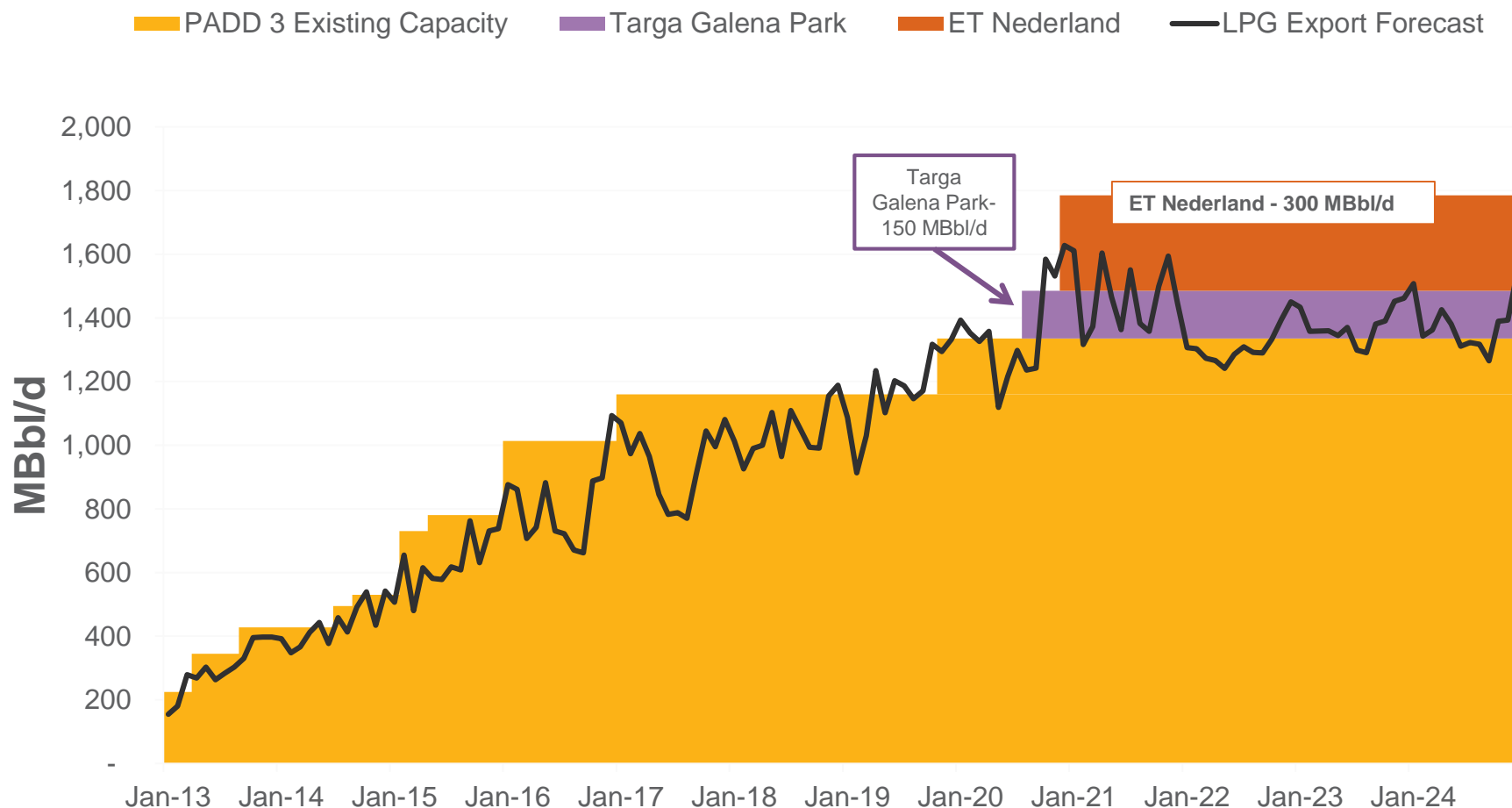
China is adding more than 360,000 Bbl/d of petrochemical propane demand in 2020-2022



LPG Export Capacity: Unconstrained Outlook

High utilization rates prompted next round of buildout of LPG propane/ butane export capacity, resulting in unconstrained exports beginning in 2020 and positive outlook for Mont Belvieu pricing relative to international pricing

U.S. Gulf Coast LPG Exports vs. Capacity (MBbl/d)



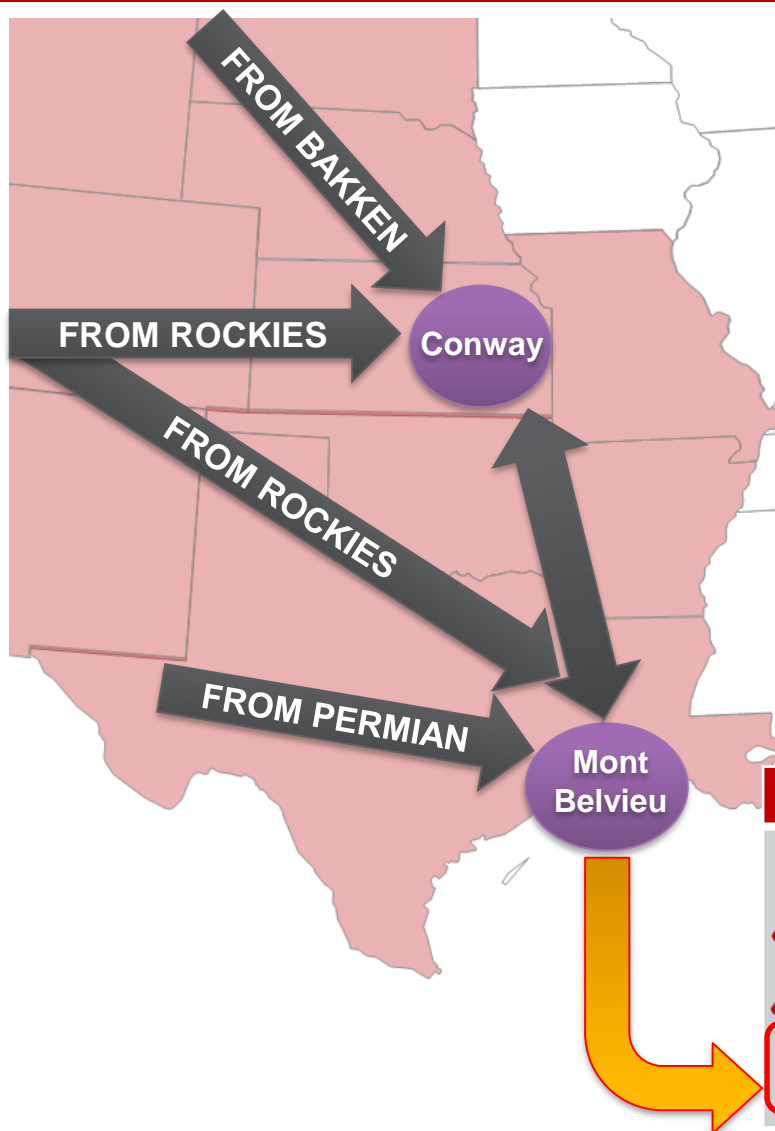
Northeast NGL Producers are Advantaged

Producer Disadvantaged:

E&Ps in Permian, Rockies, Mid-Con & Bakken

Producer Advantaged & Unconstrained:

Antero Resources in Appalachia



AR is the largest C3+ producer with the most international exposure in Appalachia

Anchor shipper on ME2

Who Captures the Arb at Marcus Hook?

Answer: AR and other Appalachian E&P's

- ✓ Direct sales to most attractive international (ARA & FEI) & domestic markets
- ✓ Fixed terminal rates
- ✓ Local fractionation & marketing to sell purity products in-basin for local demand

Results in "Mont Belvieu plus" pricing netbacks captured "at the dock" by AR

Who Captures the Arb at the Gulf Coast?

Answer: Midstream & LPG off-takers (not E&P's)

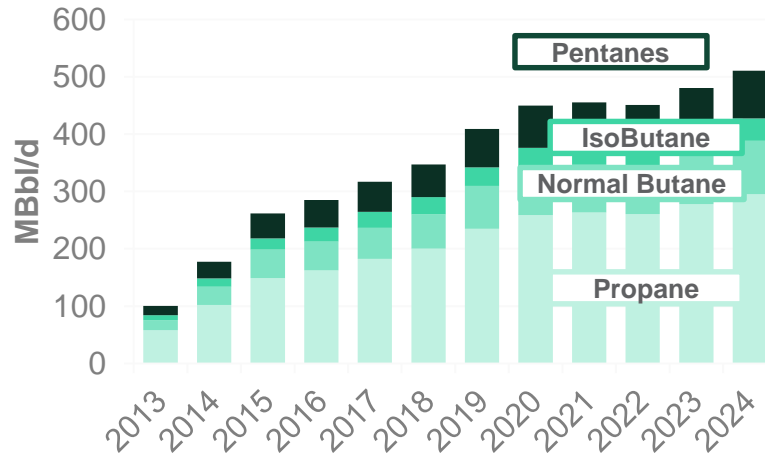
- ✗ No direct E&P access to international markets (i.e. producers only receive Mont Belvieu linked pricing)
- ✗ No local fractionation to sell marketable purity products in-basin

Results in "Mont Belvieu Minus" pricing "before the dock"

C3+ NGLs: Northeast Market Dynamics and Supply

Antero's C3+ blended differential to Mont Belvieu has improved with the Mariner East 2 export takeaway and ability to access international markets

Northeast C3+ NGL Supply

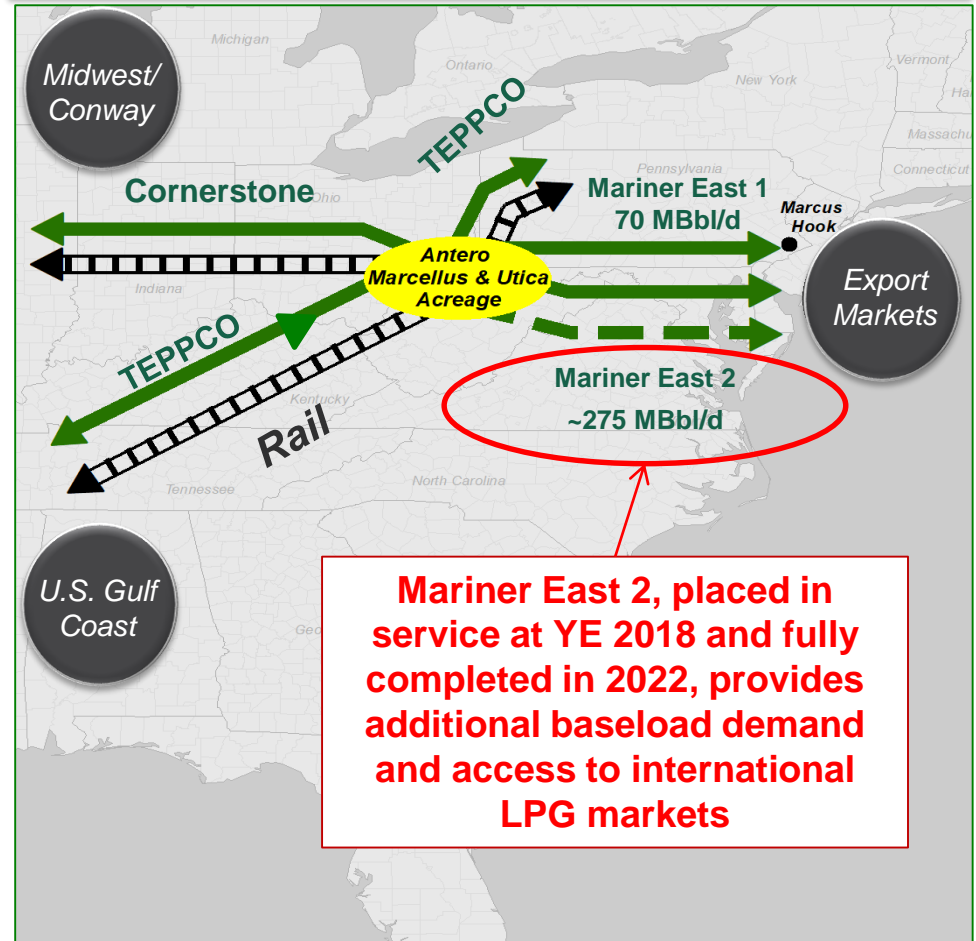


~195 MBbl/d of Northeast C3+ demand vs.
~455 MBbl/d of Northeast supply in 2021

- Resulted in **43%** of production consumed locally
- Remainder moved primarily by rail and exported

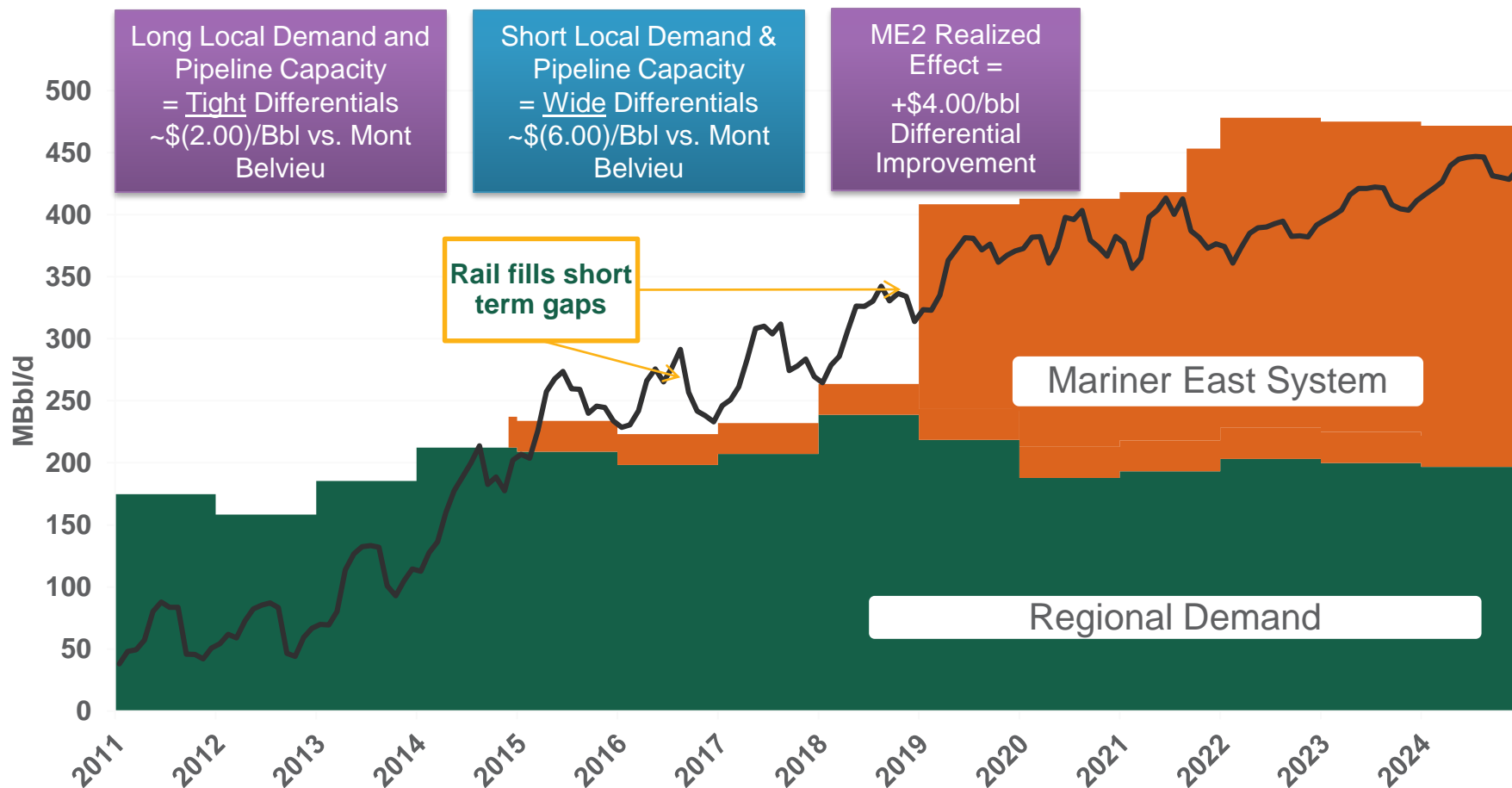
Differentials to Mont Belvieu tightened in 2019 as ~165+ MBbl/d of LPG exported via Mariner East 2

Northeast C3+ NGL Takeaway



Northeast LPG markets became oversupplied in 2015 and were forced to transport via rail, which was relieved by Mariner East 2 in 2019

Northeast LPG NGL Supply vs. Demand & Takeaway Capacity (Excluding Rail)



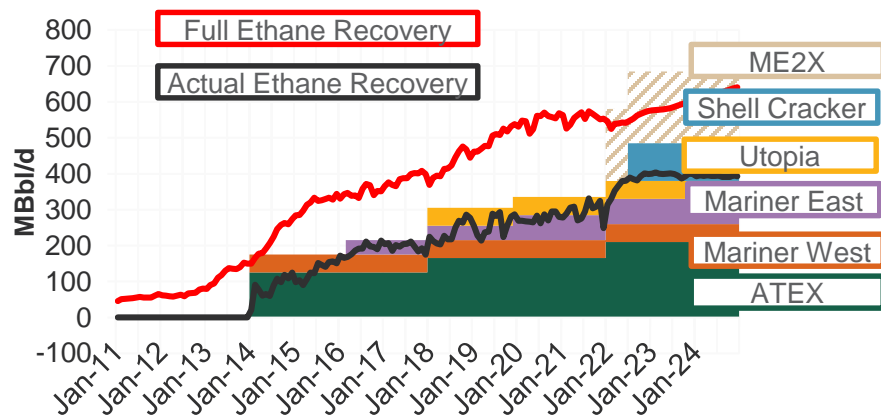
Antero's ethane has a natural gas value pricing floor; pricing improvements from additional petrochemical and takeaway demand is all "Upside"

~205 MBbl/d of ethane current rejected in Northeast (~38% of potentially recoverable ethane)

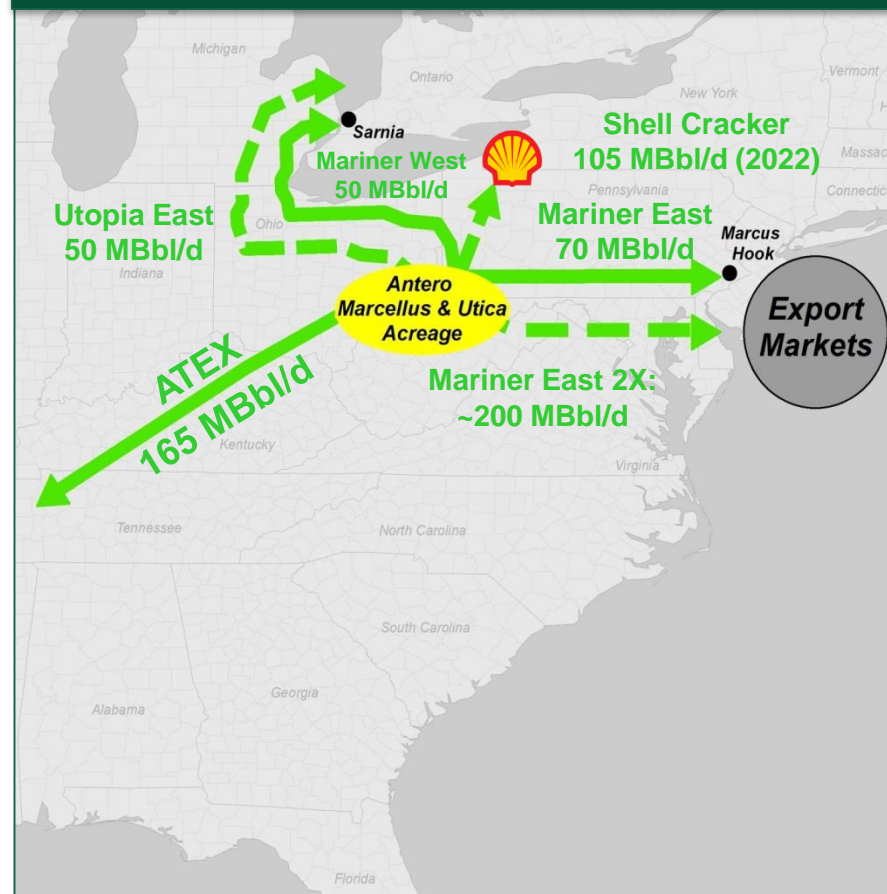
Antero is an anchor supplier to Shell's cracker expected in-service in 2022

Antero ethane firm sales contracts ~50% gas-linked and ~50% Mont Belvieu-linked.

Northeast Ethane Supply (MBbl/d)

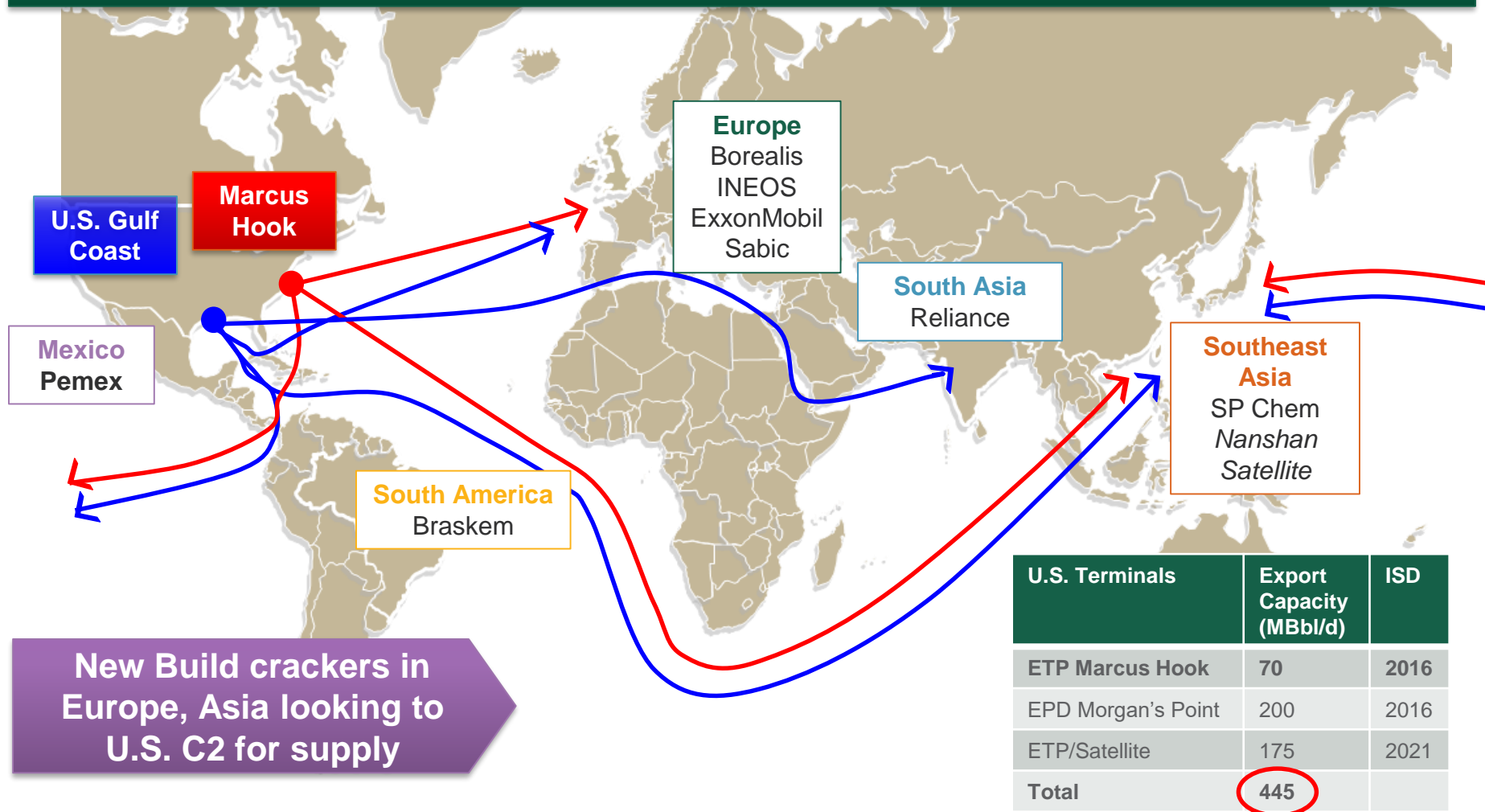


Northeast Ethane Takeaway and Capacities



The ethane market continues to develop and creates opportunities for ethane sales outside of the domestic cracker pool

Ethane Export Suppliers and Customers



Historically low NGL inventory, disciplined producer activity, and “inelastic” international LPG demand provide bullish backdrop for NGL prices

Moderate U.S. C3+ NGL production growth expected in 2022 as producers remain disciplined

Propane days of supply at 5-year lows could result in an undersupplied U.S. market in 2022

Inelastic global NGL demand growth driven by improvements in living standards and subsidies

U.S. NGL differentials have tightened vs. global prices as exports provide uplift with premium Brent-linked pricing

Price outlook for U.S. LPG exports is strong as global demand grows and export supply growth from the middle east and the U.S. subsides

Appalachian producers are geographically advantaged vs. U.S. Gulf Coast producers – captures the international pricing uplift by selling at the export dock (Marcus Hook)

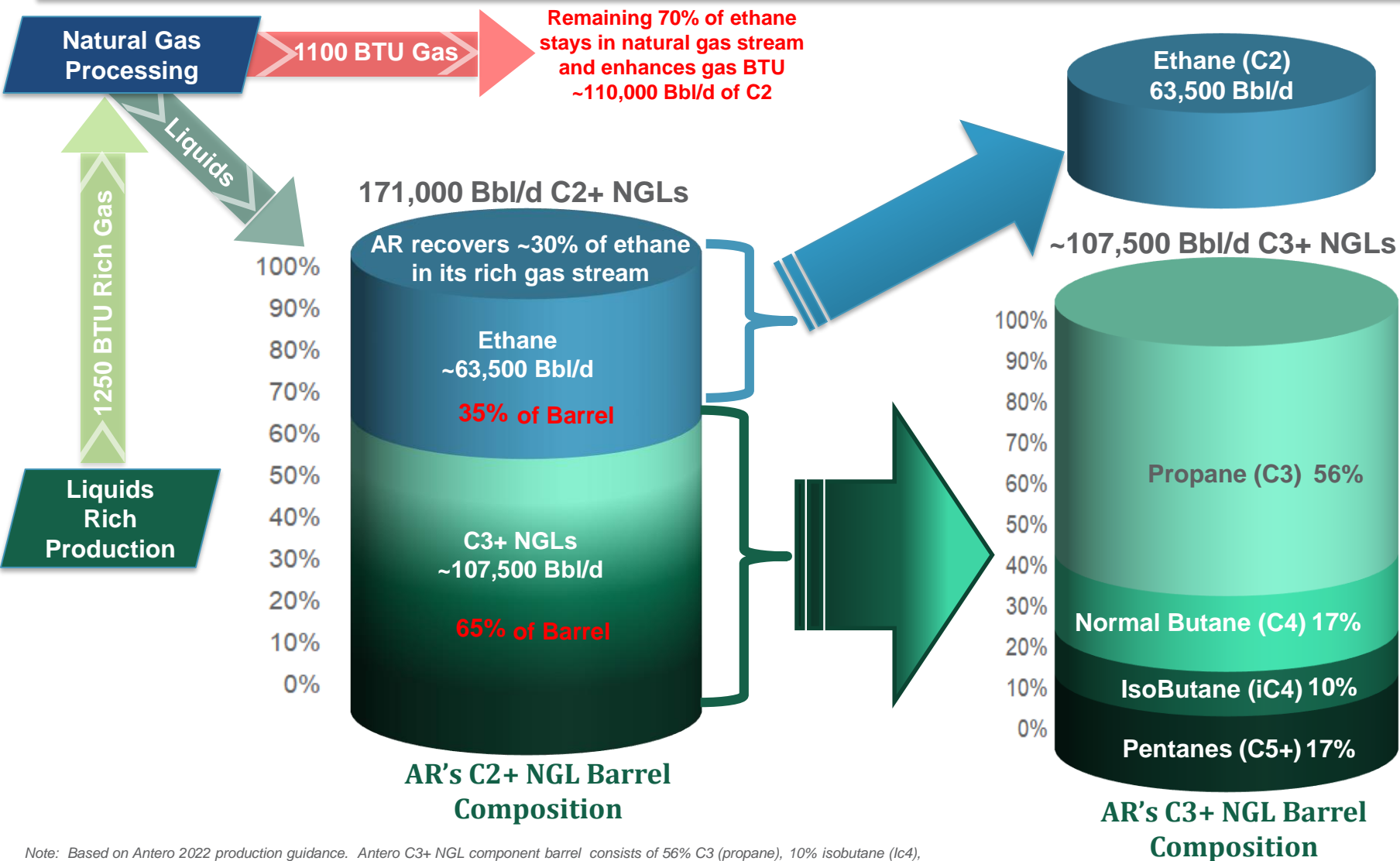


Appendix



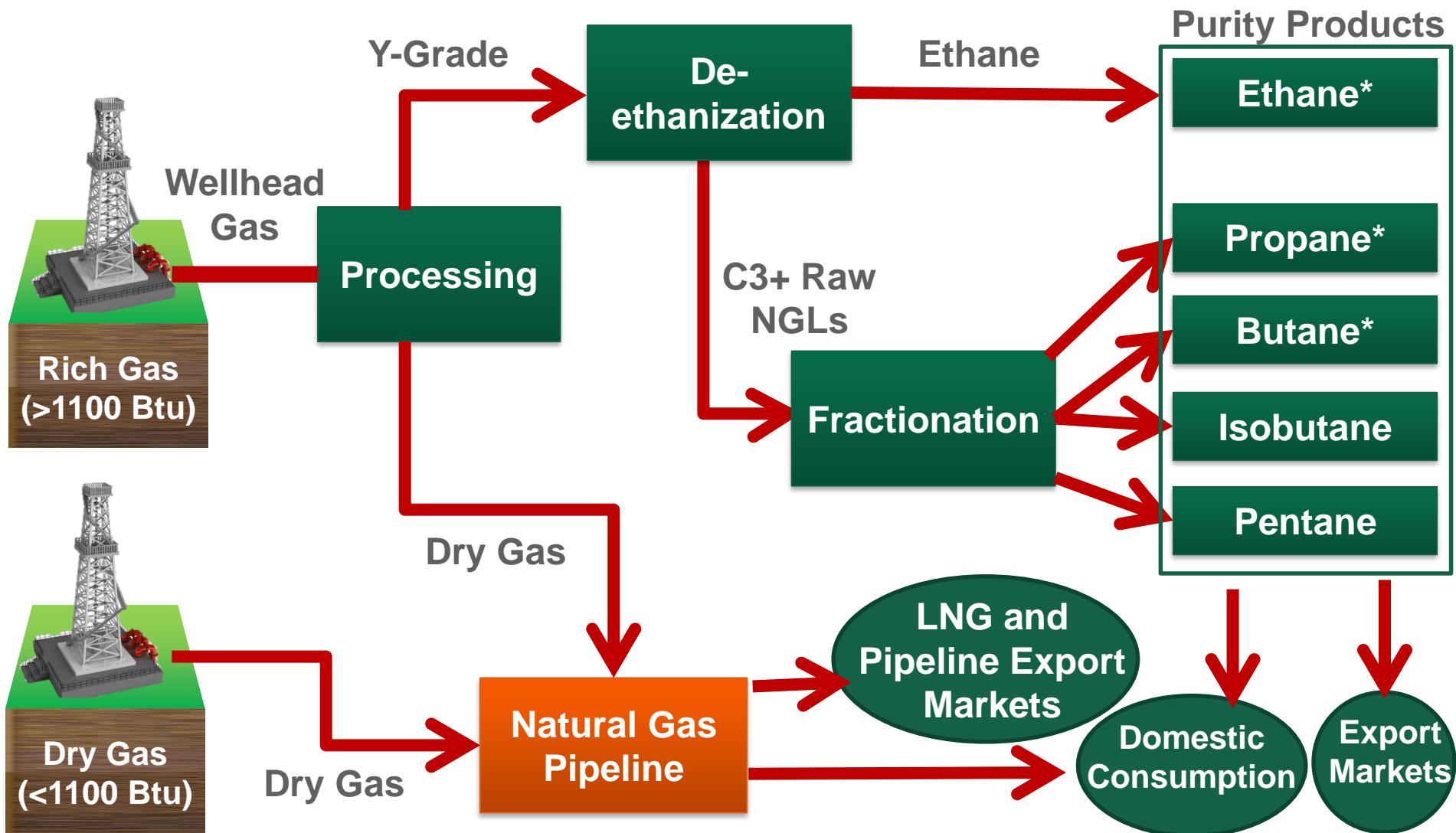
Antero currently recovers only 30% of the ethane in its rich gas stream while rejecting 70% of the ethane, sending it to pipeline sales in the natural gas stream

Antero NGL Barrel Composition (2022 Guidance)



Note: Based on Antero 2022 production guidance. Antero C3+ NGL component barrel consists of 56% C3 (propane), 10% isobutane (iC4), 17% normal butane (nC4) and 17% natural gasoline (C5+).

Natural Gas Liquids “NGLs” are contained in the rich natural gas stream, but after processing, condense into liquid form for storage, shipping and consumption



*Primary NGL export products are propane, butane, and ethane

NGLs play an essential role in the domestic and international industrial, residential, commercial and transportation industries

Gas Linked Pricing

Crude Linked Pricing

	Methane	Ethane	Propane	Butane	Iso-Butane	Pentane
	Natural Gas	C2	C3	C4	IC4	C5
Primary Sectors	All	Chemical Industrial	Industrial Residential Commercial, Chemical	Industrial Transportation	Industrial	Transportation
Primary Uses	Power	Ethylene Production (For plastics)	Heating, Crop drying, Commercial, Propylene	Winter Gasoline Blending	Alkylate feed to produce gasoline	Gasoline blend and diluent

Higher Heating Value

1000 Btu

4000 Btu

- Antero's 11,500 Bpd C2 sales contract with Borealis commenced on November 1, 2018
- Expect to load ~1 ship per month, bound for Borealis' steam cracker in Stenungsund, Sweden, for duration of 10-year contract



This material is intended for benchmark pricing estimates only and does not reflect Antero actual contracted prices

Key Terms and Definitions:

- **ARA** – “Amsterdam-Rotterdam-Antwerp.” ARA is a port and refining area in the Belgian-Dutch region of Europe.
- **CIF** - “Cost, Insurance, Freight.” CIF means that the seller delivers the goods on board the vessel or procures the goods already so delivered. Note that the CIF ARA LPG prices represent a delivered cargo into Europe.
- **FEI** – “Far East Index.” The Argus Far East Index is the average of the Argus Japan CFR propane quotation and the Argus South China CFR propane quotation. Note that the FEI LPG prices represent a delivered cargo into Asia
- **CFR** - “Cost and Freight.” CFR means that the seller delivers the goods on board the vessel or procures the goods already so delivered.
- **Baltic Index** - The Baltic LPG Index is a shipping cost estimate based on a voyage from Ras Tanura, Saudi Arabia to Chiba, Japan round trip, laden (full) on the outbound journey and ballast (empty) on the return trip, carrying a fully refrigerated cargo of 44,000 MT (+/- 5%) propane, butane, or a mixture. The index is published by the Baltic Exchange.

Intercontinental Exchange (ICE) provides the benchmark pricing Information used in this presentation. For more information, visit

<https://www.theice.com/energy/natural-gas-liquids>

	ICE DEFINITION	
ANTERO LABEL	HUB	PRODUCT
ARA C3	CIF ARA	Propane Argus Futures
ARA C4	CIF ARA	Butane Argus Futures
FEI C3	Far East	Propane Argus Futures
FEI C4	Far East	Butane Argus Futures
MB C3	MT.B-ENT	Propane OPIS Futures
MB C4	MT.B-ENT	Normal Butane OPIS Futures

Relevant Conversions:

- Propane = 521 gallons per metric ton
- Butane = 453 gallons per metric ton

Antero Internal Shipping Estimates are derived by Antero using several sources, including Baltic LPG Index Futures and broker estimates.

- Rates are adjusted based on travel time from Marcus Hook, PA to Northwest Europe (Amsterdam-Rotterdam-Antwerp Region) and Marcus Hook, PA to Asia (Chiba, Japan).
- Antero’s actual shipping rates may differ from these estimates.