



# Weekly International LPG Pricing Update

AUGUST 1, 2022

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

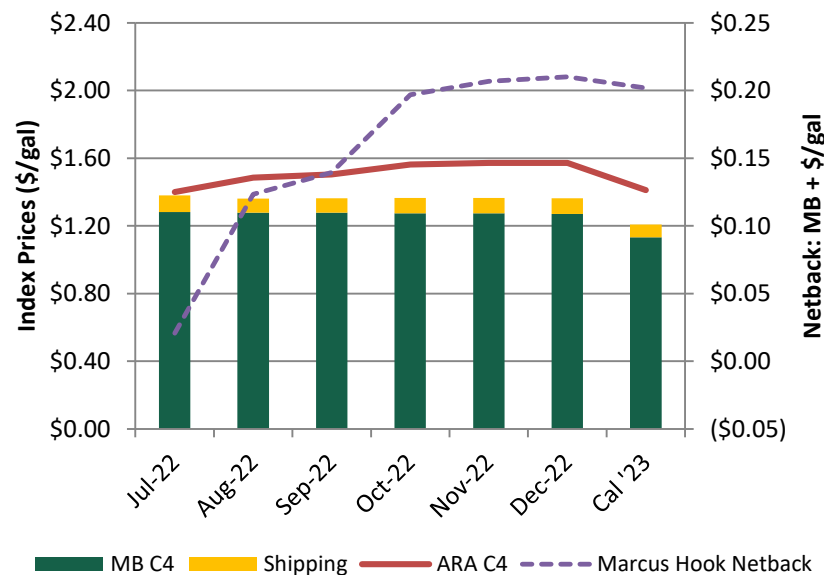
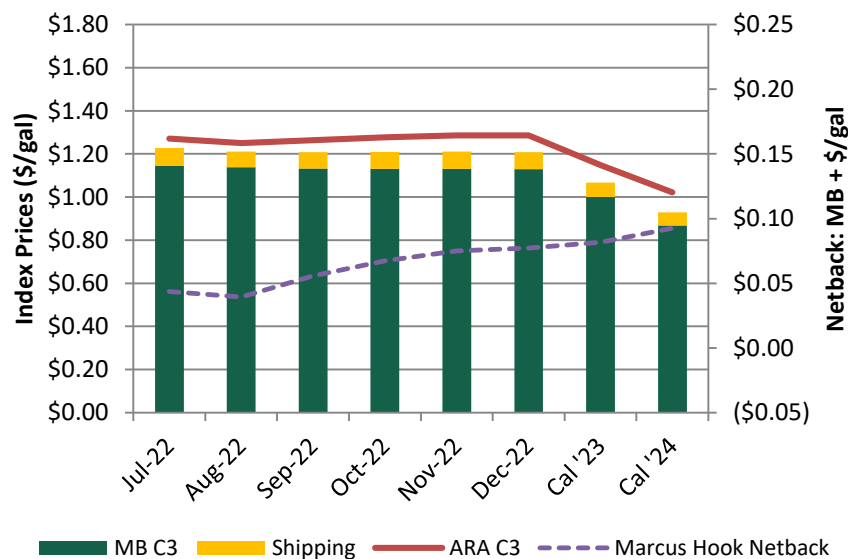
## LPG Arbitrage Futures to Europe (ARA)

### Export Arbitrage to Northwest Europe - Propane \$/gallon

Date	MB C3	ARA C3	Spread	Shipping	Marcus Hook Netback
Jul-22	1.144	1.272	0.128	0.084	MB + 0.044
Aug-22	1.138	1.250	0.112	0.073	MB + 0.039
Sep-22	1.133	1.263	0.131	0.075	MB + 0.056
Oct-22	1.131	1.277	0.146	0.078	MB + 0.067
Nov-22	1.131	1.286	0.155	0.080	MB + 0.075
Dec-22	1.129	1.285	0.157	0.079	MB + 0.077
Bal '22	1.131	1.273	0.142	0.078	MB + 0.064
Cal '23	1.000	1.149	0.149	0.067	MB + 0.082
Cal '24	0.869	1.022	0.153	0.061	MB + 0.093

### Export Arbitrage to Northwest Europe - Butane \$/gallon

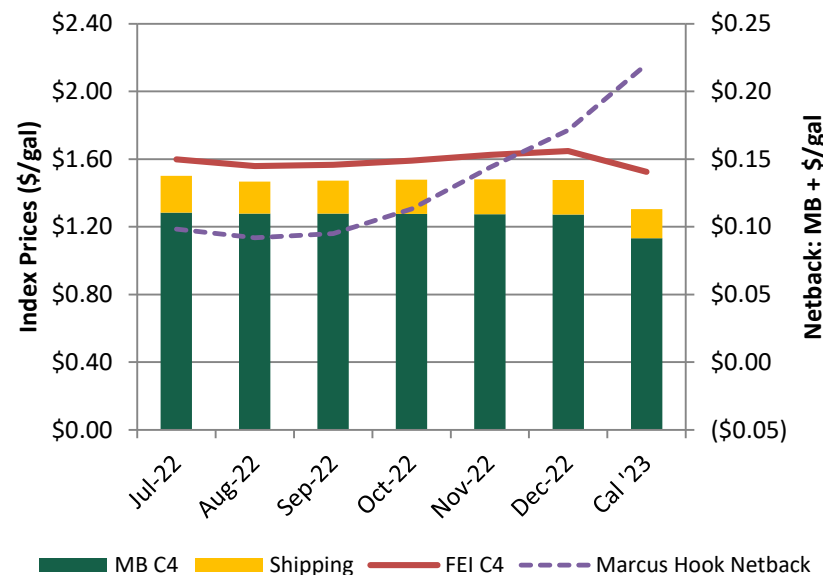
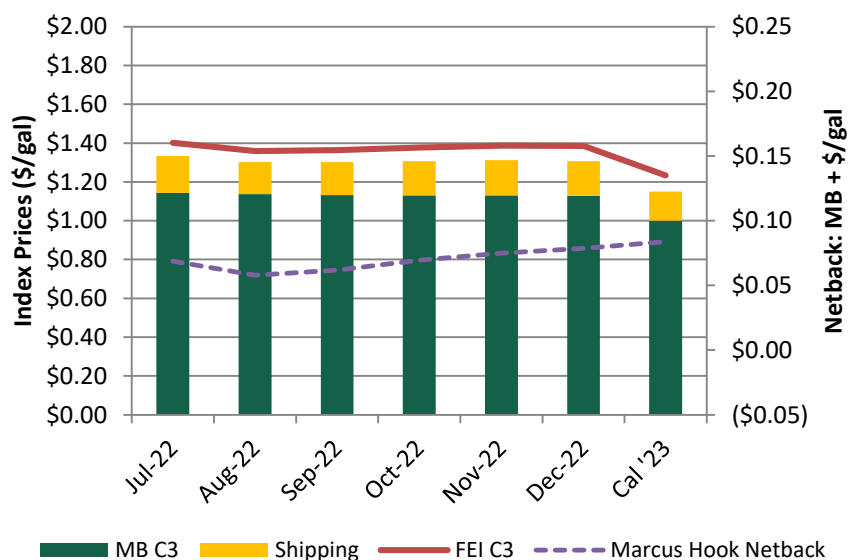
Date	MB C4	ARA C4	Spread	Shipping	Marcus Hook Netback
Jul-22	1.283	1.400	0.118	0.097	MB + 0.021
Aug-22	1.278	1.485	0.207	0.084	MB + 0.123
Sep-22	1.278	1.503	0.226	0.086	MB + 0.139
Oct-22	1.275	1.562	0.287	0.090	MB + 0.197
Nov-22	1.274	1.573	0.299	0.092	MB + 0.207
Dec-22	1.271	1.573	0.302	0.091	MB + 0.210
Bal '22	1.276	1.516	0.240	0.090	MB + 0.150
Cal '23	1.132	1.411	0.279	0.077	MB + 0.202
Cal '24	Not Available				



Sources: ICE for product pricing, Antero Internal Estimates for market shipping rates. Please see appendix for more information.

## LPG Arbitrage Futures to Asia (FEI)

Export Arbitrage to Far East Asia - Propane \$/gallon						Export Arbitrage to Far East Asia - Butane \$/gallon					
Date	MB C3	FEI C3	Spread	Shipping	Marcus Hook Netback	Date	MB C4	FEI C4	Spread	Shipping	Marcus Hook Netback
Jul-22	1.144	1.402	0.258	0.189	MB + 0.069	Jul-22	1.283	1.599	0.316	0.218	MB + 0.098
Aug-22	1.138	1.360	0.222	0.164	MB + 0.058	Aug-22	1.278	1.558	0.281	0.189	MB + 0.092
Sep-22	1.133	1.363	0.231	0.169	MB + 0.062	Sep-22	1.278	1.567	0.289	0.194	MB + 0.095
Oct-22	1.131	1.377	0.245	0.176	MB + 0.069	Oct-22	1.275	1.591	0.316	0.202	MB + 0.113
Nov-22	1.131	1.386	0.255	0.180	MB + 0.075	Nov-22	1.274	1.625	0.351	0.207	MB + 0.144
Dec-22	1.129	1.386	0.257	0.178	MB + 0.079	Dec-22	1.271	1.648	0.376	0.205	MB + 0.171
Bal '22	1.131	1.379	0.248	0.176	MB + 0.072	Bal '22	1.276	1.563	0.286	0.203	MB + 0.084
Cal '23	1.000	1.234	0.234	0.150	MB + 0.084	Cal '23	1.132	1.525	0.393	0.173	MB + 0.220
Cal '24	Not Available					Cal '24	Not Available				

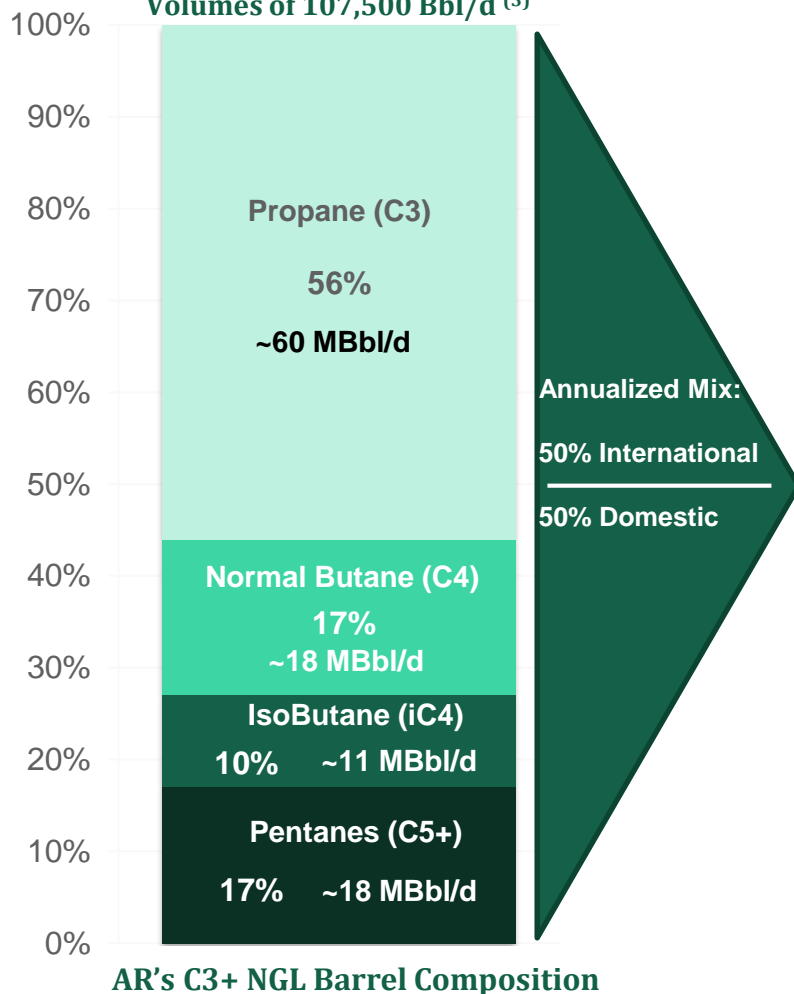


Sources: ICE for product pricing, Antero Internal Estimates for market shipping rates. Please see appendix for more information.

## Weekly Benchmark Index Pricing as of 08/01/22 – Net of Shipping <sup>(1)</sup>

This data reflects benchmark pricing estimates and does not directly reflect Antero's realized prices

Assumes 2022 AR C3+ NGL  
Volumes of 107,500 Bbl/d <sup>(3)</sup>



### Antero Estimated International Sales <sup>(2)</sup>

45 MBbl/d C3, 10 MBbl/d C4  
(Assumes 50% ARA, 50% FEI)

#### • 50% Europe (ARA) Net of Shipping <sup>(1)</sup>

		<u>Bbl/d</u>
Propane	\$1.19/gal	22,500
Butane	\$1.30/gal	5,000

#### • 50% Asia (FEI) Net of Shipping <sup>(1)</sup>

Propane	\$1.14/gal	22,500
Butane	\$1.15/gal	<u>5,000</u>
<b>Total</b>		<b>55,000</b>

**Global Weighted C3/C4 Average Price: \$51.50/Bbl**

### Antero Estimated Domestic Sales

100% Mont Belvieu Linked

#### • Mont Belvieu Prices <sup>(4,5)</sup>

		<u>Bbl/d</u>
Propane	\$1.14/gal	15,200
N. Butane	\$1.15/gal	8,275
IsoButane	\$1.53/gal	10,750
Pentanes	\$1.88/gal	<u>18,275</u>
<b>Total</b>		<b>52,500</b>

**Domestic Weighted Average Price: \$58.00/Bbl <sup>(3)</sup>**

**Weekly Indicated  
Weighted Average  
Price <sup>(2)</sup>:**

**\$54.68/Bbl**

1) Shipping rates assumed are detailed on pages 2 and 3. Please see appendix for more information.  
 2) Weighted average reflects net Antero volumes shipped on Mariner East Pipeline (55,000 Bbl/d international, 52,500 domestic).  
 3) Volumes represent midpoint of 2022 C3+ NGL guidance of 105,000 to 110,000 Bbl/d.  
 4) Assumes midpoint of Antero guidance for domestic price discount to Mont Belvieu of \$0.10/gal.  
 5) Mont Belvieu prices are based on Tet prices for Propane, N. Butane and IsoButane and Non-Tet for Pentanes.

**QTD C3+ NGL Price reflects weekly average benchmark pricing estimates for Antero NGL barrel and estimated annual allocation of barrels to domestic vs. export. Antero's realized prices will differ somewhat due to timing differences and monthly allocation differences.**

## Antero's Historical Reported C3+ NGL Price

1Q18	\$36.38	1Q19	\$31.63	1Q20	\$21.31	1Q21	\$40.72	1Q22	\$64.26
2Q18	\$34.81	2Q19	\$28.57	2Q20	\$15.55	2Q21	\$40.32	2Q22	\$65.65
3Q18	\$38.41	3Q19	\$22.53	3Q20	\$22.50	3QTD	\$52.68	3Q22 <sup>(1)</sup>	\$54.94
4Q18	\$30.92	4Q19	\$29.61	4Q20	\$27.64	4Q21	\$59.17		
2018	\$34.76	2019	\$27.75	2020	\$21.68	2021	\$47.82	2022 <sup>(1)</sup>	\$63.34

Current <sup>(1)</sup>	\$54.68
------------------------	---------

## C3+ NGL Price Sensitivity

Bbl/d <sup>(2)</sup>		Days		MMBbls		+/- \$5 per Bbl Change		Revenue Impact (\$MM)
107,500	x	365	=	39.238	x	\$5	=	\$196

1) QTD and 2022 calculation reflects latest average of Weekly Indicated Weighted Average Price published on page 4 each week. Current price as stated on page 4.

2) Volumes represent midpoint of 2022 C3+ NGL guidance of 105,000 to 110,000 Bbl/d.



**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>**

ANTERO LABEL	ICE DEFINITION	
	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 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.