

Rationalization to De-globalization

Ushering in a new era of Phenolics Equilibrium

May 2024

Terence Peh

Associate Director

Terence.Peh@chemicalmarketanalytics.com

Agenda

Rationalization to De-globalization

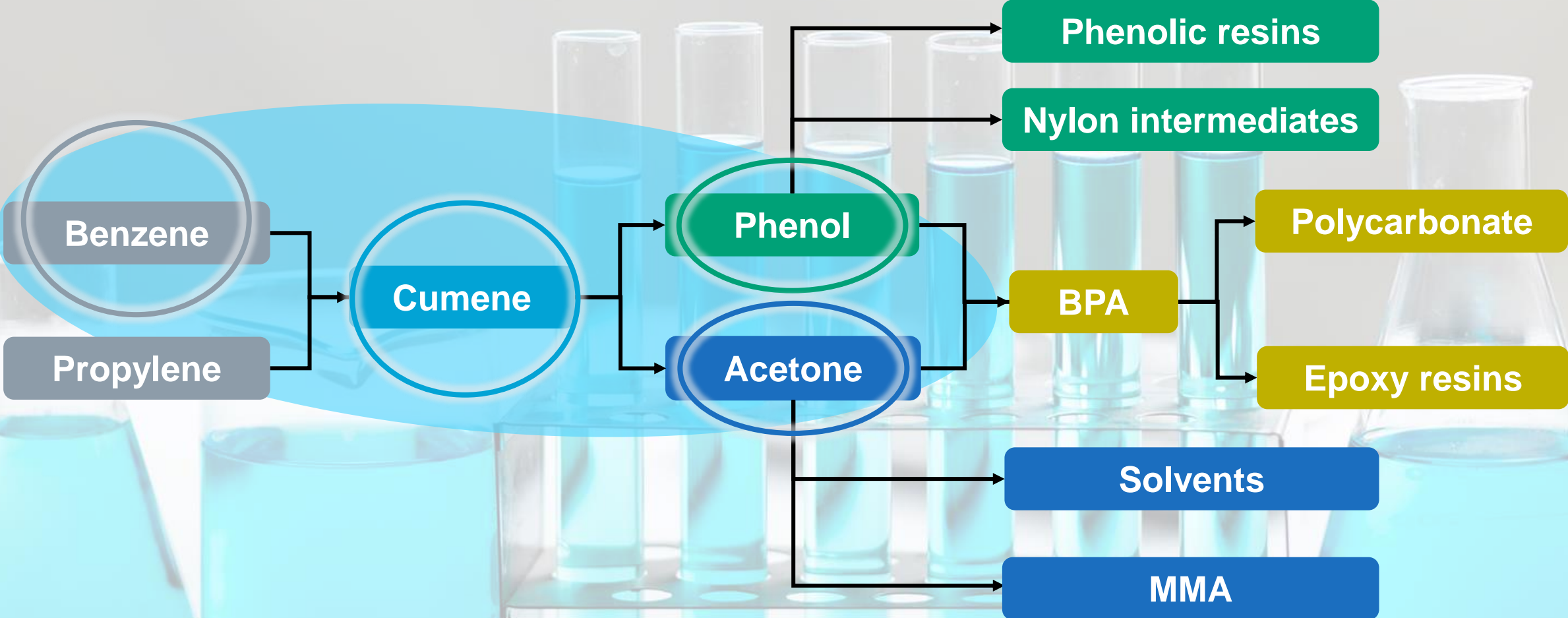
Cumene for gasoline, for how long?

Bullish Benzene, Bearish Phenol?

Highest multi-year acetone-propylene ratio!

New CMA Asia Phenol Pricing Report

Overview Of Phenolics Chain

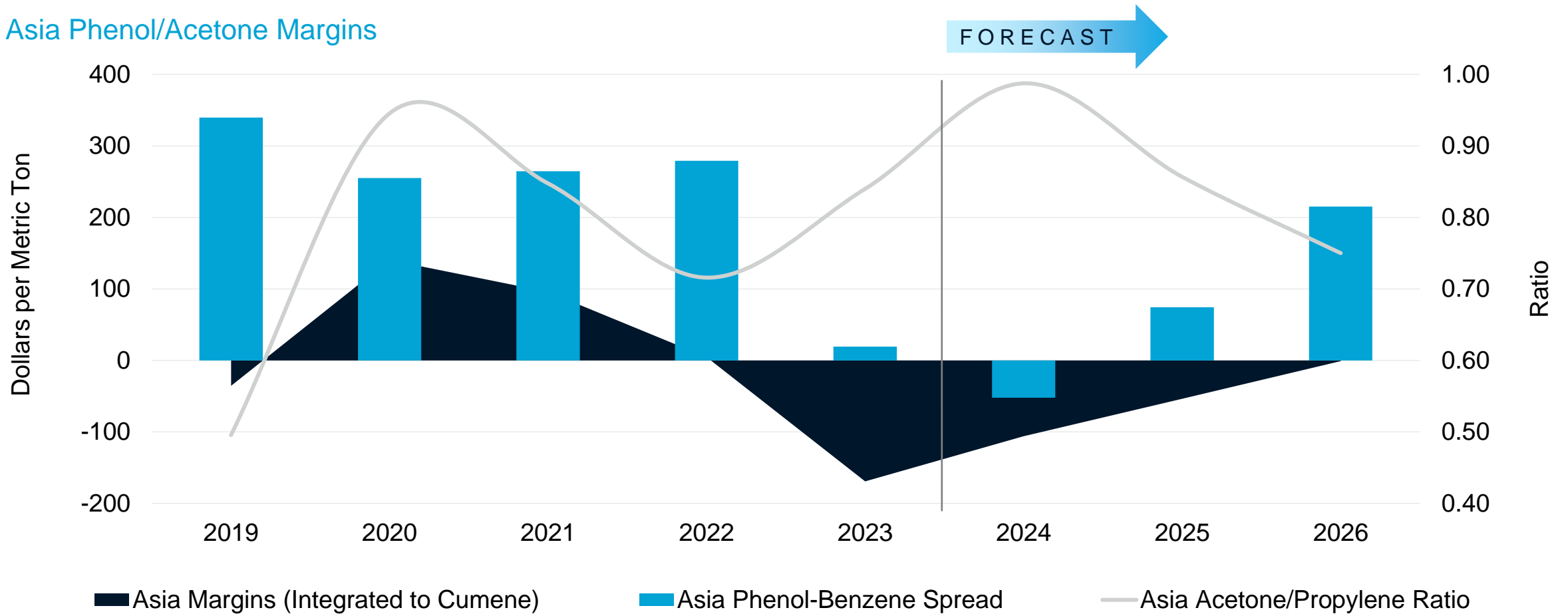


State of The Phenol Industry Today



Phenol Producers In a World of Hurt

Asia Phenol/Acetone Margins



Source: Chemical Market Analytics by OPIS

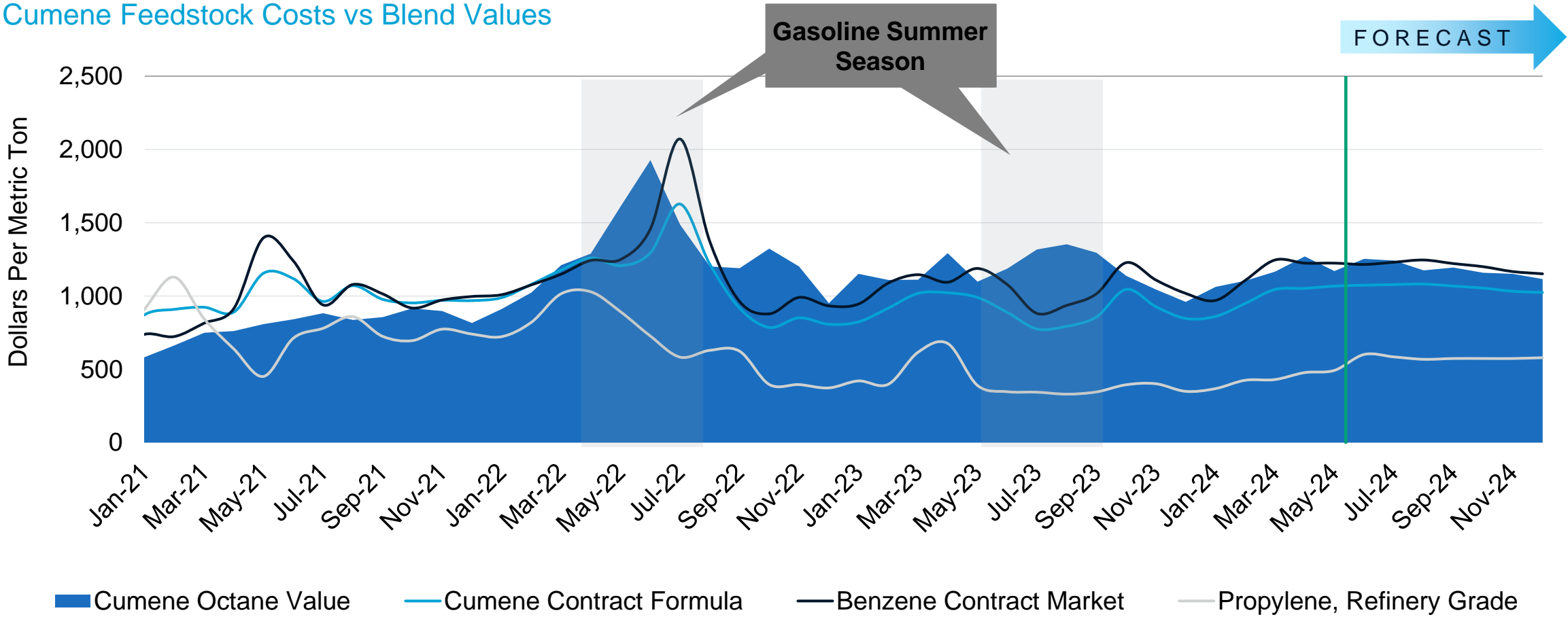
© 2024 OPIS, LLC.

Cumene for Gasoline, for How Long?



Cumene As Gasoline Blending Option

Cumene Feedstock Costs vs Blend Values

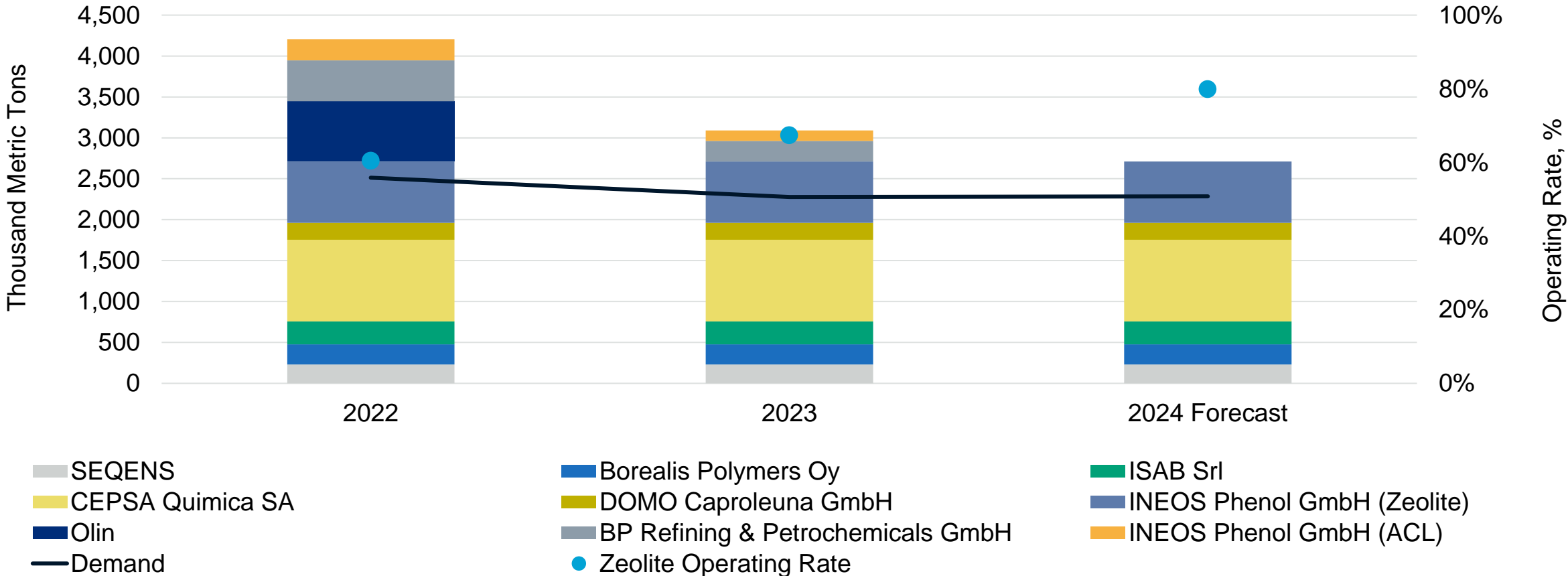


Source: Chemical Market Analytics by OPIS

© 2024 OPIS, LLC.

European Cumene Capacity is Consolidating

2022-2024 Europe cumene supply and demand



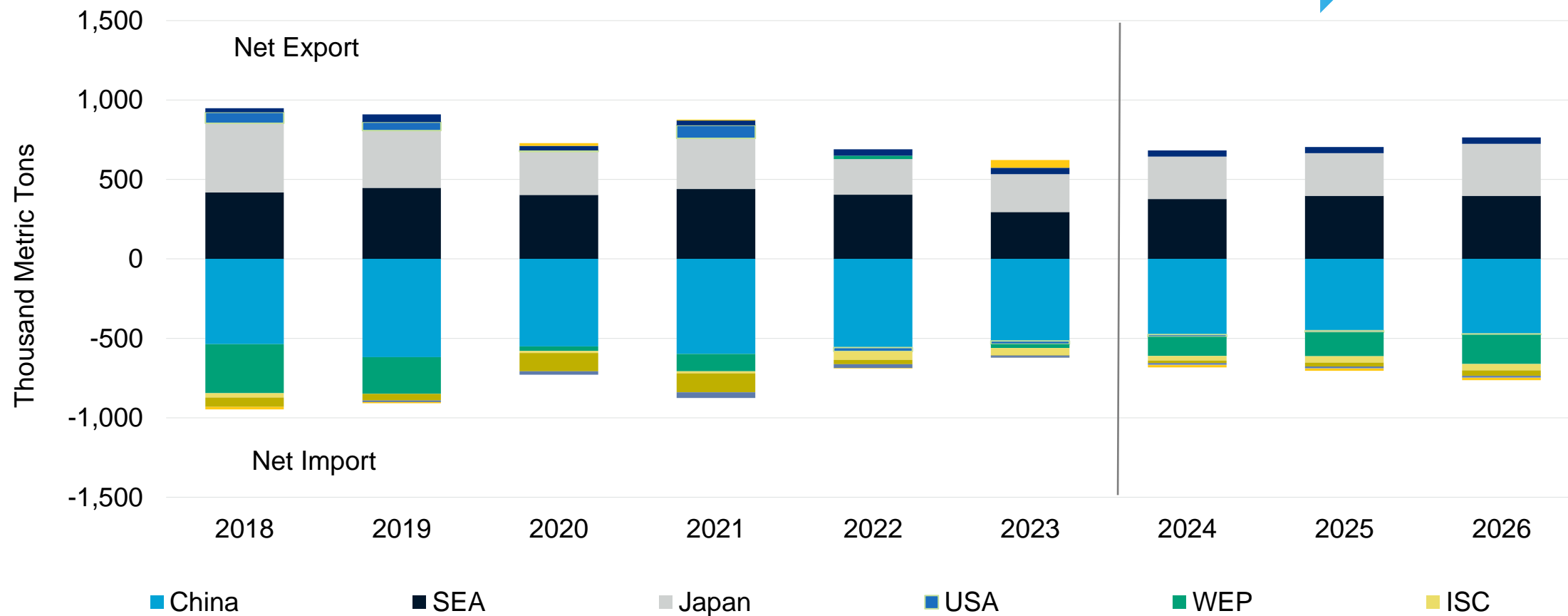
Source: Chemical Market Analytics by OPIS

© 2024 OPIS, LLC.

Global Cumene Trade To Remain Stable

Global Cumene Trade

FORECAST



Source: Chemical Market Analytics by OPIS

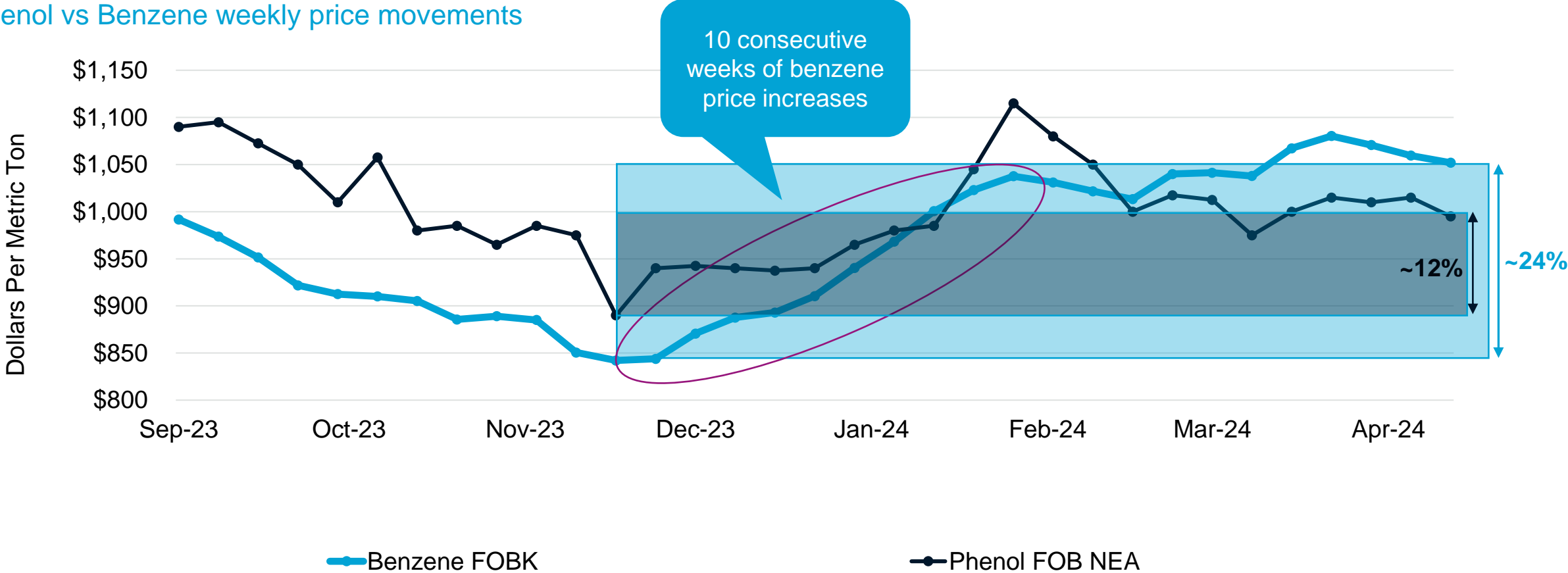
© 2024 OPIS, LLC.



Bullish Benzene,
Bearish Phenol?

Strong Benzene Prices Outpacing Phenol Prices

Phenol vs Benzene weekly price movements



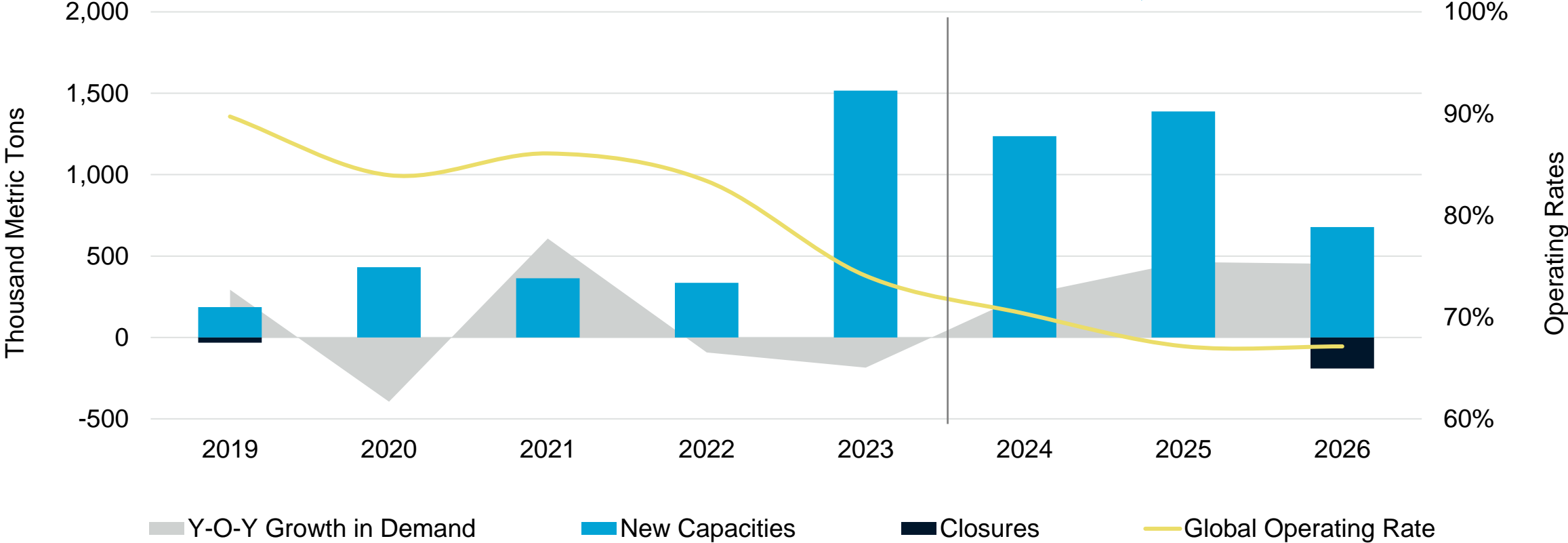
Source: Chemical Market Analytics by OPIS

© 2024 OPIS, LLC.

Capacity Remains In Excess; Difficult For Demand Growth To Catch Up

Global Phenol Capacity Changes

FORECAST



Source: Chemical Market Analytics by OPIS

© 2024 OPIS, LLC.

Many More Projects Are On The Way!

New Phenol/Acetone Plants in Mainland China

No.	Name	Location	Phenol Capacity	Acetone Capacity	Startup	Status
1	Fuyu Chemical	Shandong	220	130	2024	Constructing
Total in 2024			220	130		
2	Huasheng	Hainan	400	240	2025	Constructing
3	Ruilin Chemical	Shandong	220	130	2025	Constructing
4	Jilin PC	Jilin	220	130	2025	Constructing
Total in 2025			840	500		
5	ZRCC Phase II	Zhejiang	400	250	2026	Constructing
6	Fujian Gulei	Fujian	250	150	2026	Constructing
Total in 2026			650	400		
7	Shiyu Phase II	Jiangsu	280	170	2027	Planning
8	SanMu	Liaoning	400	250	2027	Planning
Total in 2027			680	420		
9	Jinkong Energy	Hubei	200	120	2028+	Planning
10	Luxi	Shandong	200	120	2028+	Planning
11	Jiantao	Hebei	219	135	2028+	Planning
12	Bohai Chemical	Tianjin	220	130	2028+	Planning
13	Zhenghua	Yunnan	150	90	2028+	Planning
14	Xinhui	Guangdong	300	185	2028+	Planning
15	Baling PC	Hunan	220	130	2028+	Planning
16	ZPC Jintang	Zhejiang	400	250	2028+	Planning
17	Chuangui Energy	Guangxi	162	98	2028+	Planning
18	Rongsheng	Taizhou	400	250	2028+	Planning
Total in 2028+			2,471	1,508		

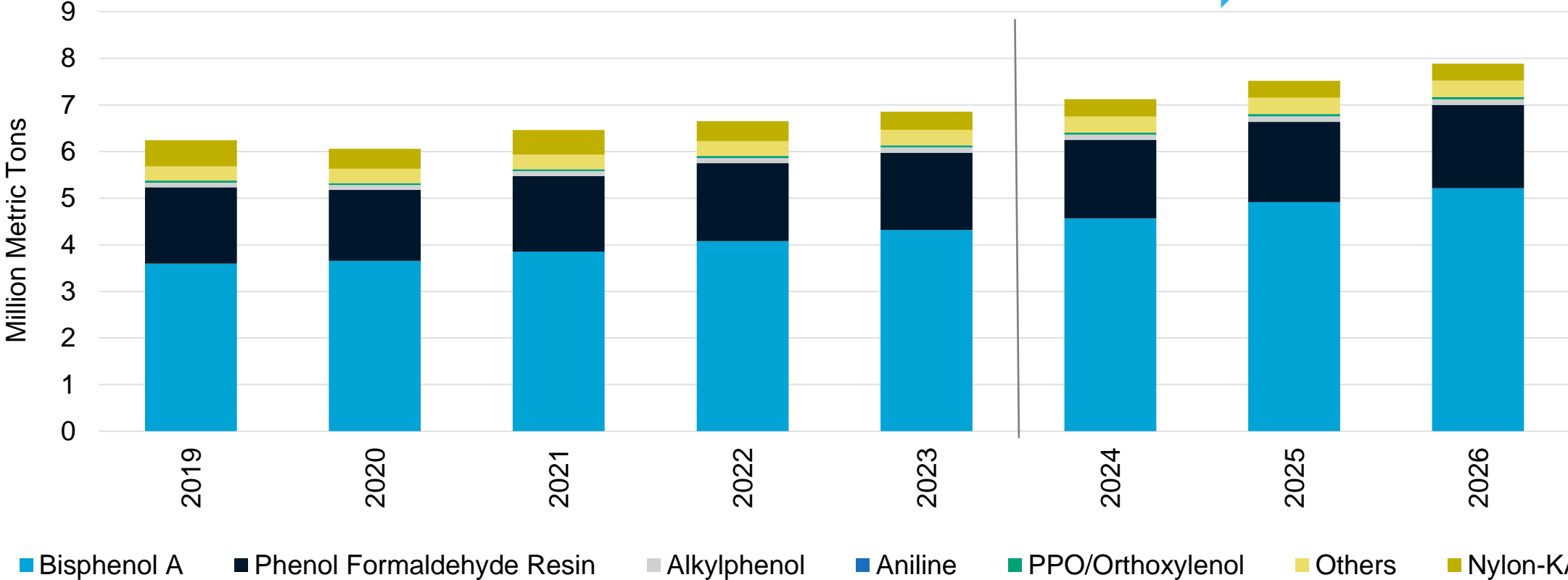
New BPA Plants in Mainland China

No.	Name	Location	Capacity	Startup	Status
1	Haiwan	Shandong	240	2024	In Operation
2	Hengli	Liaoning	480	2024	In Operation
3	Kingboard Phase II	Guangdong	240	2024	Constructing
4	Fuyu Chemical	Shandong	180	2024	Constructing
Total in 2024			1,140		
5	Shenma Phase II	Henan	240	2025	Constructing
6	Ruilin Chemical	Shandong	240	2025	Constructing
7	Jilin PC	Jilin	240	2025	Constructing
Total in 2025			720		
8	Shenghong	Jiangsu	200	2026	Constructing
9	Huasheng Phase II	Hainan	240	2026	Constructing
10	ZRCC Phase II	Zhejiang	240	2026	Constructing
Total in 2026			680		
11	Fujian Gulei	Fujian	270	2027	Constructing
12	Shiyu Phase II	Jiangsu	240	2027	Planning
13	CSPC	Guangdong	240	2027	Planning
14	SanMu	Liaoning	500	2027	Planning
Total in 2027			1,250		
15	ZPC Jintang	Zhejiang	480	2028+	Planning
16	Baling PC	Hunan	240	2028+	Planning
17	Kingboard Caofeidian	Hebei	180	2028+	Planning
18	Yingkou Jiafu	Liaoning	130	2028+	Planning
19	Bohai Chemical	Tianjin	340	2028+	Planning
20	Jinkong Energy	Hubei	180	2028+	Planning
21	Zhenghua	Yunnan	180	2028+	Planning
22	Chuangui Energy	Guangxi	180	2028+	Planning
23	Rongsheng	Taizhou	480	2028+	Planning
Total in 2028+			2,390		

Asia Phenol Demand is Holding Up

Asia Phenol Demand by Derivative

FORECAST 



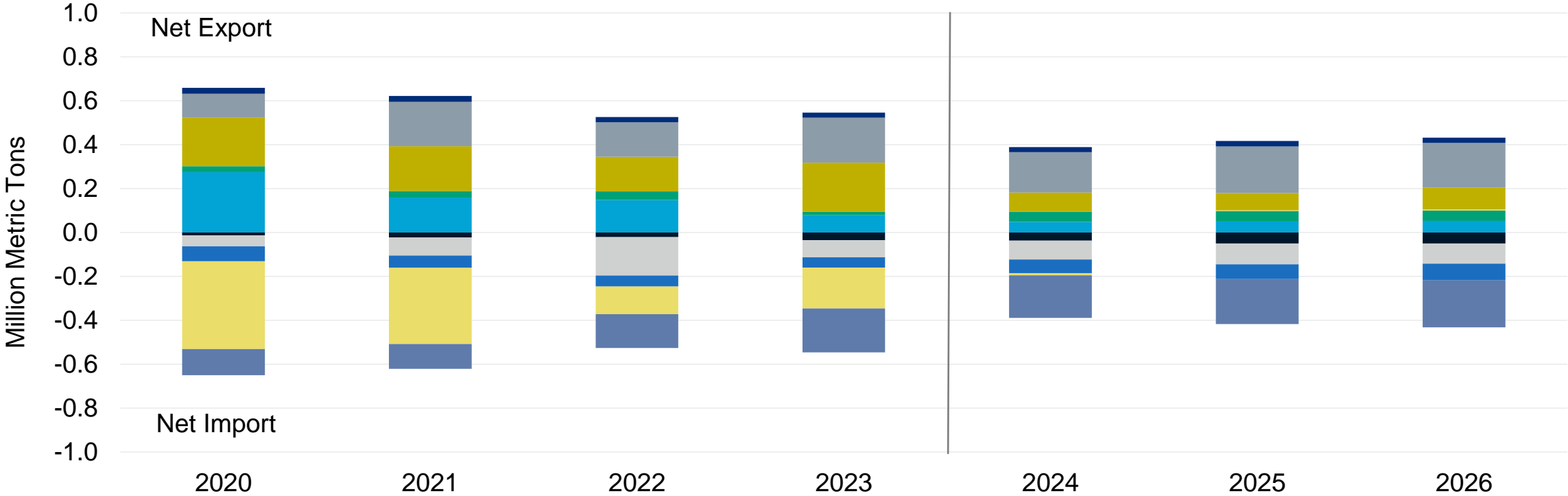
Source: Chemical Market Analytics by OPIS

© 2024 OPIS, LLC.

Domestic Economies Become More Self-Sufficient

Interregional Phenol Trade

FORECAST 



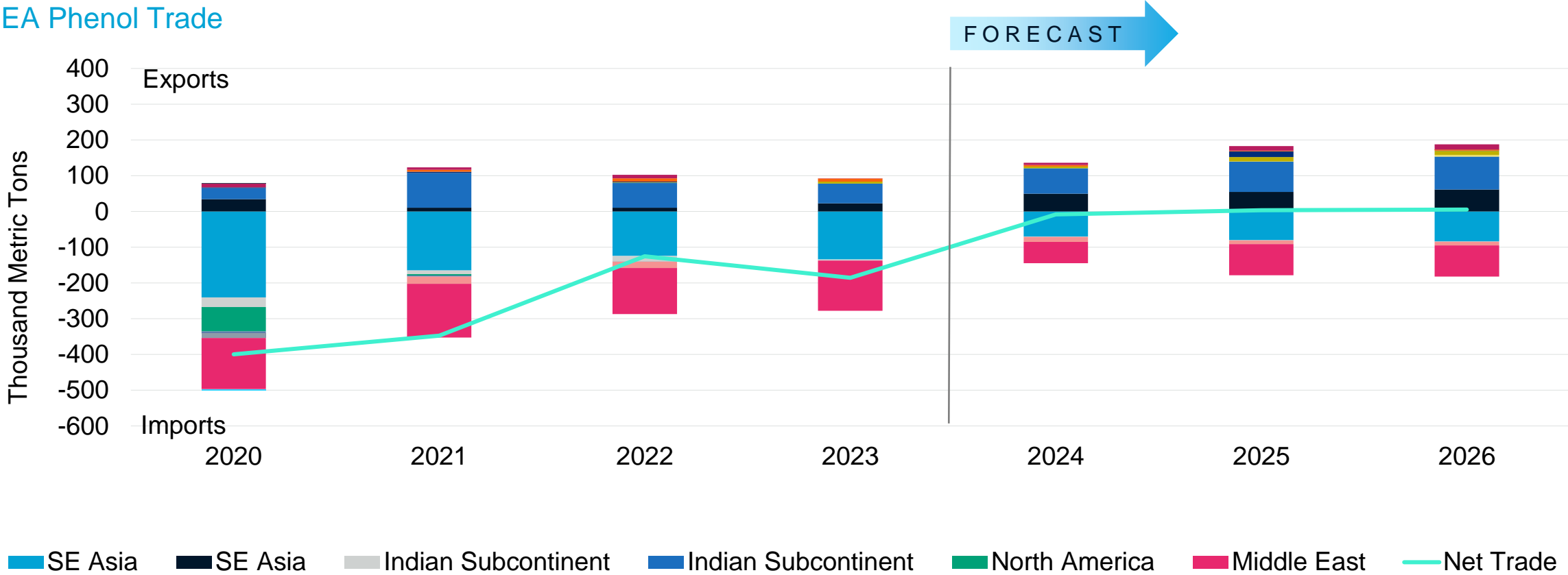
■ North America ■ South America ■ Western Europe ■ Central Europe ■ CIS ■ NE Asia ■ SE Asia ■ Indian Subcontinent ■ Middle East ■ Africa

Source: Chemical Market Analytics by OPIS

© 2024 OPIS, LLC.

Spot Phenol Availability Becomes Tight As Global Trade Declines

NEA Phenol Trade



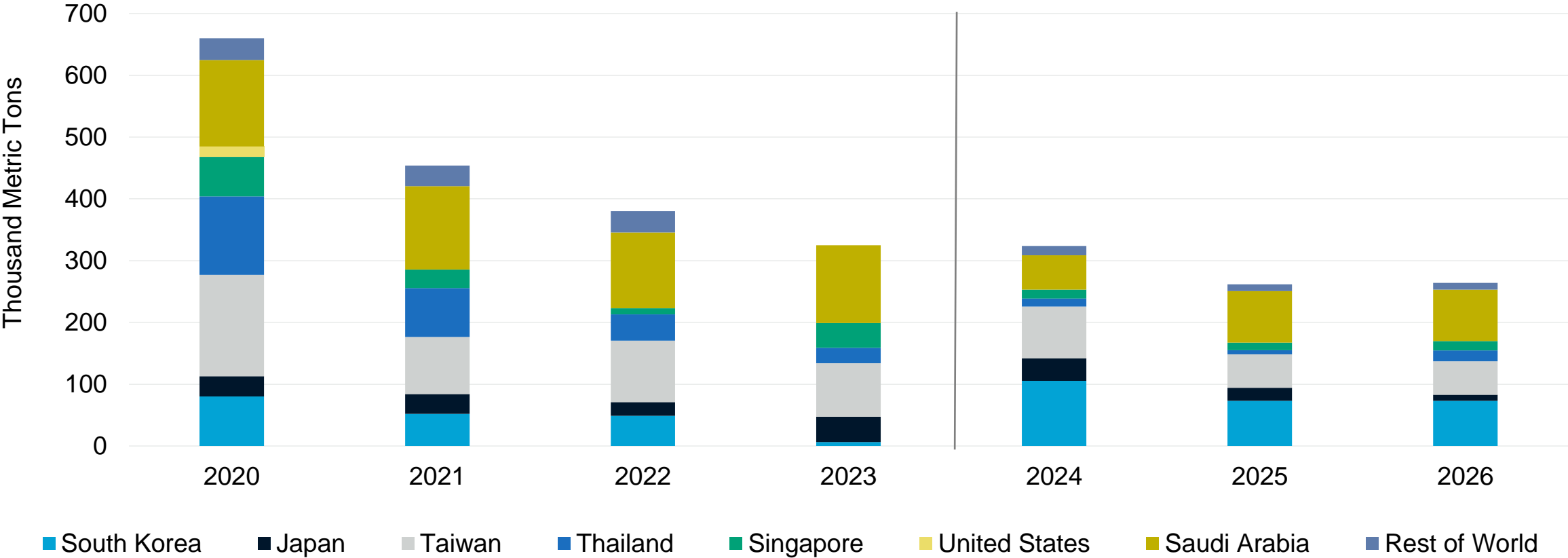
Source: Chemical Market Analytics by OPIS

© 2024 OPIS, LLC.

China's Self-sufficiency Increases, Imports on a Downtrend

China Phenol Imports

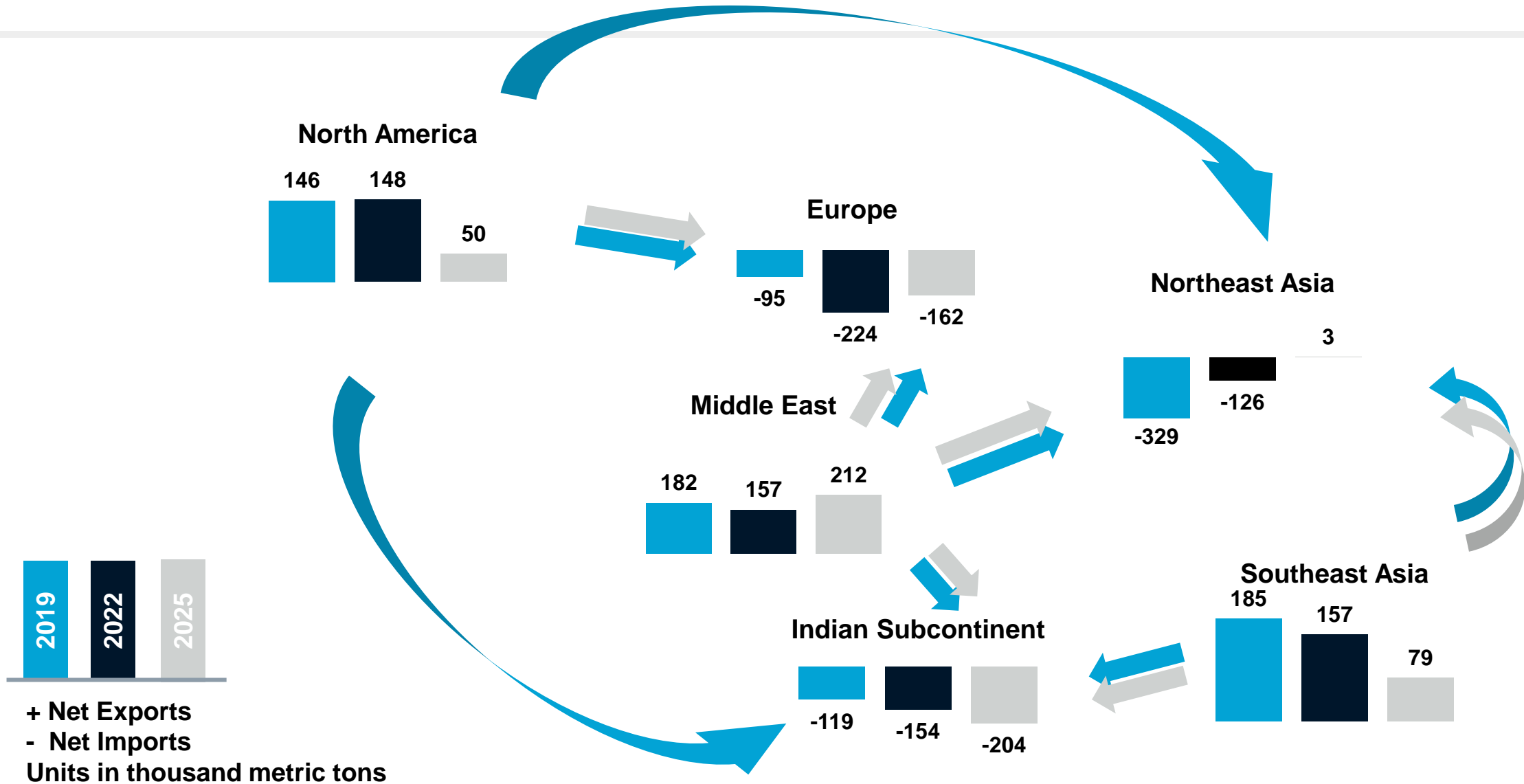
FORECAST 



Source: Chemical Market Analytics by OPIS

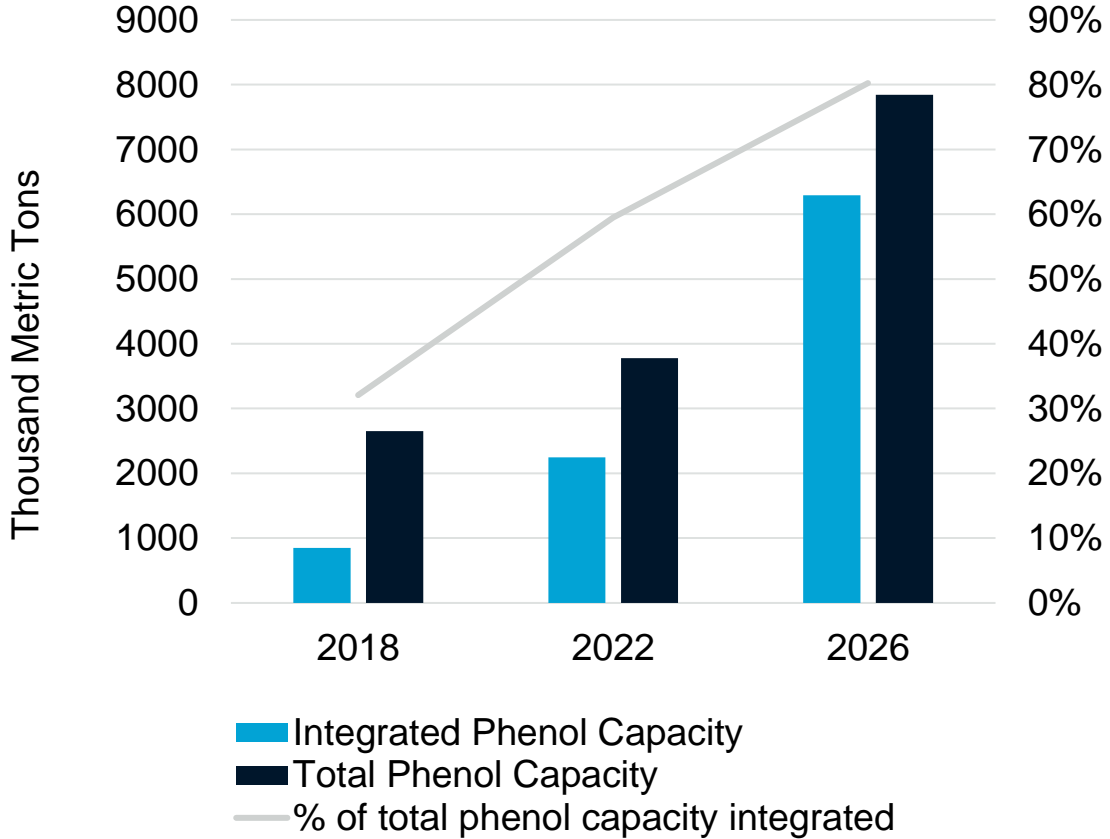
© 2024 OPIS, LLC.

Evolving Global Phenol Trade Flow



Increasing Integration Across The Phenolic Chain In China

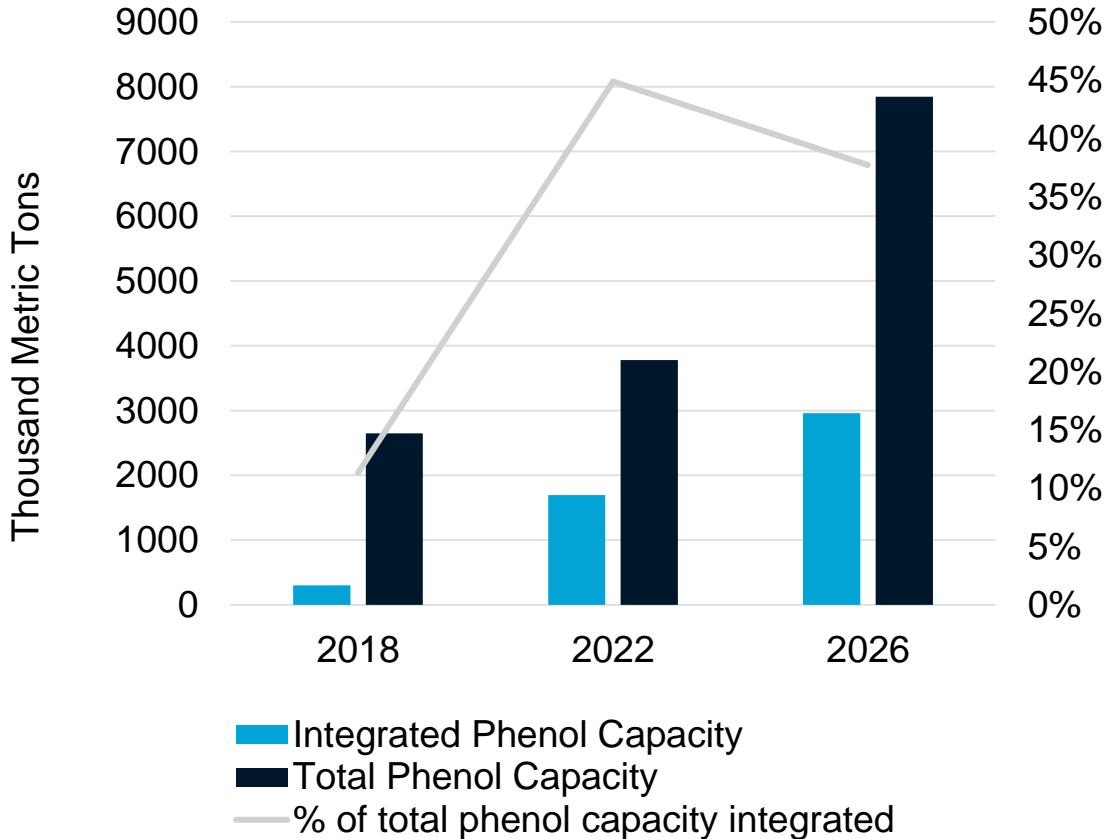
Integration of phenol producers to BPA



Source: Chemical Market Analytics by OPIS

© 2024 OPIS, LLC.

Integration of phenol producers to BPA and PC/Epoxy

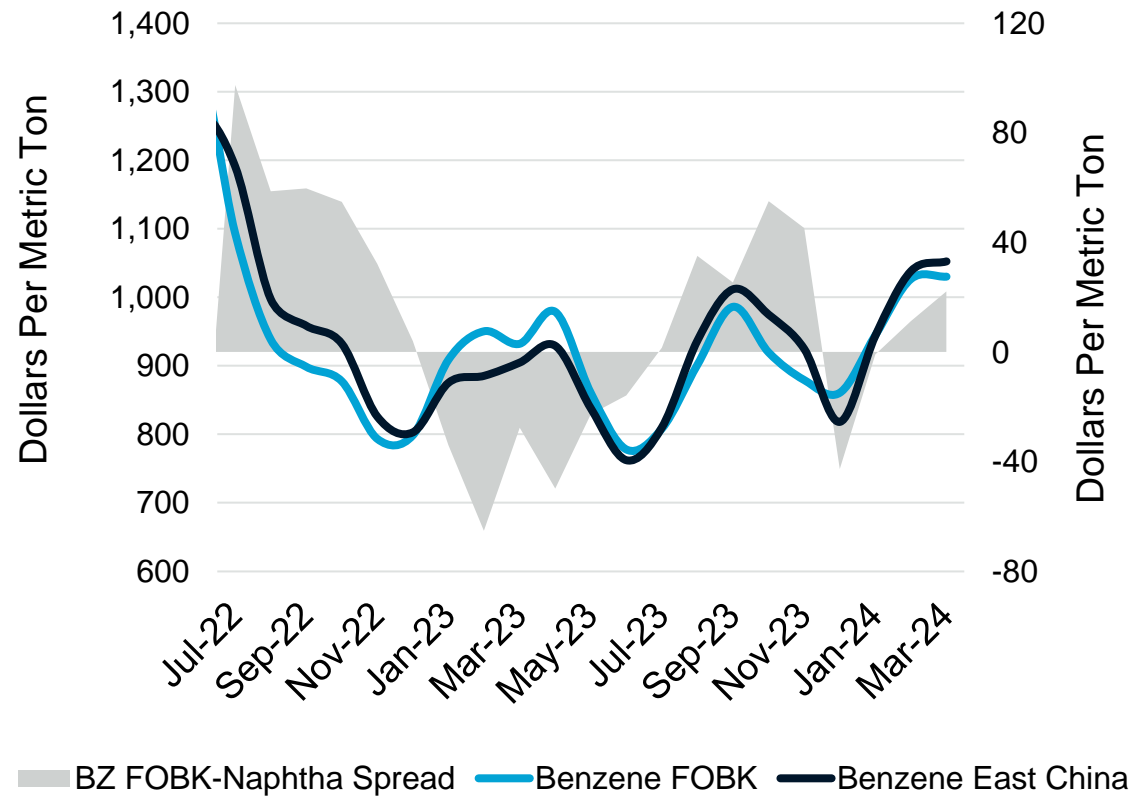


Source: Chemical Market Analytics by OPIS

© 2024 OPIS, LLC.

No Significant Feedstock Advantage For China Producers

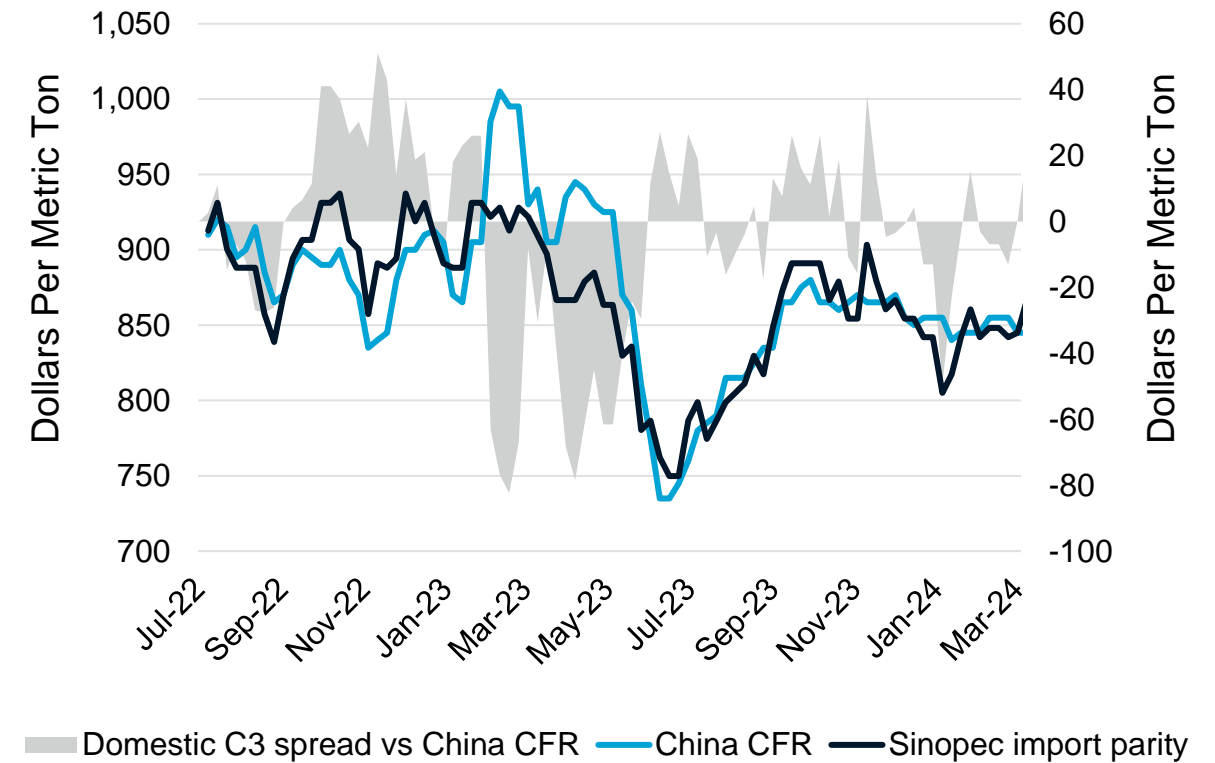
Mainland China: Domestic Benzene spread vs Imports



Source: Chemical Market Analytics by OPIS

©2024 OPIS, LLC.

Mainland China: Domestic C3 spread vs Imports

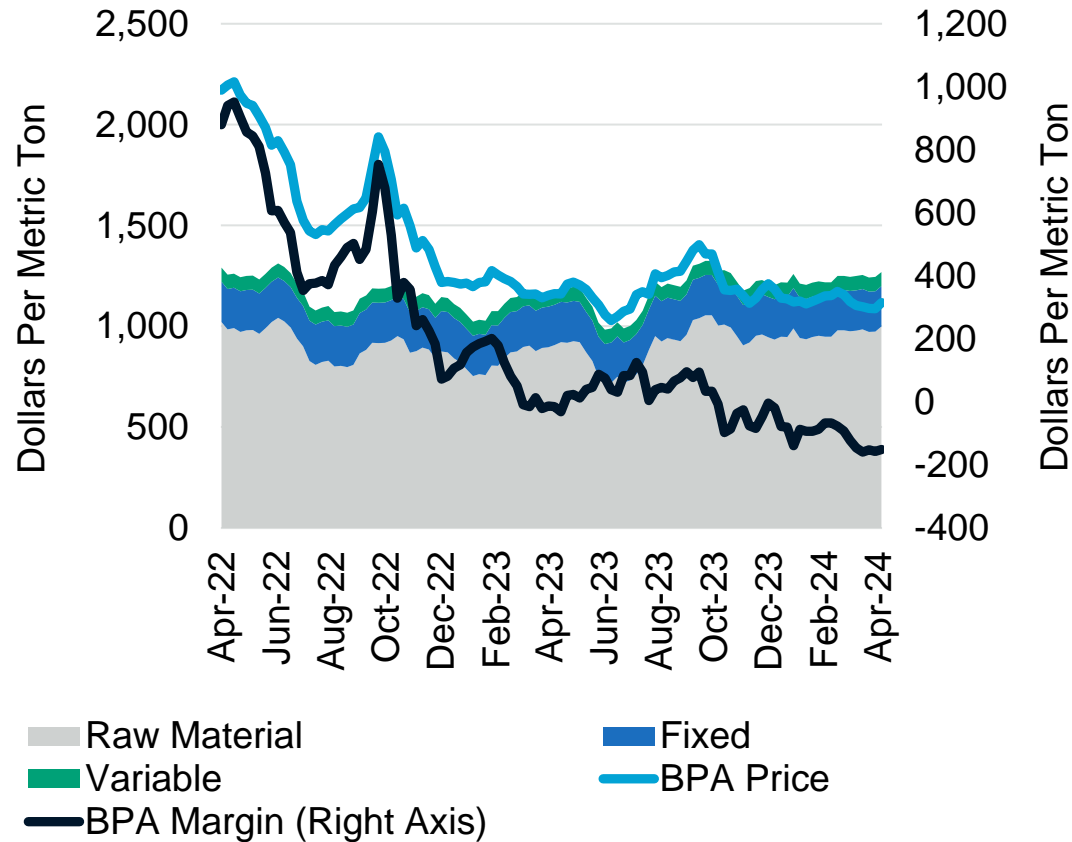


Source: Chemical Market Analytics by OPIS

© 2024 OPIS, LLC.

BPA Downstream Profitability

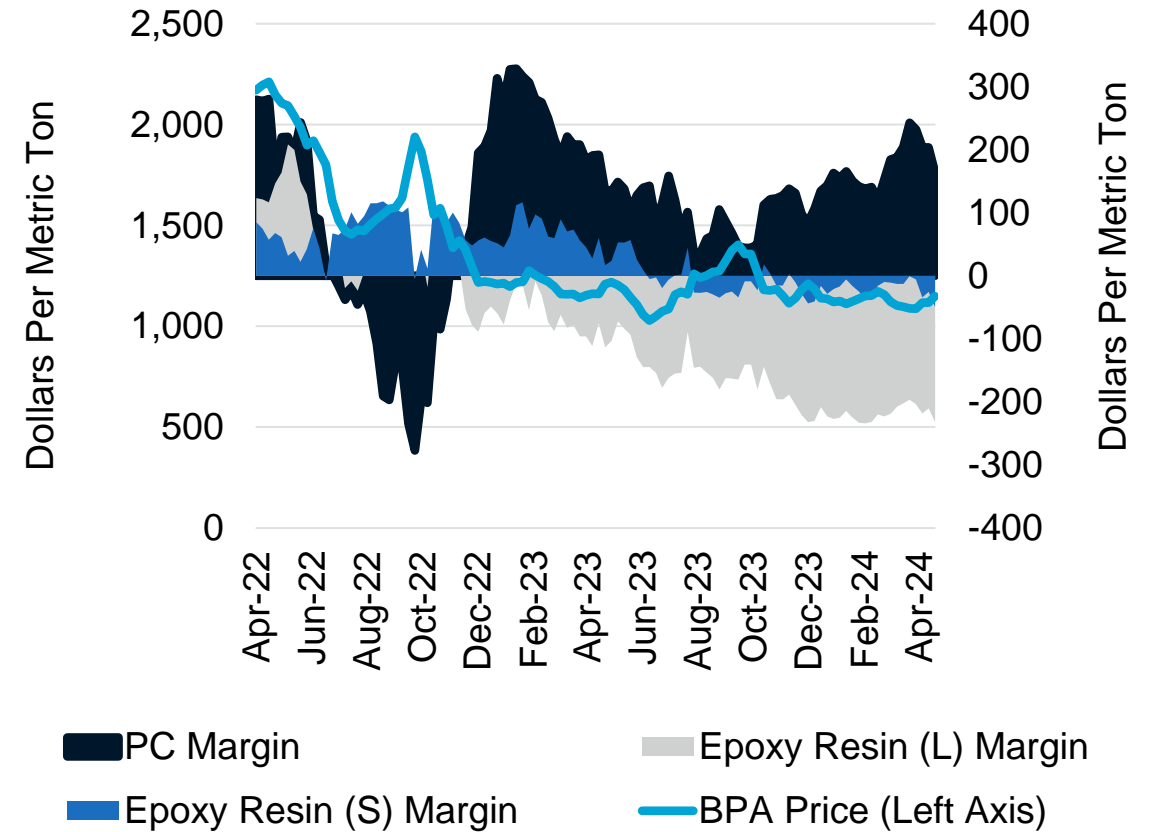
Mainland China: BPA Spot Price VS. Cash Cost



Source: Chemical Market Analytics by OPIS

©2024 OPIS, LLC.

Mainland China: BPA Downstream Margins



Source: Chemical Market Analytics by OPIS

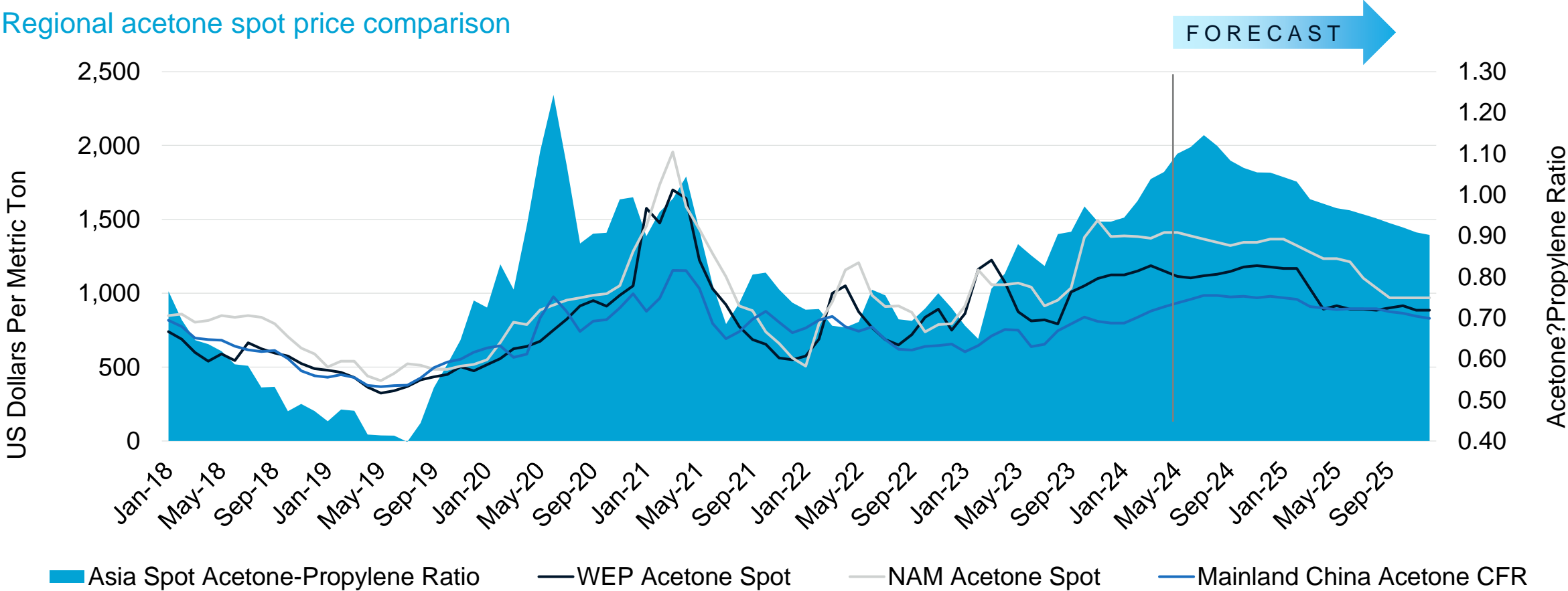
©2024 OPIS, LLC.

Highest Multiyear
Acetone-propylene
Ratio!



Propylene Acetone Ratios Higher For Longer

Regional acetone spot price comparison

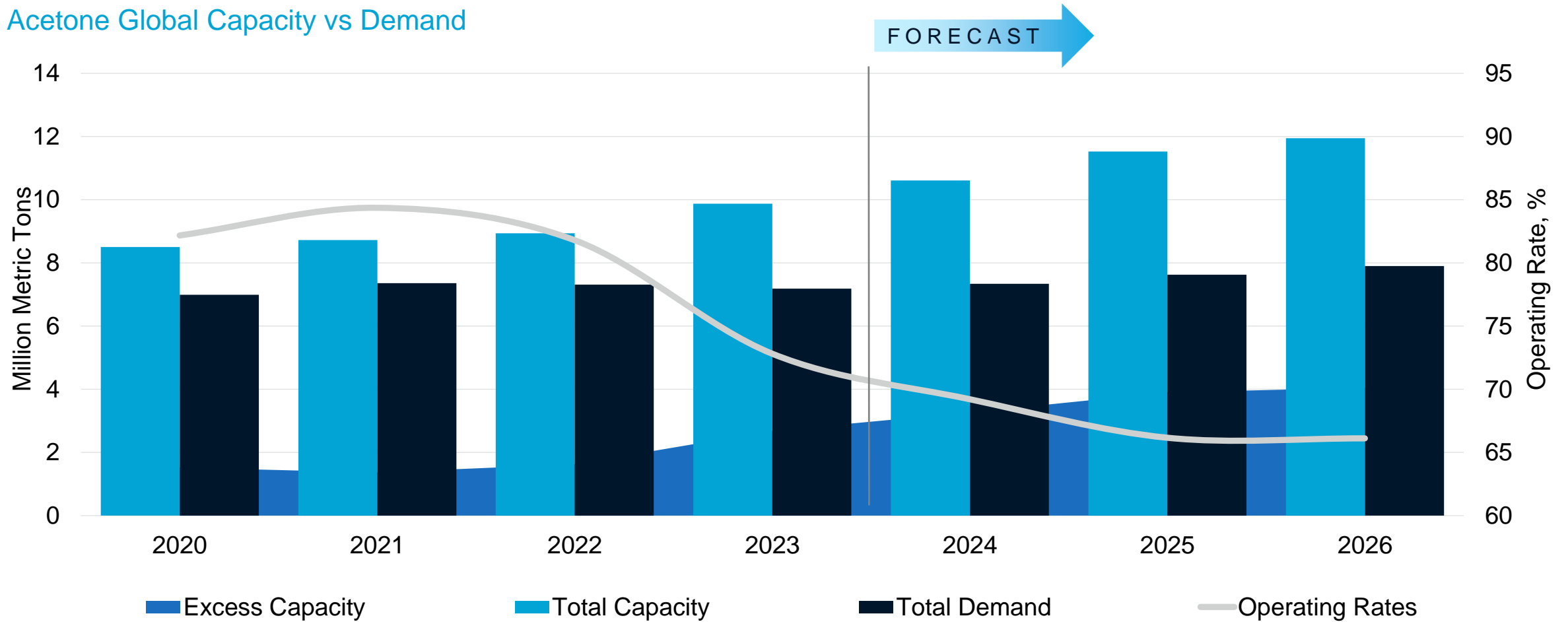


Source: Chemical Market Analytics by OPIS

© 2024 OPIS, LLC.

Acetone Operating Rates To Fall With Weak Phenol Demand

Acetone Global Capacity vs Demand

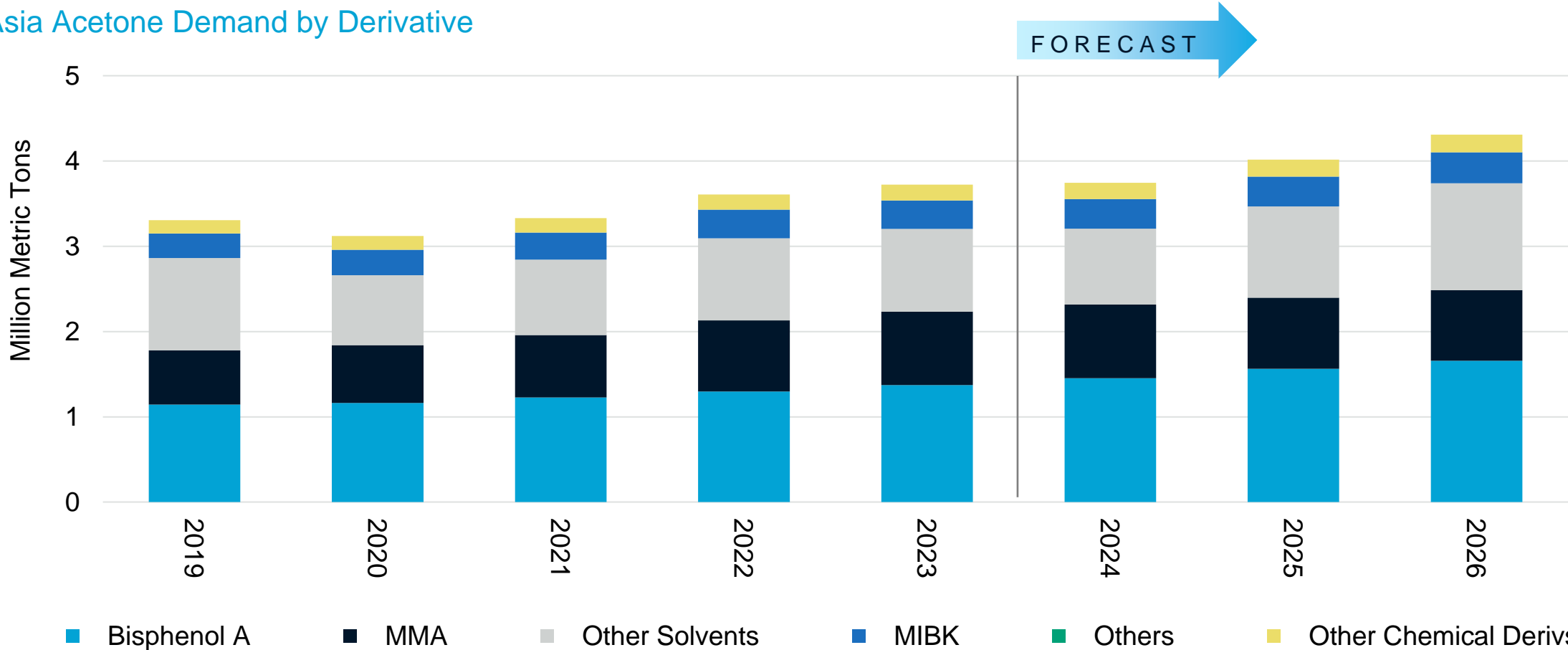


Source: Chemical Market Analytics by OPIS

© 2024 OPIS, LLC.

Global Acetone Demand to Grow at Moderate Pace

Asia Acetone Demand by Derivative

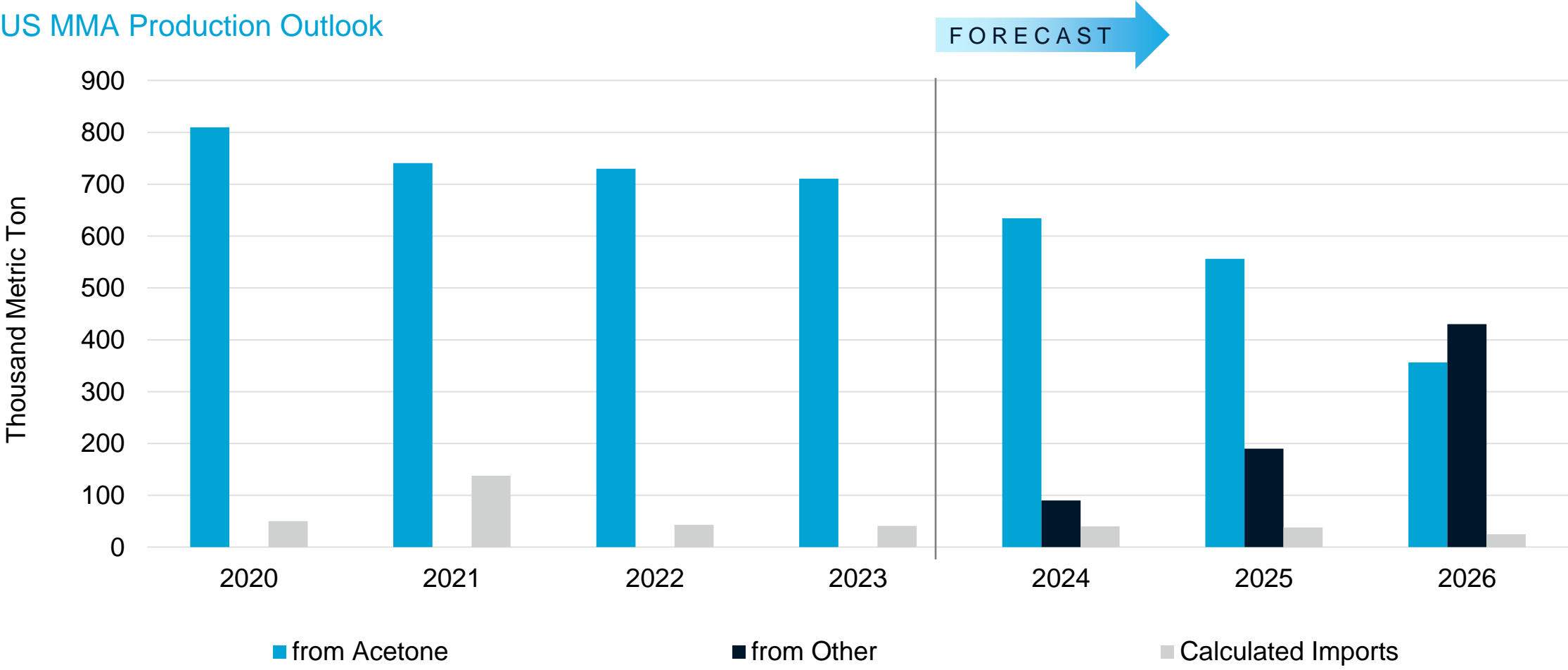


Source: Chemical Market Analytics by OPIS

© 2024 OPIS, LLC.

Acetone Demand From MMA Will Drop as New Ethylene-Based Investments Come Online

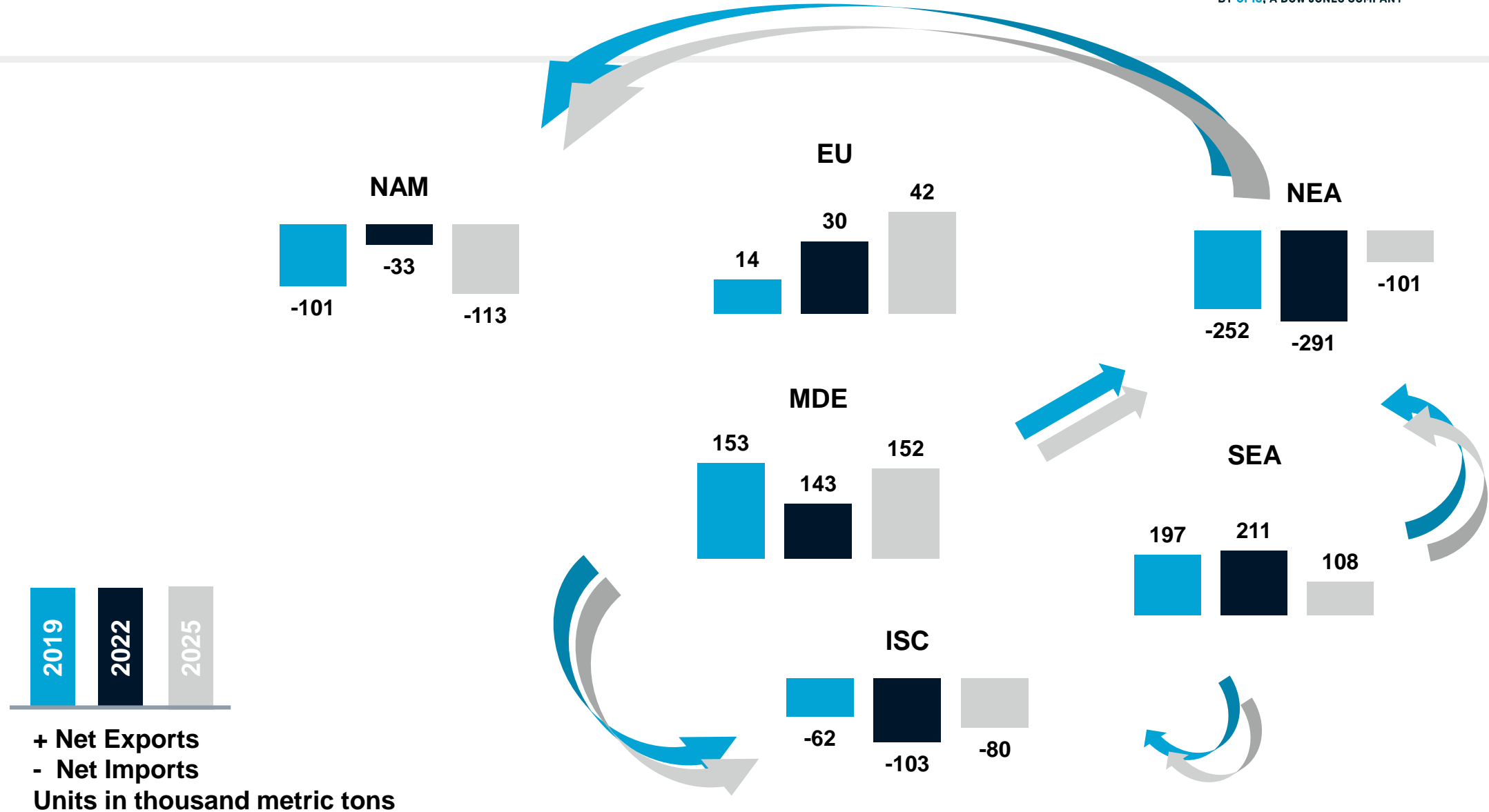
US MMA Production Outlook



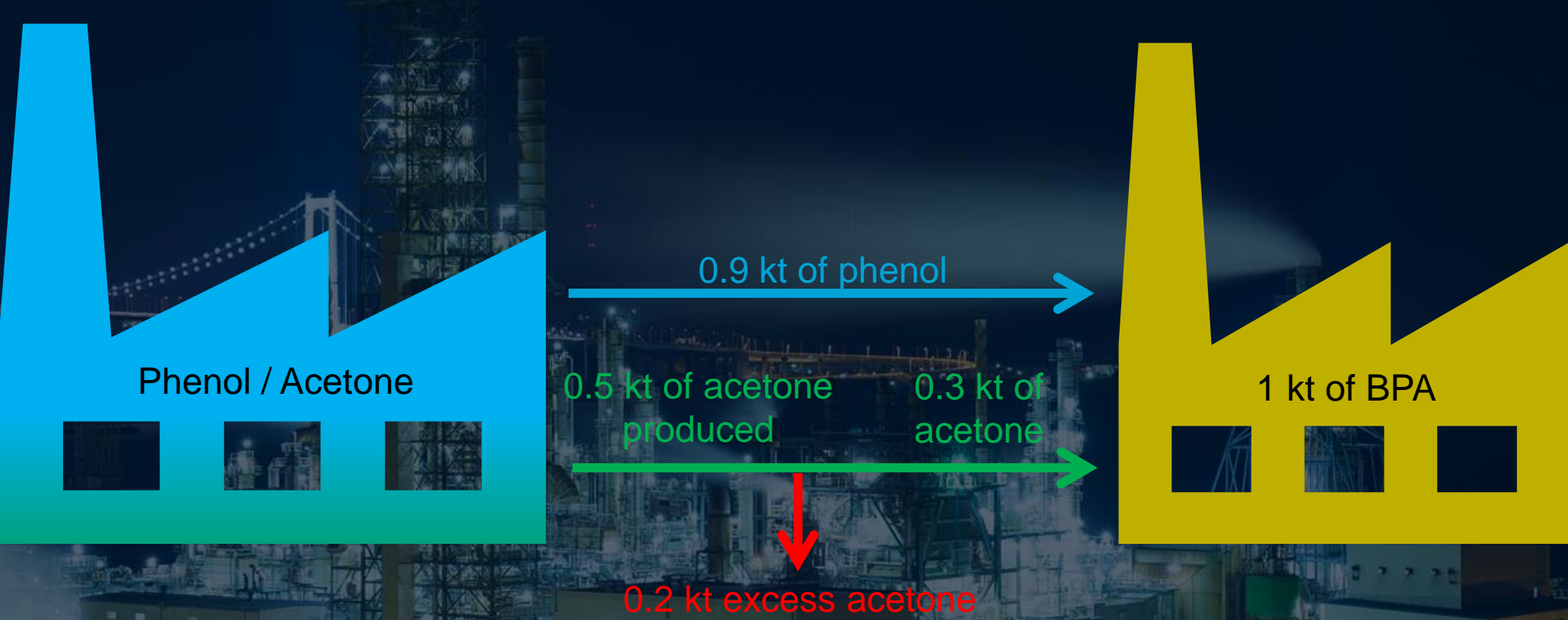
Source: Chemical Market Analytics by OPIS

© 2024 OPIS, LLC.

Acetone Global Trade Flow



Potential Acetone Surplus as BPA Demand Improves



Source: Chemical Market Analytics by OPIS



10 May 2024 | Issue 13

Weekly Insights

Asia Phenol Pricing Report

- The spot phenol FOB NE Asia marker fell for a second week as markets reopened following public holidays.
- Spot phenol prices in East Mainland China declined, falling to RMB 7,650-7,700 per mt ex-tank by Thursday, from RMB 7,950-8,000 per mt ex-tank on Monday. According to market participants, some domestic producers who had earlier announced plans to carry out plant maintenance have not done so, which means that excess supply remains a feature of the

FOB NE Asia	975	USD per mt
Price change Week-on-Week	-20	↓
Price change Month-on-Month	-40	↓
Domestic China	7825	RMB per mt
Price change Week-on-Week	-225	↓
Price change Month-on-Month	425	↑
CFR India	1045	USD per mt
Price change Week-on-Week	0	↔
Price change Month-on-Month	8	↑
Domestic India	93.75	INR per kg
Price change Week-on-Week	0	↓
Price change Month-on-Month	-1	↓
Exchange Rate for May 09, 2024		
1 USD = 7.22 CNY	1 USD = 83.47 INR	

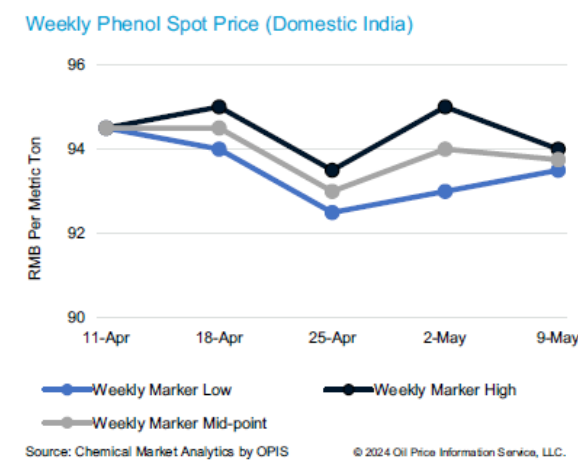
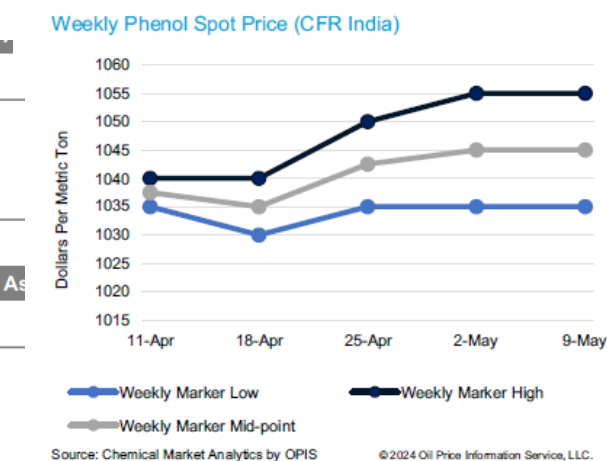
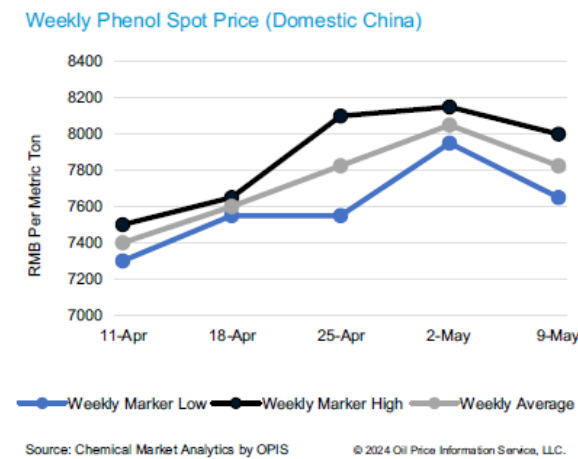
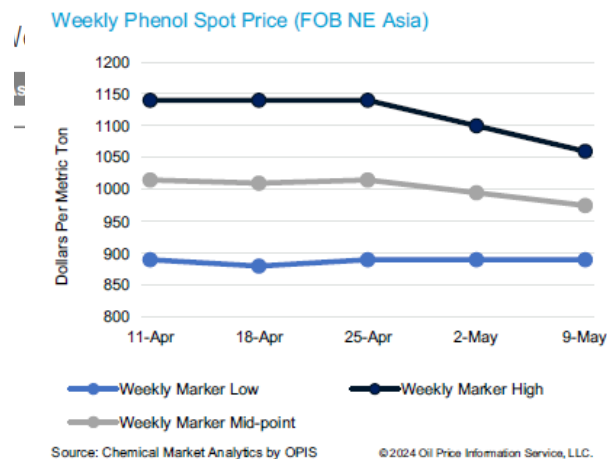
Notes:

Please refer to published methodology for more details on the various marker assessments.

Source: Chemical Market Analytics by OPIS

Contents

- Weekly Insights
- Market Short Term Analysis
- Upstream and Downstream
- Weekly Spot Price
- Operating Schedule



	D per mt	↓
	B per mt	↓
Duration		↑
	D per mt	↔
Planned maintenance from 1 March with unconfirmed restart date		↑
20 days planned maintenance from 30 March, has restarted on 8 May	R per kg	↓
		↓
JSD = 83.47 INR		

© 2024 Oil Price Information Service, LLC.

Asia Phenol Price Report Trial Now Available - FOC

- Complimentary Phenol Price Report available until **end June 2024**
- Historical prices from Sep 2023 available upon request
- Scan QR code on the right to subscribe to our free trial instantly!



Q&A

Customer Service

support@chemicalmarketanalytics.com

North America: +1 888.301.2645 (toll-free within the U.S.)

<https://www.opisnet.com/contact/contact-us/>

The information contained in this presentation is confidential and proprietary. Any unauthorized use, disclosure, reproduction, or dissemination, in full or in part, in any media or by any means, without the prior written permission of OPIS or any of its affiliates ("OPIS") is strictly prohibited. OPIS or its affiliates own all logos and trade names contained in this presentation and any use of such logos or trademarks by any third party without permission is strictly prohibited. Any opinions, statements, estimates, and projections in this presentation are solely those of the individual author(s) at the time of writing. Neither OPIS nor the author(s) has any obligation to update this presentation in the event that any content, opinion, statement, estimate, or projection (collectively, "information") changes or subsequently becomes inaccurate. OPIS makes no warranty, expressed or implied, as to the accuracy, completeness, or timeliness of any information in this presentation, and shall not in any way be liable to any recipient for any inaccuracies or omissions. Without limiting the foregoing, OPIS shall have no liability whatsoever to any recipient, whether in contract, in tort (including negligence), under warranty, under statute or otherwise, in respect of any loss or damage suffered by any recipient as a result of or in connection with any information provided, or any course of action determined, by it or any third party, whether or not based on any information provided. The inclusion of a link to an external website by OPIS should not be understood to be an endorsement of that website or the site's owners (or their products/services). OPIS is not responsible for either the content or output of external websites. © 2023 OPIS, LLC. All rights reserved. All rights reserved and all intellectual property rights are retained by OPIS and its affiliates.