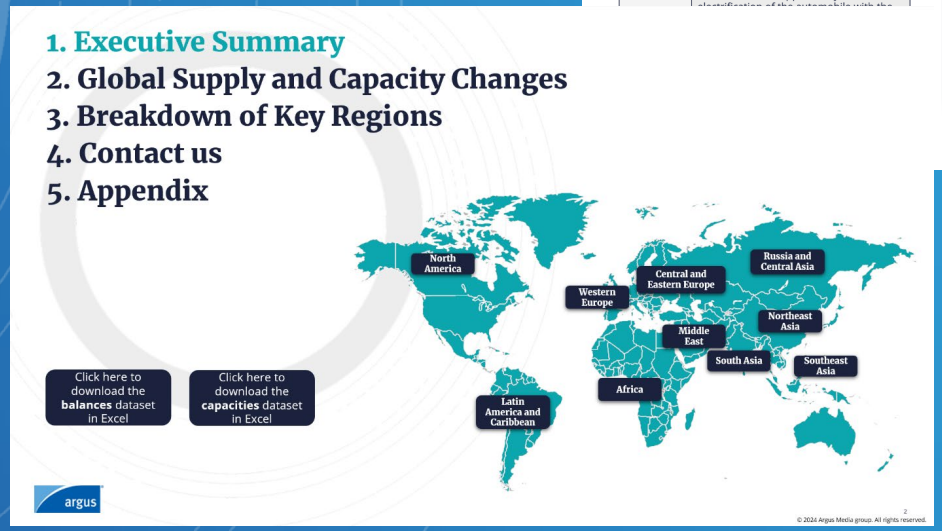
Argus report sample

Caustic Analytics

24 May 2024



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About this report

Argus Caustic Soda Analytics is a data-driven evaluation of supply-demand fundamentals forecast for caustic soda and derivatives markets, published twice a year.

The service includes a 10-year forecast and 5-year history covering balances and capacities, organized by country and region.

Subscribers receive a PowerPoint PDF written by our experts plus the accompanying Excel data files.

This is a sample of the full report only. It includes insights for North America.

To find out more about the full Argus Caustic Soda Analytics service, click here to get in touch.

Key features

10-year forecast and a five-year history
Covering capacities, supply and demand, trade, and feedstock forecasts for leading derivatives, by country and region, published twice a year.

Detailed report
In an easy-to-read PowerPoint format focusing on new plant capacities, growth rates in relevant markets, and regulatory developments.

Regional insight
Covering capacities and operating rates based on global trade and economics.

Downloadable datasets
With data on supply, demand, capacities, operating rates and trade balances, by country and region.

Access to specialists
Speak to the experts behind Argus' long-term analytics forecast services.

Associated data

Global supply, demand and trade by country; caustic soda capacities

Capacity list for caustic soda, '000dmt

Product	Region	Country	Location	Country Subdivision	Operating Company	Source	2019	2020	2021	2022	2023	2024
Caustic Soda	Africa	Algeria	Mostaganem		ADWAN Chemical	Membrane	28	28	28	28	28	28
Caustic Soda	Africa	Algeria	Ouargla		Flash Chemical Industry	Membrane	30	30	30	30	30	30
Caustic Soda	Africa	Egypt	Alexandria		Egyptian petrochemical Co.	Membrane	120	120	200	200	200	200
Caustic Soda	Africa	Egypt	El Mex		Misr Chemical Industries	Membrane	56	56	56	56	56	56
Caustic Soda	Africa	Egypt	El Nasir		Intermediate Chemicals (NCIC)	Membrane	27	27	27	27	27	27
Caustic Soda	Africa	Egypt	Port Said		Sanmar Group (Trust Chemical)	Membrane	275	275	275	275	275	275
Caustic Soda	Africa	Gabon	Sisag		Gabon chemical	Mercury	22	22	22	22	22	22
Caustic Soda	Africa	Libya	Abu Kammash		General Company of Chemical Industries	Mercury	50	50	50	50	50	50
Caustic Soda	Africa											
Caustic Soda	Africa											
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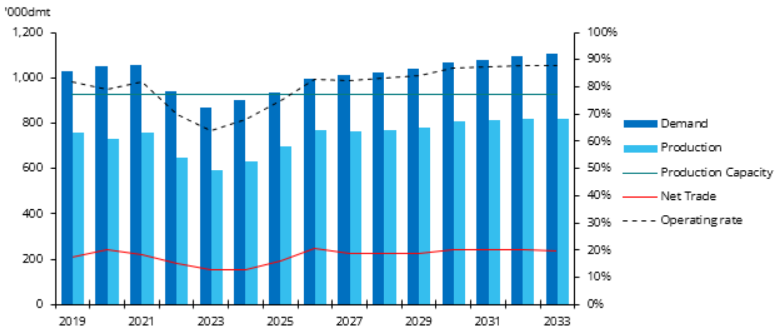
Caustic Soda	Black Se											
Caustic Soda	Central E											
Caustic Soda	Central E											
Caustic Soda	Central E											

					Estimate				Outlook							CAGR %		
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2019-23	2023-28	2028-33
Capacity																		
Diaphragm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0%	0.0%	0.0%
Mercury	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0%	0.0%	0.0%
Membrane	928	928	928	928	928	928	928	928	928	928	928	928	928	928	928	0.0%	0.0%	0.0%
Other	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0%	0.0%	0.0%
Speculative	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Total capacity	**928**	**928**	**928**	**928**	**928**	**928**	**928**	**928**	**928**	**928**	**928**	**928**	**928**	**928**	**928**	**0.0%**	**0.0%**	**0.0%**
Production																		
Diaphragm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0%	0.0%	0.0%
Mercury	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0%	0.0%	0.0%
Membrane	761	733	761	650	594	631	696	770	763	772	781	806	812	817	817	-6.0%	5.4%	1.1%
Other	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0%	0.0%	0.0%
Total production	761	733	761	650	594	631	696	770	763	772	781	806	812	817	817	-6.0%	5.4%	1.1%
Operating rate	82%	79%	82%	70%	64%	68%	75%	83%	82%	83%	84%	87%	88%	88%	88%			
Import	267	317	296	293	276	270	240	223	251	253	257	262	268	279	289	0.8%	-1.7%	2.6%
Total supply	**1,028**	**1,050**	**1,057**	**943**	**870**	**901**	**936**	**993**	**1,014**	**1,025**	**1,038**	**1,068**	**1,080**	**1,096**	**1,106**	**-4.1%**	**3.4%**	**1.5%**
Derivative Consumption	268	1,051	1,058	944	870	902	936	994	1,015	1,026	1,039	1,069	1,081	1,096	1,107			
Pulp & Paper	23	16	18	16	14	18	18	19	19	19	19	19	19	19	19	-11.7%	6.3%	0.0%
Alumina	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	0.0%	0.0%
Phosgene	110	101	127	113	99	105	110	115	116	116	117	117	118	118	118	-2.6%	3.2%	0.3%
Organic Chemicals	72	62	67	58	56	62	67	69	70	71	73	74	76	77	79	-6.1%	4.9%	2.2%
Soaps & Detergents	38	34	40	35	34	40	43	43	44	45	47	48	50	51	53	-2.7%	5.8%	3.3%
Textile	11	8	11	10	9	11	11	11	11	11	12	12	12	12	12	-4.9%	4.1%	1.8%
Inorganic Chemicals	144	130	140	122	113	118	127	140	145	146	147	148	149	150	151	-5.9%	5.3%	0.7%
Battery Materials	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0%	0.0%	0.0%
Water Treatment	22	20	23	20	19	20	21	21	22	22	22	22	22	23	23	-3.6%	3.0%	0.9%
Petrochemicals applications	23	25	23	22	22	21	23	22	29	31	31	35	35	35	35	-1.1%	7.1%	2.5%
Others	108	96	94	75	72	80	82	82	83	84	85	86	87	88	88	-9.6%	3.1%	0.9%
Total consumption	**551**	**492**	**543**	**471**	**438**	**475**	**502**	**522**	**539**	**545**	**553**	**561**	**568**	**573**	**578**	**-5.6%**	**4.5%**	**1.2%**
Export	477	558	514	472	432	426	434	471	475	480	485	507	512	523	528	-2.5%	2.2%	1.9%
Total demand	**1028**	**1050**	**1057**	**943**	**870**	**901**	**936**	**993**	**1014**	**1025**	**1038**	**1068**	**1080**	**1096**	**1106**	**-4.1%**	**3.4%**	**1.5%**
Net Trade	210	241	218	179	156	156	194	248	224	227	228	245	244	244	239			
To/(from) inventory	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Demand % change		-11%	10%	-13%	-7%	8%	6%	4%	3%	1%	1%	1%	1%	1%	1%			



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Caustic Soda Analytics Executive Summary

May 2024 update of 10-year global caustic soda supply, demand and trade analysis.

- The global caustic soda market has been reacting to massive changes in logistics with low water levels impacting the Panama Canal and hostilities in the Red Sea essentially closing a critical trade route through the Suez Canal for the foreseeable future.
- Caustic soda trade between regions has been significantly impacted by the changes in logistics with the Atlantic basin essentially cut off from the Pacific basin. Caustic soda prices globally are at fairly equivalent levels resulting in no arbitrage opportunity between regions.
- The significant disparities in energy prices in Europe compared with the rest of the world have essentially normalised, resulting in Europe having an elevated value for electricity compared with other chlor-alkali manufacturing regions.
- The global economy continues to cool compared with the red-hot recovery from the Covid-19 lockdowns. This continues to depress chlorine offtake into a number of derivatives, resulting in limited caustic soda availability.
- As the supply and demand balance between chlorine and caustic soda has rebalanced and chlorine offtake appears to be increasing at a faster rate than caustic soda, caustic soda prices in the export markets seem to have reached a cycle bottom in the past few months.
- The supply and demand balance between chlorine and caustic soda continues to ebb and flow with weak demand experienced on both sides of the molecule, well in advance of a slowing economy. The chlor-alkali cycle experienced its last inflection point at the end of 2023 with global growth beginning to strengthen in 2024.
- Caustic soda capacity additions are forecast to exceed the global demand profile beginning in 2027, leading to oversupplied conditions for a few years as demand overtakes supply, resulting in support for caustic soda price and reinvestment economics being achieved again in the last few years of the forecast.
- One of the main drivers of caustic soda demand growth will be the electrification of the automobile industry. This will not only lead to a rapid expansion of caustic soda demand for battery materials but also many related industries such as alumina, copper and to a lower extent some of the chlorine derivatives such as polyvinyl chloride, polycarbonates, as well as polyvinylidene chloride.

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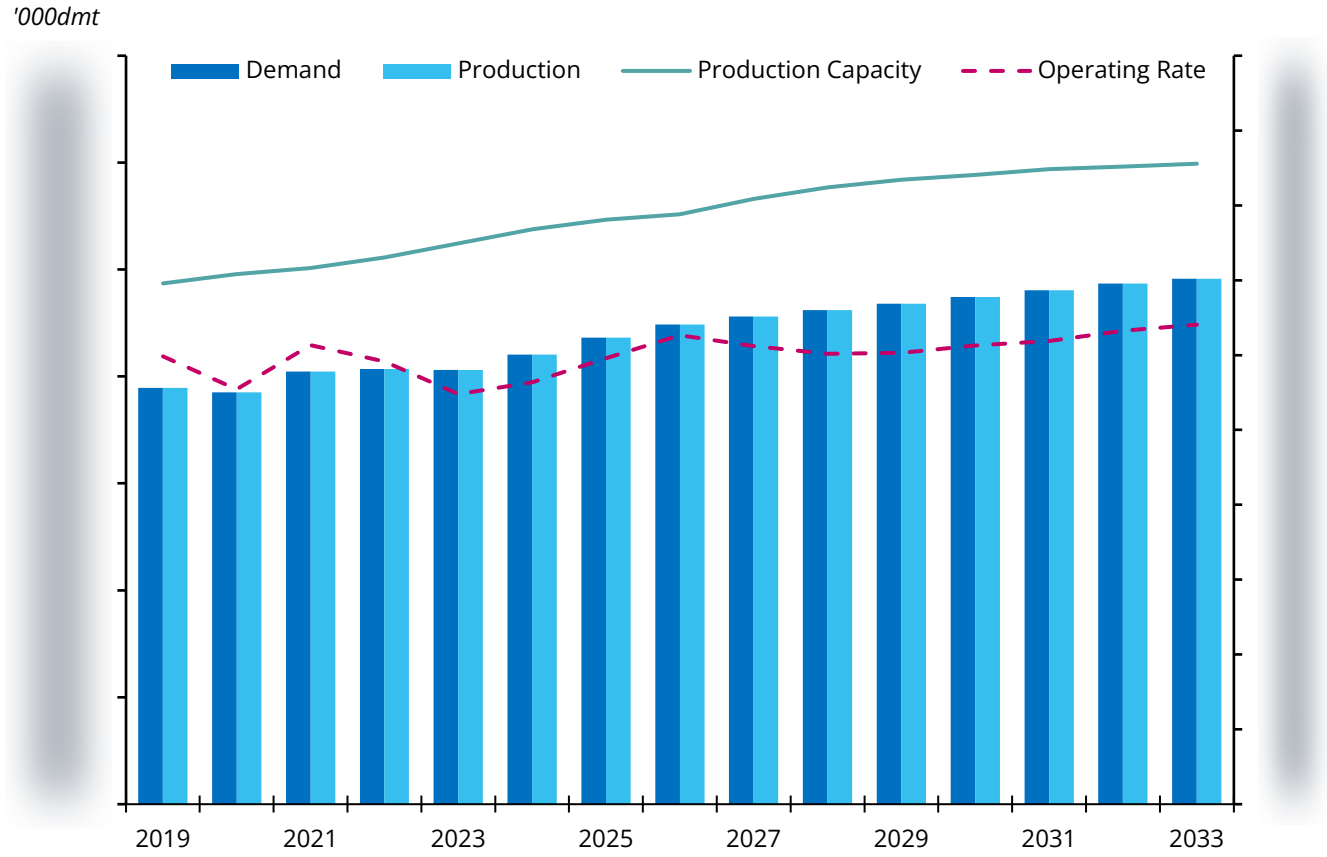
Global Key Updates

Beginning the next cycle of growth.

Key Market Changes	
Supply	Global operating rates are increasing, leading to incremental supply in the market. Capacity additions are robust in the short term but strengthen in 2027 leading to global overcapacity later in the decade.
Demand	Caustic soda demand is forecast to recover later this year with a strong growth profile over the forecast period. Demand will be supported by electrification of the automobile with the need for refining metals.
Trade	Caustic soda trade is forecast to increase over the forecast period as low-cost energy regions provide an increasing supply of caustic soda to support derivatives disassociated from the supply regions.

Global Caustic Soda supply and demand



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Global: Economy

Central banks appear to have tamed inflation for now. The global GDP forecast continues to be revised lower for longer as growth in China continues to be revised lower.

GDP Forecast Assumptions

Inflation

Inflation to be more volatile than before the pandemic. Central banks likely to keep inflation close to target in the medium and long term.

Monetary Policy

Central banks to cut rates this year. They will move cautiously to bring rates down slowly.

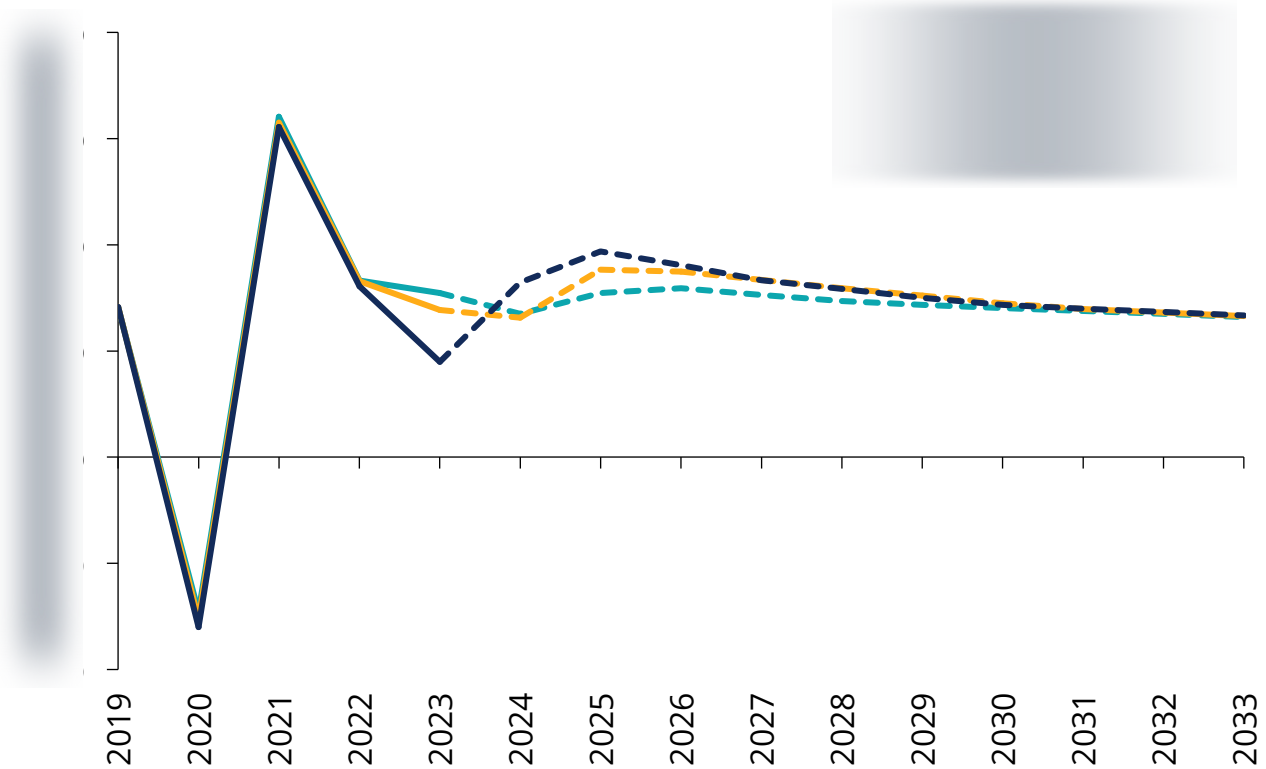
War in Ukraine

Russia sanctions stay in place long after any ceasefire. Europe avoids any future energy problems during winter months.

Globalisation

No meaningful change in the global trading system or US/China relationship. Recent tariffs and other trade barriers stay in place.

Global GDP growth rate forecast, Oxford Economics (OE)



Source: Oxford Economics

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Global: Supply

Capacity additions being added at rapid pace.

New capacity additions have slowed as economics for some projects have come into question. Some projects have been delayed owing to construction delays or financing issues. Global capacity addition in 2024 is expected to be [redacted] t of caustic soda with [redacted] of the expansion added in China.

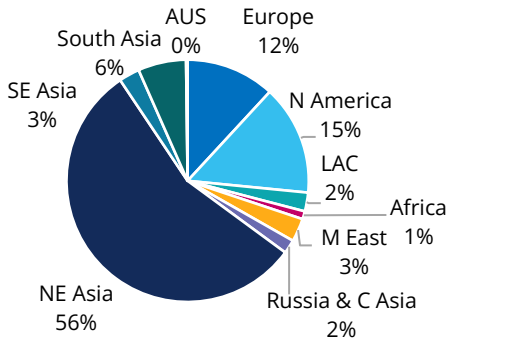
Some projects due to start in 2026 have been delayed as the economic returns experienced in the industry six months ago have deteriorated more quickly than previously forecast.

Some capacity is expected to be permanently shut down in the next two years as the economics of producing some chlorine and caustic soda derivatives has changed dramatically in some regions.

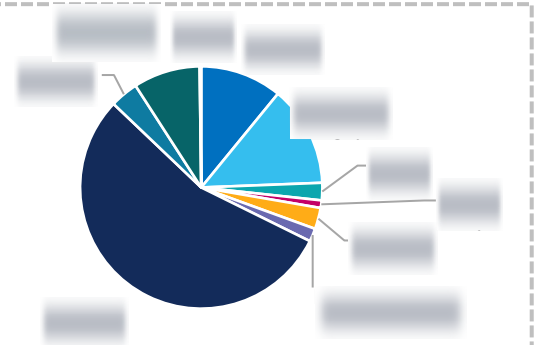
Global capacity additions have slowed significantly in the last few years of the forecast as additional capacity needs to be absorbed by the market.

Operating rates are expected to be reduced over the near term as significant new capacity has been added and demand has increased more slowly.

Capacity by region

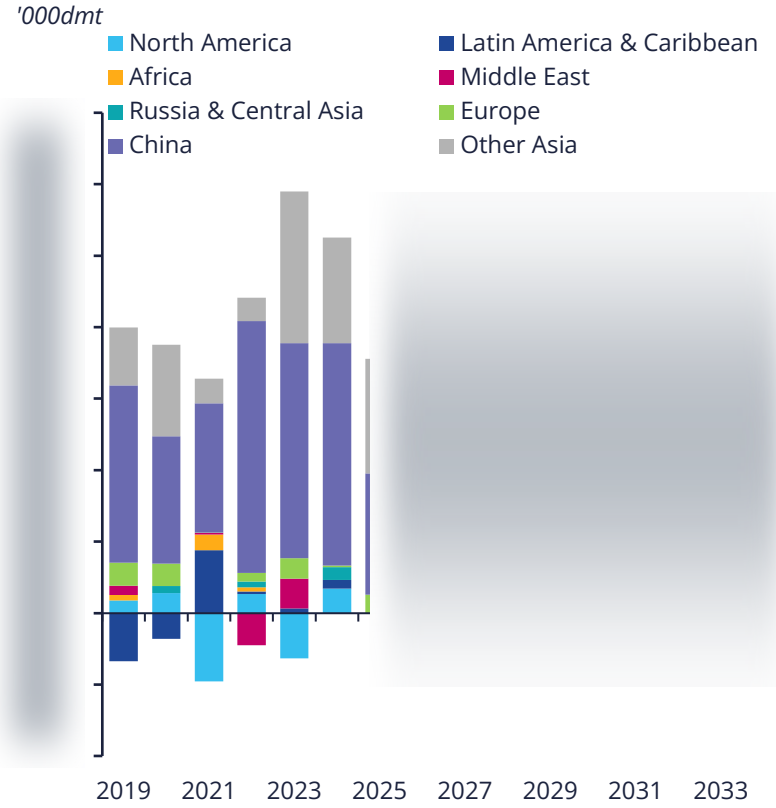


Year 2023
Total capacity [redacted] mn dmt



Year [redacted]
Total capacity [redacted] mn dmt

Capacity year-on-year changes



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Global: Demand

GDP growth forecast to increase from 2025.

Economists expect global GDP growth to increase from 2025. With chlorine being a leading indicator, operating rates have increased in the first few months of 2024, leading to a surplus of caustic soda in the market.

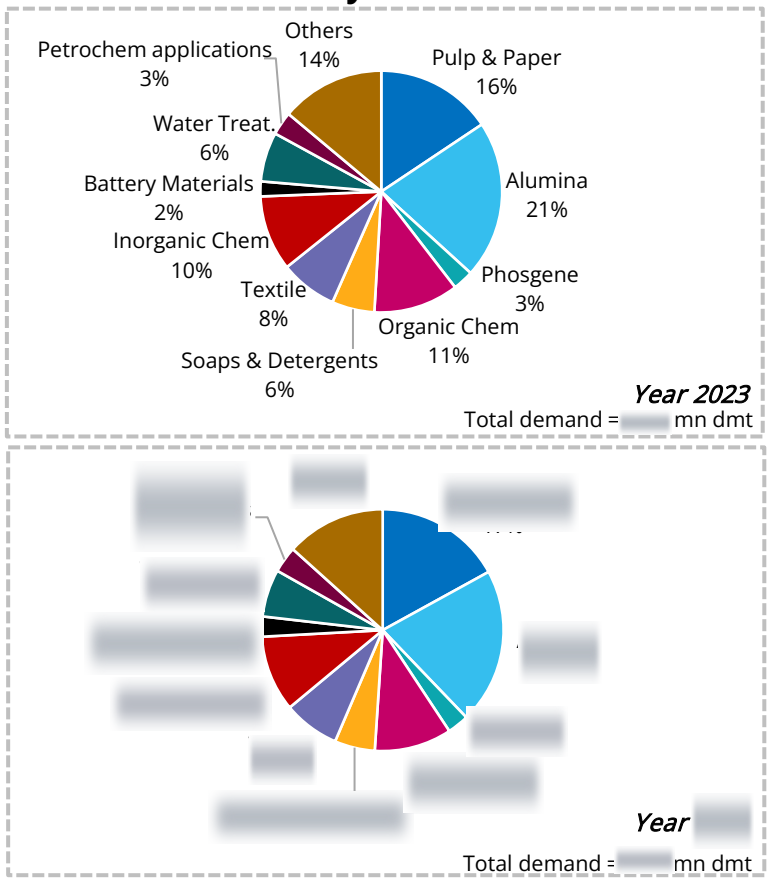
Caustic soda demand is forecast to subsequently recover compared with chlorine, but overcapacity in the market will offset demand.

Global demand for caustic soda is forecast to increase above the GDP rate for the next few years as the industry exits the trough.

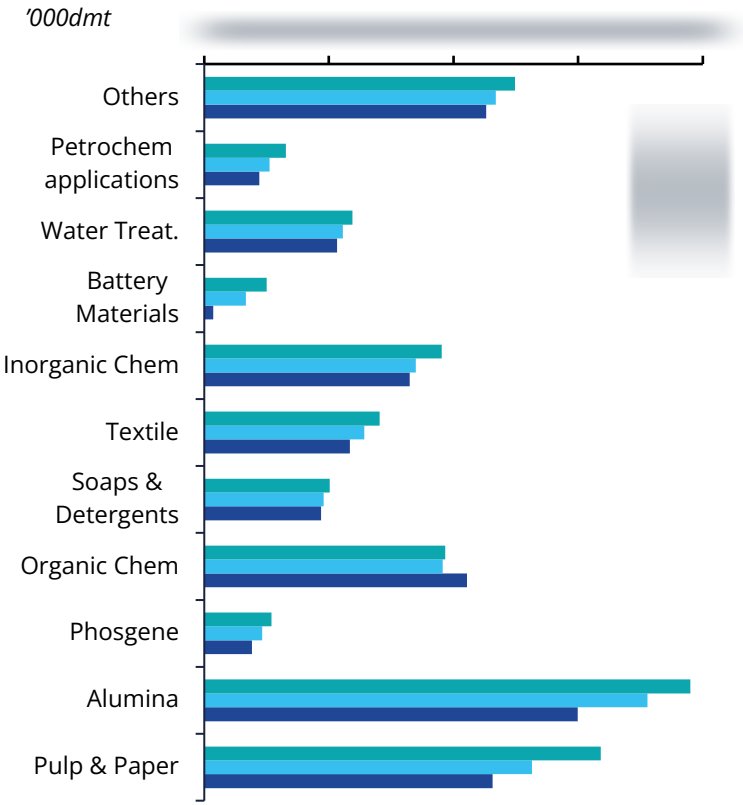
Derivative capacity additions have led to a rise in caustic soda demand in Latin America as well as in south Asia.

The chlor-alkali cycle is expected to shift from caustic soda back to chlorine leading to the need for higher caustic soda consumption rates in [redacted]. Caustic soda demand growth will be likely to lead to the need for additional investments in capacity by [redacted]

Demand by derivative



Demand by derivative



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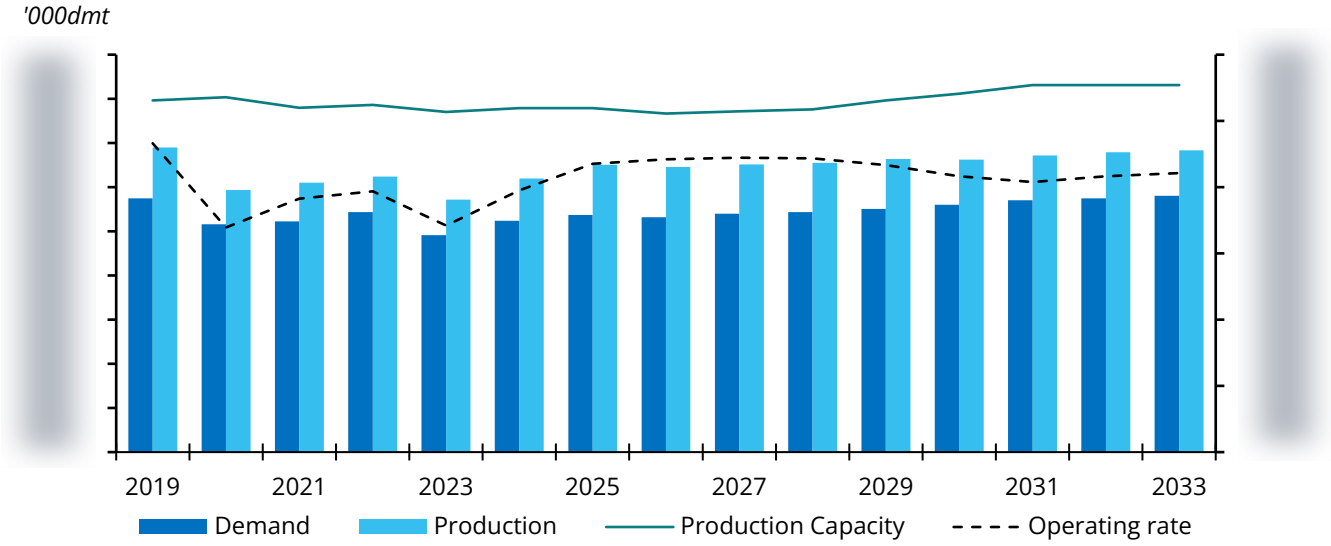
North America: Key Updates

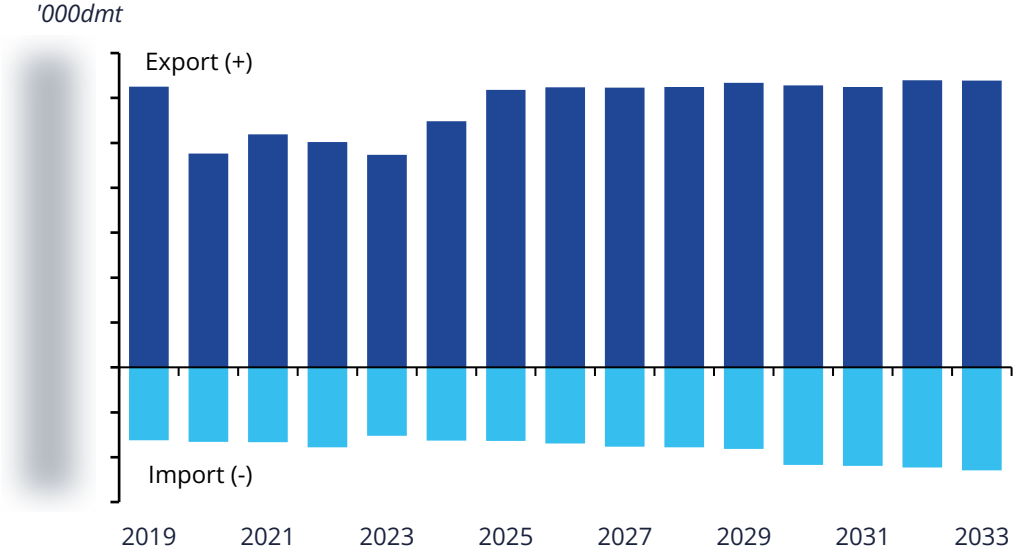
Expansions exceed demand leading to increased exports.

Key Market Changes					
Supply	Capacity increases and associated chlorine derivative demand lead to a significant rise in caustic soda supply in the region.	**Demand**	Derivative demand remains muted in typical end-markets such as pulp and paper and propylene oxide, however battery materials lead to a rate of demand growth.	**Trade**	With the growing disparity between domestic supply and demand, exports from the region will need to increase to keep the market balanced.

North America caustic soda supply and demand



Regional Trade



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North America: Supply

Strong growth in caustic soda supply as industry increases PVC production.

North America is experiencing a calm before new chlor-alkali capacity integrated into PVC and isocyanates begins to influence the market in late 2024 through 2026. This new capacity will add significantly to the surplus volume of caustic soda in North America.

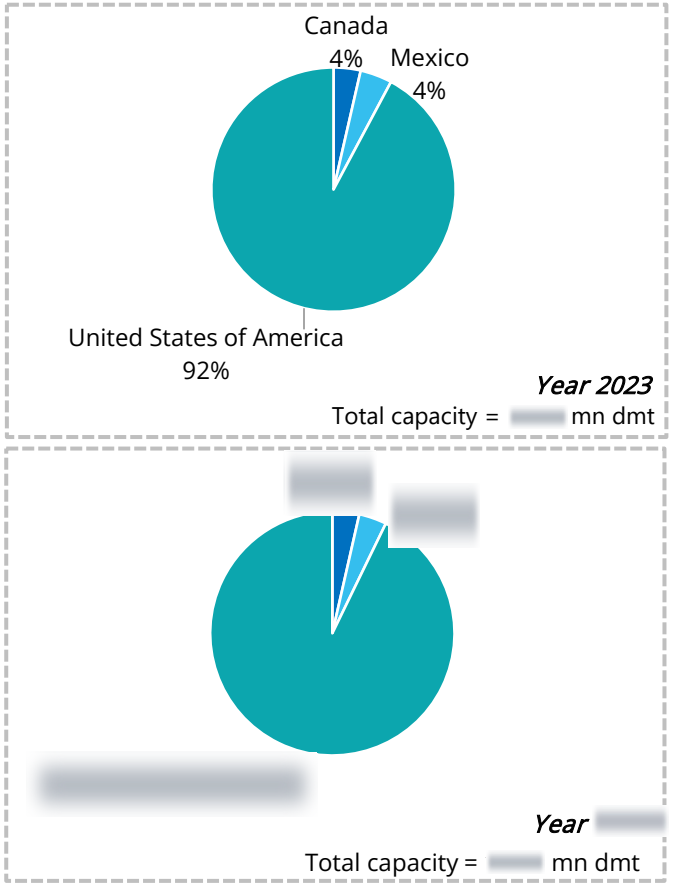
Capacity rationalisation is expected to occur in late 2025 related to chlorohydrin-based propylene oxide production. This derivative closure is ECU balance, which means that it will remove equal amounts of supply and demand resulting in no change to the net supply position of the North American market.

Mercury-based production of caustic soda will cease in North America in 2025. This capacity rationalisation will result in higher asset utilisation rates but not have any impact on the supply of caustic soda as none of the chlorine derivative demand is anticipated to close at the same time.

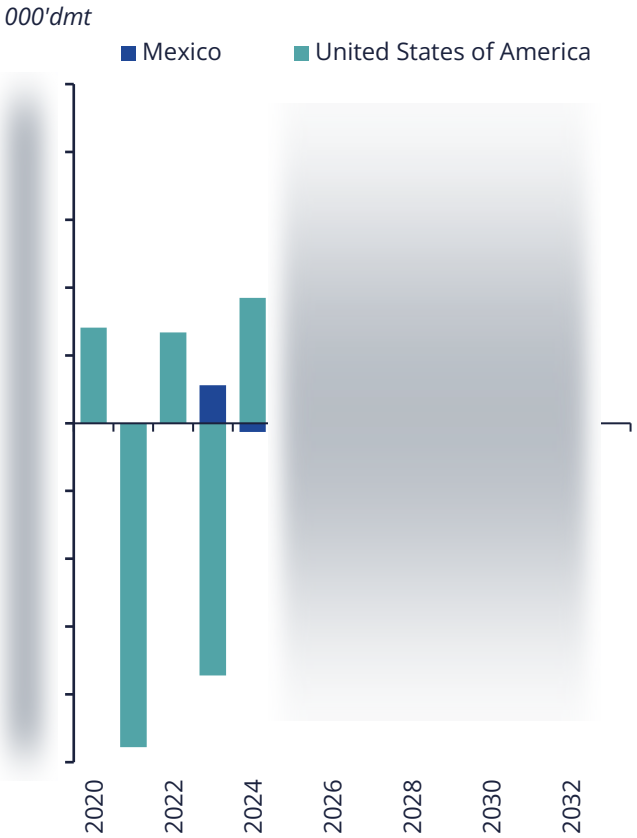
Speculative capacities have been added starting in 2027 to support potential regional inorganic growth and in 2029 to support potential vinyls expansions anticipated at that time.

The EPA is phasing out asbestos-based diaphragm capacity by 2029 unless plants have been identified to be converted to membrane. Those plants have until 2036 to convert to membrane. The industry is expected to have adequate time to make the conversion to non-asbestos-based diaphragms or membranes without disrupting the market.

Capacity by country



Capacity year-on-year changes



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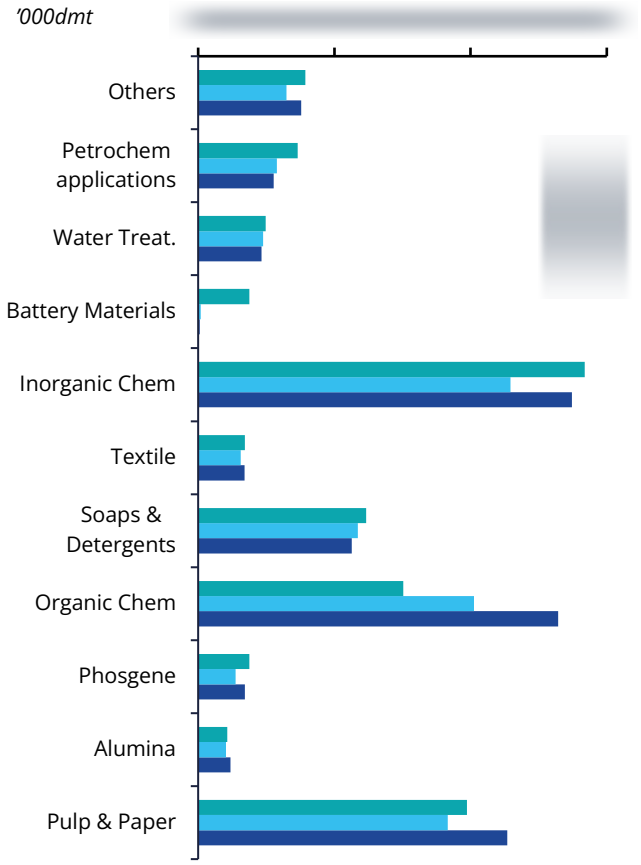
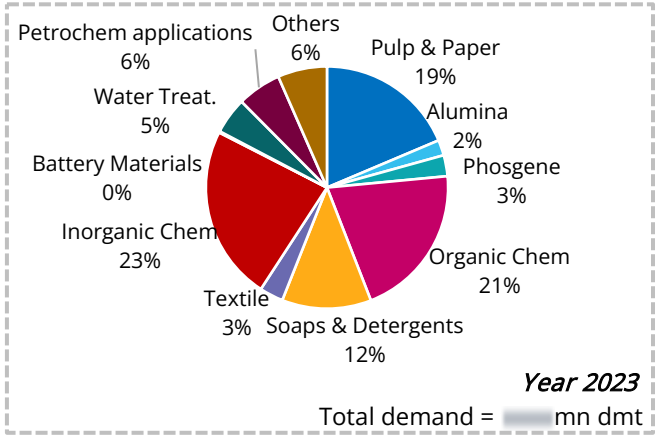
North America: Demand

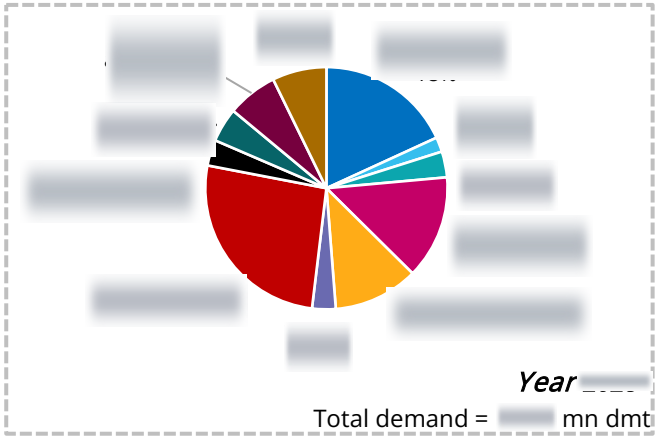
Caustic soda demand rises with the green energy transition.

Demand by derivative



Demand by derivative





Caustic soda demand will be driven by green energy segments such as battery materials and phosgene derivatives.

Caustic soda demand will fall in higher cash cost derivatives such as the chlorohydrin process for propylene oxide production and the pulp and paper sector.

Economists have increased their GDP growth forecasts for North America from the previous estimates, leading to stronger demand in multiple derivatives.

The service sector of the economy appears to be slowing while the manufacturing sector appears to be improving with both sectors converging on more normal growth patterns concerning the overall GDP outlook, resulting in more predictable caustic soda demand patterns.

Inorganic chemical demand growth is a standout in the forecast as some caustic soda derivatives such as sodium hyposulfite are forecast to increase into end-uses including copper processing.

Caustic soda demand is expected to increase in before the permanent closure of some propylene oxide capacity in the latter portion of leading to the only annual decline in caustic soda demand in the forecast period.

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We hope you found this sample report for Argus Caustic Soda Analytics valuable.

The Caustic Soda Analytics service is for anyone engaged in the chlor-alkali market and seeking insight into the fundamentals driving key trends, including global supply, demand growth, exports, operating rates, etc.

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Meet our experts

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George Eisenhauer

Vice-President Chlor-Alkali

George Leads the global chlor-alkali team, He has 30+ years' experience with roles in acquisition and asset management as well as operations control and strategic objectives, prior to his consulting career. Before joining to Argus in 2012, he was director Chlor-Alkali for IHS. George's past experience also includes roles at FMC Technologies, Dow Chemical and Union Carbide. He holds a BSc in Chemical Engineering from University of Texas and an MBA from Rice University.

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Stephanie Koenig

Head of European Chlor-Alkali

Stephanie is Editor for European Chlor alkali market she oversees contents and analytical standards across the European operations, spanning from editorial, to outlooks, analytics and events. She also contributes to single client consulting projects and has over 15 years' experience directly related to the chlor-alkali industry. Before this, she spent time at IHS Chemical, leading the global Bleaching Chemicals Service and contributing to chlor-alkali products. Stephanie has a Master's Degree in Business Administration from the University of Leipzig, Germany.

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Bernard Law

Chlor-Alkali Editor

Bernard Law is Editor and covers the chlor-alkali and vinyl markets in Asia. Bernard has more than 25 years of experience in the chemical industry in Asia, holding various responsibilities in market and competitive analysis, benchmarking, sales, marketing, and business development. He spent 13 years working for specialty and commodity chemicals in the Asia-Pacific region. He generated benchmarking pricing and assessments, including northeast Asia and southeast Asia caustics to alumina indexes. He also contributes to single client consulting projects.

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Anshu Pandey

Business Analyst Chlor-Alkali

Anshu Pandey is lead analyst for Argus' chlor alkali and derivatives services and supports fundamentals and outlook services. Prior to joining Argus, she has worked in research and development on projects associated to hydrogen storage and environmental assessment of fuels. Anshu holds master's degree in Chemical Engineering.

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Dhanish Kalayarasu

Deputy Analyst Manager

Dhanish is a Deputy Analyst Manager in the London Consulting office, mainly focusing on olefins, polyolefins and chlor alkali. His experience includes roles working in power generation, project management, agriculture and analytics. He also spent time at an edible oil refinery in operations and managing projects with high pressure biomass boilers, steam turbines, water treatment, and fuel management. He holds a degree in Chemical Engineering and a MSc in Finance Analytics.

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