CLEAN AIR TASK FORCE

Building Blocks

EU Petrochemicals: Foundations and Pressures

JUNE 2026

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Introduction

The European Union's (EU) chemical industry is one of the hardest-to-abate sectors in the energy transition, simultaneously a major source of industrial emissions and an indispensable input to the technologies needed to decarbonise the broader economy. Despite its strategic importance, the sector has received comparatively little rigorous policy-focused analysis.

This report provides a foundational primer on the EU petrochemical industry: its key molecules, production landscape, site infrastructure, feedstock dependencies, and the strategic and policy context shaping its future. It is designed to support policymakers and other stakeholders with the analytical baseline needed to effectively shape policy affecting the EU chemicals sector.

This is the first report in a CATF series that aims to close the gap in analysis and inform constructive debate, regulatory engagement, and coalition-building across the EU and beyond. Subsequent reports will examine additional chemical value chains, assess possible decarbonisation pathways, and develop policy recommendations.

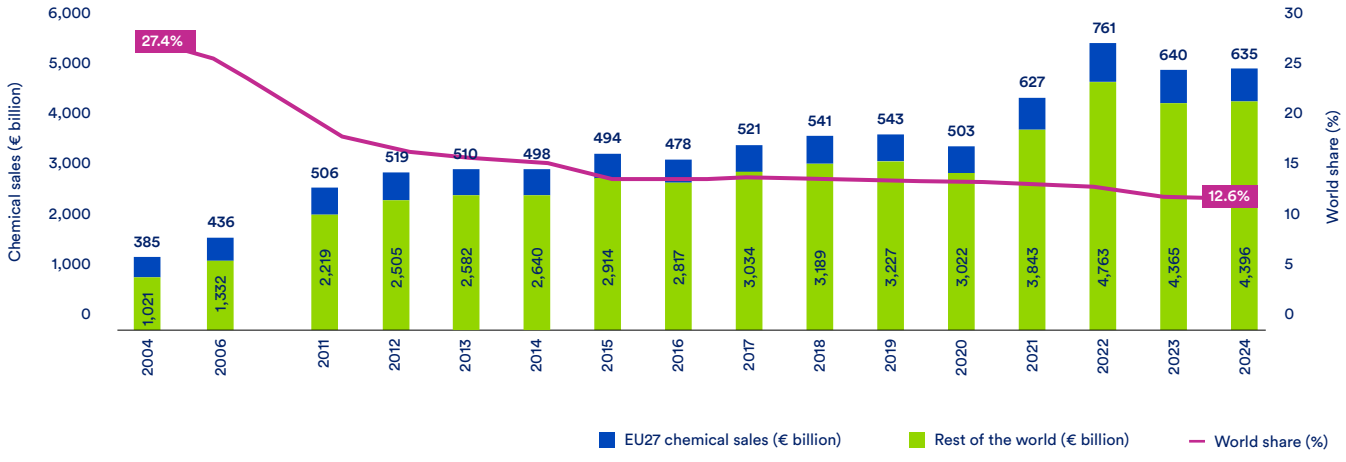
Europe's chemical industry built its dominance over a century and has been losing it for the past decade

The European chemical industry was built over the course of a century. It grew from Germany's pioneering chemistry in the early 1900s through the post-war expansion of the 1950s and 60s, when cheap naphtha and growing domestic demand made Europe the dominant force in global chemicals. At its peak, Europe accounted for more than a quarter of global chemical sales.

That position has been progressively eroded. Understanding why requires appreciating how the industry is physically structured. EU production is not a collection of independent plants; it is an ecosystem. Approximately 150 chemical parks across the bloc operate on a shared-infrastructure model, where multiple companies co-locate around anchor producers, sharing pipelines, utilities and logistics. The Antwerp-Rotterdam-Rhine-Ruhr corridor, the densest concentration of chemical production in the world, functions as a single integrated industrial system crossing national borders. This integration has been Europe's greatest competitive strength and now might be its greatest vulnerability.

On top of that, the U.S. shale gas revolution, the Chinese drive to self-sufficiency, global ethylene production overcapacity and most acutely the energy price shock in 2022 have combined to produce the deepest structural crisis the industry has faced.

EU27 share of global chemical market



Source: Cefic Chemdata International

Europe lost leadership of the global petrochemical industry it originally pioneered

Early 1900s

Germany pioneers European chemical industry

1950s

Olefin production begins; surplus naphtha from refineries as feedstock

1960s

Naphtha surplus ends; gas oil and imports supplement supply

1970s

North Sea natural gas liquids become available; feedstock flexibility grows

Pre-2000

North America & Western Europe account for ~50% of global capacity

2008-2012

Financial crisis & Euro debt crisis trigger consolidation wave

2014

Oil price drop improves naphtha economics temporarily

2020 - Present

- COVID-19 reduces demand
- Russia Ukraine war and energy repricing
- 37 Mt or ~9% of the European chemical production capacity lost in 2022-2025
- Investment drought - investment CAPEX decreased from €7.6 bn in 2022 to €1.5 bn in 2025
- Pivot from heavy feedstock to LPGs and imported ethane with loss of refining feedstock

Fundamentals

Overview of chemicals, petrochemicals, and feedstocks

A €635 billion industry that underpins virtually every sector of the modern economy

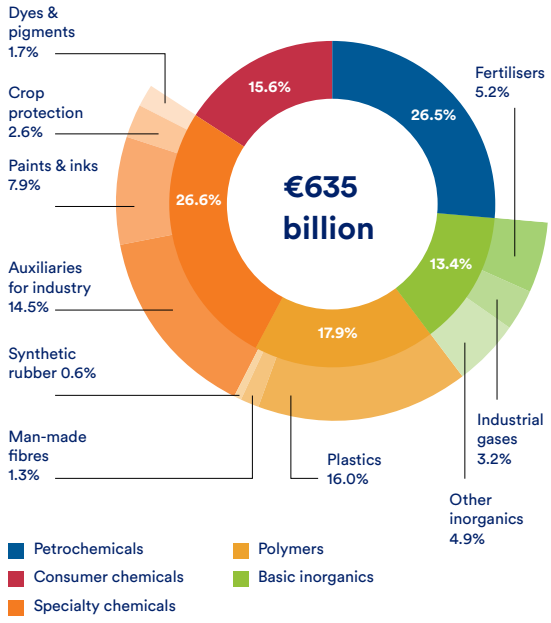
The EU chemical industry is one of the largest manufacturing sectors in the bloc with a turnover of €635 billion and 1.2 million people employed. Around 31,000 companies make up the sector, of which 97% are small and medium-sized enterprises (SMEs) that are deeply embedded in local economies across the EU.

The industry is organised across five categories of increasing complexity and value add: from **bulk inorganics** like ammonia and sulphuric acid, through **primary petrochemicals** such as ethylene and propylene, into **polymers and intermediates**, and up to **specialty** and **consumer chemicals**. These products reach consumers in everyday items ranging from paints, adhesives, and textiles to shampoos and pharmaceuticals. Primary petrochemicals sit at the centre of the chemical value chain's web. When that centre is disturbed, the reverberations are felt across every downstream category.

That dependency is now a source of acute vulnerability, driven by a convergence of pressures: chronically high energy costs following the 2022 energy crisis, tightening environmental regulation, sustained weakness in domestic demand, and intensifying competition from lower-cost producers in Asia and North America. The EU's market share in global chemical sales has declined by 8 percentage points over the past 15 years, falling from 21% to 13% between 2009 and 2024. This decline contrasts with the dramatic rise of China; once a minor player in global chemicals, China has undergone a sustained, state-backed industrial build-out over the past two decades and now accounts for 46% of global sales, a dominant position that Europe itself once held. Chemicals capacity utilisation across the EU stands at 74%, having consistently remained below the long-term average since mid-2022, reflects ongoing weak demand and declining business confidence.

This report focuses on the centre of the web, primary petrochemicals, because it is here that the structural pressures, high energy costs, feedstock disadvantages, and competitive displacement by lower-cost producers, are most acute. It is also where the supply risks are most consequential, and the policy decisions are most urgent.

EU27 chemical sales, 2024



Source: Cefic Chemdata International

The chemicals industry comprises of five broad categories

Heavily tied to agricultural fertilizers, basic glass manufacturing, and heavy industrial processing

Serve as the foundational organic nodes from which all subsequent complex plastics and elastomers are spun

The direct building blocks for synthetic fibers, automotive engineering plastics, structural foams, packaging materials, and resilient rubbers

Performance-oriented formulations tailored for specific industrial functions

Highly refined, end-user facing chemical mixtures ready for retail distribution

Inorganics	Primary Petrochemicals / Organics[2]	Polymers & Intermediates	Specialty Chemicals	Consumer Chemicals
Ammonia[1]	Ethylene	Polyethylene, EDC, VCM, MEG, EB, EO	Paints, Varnish & Coatings	Personal Care
Urea	Propylene	Polypropylene, ACN, Cumene, Phenol	Pesticides & Agrochemicals	Household
Primary NPK	Butadiene	Styrene Butadiene Rubber (SBR), NBR, ABS resins	Construction Chemicals	Adhesives & Sealants
Phosphate	Benzene, Toluene, Xylenes (BTX)	MDI, TDI, cyclohexane, adipic acid, Nylon 6 & 6.6	Water-Soluble Polymers	Fragrances & Flavours
Potassium	Methanol	Formaldehyde, acetic acid	Dyes and Pigments	Cleaning Products
Industrial Gases		PET	Surfactants	Cosmetic Ingredients
Soda Ash		Silicones		
Sulfuric Acid				
Chlor Alkali				

1. Ammonia is not a petrochemical as it contains no carbon. However, it is often analysed alongside primary petrochemicals because it shares the same fossil feedstock base and is produced at comparable scale via similar thermochemical processes.
2. Organics in this context refers to the synthetic chemicals specifically derived from fossil fuels.

Primary petrochemicals comprise of three classes of molecules

Petrochemicals are derived from petroleum, natural gas and coal feedstocks through steam cracking, catalytic reforming, or gasification.[1] They serve as the essential intermediates for manufacturing virtually every consumer and industrial product in modern life.

Olefins

Ethylene, Propylene, Butadiene – unsaturated hydrocarbons used to make plastics and synthetic rubbers

The primary products of steam cracking. **When cracker capacity closes, all three molecules are lost simultaneously, with no easy substitution route** particularly for butadiene.

Aromatics

Benzene, Toluene, Xylenes – cyclic compounds for polymers, solvents, and fibres

Oil refining provides substantial volumes of aromatics. **Refinery closures represent a second, separate threat to EU aromatic supply** that compounds the cracker closure wave.

Methanol

Alcohol derived from natural gas or coal – precursor to formaldehyde, fuels, and olefins

Domestic production covers less than 15% of consumption highlighting acute EU import dependency. **Only two fossil-based production facilities remain in the EU**, both reliant on refinery-derived feedstocks.

1. A small but growing volume of petrochemicals are being produced from bio-based feedstocks (including bio-naphtha derived from waste oils) and from chemically recycled plastics via pyrolysis. Both routes face significant constraints on feedstock availability, quality and cost that limit their near-term scale. This report focuses on conventional fossil-based production pathways, which account for the overwhelming majority of current EU output.

The global chemical industry is responsible for 14% of the total primary demand for oil[1] and 8% of the demand for natural gas[2]

Crude Oil

Refined into off gases, liquified petroleum gas (LPG) and naphtha for steam crackers; primary source of aromatics via catalytic reforming

Natural Gas

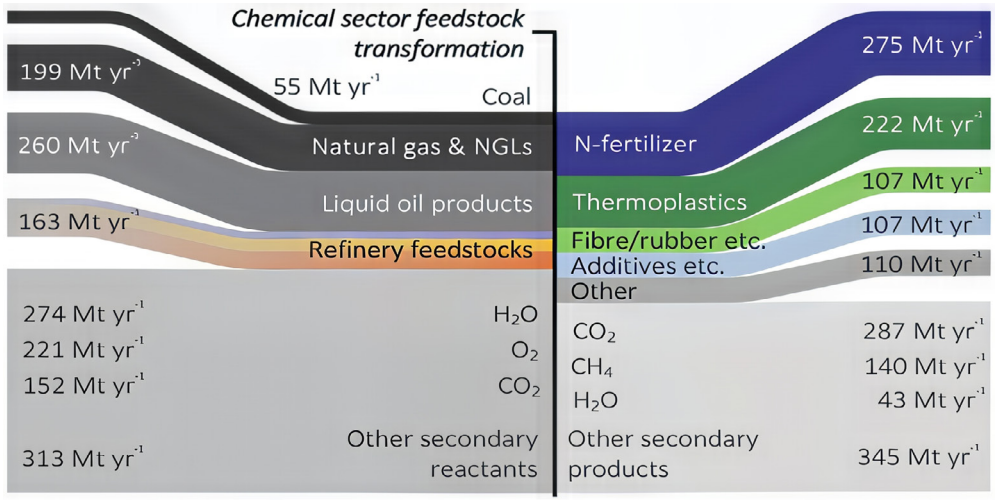
Primary source of ethane steam crackers, methane (reforming into methanol and ammonia), and natural gas liquids (NGL) for lighter cracking

Coal

Gasification to syngas for methanol, ammonia, and olefins; predominantly used in China

Share of fossil feedstock used for chemical production

Global material flow in the petrochemical industry from fossil feedstock to chemical products in 2013



Source: Levi and Cullen (2018)

1. Based on 13 million barrels per day of oil and 300billion cubic meters of natural gas. While the figures are slightly outdated, they remain relevant as almost all chemical production still relies of fossil feedstock.
2. The International Energy Agency (IEA) estimates are based on their 2018 report which vary from the figures that Levi Cullen use in their 2018 paper. For instance, the IEA reports 80MT/y of coal consumption for petrochemical production compared to 55MT/y for Levi & Cullen. One can also infer that 382 MT/y of coal is consumed in China alone for petrochemical production from the IEA Coal 2025 report [734MT/y of met coal subtracted from the 1116 MT/y for non-power steam coal]

Overview of the building blocks

EU production, consumption, and applications

Primary petrochemicals are foundational to EU industry

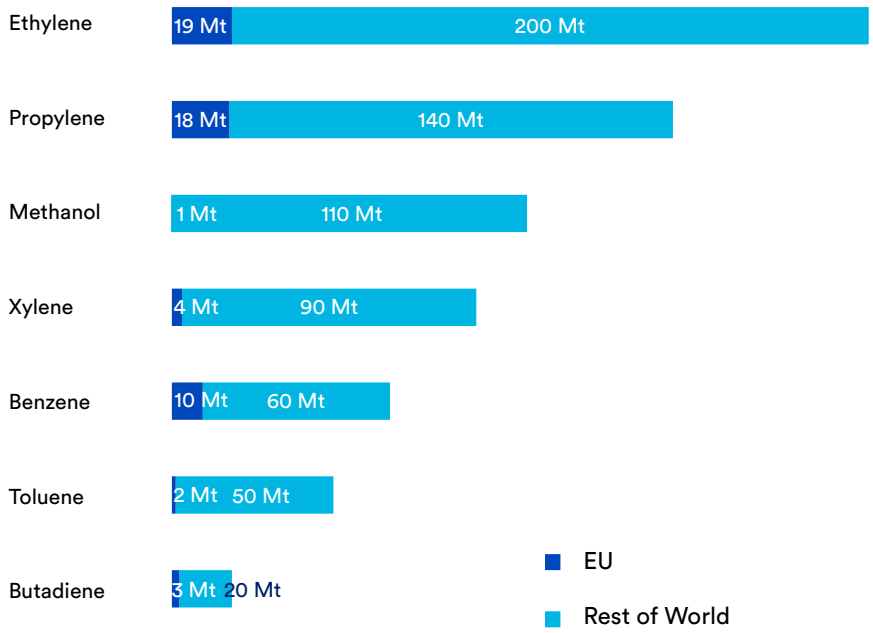
Petrochemicals are not end products. They are the invisible raw materials that make end products possible from the plastic in a car bumper, the foam in furniture, the packaging around a medicine, and the synthetic rubber in a tire.

This section profiles the five most strategically important primary molecules in the EU chemicals sector: ethylene, propylene, butadiene, benzene and methanol. These primary molecules, sometimes called building blocks, are produced in substantial quantities from crude oil, natural gas, coal as well as from biomass in much smaller quantities. Everything downstream depends on an uninterrupted supply of these molecules at competitive prices. For each, we examine how much the EU produces, how much it consumes, who produces it, and what industries depend on it.

Why this matters for policy

The EU is increasingly a net importer of several of these molecules, and the domestic facilities that produce them are closing faster than new capacity is being built. Understanding which critical molecules are most exposed and what the downstream consequences of supply disruption would be, is the analytical foundation for any effective policy in this space.

The EU accounts for less than 10% of the global primary petrochemical production capacity



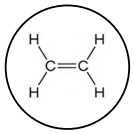
Global and EU production capacity of primary petrochemicals in million tonnes per year

Source: Petrochemicals Europe, BNEF, CATF analysis

Ethylene: The industry benchmark

16 Mt
EU
Production

3 Mt
EU Spare
Production Capacity



Top Producing Countries

Top Producing Companies

INEOS · BOREALIS · DOW · TotalEnergies

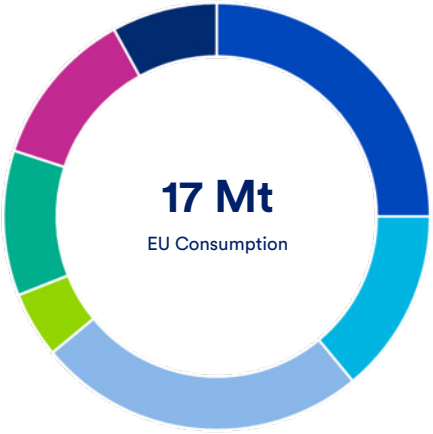
Production

Produced almost exclusively via energy-intensive naphtha or ethane steam cracking, making it a primary indicator of feedstock costs, cracker utilisation and regional competitiveness

Why ethylene matters

- Largest-volume petrochemical produced globally and the benchmark molecule for petrochemical industry health
- Foundational building block for an enormous range of polymers, chemicals, and intermediates
- Underpins the packaging, construction, transportation, textiles and, healthcare sectors

- **LDPE:** Plastic bags, bottles, and film
- **LLDPE:** Plastic bags, food packaging, cable insulation
- **HDPE:** Pipes, rigid containers
- **EB:** Intermediate input for packaging (PS), tires (SBR)
- **EO:** Intermediate input for PET bottles, antifreeze (EG), detergents
- **EDC:** Intermediate input for pipes, flooring, and cable insulation (PVC)



- **Others:** Others includes ethanol, acetaldehyde, EPDM, EVA, VAM and other derivatives

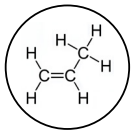
Source: Petrochemicals Europe, CATF Analysis

LDPE: Low-density polyethylene, LLDPE: Linear low-density polyethylene, HDPE: High-density polyethylene, EB: Ethylbenzene, EO: Ethylene Oxide, EDC: Ethylene dichloride, EPDM: Ethylene Propylene Diene Monomer, EVA: Ethyl Vinyl Acetate, VAM: Vinyl Acetate Monomer
Production data for 2025 were obtained from Petrochemicals Europe.

Propylene: Second largest olefin

12 Mt
EU
Production

6 Mt
EU Spare
Production Capacity



Top Producing Countries

Top Producing Companies

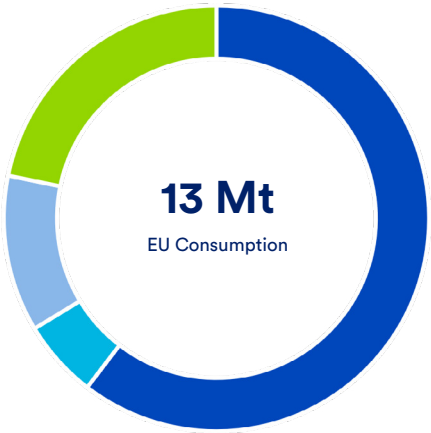
Production

Produced via three distinct routes: 1) steam cracking, 2) refinery fluid catalytic cracking (FCC) and on-purpose propane dehydrogenation (PDH) making its supply picture more complex than ethylene.

Why propylene matters

- Second largest-volume petrochemical produced globally and the olefin with broadest range of derivatives
- Underpins production of packaging, automotive components, and construction materials

- **PP:** Packaging, furniture, appliances, automotive, textiles
- **Cumene:** Intermediate input for polycarbonate plastics, epoxy resins (BPA), and industrial solvents (acetone)
- **PO:** Intermediate input for foams and elastomers (polyurethanes), antifreeze (PG)
- **Others:** Others includes IPA, ACN, 2EH, OXO alcohols



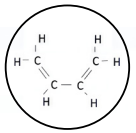
Source: Petrochemicals Europe, CATF Analysis

LP: Polypropylene, PO: Propylene Oxide, IPA: Isopropyl Alcohol, ACN: Acrylonitrile, EH: 2-ethyl hexanol, OXO: oxo alcohols, PG: Propylene Glycol, BPA: Bisphenol A
Production data for 2025 were obtained from Petrochemicals Europe.

Butadiene: The rubber molecule

1.7 Mt
EU
Production

1.3 Mt
EU Spare
Production Capacity



Top Producing Countries

Top Producing Companies

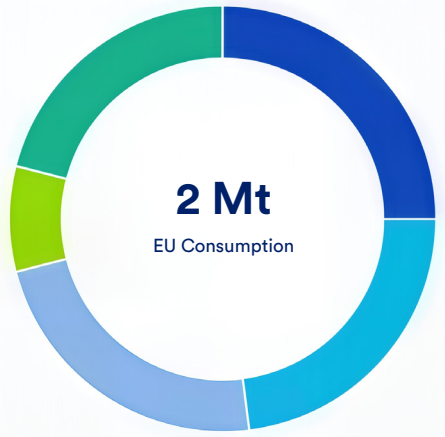
Production

Under structural pressure in Europe as steam cracker closures and the shift toward ethane and lighter feedstocks reduce C4 co-product output, with supply remaining entirely captive to naphtha steam cracker operating rates and no scalable on-purpose production alternative available

Why butadiene matters

- Dominant feedstock for synthetic rubber, elastomers, and a wide range of polymer copolymers
- Underpins automotive tires, construction materials, and consumer goods

- **PBR:** Raw material for tires, intermediate in the production of ABS resin used in electronics and car parts
- **SBR:** Primarily used in tires and tire products, also used in adhesives, sealants, coatings for wires, and cables
- **Adiponitrile:** Intermediate chemical ultimately used in the production of Nylon 6,6 used in engineered plastics, furniture, carpets, clothing
- **SB latex:** Foam rubber, adhesives, sealants, and paper coatings



- **Others:** Others includes thermoplastic elastomer, ABS resin, nitrile rubber, CR, MBS resins, styrenic block copolymers, nitrile barrier resins, K-Resin©, and specialty polybutadiene polymers

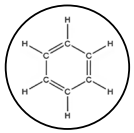
Source: American Chemistry Council

PBR: Polybutadiene Rubber, SBR: Styrene Butadiene Rubber, SB latex: Styrene Butadiene Latex,
ABS: Acrylonitrile-butadiene-styrene, CR: Polychloroprene (neoprene) rubber, MBS: methyl methacrylate-butadiene-styrene
Production data for 2025 were obtained from Petrochemicals Europe.

Benzene: Cornerstone of the aromatic value chain

5.6 Mt
EU
Production

4.4 Mt
EU Spare
Production Capacity



Top Producing Countries

Top Producing Companies

Shell, Dow, moeve, ExxonMobil

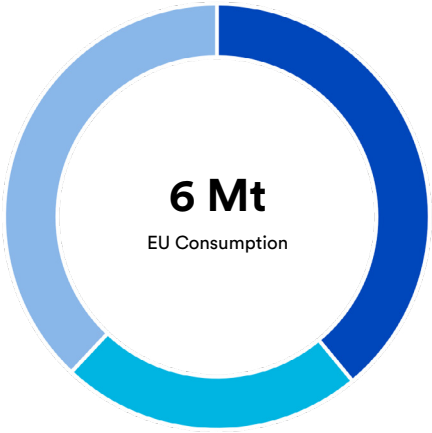
Production

Produced primarily as a by-product of naphtha steam cracking and catalytic reforming of oil refinery streams. Currently under significant pressure as EU refinery closures and the industry-wide shift to ethane cracking structurally reduce regional co-production.

Why benzene matters

- Highest-produced aromatic hydrocarbon globally
- Foundational building block for plastics, synthetic fibers and rubber
- Underpins automotive, construction, packaging and electronics industries in addition to the production of essential pharmaceuticals, and agrochemicals

- **EB:** Intermediate input for packaging (PS), tires (SBR)
- **Cumene:** Intermediate input for polycarbonate plastics, epoxy resins (BPA), and industrial solvents (acetone)
- **Others:** Others includes Alkylbenzene, Nitrobenzene, and Cyclohexane



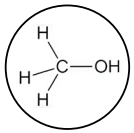
Source: Petrochemicals Europe, CATF Analysis

EB: Ethylbenzene, PS: Polystyrene, SBR: Styrene Butadiene Rubber
Production data for 2024 were obtained from Petrochemicals Europe.

Methanol: The unsung building block behind everyday life

0.8 Mt
EU
Production

0.3 Mt
EU Spare
Production Capacity



Top Producing Countries

Top Producing Companies

BASF We create chemistry

TotalEnergies

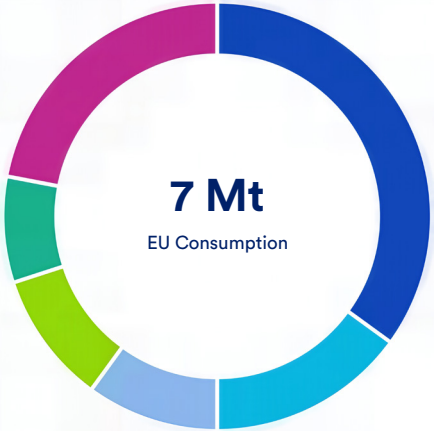
Production

Produced in the EU via the partial oxidation (POx) residue from crude oil distillation residue and from natural gas via steam reforming. EU production increasingly at risk (only 2 fossil-based methanol plants operational as of 2026) as high natural gas prices erode the competitiveness of fossil methanol manufacturing, driving structural import dependency.

Why methanol matters

- Underpins resins, adhesives, paints, fuels, and plastics
- Indispensable to the construction, automotive, packaging, textiles, and electronics sectors
- Viable candidate as a low-carbon marine fuel potentially leading to increased future demand

- **Formaldehyde:** Resins, adhesives, wood panels, and construction materials
- **MTBE:** Gasoline octane booster and oxygenate additive
- **Acetic Acid:** Paints, adhesives, synthetic fibers, and PET packaging
- **Biodiesel (FAME):** Renewable diesel blend stock via vegetable oil transesterification
- **Solvents:** Industrial cleaning, coatings, antifreeze, and direct process solvent
- **Others:** Includes DME, methylamines, MMA, and agrochemicals



Source: Methanol Institute, BNEF, CATF Analysis

MTBE: Methyl tert-butyl ether, PET: Polyethylene terephthalate, FAME: Fatty Acid Methyl Ester, DME: Dimethyl Ether, MMA: Methyl methacrylate
Production data for 2024 were obtained from Eurostat

EU production sites

The petrochemical industry’s EU production landscape

EU petrochemical production is concentrated, ageing, and shrinking

EU petrochemical production is not spread evenly across the bloc. It is concentrated in a small number of large, heavily integrated industrial clusters. Above all the Antwerp-Rotterdam-Rhine-Ruhr corridor in northwest Europe is the most prominent, where refineries, crackers, chemical parks and pipelines form a single interconnected system. This integration is a source of efficiency, but also of fragility: when one anchor facility closes, it can undermine the viability of the entire cluster around it. This section covers the production landscape for individual molecules including the companies and countries that dominate in addition to the various production pathways:

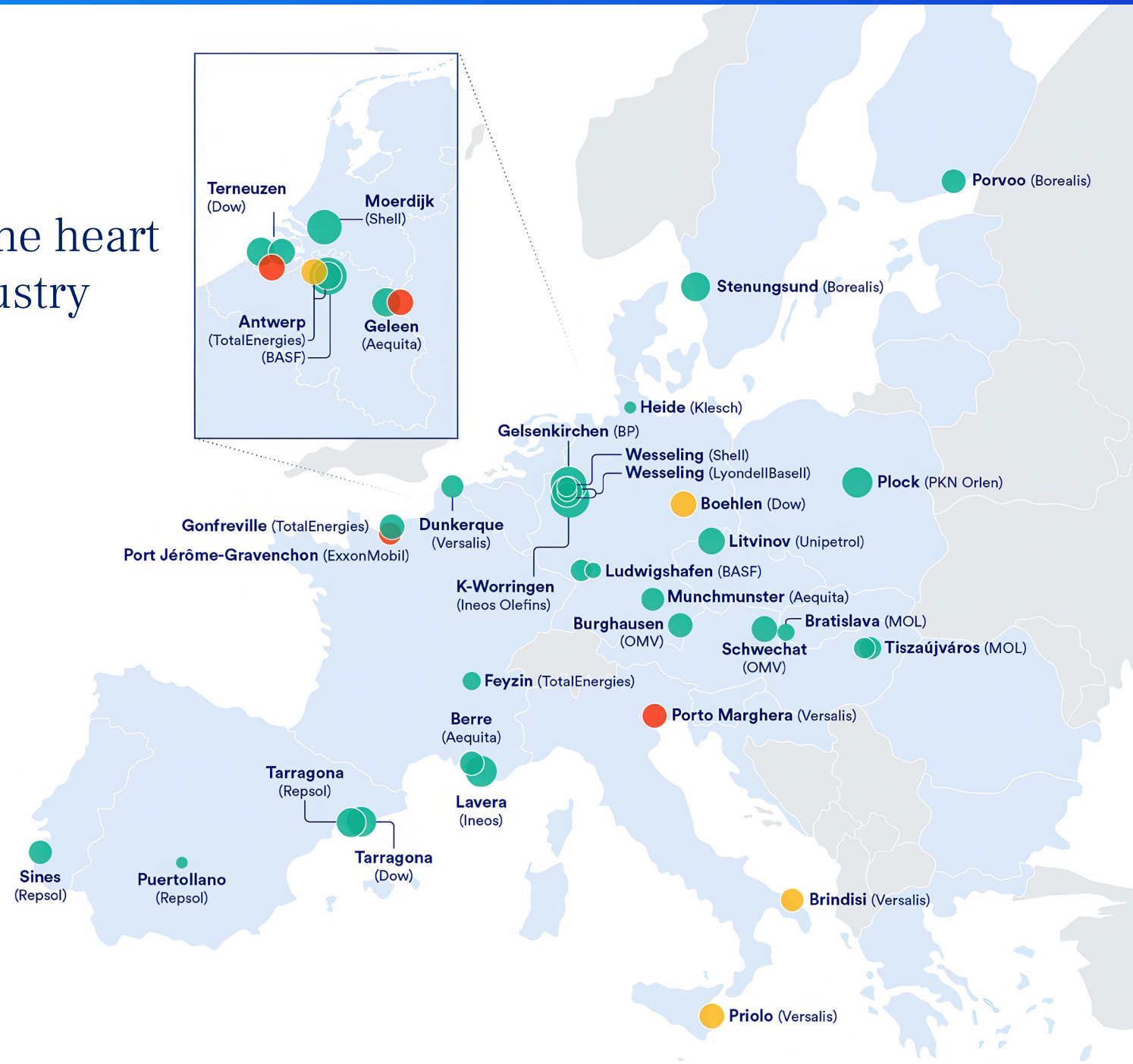
- The steam crackers, the central units that convert crude oil feedstocks (LPG and naphtha) and natural gas feedstocks (ethane) into primary petrochemicals. These are the facilities most at risk of closure.
- The refineries, which supply both feedstock and petrochemicals (propylene and aromatics), and whose gradual closure is removing a second source of supply.

Why this matters for policy

Production spans some 150 chemical parks across the EU, but output is weighted heavily toward a smaller number of large, deeply integrated clusters each with a unique industrial ecosystem. Policy measures would need to be designed to reflect this diversity. Effective intervention requires a geographically differentiated understanding of where production sits, what it produces, and what its specific vulnerabilities are. Beyond economics, these clusters underpin regional labour markets whose decline carries consequences for livelihoods and political stability. Policy responses therefore need to engage simultaneously with infrastructure viability, geographic spread, product diversity, and regional social resilience.

Steam crackers sit at the heart of the EU chemical industry

- Steam crackers produce a wide range of basic chemicals including ethylene, propylene, butadiene, and aromatics (**BTX**) that underpin various downstream chemicals and industries.
- The EU has **36 operating steam crackers**. Just over half of the EU's ethylene production uses naphtha, a light distillate refining product used in gasoline production, as feedstock and the balance is provided by LPG and ethane.
- EU annual emissions from steam cracking operations are estimated at 25-30 million tonnes.



Source: Petrochemicals Europe, CATF Analysis

Steam cracker capacity is rapidly shrinking

As of 2025, the EU boasts an ethylene **production capacity of 19MT/y** from **36 operating steam crackers**.

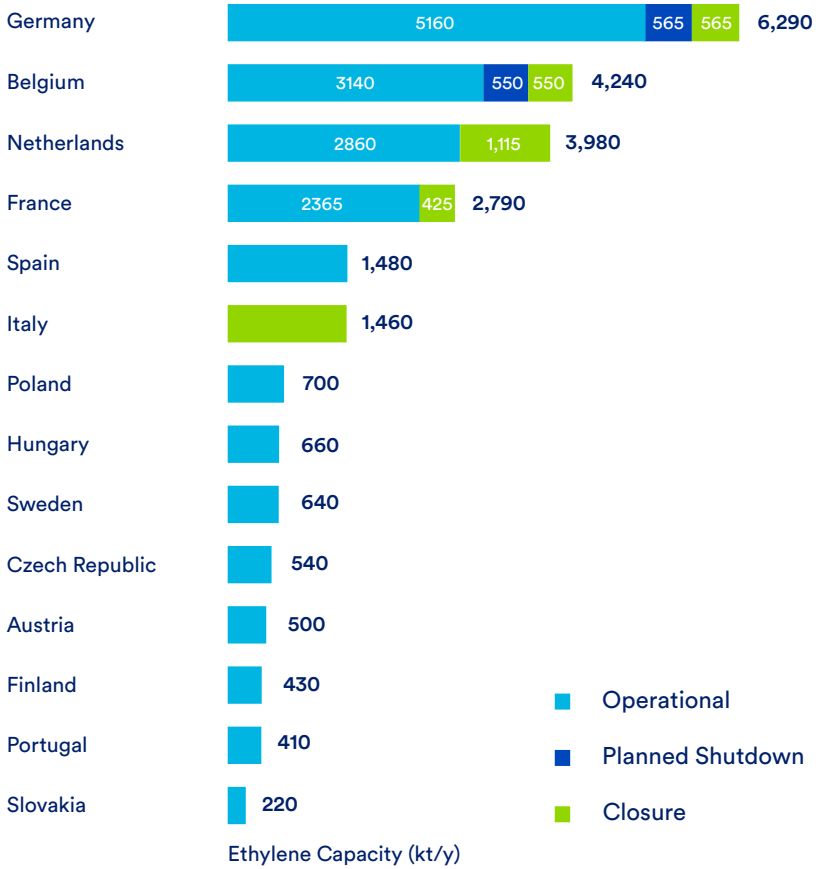
1.1Mt/y of capacity across Belgium (TotalEnergies) and Germany (Dow) are expected to be shutdown by 2027.

3.0Mt/y of capacity across Italy (Versalis), France (ExxonMobil), and Netherlands (Dow & SABIC) have been shutdown or mothballed since 2022.

1.5Mt/y of capacity is expected to be added in Belgium (Ineos) by 2026.

With the closure of Brindisi and Priolo, Italy will have no domestic ethylene production. As such, its downstream polymer and chemicals industry will become dependent on imports.

Steam crackers operate at 70-75% utilisation due to weak margins, meaning effective supply is lower than the blue bars suggest.



Source: Petrochemicals Europe, CATF Analysis

Europe has the **oldest cracker fleet** in the world

Design & Feedstock Obsolescence: European crackers were optimized for naphtha when regional energy was competitive. Aging designs and shifted cost assumptions now make these assets structurally disadvantaged.

Scale Inefficiency: Modern world-scale crackers (1-2 Mt/y) dwarf the European average of 550 kt/y. This 1970s-era scale cannot compete with newer global assets, regardless of maintenance quality.

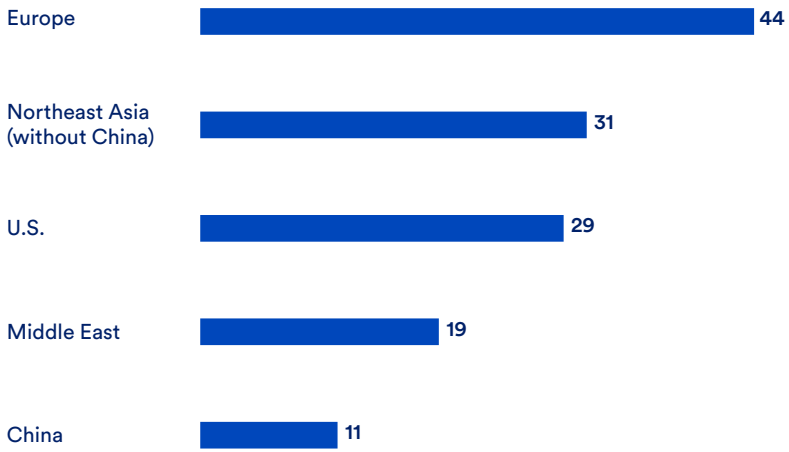
Fixed Economic Constraints: While upgrades improve furnace efficiency, core drivers like scale, location, and co-product slates are locked in at the original design and cannot be fundamentally altered.

The Closure Wave: Assets built in the 1970s are reaching the end of their 50-year technical life. The current consolidation is a deferred structural reckoning rather than a temporary market dip.

The Ethane Exception: Projects like INEOS Project ONE represent a shift toward ethane cracking, but their viability relies entirely on sustained access to low-cost U.S. shale imports (because Europe has no domestic ethane supply at scale).

Carbon Price: Older, energy-intensive assets face significant exposure to the EU ETS. Higher carbon costs widen the gap with non-EU competitors, accelerating the threshold for permanent closure.

Average age of crackers by region

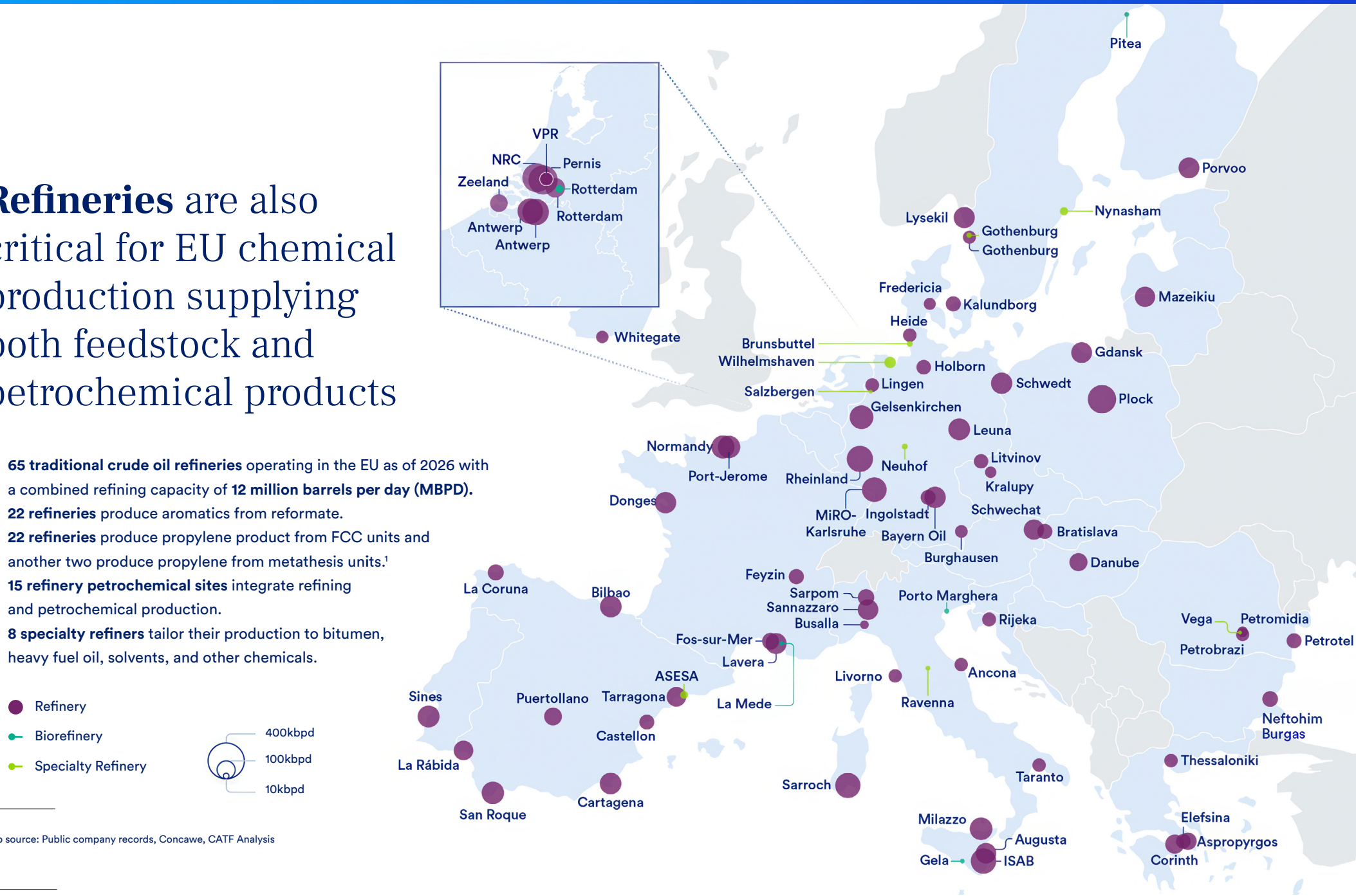


Source: ICIS Supply & Demand Database

Methodology: Regional values have been calculated with a weighted average formula that takes into account the age of each plant and gives it a weight based on its production capacity

Refineries are also critical for EU chemical production supplying both feedstock and petrochemical products

- **65 traditional crude oil refineries** operating in the EU as of 2026 with a combined refining capacity of **12 million barrels per day (MBPD).**
- **22 refineries** produce aromatics from reformate.
- **22 refineries** produce propylene product from FCC units and another two produce propylene from metathesis units.[1]
- **15 refinery petrochemical sites** integrate refining and petrochemical production.
- **8 specialty refiners** tailor their production to bitumen, heavy fuel oil, solvents, and other chemicals.

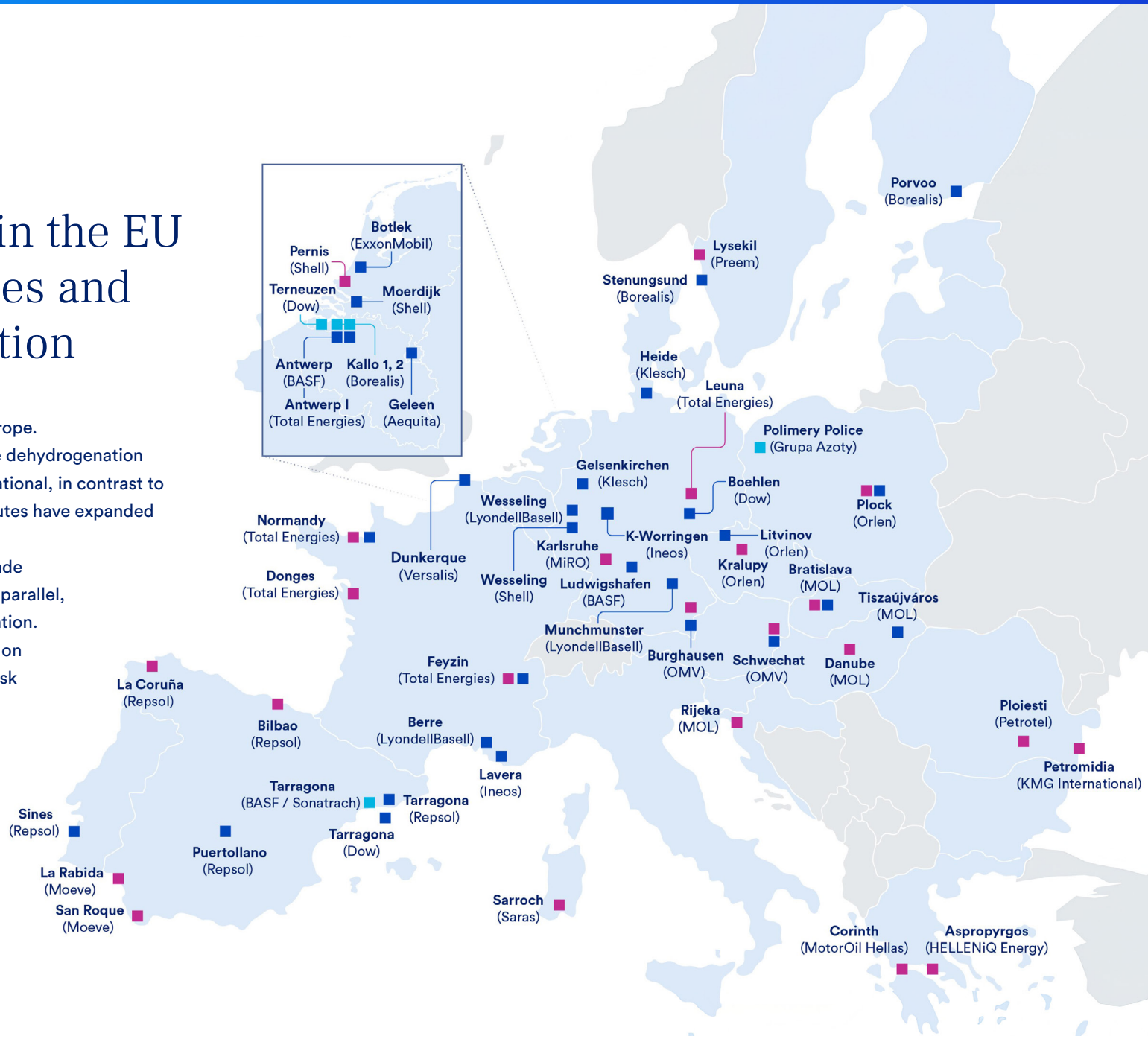


Map source: Public company records, Concawe, CATF Analysis

1. Orlen's Plock and OMV's Burghausen refineries

A third of **propylene** in the EU is supplied by refineries and propane dehydrogenation

- Production is heavily concentrated in northwest Europe.
- On-purpose propylene production through propane dehydrogenation remains rare in the EU, with only five facilities operational, in contrast to the U.S. and China where on-purpose propylene routes have expanded rapidly.
- As European refining is under pressure, refinery-grade propylene, a by-product of FCC units, will shrink in parallel, tightening supply without any direct policy intervention.
- Romania, Greece, Italy, and Croatia rely exclusively on refinery sources exposing these regions to supply risk as the refining landscape contracts.
- The geographic spread of production across member states contrasts sharply with the concentration of demand in northwest European polymer hubs, creating structural logistical dependencies.



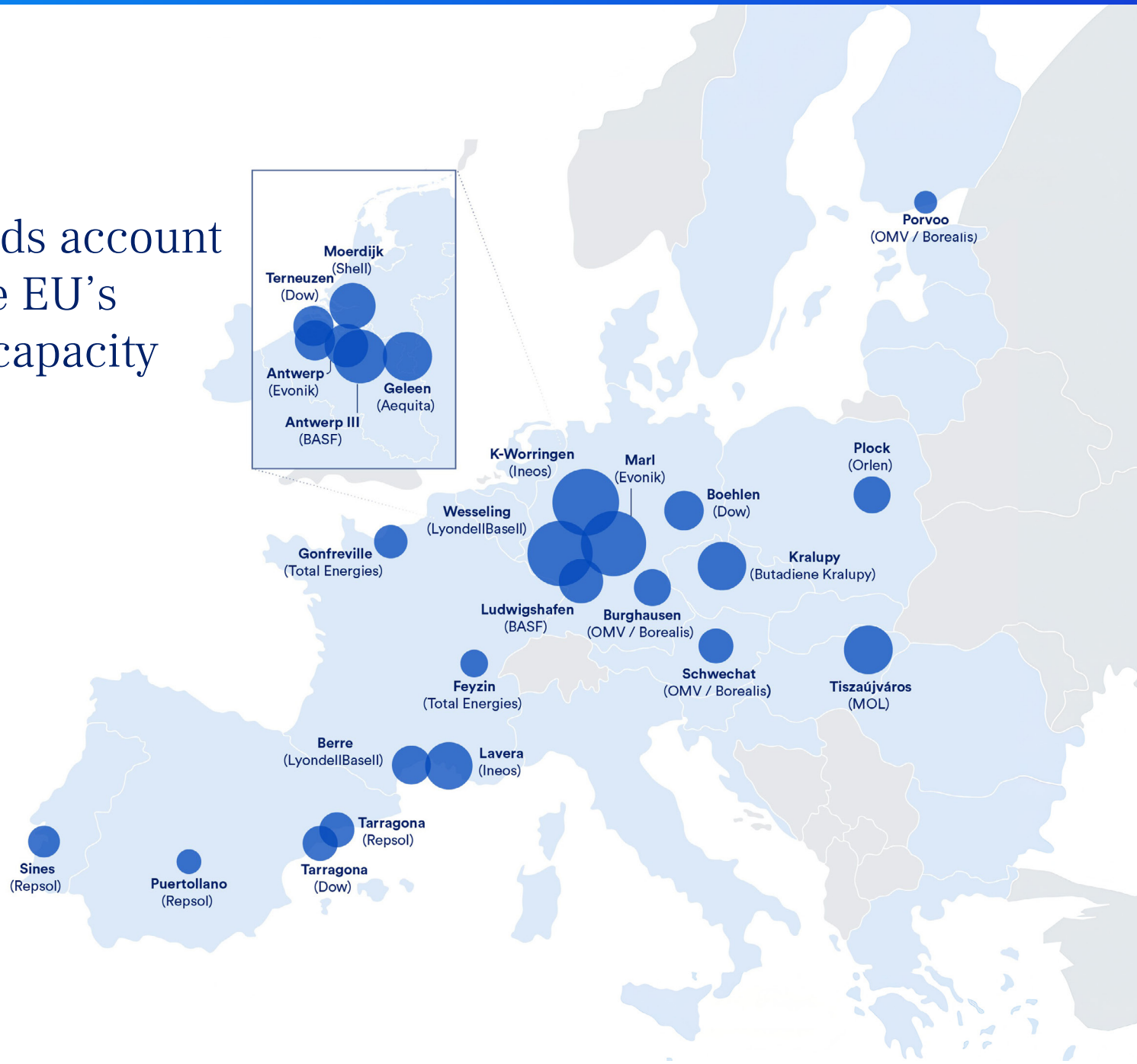
Steam Cracker

Refinery

Propane Dehydrogenation (PDH)

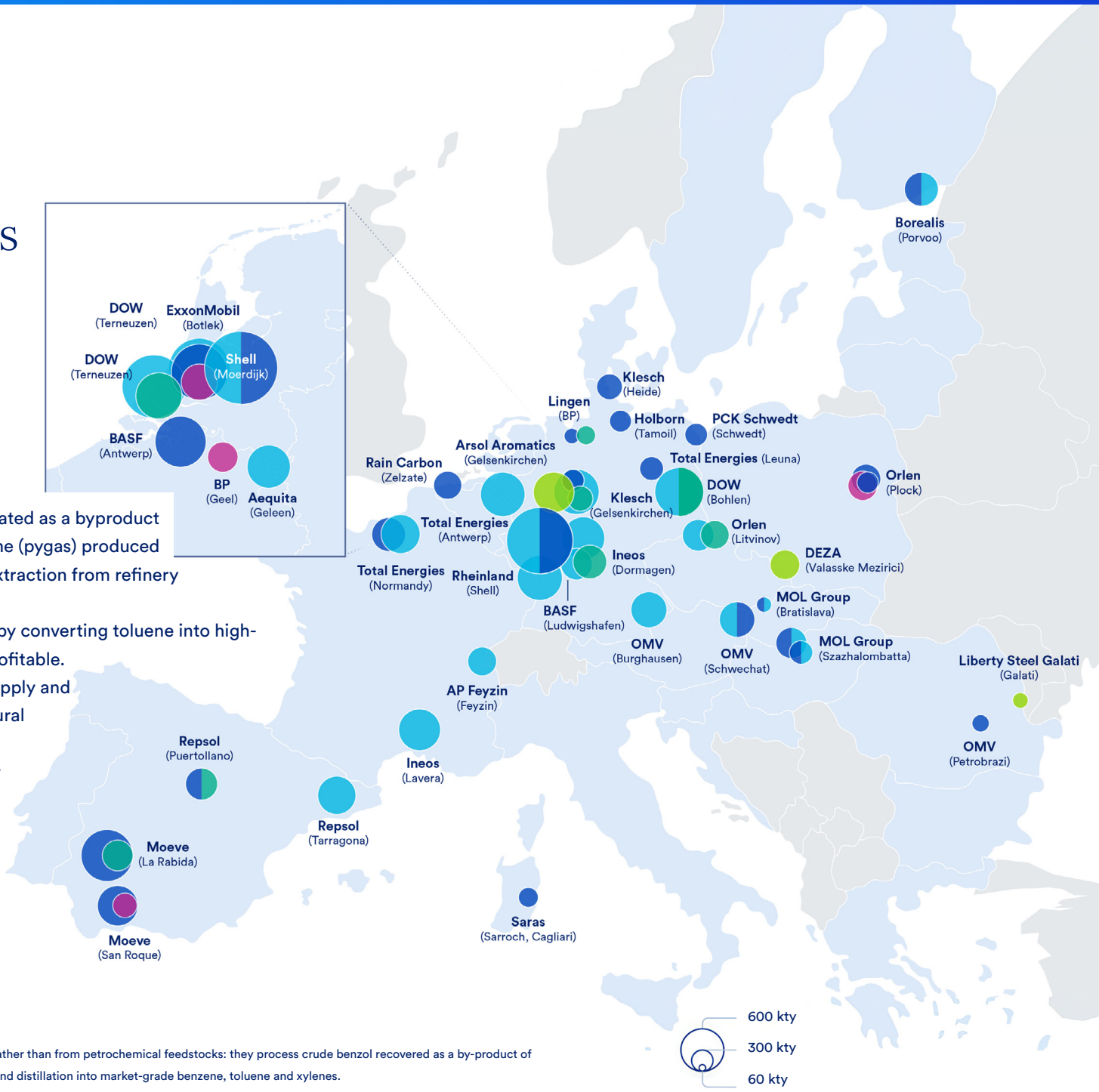
Germany and Netherlands account for more than half of the EU's **butadiene** production capacity

- The top four producers, INEOS, Dow, Evonik, and LyondellBasell, control roughly 55% of total EU capacity.
- Evonik (320kt/y) and Butadiene Kralupy (130 kt/y) operate as pure C4 processors with no own crackers.
- Dow Böehlen (105kt/y) is scheduled to close by 2027.
- A new 120 kt/y butadiene unit is under construction following Orlen's acquisition of the Synthos in December 2025.



Germany and Netherlands account for more than half of the EU's **benzene** production capacity

- There are 52 EU facilities that produce benzene.
- Approximately 75% of benzene produced in the EU is generated as a byproduct of ethylene production (via extraction from pyrolysis gasoline (pygas) produced during steam cracking) or from crude oil refining through extraction from refinery reformate streams.[1]
- The balance is produced on-purpose across 12 EU facilities by converting toluene into high-purity benzene when market prices make the conversion profitable.
- The combination of refinery closures reducing reformate supply and cracker closures reducing pygas supply represents a structural dual squeeze with no near-term domestic remedy.
- Dow Böhlen's planned closure by 2027 will remove a further 300kt/y from Germany, the EU's largest producer country.



1. There are four plants that collectively produce ~5% of the EU's benzene via the coal route rather than from petrochemical feedstocks: they process crude benzol recovered as a by-product of coke oven gas from steelmaking or coking operations and refine it through hydrogenation and distillation into market-grade benzene, toluene and xylenes.

Conclusion

- The EU petrochemical industry has a long and distinguished history, supported by an extensive asset base, established trade routes, integrated manufacturing ecosystems, and decades of accumulated intellectual property.
- Its world-class chemicals sector is underpinned by highly integrated logistics and infrastructure networks, including ports, extensive pipeline systems, shared utilities, and interconnected by-product streams, alongside deeply embedded cross-border trading relationships.
- However, structural pressures including high energy costs, ageing assets, intensifying competition from emerging markets, and compliance requirements are being felt most acutely in the petrochemical sector, which accounted for nearly half of the announced closures across the European chemical industry.
- These closures are occurring at a pace that exceeds the current policy response, which must simultaneously address the immediate risk of industrial decline while also supporting emissions reductions in line with EU climate commitments.
- Policy measures such as the Carbon Border Adjustment Mechanism (CBAM), industrial decarbonisation funding, trade defence instruments, demand side measures, and supply security frameworks are necessary, but insufficient when pursued in isolation. Only a coordinated strategy across trade, energy, climate, and industrial policy will enable the sector to both stabilise and decarbonise.