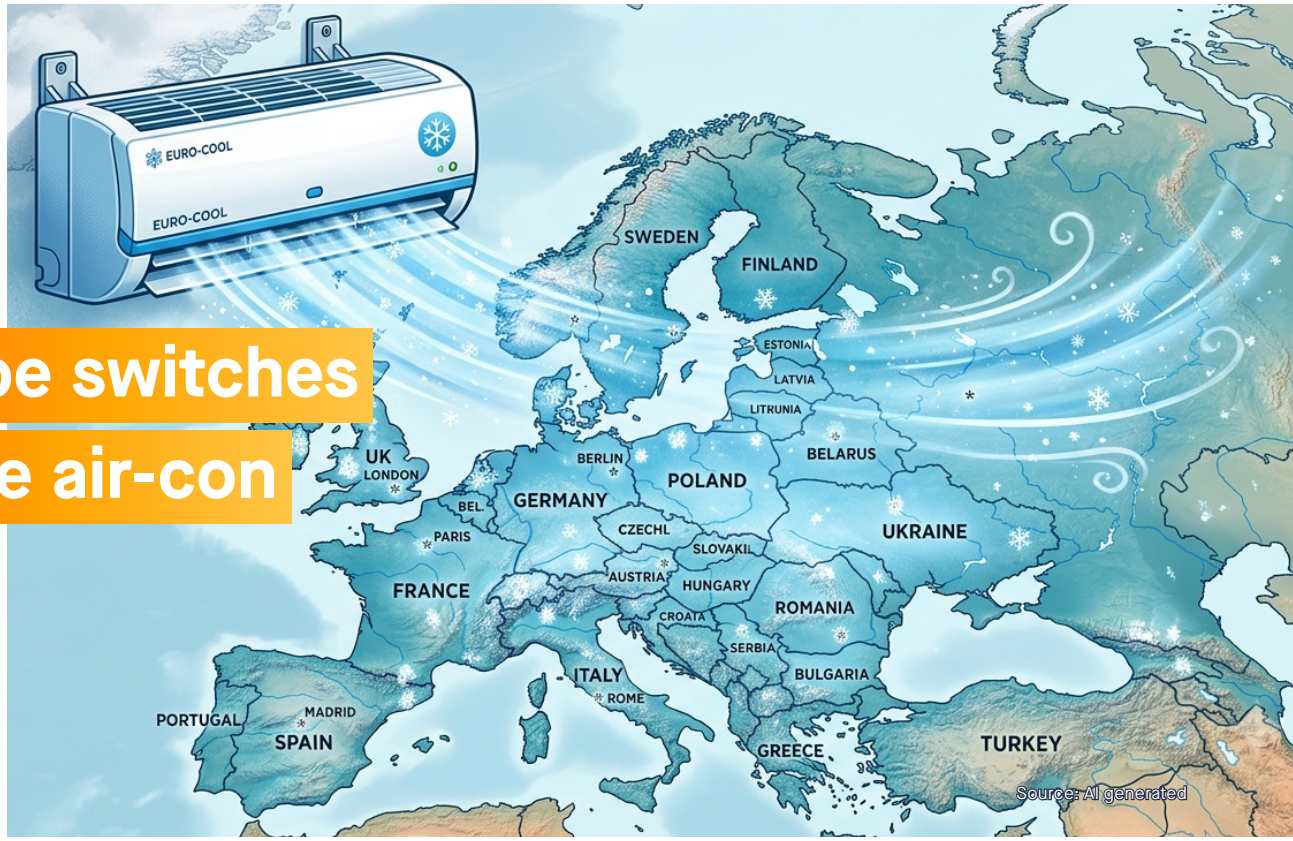
Europe switches on the air-con



Europe built its economy on the assumption of mild summers. In a hotter climate, cooling becomes a productivity tool, a workplace safety requirement, and a new layer of building infrastructure.

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Europe is the world's most under-cooled developed market. Only around one in five European households has cooling, compared with roughly 90% in the US, Japan, and Korea, yet Europe is now warming faster than any other continent. The latest June heatwave, linked to at least 1,300 deaths, turned a comfort gap into an infrastructure gap. Cooling demand will rise, but the investment case is more subtle than simply selling more units. At the same time as Europe switches on the air-con, Brussels is tightening the rules on the refrigerants used in traditional systems. The result is a market shaped by two forces: a growing need to cool homes, offices, and public spaces, and a regulatory squeeze that will determine which technologies can scale.

Europe confronts the heat shock

The June 2026 heatwave turned European cooling from a slow-burning structural theme into a political and policy issue. A North African heat dome, held in place by an omega block, pushed parts of Europe up to 18°C above seasonal norms.

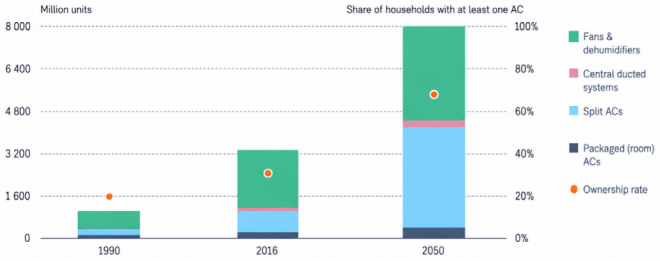
The IPCC (Intergovernmental Panel on Climate Change) projects that extreme heat will continue to intensify and persist for longer periods as global warming progresses. Recent temperatures in Switzerland reflected this trend, with 19 monitoring stations recording new highs. Basel-Binningen and Beznau both reached 39°C on 27 June, marking the country's highest temperature ever recorded in June.As heatwaves become more frequent across Europe, rising temperatures are expected to reduce labour productivity, especially in exposed and poorly cooled environments, while increasing the need for air conditioning to keep working conditions safe. Extreme heat reduces effective labour supply through shorter working hours, lower productivity and higher disruption risk. The impact is most visible in construction, agriculture, logistics, manufacturing, transport, healthcare and hospitality. According to the Network for Greening the Financial System (NGFS), labour productivity in hot and humid regions could decline by more than 10% under a 3°C warming scenario, contributing to cumulative global GDP losses of around 15% by 2050. A 2024 NBER study points in the same direction, estimating that each 1°C rise in global temperature could lower global GDP by 12% over six years.

The human cost made the issue impossible to ignore. At least 1,300 excess deaths have been linked to the episode across Europe, including roughly 1,000 in France alone.

This matters because Europe was built for a different climate. Homes, schools, hospitals and offices were designed to retain heat, not shed it. That made sense in a continent historically more worried about winter than summer. It makes far less sense today. Europe is now the fastest-warming continent, heating more than twice as fast as the global average.

The political response has moved quickly. In France, air conditioning has entered the electoral debate ahead of the 2027 presidential race. The National Rally has pushed an "air conditioning plan" built around financing support, while even parts of the Green camp have softened their language as cooling becomes harder to dismiss as a luxury. Brussels remains more cautious. The EU is not promoting air conditioning as a standalone solution. It prefers to place cooling inside the broader language of building renovation, energy efficiency, and clean heating and cooling. But the direction of travel is unmistakable. Cooling is moving from comfort spending to adaptation spending. The IEA projects that the global stock of residential cooling devices (including air conditioners, fans, and dehumidifiers) will increase from just over 3.4 billion units in 2016 to more than 8 billion by 2050, with over half of the growth coming from China, India, and Indonesia. In Europe, household air conditioner penetration is expected to rise from 20% in 2020 to 50% by 2035.

Household ownership of cooling equipment by type



Source: IEA

Cooling has thus moved from a passing heatwave story to a multi-year investment theme. The first driver is penetration. Europe remains one of the least air-conditioned developed markets, with household penetration of around 20% versus roughly 90% in the US, Japan, and Korea. The gap is especially important because adoption is now moving beyond southern Europe. Italy is already near 50%, while the UK has doubled to around 7% in just three years from a very low base. That is the early shape of an adoption curve beginning to steepen.

The second driver is replacement. Europe is expanding cooling capacity while tightening refrigerant rules. The third driver is mix. New demand will move beyond the cheapest wall-mounted units toward inverter-driven, low-GWP, smart-controlled and often heat-pump capable systems. Because air-to-air heat pumps can cool in summer and heat in winter, cooling fits more naturally into Europe's building-electrification and decarbonisation agenda.

The prize is therefore larger than the unit itself. Higher penetration means more equipment, but also more installation work, ductwork, electrical upgrades, controls, servicing and maintenance. Replacement adds a more recurring source of demand as refrigerant rules and efficiency standards force the installed base to modernise. Mix lifts the value per unit as the market shifts toward cleaner, smarter and more efficient systems.

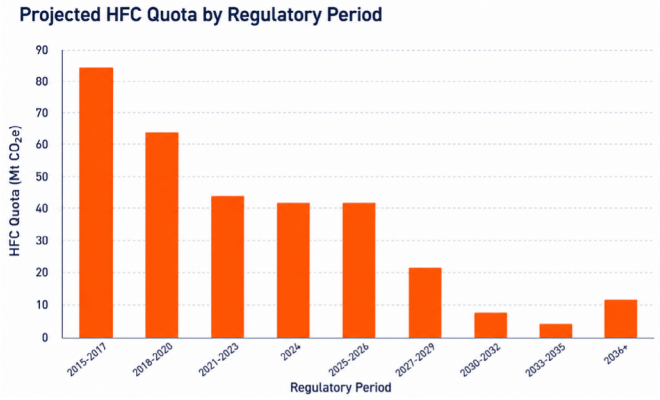
There are still two major frictions. The first is Europe's building stock. It is old, fragmented, and often difficult to retrofit. Heritage rules, planning restrictions, and aesthetic objections can also make outdoor condenser units hard

to install, particularly in dense urban centres and conservation areas. The second is operating cost. European electricity prices remain well above US levels, and heatwaves can place additional pressure on power markets as cooling demand rises.

The European regulatory framework

Regulation has become the real engine of Europe's cooling market, taking over from heatwaves and politics as the force that will set the pace. The EU's revised F-gas Regulation, adopted in 2024, turns what was once a weather-sensitive industry into a policy-backed replacement cycle. Rather than relying on hotter summers to stimulate air-conditioning demand, the regulation mandates the gradual replacement of existing systems through legally binding deadlines, creating a more predictable and resilient source of demand.

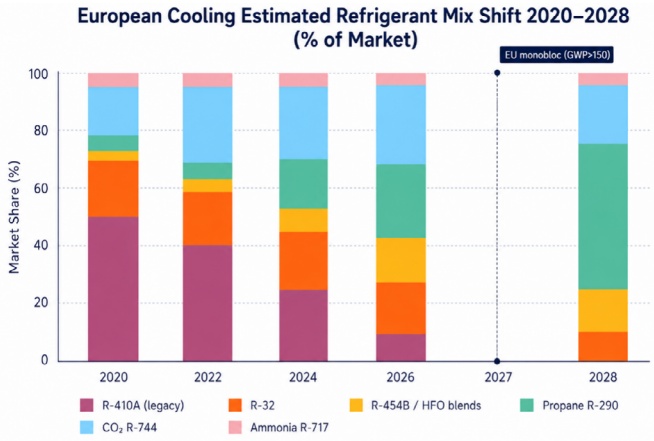
At the core of the legislation is a progressive reduction in the supply of hydrofluorocarbons (HFCs), the refrigerants used in most conventional cooling equipment. Under the EU F-gas Regulation, HFC quotas are cut in stepped phases—from 42.9 million tonnes of CO_2-equivalent in 2025–26 (around 48% below 2023 levels), to 21.7 million tonnes in 2027–29, and then to 9 million tonnes in 2030–32. By 2036, allowable supply falls further to around 15% of historical levels, supporting the EU's target of reducing HFC consumption by 80% by 2030 and achieving a near-complete phase-down by 2050.



Source: Bloomberg

These quota reductions are reinforced by product bans that accelerate equipment replacement. From 2025, new commercial HVACR systems using refrigerants with a global warming potential (GWP) above 150 are prohibited, followed by restrictions on certain heat pumps in 2027 and many split air-conditioning systems in 2029. Because these deadlines are mandatory, they create a replacement wave largely independent of economic cycles, providing compliant manufacturers with a policy-backed demand floor.

Europe is also taking a different technological path from the United States. While US manufacturers are primarily transitioning toward synthetic A2L refrigerants such as R-32 and R-454B, European producers are increasingly adopting propane (R-290). With a near-zero GWP (0.02 versus 771 for R-32), lower costs, strong thermodynamic performance, and the absence of PFAS "forever chemicals" associated with many HFO alternatives, propane has become the preferred long-term solution. Although natural refrigerants represented only 8% of European heat pump sales in 2022, regulatory support is expected to accelerate adoption. The need for redesigned heat exchangers and enhanced safety engineering also creates meaningful barriers to entry, favouring manufacturers that invested early.



Source: Bloomberg

The investment case is further reinforced by pricing dynamics. Propane-based systems typically command a 10-15% premium over legacy HFC equipment, while shrinking HFC supply will make servicing older systems progressively more expensive, encouraging replacement rather than repair. Unlike temporary weather-driven demand, this regulatory framework provides long-term visibility for both equipment volumes and pricing, creating a structural growth opportunity across the European HVAC industry.

The cooling value chain

Cooling is not a single product but a multi-layer industrial chain, and the F-gas transition reshapes each layer differently. Mapping it from molecule to installer is the clearest way to see where the economics concentrate and the pattern is counter-intuitive. The best exposure is neither the finished box nor the refrigerant itself, but the layers in between.

At the base is refrigerant chemistry, low-GWP HFOs, A2L blends and natural gases, all made scarce by F-gas quotas. It is the most visible layer, yet also the most exposed to quota tightening, patent expiry, and commodity-like pricing dynamics.

Above it sits the layers that capture transition complexity. Controls and power, including inverters, controllers, IoT and BMS systems and power semiconductors, form a refrigerant-agnostic layer present in every unit regardless of gas. Content per box rises as flammability and high-pressure management requirements increase. Components, including heat exchangers, compressors, valves and coils, sit alongside and benefit from a multi-year redesign cycle as propane and CO2 systems require re-engineered hardware.

Distribution and service act as the chain's toll bridge, aggregating many manufacturers to many installers, with reclaim, retrofit, and aftermarket activity that continues independently of new equipment cycles. OEMs, the branded box, sit at the highest volume end but are the most commoditised, directly tied to mandated replacement demand.

Around these layers sits an adjacent ecosystem: ventilation, portable air conditioning, air treatment, and increasingly data centre and precision cooling. These segments ride the same heat load and thermal demand tailwinds but from different end markets.

Layer	What it is	Companies with exposure
OEMs / equipment	Finished units: splits, VRF/VRV systems, chillers, heat pumps.	Daikin, Mitsubishi Electric, Carrier, Trane, Johnson Controls, LG, Samsung, Panasonic, Midea, Gree, Lennox; Bosch/Vaillant (private)
Refrigerant chemistry	The low-GWP HFOs and A2L blends, the consumable ingredient that the F-gas quotas are making scarce.	Honeywell (Solstice), Chemours (Opteon), Arkema (Forane), Linde, Orbia, A-Gas
Controls & power	Inverters (which adjust output rather than switching simply on/off), controllers, connected BMS, and the semiconductor chips behind them.	Carel, Belimo, Infineon, STMicroelectronics, onsemi; Danfoss/Copeland (private)
Components	The mechanical parts inside the unit: heat exchangers, compressors, fans, valves, and coils.	LU-VE, Daikin (compressors), Danfoss, Modine, SPX
Distribution & service	Links makers to installers; handles reclaim, retrofit, repair.	Beijer Ref, Watsco (US), Rexel, Bunzl, Ferguson
Adjacent / "cool the box"	Ventilation, portable AC, data-centre and industrial cooling.	Systemair, Zehnder, De'Longhi, Munters, Vertiv

Conclusion

Europe's cooling market offers a compelling long-term investment opportunity, supported by rising temperatures, low air-conditioning penetration and a policy-driven replacement cycle. However, the outlook is unlikely to be linear. High electricity costs, grid constraints, regulatory complexity, weather-dependent demand, premium valuations and growing competition from Chinese manufacturers could all limit near-term returns despite favourable structural fundamentals.

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