

Making the switch from SF₆ – power to adapt

A critical change is coming to Europe's medium-voltage infrastructure. From January 2026, the use of SF₆ in medium-voltage switchgear up to certain voltage levels will be restricted in the European Union. Here's what you need to know – and why now is the time to act.

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In early 2024, the Council of the European Union formally adopted updated F-gas regulations aimed at reducing emissions of fluorinated greenhouse gases, including sulphur hexafluoride (SF₆) – a gas with high global warming potential, commonly used in medium-voltage switchgear. The EU's F-gas regulation, which applies to all member states, targets a two-thirds reduction in emissions of these potent gases by 2030 compared to 2014. As part of this, the regulation bans the use of SF₆ in new medium-voltage electrical equipment up to 24 kV starting in 2026, and up to 52 kV from 2030.

This regulatory shift marks a significant turning point. With the deadline approaching, 2025 presents a critical window for planning and action – not only to comply but to modernise and prepare the grid for a more sustainable future.

More than a mandate: a modernisation opportunity

The shift to SF₆-free switchgear isn't a simple substitution. It's a chance to reduce lifecycle costs and increase operational flexibility. New SF₆-free

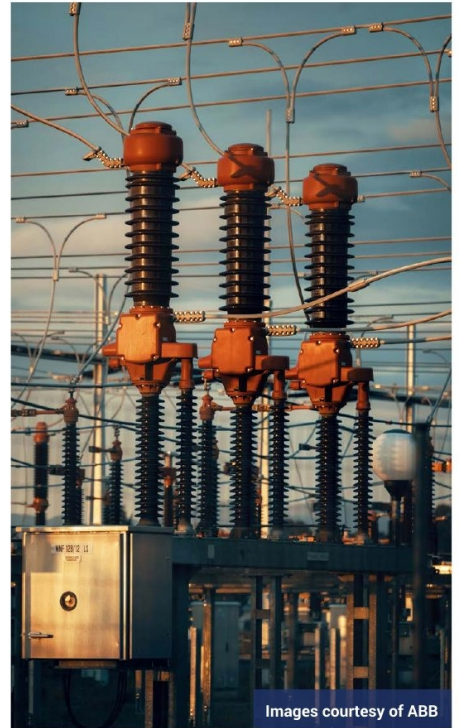
technologies, including those using dry air and vacuum interrupters, are now commercially available. These solutions eliminate fluorinated gases and deliver reliable performance.

These solutions make use of alternative insulation and switching methods that eliminate the use of high-GWP gases. Importantly, many, such as the portfolio from ABB, are designed with the same user interface, footprint, proven components, and operations as the existing portfolio to support easier deployment.

While capital costs for SF₆-free switchgear may be higher due to material and design complexity, the total cost of ownership (TCO) over the asset's life would tell a different story.

Managing the transition at scale

As the 2026 deadline approaches, demand for compliant equipment is on the rise, tightening lead times for key components, manufacturing slots, and type testing resources across the supply chain. In this landscape, businesses that take proactive steps now—such as conducting feasibility studies, initiating pilot installations, and securing supply



Images courtesy of ABB

agreements—will be better positioned to avoid delays and secure the supply chain for meeting the regulations.

Across Europe, many utilities and industries are already stepping up – and those who move early will be best placed to lead the transition as increasing electrification with low emission mandates across the world is also adding pressure on supply chains!

"ABB is working closely with our partners to deploy SF₆-free solutions. We have actively engaged with our partners and customers to introduce features in the product to help improve their experience in installation and usage. ABB's next generation of SF₆-free switchgear for secondary distribution – SafeRing/SafePlus Air, and UniSec Air – is available now, following extensive development.

These solutions are built on ABB's proven components, consistent operating principles, and the same level of reliability customers have come to expect from our portfolio.

With more than a century of medium-voltage experience and a track record of innovation, we are supporting our partners through this transition – helping them meet regulatory requirements while strengthening long-term grid resilience."

The shift away from SF₆ is no longer a question of if but when. With regulatory deadlines fast approaching and market dynamics evolving rapidly, now is the time to team up – to secure supply, streamline deployment, and unlock the full value of future-ready electrical infrastructure.