

E.DSO amendments to F-gas Regulation

E.DSO, representing Europe's leading Distribution System Operators (DSOs), welcomes the opportunity to comment on the proposed F-Gas Regulation (*fluorinated greenhouse gases*).

DSOs are fully committed to reducing the content of hazardous substances and they have already taken the necessary measures to adopt suitable alternative solutions. We also believe that hazardous substances (e.g. sulfur hexafluoride (SF₆)), posing an unacceptable risk due to their properties and use profile should be restricted or regulated, but based on scientific assessment and reasonable timeline.

However, the current proposal to phase out rapidly SF₆ is not totally feasible for our industry. E.DSO would like to take the opportunity to propose some suggestions for amendments on how the Regulation could be further improved. Those amendments are based on the well-thought-out reflections of E.DSO experts and we remain at policy makers disposal to discuss further in detail on the development of the infrastructure necessary to the achievement of EU objectives.

Our previous position on this file can be found [here](#) and [here](#).

Beneath are the key messages on the proposed revision:

- E.DSO members argue that the timeline for SF₆ phase-out for equipment up to 24kV shall be **2028** instead of **2026**. This would make it more feasible for both DSOs and manufacturers to be find the adequate alternatives. In addition, because of the technical timespan up to few decades, the framework chosen by legislators shall allow for choosing the best solution in 2028 instead of an intermediary solution in 2026. Instead of a cascading approach as proposed by the Council, the provisions must be simple and guarantee both planning clarity for the operators as well as a **minimum number of solution providers**.
- We believe that **procedures for a derogation or exemption should be clarified**. A bidder submitting a tender shall not be enough. Procedures must be based on an **open call for tender with a clear deadline for bids** and clarity as to what qualify as a **"suitable alternative"**.
- We advocate for inclusion of "Putting into operation" instead of "placing on the market". We argue that it can be a long delay between placing on the market and putting into operation, especially because our equipment is tailor-made.
- **Deleting point c) of article 5** would impose annual leakage measurements for all types of electrical switchgear. This is simply **not possible from a technical viewpoint** as it means dismantling and testing more than 300 000 installations manually annual Small, usually hermetically sealed installation covered by point c) have per design only minimal leakage rates.



Commission (Proposal 5 April 2022)	Council (General approach 5 April 2023)	European Parliament (mandate 30 March 2023)	E.DSO Recommendations/Amendments
Recitals			
		<p style="text-align: center;">Recital 4a (new)</p> <p>The RePowerEU Plan envisages an additional 20 million new heat pumps to be installed in the Union by 2026 and nearly 60 million by 2030. The full HFC phase-down by no later than 2050 should be in line with and complimentary to the Union’s energy-efficiency ambitions as laid down in, inter alia, the European Green Deal, the Energy Efficiency Directive (2012/27/EU), the Energy Performance of Buildings Directive (Directive 2010/31/EU) and the RePowerEU Plan, including the uptake of low-climate impact waste-heat recovery applications, such as heat pumps, as well as investments in electrification, power grid expansions and the increased use of batteries in the energy and transport sector.</p>	<p><i>Support the recital 4a (new) as of the European Parliament position.</i></p> <p><i>We believe that it is positive step ahead that the Parliament recognises the need for power grid expansion in the nearest future. The industry is fully committed to phasing-out the use of SF6 as long as the timeline and conditions of phase-out are realistic and do not prevent DSO from delivering the energy transition.</i></p>
<p style="text-align: center;">Recital 12</p> <p>The existing prohibitions on specific uses of sulphur hexafluoride, the most climate damaging substance known,</p>	<p style="text-align: center;">Recital 12</p> <p>The existing prohibitions on specific uses of sulphur hexafluoride, the most climate damaging substance</p>	<p style="text-align: center;">Recital 12</p> <p>The existing prohibitions on specific uses of sulphur hexafluoride, the most climate</p>	<p><i>We propose Recital 12 as of the EP position mentions exemptions to be detailed in Annex IV. We suggest the following wording:</i></p>

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<p>should be retained and be complemented by additional restrictions on the use in the critical sector of power distribution.</p>	<p>known, should be retained and be complemented by additional restrictions on the use in the critical sector of power distribution.</p>	<p>damaging substance known, should be retained and be complemented by additional restrictions on the use in the critical sector of power distribution. <i>This Regulation does not require the replacement of switchgears that are already installed in the power grid on the dates indicated in Annex IV. Grid operators should only be required to install new switchgears fulfilling the requirements set out in that Annex when, as from the dates indicated therein, they decide to replace already installed switchgears or to install additional switchgears in the power grid.</i></p>	<p><i>“The prohibition must include some exemptions for repairing, expansion and servicing of existing electrical switchgear.”</i></p>
		<p>Recital 13a (new)</p> <p><i>The ban on the placing on the market of parts of equipment that is banned under this Regulation should not apply to parts required for repairs and servicing of existing equipment that has already been installed in order to ensure that such equipment remains repairable and maintainable for their full lifespan, thereby avoiding the need for the unwarranted</i></p>	<p><i>We believe that recital 13a is rather positive by guaranteeing maintenance and operation until the end of life of products. However, we suggest the following amendment:</i></p> <p><i>The ban on the placing on the market of parts of equipment that is banned under this Regulation should not apply to parts required for repairs, extensions and servicing of existing equipment that has already been installed in</i></p>



SHAPING SMARTER GRIDS FOR YOUR FUTURE

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		<p>replacement of existing energy equipment and infrastructure, which could have a negative effect on decarbonisation efforts. The repair or servicing for which such spare parts are used should not result in an increase in the capacity of the equipment or an increase in the amount of fluorinated gases contained in the equipment or of the fluorinated gases used.</p>	<p>order to ensure that such equipment remains repairable and maintainable for their full lifespan, thereby avoiding the need for the unwarranted replacement of existing energy equipment and infrastructure, which could have a negative effect on decarbonisation efforts. The repair or servicing for which such spare parts are used should not result in <i>a change of the type of fluorinated greenhouse gas used that leads to an increase of the global warming potential of the fluorinated greenhouse gas used/.</i></p> <p>an increase in the capacity of the equipment or an increase in the amount of fluorinated gases contained in the equipment or of the fluorinated gases used.</p>

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	<p>Recital 13a (new)</p> <p>Where technically suitable alternatives are available and in consistency with the EU competition policies, bans should be introduced on the putting into operation of new electrical switchgear with relevant fluorinated greenhouse gases. Where the extension of existing electrical equipment is necessary, one or more additional cells with fluorinated greenhouses gases with the same GWP as the existing cells, may be added if a technology using fluorinated greenhouses gases with a lower GWP would entail the replacement of the entire electrical equipment.</p>		<p><i>We do support the Council text. However, we would prefer the introduction of “placing on the market” instead of ‘putting into operation’ since there is generally a delay between the two processes.</i></p> <p>Amendment proposal: <i>Where technically suitable alternatives are available and in consistency with the EU competition policies, bans should be introduced on the putting into operation of ‘placing on the market” for new electrical switchgear with relevant fluorinated greenhouse gases. Where the extension of existing electrical equipment is necessary, one or more additional cells with fluorinated greenhouses gases with the same GWP as the existing cells, may be added if a technology using fluorinated greenhouses gases with a lower GWP would entail the replacement of the entire electrical equipment.</i></p>
	<p>Recital 13b (new)</p> <p>In order to limit the necessity for the production of virgin SF6, the capacity of reclamation for SF6 from existing equipment should</p>		<p><i>We fully support the Recital 13b (new) as of the Council position.</i></p> <p><i>The current Council’s provision is good since it prioritises recycled or regenerated SF6 as of 2035 and</i></p>

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	be increased. Without endangering the safe functioning of the electrical grids and power plants, the use of virgin SF6 in electrical switchgear should be avoided, where it is technically feasible and when reclaimed or recycled SF6 is available.		<p>leaves enough exemptions to let the recycling industrial value chain develop accordingly.</p> <p>DSOs already use recycled or regenerated SF6 whenever they can, and we are confident about the quantity needed by 2035.</p>
Provisions			
<p>Article 2 – paragraph 2</p> <p>This Regulation also applies to products and equipment, and parts thereof, containing fluorinated greenhouse gases or whose functioning relies upon those gases.</p>	<p>2. This Regulation also applies to products and equipment, and parts thereof, containing fluorinated greenhouse gases or whose functioning relies upon those gases.</p>	<p>2. This Regulation also applies to products and equipment, and parts thereof, containing fluorinated greenhouse gases or whose functioning relies partly or entirely on those gases. [AM38]</p>	<p>We support the Council and Parliament position since parts are required for the servicing and maintenance of existing installations.</p>
<p>Article 5.1(b)</p> <p>it is equipped with a pressure or density monitoring device</p>	<p>Article 5.1(b)</p> <p>it is equipped with a pressure or density monitoring device with an automatic alert system.</p>		<p>We support Commission/Parliament proposal since not all the existing equipment have already automatic alert systems and it would be very difficult to implement them. Leaks for these kind of equipment are really low and are currently detected with the existing monitoring devices.</p>
<p>Article 5 – paragraph 1 – subparagraph 3 – point c</p> <p><i>(c) it contains less than 6 kilograms of fluorinated greenhouse gases listed in Annex I.</i></p>	<p>Article 5 – paragraph 1 – subparagraph 3 – point c</p> <p><i>(c) it contains less than 6 kilograms of fluorinated greenhouse gases listed in Annex I.</i></p>	<p>Article 5 – paragraph 1 – subparagraph 3 – point c</p> <p>deleted</p>	<p>We support the proposal of the Commission and Council position.</p> <p><i>Deleting point c) would lead DSOs to control 85% of installed equipment manually each year.</i></p>

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			<p><i>We acknowledge that SF6 leaks are dangerous, and we take all necessary measures to limit them.</i></p>
<p>Article 6 paragraph 2.</p> <p>Operators of the equipment listed in Article 5(2), points (f) and (g), and containing fluorinated greenhouse gases listed in Annex I in quantities of 500 tonnes of CO₂ equivalent or more and installed from 1 January 2017, shall ensure that equipment is provided with a leakage detection system which alerts the operator or a service company of any leakage.</p>	<p>Article 6 paragraph 2.</p> <p>Operators of the equipment listed in Article 5(2), points (f) and (g), and containing fluorinated greenhouse gases listed in Annex I in quantities of 500 tonnes of CO₂ equivalent or more and installed from 1 January 2017, shall ensure that equipment is provided with a leakage detection system which alerts the operator or a service company of any leakage.</p>	<p>Article 6 paragraph 2.</p> <p>Operators of the equipment listed in Article 5(2), points (f) and (g), and containing fluorinated greenhouse gases listed in Annex I in quantities of 500 tonnes of CO₂ equivalent or more and installed from 1 January 2017, shall ensure that equipment is provided with a leakage detection system which alerts the operator or a service company of any leakage. For the purposes of Article 5(2), point (g), the leakage detection system shall have a higher sensitivity than a pressure- or density-monitoring device. [AM 50]</p>	<p><i>We are in favour of Council's proposal. We argue that the EP proposal as it stands, is not feasible from a technical viewpoint as the current pressure/density monitoring systems are indeed the state-of-the-art technical measurement devices.</i></p>
<p>Article 11 - paragraph 1</p> <p>The placing on the market of products and equipment, including parts thereof, listed in Annex IV, with an exemption for military equipment, shall be prohibited from the date specified in that Annex, differentiating, where applicable, according to the type or global warming potential of the gas contained.</p>	<p>Article 13 – paragraph 6</p> <p><i>The placing on the market of parts of equipment required for repair, expansion and servicing of existing electrical switchgear is allowed provided there is no change of the type of fluorinated greenhouse gas used that leads to an increase of the global warming potential of the</i></p>	<p>Article 11 – paragraph 1 – subparagraph 1 a (new)</p> <p><i>By way of derogation from the first subparagraph, the placing on the market of parts of equipment required for repairs and servicing of existing equipment shall be allowed provided that the repair or servicing does not result in an</i></p>	<p><i>We support the proposal of the Council as it allows the operator a full servicing of his assets.</i></p>

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	fluorinated greenhouse gas used.	increase in the capacity of the equipment or an increase in the amount of fluorinated gases contained in the equipment or of the fluorinated gases used.	
<p>Article 11 – paragraph 1 – subparagraph 3</p> <p>Two years following the individual dates listed in Annex IV, the subsequent supply or making available to another party in the Union for payment or free of charge of products or equipment lawfully placed on the market prior to the date referred to in the first subparagraph shall be allowed only if evidence is provided that the product or equipment was placed lawfully on the market prior to the date.</p>	<p>Article 11 – paragraph 1 – subparagraph 3</p> <p>Two years following the individual dates listed in Annex IV, the subsequent supply or making available to another party in the Union for payment or free of charge of products or equipment lawfully placed on the market prior to the date referred to in the first subparagraph shall be allowed only if evidence is provided that the product or equipment was placed lawfully on the market prior to the date.</p>	<p>Article 11 – paragraph 1 – subparagraph 3</p> <p>Six months following the individual dates listed in Annex IV, the subsequent supply or making available to another party in the Union for payment or free of charge of products or equipment lawfully placed on the market prior to the date referred to in the first subparagraph shall be allowed only if evidence is provided that the product or equipment was placed lawfully on the market prior to the date.</p>	<p><i>We support the proposal of the Council as we see two years as a minimal feasible time span.</i></p>
<p>Article 11 paragraph 4</p> <p>Following a substantiated request by a competent authority of a Member State and taking into account the objectives of this Regulation, the Commission may, exceptionally, by means of implementing acts, authorise an exemption for up to four years to allow the placing on the market of products and equipment listed in Annex IV, including parts thereof, containing fluorinated greenhouse gases or whose functioning relies upon those gases, where it is demonstrated that:</p>	<p>Article 11 paragraph 4</p> <p>Following a substantiated request by a competent authority of a Member State and taking into account the objectives of this Regulation, the Commission may, exceptionally, by means of implementing acts, authorise an exemption for up to four years to allow the placing on the market of products and equipment listed in Annex IV, or, in derogation to Article 13(5), putting into operation new or expanded</p>	<p>Article 11 paragraph 4</p> <p>Without prejudice to the derogation for spare parts referred to in subparagraph 1a, Following a substantiated request by a competent authority of a Member State and taking into account the objectives of this Regulation, the Commission may, exceptionally, by means of implementing acts, authorise an exemption for up to four years to allow the placing on the market of products and equipment</p>	<p><i>We do support for the proposed extension of Art. 13(5) in the Council proposal, as well as deletion proposed by the EP :</i></p> <p>Following a substantiated request by a competent authority of a Member State and taking into account the objectives of this Regulation, the Commission may, exceptionally, by means of implementing acts, authorise an exemption for up to four years to allow the placing on the</p>

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	<p>electrical switchgear, including parts thereof, containing fluorinated greenhouse gases or whose functioning relies upon those gases, where it is demonstrated that:</p>	<p>listed in Annex IV, including parts thereof, containing fluorinated greenhouse gases or whose functioning relies upon those gases, where it is demonstrated that:</p>	<p>market of products and equipment listed in Annex IV, or, in derogation to Article 13(5), placing on the market of putting into operation new or expanded electrical switchgear, including parts thereof, containing fluorinated greenhouse gases or whose functioning relies upon those gases, where it is demonstrated that:</p>
	<p>Article 13 – paragraph 3bis</p> <p><i>From 1 January 2035, the use of fluorinated greenhouse gases listed in Annex I, Section III for the servicing or maintenance of electrical switchgear equipment shall be prohibited unless it is reclaimed or recycled, except if it is proved that reclaimed or recycled fluorinated greenhouse gases listed in Annex I, Section 3:</i></p> <ul style="list-style-type: none"> <i>i. Cannot be used on the basis of technical grounds; or</i> <i>ii. Are not available in case of an emergency repair situation.</i> <p><i>In such cases, the user shall provide evidence, upon request, on the justification for use to the competent authority of the</i></p>		<p><i>We believe that the deadline (2035) shall apply to the servicing, extension, or maintenance</i></p>

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	<p>Member State and the Commission.</p> <p><i>This paragraph shall not apply to military equipment.</i></p>		
Annex			
<p>Annex IV – point 23 – point a</p> <p>medium voltage switchgear for primary and secondary distribution up to 24 kV, with insulating or breaking medium using, or whose functioning relies upon, gases with GWP of 10 or more, or with GWP of 2000 or more, unless evidence is provided that no suitable alternative is available based on technical grounds within the lower GWP ranges referred to above;</p> <p>1 January 2026</p>	<p>Article 13 – paragraphs 5, 5aa and 5 ab</p> <p><i>5. Putting into operation of the following new or expanded electrical switchgear with fluorinated greenhouse gases is prohibited as follows:</i></p> <p><i>(a) as of 1 January 2026 medium voltage switchgear for primary and secondary distribution up to 24 kV, with insulating or breaking medium with GWP of 10 or more;</i></p> <p><i>[...]</i></p> <p><i>5a. By derogation to paragraph 5, switchgear with insulating or breaking medium with GWP lower than 2000 are allowed if, following an open call for tender, given the needs and the specificities of the equipment required for the specific used concerned:</i></p>	<p>Annex IV – point 23 – point a</p> <p>medium voltage switchgear for primary and secondary distribution up to and including 24 kV, with insulating or breaking medium using, or whose functioning relies upon, fluorinated greenhouse gases;</p> <p>1 January 2026</p>	<p><i>We do support the Council and Commission proposition, taking into account following proposed amendment:</i></p> <p>Putting-into-operation Placing on the market, which is defined as the contractually assured delivery date, of the following new or expanded electrical switchgear with fluorinated greenhouse gases is prohibited as follows:</p> <p><i>As of 1 January 2028 medium voltage switchgear for primary and secondary distribution up to 24kV with insulating or breaking medium using, or whose functioning relies upon, gases with a GWP of 10 or more unless evidence is provided that no suitable alternative is available based on technical, economical and toxicity grounds</i></p> <p>Justification: <i>The extension of the deadline to 2028 is recommended to allow manufacturers to develop offers</i></p>

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	<p><i>i. during the two years after the respective dates under paragraph 5, points (a) to (d), only one or no bidder submitted a tender for switchgear with insulating or breaking medium with a GWP of less than 10; or</i></p> <p><i>ii. after the two-year period mentioned under (i) above, no bidder submitted a tender for switchgear with insulating or breaking medium with a GWP of less than 10.</i></p>		<p><i>that are safe, reliable, and able to cover all the needs.</i></p> <p><i>To bring more clarity and coherency for industrial stakeholders, a single GWP<10 threshold should be maintained for voltage levels below 24kV.</i></p> <p><i>In light of recital 13a and article 13 paragraph 6 of the Council's general approach, the wording "or expanded" should be deleted here for coherence.</i></p>
<p>Annex II – point 2</p> <p>The evidence referred to in point 23, shall include documentation establishing that following an open call for tender no suitable alternative on technical grounds, given the demonstrated specificities of the application, was available that could meet the conditions set out in point 23. The documentation shall be kept by the operator for at least five years and shall be made available to the competent authority of the Member State and to the Commission, upon request.</p>	<p>5b. By derogation to paragraph 5aa, switchgear with insulating or breaking medium with a GWP of 2000 or more is allowed if, following an open call for tender, given the needs and specificities of the equipment required for the specific use concerned, no bidder submitted a tender for switchgear with insulating or breaking medium with a GWP of less than 2000.</p>	<p>Annex II – point 2</p> <p>The exception referred to in point 23 (c) and (d) may be authorised by the competent authority of a Member State following a substantiated request by an operator. The operator's request shall include documentation providing that following an open call for tender with a deadline for bids after the dates referred to in point 23 no suitable alternative on technical grounds, given the demonstrated specificities of the application, are available that could meet the conditions set out in point 23(c) and (d), or, until two years after the dates referred to in</p>	<p>Proposed amendment:</p> <p>The exception referred to in point 23 (c) and (d) on technical, economical and toxicity grounds applying to all voltage levels may be authorised by the competent authority of a Member State following a substantiated request by an operator. The operator's request shall include documentation providing that when following an open call for tender with a deadline for bids after the prohibition dates referred to in point 23 no suitable alternative (i.e. pilot equipment under real operation conditions for at least 3 years) are available, or until two</p>

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		<p>point 23(c) and (d), only one bid was placed for such switchgear with insulating or breaking medium not using, or whose functioning does not rely upon fluorinated greenhouse gases. The competent authority shall make the documentation available to the Commission, upon request.</p>	<p>years after the dates referred to in point 23(c) and (d), only one bid was placed for such switchgear with insulating or breaking medium not using, or whose functioning does not rely upon fluorinated greenhouse gases when there were not at least three suppliers able to provide another suitable alternative</p>
	<p>Article 13 paragraph 6</p> <p>The placing on the market of parts of equipment required for repair, expansion and servicing of existing electrical switchgear is allowed provided there is no change of the type of fluorinated greenhouse gas used that leads to an increase of the global warming potential of the fluorinated greenhouse gas used.</p>		<p>We are in favour of the Council proposal. Equipment already installed can be efficiently repaired and maintainable until the end of its lifespan. Ensuring that there are parts for repairing expansion and servicing on the market avoids premature dismantling of existing installations.</p>