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REGULATORY SCRUTINY BOARD OPINION

Review of EU rules on fluorinated greenhouse gases

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Brussels,
RSB

Opinion

Title: Impact assessment /

Overall 2nd opinion: POSITIVE WITH RESERVATIONS

(A) Policy context

Fluorinated greenhouse gases (F-gases) are manmade chemicals used as refrigerants in cooling equipment and heat pumps, and in foams and asthma sprays.

Hydrofluorocarbons (HFCs) are a type of F-gases used as a substitute for ozone depletion substances targeted by the Montreal Protocol. However, at the same time, these gases are very powerful greenhouse gases – several thousand times stronger than carbon dioxide, also having regard to their persistence in the atmosphere. Thus F-gases emissions count towards the climate targets under the Effort Sharing Regulation. The F-gas Regulation was designed to facilitate an agreement on HFCs under the Montreal Protocol, which had eliminated ozone depleting substances successfully in similar applications. It is also the EU's main instrument to avoid F-gas emissions of HFCs. An evaluation annexed to this impact assessment finds that the F-gas Regulation has significantly reduced emissions of F-gases. However, it is not sufficient to address the problem of HFCs required to meet the new climate targets.

This impact assessment reviews the rules on F-gases to ensure new compliance with the Montreal Protocol obligations, additional contribution to the European Green Deal targets and improvement of implementation, enforcement, monitoring and reporting.

(B) Summary of findings

The Board notes the clarifications in the revised report on the links with the Montreal Protocol and its amendments.

However, the report still contains significant shortcomings. The Board gives a positive opinion with reservations because it expects the DG to rectify the following aspects:

- (1) The choice of a static baseline ignores the measures that would be taken by the Member States under their Effort Sharing Regulation targets. The report does not convincingly identify the remaining gap between the Kigali Amendment and other GHG targets that justifies more ambitious emission reduction under the initiative.**

This opinion concerns a draft impact assessment which may differ from the final version.

- (2) The report does not bring out clearly enough the trade offs and political choice between providing emission reduction flexibility to Member States under the alignment option and more prescriptive EU level measures under the emission reduction options. The feasibility of the most ambitious option remains questionable.**
- (3) The report does not explicitly set out the assumptions and data limitations underpinning the environmental and economic impacts. It also does not clearly present the administrative costs of the preferred option.**

(C) What to improve

(1) The report should explain clearly the problem and remaining gap it seeks to address given the Kigali Amendment to the Montreal Protocol and other EU greenhouse gases reduction measures and commitments. It should demonstrate the need to go beyond F-gases reductions required by the Kigali Amendment, given that there is no gap under the EU's climate targets with the current greenhouse gases reduction measures.

(2) The report should justify its choice of a static baseline given the wide range of other initiatives aimed at GHG reduction and Member States' action. It should justify why it considers that the Effort Sharing Regulation would be ineffective.

(3) The report should explain why the least ambitious option alone is not sufficient, as it would seem to comply with the EU's commitments under the Kigali Amendment. It should also justify and assess the political feasibility of maintaining the most ambitious option given the very high costs involved.

(4) The report should give a clearer account of the methodology underpinning the assessment of impacts. It should provide a clearer presentation of the overall costs and benefits of the options and compare them in terms of effectiveness, efficiency and coherence. It should clearly present the administrative costs for all elements of the preferred option and explain the basis for the calculations. It should also better present the main assumptions and limitations of the AnaFgas and GEM-E3 models used in assessing the impacts.

(5) The report should clarify the differences between the previous modelling results (EU long-term strategy for a climate-neutral economy) and the current estimates.

(6) The report should more explicitly explain what success would look like as regards specific objectives on implementation, monitoring and coherence. It should specify whether the review in 2033 will be an evaluation.

The Board notes the estimated costs and benefits of the preferred option in this initiative, as summarised in the attached quantification tables.

(D) Conclusion

The DG must revise the report in accordance with the Board's findings before launching the interservice consultation.

If there are any changes in the choice or design of the preferred option in the final version of the report, the DG may need to further adjust the attached quantification tables to reflect this.

Full title	Impact Assessment Report accompanying the document Proposal for a Regulation of the European Parliament and of the Council on fluorinated greenhouse gases
Reference number	PLAN/2020/7308
Submitted to RSB on	8 February 2022
Date of RSB meeting	Written procedure

ANNEX: Quantification tables extracted from the draft impact assessment report

The following tables contain information on the costs and benefits of the initiative on which the Board has given its opinion, as presented above.

If the draft report has been revised in line with the Board's recommendations, the content of these tables may be different from those in the final version of the impact assessment report, as published by the Commission.

I. Overview of Benefits (total for all provisions) – Preferred Option		
Description	Amount	Comments
Direct benefits		
Reduced climate emissions	<p>Additional savings of direct emissions: 40 MCO₂e by 2030 308 MtCO₂e by 2050</p> <p>Indirect emissions: Energy savings 2.5 GWh/year (2024-2036 average; ~0.3% of baseline energy use), 2050: 8.2 GWh/year savings (~0.5% of baseline energy use)</p> <p>Saved indirect CO₂ emissions 2030 ~ 0.3 Mt CO₂/a ; 2050: ~0.3 Mt CO₂/year</p>	<p>Emission savings mostly come from the quota system and the accompanying prohibitions as well as the emission avoidance measure (A3); many other measures contribute small savings The technology conversion also leads to small energy savings</p>
Reduction of administrative costs for businesses	Savings of €4.5m per year	Delivered by i.a. relaxing thresholds for placing on the market of products and equipment, quota application in 3-year cycle rather than annually and an electronic verification process
Reduction of administrative costs for authorities	Savings of ca 2,850 days per year across Member State competent authorities, DG CLIMA and EEA.	Driven by savings to MS competent authorities from aligning reporting and verification thresholds and requirement for specification of 'NIL' reporting.
Reduction of adjustment costs to end-users (mostly businesses)	~-835 Mio € per year by 2050	<p>Cost savings in adjustment costs to end-users (sum of capex & opex) in the long-term perspective,</p> <p>(in 2024-2036 time horizon additional costs primarily due to higher investment expenditures)</p>

Revenue from quota allocation price	~125 Mio € per year initially	The quota allocation price reduces profits in HFC supply chain without increasing cost to end-users. To cover admin cost at EU level and residual amount to be transferred to the EU budget.
Indirect benefits		
Job creation	~400 by 2030, ~6,800 by 2050	In particular in the EU manufacture of equipment and supplying industries
Research and development	+	Incentive in R&D in the EU equipment manufacturing sector
Competitiveness	+	Strengthened competitiveness of EU equipment manufacturing sector; however: drawback for export-oriented equipment manufacturing
GDP increase	+ 0.005 vs baseline by 2050	GDP increase in the long-term perspective. In 2030 horizon: GDP loss of ~0.001% of baseline

II. Overview of costs – Preferred option						
	Citizens/Private Consumers		Businesses		Administrations	
	One-off	Recurrent	One-off	Recurrent	One-off	Recurrent
Direct costs		<u>Adjustment costs:</u> Increased HFC refill cost until ~2030 for EU car owners of ACs in old vehicles (new cars not affected due to MAC Directive)	<u>Admin burden:</u> €3 million	<u>Admin burden:</u> €12.1 million per year (plus €20.8 million for training costs) (the cost savings of €4.5 million ¹ are not included here, see benefits	<u>Admin burden:</u> 2,600 days	<u>Admin burden:</u> 13,500 days per year (does not include savings of 2,850, see benefits above)

¹ According to Annex **Error! Reference source not found.** the individual measures result in total gross savings of €4.5 million and additional gross burden of €12.1 million. These numbers cancel each other out when deriving summary costs and are therefore not apparent in the summary tables in e.g. section **Error! Reference source not found.**

				<p>above)</p> <p><u>Adjustment costs</u> to business end-users (sum of capex & opex) ~421 Mio € per year (2024-2036 average), turning into cost savings of ~835 Mio € per year by 2050.</p> <p>Also, distributional costs linked to HFC gas prices</p>		
Indirect costs		<p>Adjustment costs: Potential pass-through to consumers (e.g. ACs, heat pumps) of higher compliance cost for businesses not significant in most sectors as additional cost <1% of total operating cost (including for MDIs where the HFC propellant gas costs a very small fraction of the total price)</p>				



Brussels,
RSB

Opinion

Title: Impact assessment / Review of EU rules on fluorinated greenhouse gases

Overall opinion: NEGATIVE

(A) Policy context

Fluorinated greenhouse gases (F-gases) are manmade chemicals used as refrigerants in cooling equipment and heat pumps, and in foams and asthma sprays.

F-gases are powerful greenhouse gases – several thousand times stronger than carbon dioxide. They count towards the climate targets under the Effort Sharing Regulation. The F-gas Regulation was designed to deliver the EU's targets to reduce ozone-depleting gas emissions under the Montreal Protocol. It is also the EU's main instrument to avoid F-gas emissions of hydrofluorocarbons (HFCs). An evaluation annexed to this impact assessment finds that the F-gas Regulation has significantly reduced emissions of ozone-depleting F-gases. However, it is not sufficient to address the problem of HFCs required to meet the new climate targets.

This impact assessment reviews the rules on F-gases to ensure new compliance with the Montreal Protocol long-term targets, additional contribution to the European Green Deal targets and improvement of implementation, enforcement, monitoring and reporting.

(B) Summary of findings

The Board notes the comprehensive analysis and detailed information presented in the annexes.

However, the Board gives a negative opinion, because the report contains the following significant shortcomings:

- (1) The report is unclear about the contribution of this initiative to the Climate Target Plan and about the coherent articulation between the F-gases Regulation and the Effort Sharing Regulation obligations.**
- (2) The report does not sufficiently explain the relationship between the objective to fully align with the existing and long-term Montreal Protocol targets against ozone layer depletion and the objective to increase additional F-gas emission reductions to further contribute to European climate targets.**
- (3) The report does not explain whether and how changes in the Effort Sharing Regulation and the Ozone Regulation affect the baseline scenario.**
- (4) The report does not explain how the 'fair' level contribution figure was arrived**

at, which sectors it would apply to, and how it relates to abatement cost figures in other 'Fit for 55' initiatives.

- (5) Not all options appear to be realistic and compatible with the objective to achieve additional F-gas emission reductions to contribute to the climate targets in a fair and cost-efficient way.**

(C) What to improve

(1) The report should explain the relationship between the objective to fully align with the Montreal Protocol and the objective to achieve additional F-gas emission reductions for climate purposes.

(2) The report should explain to what extent the revision of the F-gases Regulation contributes to the EU climate targets. It should clarify the interaction and complementarity between this Regulation and the inclusion of targets on F-gases as part of Member States' targets under the Effort Sharing Regulation. The report should be more specific on the level of emission reductions targeted by the revision. It should clarify whether the objective to achieve further emissions reduction in a fair and cost-effective manner is a binding obligation deriving from the Climate Target Plan.

(3) The report should develop the baseline and its evolution in more detail, explaining what would happen if the F-gases Regulation is not revised, taking into account the revisions of the Effort Sharing Regulation and the Ozone Regulation.

(4) The report should present a set of policy options that can tackle all the objectives. The report should bring out clearly the credible policy choices. If the revision is bound by the objective to achieve additional emission reductions in a fair and cost-efficient manner, the report should acknowledge that options 1 and 3 are not realistic or fair options and thus appear not to be compatible with that objective. The report should better justify the composition of the remaining option and why this would be the optimal set of measures.

(5) When presenting the options, the report should also better explain the basis and reasoning behind selecting a level of marginal abatement costs of up to EUR 390 / tCO_{2e}, which sectors this applies to, and how this relates in fairness terms to abatement costs for other greenhouse gases or other sectors in the Fit for 55 package.

(6) The report should improve the overall narrative and reader friendliness, given the technical complexity of the topic. The report should describe in more detail what the underlying problem is and what the evidence for it is, including information on the problems, their scale and the sources of evidence. The report should make links between the problems and the results of the evaluation and any other relevant sources of information. The main report should present briefly the methodology and the main assumptions underpinning it, even if the details are in the annexes.

(7) The impact analysis should highlight the main conclusions of the analysis and explain which factors influence its main findings. It should clearly present the expected impacts on the main variables and the average marginal abatement cost for each option. It should explain what is behind the expected changes in the macroeconomic variables, why consumption increases in the long term, why investment does not increase and what are the main conclusions of the analysis on exports and imports.

(8) The report should specify how and when implementation will be monitored and evaluated in the future. It should clearly set out what success would look like, clear

monitoring arrangements and specific indicators and timescales.

(9) The report should include, and better engage with, stakeholder views throughout the report. It should clearly reflect diverging stakeholder views.

Some more technical comments have been sent directly to the author DG.

(D) Conclusion

The DG must revise the report in accordance with the Board's findings and resubmit it for a final RSB opinion.

Full title	Impact Assessment Report accompanying the document Proposal for a Regulation of the European Parliament and of the Council on fluorinated greenhouse gases.
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Submitted to RSB on	17 December 2021
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