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Energy & Environment

Preparation for the implementation of the EU ETS provisions for small installations

Best Practice Guidance

Report for European Commission – DG Climate Action
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A Introduction

1. The revision of Directive 2003/87/EC on EU Emissions Trading System for Phase III (2013 – 2020) aimed to provide for a more efficient and harmonised system.
2. As part of the revision, Article 27 was added into the directive to allow small installations to opt-out from the EU ETS. The impact assessment for the revision highlights that the transaction costs for monitoring, reporting and verification of emissions are higher per ton emitted for small installations as compared to larger emitters in the EU ETS. By introducing the option to opt out, the article aimed to improve the cost-effectiveness of the system for small installations.
3. The article provides for Member States to be able to opt out small installations from the EU ETS provided that their emissions do not exceed a threshold of 25,000 tCO_{2e} in each of the three years 2008 and 2010 and, where they carry out combustion activities, have a rated thermal input below 35 MW, excluding emissions from biomass. Hospitals may also be excluded.
4. Where an installation is opted out, the Member State needs to ensure that the installation is subject to measures that will achieve an equivalent contribution to emission reductions as if they would have under the EU ETS. Member States may also allow simplified monitoring, reporting and verification measures for installations with average annual verified emissions between 2008 and 2010 which are below 5,000 tonnes a year.
5. Prior to excluding an installation, Member States need to notify the Commission of each such installation, specifying the equivalent measures applying to that installation. This has to be done before the Member State publish and submit to the Commission the list of installations covered by the EU ETS pursuant to Article 11(1) or at the latest when the list is submitted to the Commission. The Commission can approve or object the exclusions.
6. The small installations opt-out clause has been implemented by a limited number of Member States in Phase III of the EU ETS, and, among these Member States, differences can be noted in the element of the application and in the implemented equivalent measures.
7. This document has been written to support competent authorities in the Member States to implement the small emitters clause and to promote best practices in Phase IV of the EU ETS. Different equivalent measures currently in place have been analysed, summarised and compared. Interviews have been carried out with the Member States that are implementing the article in the Phase III of the EU ETS, and with the Member States that have only transposed the article into their national legislations or chose not to use it at all. This document does not alter the legal effects of the Directive and is without prejudice to the binding interpretation of Article 27 as provided by the Court of Justice.
8. Throughout this guidance document, the term “small installations” refers to installations that are opted-out under Article 27 of the EU ETS, and the term “very small installations” refers to installations that could be opted-out under Article 27a of the EU ETS during Phase IV (i.e. not exceeding a threshold of 2,500 tCO_{2e}).

B Key Article 27 considerations

9. Article 27(1) states:

'1. Following consultation with the operator, Member States may exclude from the EU ETS installations which have reported to the competent authority emissions of less than 25 000 tonnes of carbon dioxide equivalent and, where they carry out combustion activities, have a rated thermal input below 35 MW, excluding emissions from biomass, in each of the three years preceding the notification under point (a), and which are subject to measures that will achieve an equivalent contribution to emission reductions,...

Hospitals may also be excluded if they undertake equivalent measures.'

10. The Article does not need to be implemented in a mandatory manner, i.e. it is the installation's operator that decides whether to opt-out or remain under the EU ETS. All Member States currently implementing the Article require small installations (including hospitals) to apply for the opt-out. No Member State has implemented the Article in a mandatory manner.
11. Member States that have experienced a high number of installations applying to be opted-out referenced the importance of extensive industry consultation processes to help gain trust from the operators concerned, as well as that of the broader industry.
12. Member States that experienced low levels of interest from installations to be opted-out noted that this was linked to whether the alternative measure and administration system was perceived as being capable of actually providing time and monetary savings when compared with the EU ETS.
13. Whilst Member States found that multiple sectors were interested in the opt-out, some sectors were more interested than others. Member States with a significant ceramic goods sector suggested that these installations could benefit the most from the reduced administrative burden of being opted-out. This sector is often characterised by small and medium enterprises, for which the burden of the MRV requirements of the EU-ETS is amplified due to the typically small size of these business.
14. Hospitals were effectively opted out by several Member States, and the box below highlights examples of best practice.

Best practice – Hospital opt-out

Member States' implementation of the hospital exemption varies, specifically regarding whether a hospital needs to be under the threshold to qualify for the opt-out. Suggested best practise is to interpret Article 27 to mean that 'hospitals may also be excluded if they undertake equivalent measures', regardless of whether they are beneath the threshold or not.

Most Member States have also implemented additional criteria where thermal installations may also be excluded if they are primarily providing services to a hospital facility.

However, a number of interviewed Member States suggested that hospitals in their country do not qualify for EU ETS either because they receive heat from district heating or because they often operate below the required thermal input and emissions limit thresholds.

15. The application procedure for Member States implementing Article 27 is reliant upon the National Implementation Measures (NIMs) for the EU ETS. Each Member State requires small installations to submit verified NIMs data, including historical activity data, to demonstrate that they met the Article 27 eligibility criteria.
16. All Member States that implemented the Article had to measure the eligibility for excluding small installations based on their previous three years of emissions data. For Phase III, this required installations providing annual average emissions for the years 2008, 2009 and 2010, and ensuring that they were less than 25,000 CO₂e.
17. Member States' involvement in this procedure suggests this provided a simple way to review whether an installation qualified for the opt-out.

C Examples of equivalent measures

18. Article 27(1), subparagraphs (a) and (b) state:

'(a) it notifies the Commission of each such installation, specifying the equivalent measures applying to that installation that will achieve an equivalent contribution to emission reductions that are in place, before the list of installations pursuant to Article 11(1) has to be submitted and at the latest when this list is submitted to the Commission;

(b) it confirms that monitoring arrangements are in place to assess whether any installation emits 25 000 tonnes or more of carbon dioxide equivalent, excluding emissions from biomass, in any one calendar year. Member States may allow simplified monitoring, reporting and verification measures for installations with average annual verified emissions between 2008 and 2010 which are below 5 000 tonnes a year, in accordance with Article 14;'

19. An alternative measure to be considered "equivalent", must lead to an equivalent or greater reduction in absolute emissions when compared with that of the EU ETS.
20. The application of an equivalent measure is mandatory for the small installations that are opted-out.
21. When introducing an equivalent measure, it is important that it reduces the administrative burden for small installations when compared with that of the EU ETS.

Not best practice – Examples of measures not approved

Alternative measures that require installations to reduce product-specific emissions (i.e. relative emissions) based on the base year emissions and production levels would not be considered equivalent for two main reasons:

- **Difficulties in comparing the environmental impact of the measure.** A measure expressed as a commitment to achieve an installation-specific relative target (emissions/product) in each year of the trading period, is very different to the EU ETS. The EU ETS is a system based on absolute emissions, it would therefore be very difficult to estimate and compare the environmental impact of the measure. A relative system will authorise higher emissions in case of higher production volumes, which is not in line with the EU ETS approach. It will be consequently difficult to establish its equivalency with the ETS.
- **It is likely to bring higher complexity and burden which is not in line with the purpose of Article 27.** Calculating specific emissions every year requires more data than is foreseen in the EU ETS. Production data will also have to be monitored, verified and reported in order to assess the reduction in relative emission values. Complex issues such as cross boundary heat flows and changes in product mix would also need to be taken into account, increasing the complexity of the measure even further.

C.1 How to determine installations emissions reduction limits?

22. For Phase IV, the EU ETS sectors, in aggregate, have to cut their emissions by 43% by 2030 compared with 2005. This equates to a reduction in emission allowances that decline at a rate of 2.2% from 2021 onwards, steeper than the Phase III reduction rate of 1.74%. It is important that measures applied to small installations achieve the equivalent contribution to emission reductions as they would have, had they been in the EU ETS.
23. The equivalent contribution to emission reductions can be achieved by setting an annual emissions reduction limit for the small installations that decreases annually.
24. To ensure equivalence, the alternative measures would need to refer to targeted emissions reductions in absolute terms (as under EU ETS), rather than in terms of intensity.
25. The emissions reduction limits can be determined in different ways and Member States have often implemented different methodologies allowing installations to choose between options.

Option	Relevant considerations
Small installations are allocated annual emissions limits that gradually decrease to achieve the same reduction as would have been achieved under the EU ETS.	Annual linear reduction trajectories can be used. In this approach, all installations and sectors are treated in the same way.
Small installations are allowed to emit an amount of CO _{2e} equivalent to what their free allocations would have been under the EU ETS, as calculated by the national authority.	The competent authority needs to make an “allocation decision” to define the amount of emissions that installations can emit every year. This can be based on the same rules as in the EU-ETS. In this case, factors such as carbon leakage and benchmarks are taken into consideration. However, as small installations are excluded by the trading mechanisms, this approach is not recommended .

- 26. To build flexibility into an equivalent measure, it is possible to allow for a small installation that emits less than their annual emissions allocation or target in a given year, to “bank” those savings so that they can be used in future years.
- 27. Flexibility can also be built into an equivalent measure by allowing small installations to borrow up to a certain percentage of their annual emissions allocation from the next year, to be used in the current year, provided that the annual emissions allocation from the next year are reduced accordingly.

C.2 How to determine penalties in case of non-compliance?

- 28. It is important that there are penalties in place in case of non-compliance with equivalent measures, to ensure emissions reductions occur and therefore maintain the credibility of the system.
- 29. Based on the experiences of the Member States implementing the Article, a fee, per tonne of emissions by which the annual emissions limit was exceeded should be applied to the small installation, to be paid in the year following the reporting.
- 30. There are different options used by the Member States for the calculation of fees:

Option	Relevant considerations
A penalty fee based on the average price of emissions allowances (EUA settlement prices) over a certain period of time, such as one calendar year.	<p>This sort of penalty fee can take several shapes such as:</p> <ul style="list-style-type: none"> a. The fee is based on the average price of emission allowances (European Union Allowance (EUA) settlement prices) over the preceding year; b. Or, an average price is calculated over a one-year period for two preceding years, and of those two prices, the lower is selected. <p>These prices are based on the average volume-weighted auction price of auctions under section 8 in a year.</p>
A penalty fee determined independently of any average emissions allowances price, such as a static fine.	A penalty fee of this type offers more flexibility to the competent national authority to determine what they consider to be an adequate fine.

Option	Relevant considerations
	<p>Special attention would need to be attributed to this option to ensure that the level of penalty is set high enough to encourage compliance.</p> <p>It is also possible for the price of such a penalty fee to be determined in line with buying an equivalent amount of EU ETS allowances.</p>
<p>An obligation for the small installation to buy EU ETS allowances and surrender them to the competent national authority.</p>	<p>This type of penalty fee takes advantage of a mechanism that is already in place where the small installations pay for the amount of emissions they exceeded their limit by buying EU ETS allowances.</p>

C.3 Monitoring, reporting and verification systems

- 31. Member States need to ensure that monitoring arrangements are in place to assess whether any installation exceeds the 25,000 tCO_{2e} threshold, excluding emissions from biomass, in any one calendar year.
- 32. The use of a simplified portal or reporting tool(s) (compared to one used by installations in the EU ETS) can be used to submit the annual emissions to the competent authority.
- 33. It is not mandatory to monitor capacity reductions to adjust the emission reduction targets. It is a Member State’s decision as to whether this value is monitored.

C.3.1 What are the reporting obligations of the excluded installations?

- 34. Frequency of reporting can vary:

Option	Relevant considerations
<p>Small installations report their emissions annually</p>	<p>This is the most common approach among Member States. It allows for annual monitoring of compliance and any emissions reductions.</p>
<p>Small installations report either annually or every two years, depending on whether their emissions exceed a threshold.</p>	<p>Setting up a threshold for small installations well below the 25,000 tCO_{2e} limit could reduce the administrative burden for both the small installations and authorities, such as 15,000 tCO_{2e}.</p> <p>A longer reporting period (e.g. a two-year reporting period) is not suggested for small installations close to the threshold as this would weaken the identification of installations that have surpassed the 25,000 tCO_{2e} limit.</p>

- 35. Member States need to ensure that a Monitoring Plan is developed by the small installations. Monitoring plans can be simplified but still need to contain all the necessary elements as specified by the EU Regulation 601/2012.
- 36. Member States’ EU ETS reporting templates can be used for reporting emissions data from small installations. However, simplified reporting obligations may also be introduced to reduce administrative burden. For example, some implementing Member States did not require information such as the risk and uncertainty analysis, improvement report, and reporting on changes in production to be included.

Best practice from a member state experience – development of national monitoring and reporting templates for small installations

This is an example where simplified excel based templates have been developed by a Member State to be used by small installations to submit their monitoring plan and report their emissions annually.

A simplified Small Installation Monitoring Plan based on excel developed for small installations to monitor and quantify their GHG emissions provides the following information:

- Layout of the plant with identification of the flows of fuels / materials used and of the emission sources connected and indication of the use of biomass or mixed materials.
- Description of the monitoring methodology for each energy and emission stream;
- List of other necessary documentation such as fuel and material invoices, evidence of used parameters, etc.;
- Details on how it meets the principles of accuracy, comparability and continuous improvement;
- List of permits associated to the installations;
- Verifier's recommendations which are recorded in the template.

A simplified Annual Emission Report which requires the operator to report all the key information as set by the regulation, however with a simplified reporting mechanism, streamlined (with given templates and guidance) and lighter compared to the EU ETS MRV system. The workbook contains five main sections:

- **Identification of the installation** including NACE code, ID in national system, address, contact person, etc.;
- **Activities carried out on site**, including thermal power, purchased electricity and heat. For each activity the operator should include the NACE code, the type of product, the capacity (tonnes/day) and the production over the period. If relevant, information on biomass and other waste sources (i.e. type of biomass, amount used and emissions) should be reported;
- **Fuel flows of the plant** and any changes to the source of emissions or monitoring plan;
- **Emission from combustion** activities. In this section the operator can report up to five combustion fuels, and for each fuel the amount used, the calorific value, the emission factor and the oxidation factor shall be entered together with the source of information. The annual emission report template automatically calculates the emissions;
- A list of up to five **sources of process emissions**. As for the emissions from combustion section, information on the activities and emission factors shall be entered together with a reference to the source. The emissions are then automatically calculated within the template;

Emissions for all small installations are recorded in a National Register which is periodically updated and published on the Government website.

C.3.2 What are the monitoring and verification systems?

37. Emissions data submitted by excluded small installations should be monitored and verified to ensure that it complies with their emission limits and that the equivalent measure achieves an equivalent contribution to emissions reductions.
38. Implementing Member States have used different approaches for verifying the emissions of small installations. Some Member States have required that small installations have their emissions

verified externally, however, simplified verification systems can be adopted to reduce the administrative burden. Possible options are described below:

Option	Relevant considerations
<p>Maintain the same level of verification as in EU ETS</p> <p>Verification is carried out in-house by the competent authorities</p>	<p>Easier to implement, however will bring few, if any savings, to small installations.</p> <p>This approach does not require third party verification. It could result however in significant administrative burden being placed on the competent authorities. Member States should consider the possible costs based on the number of installations and other criteria. It might be considered only for smaller installations (see C.3.4) where the cost of verification for installations is high relative to their emission.</p>
<p>Off-site verification by an independent and nationally accredited verifier instead of on site visit verification.</p>	<p>This option has been applied by some of the implementing Member States.</p> <p>It still requires third party verification but, decreases the costs for the installations.</p>
<p>Self-verification of the annual emissions report.</p>	<p>This option could be offered to operators of small installations, although in this case, installations should enter a risk-based audit scheme carried out by the Competent Authority.</p> <p>It is worth assessing the level of confidence that operators have in their ability to self-verify before opting for his approach. This approach is not recommended as operators might not have the necessary experience and knowledge.</p>

39. Emissions reports need to be checked by competent authorities for compliance purposes.

C.3.3 How to ensure compliance with monitoring and reporting?

- 40. Compliance cycles need to be introduced to check that the operators comply with the system obligations. Non-compliance penalties must apply and be enforceable.
- 41. Most of the implementing Member States have set up auditing schemes carried out by the National Competent Authority to check compliance with monitoring and reporting. Generally, audits are selected on a random basis, however, a Member State can also design audit schemes which target particular cohorts.

Option	Relevant considerations
<p>Self-verification where installations with high risk criteria would get audited more frequently. A Member State might determine a number of installations or proportion that would receive an audit every year.</p>	<p>Self-verification will bring cost and admin savings to the installations; however, this system is likely to require a higher number of audits by the Competent Authority. If self-verification is highly used by installations and the Competent Authority sets a high target number of audits per installation, the burden on the local authority would be high.</p>
<p>Excluded installations with annual emissions above 20,000 tCO_{2e} are audited annually.</p>	<p>Most of the implementing Member States set more demanding monitoring requirements for installations which are closer to the 25,000 tCO_{2e} threshold. This approach is recommended as it limits the risk of no re-introduction if the emissions are above threshold.</p>

C.3.4 What are the simplified MRV processes for installations that emit under 5,000 tCO_{2e}?

- 42. Member States can establish simplified monitoring, reporting and verification measures for installations below 5,000 tCO_{2e} a year (hereafter smaller installations). Smaller installations often do not have the capacity or knowledge to comply with full MRV systems and use third party services, which raise the costs.
- 43. The following simplified MRV systems are used by some of the implementing Member States for the smaller installations:

Option	Relevant considerations
<p>The competent authority carries out verification of the emission reports with results communicated to the installations;</p>	<p>This approach would be applied to smaller installations, rather than the whole cohort to minimise the level of admin required by the national authority. If applied, Member States should provide guidance on the procedure, for example by developing a list of required evidence and documents to be submitted together with the emission report to allow the verification of emission.</p>
<p>Verification is desk-based, with site visits every certain number of years;</p>	<p>National authorities will not face higher admin cost and savings are achieved for smaller installations as the site visit for verification is required less frequently.</p>
<p>Verification is not required from the smallest installations however an off-site audit should be undertaken by accredited auditors</p>	<p>This option should be considered by Member States where verifiers might not be available.</p>

- 44. The possibility to use no standardised parameters can be agreed with the Commission together with a simplified monitoring plan and procedure.

45. For those smaller installations omitting to provide an emission report, the competent authority can estimate emissions for the year concerned. At the same time, a penalty for omitting to report should be enforced.

D Re-introductions

46. Article 27(1), subparagraph (c) states:

'(c) it confirms that if any installation emits 25 000 tonnes or more of carbon dioxide equivalent, excluding emissions from biomass, in any one calendar year or the measures applying to that installation that will achieve an equivalent contribution to emission reductions are no longer in place, the installation will be reintroduced into the EU ETS;'

47. Article 27(3) states:

'3. When an installation is reintroduced into the EU ETS pursuant to paragraph 1(c), any allowances issued pursuant to Article 10a shall be granted starting with the year of the reintroduction. Allowances issued to these installations shall be deducted from the quantity to be auctioned pursuant to Article 10(2) by the Member State in which the installation is situated.'

Any such installation shall stay in the EU ETS for the rest of the period referred to in Article 11(1) during which it was reintroduced.'

48. Excluded small installations cannot choose to re-enter the EU ETS during an ongoing phase, however, excluded installations will automatically re-enter the EU ETS from the beginning of the following calendar year if at any point during 2013-2020 they fail to meet the eligibility criteria for being excluded.
49. At the time of re-entry, the installation is required to fully comply with the requirements of the EU ETS and may be allocated free allowances at the level set out in the NIMs. This would include all possible changes to the NIMs historical activity levels (HAL), if applicable.
50. Hospitals should not be considered for re-entry if they exceed the opt-out threshold. There should, however, be an additional process for re-entry into the EU ETS when a hospital installation has ceased to provide hospital services.
51. It is recommended that a definition for hospital installations which can be opted-out is provided. For example, a hospital installation can be opted out providing that in any scheme year it exports no more than 15% of heat produced by the installation to an establishment other than a hospital.

E Common challenges in the implementation of Article 27

52. **Increased administrative burden for competent authorities.** If the alternative measure is implemented, competent authorities would have to operate both the opt-out and the EU ETS scheme, therefore, the costs to the competent authority will increase. Some Member States with smaller number of opted-out installations have noted disproportionately high increase in total administrative burden for competent authorities. However, Member States that have a larger number of opted-out installations have reported no or only a slight increase in total administrative burden. These Member States have stated that the benefit for the small installations has been reported to outweigh any increase in administrative burden, which were absorbed by the National Authority. Administrative burden and cost for competent authorities per installation is reduced with an increase in the number of opted-out installations, particularly if the procedure is streamlined with ad-hoc developed templates and simplifications in the MRV requirements.
53. **New approaches to MRV and compliance activities are needed in order to realise cost savings.** Some Member States have seen no or only limited reduction in administrative burden for small installations from their equivalent measure's MRV requirements. The extent of reduction in

administrative burden directly relates to the levels of simplification of MRV requirements (as discussed above). For example, Member States that have developed alternative MRV requirements to the EU ETS, have seen reductions in administrative burden on their small installations. In addition, the Member States also report a reduction in direct costs for their small installations, such as:

- a) Not having to open an account in the official register,
- b) Not having to pay associated annual management fees
- c) Reduced verification costs.

54. **No reward mechanism for meeting or exceeding their free allocation.** Small installations in some Member States have expressed that whilst they were interested in the possibility for being opted out of the EU ETS under Article 27, they did not wish to lose the opportunity to sell allowances if they could reduce their emissions below their free allocation. These allowances provide a possible income stream arising from the ability to auction any unused allowances. The equivalent measures implemented by Member States in Phase III may not provide such an obvious rewards mechanism for the installations that exceeded their equivalent allocations under an equivalent measure. The equivalent measures option may however be designed to reduce ongoing direct costs for the small installations (see above) that provide a benefit.
55. **Difficulties in implementing an alternative measure in the national legislation framework.** Some Member States have faced challenges in implementing an alternative measure. In particular, the national taxation system might create barriers to the introduction of an alternative measure. For example, if EU ETS installations were to lose exemptions from national carbon taxes by opting out, then the alternative measure would be less attractive.
56. **The time scale was too challenging.** Most Member States have described the timescale to implement an alternative measure as being challenging if a suitable existing system did not already exist, and in some cases not allowing the implementation of the measure.
57. **Carbon Tax implementation.** It is not recommended to implement a carbon tax as part of an equivalent measure as changing the national taxation system is likely to be a very lengthy process. Many Member States have implemented a penalty instead of a carbon tax which is imposed only where the installation exceeds the emission limits.



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