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COMMISSION STAFF WORKING DOCUMENT

Impact Assessment Report
Executive Summary

Accompanying the document

Guidelines on certain State aid measures in the context of Greenhouse Gas Emission Allowance Trading Scheme Post 2012

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Disclaimer

This report commits only the Commission's services involved in its preparation and does not prejudge the final form of any decision to be taken by the Commission

1. THE CONSULTATION WITH INTERESTED PARTIES

The European Emissions Trading (ETS) Directive **("ETS Directive")**[1] envisages the possibility for Member States to provide State aid to compensate for higher electricity costs due to the ETS ("indirect CO2 costs")[2].

On 11 March 2011 the Commission launched the public consultation on a new set of State aid rules in the context of the EU ETS **("ETS Guidelines")**.

This Report is confined to State aid for "carbon leakage" due to indirect CO2 costs[3]. Carbon leakage occurs where costs imposed on EU firms by the ETS cause shifts of production, investments not to be undertaken or even relocation from the EU to third countries without comparable constraints in a way that results in a global increase in CO2 emissions[4].

Some 140 stakeholders responded to the Questionnaire which focused on the issues of sector eligibility, the aid intensity and the CO2 emission factor of electricity production.

The Report also takes account of the consultation on a draft version of the ETS Guidelines (opened on 21 December 2011and closed on 31 January 2012), as well as a meeting with the Member States on 20 January 2012.

The impact assessment was presented to the Impact Assessment Board on 9 November 2011. The Board issued its first Opinion on 11 November. The Board issued its second Option on a revised impact assessment on 20 April 2012.

2. THE PROBLEM

2.1. The problem: carbon leakage due to indirect CO2 costs and related uncertainties

The ETS Directive set up the ETS with effect from 1 January 2005. ETS 1 was in force 2005-2007 and ETS 2 will last four years (2008-2012). ETS 3 will last for eight years (2013-2020).

The ETS Directive[5] provides for protection EU sectors and subsectors "at significant risk of carbon leakage" due to CO2 costs resulting from the ETS. In that context, he Directive explicitly envisages that Member States may decide to grant State aid to firms within sectors and subsectors at significant risk of carbon leakage due to the higher CO2 costs (“**indirect CO2 costs”)**.

[1] Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC; OJ L 275, 25.10.2003, p. 32, as subsequently amended.

[2] Recital 27 of Directive 2009/29/EC of the European Parliament and of the Council of 23 April 2009 amending Directive 2003/87/EC so as to improve and extend the greenhouse gas emission allowance trading scheme of the community, OJ L 140, 05.06.2009, p. 63, and Article 10a(6) of the ETS Directive, as amended.

[3] The ETS Guidelines will also define the compatibility criteria for other measures in the ETS Directive that involve as follows: (i) investment aid to new high efficient power plants, including those that are CCS-ready; (ii) transitional free allowances to power generators for the modernisation of electricity generation in EU-10 and (iii) exclusion of small emitters from the EU ETS subject to equivalent measures.

[4] The ETS Directive has been extended to the EEA, through the mechanisms of the EEA Agreement. Thus references to EU also encompass the EEA.

[5] ETS Directive, p.63.

The carbon leakage literature does not find empirical proof of carbon leakage. The lack of empirical evidence of carbon leakage does not mean that there may not be any effects over the longer term, especially given the greater stringency of the ETS during 2013-2020.

The carbon leakage literature also draws attention to a **severe lack of data** sources at both EU and national level that would be needed to better assess risks of carbon leakage[6].

To address the problem of carbon leakage due to indirect CO2 costs the ETS Guidelines will need to: a) define and apply criteria to determine eligible **sectors and subsectors** and b) define criteria to fix **the maximum amount of aid** a Member State may grant in respect of any particular installation.

The requirement in Article 10a(6) that aid by Member States must comply with the "state aid rules applicable" means that they must respect the specific legal basis of the envisaged Guidelines, namely Article 107(3) of the Treaty on the Functioning on the European Union (TFEU)[7].

State aid for indirect CO2 costs is not linked to a new investment but **operating aid**. Operating aid relieves undertakings of day-to-day costs that they would normally bear without requiring a counterpart such as an investment that would not have been undertaken without the aid. When the Commission – exceptionally - authorises operating aid it normally requires that the aid be degressive over time and does not cover all the costs.

2.2. Pass on of CO2 costs and the CO2 price

Electricity producers were able to pass on most of those costs during ETS 1 (2005-2007) and so far during ETS 2 (2008-2012). They are widely expected to do so again during ETS 3 (2013-2020)[8].

The considerable uncertainties as to the future CO2 price justify recourse to sensitivity tests using different price assumptions. Assumptions of €10, €20 and €40 are applied in addition to the basic assumption of €30.

2.3. The ability of EU sectors to pass on indirect CO2 costs to downstream clients or customers

Even assuming that all indirect CO2 costs (i.e. the CO2 price) are passed on by electricity producers a significant carbon leakage risk – as defined by the ETS Directive – is only deemed to exist to the extent that the EU sector cannot pass on those indirect CO2 costs to downstream clients or customers without losing significant market share to third country competitors.

2.4. The wider EU policy context

The core EU policy context consists of the **EU's Climate and Energy Package** as laid down by the European Council in March 2007. The ETS Directive (as amended in 2009) is a core component of that policy which lays down two binding targets to be achieved by 2020, in particular a reduction of CO2 emissions by 20% from the emissions level in 1990

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6 Recent carbon leakage literature (Cambridge Econometrics (2010)) has strongly recommended "that both Member States and EU statistical agencies improve the quality and richness of the data required to make assessments of carbon leakage. In some cases key economic data are found to be severely lacking".

7 This is consistent with recital 49 of Directive 2009/29/EC which provides that measures adopted under that Directive shall be without prejudice to State aid rules.

8 The pass-on assumption is built into the 2011 Benchmarking Decision (see recitals 31-32).

3. THE OBJECTIVES

The general objective is for the Commission to adopt, under the State aid provisions of the TFEU (Article 107(3)(c)), Guidelines for the assessment of State aid for indirect CO2 costs arising in the context of ETS 3.

The specific objectives are to prevent carbon leakage, maintain the efficiency of the ETS and to minimise distortions on the internal market

The ETS Guidelines are not self-executing. The Member States will thus be enabled to operationally address problems of carbon leakage occurring within their jurisdiction in a manner with maintains ETS efficiency and minimises distortions in the internal market.

4. OPTIONS

4.1. Baseline Scenario

Absent the envisaged ETS Guidelines, Member States would not be able to grant the type of aid foreseen by the ETS Directive. Save for compensation up to the *de minimis* threshold (i.e. €200,000 per undertaking per three-year period) laid down by EU State aid rules for that type of aid[9].

The Baseline Scenario is a "zero aid" scenario considering that so far no Member State is or has so far been granting aid to reduce carbon leakage in view of the State aid rules currently in force.

4.2. Eligibility and the maximum aid amount

A first set of options (Options A1, A2, A3 and A4) contains criteria to define **eligible sectors or subsectors**.

Three further sets of options (Options B1-B4, C1-C3, D1 and D2) concern the determination of **the maximum amount of State aid** that a Member State may grant in favour of an installation which is active in one of the eligible sectors or subsectors.

4.3. Option Packages

Any combination of the four A, four B, three C and two D options is possible. But to enhance the transparency of the Report and facilitate the comparison of the options a limited number of combinations are bundled into **Option Packages**.

5. IMPACTS UNDER THE FOUR OPTION PACKAGES

The **Maximalist Package prevents carbon leakage risks to the maximum extent**. **Accordingly, it comprises Options A1** (151 sectors and 13 subsectors); **B1** (100% and stable aid intensity); **C1** (regional CO2 factors) and **D1** (aid based on actual output). The Package tends on the whole to address inter rather than intra-sector distortions. Its impacts can be summarised as follows:

[9] Commission Regulation (EC) No 1998/2006 of 15 December 2006 on the application of Articles 87 and 88 of the Treaty to de minimis aid, OJ L 379 of 28.12.2006, p. 5.

	Minimising carbon leakage	Maintaining ETS incentives	Minimising internal market distortions
Sector coverage	Positive	Negative	Neutral
Aid intensity	Positive	Negative	Neutral
CO2 factor	Positive	Negative	Neutral
Eligible Output	Positive	Negative	Neutral

The **Minimalist Package aims at maximising the ETS efficiency objective**. It comprises Options **A2** (five sectors); **B4** (less than 100% and degressive aid intensity); **C2** (CO2 factor: 0.465 CO2 t/MWh) and **D2** (historical output). The Package tends on the whole to address intra rather than inter-sector distortions. Its effects can be summarised as follows:

	Minimising carbon leakage	Maintaining ETS incentives	Minimising internal market distortions
Sector coverage	Negative	Positive	Neutral
Aid intensity	Negative	Positive	Neutral
CO2 factor	Negative	Positive	Neutral
Eligible output	Negative	Positive	Neutral

The **First Intermediate Package** comprises Options **A3** (14 sectors and two sets of subsectors); **B2** (100% and degressive aid intensity); **C1** (regional CO2 factors) and **D2** (historical output). The Package's qualitative approach specifically attempts target the sectors and subsectors at greatest risk of carbon leakage, while maintaining as far as possible the efficiency of the ETS. The Package is broadly neutral as far as intra and inter-sector distortions are concerned. Its effects can be summarised as follows:

	Minimising carbon leakage	Maintaining ETS incentives	Minimising internal market distortions
Sector coverage	Positive	Positive	Neutral
Aid intensity	Negative	Positive	Neutral
CO2 factor	Positive	Neutral	Neutral
Eligible output	Negative	Positive	Neutral

The **Second Intermediate Package** comprises Option **A4** (35 sectors); **B3** (less than 100% and stable aid intensity); **C3** (CO2 factor: 0.75 CO2t/MWh) and **D1** (actual output). The Package principally focused on reducing carbon leakage risks while preserving to some extent the incentives of the ETS. It tends to address inter rather than intra-sector distortions. Its impacts can be summarised as follows:

	Minimising carbon leakage	**Maximising ETS efficiency**	**Minimising internal market distortions**
Sector coverage	Positive	Negative	Neutral
Aid intensity	Neutral	Neutral	Neutral
CO2 factor	Neutral	Positive	Neutral
Eligible Output	Positive	Negative	Neutral

6. COMPARISON OF THE OPTION PACKAGES

In terms of **effectiveness** the Packages rank – after a first step of analysis - as follows: 1st Intermediate Package with a net positive score of (3). The 2nd Intermediate Package obtains a net positive score of (1) with zero scores (0) for the other two Packages. The ranking rests on the following scoring system: a positive impact equals one net positive score and a negative impact equals one net negative score. A neutral impact equals a score of zero.

All internal market distortion scores are zero. This reflects the inevitable trade-off between minimising the risks of intra-sector distortions versus inter-sector distortions (as appears from Section 5 above).

The **efficiency** comparison reinforces the top rankings. The ideal Option Package achieves the objectives (effectiveness) at lowest administrative and economic cost (efficiency). Efficiency (in the sense of cost effectiveness) is measured qualitatively in two steps.

First, potential administrative burdens under the Packages affect their cost-effectiveness. The Minimalist Package entails the lowest administrative burdens. The other three Packages entail the same administrative burden.

Second, the relative efficiency of the Packages needs to be compared based on their contribution towards the carbon leakage and ETS incentive objectives.

The most efficient Package minimises the inevitable trade-off between carbon leakage and ETS efficiency.

The First Intermediate Package comes closest to that ideal. That Package pinpoints the sectors based on a targeted and more comprehensive assessment (compared to the purely quantitative or mechanical approach used in the other three Packages).

The design of the First Intermediate and Minimalist Packages preserve the CO2 price signal to the greatest extent feasible compared to the other two Packages. That comparative efficiency results from the aid taking the form of a fixed amount per time period based on a historical baseline (save for significant changes in capacity). The mode of allocation of compensation – whatever the form of the subsidy – is fundamental to the efficiency of a cap and trade system.

The First Intermediate Package was also found to be most **coherent** with the EU's core policy framework. The ETS Directive is the pillar of the core EU policy framework. That framework also includes – in particular – two key Commission Decisions pursuant to the ETS Directive, namely the 2010 Carbon Leakage Decision and the 2011 Benchmarking Decision.

In summary, **the First Intermediate Package performs the best of all Packages**, notably by minimising the trade-off between carbon leakage risks and the maintenance of ETS efficiency.

7. MONITORING AND EVALUATION

The ETS Guidelines are adopted under the State aid rules of the Treaty. This means that all Member States that adopt aid schemes covered by the ETS Guidelines shall submit annual reports on such schemes to the Commission.

The ETS Guidelines form part of a wider regulatory framework under which monitoring and evaluation already takes place or will take place in the near future.

Under the ETS Directive, Decision 2010/2/EU which concerns compensation for direct CO2 costs must be reviewed by end-2014. To this end, much data will be collected that will be relevant in connection with a possible review of the ETS Guidelines.