

# **Impact Assessment Institute**

The Institute for Impact Assessment and Scientific Advice on Policy and Legislation

“Impartial Analysis for Policy Making”

**Report on the**  
**“IMPACT ASSESSMENT**  
**Accompanying the document**  
**Proposal for a Directive of the European Parliament and of the**  
**Council**  
**amending Directive 2003/87/EC to enhance cost-effective**  
**emission reductions and low carbon investments”**  
**SWD (2015) 135**

February 2016

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### **Main findings**

The IAI scrutinised the Impact Assessment accompanying the legislative proposal on the revision of the Emissions Trading System for the post-2020 period.

The analysis in this Impact Assessment is based substantially on earlier Climate & Energy Impact Assessments, for which the IAI identified a critical lack of transparency of the analysis. In particular, evidence behind the 40% GHG reduction target for 2030, derived from the proprietary PRIMES model, is not available for scrutiny and cannot be verified.

The consequence of the lack of transparency is that the following elements of the ETS package are called into question due to the uncertainty in the economic implications of the reduction target:

- The proposed linear reduction factor in the allowance cap of 2.2%, which is derived directly from the 40% GHG reduction figure.
- The carbon-leakage provisions for calculating the number of free allowances, whose analysis depends on the economic effects of the GHG reduction figure.
- The efficacy of provisions on low-carbon funding mechanisms that are dependent on economic effects.

In addition to the above, the option package for free allocation selected for the legislative proposal was not explicitly analysed in the Impact Assessment. This analytical gap denies stakeholders the possibility to analyse the specific evidence and rationale behind the chosen legislative approach.

In conclusion, the lack of transparent evidence behind the underlying figures casts doubt on the efficacy of the Impact Assessment's numerical analysis, conclusions and the relevance to the provisions of the legislative proposal. To generate the necessary confidence in the proposed policy provisions, a full and transparent reanalysis of the underlying data would be required.

## Accompanying statement

This report has been written according to the guiding principles of the Impact Assessment Institute: transparency, objectivity, legitimacy and credibility. It therefore analyses the subject matter critically from a purely factual and scientific point of view, without any policy orientation. In respecting these principles it has been compiled following its written Study Procedures<sup>1</sup>.

The analysis is open to review and criticism from all parties, including those whose work is scrutinised. Contacts with all relevant parties are recorded to ensure transparency and to guard against “lobbying” of the results.

By its nature the report has a critical characteristic, since it scrutinises the subject document with its main findings entailing the identification of errors, discrepancies and inconsistencies. In performing this work, the intention of the report is to be constructive in assisting the authors of the subject document and its background information as well as all relevant stakeholders in identifying the most robust evidence base for the policy objective in question. It should therefore be seen as a cooperative contribution to the policy making process.

This report is also to be considered as a call for additional data. Peer review (Annex I) is an essential step laid down in the procedures of the Impact Assessment Institute and this is manifested in the openness to further review and to identify new data. Even at publication of the final version, the report explicitly requests additional data where the readily available data was not sufficient to complete the analysis.

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<sup>1</sup> “Procedures for Conduct of Studies”, Impact Assessment Institute, December 2015 (<http://www.impactassessmentinstitute.org/#!procedures/c1q8c>)

## Additional data requested

Repeating the request detailed in the IAI's study<sup>2</sup> on the Climate & Energy and Energy Efficiency Impact Assessments SWD (2014) 15 and SWD (2014) 255, detailed information on the inputs, mechanism and outputs of the PRIMES model and associated scenarios are requested from the European Commission:

- Full set of relevant numerical input parameters to the PRIMES model for each scenario in both the 2030 Impact Assessment and the Energy Efficiency Impact Assessment, for the 2030 and 2050 timeframes.
- Full set of raw outputs for all scenarios.
- Comprehensive and comparable explanation of the conditions underlying all scenarios.
- Full explanation of how the underlying scenario conditions translate into the numerical input parameters to the model.

In addition, specifically for the Impact Assessment of the ETS revision, the following additional data is requested from the European Commission:

- In order to provide transparency for this important legislative dossier, full access to and disclosure of the details and algorithms of the underlying model is essential, specifically the PRIMES energy model.
- An explicit evaluation of the selected option package for free allocation (see Section 1.2.2).

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<sup>2</sup> 'Report on transparency, consistency and feasibility in the Impact Assessments accompanying the European Commission Communications SWD (2014) 15 and SWD (2014) 255', the Impact Assessment Institute, 14<sup>th</sup> December 2015.

## Visualisation

The following table provides a visual overview of the results of this report for each element of the evidence presented in the Impact Assessment, using an assessment from 1 to 7 to indicate the level of confidence (1 = highest, 7 = lowest confidence level).

Element	Assessment level & description (1...7)	Notes
Rhetoric	2 Minor questions identified on analysis and/or evidence	The language used is generally neutral and refers to the existing facts and evidence
Assumptions	3 Several questions identified on analysis and/or evidence	The assumptions are consistent with existing work, but are contested by a number of stakeholders
Background data	6 Serious concerns identified with analysis and/or evidence	The background data is not transparent due to the use of a proprietary analytical model and lack of information about the inputs and outputs of the model
Analysis	6 Serious concerns identified with analysis and/or evidence	Notwithstanding the concerns of the background data, the analysis did not include an assessment of the selected option proposal for a key element of the legislation
Results	6 Serious concerns identified with analysis and/or evidence	Given the concerns with the background data, the results cannot be scrutinised and independently verified, calling into question their validity
Conclusions	6 Serious concerns identified with analysis and/or evidence	The conclusions of the Impact Assessment are based on intransparently generated results and thereby do not provide a sufficient basis for public policy making in this case

### Key to assessment levels

1	2	3	4	5	6	7
Correct analysis, fully evidenced	Minor questions identified on analysis and/or evidence	Several questions identified on analysis and/or evidence	Concerns identified with analysis and/or evidence	Substantial concerns identified with analysis and/or evidence	Serious concerns identified with analysis and/or evidence	Incorrect analysis / evidence absent

## 1 Report on the content of the Impact Assessment

The legislative proposal on the revision of the Emissions Trading System for the post-2020 period<sup>3</sup> (ETS post-2020) follows on from the European Commission communications on Climate & Energy<sup>4</sup> and Energy Efficiency<sup>5</sup> policy to 2030. The Impact Assessment for the ETS post-2020 legislation (ETS post-2020 IA) is based to a great extent on the results of the Impact Assessments of the Climate & Energy and Energy Efficiency policy communications (Climate & Energy IAs).

The Impact Assessment Institute (IAI) published its study on the Climate & Energy IAs on 14<sup>th</sup> December 2015. The IAI study concluded that the evidence for the results attained in the Climate & Energy IAs is not fully transparent. Specifically, the inputs, outputs and inherent analysis of the mathematical modelling, including amongst others the PRIMES model, were not explicitly published, preventing interested stakeholders from reproducing the results and performing alternative scenario analysis.

This subsequent study, analysing the ETS post-2020 IA, identifies a number of consequences for the ETS post-2020 legislation arising from the IAI analysis of the Climate & Energy IAs. A material lack of transparency was identified in the Climate & Energy IAs. This finding is now escalated from the level of policy discussion and strategy to an actual legislative measure with concrete outcomes. The information presented thus does not allow a full assessment of the quality and robustness of the ETS post-2020 IA.

### 1.1 Linear reduction factor

In the ETS post-2020 proposal, the linear reduction factor in the cap of allowances for 2021 onwards has been increased from the current 1.74% to 2.2%. It was determined in the ETS post-2020 IA that this increase was necessary in order to reach the targeted GHG reduction by 2030 in the included sectors of 43% that had been presented in the Climate & Energy communication and IA. The validity of the 2.2% linear reduction factor is fully dependent on the robustness of the 43% figure as the appropriate policy goal. This figure in turn forms part of the selected GHG40 policy scenario, presented in the Climate & Energy IAs.

The IAI report on the Climate & Energy IAs concluded that the modelling evidence has not been transparently presented. This leads to the conclusion that the GHG40 scenario, the 43% ETS target and therefore the 2.2% linear reduction factor are not supported by transparent evidence. The evidence available is therefore not sufficient to substantiate the 2.2% factor as the appropriate level of ambition.

<sup>3</sup> "Proposal for a Directive of the European Parliament and of the Council amending Directive 2003/87/EC to enhance cost-effective emission reductions and low carbon investments" COM(2015)337, European Commission, 15<sup>th</sup> July 2015.

<sup>4</sup> "Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: A policy framework for climate and energy in the period from 2020 to 2030" COM(2014)15, European Commission, 22<sup>nd</sup> January 2014.

<sup>5</sup> "Communication from the Commission to the European Parliament and the Council: Energy Efficiency and its contribution to energy security and the 2030 Framework for climate and energy policy" COM(2014) 520, European Commission, 23<sup>rd</sup> July 2014.

## 1.2 Auction share, free allocation and carbon leakage provisions, indirect carbon costs

The provisions on auction share, free allocation and indirect carbon costs have been implemented with the objective to avoid an inordinate burden on industries which may be subject to carbon leakage. The higher the cost of compliance with the cap, the greater the risk of carbon leakage.

As indicated in Section 1.1 above, the modelling evidence, on which the parameters such as ETS price and total system costs rest, has not been fully presented in the Climate & Energy IAs. The ETS post-2020 IA presents no new evidence in this respect, relying fully on the results of the Climate & Energy IAs. It is therefore not possible to verify whether the ETS price and total system cost figures correspond appropriately to the proposed provisions for auction share, free allocation, indirect carbon costs and low-carbon funding mechanisms.

### 1.2.1 Amended criteria for determining sectors at risk of carbon leakage

The key economic factors relating to carbon leakage and the main justification for free allocation are compliance costs and possibilities for cost pass through, as assessed in Section 7.5.3 of the ETS post-2020 IA.

The replacement of cost intensity by emissions intensity in all options except the 'continuity of Phase 3 conditions', is applied in order to "...help avoid a recurrent debate on which carbon price to use...", as described in Annex 5.2.2 of the ETS IA. However, the conversion of cost intensity into emissions intensity uses the implied ETS allowance price of €25/tCO<sub>2</sub> (as indicated for example in Annex 5.2.2 and Annex 7.5), which is a decision that itself could equally be recurrently debated. The rationale for the use of the €25/tCO<sub>2</sub> figures is alluded to in the ETS post-2020 IA (e.g. on page 180 as the "...expected average carbon price in phase 4...") but the reasoning is not explicitly presented.

As argued in Section 1.2 above, since the underlying evidence for has not been fully presented in the Climate & Energy IAs, it is not possible to scrutinise effectively the resulting calculation of allowance prices nor therefore to verify the most effective parameters for determining the at-risk sectors.

### 1.2.2 Option packages for free allocation

A number of packages of options for addressing the risk of carbon leakage (CL) were assessed in the ETS post-2020 IA. In particular, these include different options for the definition of carbon leakage groups, their criteria and cost pass-through rates (summarised in Section 7.4).

Two options for thresholds for determining risk of carbon leakage are considered:

1. Thresholds for either emission or trade intensity or a combination of both (with emissions intensity replacing the cost intensity used in the current ETS phase)
2. A single threshold based on the product of emission intensity and trade intensity

Three options exist for the number of carbon leakage groups:

1. No groups
2. 2 groups (CL-exposed and non CL-exposed)
3. 4 groups (very high, high, medium and low risk)

The table below shows the options evaluated in the Impact Assessment for each of the packages (●) comparing with the current rules (●) and with the method applied in the legislative proposal (●).

Thresholds	Thresholds based on cost/emission intensity and/or trade intensity.	Thresholds based on emission intensity multiplied by trade intensity
<b>Groups</b>		
No groups	● (Simple)	
2 groups: <ul style="list-style-type: none"> <li>• 100% - CL-exposed;</li> <li>• 30% - non CL-exposed</li> </ul>	<ul style="list-style-type: none"> <li>● Current rules</li> <li>● Baseline B</li> <li>● Baseline B bis</li> </ul>	● Proposal
4 groups by leakage risk: <ul style="list-style-type: none"> <li>• 100% - very high;</li> <li>• 80% - high;</li> <li>• 60% - medium;</li> <li>• 30% - low.</li> </ul>	● Limited changes	● Targeted

This simple representation highlights that the package put forward in the legislative proposal (●) was not specifically analysed in the ETS post-2020 IA. It is similar to the “Targeted” package, having the same single threshold value based on the product of emission intensity and trade intensity, but using two groups instead of four.

This lack of specific analysis of the eventually selected option significantly reduces the transparency of the evidence base for the ETS post-2020 proposal. This is combined with the absence of a fully comprehensive presentation of the evidence for the underlying GHG reduction target in the Climate & Energy IAs setting the policy framework. The analysis in the ETS post-2020 IA of the specific package that is actually reflected in its legislative proposal does not follow from the presented evidence base. Stakeholders are therefore not in a position to assess fully the reasoning behind the policy decision.

### 1.3 Low carbon funding mechanisms

The policy options assessed for innovation support, the modernisation fund and for modernisation of the energy systems in lower income Member States involve economic decision making, since they each include provisions for the allocation of allowances for these purposes. However, the lack of transparent presentation of the underlying evidence in the Climate & Energy IAs (as stated in Section 1.2 above) prevents validation of the projected value of the allowances and therefore the expected economic effect of the policy provisions.

The ETS post-2020 IA and the legislative proposal define a total of 450 million allowances devoted to innovation support, 2% set aside for the modernisation fund and free allocation to the electricity generation sector in low income Member States. These have an economic value, which is dependent on the allowance price. However, the assumed price is not explicitly stated in the relevant parts of the text. The range €10 -25 is suggested in the context of the modernisation fund (explicit or implied in footnotes on pages 54 and 60). This in itself is a large range and in addition the allowance price is likely to change over time,



reaching €40 by 2030 according to the GHG40 scenario in the Climate & Energy IAs. In turn the €40 itself is subject to uncertainty due to the lack of transparency of the underlying modelling.

Given the high uncertainty around the allowance price, the economic value of the underlying allowances is also highly uncertain. This prevents an accurate evaluation of the impacts.

## 2 Transition to the system of delegated and implementing acts ('Lisbonisation')

In addition to analysing the ETS post-2020 IA, the Impact Assessment Institute has also investigated the provisions in the legislative proposal for transitioning to the system of delegated and implementing acts, known as Lisbonisation. This is included in the study since that secondary legislation will contain important provisions that are themselves based on evidence already presented or to be presented, potentially requiring further scrutiny.

The provisions in the legislative proposal for transitioning to the system of delegated and implementing acts are found to be consistent and comprehensive.

In the legislative text, one small clarification is necessary. On page 25 of the legislative proposal, the amendment for Article 24a includes a reference to Article 11b(7). However, Article 11b(7) is deleted according to page 23 of the legislative proposal. This appears to require some clarifying words, since in the consolidated text will therefore include a reference to Article 11b(7) without the Article existing in the text.

Continued monitoring of the secondary legislation is to be undertaken as a follow-up to this study.

### 3 Conclusion

The ETS post-2020 IA is predicated on the evidence base that was presented in the Climate & Energy IAs. Since the publication of those latter Impact Assessments, further institutional debates have resulted in the political decision to endorse a 40% GHG reduction target and consequently the 43% reduction target for the ETS sectors.

This study shows that the lack of transparency identified in the evidence base for EU Climate and Energy policy is fundamental to the concrete legislative initiatives that are derived from it. The analysis that underpinned the strategic policy choices is now carried over into an actual legislative proposal, with the consequence that the lack of transparency in the data is also carried over. Without further action to present the underlying data more comprehensively, this will also be the case for future initiatives in the Climate and Energy Policy domain.

The lack of full transparency diminishes the confidence that stakeholders may have in the process, since they are not in a position to reproduce or test the evidence fully. In particular, subsequent decisions taken by the Council of Ministers and European Parliament might have effects different than those that they presume based on the analysis presented by the Commission. Last, but not least, there is a risk of choosing policy and regulatory options that are not sufficiently effective or efficient in meeting key EU policy objectives, in contradiction to the principles and expectations of Better Regulation.

*Annex I: Response to peer review and interactions with stakeholders*

The draft version of this study was sent to involved European Commission services, affected industry associations and interested non-governmental organisations on 18<sup>th</sup> December, giving the option to participate in a five-week peer review.

A number of the organisations contacted acknowledged the study. No substantive comments were received on the content and no changes were made in response to the acknowledgements.