

INITIAL ASSESSMENT OF NATIONAL ALLOCATION PLANS FOR PHASE II OF THE EU EMISSION TRADING SCHEME

Summary – Please do not quote without reference

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Summary

The EU Emission Trading Scheme (EU ETS) is a central part of climate change policy in the European Union (EU). Successfully introduced in 2005 it has now arrived at a critical stage: The EU Commission has to make vital decisions regarding the proposed National Allocation Plans (NAPs) from Member States for Phase II of the scheme, which will run from 2008 to 2012. These decisions will have a huge impact on the working of the market and the environmental impact the scheme will have.

Ecofys has conducted an initial assessment of the NAPs for Phase II of the EU ETS. The assessment was based on draft and notified versions of NAPs¹ from 18 out of 25 EU Member States plus Romania and Bulgaria who will join the scheme from 2007. Thus the assessment covers 97 % of 2005 ETS sector emissions in the 27 countries.

The focus of the assessment is on the level of the ETS cap and how it compares to the virtual Kyoto target for the ETS sector and the projections of Business as Usual (BAU) developments. Progress towards Kyoto is important, because the EU ETS is potentially one of the most important policies for the EU and the EU Member States to meet the Kyoto target in a cost-effective way. The size of the cap relative to the BAU development is important, because it is an indicator for the shortage and thus the required abatement.

Cap compared to Kyoto target

To assess the level of the proposed caps for EU ETS sector participants in Phase II in comparison to the Kyoto target for a country a “virtual Kyoto commitment” is calculated for the EU ETS sector in each Member State. This calculation is based on the key assumption that the ETS sector will make an even contribution to meeting the Kyoto target as other sectors and gases in the economy.² The *virtual Kyoto commitment* provides a useful indication of the extent to which Member States intend to use the EU ETS to move towards their Kyoto target. Next to the EU

¹ In the figures it is indicated for every Member State whether a draft or notified version was assessed. This assessment does not include the NAPs of Denmark, Slovenia, Estonia, Latvia, Lithuania, Malta and Cyprus.

² This may not be the case if, for example, non-CO2 greenhouse gases outside the ETS are reducing faster than emissions within the ETS, or conversely if emissions from other sectors of the economy (e.g. transport) are growing faster than the ETS sector. These two effects cancel each other out to some extent, but the picture can still be distorted.

ETS one must also consider the possible use of the Kyoto mechanisms by governments (i.e. Joint Implementation (JI), Clean Development Mechanism (CDM) and International Emissions Trading).

Figure 1 gives an overview of Member State proposed EU ETS caps in 2008-2012 compared to the *virtual Kyoto commitment*. The cap is indicated by a red dot while the horizontal line represents the *virtual Kyoto commitment*. If the red dot is higher than the virtual Kyoto commitment line, efforts in the ETS under the cap may be insufficient to meet the virtual Kyoto commitment.

Following the country label on the graph axis it is indicated whether a draft (d) or notified (n) version of the NAP was assessed. Note that new versions of NAPs are often published when Member States notify their NAP to the European Commission³ and NAPs may also change after the Commission decision which is likely to change the picture for some individual countries significantly.

Assessment of the proposed EU ETS caps of Austria, Belgium, France, Germany, Italy, Luxembourg, the Netherlands, Portugal and Spain suggests that they are less strict than would be required if these ETS sectors were to make an equal contribution to meeting country Kyoto targets as other sectors of the economy. This comparison however does not include Government level use of the Kyoto Mechanisms, which in some cases is expected to be significant.

³ Proposed caps for Italy, Portugal and Romania have been increased since this initial assessment by 13 Mt in total.

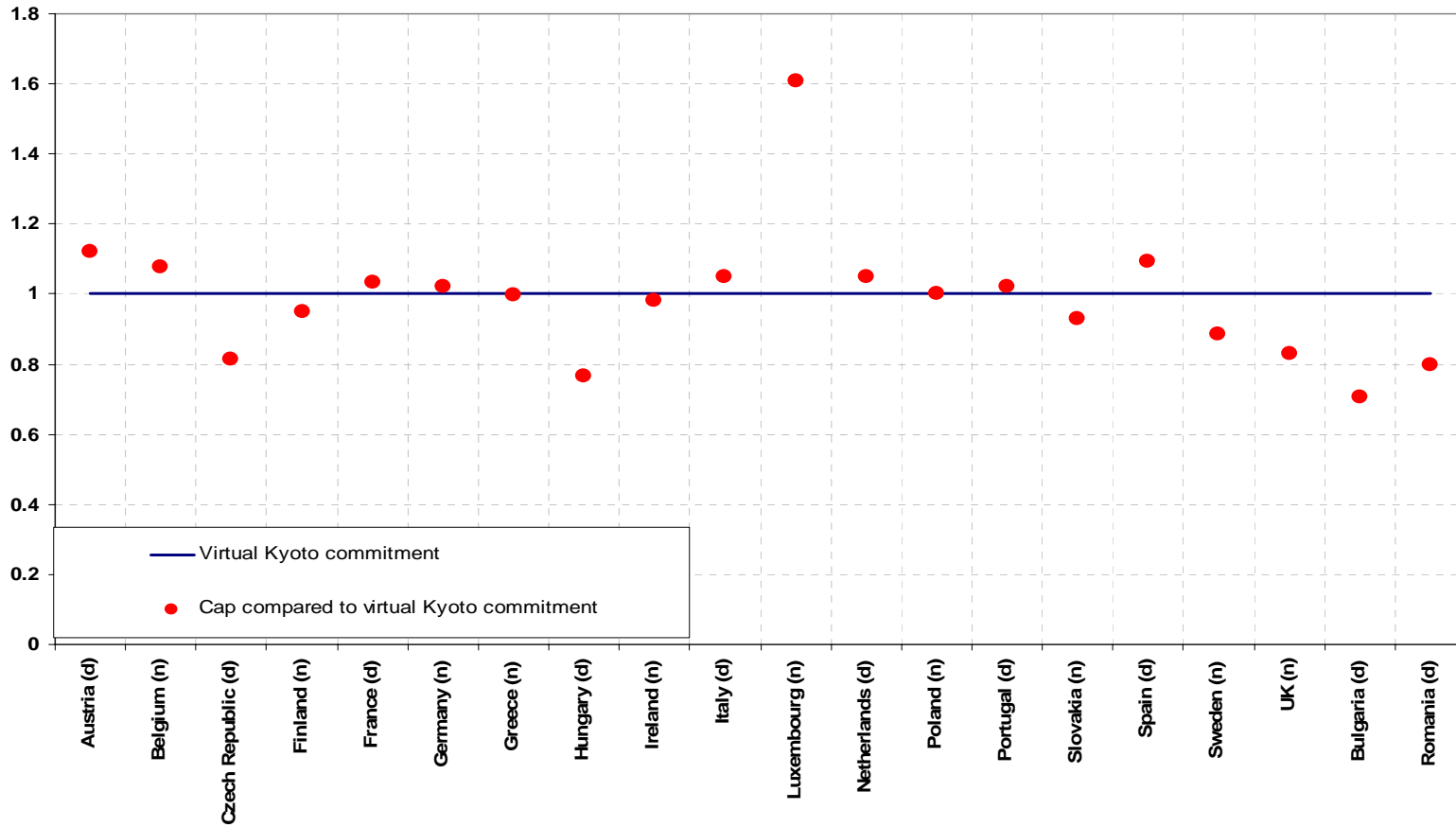


Figure 1 Proposed caps compared to *virtual Kyoto commitment*

Allowance shortage

The likely allowance shortage in Phase II can be assessed by comparing proposed Phase II caps to BAU emissions, i.e. the emissions that were likely to occur in the absence of the EU ETS. In this evaluation the caps are compared to two different indicators for each Member State:

- The **official projection of BAU emissions of the EU ETS participants** in 2008-2012 as given by most Member States in their NAP⁴;
- An **independent estimate of BAU emissions for EU ETS participants** in 2008-2012, based on own estimates, verified 2005 emissions data and sector level emissions projections from PRIMES 2005⁵.

Official BAU projections can usually be derived from the NAPs. Official BAU projections for the ETS sector for Czech Republic, Germany, Italy and Spain could not be directly taken from their NAP, but had to be calculated based on other official data.

Figure 2 gives an overview of the absolute level of proposed EU ETS caps in 2008-2012, the official BAU emission projections and the independent estimate of BAU emissions in the same period.

Figure 3 gives an overview of the relative level of proposed EU ETS caps and the official BAU emission projections in 2008-2012 compared to the independent estimate of BAU emissions in the same period. The cap is indicated by a red dot while the horizontal line represents the independent estimate of BAU emissions. The official BAU emission projections are indicated by the horizontal bar. The figure should be read as follows:

⁴ It must be noted here that Member States differ in their approach to BAU calculation (and in fact in the extent to which they carry out projections at all). Data quality and the transparency of the calculations differ between countries. Importantly also the number of policies and measures already included in a “with policies and measures” BAU scenario differ between Member States due to national historical differences in the design and implementation of climate change policies. These factors must be borne in mind when directly comparing BAU figures. The number of policies and measures included in the “with measures” BAU scenario is very important to consider when comparing the Netherlands and Poland for example.

⁵ PRIMES projections were chosen due to the fact that they provide a consistent methodological approach across all Member States, and as such provide a useful independent comparison to Member States’ own BAU emissions projections. There are valid reasons why Member States may have a more accurate view of individual circumstances in their country and hence may provide more accurate BAU projections compared to the PRIMES model. However, equally Member State BAU scenarios can reflect political considerations.

PRIMES sectors used: Industry, electricity/steam production, district heating and energy branch. Emission projections corrected for Phase I EU ETS scope. Phase II allocation for additional installations added to make the calculated BAU comparable to proposed Phase II caps.

- If the horizontal bar is shown higher than the horizontal line, this suggests official member State BAU emission projections are higher than the independent estimate of ETS sector BAU, and vice versa.
- If the red dot is shown lower than the horizontal bar, the proposed cap is lower than the official BAU projections, suggesting that the ETS sector will be short according to official Member State data.
- If the red dot is shown lower than the horizontal line, the proposed cap is lower than the estimated BAU projections, suggesting that the ETS sector will be short according to independent emission projections.

With some exceptions, the caps imposed by Member States are below the official BAU emission projections. The Czech Republic and Hungary have higher caps compared to official BAU emission projections⁶, while the caps of Poland, Slovakia and Romania are exactly on the same level as the BAU emission projections. The overall shortage compared to the official BAU figures is 153 Mt CO₂/year, which corresponds to 7 % of the total emissions within the EU ETS.

The independent estimate of BAU emission projections is in most cases below the official BAU figures, except for Portugal, Spain and the UK. In the majority of countries the proposed cap is higher than the independent estimate of BAU emissions. Comparing currently proposed caps to the independent BAU estimate of emission projections the EU ETS there would be 53 Mt CO₂/year surplus of allowances in the EU ETS in Phase II, which corresponds to 2.5 % of the total emissions within the EU ETS.

In its guidance to Member States the European Commission suggested that in assessing the NAPs it is relevant to compare caps to a so called **indicative maximum cap** for each Member State. The indicative maximum cap should be calculated by multiplying historic EU ETS sector emissions by projected national GDP growth and CO₂ intensity improvement, thus giving a theoretical maximum that Member States should be able to commit to achieving.⁷ Ecofys' analysis shows

⁶ Note that the Czech BAU had to be calculated based on emissions projections from its National Communication to the UNFCCC and the share of ETS sector of the overall economy as stated in the NAP.

⁷ Communication from the Commission on "Further guidance on allocation plans for the 2008 to 2012 trading period of the EU Emission Trading Scheme" COM (2005) 703, 22.12.2005. Due to data availability and a match with the time period of the growth projections available we used 2005 verified emissions data in the calculation of the indicative maximum cap here instead of 2003 emissions data as proposed by the Commission. These data are then multiplied by national GDP growth rates and CO₂ intensity improvement rates from PRIMES (2005). Phase II allocation for additional installations added to make the calculated BAU comparable to proposed Phase II caps. Verified 2005 emissions are not available for Bulgaria and Romania who are not yet in the scheme. For these countries 2003 ETS sector emissions provided in their NAPs were used as the basis for the independent BAU calculation.

that the sum of the proposed caps analysed is 23 Mt/yr higher than the indicative maximum cap for these countries. This corresponds to about 1 % of the total emissions within the EU ETS.

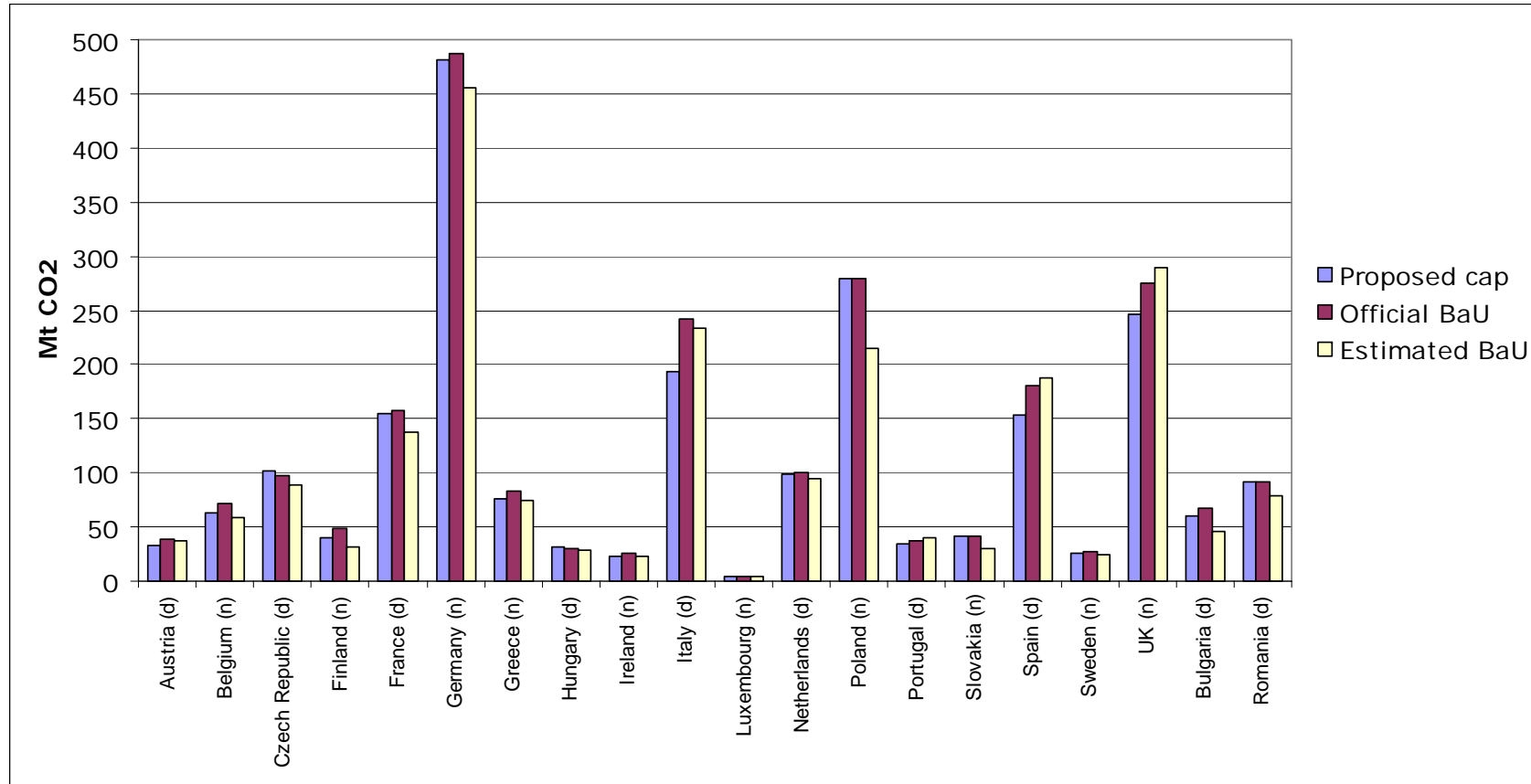


Figure 2 Proposed caps and official BAU emission projections compared to estimated BAU emissions

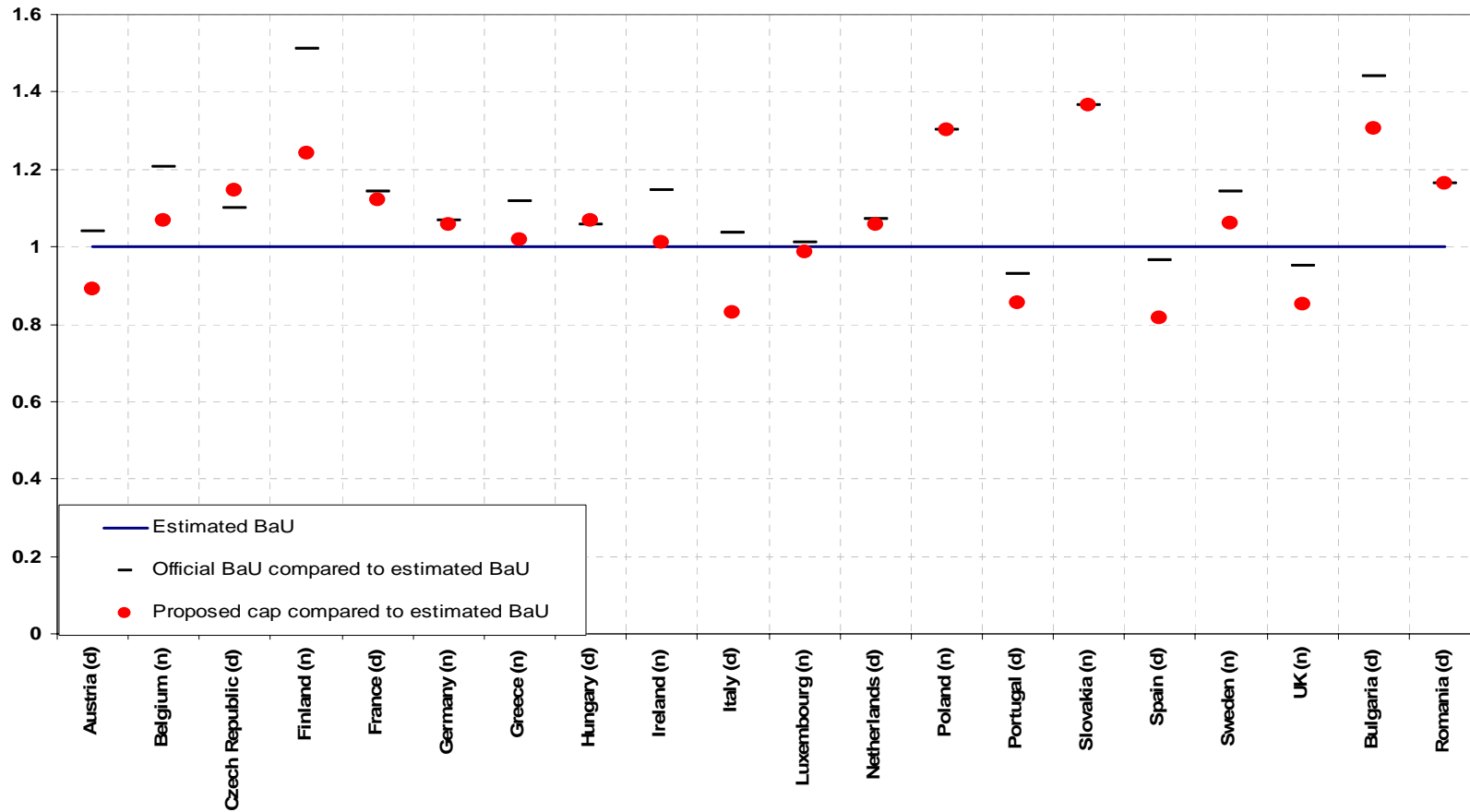


Figure 3 Proposed caps and official BAU emission projections compared to estimated BAU emissions

Use of JI/CDM

A number of EU Member States have intentions to purchase JI/CDM credits at a Government level, with varying levels of commitment already made. Governments could use JI/CDM credits to ease the burden on both ETS and non-ETS sectors, which could in effect increase the virtual Kyoto commitment for the ETS sector and allow for higher caps.⁸ The total purchase of JI/CDM credits planned by EU Governments is estimated to be around 112 Mt CO₂/yr, according to latest National Communications and Phase II NAPs, which corresponds to about 5 % of the total emissions within the EU ETS.

EU ETS participants are also allowed to use JI/CDM credits in order to comply with their obligations under the EU ETS. Member States must specify in their NAPs any restrictions they wish to impose on the amount of JI/CDM credits that ETS participants may use. The maximum amount of JI/CDM credits that could enter the EU ETS if all participants use their maximum number of imported credits is 355 Mt/year, which corresponds to almost 17 % of the total emissions within the EU ETS⁹.

Conclusion

Comparing proposed caps to the official Member State BAU projections provided in the NAPs suggests a shortage of 153 million ton CO₂ per year in the 2nd phase, which corresponds to 7 % of the total emissions within the EU ETS. But when proposed caps are compared to Ecofys analyses there is a predicted surplus of allowances. Total proposed caps are 53 million tons CO₂ per year higher than the independent calculation of BAU emissions, which corresponds to 2.5 % of the total emissions within the EU ETS.

Especially surprising are the huge differences between official national emission projections and the independent estimate of BAU emissions. For nine out of the 20 countries investigated the national emission projections are more than 10% higher than the independent projection. At this moment few Member States have proposed EU ETS caps for Phase II that suggest substantial emissions abatement effort being required by participants.

The level of a number of caps is not ambitious enough to put Member States on a path to reach their Kyoto target without Government purchase of JI/CDM credits. Most of these countries have programmes in place for purchasing project-based

⁸ Some Eastern European Member States are likely to be host countries for JI projects as opposed to purchasers of project-based credits. In that case the opposite effect would occur, i.e. that the virtual Kyoto commitment would decrease.

⁹ Excluding Romania as no data is available yet.

emission credits (JI/CDM). However, only in one out of nine the planned purchase would be sufficient to make up for the gap assuming that the credits are evenly spread over the different sectors in the economy.

The EU ETS is at a critical junction. Setting ambitious yet fair Phase II caps and restrictions on the use of JI/CDM by participants will be crucial to the development of a carbon market within Europe and to ensure that real emissions reductions occur within the EU in the coming years when Kyoto obligations have to be met.

This analysis is based on a more detailed country-level assessment of Phase II NAPs. For more information please contact:

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