Analysis of options to move beyond 20% greenhouse gas emission reductions and assessing the risk of carbon leakage

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PURPOSE: to launch a debate on the possible options of moving beyond 20% greenhouse gas emission reductions and assessing the risk of carbon leakage.

BACKGROUND: the EU agreed a 20% cut in greenhouse gas emissions from 1990 levels by 2020, together with a 20% renewable energy target. It has always been clear, however, that action by the EU alone will not be enough to combat climate change and also that a 20% cut by the EU is not the end of the story. EU action alone is not enough to deliver the goal of keeping global temperature increase below 2°C compared to pre-industrial levels. All countries will need to make an additional effort, including cuts of 80-95% by 2050 by developed countries. An EU target of 20% by 2020 is just a first step to put emissions onto this path.

That was why the EU matched its 20% unilateral commitment with a commitment **to move to 30%,** as part of a genuine global effort. Despite the disappointment of failing to achieve at Copenhagen the goal of a binding international agreement to tackle climate change, the most positive result was that countries accounting for some 80% of emissions today made pledges to cut emissions, even though these will be insufficient to meet the 2°C target.

CONTENT: the purpose of this Communication is not to decide now to move to a 30% target: **the conditions set are clearly not met**. To facilitate a more informed debate on the implications of the different levels of ambition, this Communication **sets out the result of analysis into the implications of the 20% and 30% targets as seen from today's perspective**. It also covers the issue of carbon leakage, in the context of the Directive 2009/29/EC on the Emissions Trading System.

1) The economic crisis and the 20% reduction target: the Communication sets out how changed global circumstances have impacted on the targets set in 2008, with particular reference to the financial crisis. It notes that verified emissions in the ETS in 2009 were 11.6% below 2008 emissions. This one-off reduction in emissions meant that in 2009, the EU emitted around 14 % less greenhouse gases than 1990. But, of course, as production recovers in energy-intensive industries like steel, this rate of reduction cannot be simply extrapolated into the future.

However, **the absolute costs of meeting the 20% target have fallen**. In the analysis presented in 2008 underpinning the climate-energy package, based on the expectation of continued economic growth, the costs of reaching the target were estimated as at least EUR 70 billion per annum in the year 2020. Today, the analysis also takes account of the recession. **The price tag is now estimated at EUR 48 billion (0.32% of GDP in 2020)**. **This represents a reduction of some EUR 22 billion, or 30% less than expected 2 years ago.** Nevertheless, this reduction in absolute costs comes in the context of a crisis which has left businesses with much less capacity to find the investment needed to modernise in the short run, and great uncertainty over how long it will take to recover. The lower cost of the climate and energy package today is due to the interplay of several factors:

- lower economic growth has effectively reduced the stringency of the 20% target;
- the rise in oil prices proved an incentive to improve energy efficiency: energy demand has fallen;

- the carbon price is likely to remain lower as allowances not used in the recession are carried forward into the future.

While the absolute costs of meeting a 20% target have been reduced, representing a welcome relief for businesses facing a battle for recovery, **it also represents a risk that the effectiveness of the 20% target as a motor for change diminishes**. This all comes at a time of severe economic constraint, both for Governments and businesses.

2) Possible move to a 30% target: the Communication considers possible options for reaching the 30% target, including options inside the ETS, technological options, carbon taxes and Using EU policies to drive emission reductions, such as encouraging Member States to step up low-carbon investment by directing a greater volume of cohesion policy funding towards green investments. It also considers using the leverage of international credits. The paper notes that the fact that the 20% is now more in reach than was assumed in 2008 has an obvious knock-on effect on the challenge of meeting a 30% target.

In absolute terms, the EUR 70 billion price tag in 2020 as estimated in early 2008, would be sufficient today to take the EU more than half way towards stepping up from 20% to 30%, although in a situation where the EU economy is more constrained. The additional total costs for the EU to step up from the current 20% to 30% are estimated to be around EUR 33 billion in the year 2020, or 0.2% of GDP.

In order to achieve this 30% reduction, it is estimated that the carbon price in the EU ETS would amount to some EUR 30 per tonne of CO2, which is similar to the level estimated to be necessary to meet the 20% reduction target in 2008. Domestic emissions would reduce to -25% compared to 1990 with the remaining being covered by banked allowances and international credits. **The total cost of a 30% reduction, including the costs to go to 20%, is now estimated at EUR 81 billion, or 0.54% of GDP**.

Recalling that in early 2008, the cost of the climate and energy package was estimated to be EUR 70 billion, or 0.45% of GDP in 2020. Therefore, going to the 30% reduction target represents an increase of EUR 11 billion compared to the absolute costs of the climate and energy package in 2020, as projected in 2008.

While costs clearly have decreased, the reduced profitability of companies, spending power of consumers, and access to bank loans has reduced the ability of the EU economy to invest in low carbon technologies: a legacy of the crisis which can only be offset by the return of growth and proactive policies to prioritise growth in these sectors. In terms of sectors, the analysis suggests that the greatest potential for emissions reductions comes from the electricity sector through a combination of improved demand-side efficiency and a reduction of carbon-intensive supply-side investments.

3) Carbon leakage: one of the important considerations in EU climate policy is avoiding "carbon leakage". The main issue for carbon leakage is the competitive difference between the EU and third countries. There are, therefore, broadly three ways in which carbon leakage could, if it can be demonstrated, be tackled: i) by giving further support to energy-intensive industries through continued free allowances; ii) by adding to the costs of imports to compensate for the advantage of avoiding low-carbon policies; or iii) by taking measures to bring the rest of the world closer to EU levels of effort.

The most obvious way to provide further help to level the playing field by action inside the EU is to maintain the free allocation of allowances. There would also be an option of including imports in the Emissions Trading System.

A **political decision to move to the 30% s target cannot be taken without consideration of the international context**. At present the conditions set for stepping to 30% have not been met. In addition,

such a decision also needs to be taken in full consciousness of the economic consequences at home. Both the international context and the economic analysis suggest that the EU should maintain the option for moving to a 30% target: we should be ready to act whenever the conditions are right to take this decision.

In the meantime, we need to strengthen efforts to work with our international partners, to encourage them so that we can achieve the level of ambition needed to put global efforts on track to secure the real limitation of climate change to which we are all committed.

The Commission will continue to monitor the situation, including the competitiveness of EU industry vis-à-vis its main international competitors, particularly those which have not yet taken convincing action to combat climate change. Furthermore, in the light of the evolving economic situation and the international negotiations, the Commission will further update its analysis to inform the continued discussions in the Council and the European Parliament on the content of this Communication.