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JUAN DELGADO

Reaching the renewables target, what is the roadmap?

Climate change policy has emerged as the main topic of the EU German presidency. The heads of government agreed in March on the four environment twenties, i.e. 20 percent reduction in CO₂ emissions and 20 percent of renewables in the energy mix by 2020. The EU signaled a clear commitment to go beyond Kyoto in fighting climate change. However, the weak justification for the targets and the difficult process of implementing the appropriate policies to meet such targets may undermine the credibility of such a signal.

Two major questions arise: First, member states have agreed on targets for Europe as a whole. They have now to decide how to share the burden. The size of the bill is known but not how to divide it up. Second, the necessary policies have to be put in place to make sure that the targets are met in due time.

Neither of the two steps is obvious. Let us look for example at the renewables target. If the European target is transformed into national subtargets, one has to consider that member states depart from different starting points: while wind power provides 20 percent of electricity in Denmark, in the UK less than 5 percent of electricity comes from renewable sources. Different starting points and different resource availability due to geographic and structural economic factors determine the range of possibilities available to each country. The cost of reaching a specific target is therefore higher in some countries than in others. Moreover the same technologies are not equally efficient in all locations. Geography and technological possibilities should then play a role in determining the national quotas. For example, following this logic, the target for Poland would be lower than the target for Spain which is better equipped for developing tidal, solar or wind energy.

If the renewables target aims at reducing CO₂ it would seem logical to link both targets. However, this would likely be opposed by countries like France and Finland, which would claim that they could use nonrenewable technologies such as nuclear energy to reach their CO₂ targets. The battle over burdensharing does not promise to be an easy one. The harmony of the "twenties" may vanish when trying to dissect them into national quotas.

The second task is to design the appropriate mechanisms to achieve the targets. In principle, the European Trading Scheme should be sufficient to reach both targets by promoting a more efficient use of energy and the development of alternative technologies. However, this is not the case in practice. CO₂ prices are currently not sufficient to encourage investment in more costly renewable technologies. Member states have up to now followed different routes to promote renewables. Germany and Spain have applied a system of feed-in tariffs by which renewables obtain a fixed out-of-market price for the energy produced. This system has been rather successful in both countries where wind energy accounts nowadays for 6% and 8% of total electricity production respectively. The drawback of this system is that it is difficult to determine the adequate premium that would result in the target being achieved and therefore does not guarantee the 20 percent target.

Other countries such as the UK and Italy have developed “market-based” mechanisms with little success. For example, the UK will not meet the 6.7% target set for this year by national legislation. In such systems energy companies are imposed obligations to produce certain amount of energy using renewable technologies. For each MWh they produce they get a green certificate that they can sell in an organized market obtaining an (uncertain) compensation. If companies do not reach their target they have to buy extra certificates in the market. The advantage of this system is that it allows setting a volume target and provides with flexibility by allowing trade. On the other hand, the revenue uncertainty creates difficulties in obtaining funding, especially for small scale independent projects.

The first step could be partially bypassed by establishing either a European feed-in tariff (with a consequent EU tax on energy) or a European system of green certificates with obligations on companies rather than on governments. The European dimension would facilitate the implementation of the targets. Common taxes or tariffs seem however as difficult to agree as national subtargets. An EU market for green certificates mimicking the emissions trading scheme could be a solution, but it should be carefully designed to guarantee that the targets are met. Also, by the time it starts operating, it might be too late to reach the prescribed targets.

In any case, such schemes only cover electricity producers and are unlikely to be sufficient to guarantee that renewables constitute on average 20 percent of the total energy mix. Additional mechanism would have to be put in place for other sectors such as transport or heating.

Whatever the system adopted, it seems to be essential that flexible mechanisms are available so that if a country or a company is unable to fulfil its obligations it should be able to “pay” other countries or companies to make-up this shortfall. The lack of underpinning of the targets and the dismal record of EU countries in failing to meet them in the past has raised some doubts about whether the targets are realistic. Furthermore, the lack of clear and objective criteria for burden-sharing and the absence of mechanisms to implement the targets put into question the feasibility of the scheme itself.

The technologies are there (no drastic developments can be expected before 2020) and the investments to reach the targets have to start now. What is missing are the necessary policies to put the targets in place. Such policies should have a European dimension taking advantage of the enlarged possibilities that Europe provides, should be based on flexible mechanisms in order to facilitate implementation and should be time consistent up to 2020 in order to guarantee the appropriate flow of investment. Otherwise, the “ambition” of EU climate change policy will do no more than add new uncertainties to the “per se” uncertain course of climate change.

Juan Delgado is research fellow at Bruegel, www.bruegel.org, a Brussels-based economics think-tank. He has recently coauthored the study “Energy: Choices for Europe”.