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A new EU climate vision

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1. Leveraging EU finances to foster a low-carbon strategy

The EU financial instruments through the EU budget and EIB have the potential to play a central role in driving the process to a low carbon economy. This is the objective of European Commission's forthcoming Communication on mainstreaming climate change into all other policies due in March 2011. While reinforcing R&D and demonstration support through the Strategic Energy Technology (SET) Plan is important, it is by far not the only or even the main instrument. The Trans-European and pan-European (low-carbon) energy transport links, as well as the appropriate national, regional and local infrastructures can be assisted and coordinated through a coherent use of a number of EU funds. There are three main roles the EU budget should play to finance a low carbon strategy:

- Reinforce R&D in renewable technologies and their deployment
- Co-finance the development of low carbon zones
- Assist in the development of an integrated energy market in Europe

1.1 R&D financing

The present investment in R&D (public and private) for the SET Plan group of technologies is estimated at approximately €3 billion annually. The Commission calls for more than a doubling to €8 billion a year or €50 billion over the next 10 years[3]. Although the sources of

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[3] The rationale for funding R&D is clear. Apart from the need of developing better technologies to achieve large reduction in emissions, reaching over 80% in 2050, the EU does not operate in isolation and we are facing

this funding still need to be decided, it should be based on a mix of EU, national, public and private sources. The missing €5 billion p.a. funding will still need to be found and approved by the member states. This will not be easy as governments fight their fiscal deficits and private companies suffer from the recession. On the other hand, the SET plan has served as an unprecedented catalyst for industry outside the ETS to engage with the EU on low-carbon technologies and products. For the EU this constitutes a unique opportunity to forge ahead with technology leadership across the board.

This chance must not be squandered and possible avenues could be i) to increase the EU budget's share of funding and/or reinforcing the role of the EIB[4] and/or using ETS auctioning revenues either at EU or member state level through using the . New Entrants Reserve (NER) or earmark ETS revenues.

1.2 Financing the development of low-carbon zones

The EU's Cohesion Policy consisting in the Cohesion Funds and Regional Funds for member states and regions with a low GDP per capita relative to the EU average, can potentially drive low carbon strategies. Even the Common Agricultural Policy and Rural Development Policy can have important roles to play, if properly devised.

- "Climate proofing"; all actions should avoid clashing with EU climate objectives, and mechanism for offsetting new emissions created through EU financed programmes;
- More emphasis on low-carbon transport modes (e.g. public transport and rail) to the detriment of roads and motorways.
- Through the combined use of funds from the Cohesion policy and the EIB[5], it is possible to envisage large scale low carbon zones[6] at regional and in some cases at nationwide scale, with a large role as technology demonstration areas for SET Plan

a technological race. Without the EU developing technological solutions to climate change, Europe may lose the leading edge and important economic opportunities.

[4] For example, the European Commission and EIB offers through its risk sharing financial facility (RSFF) loans for advanced but untested technologies. The RSFF facility allows for up to €10 billion in loans thanks to a combined European Commission and EIB €2 billion guarantee fund. Given the 1/5 leverage effect through the loans for risky undertakings, the EU can radically expand funding in this area, especially for demonstration plants.

[5] The EIB has instruments which can be used to finance energy projects which are using existing technologies. The EIB can give bank guarantees for infrastructure projects such as it is done for the RSFF. As those are much less risky than RSFF operations the leverage effect is much higher, up to 1/20. The EIB also offers already loan guarantees through the European Investment Fund (EIF) and has created a new financial instrument, the Transport Investment Facility (TIF). This consists in loans with maturity up to 35 years and covering up to 75% of cost. Those instruments need expanding (see: European Investment Bank (2005), 'Evaluation of PPP projects financed by the EIB', March 2005, EIB, Luxembourg.)

[6] The creation of low carbon zones, however, requires a different culture of planning and intervention at national and EU level. The strategies required need a real integrated approach to energy and development which for the moment does not exist, with serious monitoring of objectives. It also needs to integrate effectively funding from different sources much more coherently than has been done in general.

priority technologies. For some poorer member states and regions, the opportunity costs are very low.[7]

3.3 Assist in the development of an integrated energy market

For the EU to achieve its full potential with large scale renewable energy sources, it is important to build the infrastructure that would counteract the fluctuations of energy intensity arising from those sources. It is important that HVDC (High Voltage Direct Current) connections link member states to large renewable energy sources. This requires an integration of the energy market, a long standing objective of the EU, the TEN-E (Trans-European Networks for Energy), allowing long distance energy transfer with low levels of energy loss, minimising the need for backup energy and linking the best renewable energy locations – sun from the south, and wind and hydro from the north.

While there is a large role for the energy companies and transmission operators in financing their own infrastructure, the EU budget has the potential to intervene in crucial aspects of these objectives through a number of policies. Particularly important is the completion of the interconnectors among member states. The TEN plans were not developed to address today's energy concerns as the Second Energy Review by the European Commission in 2008 clearly stated and we need to further develop a coherent policy for an integrated grid.

The EU budget, through its TEN-E budget, the Cohesion Fund (for TEN-E investments in poorer member states) and financial mechanism offered through the EIB can assist in the network development[8].

2. Strategic sectoral strategies

Given the urgency to reduce GHG emissions here and now, there has been a repeated attempt to design tailor-made strategies for a number of key sectors, notably industry, buildings and cities. More recently, surface transport has been added to the list but this topic will be discussed in a separate section.

4.1 Cities/urban areas

The most dynamic area in the EU (and arguably globally) are cities and local governments. Cities are home to 74% of Europe's citizens and are responsible for 75% of energy consumption and 75% of CO_2 emissions. In many developing countries we find mega cities – with over 10 million inhabitants or more – which have grown very rapidly in the last few

[7] The Rural Development Funds would also need revisiting, shifting more of the focus of support toward small scale energy generation, in particular using biomass, wind or solar in rural areas and farms.

[8] The EIB already offers the LGTT (Loan Guarantee instrument for Trans-European transport network projects). LGTT is financed with a capital contribution of €1 billion (€500 million each from the Commission under the TEN-T budget and the EIB) which is intended to support up to €20 billion of senior loans. The amount of guarantee never exceed more than a 200 million €, while the EIB is expected to offer loans for 50 billion € over the next decade (See: European Investment Bank (2008), 'The Loan Guarantee Instrument for Trans-European Transport Network Projects', Fact-Sheet, 2008-005-EN, 11 October 2008).

decades, while infrastructure investment is not keeping pace with this growth. Cities worldwide are thus facing a huge challenge to develop or shift towards sustainability. At the same time, there is vast potential to develop low-carbon and long-term sustainable cities, thereby possibly leapfrogging onto a sustainable development path. This makes cities a 'natural' focus for action on climate change; one of the EU's but also other countries' policy priorities. The Covenant of Mayors, launched by the European Commission has been greatly successful in giving recognition to, accelerate, and support the actions of urban and local governments. There is major potential not only to translate this initiative into lower reductions but to accelerate the transition to a low-carbon infrastructure, thereby bringing the EU firmly on the track to a low carbon economy. Finally, it offers possibilities for international co-operation.

4.2 Revisiting sectoral approaches

The same motivation as for cities holds for other sectors. Targeting a number of key sectors in terms of emissions has been seen as a good way to reduce emissions fast at scale. Unfortunately, concepts of sectoral approaches have little progress both at EU or global level and this will remain to be so. However, there is interest in sectoral approaches at country level as part of national strategies and to an extent as driver for innovation. This offers possibilities to have another look at merit of sectoral strategic approaches to sectors, be they in the ETS or not. The following areas seem to offer the best avenues for further exploration, i) NAMAs, ii) National sectoral policies and crediting mechanisms both internationally and within the EU (e.g. EU projects); iii) transport, iv) Bunker fuels, v) Bilateral joint commitments.

4.3 Energy Efficiency (in buildings)

Energy efficiency policies, technological progress and the ongoing structural change of formally planned economies in central and eastern Europe have resulted in a decline in the energy intensity of European economic activities since 1998. By 2008, around 18% less energy was required to produce one unit of GDP compared to 1998 [own calculations based on Eurostat and Ameco data]. According to the European Commission [EC 2008], EU27 final energy efficiency increased on average by 1.3% per year between 1997 and 2006.[9]

Positive developments of the EU27 average hide the fact that there still exist large disparities between different member states and especially between western and eastern Europe. The 10 countries of central and eastern Europe, which joined the EU in 2004 and 2007, represent the 10 most energy intensive economies in Europe. On the other hand, some of them also achieved the largest energy efficiency improvements in Europe (e.g. Romania, Poland, Estonia, Lithuania in the household sector).

Energy efficiency also plays a major role in all energy scenarios or road maps. There is rising pressure on the Commission to make the current 20% energy efficiency target binding.

[9] The largest improvements were achieved in the industrial sector, which in 2006 was 24% more efficient than in 1997. The transport sector and households, on the other hand, only achieved improvements of 9% each over the same period.

However, the Commission is resisting such a move. It argues that this would change the way in which it could guide the implementation of energy efficiency measures. If the target were made binding, member states would have the freedom to implement any measure necessary to meet the goal. If, however, the target remains non-binding, it is possible for the Commission to take a measure based approach, thereby ensuring internal market compatibility among other.

On the other hand, a binding EU-wide target with national sub-targets could send a strong international message. By committing, through legislation, to improving energy efficiency, the EU will create new opportunities to negotiate with countries outside of Europe and improve cooperation in this field.

A second option is to target specific sectors (at EU and member state level) with integrated policies such as energy conversion, transport, buildings or agriculture.

Thirdly, market based instruments such as white certificates are gradually put into place in the EU. Efforts to set up a European-wide white certificate scheme seem premature at the moment, although harmonisation between existing schemes may bring significant economies of learning and avoid energy market distortions.

5 Towards an EU transport vision founded on indicator-based targets

Next to the power sector, transport is most important for the low-carbon future. Currently, the European Commission is preparing a White Paper with a strategy for the next decade for the EU transport sector. Among other the White Paper reviews the "transport agenda" by assessing complementarity of its existing policies with a low-carbon future.

One, if not the central questions for the EU is the tool through which the transport sector can be steered best. In this context, the question of a transport GHG emissions target has emerged rapidly and policy-makers will need to ask themselves whether a European low-carbon transport strategy is possible without some sort of headline target as for example has been set under the 2009 energy and climate package. Different kind of targets can be envisaged; hard caps, aspirational or indicative targets, EU or member state targets or sector wide mode-specific targets. These propositions will need to be discussed in light of their potential to drive transformation in an efficient, yet effective way. As most of the investment (and much of the R&D) will originate from industry and private investors, the key to success is to generate an appropriate economic environment, with industry buy-in.

The most promising way to provide steering to the transport sector, identified by the European Dialogue has been to develop a set of indicators capable of measuring the (gradual) progress towards the EU's transport carbon objectives, mode by mode. This would on the one hand integrate customers' perspectives into policy making and thereby ensure customer's responsiveness. On the other, and more importantly, such indicators would provide for guidance for technology and equipment companies, service providers and investors alike and ultimately have a high possibility to ensure management buy-in. To date such indicators are not yet developed, but should not be too difficult. An example for a set of indicators in the rail freight sector could be i) always available rolling stock, ii) flexible train configurations, iii) availability of integrated mobility hubs, iv) tracking system available to customer etc.