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The European Low Carbon Transformation: If not now when?

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Europe at a crossroads

The transition to a low carbon economy is already in motion. International revenues from companies providing goods and services related to climate change already exceed the aerospace and defence sectors and could reach nearly €1.35 trillion by 2020.¹ Europe has long recognized the benefits of the low carbon transformation and has played a leadership role at home and internationally by adopting commitments to reduce its emissions ahead of any other major economy.

Now is the time to accelerate the pace of the European low carbon transformation. Massive investments will be made in the next years to upgrade and create infrastructure that will operate for several decades. A critical question is how these investments can move Europe toward a low carbon pathway in the long term. If Europe delays the pace of the decarbonisation agenda, it will miss the most cost-effective opportunity in a generation to clean up its infrastructure.

The recession adds new impetus for accelerating the low carbon transformation in Europe. Lower emissions due to the economic downturn create a historical opportunity to increase the pace of Europe's decarbonisation. Recent analysis shows that the fall in emissions caused by the recession has reduced the cost of achieving the 30% target well below the estimates for reaching 20% when that target was agreed as EU policy in December 2008². Science also calls for faster action: the world has about five years to begin the low carbon industrial transformation required to move to a 2°C world.³ The IEA has estimated that every year of delay in climate action will add an extra €336 billion to the clean investment needed globally between 2010 and 2030 in the energy sector.

¹ HSBC, 2009. Climate Change – September annual index review. Climate revenues – an industrial reality.

² E3G, 2009. 30 Percent and Beyond: Strengthening EU Leadership on Climate Change. Available at: <http://www.e3g.org/index.php/programmes/europe-articles/eu-should-raise-its-emissions-reduction-target-latest-e3g-briefing/>

³ That is, global average temperature is expected to increase no more than 2 degrees Celsius compared to preindustrial levels. Intergovernmental Panel on Climate Change (2007a) Summary for Policymakers. In Climate Change 2007: Fourth Assessment Report, Synthesis Report (AR4). Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

Policy for transformation: Beyond “least expensive” compliance tools

The low carbon economy will on balance increase employment and economic activity in Europe as imports of fossil fuels are replaced by domestic investment in new technology and highly efficient infrastructure. However, as with any transition it will also create winners and losers. To maintain public support, a just transition must be ensured where jobs are protected and industry losses are minimised. The best way to manage this transition is to put the right policies in place quickly to capture the full benefits of the transformation.

The main pillar of EU policy for combating climate change and accelerating the transition to a clean energy economy is the Climate Package, adopted in December 2008.⁴ As part of this effort Member States have agreed collectively to reduce GHG emissions by 20 percent relative to 1990 levels by 2020 and to source 20 percent of final energy consumption from renewable sources. The emissions reduction target will rise to 30 percent in the context of a global agreement where other developed countries take on comparable targets and major developing countries contribute adequately.

The EU has already committed to reducing emissions by 80-90 percent by 2050. Assuming a linear trajectory this would mean at least a 40 percent reduction by 2020. But today the EU has no real roadmap for moving beyond its current 2020 target apart from hazy statements that an additional 5 percent could come from international offsets generated in developing countries and a further 3 percent from land-use changes.

A credible policy strategy for speeding up the European low carbon transformation is needed. The EU Emissions Trading Scheme (ETS) remains the main tool for achieving emission reductions. Unfortunately, current debate has centred solely on reducing the short term cost of compliance with the ETS, with a heavy focus on the use of international offsets. Though offsets reduce immediate compliance costs they lower the incentives for transformational change in Europe. The UK Climate Change Committee has built its assessment of the UK’s long term carbon budget on the assumption that net flows of offsets will cease in large quantities by 2030 when all major economies have binding reduction caps. Relying on a future stream of low cost offsets to reach the EU’s increasingly stringent targets risks facing high costs risks in the future.

⁴ European Commission, 2009. Stepping up International Climate Finance: A European Blueprint for the Copenhagen Deal. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, September 2009. Available at: http://ec.europa.eu/environment/climat/pdf/future_action/com_2009_475.pdf

Transformational change requires innovative policies that scale up investments in energy efficiency, low carbon infrastructure and transport. In the short term, a strong focus must be placed on achieving domestic energy efficiency targets and adopting stronger efficiency standards for buildings and appliances will help companies and consumers capture immediate, negative cost efficiency gains.

In the medium and longer term, a fundamental challenge is to ramp up investment in smart grids, other low carbon infrastructure, buildings and transport. The geography of Europe has placed its major renewable energy resources on the periphery: North Sea Wind; Mediterranean solar and Eastern European biomass. Europe will need a pan-European Electricity Grid if it is to efficiently decarbonise its power sector and meet the increased demand for clean power from electric cars.

Emissions from transport are growing rapidly and contributing to a larger share of total emissions. Standards and government support will be necessary to boost R&D programs on greener vehicles, advanced engine technologies, hybridisation and electric cars, high-speed rail networks and other clean technology public transportation systems.

The quality of the policies promoting innovation will play a pivotal role in consolidating the first-mover advantage of Europe's low carbon industries and in maintaining a lead in market share in clean technology market.

The potential to create low carbon jobs

Policies supporting the low carbon industries can catalyse a new generation of low carbon jobs creation and stimulate retooling of current workforce. Estimates vary but agree that strong public policy supporting low carbon industries can have a noticeable effect on jobs. According to the EU, *improving* current policies so that the target of 20 percent renewable energy in final energy consumption in 2020 can be achieved will provide a net effect of about 410,000 additional jobs. It is estimated that a 30 percent reduction target for Europe could lead to an increase of 1.1 million jobs by 2020.⁵

In addition to putting in place strong decarbonisation policies, public support will be needed to build new skills into the European workforce and to enhance existing ones. Without incentives for training and retooling, Europe risks facing supply shortages in the low carbon job marketplace. A recent study for the UK by the

⁵ The Climate Group & The Office of Tony Blair, September 2009. Cutting the Cost: The Economic Benefits of Collaborative Climate Action.

Aldersgate Group of companies has shown the need for rapid and accelerated investment in skills if low carbon targets are to be met.⁶

Most of the public discussions about job creation potential have been on clean energy jobs but a broader focus is needed. As the low carbon transformation deepens, more attention should be placed on investing in new skills in a broader set of areas including resource efficiency, energy efficiency, clean transportation, and de-materialisation of products, and green buildings.

Financing Europe's low carbon growth and job creation: building national green infrastructure banks

Public policy however will not be enough to catalyse change. Without an adequate finance strategy, low carbon industries will not be able to reach the scale required. This will put a break on job creation opportunities. More aggressive investment is needed in these sectors to lay the foundation for new global European industries. Grasping this opportunity will require creative ways to mobilise funds from risk-averse investors toward energy efficiency, low carbon infrastructure, and transport.

The idea of developing green infrastructure banks to help support the low carbon transition is growing in the UK, Germany and even the US. A green infrastructure bank (GIB) can leverage private capital and scale up low carbon investments in Europe. A GIB would put in place multiple public-private financing mechanisms to shift capital toward existing and new infrastructure. This green bank could be self-financing in the medium term, while delivering increased confidence and growth in low carbon markets.

Sector-specific banks are not new. In 1958, the European Investment Bank (EIB) was launched to facilitate the integration of Member States. The bank is policy-driven, based on priorities by Member State shareholders and raising funds on the capital market, which it then uses to provide loans and other financial products to projects furthering EU policy objectives. The EIB is already redirecting large amounts of its portfolio towards low carbon sectors and will effectively become a pan-European GIB. However, national GIBs are also needed to undertake more complex and nationally specific tasks, especially helping with local financing issues on energy efficiency and infrastructure. In many countries a GIB could be based on existing national development banks, though there is a strong argument for building dedicated institutions with focused expertise.

⁶ Aldersgate Group, 2009. Mind the Gap: skills for the transition to a low carbon economy. Available at: <http://www.aldersgategroup.org.uk/reports>

A GIB could provide multiple opportunities for Governments to deliver low carbon investments by acting as a mechanism to ensure that Government guaranteed funds are effectively earmarked for green infrastructure allowing them to direct investment of this capital through strict investment criteria. A GIB could act as loan guarantor on behalf of the Government; it could facilitate transparent communication of government policy and reporting on levels of success and finance; and syndicate a delivery of low carbon investment programmes such as a national energy efficiency scheme.

A specialized infrastructure bank is preferable to *ad hoc* financial mechanisms. Firstly, it would provide public sector expertise to deliver public good outcomes within a commercial environment, eliminating some of the conflicts associated with using commercial agents for these tasks. It would also provide on-going innovative capacity to respond to the multiple and often unanticipated demands accruing from the low carbon transition. Finally, a GIB could increase market confidence because the government would be backing its own policies through direct investment thus signalling to investors that low carbon investment is a solid proposition.

Final remarks

There is no low cost, high carbon future for Europe. Failure to lead the global transformation to a low carbon economy would leave the EU exposed to massive climate change damages and soaring fossil fuel prices as peak oil hits in the next few decades.

With a low carbon economy the only viable alternative is how quickly Europe will drive its own transition. Delay often seems attractive as a least cost option, but is not in this case. Europe needs to replace its aging energy infrastructure in the next two decades. Failure to make the new generation of power plants, buildings and factories low carbon will lock in high costs into the future. Grasping the opportunity to change will create jobs and help support the industries of the future. The Chinese have a saying that you cannot cross a ravine by taking small steps. Now is the time for Europe to jump into a low carbon future.