A New Climate and Energy Package

Meeting Europe’s economic, environmental and energy security goals

We welcome the European Commission’s determination to develop a clear and ambitious post-2020 climate and energy package. Only through reaching the upper end of the 80-95% emission reduction target by 2050 will the EU have taken up its responsibility to avoid dangerous climate change. For this to be achieved, current climate and energy targets and policies will need to be strengthened, and a set of post-2020 policies at EU and national level that are ambitious, coherent, and binding are needed. This includes targets for emission reductions, energy savings, renewable energy production and international climate finance.

This paper focuses on the elements that post-2020 objectives should include and addresses the key policy debates. A strong commitment from the EU and its Member States to decarbonising the European economy will achieve goals in multiple areas: boosting competitiveness, completing the single European market, creating sustainable growth and jobs, enhancing resource efficiency, and contributing to the EU’s objectives for peace building.

1) How can a post-2020 climate and energy framework help economic recovery and industrial competitiveness?

The EU needs robust climate and energy policies for beyond 2020 due to a range of market barriers and failures. These failures include a lack of access to capital for investing in existing technologies and for investing in research and development of new technologies. Knowledge barriers also exist in the lack of awareness amongst industries of the net benefits of installing technologies that help reduce carbon emissions and energy costs.

A well-designed post-2020 strategy can reduce these barriers and aid in boosting competitiveness. Europe currently spends over €400 billion per year on energy imports [i]. The European Competitiveness Report 2012 [ii] by DG Enterprise and Industry found that the European Union relies on a higher share of foreign-sourced energy than other major economies, such as Japan and the United States. Moreover, fossil fuel prices are not only increasing, they are becoming more volatile. With ambitious climate and energy policies the EU can provide focus and cut fossil fuel dependency by almost 50% by 2030 [iii].

Share of foreign energy embodied in exports (percentage 1995-2009), DG Enterprise and Industry
The European Competitiveness Report 2012 concludes that global competition and the cross-border integration of production chains calls for improved energy efficiency and offer new business and energy-saving opportunities. Moreover, it recommends that in order to remain competitive, EU firms need to focus on “exploiting the business opportunities offered by global environmental and societal goals and challenges”.

By committing to ambitious targets for greenhouse gas reductions, energy savings and renewable energy, the EU will reassure investors and boost demand for industrial products. For example, refurbishing buildings and upgrading electricity grid infrastructure will require large amounts of steel, cement, and glass - all products from sectors which are currently struggling with overcapacity and lack of demand.

In terms of employment, clean energy and energy savings can also deliver. By 2010 the EU’s renewable energy industry employed more than 1.1 million people [iv] and could represent as many as 2.8 million jobs in 2020, rising to 3.4 million in 2030 [v]. The EU is expected to create over 400 000 net new jobs if it meets the 20% by 2020 energy savings target [vi].

Finally, as the latest Global Risks report of the World Economic Forum underlines, economic recovery will not be possible without tackling the climate crisis [vii].

2) Why should the EU move on climate and energy if the rest of the world delays?

The recent GLOBE Climate Legislation Study shows that it is a myth that the rest of the world is not moving. 32 out of 33 major economies have progressed or are progressing with climate policies [viii], and more than 100 countries have announced to take action within the UNFCCC framework. The Climate Action Tracker [ix] rates the EU’s current UNFCCC emission reduction pledge as ‘inadequate’, and ranks it lower than Mexico, Brazil, South Korea, India, South Africa, Indonesia, Norway, and Japan. The EU had already reached a 19.7% cut by 2010[x]. Many countries would therefore turn the question around and ask, why does the EU feel incapable of moving further?[xi]

Meanwhile the climate crisis worsens: we need to be ‘shocked into action’, writes the President of the World Bank. His organisation has concluded that the world is on track to a ‘4 degree warmer world’ [xii], with ‘devastating’ consequences. There is neither time nor justification to delay while lamenting the supposed inaction of other nations.

Furthermore, advancing energy savings and renewables in order to reduce emissions in the EU is a ‘no regrets’ policy [xiii]. What Europe will regret is a failure to invest in the clean economy. The EU’s economic competitors are catching up. China plans to invest $372 billion into energy conservation projects and anti-pollution measures over the next three-and-a-half years [xiv]. In August 2012, the Obama administration issued new rules that require automakers to nearly double the average fuel economy of new cars and trucks by 2025 [xv]. Moreover, China, South-Korea, Australia and other major economies are embarking on programmes for emissions trading.

Energy price rises in Europe are primarily due to fossil fuels. In the UK, up to 90% of price rises since 2004 are unrelated to renewable energy, and mostly due to rises in gas prices [xvi]. Only a third of German energy price hikes have been due to renewables support since 2000, and the burden falls heaviest on consumers, not industry: exemptions for 1000 industrial players who use 19% of Germany’s energy mean they only pay 0.3% of the support for renewable energy, raising prices for other consumers [xvii].
Renewables are expected to be cheaper on average than new coal and gas plants by 2030 [xviii]. The mechanisms to support renewable energy should be transparent and adapted to decreasing technology costs. They should be made more market-responsive, while acknowledging new and maturing technologies will continue to require support. However, we must not overlook that fossil fuels (and nuclear energy) have enjoyed decades of subsidies that continue today. Addressing that distortion should also be a top priority.

According to the Commission, energy system prices in future will be similar across a range of baseline and decarbonisation scenarios. In other words, we can choose to invest in a decarbonised system and free Europe from fossil fuel import dependency and the devastating impacts of fossil fuel use [xix]. Or we can continue exporting capital, and be at the mercy of price shocks, supply insecurity, health impacts and climate change.

3) Why is a package of binding targets needed?

According to the Commission’s 2050 Energy Roadmap analysis, saving energy and increasing the share of renewable energies are preconditions for delivering the EU’s long-term emission reduction objectives. Also the International Energy Agency has clearly stated that “carbon pricing needs to be flanked by supplementary policies to fully realise its least cost potential” [xx]. Yet some would prefer to have only a single target for greenhouse gas emissions alone. Others question the appetite for further European binding targets. Such approaches are fundamentally wrong: a comprehensive package of binding targets will be more effective and cheaper than an approach that is either non-binding or reduced to a single target.

Setting a single green house gas target would result in an incentive to continue investing in fossil fuels-based generation capacity at the expense of renewables. This would put the EU in risk to lock itself in a high carbon economy-infrastructure, as about 40% of the EU’s energy infrastructure needs to be replaced within this decade. And it would make the EU rely on the future contribution of not-yet-commercially proven CCS technology for power production [xxi].

Binding targets provide certainty to the relevant industrial sectors and give clarity about the long-term decarbonisation of the EU economy. They help concentrate minds and resources on devising policies and solutions to deliver top-level objectives (for instance feed in tariffs for renewables, or third party financing for energy savings).

At the same time, targets make it possible to measure progress, and to take corrective measures if needed. By increasing investment security, they lower project costs. And they allow profiting from economies of scale that accelerate the cost reduction of energy technologies. We can draw clear conclusions from the 2020 climate and energy package: the EU is on track to achieving its two binding targets – greenhouse gas emissions and renewables. But it is not on track to achieving the voluntary 20% energy savings target. Targets may be only the first step to meeting the EU’s climate and energy objectives – but they are an essential one.

4) How will we pay for investments?

It would be wrong to say that there is no appetite to invest in the clean economy. 9,616 MW of wind power capacity (worth some €12.6 billion) was installed in the EU during 2011, following 9,648 MW installed in 2010 [xxii]. The Carbon Trust’s analysis found that businesses that invest in renewable energy could make average returns of 11-12% [xxiii]. Munich Re, the world’s biggest re-insurer, plans to increase its own investments in renewable energy operations to about 2.5 billion euros ($3.6 billion) in renewable energy assets over the next five years [xxiv].
The great majority of investment will be private, but public finance is important as a catalyst. The 20% climate commitment in the multiannual financial framework, and specific budget lines in Cohesion policy, Horizon 2020 and elsewhere have the potential to significantly assist investment. The European Investment Bank is the world’s largest public lending institution. Its energy portfolio is growing, and the current review of its lending policy should end support for coal and gas, freeing up billions of euros for clean investment.

A consistent and ambitious climate and energy policy has a high monetary value and increases the availability of private sources of finance. Binding targets and support schemes for renewables can, by providing investment security and reducing risks, reduce financing costs by up to 50% [xxv] In Germany, the security provided by feed-in tariffs has convinced private citizens and cooperatives to finance over half of the installed renewable energy capacity [xxvi]. Mandatory post-2020 targets for energy savings, renewables and greenhouse gas emissions would help to show businesses and investors that the direction of travel is not going to change. This increased security reduces the need for public support.

**Key barriers to renewable energy investments**

Third party financing from private sources is also gaining ground in relation to energy efficiency. The principle is that an energy service company will measure a business’s energy use. It then signs a deal to reduce – at its own expense – monthly energy bills by fitting smarter heating and lighting systems, or by installing better equipment. The business gains from cheaper energy bills and / or increased efficiency, and the investor uses some of the money saved on the business’s bills to cover its costs and pay profits over a medium-term contract period. This has proven very successful in countries like Denmark, the UK and also the US.

Moreover, post-2020 targets can help to restore the effectiveness of the EU’s emissions reduction policies. For example, higher revenues from the emissions trading scheme can be mobilised by the EU and its Member States to support green taxation reforms and investments in renewable energy, energy savings and industrial innovation. Part of this revenue should also be used to support the Green Climate Fund as a way to ensure the EU fulfills a continued commitment to adequately support climate action in poor countries post-2020.

Demonstration and deployment of innovative, clean and efficient production technologies in heavy industry sectors, such as in the steel, cement and -paper sectors, do require significant upfront investment. Access to capital is often a barrier for investing in cleaner industrial technologies. One possibility is to
complement post-2020 targets for renewable energy, energy savings and greenhouse gas reductions with a fund to help leverage investments, replenished by a share of the auctioning revenues from the post-2020 EU’s emission trading scheme (ETS).

Crucially, the EU’s energy network requires modernisation regardless of other considerations. But we need to make the right choices about our energy system and support energy savings and renewables. Otherwise the EU risks missing its greenhouse gas reduction objectives. Nuclear power and carbon capture and storage (CCS) – which are billed as viable alternative decarbonisation technologies to renewables and energy savings – are experiencing crippling delays and cost overruns. Two nuclear plants are currently under construction in the EU: Olkiluoto in Finland and Flamanville in France. Both are five years behind schedule and billions of euros over budget [xxvii].

5) How to bring member states on board with us and create political will?

Last year, 26 EU member states invited the European Commission to present policies for the period up to 2030. To enhance their support for post-2020 action, the European Commission must urgently start building the case for mid-term climate and energy policies, including ambitious targets and robust supporting policies. The Commission should in particular assess the socio-economic opportunities and risks related to the post-2020 policies in the areas of health, competitiveness, innovation, fuel import and employment effects, and make sure that these aspects are clearly presented to member states alongside proposals for a post-2020 framework.

A better awareness of the benefits is required. Reducing energy demand and switching to renewables lowers emissions and is a boon for energy security, business opportunities and new jobs. Research group Ecofys estimates effective energy savings policies alone could lead to annual net savings of €200 billion per year by 2020 [xxviii]. Similar or higher annual savings can be expected by 2030, provided effective policies are put in place. The result: lower energy bills and increased competitiveness – precisely the benefits that member states are calling for the EU to deliver.

Finance and investments issues must be assessed upfront. This is particularly relevant for member states and regions with a high potential to save energy and increase clean energy capacity, but with a lower capacity to invest. New and innovative EU investment support mechanisms for such regions, in particular in central and eastern Europe, must be explored.

6) If we do set targets, how do we determine the level? What further modelling or analysis is needed?

The EU’s post-2020 greenhouse gas emissions reduction target must be coherent, with the principle objective of reducing emissions by 80-95% by 2050. It must also be in line with the EU’s ‘fair share’ of a global emission scenario consistent with keeping any global temperature increase to below 2°C. Moreover, the surplus of carbon emission allowances accumulating under the ETS by 2020 must be taken into account, because a major volume of banked allowances could undermine the effectiveness of the ETS.

The post-2020 greenhouse gas reduction target would determine the overall level of ambition needed for the energy efficiency and renewable energy targets. To ensure policy coherence, it is crucial that the interaction of the three targets be taken into consideration from the outset (in contrast to the three 2020 targets).

The energy efficiency and renewable energy targets must be based on a scenario that combines high efficiency, assessed using bottom-up savings potentials (this would ensure the cheapest possible energy prices, according to the Commission), and a high share of renewable energy (thus ensuring increased
resilience of European industry to fossil fuel price volatility). Despite its obvious benefits, such a scenario was missing from the Commission’s Energy Roadmap 2050.

It is just as important that the Commission does not base its post-2020 policy solely on the modelling exercises carried out in its Low Carbon Roadmap 2050 and Energy Roadmap 2050, as these contain significant flaws and a lack of ambition. The Low Carbon Roadmap 2050 only aimed to achieve emission reductions of 80% domestically by 2050, instead of the 95% reduction required. The Energy Roadmap 2050 contains a number of incorrect assumptions, including overestimations of renewable costs (e.g. projected solar costs in 2025 have already been achieved) and unrealistic cost projections for CCS and nuclear (nuclear power is assumed to become cheaper, despite all historical precedent).

In determining the level of ambition of the targets, the Commission should also look at external reports, such as the recent Fraunhofer Institute study (commissioned by the German government) which estimates the EU’s cost effective energy savings potential at close to 50% below 2005 levels by 2030 [xxix]. This is over double the Commission’s level of ambition. Fraunhofer estimates this could reduce emissions in the EU’s transport, industry, tertiary and household sectors by 52% by 2030 [xxx]. This is the kind of action the EU needs to address climate change seriously.

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xiv http://www.reuters.com/article/2012/08/22/us-china-energy-idUSBRE87U01920120822


xvi Price rises due to non-renewables/climate factors were 90% for consumers, 85% for industry and 66% for commercial customers. The great majority of this is gas price rises, in addition to some network investment. http://hmccc.s3.amazonaws.com/ENERGYbill12/1672_CCC_Energy-Bills_bookmarked.pdf

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xix European electricity systems heavily reliant on coal, as in Poland, cost more in external impacts than the price of the electricity it generates –those health and environmental costs are hidden, borne by society at large

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xxx Fraunhofer, ibid, table page 209