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BRIEFING PAPER

JANUARY 2013

Re-Energising Europe

with a post-2020 climate and energy package

Key features of a post-2020 climate and energy package

The European Commission must reach a political agreement on the need for post-2020 climate and energy legislation that builds on the success and corrects the failures of the 20-20-20 package. This agreement should specify that binding targets for energy savings, renewable energy generation, and emissions reductions are needed, should be delivered by Member States, and should be designed so that the measures used to achieve them are coherent and complementary.

Specifically, an emissions reduction target supported by the EU ETS is necessary but not sufficient. The International Energy Agency has clearly stated that "carbon pricing needs to be flanked by supplementary policies to fully realise its least cost potential"[1].

A comprehensive package of binding targets is *more effective and cheaper* than an approach that is either non-binding, or reduced to a single target. However, the 'no regrets'[2] options of energy savings and renewable energy should not only be promoted as part of the optimum package for energy sector decarbonisation. This paper shows why they should also be supported as the best means to deliver the key ends of current and future European competitiveness and social and environmental protection.

1 International Energy Agency, http://www.iea.org/publications/freepublications/publication/Summing_Up.pdf
2 European Commission, Energy Roadmap 2050, http://ec.europa.eu/energy/energy2020/roadmap/index_en.htm

Ambitious climate and energy legislation will increase the EU's global competitiveness

1. In 2011, the EU paid €573billion for imported fossil fuels[3] and is expected to become increasingly exposed to the structurally rising cost of energy[4] and a growing dependence on energy imports[5], which negatively impact competitiveness.
2. Energy efficiency measures alone could lead to annual *net* savings of €200 billion per year by 2020 because, for every €1 of energy cost saving, an additional €1 could be saved due to lower energy prices[6].
3. The value of cleantech manufacturing almost doubled globally from 2008 to 2011. By 2015, cleantech will rival the size of the oil & gas equipment market[7].
4. Businesses investing in renewables could make average returns of 11-12%[8] The European Competitiveness Report 2012 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"[9].
5. The latest Global Risks report from the World Economic Forum underlines that economic recovery will not be possible without tackling the climate crisis[10].
6. Europe needs to do much more to catch this global cleantech wave. High investment is propelling China and South Korea up the league tables, while the EU begins to stagnate[11].
7. Other countries are moving ahead too. US investment in renewable energy leapt 57% in 2011 to $51 bn. India displayed the fastest expansion rate for investment of any large renewables market in the world in 2011, with a 62% increase to $12 bn[12].
8. There is investment capital available that EU businesses should not miss out on:
    - UK households alone hold €4.5 trillion in savings[13], which could be encouraged to follow the €50bn invested worldwide in small scale renewable energy projects[14].
    - Large-scale private investment is also picking up, as Warren Buffet-owned MidAmerican's $850million bond issue in early 2012 for a PV project proved[15].

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3 Connie Hedegaard Press release on the Energy Efficiency Directive 14.06.12 http://ec.europa.eu/commission_2010-2014/hedegaard/headlines/news/2012-06-14_01_en.htm

4 European Competitiveness Report (2012), Reaping the benefits of globalisation http://ec.europa.eu/enterprise/policies/industrial-competitiveness/competitiveness-analysis/european-competitiveness-report/index_en.htm

5 IEA slide pack made available with the World Energy Outlook 2012.

6 ECOFYS, http://www.ecofys.com/files/files/ecofys_can_foe_2012_saving_energy.pdf

7 WWF Netherlands and Roland Berger Consulting, http://www.rolandberger.com/media/pdf/Roland_Berger_WWF_Clean_Economy_20120606.pdf

8 The Carbon Trust, http://www.carbontrust.co.uk/news/news/press-centre/2011/pages/investing-renewable-energy-returns.aspx

9 European Competitiveness Report (2012), Reaping the benefits of globalisation http://ec.europa.eu/enterprise/policies/industrial-competitiveness/competitiveness-analysis/european-competitiveness-report/index_en.htm

10 World Economic Forum, http://www.weforum.org/reports/global-risks-2013-eighth-edition

11 WWF Netherlands and Roland Berger Consulting, http://www.rolandberger.com/media/pdf/Roland_Berger_WWF_Clean_Economy_20120606.pdf

12 http://fs-unep-centre.org/sites/default/files/publications/globaltrendsreport2012final.pdf

13 Lloyds TSB - http://www.prweb.com/releases/2012/6/prweb9588409.htm

14 UNEP, http://fs-unep-centre.org/sites/default/files/publications/globaltrendsreport2012final.pdf

15 UNEP, http://fs-unep-centre.org/sites/default/files/publications/globaltrendsreport2012final.pdf

A package of binding targets for renewables, energy efficiency and CO2 cuts would be easier to deliver, is more likely to succeed, and has consumer support

1. Developing measures to promote nuclear and CCS alongside renewables and efficiency will increase the risk of failure[16], and the cost of action. Instead, security can be found in supporting energy savings and the existing diversity of renewable generation.
2. A recent WWF-UK report explains why carbon pricing must be complemented by renewable energy targets and support[17]:
    - Specific targets and support lower investment risks and costs more effectively because they are a more stable and secure price signal than carbon markets.
    - Carbon pricing alone does not help emerging technologies. A carbon price high enough to support maturing technologies would give windfalls to mature competitors and is, therefore, less likely to be as efficient and effective as targeted support.
    - Both analytical complexity and political realities mean that a 'correct' price on carbon is difficult to achieve or maintain, and remains a distant prospect. Carbon prices or caps are instead managed pragmatically, and, therefore, are not generally ideal.
3. Globally, 85% of consumers want more renewable energy and 49% show a willingness to pay more for products made with renewable energy. Corporations see this - in 2011 net investment in renewable capacity outpaced that of fossil fuel generation[18].
4. The perceived risk to the EU of 'going it alone' is false. In a global policy scenario aiming for equal per-capita levels in 2050, regions with above average emissions incur lower mitigation costs by taking early action, even if the rest of the world delays[19].
5. In fact, unless the EU moves soon, it will be left behind. 32 out of 33 major economies have progressed or are progressing climate policies[20], and, having already achieved its 2020 emissions reduction target[21], the EU could now legally begin to *increase* emissions, which is the wrong signal to send internationally.
6. The overall energy system costs of implementing further decarbonisation policies are similar to the cost of continuing with current policies[22]. This is true even based on the Commission's expectation of a 2030 oil price of $88/barrel compared to 2012 prices of $111/barrel or the IEA assumption of $125/barrel in 2035 World Energy Outlook 2012. Higher prices mean significantly more cost savings from cutting fossil fuel use through energy savings and renewable energy[23]. Furthermore, a unified European approach will lower costs compared to parallel national schemes[24].

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16 The Öko Institut and Wuppertal Institute for a SEFEP funded project, http://www.sefep.eu/activities/projects-studies/metastudy-full.pdf
17 WWF UK, On Picking Winners, http://assets.wwf.org.uk/downloads/on_picking_winners_oct_2012.pdf
18 Bloomberg New Energy Finance, http://www.bnef.com/PressReleases/view/242
19 Climactic Change, Time to act now? Assessing the costs of delaying climate measures and benefits of early action, http://link.springer.com/content/pdf/10.1007%2Fs10584-011-0128-3
20 Globe International, http://www.globeinternational.org/index.php/legislation-policy/studies/climate
21 Sandbag, http://www.sandbag.org.uk/blog/2012/nov/1/two-more-nails-20-coffin/
22 European Commission, Energy Roadmap 2050, http://ec.europa.eu/energy/energy2020/roadmap/index_en.htm
23 Climate Bonds initiative, RESPONSE OF THE CLIMATE BONDS INITIATIVE TO THE EUROPEAN INVESTMENT BANK CONSULTATION ON ENERGY SECTOR LENDING POLICY
24 European Commission, Energy Roadmap 2050, http://ec.europa.eu/energy/energy2020/roadmap/index_en.htm

Delivering an ambitious climate and energy package will have significant social and economic benefits for Europe, and beyond

1. In 2010 the EU's renewables industry employed over 1.1m people[25], a number that could grow to 2.8m in 2020, before rising to 3.4m in 2030[26]. A binding 20% energy savings by 2020 target would create almost 400,000 additional jobs[27].
2. Wind energy alone allowed the EU to avoid €5.71 billion of fuel costs in 2010 and was a net exporter of €5.7bn of products and services in that year. For the 2007 to 2010 period, wind energy avoided fuel costs totalling €20.18 bn[28].
3. The IEA also confirms that delaying action is a false economy: globally, for every $1 of investment avoided in the power sector before 2020 an additional $4.3 would need to be spent after 2020 to compensate for the increased emissions[29].
4. Energy savings and renewable energy investments can reduce costs across the economy. For example, air pollution from the 10,000 largest polluting facilities in Europe cost citizens between €102bn and €169bn in 2009 alone[30].
5. Renovating existing buildings can deliver quantifiable EU wide health benefits worth €64 to €140 bn annually in 2020, including through reduced public health spending and fewer missed days of work.[31]
6. A recent EEA study of climate change impacts shows that the heat-waves which caused tens of thousands of premature deaths over the last decade are very likely to increase, as are the health risks of flooding due to increases in extreme rainfall[32].
7. The EU's responsibilities do not end at our borders. Outside Europe, our companies and finance are driving massive pollution and habitat destruction globally, often to meet our own hunger for fossil fuels with little or no benefit to local populations[33].
8. By contrast, the investments Europeans have made in developing renewable energy have been huge global public goods, spurring innovation and cost reduction to the benefit of both developed and developing economies[34].
9. Both the International Energy Agency[35] and the World Bank[36] have recently stated that without significant action the world will warm beyond the 2 degree maximum agreed by world leaders, drastically increasing the threat of catastrophic climate change.

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25 EurObserv'ER, 'The State of Renewable Energies in Europe', http://www.eurobserv-er.org/pdf/press/year_2012/bilan/english.pdf

26 European Commission, The Economic benefits of environmental policy, http://ec.europa.eu/environment/enveco/economics_policy/pdf/report_economic_benefits.pdf

27 Energy Efficiency Directive Impact Assessment, http://ec.europa.eu/energy/efficiency/eed/doc/2011_directive/sec_2011_0779_impact_assessment.pdf

28 EWEA, The Economic Benefits of Wind, http://www.ewea.org/policy-issues/economic-benefits/

29 IEA World Energy outlook 2011, http://www.worldenergyoutlook.org/

30 European Environment Agency http://www.eea.europa.eu/pressroom/newsreleases/industrial-air-pollution-cost-europe

31 Copenhagen Economics, Multiple benefits of investing in energy efficient renovation of buildings: http://www.renovate-europe.eu/Multiple-Benefits-Study

32 European Environment Agency, http://www.eea.europa.eu/pressroom/publications/climate-impacts-and-vulnerability-2012/

33 Heinrich Böll Foundation and Friends of the Earth Europe, Marginal Oil: What is driving companies dirtier and deeper? http://www.foeeurope.org/sites/default/files/publications/FoEE_Marginal_Oil_0511.PDF

34 The Global Climate Network, Investing in Clean Energy: How can developed countries best help developing countries finance climate-friendly energy investments? http://www.globalclimatenetwork.info/ecomm/files/Investing%20in%20Clean%20Energy%20Nov2010.pdf

35 IEA promotion of the World Energy Outlook: "With current policies in place, global temperatures are set to increase 6 degrees Celsius... If as of 2017 there is not a start of a major wave of new and clean investments, the door to 2 degrees will be closed." http://www.iea.org/publications/worldenergyoutlook/pressmedia/quotes/7/

36 World Bank, Turn Down the Heat: why a 4 degree Celsius warmer world must be avoided: http://climatechange.worldbank.org/sites/default/files/Turn_Down_the_heat_Why_a_4_degree_centrigrade_warmer_world_must_be_avoided.pdf

A package of climate and energy targets can put the EU on track to 100% renewable energy

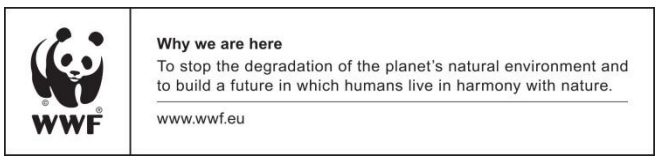
WWF's research has shown that by 2050, we could get all the energy we need from renewable sources. Achieving this goal will help us meet our responsibility to prevent catastrophic climate change; it is also the right choice for our economies. By 2050, WWF's vision would save the planet nearly €4 trillion per year through energy efficiency and reduced fuel costs[37]. To stay on track with this global vision, the EU should, by 2030, achieve at least the following[38]:

- **38% primary energy savings** compared to the PRIMES 2007 baseline
- **41% share of renewable energy in total consumption**

Doing so would deliver a **50% cut in energy-related emissions** compared to 1990 levels. As a wealthy and technologically advanced region, the EU could and should aim to reach 100% renewable energy before 2050, by exceeding these 2030 milestone goals.

This vision must be advanced by a post-2020 package of climate and energy legislation setting EU-wide binding targets for producing energy from renewable sources, reducing energy consumption in absolute terms, and cutting greenhouse gas emissions in both ETS and effort sharing sectors. Meeting such targets would be the responsibility of Member States on an effort sharing basis.

37 WWF International, http://www.panda.org/energyreport
38 ECOFYS – Renewable energy: a 2030 scenario for the EU, 2012, http://awsassets.panda.org/downloads/report_eu_2030_re_target.pdf



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To stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature.

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EU Transparency Register Nr: 1414929419-24
Printed on recycled paper.

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