

# Climate Policy Brief

## Climate policy at the G8 summit

G8 leaders have recognized at their summit in L'Aquila, Italy, that global temperatures should not rise by more than two degrees Celsius above pre-industrial levels. They support a goal of an 80 percent cut in developed countries' greenhouse emissions, and 50 percent for developing countries, by 2050.

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## The American Clean Energy and Security Act of 2009 – The Waxman-Markey-Bill

With the introduction of the Waxman-Markey Bill, the US set a new stimulus for energy and climate policy since the bill represents a comprehensive program for energy and climate policy in the US. The overall goals for the reduction of greenhouse gas emissions are 17 percent until 2020, 42 percent in 2030 and 83 percent until 2050. In order to meet the targets, a cap and trade program will be established.

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## Climate policy at the G8 summit

### Climate and emissions targets

<b>G8 summit in L'Aquila</b>	<p>Climate change was one of the main topics at the G8 summit in L'Aquila, Italy, on 10-12 July 2009.</p> <p>39 nations were present but only the major eight countries – Britain, Canada, France, Germany, Italy, Japan, Russia and the United States – enjoy status as full agenda-setting participants.</p>
<b>The climate related results</b>	<p>The main climate related results of the summit are:</p> <ul style="list-style-type: none"> <li>• G8 leaders have recognized that global temperatures should not rise by more than 2 degrees Celsius above pre-industrial levels.</li> <li>• The goal of an 80 percent cut in developed countries' greenhouse emissions, and 50 percent for developing countries, by 2050 is supported.</li> </ul>
<b>Excerpts from the G8 Declaration</b>	<p>“We reaffirm the importance of the work of the Intergovernmental Panel on Climate Change (IPCC) and notably of its Fourth Assessment Report, which constitutes the most comprehensive assessment of the science.</p> <p>We recognize the broad scientific view that the increase in global average temperature above pre-industrial levels ought not to exceed 2°C. Because this global challenge can only be met by a global response, we reiterate our willingness to share with all countries the goal of achieving at least a 50% reduction of global emissions by 2050, recognizing that this implies that global emissions need to peak as soon as possible and decline thereafter.</p> <p>As part of this, we also support a goal of developed countries reducing emissions of greenhouse gases in aggregate by 80% or more by 2050 compared to 1990 or more recent years.</p> <p>Consistent with this ambitious long-term objective, we will undertake robust aggregate and individual mid-term reductions, taking into account that baselines may vary and that efforts need to be comparable. Similarly, major emerging economies need to undertake quantifiable actions to collectively reduce emissions significantly below business-as-usual by a specified year.”</p>
<b>The meaning of these targets</b>	
<b>The recognition of the EU climate target</b>	<p>The two degrees goal is the European Union's long term inspirational climate goal. The European Council (2007) underlined the vital importance of achieving the strategic objective of limiting the global average temperature increase to not more than 2°C above pre-industrial levels. The adoption of the two degrees goal at the G8 meeting can be seen as a victory of the European Union as the world's largest economies agreed on the European Union's long-term climate visions.</p>
<b>Vagueness about the reduction targets</b>	<p>The base year, however, for calculating emission reductions was left vague, as the declaration merely states that the reductions should be</p>

"compared to 1990 or more recent years".

The wording could herald a battle between nations not unlike the one that took place during the EU's internal negotiations, when the EU 15 largely supported a 1990 reference point and many Eastern states argued for 2005. And: Russia emphasized doubts whether such stringent target would be attainable for its country.

But while US President Obama said the Italian summit constituted progress towards a new UN climate change treaty being signed in Copenhagen in December, UN Secretary-General Ban said bluntly that progress at the G8 was "not enough" as the summit didn't set mid-term targets. Ban said big cuts were needed sooner rather than later.

#### Documents of the G8 Summit

[http://www.g8italia2009.it/G8/Home/G8-G8\\_Layout\\_locale-1199882116809\\_Atti.htm](http://www.g8italia2009.it/G8/Home/G8-G8_Layout_locale-1199882116809_Atti.htm)

### Major Economies Forum (MEF)

#### Setback at the Major Economies Forum

At the sideline of the G8, summit leaders from 17 major economies that account for roughly 80 percent of global GHG emissions engaged in climate change talks at the so called Major Economies Forum on Energy and Climate (MEF).

This meeting failed to agree to halve greenhouse gas emissions by 2050, in a setback to efforts to secure a new UN climate pact.

India emphasized that for any long-term goals to be achieved there must be credible mid-term goals for developed countries in the range of 25 to 40 percent. However the MEF recognized the scientific need that the increase in global average temperature above pre-industrial levels ought not to exceed 2°C.

#### Declaration of the MEF

[http://www.whitehouse.gov/the\\_press\\_office/Declaration-of-the-Leaders-the-Major-Economies-Forum-on-Energy-and-Climate/](http://www.whitehouse.gov/the_press_office/Declaration-of-the-Leaders-the-Major-Economies-Forum-on-Energy-and-Climate/)

### Implications for a Copenhagen agreement

#### Continuing dim prospects for a Copenhagen agreement

Contrary to the Kyoto Protocol the current UN negotiations towards a Copenhagen agreement aim to set long-term reduction targets.

Long-term international targets and visions are of crucial importance for defining the short and mid-term policy steps and for giving business certainty.

Including the G8 targets into a Copenhagen agreement would be a major success, in particular if the developing countries would agree to the two degrees goal in such an agreement. Given a shared vision of the long-term temperatures target, the emissions targets would have to be adjusted regularly according to latest science.

The failure of the Major Economies Forum to fully support the G8 targets hampers the prospects for a credible Copenhagen agreement.

## The American Clean Energy and Security Act of 2009 – The Waxman-Markey-Bill

### A big step forward

#### Emissions reduction goals from 2020 to 2050

With the introduction of the Waxman-Markey Bill, the US set a new stimulus for energy and climate policy since the bill represents a comprehensive program for energy and climate policy in the US.

Between the introduction of the bill in May 2009 and its passage by the House of Representatives on June 5, 2009 (by a narrow vote of 219 to 212), several modifications were introduced.

The overall goal for the reduction of greenhouse gas emissions was modified from 20 percent in 2020 in the original proposal to 17 percent until 2020, 42 percent in 2030 and 83 percent until 2050.

In order to meet the targets, a cap and trade program will be established with an absolute cap and provisions for allowance trading. The long term goal until 2050 signals the need of a transformation of the US economy towards a post carbon society.

#### The potential for major impacts on international climate policy

With the Waxman-Markey Bill the US receives again attention in international climate policy and if adopted by the US Senate the US could gain a leading role in international climate negotiations.

The objectives of the bill, the topics addressed and a number of proposed measures clearly show thematic parallels to the European energy and climate package. The implementation of the cap and trade program would create the largest allowance market which would alleviate international trade in GHG allowances.

### The bill in a nutshell

#### Four titles

The bill is comprised of four chapters (Titles) that together are aimed at the long term restructuring of the US energy system and a reduction in GHG emissions.

#### Title I: Clean Energy

#### Renewable energy sources

The legislation would require a certain share of renewable energy sources as well as energy efficiency in retail electricity demand.

The goal for 2020 is a share of 20% of electricity demand to be met by renewable energy sources and energy efficiency measures.

As an alternative to proving this share of renewables, retailers can opt for an alternative compliance payment (\$25 per MWh) to meet their annual target. In case of non-compliance a penalty of \$50 per MWh applies.

#### Carbon capture and storage (CCS)

For carbon capture and storage a national strategy is to be developed that enables research and development of CCS technologies as well as demonstration projects that aim at the commercial and safe application of this technological option. Added are standards for new coal power plants.

<b>Fuels and vehicles</b>	<p>The bill includes several provisions connected to fuels and vehicles. In the context of an allowance allocation within the cap and trade program (see below) special focus is given to the development and deployment of plug-in vehicles. A certain share of the allowances is to be used to finance the development of plug-in vehicles.</p> <p>Furthermore under the topic “cash-for-clunkers” temporary (until end of March 2010) monetary incentives are implemented to encourage the purchase of more energy efficient vehicles. Further provisions address GHG standards for various transportation sectors and the use of biofuels.</p>
<b>Smart grids, smart metering and peak load management</b>	<p>The bill contains several activities addressing the development and installation of smart grid technologies. The aim is to identify products that can cost-effectively be equipped with smart grid technologies.</p> <p>This would allow the integration of various home appliances via smart metering into grid management. Utilities could temporarily stop operation of appliances in agreement with home owners if electricity is scarce or prices for electricity are high. Furthermore the integration of plug-in vehicles in smart grids is addressed in the bill.</p> <p>Peak load management is also included under the title of smart grids although this topic includes other measures in order to reduce peak load as e.g. demand response arrangements between a utility and an industrial facility.</p>

## **Title II: Energy Efficiency**

<b>Stimulating energy efficiency</b>	<p>The topic energy efficiency is comprised of a number of activities for buildings, lighting and commercial equipment, water-using equipment, wood stoves, industrial equipment and healthcare facilities. Improvement in energy efficiency in these areas should be met mainly through grants, standards and rebates.</p>
<b>Buildings</b>	<p>Buildings play a central role under this heading. Efficiency improvements are to be achieved in new buildings mainly via more stringent building codes. Rebate programs are aimed at replacing energy inefficient manufactured homes by low income families. Furthermore support programs and standards are to be developed to retrofit commercial and residential buildings. A labeling scheme for buildings according to their energy efficiency is scheduled similar to existing labeling schemes for appliances.</p>
<b>Lighting and appliances</b>	<p>More stringent standards for lighting and appliances and monetary support programs aimed at a broader diffusion of so-called “best-in-class” products are to be established. Standards also play a central role in enhancing energy efficiency in industry. A monetary award program is planned in order to encourage innovation with respect to heat recovery in power plants and industrial facilities. Special attention is given to efficiency potentials of electric motors.</p>

### Title III: Reducing Global Warming Pollution

<b>Cap and trade system</b>	A cornerstone of the Waxman-Markey Bill is the cap and trade system for achieving a 17 percent GHG reduction until 2020 and 83 percent until 2050 compared to 2005 GHG emissions.
<b>Upstream and downstream compliance</b>	<p>The scheme establishes an absolute – over time regressive - cap on emissions and allows trading of emission permits (“allowances”). The cap and trade program is a combination of upstream compliance (petroleum) and downstream compliance (electricity generators, industrial sources, natural gas local distribution companies - LDC).</p> <p>A size limitation for coverage in the cap and trade program of 25.000 t CO<sub>2</sub>e is provided for. For these entities other regulations for emission reductions are planned.</p>
<b>Provisions against negative distributional effects</b>	<p>In order to avoid negative distributional effects a substantial share of allowances is allocated for the benefit of energy consumers and low-income households either through grandfathering allowances to covered entities (e.g. LDCs in order to avoid energy cost increases) or the planned redistribution of auctioning proceeds to qualified recipients.</p> <p>It is planned that over time these provisions for energy cost relief and free allowance allocation are phased out in favor of auctioning and a redistribution of auctioning receipts on a per capita basis.</p>
<b>Provisions to alleviate price volatility</b>	<p>In order to alleviate price volatility five mechanisms for cost control are included in the bill:</p> <ul style="list-style-type: none"> <li>• Unlimited banking and limited borrowing of allowances.</li> <li>• Two year compliance period. Regulated entities are allowed to borrow allowances (at no interest) from the next year creating a rolling two year compliance period. Borrowing with interest up to 15 percent of an entity’s emissions is allowed for up to five years in the future.</li> <li>• Strategic auctioning. Allowances held in a strategic reserve will be auctioned off on a quarterly basis at the beginning of the cap and trade scheme, increasing the availability of allowances in the beginning without violating the overall cap. The reserve price for 2012 is \$28 per allowance and an annual price increase of 5 percent (plus inflation). From 2015 on reserve prices will be 60 percent above a 36 month rolling average allowance price. Non-sold allowances replenish the reserve, auction proceeds are used to purchase international offset credits.</li> <li>• Periodic auctions with a reserve price of \$10 in 2012 increasing at 5 percent annually (in real terms).</li> <li>• Limited use of domestic and international offsets. Offsets are limited to two billion allowances (about 30 percent of the allowances) equally divided between domestic and international offsets. After 2017 five offset credits have to be submitted to equal four allowances.</li> </ul>
<b>The American Clean Energy and Security Act</b>	<a href="http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=111_cong_bills&amp;docid=f:h2454pcs.txt.pdf">http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=111_cong_bills&amp;docid=f:h2454pcs.txt.pdf</a>

## The EU Emission Trading Scheme

### The price for EU Allowances (EUA)

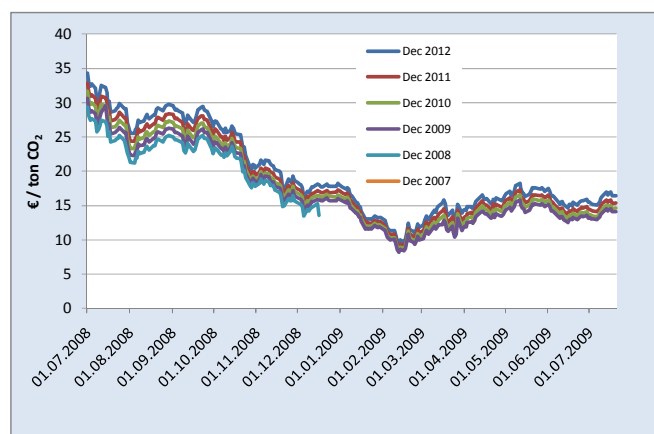
Continuing high volatility of the EUA price

The EUA price faces a huge volatility also in the second phase of the EU-ETS. In autumn 2008 the price fell mainly because of the financial crisis and the reduced industrial output. The beginning of 2009 saw a (slight) recovery of the price.

Analysts point out several factors to be responsible for the rise in 2009. The market has been lifted by the fact that emissions have not fallen as much as expected in 2008 when the economic recession began. Additionally higher energy prices have contributed to carbon price gains (and the relative price of gas to coal). The volatility in the first half of 2009 is partly attributed to the volatility in the energy markets.

Forward prices of EUAs

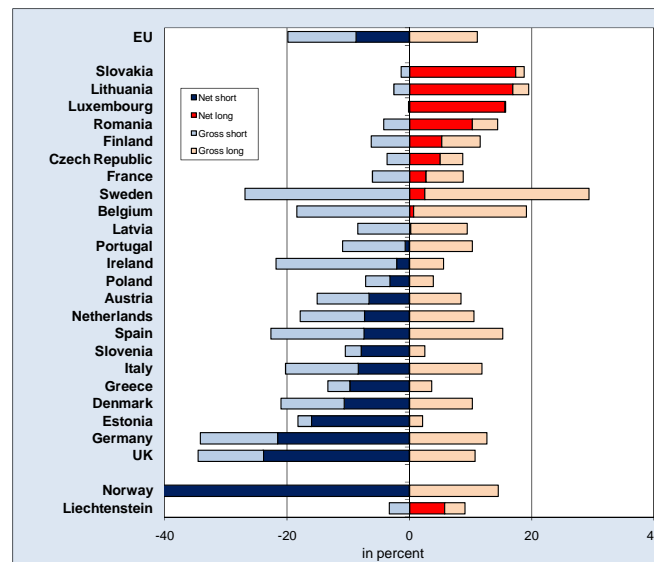
Source: Austrian Institute of Economic Research



### The market in 2008

Allocation discrepancies in 2008

Source: CITL and Austrian Institute of Economic Research



## European climate plans

Several European countries have elaborated climate plans in order to meet the European 2020 targets.

### UK Low Carbon Transition Plan

#### Key steps

- Getting 40 percent of the electricity from low-carbon sources by 2020 with policies to produce around 30 percent of the electricity from renewables by substantially increasing the requirement for electricity suppliers to sell renewable electricity and to fund up to four demonstrations of capturing and storing emissions from coal power stations.
- Channeling about £3.2 billion to help households become more energy efficient by increasing the current program by 20 percent between 2008 and 2011 and then extending it to the end of 2012.
- Rolling out smart meters in every home by the end of 2020.
- Introducing clean energy cash-back schemes so that people and businesses will be paid if they use low carbon sources to generate heat or electricity.
- Helping make the UK a centre of green industry by supporting the development and use of clean technologies, including up to £120 million investment in offshore wind and an additional £60 million to cement the UK's position as a global leader in marine energy.
- Transforming transport by cutting average carbon dioxide emissions from new cars across the EU by 40 percent on 2007 levels, supporting the largest demonstration project in the world for new electric cars, and sourcing 10 percent of UK transport energy from sustainable renewable sources by 2020.
- Producing a longer term roadmap for the transition to a low carbon UK for the period 2020 to 2050 by next spring and a vision for a smart grid.

#### Downloads

[http://www.decc.gov.uk/en/content/cms/publications/lc\\_trans\\_plan/lc\\_trans\\_plan.aspx](http://www.decc.gov.uk/en/content/cms/publications/lc_trans_plan/lc_trans_plan.aspx)

### Netherlands: New Energy for Climate Policy

#### Targets

The program Clean and Efficient describes how the Netherlands is aiming to have one of the most efficient and cleanest energy systems in Europe by the year 2020. The targets of the new climate policy are:

- A reduction of greenhouse gas emissions by 30 percent compared to 1990.
- A rate of energy efficiency improvement of 2 percent per year.
- A share of renewable energy of 20 percent in 2020.

#### Downloads

[http://www.eceee.org/MembersForum/Novem/Reports\\_0/](http://www.eceee.org/MembersForum/Novem/Reports_0/)



## Sweden's climate policy

### Targets

These are the long- and short-term emissions targets:

- 2008–2012:  
Swedish greenhouse gas emissions will decrease by four per cent in comparison with 1990.
- 2020:  
Greenhouse gas emissions in Sweden (this applies to activities outside the emissions trading scheme) will decrease by 40 per cent in comparison with 1990.
- 2050:  
The vision is for Sweden in 2050 not to have any net emissions of greenhouse gases into the atmosphere.

### Action plans

Three action plans are aiming at the following results:

- Half of Sweden's energy use in 2020 will come from renewable energy sources.
- In 2030 Sweden will have a vehicle fleet that is independent of fossil energy.
- Sweden's net greenhouse gas emissions will be zero by the middle of this century.
- Energy use will be 20 percent more efficient in 2020.
- The proportion of renewable energy in the transport sector in 2020 will be 10 percent.

### Downloads

<http://www.swedishepa.se/en/In-English/Menu/Climate-change/Climate-policy/Swedens-climate-policy/>

## Sweden's EU presidency focuses on climate change

Sweden launched its six-month rotating presidency of the European Union on July 1 by describing tackling climate change as this generation's central challenge.

Sweden boasts the highest renewable energy record in Europe and pioneering carbon taxes.

The trickiest challenge in helping deliver a successor to the Kyoto protocol will be to get the 27 countries of the EU to agree to share a bill running into many billions to assist developing countries cope with the impacts of climate change and cut emissions.

UK prime minister Gordon Brown was the first major country leader to name a figure when he proposed the adaptation funding should amount to \$100 billion by 2020.

### Website

[http://www.se2009.eu/en/the\\_presidency/work\\_programme/climate](http://www.se2009.eu/en/the_presidency/work_programme/climate)

## Who is who?

### UK Carbon Trust

#### Accelerating the move to a low carbon economy

The Carbon Trust was created by the UK government to help businesses and public organizations to reduce their GHG emissions through improved energy efficiency and developing commercial low carbon technology. Its stated mission is to accelerate the move to a low carbon economy.

The Carbon Trust is partly funded from the UK Climate Change Levy, a tax on electricity, gas, and coal.

#### Core activities

The Carbon Trust's core activity consists of helping companies and organizations reduce carbon emissions through providing help, support and advice. The Trust estimates in its annual report 2008 that it saves UK business £1 million a day through the cost savings reducing carbon emissions brings.

It finances a number of loan funds - including an interest-free loan for small and medium sized enterprises for energy-efficient equipment, and a similar scheme for the public sector. Unusually for a government sponsored organization it operates venture capital funds - in this case in the early-stage low carbon technology sector.

#### Reports

The Carbon Trust publishes climate policy related reports for UK business in collaboration with the research network Climate Strategies at <http://www.climatestrategies.org/carbon-trust-reports.html>

#### Website

[www.carbontrust.co.uk](http://www.carbontrust.co.uk)

### Climate Strategies

#### An international research network

Climate Strategies, established in 2006, is an international research network that carries out climate policy related research. Climate Strategies is a non-profit, academic membership organization that is granted by a number of international governments and foundations.

Climate Strategies convenes international groups of experts to provide assessments on international climate change policy, including issues related to the European Emissions trading scheme, the Kyoto project based mechanisms, and the post 2012 process.

#### Research activities

Current research spans a range of topics on the future design of economic instruments in industrialized countries and strengthened engagement with developing countries – topics that include energy and climate options for the G8, carbon prices in Phase 3 of EU ETS and research on tackling leakage issues and the possibilities of linking emissions trading systems.

#### Website

<http://www.climatestrategies.org>