

Climate Change Policies: Step-by-Step to a Low Carbon Economy

Climate change is the greatest environmental challenge that we face today. As the scientific evidence for it mounted during the late 1980s, the international community came together and began to combat the problem, establishing a step-by-step political process to mitigate the effects of climate change.



The first step was made in 1988. Sensing a growing concern about the critical impact of climate change, governments established the Intergovernmental Panel on Climate Change (IPCC) to better understand the nature and potential impact of the problem. The IPCC's first report in 1990 confirmed that climate change was occurring, and recommended that countries should take action in the form of an international treaty.

The kick-off treaty: The UN Framework Convention on Climate Change

This emerged as the United Nations Framework Convention on Climate Change (UNFCCC), signed by the UN member states at the Rio Earth Summit in 1992. The Convention set the ultimate objective of stabilizing atmospheric greenhouse gas (GHG) concentrations at safe levels, thereby reducing the impact of unavoidable climatic changes. The UNFCCC incorporated a non-binding initial goal that industrialized countries should take the lead in tackling the problem by cutting their emissions to 1990 levels.

The first substantive agreement: The Kyoto Protocol

It took all of one year for the member countries of the UNFCCC to decide that the Convention had to be augmented with stricter demands for reducing GHG emissions. The UNFCCC took effect in 1994, and by 1995 governments had begun negotiations on a protocol – an international agreement linked to the existing treaty, but standing on its own. The Kyoto Protocol was signed in 1997, but was in its impact somewhat diminished by the subsequent non-ratification of key parties, including the United States and Australia.

The Kyoto Protocol's major feature was that it defined mandatory targets for the world's leading economies. As many as 38 developed and industrialized countries agreed to reduce their emissions of greenhouse gases from 1990 levels by a total of 5.2 percent between 2008 and 2012.

Effective mechanisms for emissions reduction

With Kyoto, countries were offered flexibility in how they could

achieve their targets. Several reduction concepts were set up for this purpose, among them project-based mechanisms like Joint Implementation (JI) and the Clean Development Mechanism (CDM). They allow industrialized countries to invest in emissions reduction projects in other countries and obtain reduction units which can be applied to their own emission targets.

These reduction units then become part of the national emissions budgets that can be traded under the International Emissions Trading System (IET). In establishing the concept of IET, the Kyoto Protocol laid the groundwork for what has become known as the "carbon market".

Under the IET system, industrialized countries can trade part of their emissions budget known as Assigned Amount Units (AAUs). AAUs allow countries that have emission units to spare – emissions permitted to them, but not "used" – to sell this excess capacity to countries that have exceeded their targets.

The EU "carbon market"

Smaller carbon markets have been set up in the meantime to start the process and to link up with the Protocol's global market. The European Union (EU), for example, has established its own EU Emissions Trading Scheme (EU ETS), regulating industrial CO₂ emissions in the EU bloc. The scheme – mandatory for governments and companies – began in January 2005. The first phase runs from 2005-2007, the second one from 2008-2012, coinciding with the first Kyoto Protocol commitment period.

It is targeted primarily at large individual energy-using installations in defined economic sectors: mainly energy production, metals, construction materials, and paper. Each EU country has to develop a National Allocation Plan (NAP) outlining the total number of emission allowances (EUAs) allocated (free of charge) to the individual installations covered by the scheme. At the end of each year, each site must surrender sufficient allowances to cover their CO₂ emissions for that year.

Companies can meet their targets by implementing measures to reduce CO₂ emissions or by buying surplus allowances from other firms, i.e. trading. The 2004 "Linking Directive" allows emissions credits from Kyoto Protocol project-based reduction mechanisms (JI/CDM) to be used within the EU ETS.

Carbon constraints: Incentives for a low-carbon economy

Carbon constraints will mean different things for different economic sectors. Studies suggest that earnings for some branches will increase while others will decline. Among the declining industries are emission-intensive ones, such as metal and automotive manufacturing.

For these companies, climate change mitigation policies are a great challenge, compelling them to take investment decisions to replace or upgrade existing infrastructure today while at the same time accommodating the long-term prospect of decreasing future emissions allocations. One of the most important benefits of

mitigation is thus the incentive to develop processes and technologies that emit less carbon.

Managements and investors have slowly begun to realize that those companies that reduce their GHG emissions through energy efficiency and utilize low-carbon technologies in their operations will achieve fast and sustained growth.

Future steps: Clear policy framework on climate change

Companies need to play their part, but they must be able to rely on stable and clear political direction. Therefore it is crucial that the international community provides political and regulatory security – especially for the period after the Kyoto Protocol expires in 2012. Governments must pave the way for a clear future policy framework on mitigating climate change, so that companies and investors are not deterred, and can adjust their long-term investment accordingly.

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