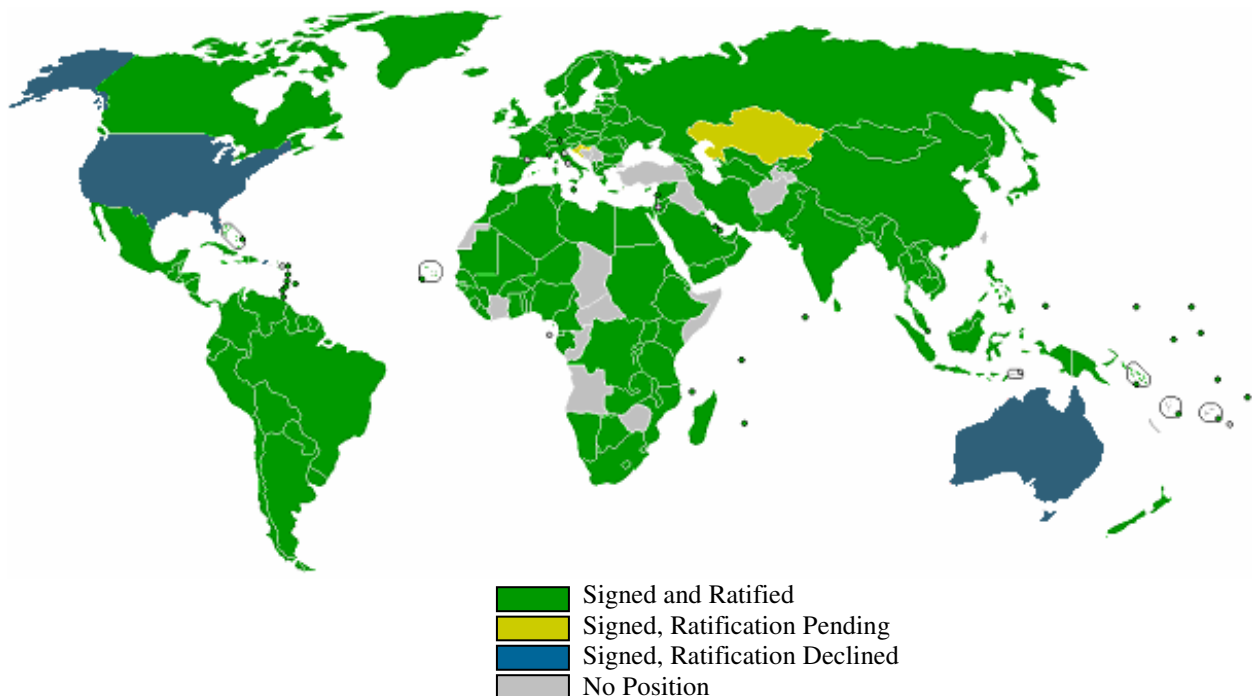


NATIONWIDE AND INTERNATIONAL REGULATION OF GREENHOUSE GAS EMISSIONS

International Agreements on Greenhouse Gas Emissions Reduction

Kyoto Protocol: A broadly ratified treaty developed under the United Nations Framework Convention on Climate Change which establishes legally binding targets and mechanisms for effecting global reductions in greenhouse gas emissions.¹ The Protocol achieves its goals through three mechanisms that allow for the international trade of emissions credits, grant industrialized countries emissions credits by financing projects in developed “transition economies” like those of eastern Europe, and structure financing mechanisms for emissions-avoidance or emissions-reduction projects in developing countries.²

*Kyoto Protocol Ratification Status (as of December 2006)*³



¹ See U.N. Framework Convention on Climate Change (UNFCCC), Essential Background, http://unfccc.int/essential_background/items/2877.php.

² See U.N. Framework Convention on Climate Change (UNFCCC), The Kyoto Protocol, http://unfccc.int/kyoto_protocol/background/items/2878.php.

³ See ROBERT J. KEATING ET AL., ENERGY & ENVTL. SEC. INITIATIVE, GREENHOUSE GAS EMISSIONS TRADING: EMERGING MARKETS AND OPPORTUNITIES FOR COLORADO 21-22 (Mar. 2007), available at http://www.colorado.edu/law/eesi/CO_GHG_Trading_Report.pdf.

The Kyoto Protocol places responsibility on individual countries to mitigate greenhouse gas emissions proportional to their respective historical emissions. As such, industrialized countries with mature economies have more stringent emissions reduction requirements than do countries with transition economies. Developing countries are not required to achieve reductions in greenhouse gas emissions. The Kyoto Protocol entered into force in February of 2005.

European Union Emissions Trading Scheme (EU ETS): Established in order to achieve Kyoto-established emissions reduction goals, the EU ETS is a downstream, company level, greenhouse gas emissions trading system organized under the auspices of the European Union. It currently covers nearly 12,000 installations in 25 countries and across six major industrial sectors.⁴ Countries participating in the trading scheme are responsible for allocating and regulating those GHG emissions allowances granted them by the Kyoto Protocol.⁵ Emissions permits traded on the EU ETS are granted only if satisfactory monitoring and reporting mechanisms are in place.⁶

Asia-Pacific Partnership on Clean Development and Climate (AP6): The six partner countries—Australia, China, India, Japan, Republic of Korea, and the United States—represent about half of the world’s economy, population, and energy use. The Partnership strives to expand investment and trade in clean energy technologies, goods, and services, focusing on key market sectors.⁷ The Partnership is without legally binding commitments for greenhouse gas emissions reductions. It provides a multinational forum for advancing technology development. Canada has expressed interest in joining the partnership, and that country’s membership is currently under consideration.⁸

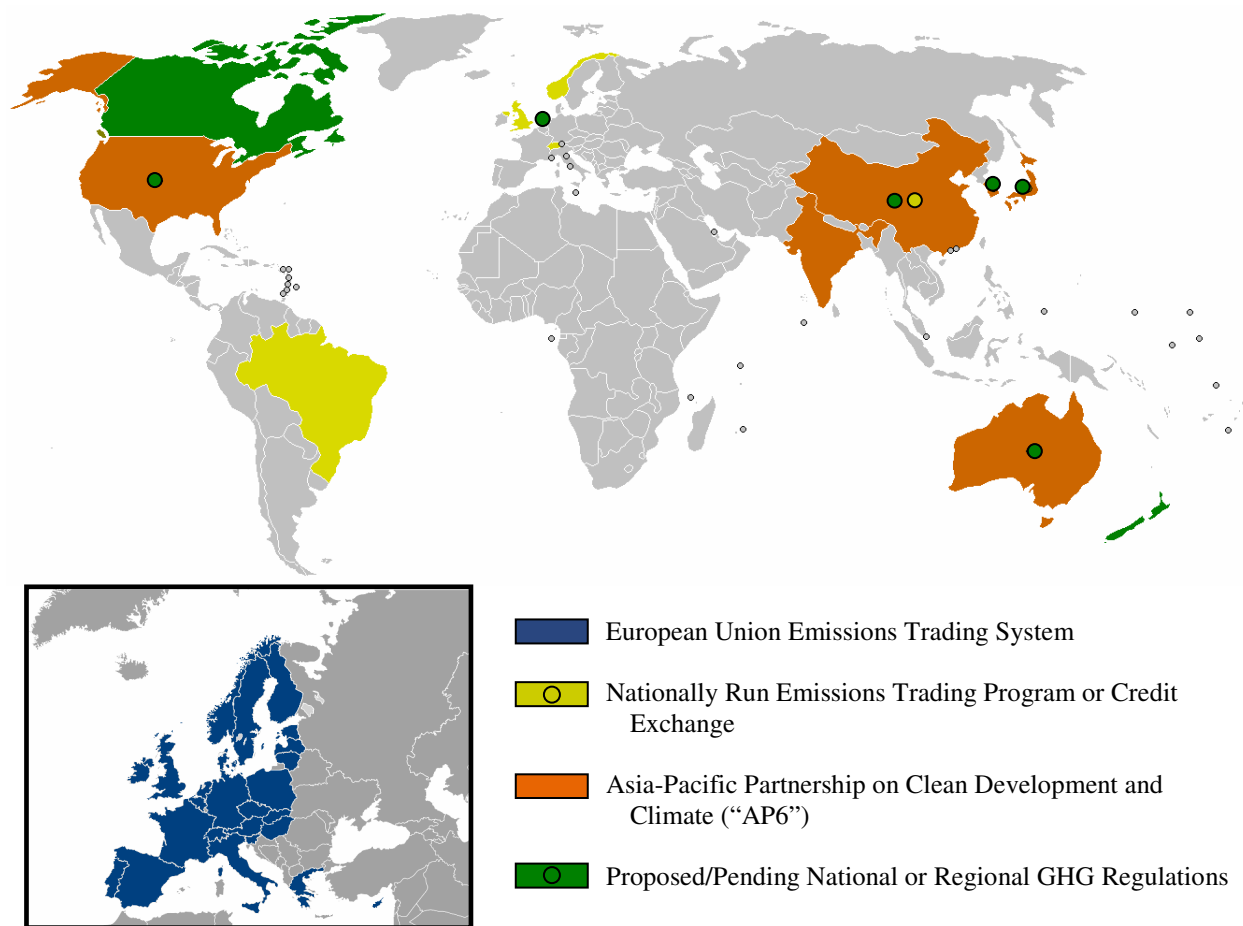
⁴ *Id.* at 16-17.

⁵ See Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003, 2003 O.J. (L 275) 32 [hereinafter Emissions Trading Directive].

⁶ See *id.* at 35.

⁷ See Asia-Pacific P’ship on Clean Dev. & Climate, <http://www.asiapacificpartnership.org/>.

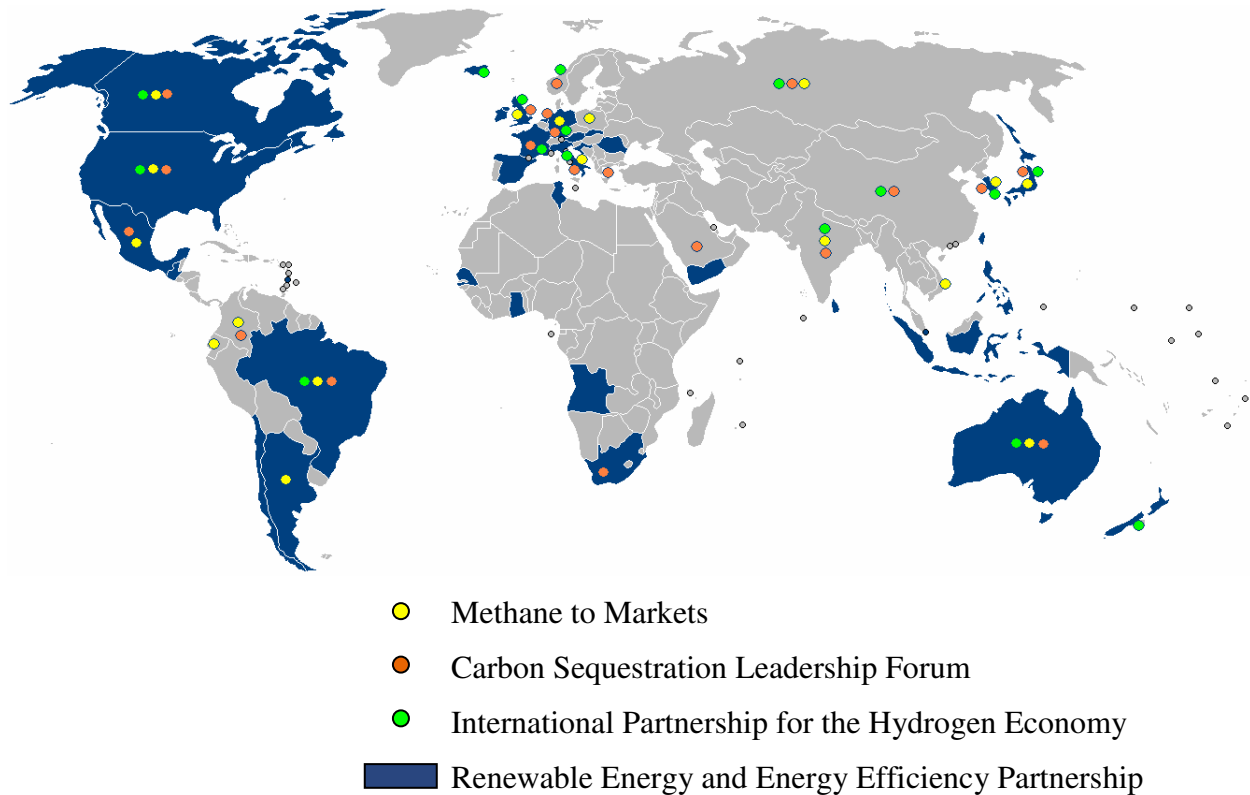
⁸ See Toshio Aritake, *Meeting of Asia-Pacific Climate Partnership Considers Pilot Projects; Canada May Join*, 30 INT’L ENV’T REP. (BNA) at 584 (July. 25, 2007).

*Trading of GHG Emissions Credits & Partnerships on Climate Change*⁹

There are several other international partnerships that focus on mitigating global warming pollution by encouraging the development of specific technology markets and changes in energy infrastructure. Like the AP6, these partnerships do not include binding goals. However, they do indicate national interest on the part of their member states to effect emissions reductions and facilitate the development of new business opportunities over carbon-intensive products and services.

⁹ See KEATING ET AL., *supra* note 3, at 21-25.

Other International Climate-Related Partnerships and Market Efforts



Methane to Markets: A partnership of twenty countries to encourage the development and implementation of methane capture technologies for energy production and climate change mitigation. [www.methanetomarkets.org]

Carbon Sequestration Leadership Forum (CSL Forum): An international climate change initiative focused on the development of cost-effective means for the capture and long-term sequestration of CO₂ emissions. CSL Forum has twenty-one member states along with the European Commission. [www.cslforum.org]

International Partnership for the Hydrogen Economy (IPHE): A partnership established in 2003 of sixteen countries committed to accelerating the development of hydrogen and fuel cell technologies. [www.iphe.net]

Renewable Energy and Energy Efficiency Partnership (REEEP): With a membership of 36 governments as well as NGO and multinational businesses, REEEP is a prominent partnership that funds projects and analyzes policy mechanisms to encourage renewable energy and energy efficiency. [www.reeep.org]

International Dialogues on Climate Change

- *Vienna Climate Change Talks*, August 27-31, 2007 – This conference was held under the auspices of the U.N. Framework Convention on Climate Change and attended by over 900 delegates of the Parties to the Convention. The conference addressed how a global post-Kyoto climate policy will be negotiated and reached "agreement on key elements for an effective international response to climate change."¹⁰
- *Heiligendamm Summit*, June 7-8, 2007 – A G8 summit that included the world's five largest developing economies (Brazil, China, India, Mexico, and South Africa) in discussions concerning post-2012 international climate change policy. The summit reiterated the participating countries' dedication to mitigating climate change and outlined commitments to cooperate in certain fields including cross-border development, research and development, energy infrastructure revision, and sustainable development, especially in Africa.¹¹ The group committed to consideration of an emissions reduction goal of halving current emissions by 2050.¹²

¹⁰ Press Release, UNFCCC Secretariat, Vienna UN Conference Shows Consensus on Key Building Blocks for Effective International Response to Climate Change (Aug. 31, 2007), *available at* http://unfccc.int/files/press/news_room/press_releases_and_advisories/application/pdf/20070831_vienna_closing_press_release.pdf; *see also* U.N. Framework Convention on Climate Change, Vienna Climate Change Talks 2007, http://unfccc.int/meetings/intersessional/awg_4_and_dialogue_4/items/3999.php.

¹¹ *See* Joint Statement by the German G8 Presidency and the Heads of State and/or Government of Brazil, China, India, Mexico and South Africa on the Occasion of the G8 Summit in Heiligendamm, Germany, 8 June 2007, *available at* http://www.g-8.de/Content/EN/Artikel/___g8-summit/anlagen/o5-erklaerung-en,property=publicationFile.pdf.

¹² Stephen Gardner, *Summit Discussions Conclude with Pledge by Developing Nations, G-8 to Do 'Fair Share'*, 30 INT'L ENV'T REP. (BNA) at 482, June 13, 2007.

- *United Nations Climate Change Conference*, Nairobi, Nov. 6-17, 2006 – This conference assessed progress of the implementation of the Kyoto Protocol, and hosted the twelfth session of the Conference of the Parties to the Climate Change Convention.¹³
- *Climate Dialogue at Pocantico*, September 2005 – A convening of senior policymakers and stakeholders from 15 countries to develop options and recommendations for policy approaches to mitigate global climate change.¹⁴
- *Gleneagles Summit*, July 6-8, 2005 – A G8 summit focusing on climate change, clean energy, and sustainable development. The adopted plan of action identified several methods to promote renewable energy and energy efficiency. These include, *inter alia*, reviewing building codes and vehicle standards to identify best practices, adopt market-based policy frameworks to finance the transition to cleaner energy sources, and encourage multilateral development banks to consider a project’s greenhouse gas intensity.¹⁵

Foreign Greenhouse Gas Emissions Regulations and Climate Change Mitigation Schemes

Included below are brief overviews of the steps some countries are taking to mitigate global climate change. This summary compilation is provided to illustrate the extensive diversity and number of such legislative and other regulatory measures internationally.

Australia: On June 3, 2007, Australia’s Prime Minister announced that the country would be implementing an emissions reduction and trading system that will have broad coverage

¹³ See U.N. Framework Convention on Climate Change, United Nations Climate Change Conference – Nairobi 2006, http://unfccc.int/meetings/cop_12/items/3754.php; see also Pew Ctr. on Global Climate Change, COP 12 and COP/MOP 2 Nairobi,

http://pewclimate.org/what_s_being_done/in_the_world/cop12/.

¹⁴ See Pew Ctr. on Global Climate Change, *Climate Dialogue at Pocantico*, <http://pewclimate.org/pocantico.cfm>.

¹⁵ See Pew Ctr. on Global Climate Change, *Summary of G8 Summit*, http://pewclimate.org/policy_center/international_policy/summary_of_g8.cfm.

of greenhouse gas emissions sources and the capability to be tied to other national or international trading programs. Trading is set to begin no later than 2012.¹⁶

Brazil: In conjunction with the World Bank and a Japanese bank, Brazil will be launching a carbon exchange in September 2007 to auction off carbon emissions credits obtained under the Clean Development Mechanism of the Kyoto Protocol.¹⁷

Canada: John Baird, Canadian Environment Minister, formally proposed a greenhouse gas emissions reduction plan in April of 2007, setting its sights on a 20% reduction from current levels by 2020. The plan includes a regulatory framework and enforcement mechanisms to ensure reduction goals are met.¹⁸ Additionally, the province of Quebec will implement a tax on carbon dioxide emissions in October of 2007.¹⁹

China: In June of 2007, China issued a national plan to reduce the nation's greenhouse gas emissions. The plan does not include mandatory caps, but discusses future adoption of tax incentives and low-interest loans to encourage clean development.²⁰ Further, China announced in February of 2007 that it would launch the developing world's first carbon credit exchange in collaboration with the United Nation's Development Program.²¹

Germany: In May of 2007, Environment Minister Sigmar Gabriel unveiled an eight-point plan for reducing Germany's greenhouse gas emissions 40% from 1990 levels by 2020. The

¹⁶ See Dep't of the Prime Minister & Cabinet, Australian Gov't, Climate Change, http://www.pmc.gov.au/climate_change/index.cfm.

¹⁷ See *Carbon Trading: Brazil Opens Carbon Exchange*, CLIMATE CHANGE CORP.COM, Aug. 2, 2007, <http://www.climatechangecorp.com/content.asp?ContentID=4885>.

¹⁸ See Peter Menyas, *Canada Proposes New Framework to Cut Greenhouse Gas Emissions, Air Pollutants*, 30 INT'L ENV'T REP. (BNA) at 334, May 2, 2007.

¹⁹ See *Canada's Quebec Province Plans Carbon Tax*, 30 INT'L ENV'T REP. (BNA) at 470, June 13, 2007.

²⁰ See Kathleen E. McLaughlin, *China Plan Emphasizes Energy Efficiency; Country Will Not Support Mandatory Targets*, 30 INT'L ENV'T REP. (BNA) at 471, June 13, 2007.

²¹ See KEATING ET AL., *supra* note 3, at 25; Kathleen E. McLaughlin, *China to Establish GHG Emissions Exchange with U.N. in Bid to Spur Clean Development*, 30 INT'L ENV'T REP. (BNA) at 163, Feb. 21, 2007.

plan includes efforts to increase the efficiency of cogeneration power plants and motor vehicles, as well as boost the percentage of renewable energy in the nation's overall use from 12 to 20%.²²

Japan: The Japanese government announced plans in February of 2007 to establish mandatory emissions-reduction targets for industry and develop a trading platform for greenhouse gas emissions credits.²³ Japan has also unveiled a program to promote energy efficiency to be jointly implemented by the government and industry. The program will focus on the utilization of cutting edge technology in several sectors to capture energy from existing industrial process, and retrofit energy-intensive processes.²⁴ Additionally, the Tokyo municipal government will soon impose compulsory CO₂ emissions reduction targets on large sources within the city, including factories and office buildings. The program involves tax breaks for companies meeting the reduction goals and penalties for those exceeding the targets. It will later be expanded to cover smaller emissions sources.²⁵ Finally, Japan has announced that the global environment and climate change will be at the center of next year's Group of Eight summit.²⁶

New Zealand: New Zealand has announced its goal to be a carbon neutral nation.²⁷ To this end, the government has released a number of proposals for public comment, including energy efficiency and conservation strategies, sustainable land management measures, and transitional strategies to move toward low-emissions electricity production. As Jim Anderton, New Zealand Minister for Agriculture and Forestry, noted: "Climate change presents a very real threat not only to the way we use our land, but to our international markets Already there is talk in Europe of border taxes on goods from countries that aren't taking effective action to

²² See Niels Sorrells, *German Environment Minister Unveils Plan to Cut Carbon Emissions 40 Percent by 2020*, 30 INT'L ENV'T REP. (BNA) at 324, May 2, 2007.

²³ See *Japan Plans to Launch Emissions Trading Platform*, 30 INT'L ENV'T REP. (BNA) at 204, Mar. 7, 2007.

²⁴ See *Japan Plans to Promote Energy Efficient Technology*, 29 INT'L ENV'T REP. (BNA) at 742, Oct. 4, 2006.

²⁵ See Toshio Aritake, *Tokyo Considers Mandatory Limits for Large Carbon Dioxide Emitters*, 30 INT'L ENV'T REP. (BNA) at 474, June 13, 2007.

²⁶ See Nancy Ognanovich & Stephen Gardner, *Japan Plans to Make Environment Focus of Next Year's G-8 Summit*, 30 INT'L ENV'T REP. (BNA) at 483, June 13, 2007.

²⁷ See Eduard Goldberg, *New Zealand Prime Minister Announces Plans to Make Country 'Carbon Neutral'*, 30 INT'L ENV'T REP. (BNA) at 166, Feb 21, 2007.

address climate change. It's in our economic interest to be part of the global response to climate change. We need to take action to reduce the risks.”²⁸

Norway: In April of 2007, Norwegian Prime Minister Jens Stoltenberg outlined his government’s plans to make the country entirely greenhouse gas neutral by 2050. He further expressed a desire to lead the way in developing a new, binding, and truly global treaty for the reduction of greenhouse gas emissions to succeed the Kyoto Protocol.²⁹ The country has also implemented a sales tax on passenger vehicles which is calculated relative to the car’s carbon dioxide emissions.³⁰

Switzerland: Switzerland announced it will impose a tax on certain fossil fuels starting in 2008 in order to help achieve greenhouse gas emissions reduction goals. The tax will be levied on imported heating oil and natural gas.³¹

United Kingdom: The United Kingdom has developed a National Allocation Program in accordance with the EU ETS Directive. These regulations cover installations involved in energy activities, the production and processing of ferrous materials, mineral processing, and paper and wood pulp production.³² To this end, the Government has published a code of best practice for trading emissions credits.³³ Further, the U.K.’s Climate Change Bill, proposed in March of 2007, is currently under consideration. It would, if implemented, require future UK governments to commit to greenhouse gas emissions reductions by establishing rolling, 5-year term emissions reduction targets.³⁴ The U.K. has also adopted an Energy Efficiency Commitment Program

²⁸ Eduard Goldberg, *New Zealand Proposals to Reduce Emissions Consider Incentives for Agriculture, Forestry*, 30 INT’L ENV’T REP. (BNA) at 41, Jan. 10, 2007.

²⁹ See Marcus Hoy, *Norwegian Prime Minister Announces Plans to Cut Carbon Emissions to Zero by 2050*, 30 INT’L ENV’T REP. (BNA) at 325, May 2, 2007.

³⁰ See Marcus Hoy, *Norway Revises Vehicle Purchase Tax to Target Carbon Dioxide Emissions*, 30 INT’L ENV’T REP. (BNA) at 67, Jan. 24, 2007.

³¹ See Daniel Pruzin, *Switzerland to Impose Carbon Dioxide Tax After Missing Emissions Reduction Target*, 30 INT’L ENV’T REP. (BNA) at 539, June 11, 2007.

³² See KEATING ET AL., *supra* note 3, at 19.

³³ See Tom Blass, *Britain Drafts Standard for Buying, Selling Voluntary Greenhouse Gas Emissions Offsets*, 30 INT’L ENV’T REP. (BNA) at 66, Jan. 24, 2007.

³⁴ See Dep’t for Env’t, Food, & Rural Affairs, U.K. Legislation: Climate Change Bill, <http://www.defra.gov.uk/environment/climatechange/uk/legislation/index.htm>; Tom Blass, *U.K. Bill*

which encourages energy companies to implement efficiency measures utilizing market influences, a program highly praised by the International Energy Agency.³⁵ Additionally, the Mayor of London introduced a plan to cut the city's CO₂ emissions 60% by 2050 by using a suite of financial incentives.³⁶

Other Resources

- The Energy & Environmental Security Initiative has compiled a database of thousands of bilateral and multinational agreements concerning energy and the environment, with many of these focused on the development and installation of renewable energy technologies and conservation measures. *See* <http://lawweb.colorado.edu/eesi/>.
- The Pew Center on Global Climate Change has several analytic reports and policy overviews on international dialogues surrounding GHG emissions and climate change mitigation. *See* http://pewclimate.org/what_s_being_done/in_the_world.

Envisions Five-Year Carbon Budgets to Achieve 60 Percent Reduction by 2050, 30 INT'L ENV'T REP. (BNA) at 218, Mar. 21, 2007.

³⁵ *See* Int'l Energy Agency, *Overview*, in ENERGY POLICIES OF IEA COUNTRIES – THE UNITED KINGDOM: 2006 REVIEW (2007), available at <http://www.iea.org/w/bookshop/add.aspx?id=299>; U.K. Energy Efficiency Program Seen as Model, 30 INT'L ENV'T REP. (BNA) at 192, Mar. 7, 2007.

³⁶ *See* Tom Blass, *London 'Climate Change Action Plan' Offers Measures to Cut Emissions from All Sources*, 30 INT'L ENV'T REP. (BNA) at 184, Mar. 7, 2007.