

CLIMATE CHANGE 101

International Action



Climate change is a global challenge and requires a global solution. Greenhouse gas emissions have the same impact on the atmosphere whether they originate in Washington, London or Beijing. To avoid dangerous climate change, emissions ultimately must be reduced worldwide. An effective global strategy requires leadership by the United States, and commitments and action by all the world's major economies.

GLOBAL EMISSIONS

Greenhouse gas (GHG) emissions, largely carbon dioxide (CO₂) from the combustion of fossil fuels, have risen dramatically since the start of the Industrial Revolution. Globally, energy-related CO₂ emissions have risen 145-fold since 1850—from 200 million tons to 29 billion tons a year—and are projected to rise another 54 percent by 2030 (see Figure 1).¹

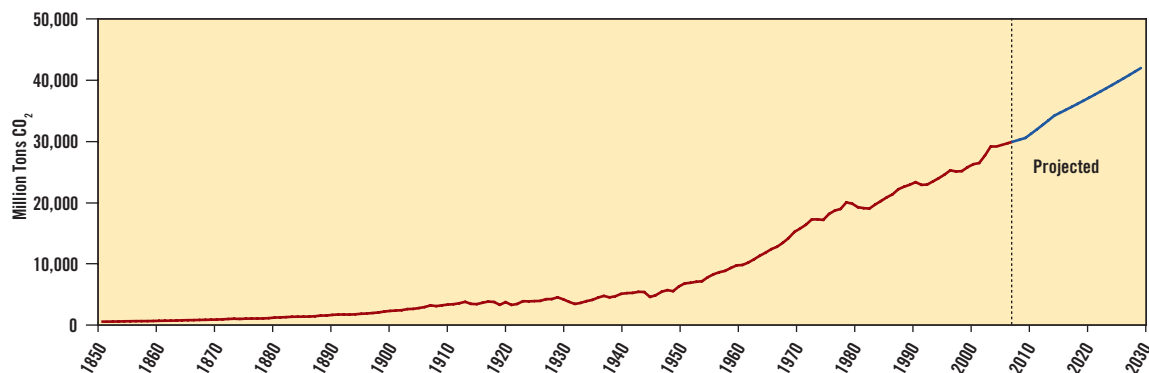
Most of the world's emissions come from a relatively small number of countries. The 25 largest emitters, with 75 percent of the world's population and 90 percent of the global gross domestic product (GDP), account for approximately 85 percent of global GHG emissions. The top six emitters—the United States,

China, the European Union (EU),² Russia, India, and Japan—accounted for more than 60 percent of global emissions in 2005. (If emissions from land use change and forestry are also taken into account, Brazil, Indonesia and other countries with high rates of deforestation rank among the top emitters.)³

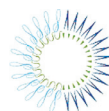
Among members of the Organization for Economic Cooperation and Development (OECD), the United States, the EU, and Japan are the three largest GHG emitters (see Figure 2). In absolute terms, the United States is by far the largest. The United States, with 5 percent of the world's population, is responsible for 18 percent of GHG emissions.⁴

Figure 1

Global Carbon Dioxide Emissions 1850–2030



PEW CENTER
ON
Global CLIMATE CHANGE



THE
PEW
CENTER ON THE STATES

Figure 2

GHG Emissions for Major Economies

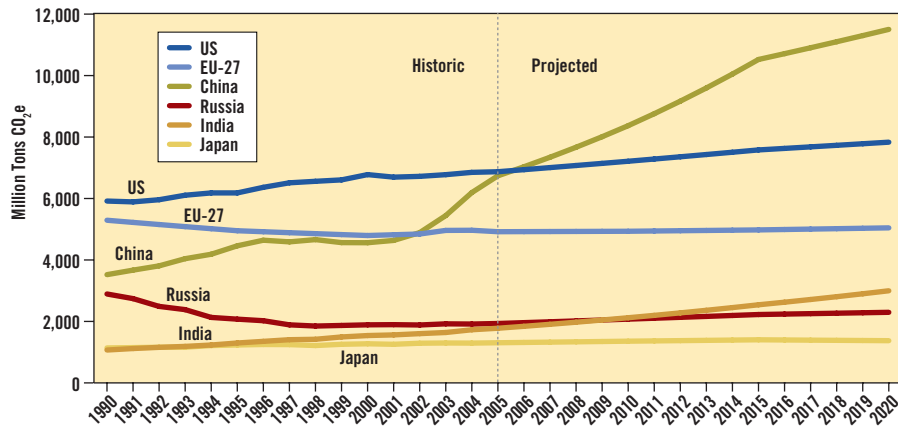


Figure 3

GHG Intensity 2005

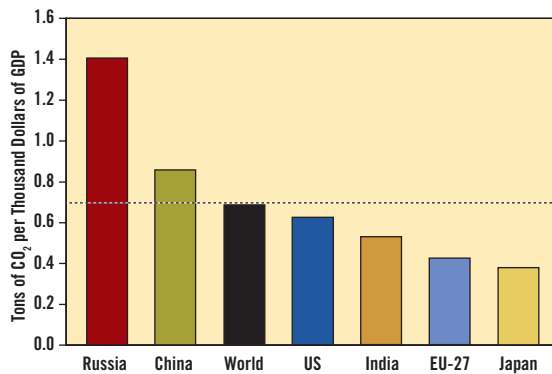
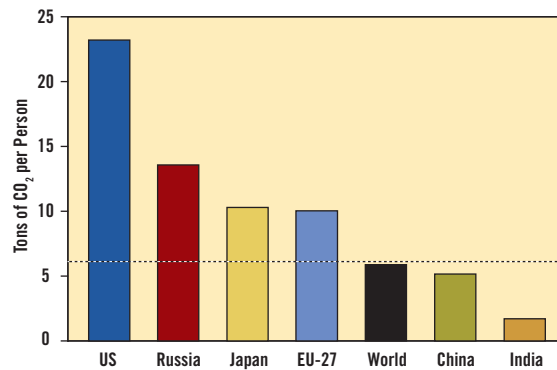


Figure 4

Per Capita GHG Emissions 2005



On an intensity basis (emissions per GDP), U.S. emissions are significantly higher than the EU's and Japan's (see Figure 3). On a per capita basis, U.S. emissions are roughly twice as high as those of the EU and Japan and four times the world average (see Figure 4). Looking ahead, U.S. GHG emissions are projected to rise 14 percent above 2005 levels by 2020. By comparison, emissions are projected to grow 2.5 percent in the EU and 5 percent in Japan.

Emissions are rising fastest in developing countries. China's and India's emissions are projected to grow 71 percent and 68 percent, respectively, by 2020. Annual emissions from all developing countries surpassed those of developed countries in 2004.

As overall emissions from developing countries rise, their per capita emissions will remain much lower than those of developed countries. While China's per capita emissions are expected to more than double by 2020, to slightly above the world average, they will still be just one-third those of the United States. India's will rise to about one-tenth those of the United States.

Looking at emissions on a cumulative basis, the United States accounts for 30 percent of energy-related CO₂ emissions since 1850, while China accounts for 7 percent.⁵ Cumulative emissions are an important measure because of the long-lasting nature of greenhouse gases in the atmosphere.

Although developing country emissions are rising, their cumulative emissions are not projected to reach those of developed countries for several more decades.

THE INTERNATIONAL CLIMATE EFFORT

Governments launched the international climate change effort at the “Earth Summit” in 1992 with the signing of the United Nations Framework Convention on Climate Change. Signed by President George H.W. Bush and ratified by the U.S. Senate, the Convention now has 192 parties.

The Convention set as its ultimate objective stabilizing atmospheric GHG concentrations “at a level that would prevent dangerous anthropogenic [human] interference with the climate system.” Recognizing the wide range in countries’ historic contributions to climate change, and in their capacities to address it, governments agreed they had “common but differentiated responsibilities.” In keeping with that principle, developed countries agreed to “take the lead” and to assist developing countries in combating climate change. Developed countries also agreed to a non-binding “aim” of reducing their emissions to 1990 levels by 2000.

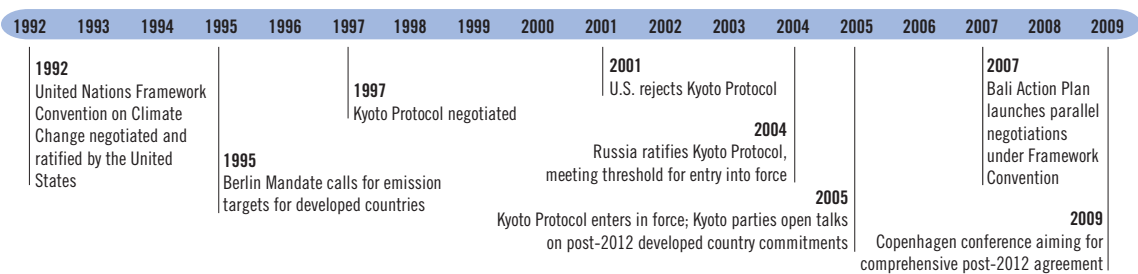
In 1995, recognizing that this voluntary target was insufficient and in most cases would not be met, governments adopted the Berlin Mandate, calling for the negotiation of binding targets for developed countries. These negotiations led in 1997 to the Kyoto Protocol. Under the Protocol, developed countries agreed to an average emission reduction of 5.2 percent below 1990 levels by 2008–2012 (the first commitment period). Individual targets range from –8 percent for EU countries to +10 percent for Iceland; the target the United States negotiated for itself was –7 percent.

Key provisions of the Protocol, urged largely by U.S. negotiators, provide countries with flexibility to meet their targets cost-effectively. These include three market-based mechanisms: international emissions trading (trading of emission allowances⁶ among countries with targets); and Joint Implementation and the Clean Development Mechanism (JI and CDM, which credit emission reductions from projects in developed and developing countries, respectively). Other flexibility provisions include: setting emission targets as five-year averages, rather than single-year limits; counting a “basket” of six greenhouse gases, not just carbon dioxide; and providing credit for carbon sequestration (i.e., storage) in forests and farmland.

Following the United States’ renunciation of Kyoto in early 2001, other governments completed negotiations on the Protocol’s detailed implementation rules and proceeded to ratify it. Russia’s ratification in 2004 provided the necessary quorum (at least 55 countries representing 55 percent of 1990 developed country emissions), triggering the Protocol’s entry into force in February 2005. Kyoto has now been ratified by 182 countries. The 37 industrialized countries with binding targets account for 64 percent of developed country emissions and about a third of global emissions.

Meeting in Montreal in 2005, parties to the Kyoto Protocol opened negotiations on post-2012 commitments for developed countries. In Bali in 2007, governments launched a parallel negotiating process under the Framework Convention, which includes the United States. The Bali Action Plan envisions “measurable, reportable, and verifiable” mitigation “actions or commitments” by developed countries; mitigation “actions” by developing countries; and technology, financing, and capacity-building support for developing countries. It

Timeline International Action on Climate Change



Climate Action Around the World

Many countries have policies and programs that help reduce or avoid GHG emissions. Some are undertaken specifically to address climate change; others are driven principally by economic, energy, or development objectives, but at the same time contribute to climate efforts. In the United States, state and local governments are taking the lead. California has enacted GHG standards for cars and light trucks and a mandatory target to reduce statewide emissions from all sources to 1990 levels by 2020 (a 28-percent reduction compared to “business as usual” projections). Ten north-eastern states have established the Regional Greenhouse Gas Initiative, a cap-and-trade program to reduce emissions from power plants. Twenty-nine states and the District of Columbia require that a significant percentage of their electric power come from renewable sources. At the federal level, the United States has a number of voluntary programs and bills have been proposed in Congress to establish mandatory economy-wide GHG limits. (For more information on U.S. action, see three other reports in the Climate Change 101 series: *Local Action*, *State Action*, and *Business Solutions*.) Here is a sampling of policies and programs in other major GHG-emitting countries:

European Union

- *Kyoto Target*—Reduce EU-15 emissions 8 percent below 1990 level by 2008–2012. Individual targets for 12 new member states range from -8 to +6 percent.
- *EU Target*—Unilateral commitment to reduce EU emissions 20 percent below 1990 levels by 2020 ; 30 percent below 1990 levels if other developed countries agree to comparable reductions and advanced developing countries contribute according to their capabilities and responsibilities.⁷
- *Emissions Trading Scheme*—Mandatory CO₂ emission limits for 12,000 installations in six major industrial sectors, with emissions trading. Links to the Kyoto Protocol’s emission crediting mechanisms.
- *Renewable Energy Target*—Mandatory target of 20 percent of EU energy mix from renewable sources by 2020, including a minimum of 10 percent biofuels in overall fuel consumption.

- *Community Tax Framework*—Minimum tax rates for energy and electricity depending on fuel type, with exemptions for electricity from renewables, biomass, and combined heat and power.
- *Auto fuel economy*—Mandatory standards to reduce average CO₂ emissions of new cars from 160g/km (0.57lbs/mile) to 120g/km (0.43lbs/mile) by 2012 (Draft legislation awaiting approval).

United Kingdom

- *Emission Targets*—National target of reducing CO₂ emissions 20 percent below 1990 level by 2010 (more than required under Kyoto or the EU’s internal target-setting), with a mandatory long-term target of 80 percent reduction by 2050.
- *Climate Change Levy*—Tax on fossil fuel-based electricity for industry and other large users, with most revenues used for energy efficiency research.

Japan

- *Kyoto Target*—Reduce emissions 6 percent below 1990 levels by 2008-2012.
- *Industry Agreements*—Agreements with Nippon Keidanren, Japan’s leading industry association, to reduce industrial GHG emissions to 1990 levels by 2010 and with the Federation of Electric Power Companies to reduce emissions intensity of the electricity sector about 20 percent below 1990 levels by 2010.
- *Energy Taxes*—Schedule of taxes based in part on carbon content of fuel (e.g., \$0.45/liter, or about \$1.70/gallon for gasoline; \$2/ton for coal, rising to \$7/ton by 2007), with a portion of the revenues used for climate purposes.
- *Auto Fuel Economy*—Standards to increase fuel economy of new passenger vehicles to 16km/l (37.6 miles per gallon or mpg), and commercial vehicles to 15km/l (35.2 mpg), by 2015 (an improvement of 22 percent and 13 percent from 1990 levels respectively).

Climate Action Around the World (continued)

China⁸

- *National Climate Change Program*—Comprehensive program adopted in 2007 outlining existing and planned policies and programs addressing climate change mitigation and adaptation.
- *Fuel Economy Standards*—Require all new cars and light trucks to achieve 19 to 38 mpg by 2005 (depending on class) and 21 to 43 mpg by 2008. Projected to save 960 million barrels of oil and avoid 130 million tons of carbon emissions through 2030.
- *Energy Intensity Goals*—National goals of reducing energy intensity 20 percent from 2005 to 2010, and a total of 50 percent from 2000 to 2020; follows a 68 percent reduction in energy intensity from 1980 to 2000.
- *Renewable Energy Initiatives*—National targets for renewables to provide 16 percent of primary energy (up from 7 percent today) and 20 percent of electricity by 2020, including specific targets for wind power, biomass, and hydropower capacity.
- *Taxes on Energy-Intensive Exports*—Increased export taxes on energy-intensive goods including aluminum and steel (and reduced import tariffs on energy and resource products including coal and petroleum) to conserve domestic energy resources.

India⁹

- *National Action Plan on Climate Change*—Comprehensive plan adopted in 2008 outlining existing and future policies and programs addressing climate change mitigation and adaptation, and directing ministries to develop detailed implementation plans.¹⁰
- *Renewable Energy*—Target to increase renewable power to more than 10 percent of total installed electrical generation capacity by 2012.

- *Rural Electrification*—Goal of electrifying 18,000 rural villages by 2012 from non-conventional sources such as biomass, solar, wind, and small hydropower.
- *Vehicle Conversion*—Rules requiring conversion of taxis, buses, and three-wheelers from gasoline and diesel to compressed natural gas in key cities.
- *Energy Efficiency*—National program including energy efficiency labels for appliances, mandatory energy audits of large energy-consuming industries, demand-side management programs, and benchmarks for industrial energy use.

EU Emissions Trading Scheme

The world's most far-reaching GHG reduction policy is the EU's Emissions Trading Scheme (ETS), which limits CO₂ emissions from 12,000 facilities across Europe. The ETS was launched in 2005 and in 2007 traded 2 billion tons of CO₂ at a market value of \$50 billion.¹¹

In its current second phase, which coincides with the Kyoto Protocol compliance period (2008–2012), the ETS covers electricity and major industrial sectors (including oil, iron and steel, cement, and pulp and paper) that together produce nearly half of the EU's CO₂ emissions. Most rules are set at the EU level but allocation of emission allowances is handled by individual member states. Excess emissions incur a penalty (100 euros/ton) and must be made up in the next phase. In mid 2008, emission allowance prices ranged from about 20 euros to 30 euros.

Changes proposed for the third phase (2013–2020) include: increasing coverage to the petrochemical, chemical, and aviation sectors; setting an EU-wide cap of 21 percent below 2005 levels by 2020 (rather than targets set individually by member states); harmonizing allocation of allowances in key sectors; 100 percent auctioning of allowances for the power sector; and phasing in full auctioning of allowances for some sectors by 2020.

is hoped that negotiations under the Kyoto and Convention tracks will converge in a comprehensive post-2012 agreement in Copenhagen in late 2009.

Governments are engaging in other international venues to supplement and contribute to efforts under the U.N. framework. Leaders of the Group of 8 (G8) industrialized countries have addressed climate change in each of their recent annual summits; in 2008, they endorsed a goal of reducing global emissions at least 50 percent by 2050. Discussions among the world's 17 major economies convened by the Bush administration led to a leaders' summit in 2008 calling for major developed economies to implement economy-wide goals and achieve absolute emission reductions, and major developing economies to undertake mitigation actions "with a view to achieving a deviation from business as usual emissions."

COMPETITIVENESS

In considering the U.S. policy response to climate change, both at home and abroad, one concern is the potential impact on U.S. competitiveness. Emission limits like those proposed in cap-and-trade legislation before Congress are projected to affect economic growth rates only marginally,¹² and thus pose little risk to the competitiveness of the U.S. economy as a whole. Any potential competitiveness risks would be felt most directly by energy-intensive industries whose goods are traded internationally, a relatively small segment of the U.S. economy.¹³ Potential concerns include relocation of energy-intensive U.S. industry to countries with no or looser controls, loss of market share to competitors in those countries, or a shift in U.S. investment to those countries.

Past experience with the adoption of new environmental standards shows little evidence of significant competitiveness impacts. One major review—synthesizing dozens of studies assessing the impacts of a range of U.S. regulations across a range of sectors—concluded that while environmental standards may impose significant costs on regulated industries, they do not appreciably affect patterns of trade.¹⁴ Other studies indicate that when U.S. producers do relocate to developing countries, factors such as wages and access to raw materials and markets are far more decisive than environmental costs.¹⁵

In gauging the potential impacts of GHG regulation, it is important to distinguish the "competitiveness" effect from the

broader economic impact on a given industry or firm. A mandatory climate policy will present costs for U.S. firms regardless of what action is taken by other countries. In the case of energy-intensive industries, one likely impact will be a decline in demand as consumers substitute less GHG-intensive products. The "competitiveness" impact is only that portion of the total impact on a firm resulting from an imbalance between GHG constraints within and outside the United States.

A forthcoming Pew Center report analyzes the historical relationship between energy prices and production, trade, and employment in order to project the potential competitiveness impacts of mandatory domestic GHG limits, at a price of \$15/ton CO₂. Looking at chemicals, paper, iron and steel, aluminum, cement, and bulk glass, the analysis concludes that most of the anticipated decline in production within those sectors (-2.6 percent to -5.3 percent) reflects a decline in consumption (-1.5 percent to -4.3 percent). The gap made up by imports, or the "competitiveness" effect, ranges from -1.0 percent to -1.5 percent. Within some sub-sectors (the analysis examines more than 400 individual manufacturing industries), the impact ranges up to 5.9 percent.¹⁶

Targeted policies minimize or mitigate potential competitiveness impacts. Under a cap-and-trade system, options include exempting trade-exposed energy-intensive industries from the cap or freely granting them emission allowances on the basis of historical or current emissions, output, or environmental performance. Compensation for indirect regulatory costs (higher energy prices) can be provided through additional free allowances or tax rebates. An alternative approach is to impose taxes or allowance requirements on energy-intensive imports from countries with weaker emission controls. Other policy options include: tax and other incentives for accelerated deployment of cleaner technologies; support for research and development of long-term technologies; and transition assistance for affected workers.¹⁷

Some economists believe that stronger environmental standards in many cases confer a competitive *advantage* by driving firms to innovate and become more efficient.¹⁸ By spawning markets for new technologies, new standards are as likely to create jobs as reduce them, according to some studies.¹⁹ A recent report commissioned by the United States Conference of Mayors estimated that strong investment in

areas such as renewable energy and fuels and building efficiency retrofits could add a total of 4.2 million new green jobs to the U.S. economy within 30 years, representing 10 percent of all new jobs growth over this period.²⁰

THE INTERNATIONAL CLIMATE EFFORT POST 2012

The move toward a mandatory national climate policy in the United States and the ongoing negotiations under the Framework Convention and Kyoto Protocol present an opportunity to broaden and strengthen the international climate effort beyond 2012, when the Kyoto targets expire.

To weigh post-2012 options, the Pew Center on Global Climate Change brought together senior policymakers and stakeholders from 15 countries in the Climate Dialogue at Pocantico.²¹ A key message from the group is that to be fair and effective, the international effort must engage all the world's major economies, which requires a flexible framework allowing countries to take on different types of commitments.

For developed countries, binding economy-wide *emission targets* like those established under Kyoto are generally regarded as the most appropriate form of mitigation commitment in a post-2012 agreement. Major developing countries are very unlikely to accept binding economy-wide targets; among other reasons, most lack the capacity to accurately measure and project their emissions economy-wide. One option for developing countries is sectoral emission targets (either absolute or intensity). Another is *policy-based commitments*—nationally-defined policies such as energy efficiency standards, renewable energy targets, or forestry goals that produce verifiable greenhouse gas reductions.²² These could be complemented by a mechanism granting developing countries tradable credits for policy-driven emission reductions.

A post-2012 framework also could include international *sectoral agreements* setting commitments across developed and developing countries in major emissions-generating sectors. Sectoral agreements could take a variety of forms,

including emission targets, performance- or technology-based standards, or “best practice” agreements.²³ In the case of energy-intensive industries, sectoral agreements can help address competitiveness issues by establishing mutual terms among major producing countries.

In addition to different types of mitigation commitments, a post-2012 agreement will likely include mechanisms to provide technology, finance, and adaptation support to developing countries. Key issues in negotiating a post-2012 agreement include the stringency and comparability of emission targets and other commitments, the means and level of support provided to developing countries, and the terms for reporting and verification of countries' actions.

NEXT STEPS

The future of the international climate effort hinges in large measure on the United States, which as the world's largest economy and cumulative emitter of greenhouse gases, has both the capacity and the responsibility to lead. Other major emitters are unlikely to commit to stronger action without the United States.

Governments are aiming for a new international climate agreement in late 2009 in Copenhagen. Unless Congress has completed work on a mandatory national climate policy, the United States is unlikely to commit to a specific international target at that time, making a full agreement improbable. Governments could, however, agree on the basic architecture of a post-2012 framework—for instance, economy-wide targets for developed countries, other commitment types for major developing countries, and types of technology and adaptation support—with the specific terms still to be negotiated. Whatever the outcome in Copenhagen, governments will have to continue working in the years ahead to achieve an effective long-term international climate effort.

To be fair and effective, the international effort must engage all the world's major economies, which requires a flexible international framework allowing countries to take on different types of commitments.

Pew Center on Global Climate Change

More information on climate change solutions is available at www.pewclimate.org.

ENDNOTES

- 1 Global CO₂ emissions from 1850-2030 (Figure 1) includes energy-related CO₂ only. All other data and figures are for all six greenhouse gases, excluding emissions associated with land use, unless otherwise stated. Energy-related CO₂ data: IEA, 2007. "CO₂ Emissions from Fossil Fuel Combustion 1971-2005". Other GHG emissions data: USEPA, 2006. "Global Anthropogenic Non-CO₂ Greenhouse Gas Emissions: 1990-2020." Projections: WEO, 2007. "World Energy Outlook 2007: China and India Insights."
- 2 Figures for the European Union represent emissions of the 27 EU members—the original EU-15 (Austria, Belgium, Denmark, France, Finland, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden, and the United Kingdom) and EU +12 (Czech Republic, Estonia, Latvia, Lithuania, Slovak Republic, Slovenia, Hungary, Poland, Bulgaria, Romania, Malta and Cyprus). The EU is treated here as a "country" because, as a regional economic integration organization, the European Community has "Party" status under the U.N. Framework Convention on Climate Change.
- 3 CO₂ emissions data (2000) from land use change and forestry: World Resources Institute, Climate Analysis Indicators Tool. Accessed October 2008.
- 4 When only energy-related CO₂ is taken into account, the U. S. is responsible for approximately 21 percent of global emissions.
- 5 Cumulative emissions data: World Resources Institute, Climate Analysis Indicators Tool. Accessed October 2008.
- 6 Allowances are legally established units entitling those holding them to emit a given level of GHGs.
- 7 For more details, see "European Commission's Proposed Climate Action and Renewable Energy Package" by Pew Center on Global Climate Change, Available at <http://www.pewclimate.org/docUploads/EU-Proposal-23Jan2008.pdf>
- 8 For more details, see "Climate Change Mitigation Measures in the People's Republic of China," by the Pew Center on Global Climate Change, Available at <http://www.pewclimate.org/docUploads/International%20Brief%20-%20China.pdf>
- 9 For more details, see "Climate Change Mitigation Measures in India," by the Pew Center on Global Climate Change, Available at <http://www.pewclimate.org/docUploads/India-FactSheet-09-08.pdf>
- 10 For more details see "Summary: India's National Action Climate Change Plan," by the Pew Center on Global Climate Change, Available at <http://www.pewclimate.org/international/country-policies/india-climate-plan-summary/06-2008>
- 11 Capoor Karan and Philippe Ambrosi. 2008. "State and Trend of the Carbon Market 2008." Carbon Finance Unit, The World Bank. May 2008. Available at http://carbonfinance.org/docs/State_Trends_FINAL.pdf
- 12 An Energy Information Administration study projects that achieving the emission targets of the Lieberman-Warner Climate Security Act of 2007 would diminish U.S. GDP by 0.3 percent from BAU levels in 2030. (Energy Information Administration. 2008. "Energy Market and Economic Impacts of S. 2191, the Lieberman-Warner Climate Security Act of 2007," Available at <http://www.eia.doe.gov/oiad/service/rpt/s2191/index.html>. For a more detailed discussion on various modeling scenarios on the Lieberman-Warner Climate Security Act 2007 see "Insights from Modeling Analyses of the Lieberman-Warner Climate Security Act S.2191," by Pew Center on Global Climate Change, Available at <http://www.pewclimate.org/in-brief/l-w-modeling>).
- 13 Energy-intensive industries (those whose energy costs are 4 percent or more of shipped value) consume more than half of the energy used in U.S. manufacturing but generate only 16 percent of production and 20 percent of employment (less than 1 percent of total U.S. employment). Aldy, Joseph E. and William A. Pizer, *The Competitiveness Impacts of Climate Change Mitigation Policies*, Pew Center on Global Climate Change (forthcoming).
- 14 The authors found "relatively little evidence to support the hypothesis that environmental regulations have had a large adverse effect on competitiveness..." Jaffe, A.B., S.R. Peterson, P.R. Portney, and R.N. Stavins. "Environmental Regulation and the Competitiveness of U.S. Manufacturing: What Does the Evidence Tell Us?" *Journal of Economic Literature*. Vol. XXXIII, March 1995.
- 15 Goodstein, Eban. 1994. *Jobs and the Environment: The Myth of a National Trade-Off*. Island Press. Jeppesen, Tim, John List and Henk Folmer, 2002. *Environmental Regulations and New Plant Locations Decisions: Evidence from a Meta-Analysis*, 42 J. Regional Science. 19, 36.
- 16 Aldy and Pizer, forthcoming.
- 17 Pew Center on Global Climate Change. 2008. "Addressing Competitiveness in U.S. Climate Change Policy." Congressional Policy Brief Series. Pew Center on Global Climate Change. November 2008.
- 18 Porter, Michael. "America's Green Strategy," *Scientific American*, 264, 4: 96, 1991; Porter, M. and C. van der Linde, "Toward a New Conception of the Environment-Competitiveness Relationship," *Journal of Economic Perspectives* 9, 4:97-118, 1995.
- 19 Morgenstern, Richard D. William A. Pizer, and Jhih-Shyang Shih. 1997. Are we Overstating the Economic Costs of Environmental Protection? Resources for the Future, Discussion Paper 97-36-REV June 1997.
- 20 "U.S. Metro Economies: Current and Potential Green Jobs in the U.S. Economy." Prepared for the United States Conference of Mayors and the Mayors Climate Protection Center by Global Insight, October 2008.
- 21 The report of, and background on, the Climate Dialogue at Pocantico are at <http://www.pewclimate.org/pocantico.cfm>.
- 22 Lewis, Joanna and Elliot Diringer, 2007. "Policy-Based Commitments in a Post-2012 Climate Framework." Pew Center on Global Climate Change. May 2007.
- 23 Bodansky, Daniel. 2007. "International Sectoral Agreements in a Post-2012 Climate Framework." Pew Center on Global Climate Change. May 2007.

Pew Center on Global Climate Change
2101 Wilson Blvd., Suite 550
Arlington, VA 22201
Phone (703) 516-4146
www.pewclimate.org

The Pew Center on Global Climate Change is a non-profit, non-partisan, independent organization dedicated to providing credible information, straight answers, and innovative solutions in the effort to address global climate change.

Pew Center on the States
1025 F Street NW, 9th Floor
Washington, DC 20004-1409
Phone (202) 552-2000
www.pewcenteronthestates.org

The Pew Center on the States, a division of the Pew Charitable Trusts, identifies critical issues facing states, examines diverse policy approaches, and shines a spotlight on nonpartisan, pragmatic solutions.

