Global Climate Change Treaty: Negotiations and Related Issues

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Summary

The United States and other parties to the 1992 Climate Change Convention signed at the Earth Summit in Rio de Janeiro will meet December 1-12 in Kyoto, Japan, to conclude year-long negotiations on a legally binding protocol or amendment to reduce or stabilize emissions of greenhouse gas emissions. The U.S. proposal to reduce emissions of carbon dioxide and five other greenhouse gases to 1990 levels between 2008-2012 is less ambitious than environmentalists and many other treaty Parties urge, but represents a commitment that others, including many in business, fear could damage the economy. A key aspect of the negotiations also is what should be expected of developing nations, whose current emissions of greenhouse gases are relatively small, but are expected to increase rapidly over the next decade with economic development. A sense of the Senate resolution calls for all countries to meet scheduled reductions, and would agree to U.S. participation only if harm to the domestic economy is avoided. If agreement is reached in Kyoto, Senate approval would be required for U.S. ratification, and legislation to implement commitments would also likely be necessary.

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Background

There is broad scientific consensus that greenhouse gases--primarily carbon dioxide (CO2) emitted in the burning of wood and hydrocarbons such as oil, coal, and gas, but also including a number of other gases such as methane--are increasing in the atmosphere due to human activities, and that the temperature of the Earth has warmed by about 0.9 degrees F over the past 110 years. Emissions have a cumulative effect, as most greenhouse gases remain in the atmosphere for long periods--hundreds of years in the case of carbon dioxide, and thousands of years for some. What is still a matter of contention is the accuracy of models that predict future consequences such as the timing, rate, and magnitude of prospective climate changes, and where and how these impacts might be felt. This uncertainty about future changes has generated a continuing debate over what is appropriate in terms of policy measures to reduce or limit greenhouse gases. (See CRS Issue Brief 89005, *Global Climate Change*, for more detailed discussion of scientific and other aspects of this issue).

Negotiations began in 1989 under United Nations auspices to formulate an international treaty on global climate change and resulted in the 1992 Framework Convention on Climate Change (FCCC). The Climate Change Convention was opened for signature at the Earth Summit in Rio de Janeiro in 1992. In this treaty, which the United States was one of the first to ratify, nations acknowledged that human activity may be changing the world's climate systems and pledged that industrialized countries would aim to stabilize emissions of human-generated "greenhouse gases" at 1990 levels by the year 2000. However, no legally binding targets or timetables for such reductions were agreed upon, and actions to control emissions were sought primarily from countries listed in an Annex ("Annex I countries") that included only the more advanced industrialized (developed) countries, and the former communist countries now referred to as "economies/countries in transition."

Most developed nations agreed to the non-binding goal of scaling back their emissions to 1990 amounts by the year 2000, but it now appears that most nations will fail to meet this goal. U.S. emissions of greenhouse gases are about 13% above 1990 levels, and at current rates would grow to some 30% above 1990 levels by 2010. The FCCC does not deal with the post-2000 time frame, which is the focus of current negotiations.

Since 1992, the Convention has entered into force and two meetings of the Parties have been held, resulting in the negotiations currently underway on a legally binding protocol on specific provisions to reduce, limit and/or stabilize greenhouse gas emissions in the post-2000 period. These negotiations are expected to conclude in a December 1997 Conference of the Parties (COP-3) in Kyoto, Japan. However, given the continuing differences among the Parties, and the failure to resolve major issues to date, some believe that agreement will be difficult to achieve by December of this year.

Negotiations Leading to the Kyoto Conference of the Parties

Major points of contention in current negotiations include significant differences among the industrialized/developed countries and between developed and developing countries over the extent of specific reductions, how flexible the means to reach these reductions should be, and other elements. Another contentious issue is what should be expected of developing countries, which are exempted under the terms of current negotiations from assuming "new commitments." Developing countries argue they are emitting far fewer greenhouse gases, both in absolute and per capita terms, than developed nations, and that increasing their use of energy is critical to their economic development. Further, they argue that the developed countries have caused the problem by emitting most of the greenhouse gases to date (although it is expected that within the next two decades, greenhouse gases from major developing countries will exceed those of the current "developed" countries).

In 1995, at the First Meeting of the Conference of the Parties (COP-1) in Berlin, Germany, the "Berlin mandate" was agreed upon to begin analysis and assessment of the need for a binding protocol on emissions limits. The 1996 COP-2 meeting resulted in a ministerial agreement that called for accelerated negotiations on a protocol or other legal instrument that would result in limiting greenhouse gases. Negotiators have met eight times as the "Ad hoc Group on the Berlin Mandate" (AGBM) to try to find agreement on elements of a protocol which they aim to bring to the third meeting of the parties (COP-3) for agreement and signature. (For detailed discussion and a copy of the Berlin Mandate, see CRS Report 96-699 SPR, *Climate Change: The U.N. Framework Convention's Second Conference of Parties and the Ministerial Declaration*.)

Few major issues were resolved at the seventh meeting of the negotiators in Bonn, Germany, July 27-August 8, 1997 (AGBM-7). Four working groups were established to work on: (1) targets and timetables, (2) policies and measures needed to achieve goals that may be agreed upon, (3) developing country commitments, and (4) institutional and legal frameworks to concentrate on major concerns yet to be resolved.

The October 17-31 negotiating session (AGBM-8) considered a consolidated negotiating text, and had three major proposals that vary significantly before it--from one the European Union, one from Japan, and an October 23 proposal announced by the United States. However, the most difficult issues eluded a resolution at the Bonn meeting. Few major decisions seem likely to be concluded prior to the Kyoto meeting, although numerous informal meetings are continuing discussions between the AGBM-8 meeting and the December 1-10 COP-3 meeting. It now appears to

some observers and participants that the prospect of reaching a final agreement by December 1997 in Kyoto at the third meeting of the parties will be difficult, at best. Others feel that a compromise might be reached that involves some initial commitments on emissions by developed countries, with commitments from developing countries to commence further negotiations on binding emission limits for themselves.

Current Negotiations

Additional meetings scheduled in the weeks leading up to the Kyoto meeting, include a ministerial level meeting in Japan. High level efforts are being made to find accommodation and resolution of the various proposals on the table. The AGBM, instead of being disbanded at the end of the Bonn meeting, will have final sessions on November 30 and the morning of December 1, to attempt to resolve some of the outstanding issues--and to incorporate any areas of agreement that have been reached in the intersessional meetings around the world in the weeks preceding the meeting.

U.S. Proposals and Positions

In 1996, the United States reversed its position against emissions reduction targets and called for legally binding, quantitative emissions limitation and reduction objectives for the period beyond year 2000. At the 1997 "Earth Summit Plus Five" Special Session of the United Nations General Assembly, held in June to assess progress since the 1992 Rio Earth Summit,[1] the United States faced strong criticism for failing to take leadership in setting specific targets and timetables for limiting greenhouse gas emissions. President Clinton addressed this meeting, but declined to declare a specific numerical emissions reduction target for greenhouse gas emissions on behalf of the United States. Instead, he pledged: (1) to hold a White House Conference on climate change (later scheduled for October 6) to bring together the various contending interests, including industry, scientists, economists, environmental groups, etc., to discuss needed policies; (2) to make $1 billion available over the next 5 years in foreign assistance targeted to climate change prevention; and (3) to encourage installation of one million solar roofs--to heat and cool buildings without greenhouse gas emissions--over the next 5 years. Other actions would include an environmental technology initiative to bring developing countries on board, and requirements for best environmental practices as criteria for international lending.

Interests in the United States are pushing in two directions. Some industry spokespersons urge the United States not to make commitments that would too quickly limit use of fossil energy and other greenhouse gas sources, which they argue would create problems for them and for the economy. On the other hand, environmental groups are concerned that the United States will be reluctant to take leadership in making specific commitments to limit greenhouse gases, thereby delaying what they regard as important, and even overdue, action both domestically and internationally to stave off consequences of climate change.

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[1] See
Assembly Special Session on Environment and Development.

A major influence on the process in the United States and at the international level has been views and actions of the U.S. Congress. Some Members of Congress have warned U.S. negotiators that consent would be difficult to achieve for any new protocol or other legal instrument that proposes new commitments for the post-2000 period, if those commitments were not uniform and binding for all parties, whether they are industrialized countries, in transition (former communist countries), or developing countries. S.Res. 98, introduced by Senators Byrd and Hagel, along with 64 co-sponsors, passed the Senate by a vote of 95-0 on July 25, 1997. The resolution expressed the sense of the Senate that the United States not be a signatory to any agreement in Kyoto in December 1997, "unless the protocol or other agreement also mandates new specific scheduled commitments to limit or reduce greenhouse gas emissions for Developing Country Parties within the same compliance period," or if it would "result in serious harm to the economy of the United States."

The United States and some other countries have stood firmly against the imposition of "common and coordinated measures," expressing the position that climate protection goals should be differentiated from country to country according to their situations and based upon what makes the best economic sense for them, individually.

Following the October 6 White House Conference on Climate Change, Administration officials engaged in intensive and reportedly difficult interagency debates, delaying announcement of an official U.S. position on targets and timetables until after the beginning of the October AGBM negotiations in Bonn.

U.S. negotiating position announced. On October 22, President Clinton announced the long-awaited United States position on global climate change in a speech at the National Geographic Society in Washington, D.C. The U.S. position proposed legally binding targets for developed countries that renew their commitment to reduce emissions of six major greenhouse gases to 1990 levels, this time by 2008-2012, together with measures to be taken in the United States to encourage actions before the mandatory date, and commitments by developing countries to participate in a meaningful way in greenhouse gas limitations. The major elements of the U.S. proposal are:

-- Binding targets for greenhouse gases to reach 1990 emission levels by between 2008 and 2012, with unspecified reductions below 1990 levels in the following 5-year period. The United States argues that this is a reduction of 23% to 30% below what emissions would otherwise be.

-- A $5 billion package of tax cuts and spending on research and development over 5 years to encourage energy efficiency and development of new lower emission technologies.

-- Early credit for industries that adopt near-term actions to cut emissions, based on industry-by-industry consultations to encourage preparation of plans over the next 9 months on reduction of emissions.

-- Domestic and international emissions trading systems to be implemented after a decade of experience has accumulated in developing new

technologies, creating early credit, focusing federal procurement on energy efficient and lower emission technologies, electric utility restructuring, and other measures.

-- Participation of developing countries, with specific commitments to be developed; the United States will spearhead joint implementation projects, in which firms in one country receive credit for emissions reductions in other countries where investments might achieve greater reductions than in the home country.

The United States supported its proposal with fact sheets on a variety of approaches, such as international emissions trading and joint implementation, federal procurement, electricity restructuring and other issues. In addition, these materials underlined the importance of the participation of developing countries, requiring "every nation" to take "meaningful actions to limit emissions." Above all, the U.S. materials emphasize that the U.S. proposal is "realistic, flexible and achievable." The Administration further contends that domestic implementation could be achieved through tax incentives, joint implementation for credit and other measures that would avoid the need for taxes or onerous regulations (For discussion of joint implementation and market based mechanisms for reducing greenhouse gases, see CRS Issue Brief 97057, *Global Climate Change: Market-Based Strategies to Reduce Greenhouse Gases*).

The U.S. proposal was criticized by some nations and environmental groups as at best a weak compromise that would not require immediate action to reduce greenhouse gas emissions. Others accepted the proposal as realistic, going as far as was politically possible. Still others felt the proposal failed to make explicit commitments by developing countries and would not be acceptable in light of S.Res. 98. Some commentators have noted that when positions are announced by the head of state, a country then has less leeway for adjusting its position.

In the period since the June 1997 "Earth Summit Plus Five" meeting of the U.N. General Assembly, President Clinton has reportedly been deeply involved in decision making and has engaged widely in discussions with other heads of state about climate change and the negotiations leading up to the Kyoto meeting. This has already had some effect in elevating the issue politically in many countries and focusing high-level attention on these negotiations.

Other Nations' Positions

In addition to the U.S. position, there are two competing proposals that are receiving the most attention--from the European Union and from Japan, both proposing emissions reductions below 1990 levels by various dates.

European Union. The European Union made an early proposal during the summer, urging that developed countries make a commitment to reduce three major greenhouse gas emissions 15% below 1990 levels by the year 2010, with an interim target of 7.5% by the year 2005. They propose using a "bubble" approach that would group all the European nations together and call for emissions reductions that would be cumulative across all countries in the European Union. The Europeans strongly

urged the United States to adopt this position at the June 1997 Earth Summit Plus Five meeting. The United States was accused at that meeting of failing to take leadership on the climate change issue because it did not articulate specific numerical targets and timetables for greenhouse gas emission reductions.

However, some observers note that European emissions--taken as a whole--have already dropped significantly since 1990, with the addition of East Germany and Eastern European nations, where highly polluting plants have been closed or retrofitted. These observers note that this makes adoption of this position easier for Europe than for other regions. In addition, use of the bubble approach means that several countries in the European Union would be allowed actual increases, some sizable, in greenhouse gas emissions, and the EU as a whole would still meet the targets. Another difference between the United States and European nations is that the European position does not favor including specific additional requirements for developing countries in the protocol under negotiation.

Japan. On October 6, the government of Japan announced its proposal, for a 5% reduction below 1990 levels for three greenhouse gases--carbon dioxide, methane, and nitrous oxide--over a "budget" period from 2008 to 2012. The proposal also calls for flexibility for measures that best suit a country's needs to be used. Targets for individual countries would be differentiated using several factors: emissions per gross domestic product (GDP), emissions per capita, and population.

The Japanese proposal also called for banking, borrowing, emissions trading, and joint implementation, and stated that emissions for the second budget period should not exceed those for the first budget period. According to various estimates, using the differentiation method and the factors in Japan's proposal for computing actual reductions, Japan's actual target would end up being between 2.5% and 1.5% below its 1990 levels of emissions.

Japan takes very seriously its responsibility as host of the Kyoto COP-3 and thus as president-designate of the meeting. Its proposal was intended to be realistic, and does not call for any requirements for developing countries in the agreement considered at Kyoto, although it would encourage voluntary commitments from more advanced developing countries. However, significant dissatisfaction was expressed by other parties in the ruling coalition in the Japanese parliament, who said they were not consulted before this proposal was announced; they called for more stringent requirements to deal with "the perilous state of the global environment." Some press reports in Japan stated that the Japanese Prime Minister subsequently indicated there might be some room for changes in its proposal.

Developing Countries. Most developing countries continue to resist making commitments to emissions reductions in this round of negotiations. There have been exceptions, notably a formal statement issued by President Menem of Argentina during President Clinton's visit to that country, in which the joint Presidential Declaration of Bariloche was issued. In this declaration, the two countries agreed that given the global nature of the problem of climate change, "...Developed countries must meet their obligations, and developing countries must participate meaningfully in this global regime, including by addressing emission limits for developing countries."

However, for the most part, the "G77 and China," as the bloc of developing countries is called, continue to argue that it is the responsibility of developed/industrialized nations--who have produced most of the current load of additional greenhouse gases during their development--to take the first meaningful steps and lead the way on greenhouse gas emissions, and that developing countries must also receive economic assistance in the course of making changes to mitigate and adjust to climate change.

The G77 and China made a formal proposal at the Bonn meeting that developed countries should stabilize their emissions of greenhouse gases at 1990 levels by 2000, then reduce them by 15 percent by 2010, with further reductions of 20 percent by 2020--a total of 35 percent reduction in greenhouse gases by 2020 below 1990 levels.

Impacts of Emissions Reductions

If binding emissions limits or reductions of greenhouse gases are agreed upon in Kyoto, there are varying estimates on what the impacts would be--on atmospheric concentrations of these gases, on how much actual reduction each proposal would actually achieve, and on the likely amount of climate change or warming that might occur.

Atmospheric concentrations. Attention has focused on when a doubling of greenhouse gases in the atmosphere would occur, with the consequent possibility of a rise in the Earth's surface temperature of 3 to 8 degrees fahrenheit, causing increased sea level rise and disruption of current climate and hydrological cycles. (It is estimated that the world has warmed some 5 to 9 degrees over the past 18,000 to 22,000 thousand years since the last ice age.) Atmospheric concentrations of carbon dioxide have risen over the past 100 to 200 years from approximately 280 parts per million in the pre-industrial period to 360 parts per million today--an increase of just over one-third.

It now seems likely that even with implementation of the somewhat modest reductions in greenhouse gases that might be achieved by proposals taken up at Kyoto, the atmospheric concentration of these gases is likely to double within the next century--to 550 parts per million.[2] A key question is how much beyond a doubling might these concentrations go, and if significant climate disruption is caused by a doubling, how severe the eventual consequences might be of even greater increases. Some argue that strong steps now could keep atmospheric levels below 550, but others do not agree.

Impacts of proposals on emission reductions. Although the three major proposals on the table for Kyoto--from the European Union, the United States and Japan--appear very different, some analysis of how they would work in practice indicate they may be closer together than they appear at first. A recent Environmental Protection Agency analysis, not yet published, disaggregated the elements of each

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[2] See discussion in "Experts Doubt a Greenhouse Gas Can Be Curbed," New York times, November 3, 1997, p. 1.

proposal, and concluded that in terms of all greenhouse gases, the actual percentage change from 1990 levels would be as follows:

-- The U.S. proposal would be 0% change--stabilization at 1990 levels;
-- The European proposal would result in 5.2% reduction below 1990 levels;
-- The Japanese proposals would result in increases above 1990 levels of 5.4% to 7.9%.

The differences are because the U.S. proposal, EPA argues, includes all major gases, and accounts for removal by greenhouse gas "sinks"--through which gases are removed from the atmosphere. By contrast, the EU proposal and the Japanese proposals, although described as a 15% reduction or 5% reduction respectively, make commitments to reduce only three of the six major greenhouse gases, and do not account for sinks.

These elements of differences, and the degree to which the differing parties can agree on convergence among their treatment of these differences, will undoubtedly be major factors in the discussions among parties in the period leading up to the December meeting and in Kyoto.

Issues for Congress

Issues for Congress related to a possible climate change protocol or amendment fall into three categories: oversight, Senate advice and consent on ratification, and consideration of implementing legislation.

Oversight. Extensive hearings have been held by several committees in both the House and the Senate, considering a wide range of issues connected to U.S. negotiations on binding commitments in a climate change agreement. Major issues have included assessments of the status of scientific knowledge, oversight of proposals being negotiated, and economic impacts of U.S. measures to implement an agreement.

Discussions of economic impacts of an agreement have been inconclusive, since the content of an agreement is not yet known; the Administration had agreed to conduct an interagency review of economic impacts of various possible measures, but the task is not yet completed, and has proven to be internally contentious. The Administration has argued that the U.S. proposal, if accepted in negotiations, is structured in such a way that taxes and onerous regulation can be avoided. Some commentators have doubts that the 20-30% reductions by 2008-2012 in all six greenhouse gases proposed by the United States could be achieved domestically without a tax.

Both the House of Representatives and the Senate are planning to send sizable delegations of Members as observers to the Kyoto meeting in December.

Ratification. If the Kyoto negotiations produce an international protocol or amendment to the Framework Convention on Climate Change, and the United States

signs the agreement, Senate approval would be required for U.S. ratification. The Byrd-Hagel resolution (discussed above) in the Senate put the Administration on notice that such approval would be lacking if Members did not find requirements made of developing countries sufficient, or if they regarded the proposal to be potentially damaging to the U.S. economy. If the agreement in Kyoto involves follow-on negotiations to bring developing countries sufficiently into the process at a later date, it is unclear whether the Administration would submit the agreement to the Senate until after satisfactory agreement has been reached with developing countries.

Implementing legislation. President Clinton's proposal on climate change includes a number of domestic actions to promote energy efficiency, create tax credits for industries, and other measures that would lead to reduction of greenhouse gas emissions. Such measures would require congressional action. Some of these measures may be proposed in Congress even before U.S. approval of a Kyoto agreement. Other measures to meet the binding obligations in the U.S. proposal would not necessarily be required until closer to the 2008-2012 period in which limitations would have to be achieved.

For Additional Reading

CRS Issue Brief 97027. *Energy Efficiency: Key to Sustainable Energy Use*, by Fred Sissine.

CRS Issue Brief 89005. *Global Climate Change*, by Wayne A. Morrissey and John R. Justus.

CRS Issue Brief 97057. *Global Climate Change: Market-Based Strategies to Reduce Greenhouse Gases*, by Larry Parker.

CRS Report 96-699. *Climate Change: The U.N. Framework Convention's Second Conference of Parties and the Ministerial Declaration*, by Wayne A. Morrissey.

CRS Info Pack 405G. *Global Climate Change*.