

Work Plan for Implementing the American Chemistry Council's Climate VISION Commitment

The American Chemistry Council (ACC) represents the leading companies engaged in the business of chemistry. ACC members apply the science of chemistry to make innovative products and services that make people's lives better, healthier and safer. ACC is committed to improved environmental, health and safety performance through Responsible Care[®], common sense advocacy designed to address major public policy issues, and health and environmental research and product testing. The business of chemistry is a \$450 billion enterprise and a key element of the nation's economy. It is the nation's largest exporter, accounting for ten cents out of every dollar in U.S. exports. Chemistry companies invest more in research and development than any other business sector. Safety and security have always been primary concerns of ACC members, and they have intensified their efforts, working closely with government agencies to improve security and to defend against any threat to the nation's critical infrastructure.

Summary

The American Chemistry Council Climate VISION greenhouse gas emission intensity reduction goal is to: Pursue additional reductions in greenhouse gas intensity toward an overall target of 18 percent by 2012, using 1990 emissions intensity as the baseline. ACC will work the Department of Energy to determine a target for the period 2002 to 2012.

The American Chemistry Council has developed this work plan, with support of the DOE, outlining its proposed implementation actions to further reduce greenhouse gas emission intensity by 2012. ACC members, with the assistance of DOE, will implement the actions. The work plan includes the following four major components:

➤ Element 1: Emission measurement and reporting protocols

The American Chemistry Council, will provide valid and reliable data ensuring that greenhouse gas intensity reduction numbers are complete, transparent, and cover actual conditions. ACC also will work with the Department of Energy to develop consistent definitions and methodologies for its voluntary emission reduction and sequestration registration program under section 1605(b) of the 1992 Energy Policy Act. In addition, ACC will support efforts of the Administration to provide appropriate recognition to businesses and industries for voluntary actions that are taken in 2003 and beyond to reduce greenhouse gas intensity.

ACC will provide regular reports to the public and the government on progress. Member-wide reports will be made annually to the Department of Energy and contain what we're doing, how we're doing, difficulties encountered and suggestions for improvement when reporting within the 1605(b) process. ACC will participate and provide data for the duration of the program and also encourage members to provide data directly to the government through the 1605 (b) voluntary emission reduction program.

In addition, through the Responsible Care[®] program (<http://www.responsiblecare-us.com>), ACC members have established metrics that will measure and report publicly on greenhouse gas emissions and energy consumption. From 2003 through 2012, ACC will collect data directly from members to measure progress. Greenhouse gas intensity for the business of chemistry is the ratio of net greenhouse gas emissions to pounds of production. We will use these data to provide DOE with an annual, industry wide measure of our progress.

Responsible Care is the U.S. chemical industry's award-winning performance initiative that has resulted in emissions reductions of 70 percent and a worker safety record that is four times better than the average of the U.S. manufacturing sector.

Responsible Care helps America's leading chemical companies go above and beyond government requirements and openly share their results with the public.

Participation in Responsible Care is mandatory for ACC member companies, all of which have made CEO-level commitments to uphold these requirements:

- Measuring and publicly reporting performance;
- Implementing the Responsible Care Security Code;
- Applying a modern management system to achieve and verify results; and
- Obtaining independent certification that a management system is in place and functions according to professional standards.

The ACC operates a CEO-level Board Committee on Responsible Care that oversees the program and assures that ACC members are fulfilling their Responsible Care obligations, since it is a condition of ACC membership. Members that fail to meet Responsible Care requirements are subject to a strict governance process that results in a company's dissociation with ACC if satisfactory completion of delinquent requirements are not met within a specified time frame.

In 2002, the American Chemistry Council (ACC) enhanced the Responsible Care program by requiring the public reporting of certain performance measurements for ACC members. It is the intention of this public reporting to enhance transparency and accountability and drive performance of Council member companies in several areas:

- Environment (includes toxic emissions, greenhouse gas emissions and energy efficiency)
- Safety (includes employee injury/illness rates, process safety, and DOT incidents)
- Security (includes on-time implementation of Security Code elements)
- Products (includes two Y/N questions on product risk management and communication)
- Accountability (includes Responsible Care certification status)

The information on the ACC's performance in these areas - including composite greenhouse gas emission intensity and energy efficiency starting in 2005- is posted on a public-facing website: <http://www.responsiblecare-US.com>.

Data gathering for this new metric has already been initiated. Once completed, the data from ACC members will be compiled and the aggregate greenhouse gas intensity numbers submitted to DOE and to the public at large on an annual basis starting in 2005 (reporting emission totals and allowing comparisons from both 2003 and 2004). ACC will work in concert with DOE's Office of Policy and the Energy Information Administration to review measurement methods and responses and to develop an eventual correlation to government data.

In addition to the reporting of greenhouse gas and energy efficiency information on its public website, ACC has also required third-party certification of each of its member company's environment, health, safety, and security management systems. Through this process, independent auditors will visit member company headquarters and facilities to determine conformance against a management system standard. Part of this audit process includes a look at whether companies are fulfilling their Responsible Care obligations. It will also look at how the company is doing against its own EHS policies and commitments. This certification process is another step toward assuring that commitments toward reducing greenhouse gas emissions and increasing energy efficiency are being met.

Milestones:

- Fall, 2004: ACC and DOE met to discuss Energy Efficiency and Greenhouse Gas data and trends. Similar summit meetings will be held in 2005 and 2006. The focus of the summit will be a discussion of results and trends, ways to improve reporting and the interrelationship to DOE/EIA energy metrics.
- ACC will schedule a summit in February 2005 with EIA and others. ACC will discuss 2002 and 2003 trends and 2003 data.

➤ **Element 2: Identify and implement cost-effective opportunities**

ACC members will identify and implement near-term cost-effective energy saving opportunities to reduce their greenhouse gas emission intensity, with the assistance, as appropriate, of the Department of Energy (DOE). ACC will:

Near Term

Work with DOE and EPA to investigate and participate in workshop opportunities to advance application of CHP facilities.

- Completed Summer 2004. Promote CHP workshop in September in Austin, Texas. Will work to co-sponsor future workshops.

Highlight and encourage energy efficiency within the industry and provide recognition for outstanding achievement and innovation through the annual ACC Energy Efficiency Awards program. The press release and supplemental information will be put on the Climate VISION website.

- Announce 2003 ACC Energy Efficiency Award winners in November 2004 at ACC Energy Network meeting.
- Submit 2003 ACC Energy Efficiency Award winners to DOE for posting on Climate VISION website.

ACC will sponsor the 2005 Industrial Energy Technology Conference to be held in Spring.

Encourage our employees to practice energy conservation by stepping up education efforts concerning energy savings at work and at home. Leverage information on DOE's website: www.energysavers.gov.

- ACC will develop and circulate a "Climate VISION Newsletter" by November 2004 which will include key energy efficiency resources and website links, such www.energysavers.gov (for home owners) and www.energysavers.gov/industry (for chemical plants).

Work with the Administration to encourage broader conservation across the nation. Conserving energy usage across the economy will provide the greatest and fastest short-term reduction in energy demand and meet greenhouse gas intensity goals while new technologies and energy efficient products are developed and brought to market. Work with and support the Administration and Congress to implement legislation and regulations that enhance industry's ability to install and operate new technologies and equipment that can increase energy efficiency and reduce greenhouse gas emissions intensity and enhance industry's ability to compete in the global marketplace. An example of this cooperative effort is implementation of the Administration's New Source Review reforms.

Work with and support the Administration, Congress and the Federal Energy Regulatory Commission to implement legislation and regulations that enable even greater application of highly efficient CHP equipment without prohibitive market access restrictions.

Long Term

Develop a member education and mutual assistance program -- including open workshops -- to share methodologies and best practices to achieve greenhouse gas intensity reductions. This information also would be made available to other energy users. ACC will coordinate with DOE to support ACC focused initiatives in energy efficiency using DOE's Best Practices and other resources.

Support activities that increase our understanding of greenhouse gas intensity as it relates to our products and processes. Educate customers on greenhouse gas emission intensity reduction benefits from chemical products.

Encourage chemical manufacturers that are not members of ACC to participate in Climate VISION activities or to make their own commitment.

The American Chemistry Council and DOE's Office of Energy Efficiency and Renewable Energy (EERE) may also consider developing an Allied Partnership agreement or an analogous agreement] that outlines a variety of mutual activities through which the government can help ACC members achieve its near-term energy saving and greenhouse gas intensity reduction goals. In particular, DOE could provide incentives for companies to participate in pilot projects that incorporate these activities as part of their corporate strategy. These activities may include:

- Plant-wide energy assessments
- Co-sponsored energy efficiency training events on various energy applications (e.g., pumping, steam, process heating)
- Case study referrals
- Publications, communications, and outreach, including trade journal articles
- Web site coordination and development
- Public and industry-oriented events
- Commercialization of emerging technologies
- Promotion of DOE [and/or other agencies] R&D solicitations

Milestones:

- Completed in February 2004: ACC has added a link to DOE's "www.energysavers.gov/industry" website informing members about the tips for industrial energy savings that can be found there, and urging its use. Member companies are urged to consult the website for manufacturing energy savings tips.
- February 2005. ACC will develop and circulate a "Climate VISION Newsletter" by February 2005 and periodically thereafter which will include key energy efficiency resources and website links, such www.energysavers.gov to encourage employees to save energy at home and in their cars.
- March 2005. Work with DOE Office of Policy to plan workshops for ACC members covering DOE's focused initiatives.
- To be completed in November 2004. Publicly announce 2003 ACC Energy Efficiency Award winners and place on Climate VISION website.
- November 2005. Announce 2004 ACC Energy Efficiency Award winners in November 2005 at ACC Energy Network meeting. Place press release of award winners on Climate VISION website in November 2005.
- November 2004. Promote and publicize DOE's energy saving decision tools compact disc to ACC membership via "Climate VISION newsletter" and by directly distributing to attendees of November 2004 Energy Network meeting.

- November 2004. ACC promotes scheduled DOE BestPractices energy efficiency training workshops to ACC membership via “Climate VISION newsletter” and other ACC communications.
- November 2004 to March 2005. Conduct DOE BestPractices energy efficiency webcast trainings in steam, process heating, compressed air or pumping systems, and the Plant Energy Profiler tool.
- December 2004. Identify 3 to 5 case studies on energy efficiency and greenhouse gas reductions. Seek potential case studies from 2003 ACC Energy Efficiency award winners.
- Spring 2005. In conjunction with Industrial Energy Technology Conference, ACC and DOE will plan and conduct industrial energy efficiency training workshop directed to middle and corporate energy managers. ACC’s energy efficiency award winner presentations would be part of the agenda. DOE’s plant-wide energy efficiency assessment results and Plant Energy Tool will be highlighted at the workshop.

➤ **Element 3: Develop cross-sector projects for reducing greenhouse gas emission intensity**

The Climate VISION initiative encourages cross-sector projects that reduce greenhouse gas emission intensity. The American Chemistry Council and DOE [and/or other agencies] will explore innovative opportunities to improve energy efficiency and greenhouse gas emission intensity in one or more sectors, so as to have a significant impact on a market supply chain. For example, as innovations in energy saving and energy efficiency are developed, DOE could provide assistance to accelerate widespread acceptance and utilization of these advances.

ACC members will continue to manufacture products and pursue innovative new ways to help other industries and sectors achieve the president’s goal. ACC will work with the government to develop a credible methodology for estimating the greenhouse gas intensity improvements in sectors of the economy (e.g. automotive [light weighting] and construction/building [thermal insulation]) that use chemical industry products.

Milestones:

- Completed in April 2004. ACC will work with DOE to develop ideas on how to improve the Climate VISION program’s strategy and to quicken its results. ACC has proposed that DOE and ACC cosponsor a Climate VISION workshop with DOE and other participating Climate VISION industry partners. Workshop sponsors will invite representatives of sectors of the economy not presently committed to Climate VISION to share ideas of how to get new energy efficiency technologies into their markets. ACC sent DOE a letter proposing this Climate VISION workshop in early 2005.

➤ **Element 4: Accelerate investment in R&D and commercialization of advanced technology**

Development and commercialization of new technology relates to the American Chemistry Council's desire to reinforce or establish with DOE [and/or other agencies] a collaborative R&D / technology commercialization program focused on technologies that can reduce its greenhouse gas emission intensity by 2012.

ACC will advance new technologies by:

Short Term

- Provide input on the Vision 2020 Innovative Energy Systems Challenge initiative to reflect a coordinated approach to achieving greenhouse gas emission intensity reductions through the development and adoption of advanced technology into the chemical industry.
- Provide input on the DOE development of budget priorities for development of innovative technologies.

Long Term

- Providing expertise on priorities for taxpayer-funded research to assess the value of CO₂ and other greenhouse gases for new processes and products as well as sequestration opportunities.
- Promote the further development and deployment of coal gasification technology through educational sessions in future workshops and additional Vision 2020 initiatives.
- Promote cost-effective, renewable energy resources, including bio-based processes and product recycling.
- Promote fuel cell technology deployment, including converting hydrogen into electricity and using other sustainable, renewable sources of energy as an alternative to fossil fuels.

Milestone:

- ACC will continue to provide input for Chemical Vision 2020 Innovative Energy Systems Challenge and provide input to the Challenge Technical Committee.

Appendix A

This appendix includes the American Chemistry Council's Commitment Letter for the Climate VISION initiative.

December 24, 2002

The Honorable Spencer Abraham
Secretary of Energy
Department of Energy
100 Independence Avenue, SW
Washington, DC 20585

Dear Secretary Abraham:

On behalf of the American Chemistry Council (ACC) I am pleased to transmit the attached "US Chemical Industry Response to the President's Global Climate Business Challenge." This voluntary commitment has been approved by our Board of Directors, pursuant to President Bush's call for an American industrial response to the issue of global climate change. We applaud President Bush's leadership in harnessing the entrepreneurial spirit of the US private sector in addressing this significant issue.

American Chemistry Council (ACC) members are proud to do their share to help the President and the country achieve the overall 18 percent reduction in greenhouse gas intensity by 2012, as called for in the Business Challenge. In 2001, the US chemical industry had nearly half a trillion dollars in sales, and half of that was of products that are hydrocarbon-based. It's an energy-intensive industry, but it is unique because it uses energy both in the manufacturing process and also as a raw material. No other industry adds as much value to its energy inputs as the business of chemistry.

Energy efficiency and greenhouse gas intensity reduction are not new to the chemical industry. As you know, it has reduced the fuel and power energy it consumes per unit of output by 41 percent since 1974. Carbon emissions per unit of output have declined by more than 45 percent during the same period. The efficient use of energy has been an economic imperative of the chemical industry for decades, driven by the need to compete globally and the desire to constantly improve our operations.

The centerpiece of our 12-part response to the President's Global Climate Business Challenge is to pursue reductions in greenhouse gas intensity toward an overall target of 18 percent by 2012, using a baseline of 1990 emissions intensity as the President suggests. From 2003 through 2012, the ACC will collect data directly from members to measure progress. But that's not the only way our intensity will help the country achieve its intensity reduction target. We also pledge to continue to manufacture products and pursue innovative new ways to help other industries and sectors achieve the president's goal. We plan to work with the government, through the Department of Energy, to develop a credible methodology for estimating greenhouse gas efficiency improvements in sectors of the economy that use chemical industry products. Our

response also highlights areas in which government policy can assist in achieving designated greenhouse gas intensity reductions.

We look forward to working with the Department of Energy and the Administration in implementing this commitment. If you have any questions, please feel free to contact ACC Vice President of Federal Relations, Mark Nelson, at (703) 741-5900.

Sincerely,

Greg Lebedev
President and
Chief Executive Officer

cc: The Honorable James L. Connaughton, Chairman
Council on Environmental Quality