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FACT SHEET

Asia-Pacific Partnership on Clean Development and Climate

Cement Task Force
Summary of Action Plan and Projects

The Asia-Pacific Partnership on Clean Development and Climate is a unique public-private initiative among government and private sector partners from Australia, China, India, Japan, the Republic of Korea and the United States. In remarks delivered to experts representing all Partner nations gathered at the American Electric Power facility in Columbus, Ohio, Under Secretary of State for Democracy and Global Affairs Paula Dobriansky today announced that the Partnership has begun a new implementation phase with the start of a series of multifaceted programs designed to promote cleaner, cost-effective energy technologies and practices among the Partner nations. The Partnership is identifying policies and deploying technologies that reduce greenhouse gas emissions, promote healthier air quality, advance sustained economic growth, and reduce poverty. It focuses on voluntary practical measures to create new investment opportunities, build local capacity, and improve economic and energy security. The Partnership involves countries that account for about half of the world's population and more than half of the world's economy and energy use.

Summary of Cement Task Force Action Plan

Cement is an essential material for our infrastructure and has played a vital role in economic development around the world. The production process for cement is energy-intensive and requires a large amount of natural resources for fuel and raw materials. Consequently, the aggregate amount of carbon dioxide (CO₂) emitted from the global cement industry has reached about 2.2 billion tons. Energy makes up about 40 percent of the cost of cement production. Energy efficiency improvements therefore have great potential to reduce costs, while dramatically reducing the majority of pollutants generated from fuel combustion.

Partner countries account for 61 percent of global cement production. The Cement Task Force has initially developed six projects and activities to reduce emissions and conserve energy through sharing information on clean energy technologies; cooperate further to diffuse such technologies; and increase private sector investment in the global cement industry.

Sharing Best Practices

A critical challenge for this sector is the lack of available basic data for each Partner's cement industry. Once available, this information can serve as the basis for the development of benchmarks, inform decision-making processes, and lead to increases in efficiency among the Partners. Japan's public and private sector are cooperating to coordinate information-gathering among the Partners. Based on the results of this effort, Partners will work to develop performance indicators and benchmarks for evaluating emissions reduction potentials.

Transforming Markets

Partners have already identified several existing clean-energy technologies and practices that will reduce emissions and/or conserve energy. The United States leads a project that will identify and address legal and regulatory barriers to and incentives for reducing the CO₂ intensity of cement production and deploying cleaner manufacturing technology. This project will also identify legal and regulatory barriers and incentives relating to the use of concrete to mitigate climate-change impacts and energy-efficient structures.

Summary of Cement Task Force Projects

Project 1. Status Report

The Cement Task Force has identified as a first priority addressing the lack of basic data among Partner countries that is crucial to the development and success of the Task Force's future work. Examples of such data include emissions and emissions intensity of CO₂ and air pollutants, energy consumption and intensity, and usage of alternative fuels and raw materials. Japan organized and funded this data-collection effort. The information acquired from this work will contribute to a greater understanding among Partners regarding their current energy consumption levels, emissions and practices. The data collected will also be the basis for the Task Force's development of benchmarks and best practices.

Project 2. Benchmarking (Benchmark Development)

Task Force members will develop benchmarks for evaluating the emissions reduction potential based directly on the results of the Status Report project. The United States and Japan have taken the lead on this project. In 2006, Partners are slated to define benchmarks and select key performance indicators, such as CO₂ emissions, energy efficiency, recycling, and emissions of air pollutants. In 2007, the Cement Task Force will estimate emissions reduction potential and set benchmarks; identify potential barriers to emissions reductions; and provide recommendations to Partnership governments in order to meet reduction goals.

Project 3. Legal/Regulatory Issues

Partner countries have identified several legal and regulatory barriers to the cleaner, more efficient production of cement. The Cement Task Force will undertake a study of comparative legal and regulatory barriers to, and incentives for, reducing the CO₂ intensity of cement production and deploying cleaner manufacturing technology. In addition, Partners will identify the legal or regulatory barriers to, and incentives for, the use of concrete to mitigate climate change impacts. The United States will fund and organize this work. The ultimate goal of this project is two-fold: Partners will reduce or eliminate legal and regulatory barriers to cleaner, more efficient production of cement and the use of concrete to mitigate climate change impacts, and work aggressively to promote incentives.

Project 4. Product Application

In addition to improving the Partners' cement production processes, the Task Force seeks to identify and draw attention to ways in which concrete can mitigate climate change impacts. The Task Force will evaluate applications of concrete that mitigate climate change impacts; undertake collaborative research into life cycle energy efficiency of concrete applications; and identify further steps that governments can take to encourage sustainable development using concrete products. This effort may include evaluation of energy efficient structures, urban heat island mitigation, vehicle fuel efficiency, and structural durability. The United States will fund and organize this work; the industry members of the Task Force hold the primary responsibility. Partners will summarize existing literature and programs to evaluate applications of concrete and identify potential research projects by the end of 2006. The Task Force will make recommendations on further steps that governments can take to encourage sustainable development using concrete products within 2007 or 2008.

Project 5. Center of Excellence

Partners will use the proposed Center of Excellence to share information on best practices; research emerging technologies; and promote improved environmental performance to Partner governments, cement industry associations and major cement manufacturers. The Center will provide scholarships and lecturing/research opportunities through which Partner country applicants can work for up to a year on an agreed APP-relevant project with a research team at the China Building Materials Academy in Beijing. Finally, the Center will facilitate skilled worker exchanges between participating Partner countries in order to enhance the diffusion of technical expertise between companies in areas of energy efficiency, greenhouse gas reduction and the use of alternative fuels and raw materials for cement production. Australia, China and Japan have taken the lead on this project. The Center will be located in China.

Project 6. Cement Kiln Co-Generation

This demonstration plant will document the economic and energy efficiency gains obtained by utilizing cement plant waste heat to generate electricity. The Project combines two established technologies, cement kiln operation and cogeneration technology, in a novel manner to reduce the greenhouse gas emission intensity from cement production; increase cement kiln energy use efficiency, reduce kiln energy consumption; and generate electricity. In addition, this project seeks to demonstrate the technical and engineering challenges involved in retrofitting cogeneration facilities utilizing cement kiln waste heat; characterize the energy efficiency gains obtained from the installation of cogeneration facilities in a typical cement plant; disseminate the expertise of Partner countries on cogeneration technology; and encourage and facilitate deployment of cogeneration technology to Partners. Australia and China are heading up this work, and the plant will be located in Australia. The cement kiln electricity cogeneration demonstration plant will facilitate the demonstration and deployment of energy-efficient and cleaner production formulation technologies in Partnership countries.