

**June 14, 2007 - U.S.-China Economic and Security Review Commission
Testimony of Judith E. Ayres
Assistant Administrator, Office of International Affairs
U.S. Environmental Protection Agency**

Madame Chair, Mr. Vice Chair,

Members of the Commission, thank you for the invitation to appear today to discuss the United States environmental policy approach to China, specifically, EPA's approach to collaborating with China to address air pollution emissions.

I shall first address environmental concerns regarding air quality resulting from rapid economic growth and energy generation in China. I shall then discuss the work EPA is doing with China in an effort to alleviate the consequences of the resulting pollution which impacts both China and parts of the rest of the world. I shall then share some thoughts on how EPA plans to enhance its cooperation with China and the necessity to coordinate with the international community.

State of China's Environment

The steady expansion of China's economy has been well documented. The Chinese economy today is roughly ten times larger than it was in the early 1980s. Since 1988, China's annual gross domestic product (GDP) growth has averaged 8.5 percent. With an estimated GDP of \$2.5 trillion in 2006, China ranks fourth in the world behind the United States, Japan, and Germany.

Since 2000, electricity generation from fossil fuels has increased by over 14 percent annually. China's economy is becoming more, not less, energy intensive. This rapid growth, and the corresponding increase in energy consumption, has increased emissions of priority air pollutants and greenhouse gases.

One of EPA's closest partners in China, the State Environmental Protection Administration or SEPA, estimates that environmental degradation costs China 8 to 13 percent of its annual GDP. Air pollution alone is estimated to cause economic damage equivalent to 2-4 percent of annual GDP.

China relies on coal-fired power plants to generate approximately 70-75 percent of its electricity. China expects to commission a new coal-burning power plant every week-to-ten days over the next two to three years. These plants will have SO₂ controls and, in some cases, capacity for retrofitted nitrogen oxide control. In addition, based on projections by China's Ministry of Communications, the number of vehicles on China's roads is set to increase from roughly 25 million today to 140 million by 2020.

As a result, air quality in many cities in China is poor, and the Chinese face major challenges in reducing pollution to healthy levels. The average concentration of fine-particle pollution in Beijing is seven times the ambient standards set by U.S. EPA, and the World Health Organization (WHO) estimated in the 2002 World Health Report that current outdoor air pollution levels could be responsible for over 300,000 premature deaths in China annually.

Due to heavy reliance on uncontrolled coal-fired power plants, China is one of the world's largest emitters of sulfur dioxide and mercury. These emissions affect the environment within China and have significant implications throughout the east-Asian region and even the United States due to long-range transport of pollutants..

According to the International Energy Agency, China will, in the near future, surpass the U.S. as the world's largest emitter of greenhouse gases.

Environmental Collaboration

Indeed, China would appear to have no easy solutions to its environmental challenges, but its leaders are looking to international partners for help.

EPA has collaborated with the Chinese government on innovative approaches, including the use of market mechanisms, to address both energy and environmental concerns.

Productive collaboration has been achieved through agency-to-Ministry agreements, multilateral efforts such as the Asian Pacific Partnership on Clean Development and Climate (APP), or more broadly through the U.S.-China Strategic Economic Dialogue.

Many of EPA's programs in China are conducted within the framework of a 2003 Memorandum of Understanding with China's State Environmental Protection Administration. The MOU established a mechanism for the U.S. and China to determine strategic environmental objectives and to coordinate environmental activities.

Among the many initiatives EPA has undertaken under this MOU are:

- 1) Working to develop and disseminate solutions to reduce air pollution from home cooking and heating. In this effort, EPA is supporting two pilot projects in China to introduce alternative energy technologies in rural homes and schools, and reduce the indoor air pollution from burning biomass and coal.

- 2) Working with partners in Shanghai to assess air quality management capabilities and building capacity to model and develop effective, science-based air quality improvement strategies. In April of last year, a U.S./China new joint initiative established a state-of-the-art of air quality forecasting and public notification system successfully used in over 300 cities in the United States. Through the air quality forecasting models and a better understanding of air quality episodes, this U.S.-China collaboration has the potential for informing the public in Shanghai in the future.

- 3) In November 2006, EPA, working in partnership with the Beijing Environmental Protection Bureau and SEPA, launched a pilot project to retrofit diesel city buses in Beijing. EPA is hopeful that this effort will yield meaningful air quality benefits in time for the 2008 Olympics that can then be applied to other cities.

We have found it necessary to work with multiple Chinese partners in order to make meaningful progress on many environmental issues. In addition to EPA's work with SEPA, EPA also cooperates with the Ministry of Science and Technology (MOST), along

with the U.S. Department of Energy, on energy sector projects, and with the National Development and Reform Commission on climate change and energy efficiency. Last summer, EPA and the Asian Development Bank signed a Letter of Intent which both sides expect will enhance our mutual work in China.

Among the multi-lateral efforts in which the United States and China are engaged is the Asia Pacific Partnership on Clean Development and Climate. The APP is a public-private partnership of six nations--Australia, China, India, Japan, the Republic of Korea, and the United States--committed to explore new mechanisms to meet national pollution reduction, energy security and climate change goals in ways that reduce poverty and promote economic development. APP members have undertaken cooperative activities involving deployment of clean technology in partner countries in eight areas: cleaner fossil energy, renewable energy and distributed generation, power generation and transmission, steel, aluminum, cement, coal mining, and buildings and appliances. Through this mechanism, the EPA is already working with China on energy efficient buildings and will be developing similar new projects this year.

In addition to APP, the U.S. and China work together in a number of innovative global partnerships to address climate change, including the Carbon Sequestration Leadership Forum, the Partnership for the Hydrogen Economy and the Methane to Markets (M2M) Partnership.

The most recent example of our collaborative efforts is the U.S-China Strategic Economic Dialogue (SED). The SED has demonstrated a critical ability to bring together

the various elements of the Chinese government whose policies impact environmental outcomes. The results of our recent meetings illustrate the benefit of such an integrated approach. At the second session of the Strategic Economic Dialogue, held last month in Washington, EPA and our Chinese counterparts undertook to pursue specific deliverables.

- 1) The first is a Joint Economic Study designed to evaluate the environmental, economic, and human health costs of various policy approaches for saving energy and controlling emissions from the Chinese and U.S. power sectors. The Study, to be completed late this year or early next, will enhance the ability to cost-effectively improve air quality and energy efficiency.

As both China and the U.S. are committed to addressing pollutants, such as SO₂, NO_x, and greenhouse gas emissions, this Study can serve as a foundation for the design of sound environmental policies in our respective nations, especially in China.

- 2) The second deliverable – which will implement a Memorandum of Understanding on energy efficiency product endorsement labeling – further encourages the production and use of consumer efficiency products that benefit both the environment and the economy.

This past March, EPA and the China Standard Certification Center, or CSC, signed an MOU to expand the longstanding partnership to promote voluntary energy-efficiency endorsement labeling.

Among other things, the plan enables us to explore harmonization of the U.S. ENERGY STAR label – a joint program of the U.S. Environmental Protection Agency and the U.S. Department of Energy – with CSC's label, and works towards increasing the energy efficiency of Chinese products in order to help the Chinese meet their national energy intensity goal while reducing the growth of emissions of greenhouse gases from electricity consumption.

- 3) The third deliverable also helps reduce global greenhouse gas emissions through the recovery of coal mine methane through collaboration under EPA's Methane to Markets Program.

China and the U.S have enjoyed a long history of successful collaboration to encourage more productive uses of coal mine methane, a potent greenhouse gas 23 times more effective at trapping atmospheric heat than CO₂.

By capturing and utilizing what would otherwise be fugitive methane emissions, a new source of clean, reliable, inexpensive energy is realized.

In May 2006, U.S.-based engine manufacturer, Caterpillar Inc., secured a \$58 million contract from China to supply the power generation equipment for the

world's largest coal mine methane fueled power plant. Once completed, an estimated 40 million tons of carbon dioxide equivalent emissions will be avoided over a 20-year period. At the recent SED meeting, China agreed to undertake up to 15 additional coal mine methane capture projects as a way of identifying and overcoming barriers to application of this technology on a national scale.

Methane recovery is a clear example of the benefits of how doing what's good for the environment makes good energy sense. The development of a national low sulfur fuel policy for China – our final deliverable – is another example. EPA stands ready to work with China to create a low sulfur policy.

Consistently, EPA finds that the economic and health benefits of reducing pollution from vehicles far exceed the costs – making the point once again that good environmental policies can yield positive economic results. A December 2006 report by the International Council on Clean Transportation concluded that if China were to adopt the same clean fuel and vehicle measures as the U.S., the health and environmental benefits would outweigh the costs by a factor of 20- to - 1.

The Way Forward

It is important to note, EPA shares the thinking expressed by others, including the OECD and Asian Development Bank, that environmental cooperation with China should be more focused on enhanced monitoring and enforcement capabilities. Hence, as we pursue the project-specific initiatives outlined above under the SED, we shall also strive

to enhance China's ability to ensure effective compliance with its own statutory environmental requirements.

Discussions are under way with SEPA on formalized cooperation to strengthen implementation and enforcement of environmental laws and regulations.

Many critical environmental decisions in China are made at the provincial or local level by officials with little or no environmental training or responsibility. EPA's colleagues at SEPA are too few to oversee directly more than a handful of such decisions. EPA and the Asian Development Bank have been asked by SEPA to facilitate the establishment of six "regional supervision centers" that will create a new level of SEPA oversight. These new centers may also serve as training platforms from which SEPA can build enforcement capacity at the regional and local levels while engaging more actively with important stakeholders outside the national government.

However, one must note that the institutional structure involved in ensuring compliance with China's energy and environmental goals is somewhat fluid. Our plans for environmental cooperation with China will need to adapt to new policies and structures. I refer here to China's June 4 announcement of measures to reduce greenhouse gas emissions, and last month's report of a new "leading group" to address energy efficiency and emissions reductions. Next year's summer Beijing Olympics will also affect China's willingness to prioritize cooperation progress on clean air initiatives.

China's environmental performance is closely monitored by both other countries and international organizations around the world—China has said they are engaged in some 80 bilateral environmental agreements. The U.S. and China are already engaged in a number of important and productive international environmental partnerships.

Last fall, I represented the United States in an international panel of experts involved in crafting an Environmental Performance Review of China on behalf of the OECD. That Review, to be released next month, offers a rare international consensus on what China has accomplished and what remains to be done in the environmental sector. I would commend the OECD Environmental Performance Review to the members of this Commission, and would suggest that we need more such examples of international coordination in addressing China's environmental challenges.

Our relationship with the Asian Development Bank has great promise in this regard, since such international financial institutions are ultimately funded by national governments and bring a strong multilateral perspective to bear in implementing programs in a given country. EPA can work with China in ways that both maximize results and restate U.S. environmental leadership in the global arena.

Conclusion

EPA believes that it is in the best interest of both the U.S. and China to work together to address the environmental challenges resulting from China's significant economic growth and energy consumption. In fact, the common interests the U.S. and China share in

promoting good environmental practices and sustainable energy policies make these among the most promising and important areas for collaboration.

Thank you.