

## **China's Green Energy and Environmental Policies**

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**Testimony Before the U.S.-China Economic and Security Review Commission**

**April 8, 2010**

EPA is grateful for this opportunity to acquaint the Commission with our current perspectives on environmental and clean energy cooperation with China. In many respects, my remarks will constitute an update on our previous submission to the Commission, presented by my predecessor, Mr. Scott Fulton, at the August 2008 hearing.

We at EPA continue to view China as one of our most important bilateral relationships. The American people and the global community benefit when China addresses its environmental challenges, and EPA continues to support this goal through substantial efforts across a range of issues. Of course, our role is *advisory*; we seek to share information and experience with Chinese counterparts in order to inform their decision-making. In every case, the ultimate decision is theirs.

### **Recent Context**

Much has changed since our August 2008 testimony. At that time, Beijing had just completed herculean efforts to ensure satisfactory air quality for the summer Olympic Games—efforts which we believe may have had enduring benefits. Soon afterwards, global financial conditions deteriorated. While China fared comparatively well through that difficult experience, there is much we do not know about the net environmental effect of China's \$580+ billion stimulus package. For instance, significant sums were dedicated to expanding railway capacity, emission controls, and wastewater treatment capacity. These investments will result in notable energy and environmental benefits in the long term.

China is in the final year of its 11<sup>th</sup> Five Year Plan (FYP), which raises two questions: to what extent were the ambitious environmental goals of that Plan met, and how will environmental protection figure in the upcoming 12<sup>th</sup> FYP? In the latter regard, it will be interesting to see whether the 12<sup>th</sup> FYP addresses additional parameters beyond those in the 11<sup>th</sup>, which relate to energy intensity, sulfur dioxide emissions, and chemical oxygen demand in water. We hope for a continuation of the trend toward increasing environmental and energy efficiency investments established over the past decade.

Two years have passed since China's national environmental authority was elevated to the rank of ministry. That event was hailed as a milestone in China's path to more effective environmental governance, and indeed our colleagues at the Ministry of Environmental

Protection (MEP) seem to have greater confidence in their ability to get things done, despite the institutional challenges of limited resources and jurisdiction.

## **Current Challenges and Opportunities**

Like any large continental nation, China's environmental issues are diverse, with significant regional variations. Our MEP interlocutors tell us that water quality is their top concern because of its direct and immediate impact on public health and economic growth. Exacerbated by water scarcity in a large portion of the country, water pollution continues to pose a threat to public health and ecosystem integrity. It is also worth noting that water supply, though not managed by MEP, has major implications for energy use and efficiency, as the regime struggles to move huge quantities of water over long distances and varying terrain.<sup>1</sup> We continue to engage with MEP, other Chinese organizations, and other U.S. Government organizations on regulatory and technological approaches to water quality management.

Part of the challenge in working with China on water quality, as on other environmental issues remains, "Which part of China?" Our colleagues in MEP are sincere and dedicated, but they are hampered by bureaucratic stove-piping and a culture which does not encourage information sharing. Many local/regional jurisdictions are keen to engage with us on water quality, but the demand for cooperation is vast and their ability to act on our insights is constrained by various factors. It has been very difficult to have the Chinese focus on and implement the basic technologies (or ones similar thereto) responsible for our major water quality improvements of the 1970s and 1980s. The science and engineering of water quality remain fairly basic, which means that outcomes are largely a matter of finance and policy decisions, a realm which remains largely opaque in China and outside of MEP's control. Ultimately, however, water pollution in China has limited impact on environmental quality in the U.S.

Air pollution is a different matter. Here the connections to climate change and even air quality in portions of the U.S. are important, though quantifying the connection is difficult. Yet here too, the limits of what EPA's relationship with MEP can accomplish are clear. When the conversation addresses conventional pollutants like sulfur dioxide and nitrogen oxides and proceeds successfully over a period of years, we can point to real progress in helping MEP develop a stronger, more extensive regulatory capability and tangible improvements in air and environmental quality. The same applies to more prosperous regional jurisdictions like Shanghai, where we have partnered with the municipal Environmental Protection Bureau (EPB) to introduce AirNOW-International, EPA's real-time air quality information platform, which will be rolled out at the Shanghai World Expo this May.

However, when we have tried to engage China on air quality issues that lie wholly or partially outside of MEP's remit, we have been less successful. During the Strategic Economic Dialogue that was launched under the Bush administration (and continues today as the Strategic and Economic Dialogue), Chinese officials agreed – as part of the Ten Year Energy and Environment Cooperation Framework (TYF) -- to work with EPA on a timeline for reducing sulfur in vehicle fuel in China. However, no measureable progress has occurred in this area under the TYF. The full emission reduction benefits of an integrated clean fuels and vehicles approach are not being

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<sup>1</sup> "In China, a scramble for water," [The Washington Post](#), March 16, 2010, p. A6.

achieved because China's ambitious mobile-source emissions standards are not complemented by the corresponding fuel quality standards. While MEP has the authority to set vehicle emission standards, fuel quality standards are currently issued by the Standardization Administration of China (SAC). The SAC coordinates a committee process in which MEP is but one voice among many, including the more powerful National Development and Reform Commission (NDRC) and the oil industry.

On the other hand, MEP successfully spearheaded the effort to eliminate lead from gasoline in China, and did so in less than two years. This was a tremendous achievement and one that could potentially serve as a model for other efforts.

On the climate change front, progress requires the active collaboration of NDRC. EPA signed a Memorandum of Cooperation (MoC) with NDRC last fall on capacity building to address climate change. Over the course of the next year, we expect to see meaningful progress under this instrument, building largely on our pre-existing cooperation to support capacity building for greenhouse gas inventories. Our colleagues at DOE can speak more broadly to the topic of cooperation with China related to clean energy, and to China's impressive investments in this sector.

U.S. efforts to engage bilaterally with China on a global regime to control mercury are an important part of the U.S. overall strategy. As the largest global source and leading consumer of mercury, China is widely viewed as a necessary partner in any international effort to control mercury. To date, MEP has represented China in multilateral negotiations on this issue. Over the past two years, as international momentum has shifted in favor of a multilateral agreement to address global mercury, MEP has shown an increased willingness to address mercury. For example, China's vinyl chloride monomer production sector is widely thought to be the single largest use of mercury in any one sector in any country on earth – China used about 800 tons of mercury for vinyl chloride production in 2005 alone. This sector is one of their top priorities for engagement with EPA. We are also engaged with MEP in mercury measurement and control from power plants, metallurgy, and cement production—all major sources of mercury emissions. We are optimistic that MEP will continue to take the global mercury negotiations seriously and will put concerted effort into bridging environmental and industrial development interests as we approach our first negotiating session this June.

EPA's work with MEP on environmental law and enforcement offers an insightful window on China's environmental policy infrastructure. China continues to pursue an ambitious agenda of environmental legislative reform. Newer legislation tends to give greater attention to implementation mechanisms and effective enforcement, which is encouraging. The "planning culture" in China, a legacy of decades of single-party rule, remains strong, while the rule of law and "compliance culture" are still evolving. Despite enactment of a range of legislation in recent decades, many provisions in China's environmental statutes have aspirational mandates, unclear enforcement mechanisms, and limited or weak provisions for judicial review or public oversight. We continue to value the potential for MEP's six Regional Supervision Centers to support improved enforcement and compliance, though their real effectiveness remains difficult to gauge. A related problem is the lack of accountability of provincial and municipal governments to MEP for their implementation and enforcement of environmental laws. We are cooperating

with MEP to help explore various reporting, measures, and capacity building mechanisms to reflect performance and ensure appropriate follow up and consequences.

The Commission has asked us to opine on the success rate of China's environmental mitigation policies. In our opinion, there is insufficient access to reliable environmental data and information in China for us—or probably anyone—to answer that question with confidence in general terms. There are important exceptions: access to very detailed sulfur dioxide emissions data has been part and parcel of our strong, durable cooperation with MEP on sulfur dioxide control. But it is fair to say that an overarching goal in our work with China remains improving the quality, accessibility, and transparency of environmental data and information. Much of EPA's recent air quality cooperation with China has focused on building capacity in municipal/provincial Environmental Monitoring Centers (EMCs) to provide quality assurance for data they receive from enterprises and subordinate jurisdictions. In general, we have found the EMCs to be capable, responsive partners, and we hope to develop a broader cooperative agenda with MEP on environmental information management. We will continue to explore cooperation on GHG inventories under the 2009 MoC with NDRC, as the latter will likely play a significant role in China's GHG emissions reporting.

The Commission has also asked about the likely effects of China's pollution on the U.S. and U.S. responses to these effects. Here again, our ability to draw meaningful conclusions across the whole range of pollutants is limited by the availability of data. We can say with confidence that intercontinental flows of air pollution from Asia have an impact on environmental quality in the United States, possibly affecting the ability of some areas to attain air quality standards and environmental goals. EPA has led international scientific efforts to improve our understanding of transboundary sources of local air pollution. Chinese scientists have been active participants in these efforts, which are intended to lay the foundation for international policies designed to mitigate these intercontinental flows. There are strong linkages between the issues of climate change and mercury, ozone, and fine particle pollution. As we try to think about these issues in an integrated fashion within U.S. domestic and international policies, there is an opportunity to help China make these connections as well.<sup>2</sup>

In addition to our cooperation with MEP and other central ministries in Beijing, we remain alert to partnerships among China's highly varied regions. This is based partly on the fact that the central government is concerned about the occurrence of adverse environmental impacts in various parts of the country, and is prepared to support efforts targeted on such regional impacts.

- EPA had very good collaboration with Beijing authorities in the period leading up to the 2008 Summer Olympics. A U.S.-sponsored diesel bus retrofit pilot involving 20 vehicles led to a decision by local authorities to retrofit 6000 additional vehicles prior to the Olympics.
- Three provinces – Beijing, Shanghai, and Guandong – have moved ahead of the rest of China in terms of implementing low sulfur transportation fuel programs, and, in some cases, have accelerated the introduction of more stringent vehicle emission standards.

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<sup>2</sup> See the 2009 National Research Council report, Global Sources of Local Pollution: An Assessment of Long-Range Transport of Key Air Pollutants to and from the United States.

Another promising field of consultation and perhaps cooperation is the area of “smart growth,” given China’s rapid urbanization and the need to provide expanding urban populations with reliable energy and accessible transportation.<sup>3</sup> Indeed China is now implementing requirements that environmental impact assessment be integrated into the process of developing master plans at the provincial and municipal levels.

Finally, we should commend the efforts of many other actors—international organizations in the UN system, international financial and development institutions, multinational corporations, NGOs, academia, various foreign governments—who share our support for an environmentally sustainable China. Also of note is our participation in related bilateral fora like the Environment Working Group of the U.S.-China Joint Commission on Commerce and Trade, where EPA works with the Commerce Department and Office of the U.S. Trade Representatives to help ensure the Chinese can access technologies they need to address local environmental issues. This is a task of truly global proportions that requires concerted action at many levels.

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<sup>3</sup> See Martin Joeris et al., “China’s Green Opportunity,” in The McKinsey Quarterly: Climate Change Special Initiative, May 2009