

TAB 12: ENVIRONMENTAL PROTECTION AGENCY

Ms. Kay Anske
Director, Office of Science and Technology Cooperation
Bureau of Oceans, Environment and Science
U.S. Department of State
Washington, DC 20521-0410

Dear Ms. Anske:

On behalf of the Environmental Protection Agency (EPA), I am pleased to respond to your request for information about EPA activities in China to assist your office in submitting a report to Congress on the implementation of activities under the 1979 Science and Technology Agreement (the S&T Agreement.)

In response to a similar request from your office in 2002, EPA explained that its activities in China were undertaken on an ad hoc basis without reference to the S&T Agreement. It was EPA's position that the Congressional reporting requirement did not pertain to EPA activities. Nevertheless, EPA submitted a description of its various ongoing projects in China as a courtesy.

For the current report to Congress due in April 2004, EPA is pleased to provide you with a brief description of its projects in China, a list of some of the accomplishments over the past two years, and an outline of the proposed future direction of EPA activities. Some of the current EPA projects will continue through the next reporting period.

Accomplishments During 2002 and 2003

EPA cooperation with China:

- Demonstrated air quality management methods in Shanghai;
- Assisted in developing an air quality monitoring network for 11 cities;
- Trained experts on the use of emissions trading to control acid rain;
- Demonstrated a dynamic general equilibrium model to analyze economic, environmental, and health effects of policies to reduce greenhouse gas emissions;
- Assessed the regional formation and transport of ozone, particulate matter, and acid rain
- Provided information on the use of reburn technology to control NO_x from coal-fired utility boilers;
- Trained industrial managers and environmental regulators to develop voluntary pollution prevention programs for the cement and food processing industries;
- Assisted project developers in commercializing coal mine methane;
- Assisted regional authorities to protect source water protection and manage watersheds;

- Assisted environmental authorities, in cooperation with U.S. industry, in developing regulations for underground injection wells; and
- Researched health risks associated with arsenic in drinking water in Inner Mongolia.

Plans for the 2004-2005 Reporting Period

In December 2003, EPA and SEPA concluded a Memorandum of Understanding (MOU) on Scientific and Technical Cooperation in the Field of Environment. The MOU outlines a broad range of potential areas for cooperation, but places the immediate focus of activities on the prevention and management of air pollution, water pollution, and pollution from persistent organic pollutants (POPs) and other toxic substances. Each of these three areas is the subject of a separate annex to the MOU.

The MOU establishes a Joint Committee on Environmental Cooperation (JCEC) that will provide guidance to all working groups pertaining to environmental protection established under the S&T Agreement. The JCEC will meet at least once every two years to address a wide range of environment-related issues such as technical exchange, informational exchange, scientific research, and environmental policy.

The first new initiative under the MOU is the EPA-SEPA Strategy for Clean Air and Energy Cooperation. The goal of this strategy is to address China's severe local and regional air pollution problems and reduce emissions that contribute to transboundary air pollution, as well as regional and global climate impacts. The strategy provides a framework that will coordinate activities in two directions: 1. Strengthening Regional Coordination of Clean Air and Energy Management; and 2. Prioritizing Source Categories Affecting Air, Environment and Public Health.

In 2004-2005, new activities are anticipated that will address the World Summit for Sustainable Development (WSSD) Partnership on Clean Fuels and Vehicles, the WSSD Partnership on Indoor Air, the United Nations Environment Program (UNEP) global initiative on mercury, and the Stockholm Convention on POPs.

EPA looks forward to cooperating with your office during the next reporting period as we implement activities under the MOU and S&T Agreement. We are prepared to answer any questions you may have regarding specific projects. If you have any questions or comments about the current report, please contact Dan Thompson at (202) 564-6418 or by e-mail at thompson.dan@epa.gov. An electronic version of the enclosed information has been forwarded to Pete Kelly in your office.

Sincerely,

Jerry Clifford
Deputy Assistant Administrator

Attachment:
Descriptions of EPA Projects

U.S. Environmental Protection Agency Project Descriptions

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EPA Program Office Abbreviations

CAMD – Clean Air Markets Division

CPPD – Climate Protection and Partnership Division

GPD – Global Programs Division

NCEE – National Center for Environmental Economics

NHEERL – National Health and Environmental Effects Research Laboratory

NRMRL – National Risk Management Research Laboratory

OAP – Office of Atmospheric Programs

OAQPS – Office of Air Quality Planning and Standards

OIA – Office of International Affairs

OPEI – Office of Policy, Economics and Innovation

ORD – Office of Research and Development

OTAQ – Office of Transportation and Air Quality

Agency	Environmental Protection Agency
Project Name	Air Quality Management Assessment
Focus	Air Quality/Air Quality Management
Status	Ongoing
Start Date	10/1/1999
Description	The Air Quality Management Assessment project is a collaborative assessment of China's air quality management (AQM) system created to assess the feasibility of applying U.S. AQM methods and technologies to air quality issues in a large Chinese city (Shanghai is the demonstration city). The assessment covers a broad range of air quality management elements such as emission inventory development/use, ambient monitoring network design/data use, local and regional modeling, control strategy development, regulation development and public participation/outreach at the national and local level. Its principle activities include: training/exchanges on US-Chinese AQM systems through meeting and workshops; capacity building in monitoring, emission inventories and modeling; and, technical tools transfer.
Results	The assessment report will be completed in 2003. AQM workshops were held in Beijing (4/00) and AQM training took place in US (3/02). Chinese capacity has been strengthened in the areas of monitoring, emission inventories, and local and regional modeling. Technical tools have been transferred to support economic and environmental assessment.
EPA Office	OAQPS
Chinese Partners	<ol style="list-style-type: none"> 1) State Environmental Protection Administration, 2) Chinese Research Academy of Environmental Sciences (CRAES), 3) Shanghai Environmental Protection Bureau, 4) Shanghai Academy of Environmental Sciences (SAES), 5) Shanghai Environmental Monitoring Center/National Monitoring Center

Agency Environmental Protection Agency
Project Name Advanced Reburn System Pollution Control
Focus Air Quality/Control Technology
Status Ongoing **Start Date** 10/1/2002
Description The Advanced Reburn System Pollution Control project is providing technical assistance on cost-effective control of NOx, POPs, and other pollutants, such as mercury, from combustion sources. The reburn project is a multiyear project which will include a feasibility study of the technology for the candidate boiler, the conceptual design and detailed engineering drawings, reburn component manufacturing and installation, and system shakedown and testing. A U.S. contractor will be hired to do most of the feasibility study and design work, and manufacturing and installation work will be done by local contractors in China. The Beilun Power Plant located in Ningbo, Zhejiang Province, is interested to apply reburn technology for NOx emissions control. The plant has five coal-fired boilers (600 MW each) with a total capacity of 3,000 MW, is the largest coal-fired power plant in China.

Results

Reburning is a combustion modification technology for reducing NOx emissions from combustion processes. In reburning, between 15 to 25% of the total fuel input is provided by injecting a secondary (or reburning) fuel above the main combustion zone to produce a slightly fuel-rich reburn zone with a stoichiometry of about 90 percent theoretical combustion air. Combustion of reburning fuel at fuel-rich conditions results in unburned hydrocarbon fragments, which react with the incoming NOx produced from the main combustion zone and to reduce the NOx to N2. Finally, completion air is added above the reburn zone to complete burnout of reburning fuel. Reburn is ideal for control of NOx from coal-fired utility boilers in China because it is cost effective and can be applied to coal-, oil-, and natural gas-fired boilers with a wide variety of boiler types for NOx control with 50 to 70% control efficiency. Coal, oil, and natural gas can also be used as the reburn fuel.

EPA Office ORD
Chinese Partners 1) Institute for Thermal Power Engineering (ITPE),
2) Zhejiang University

Agency Environmental Protection Agency

Project Name Clearing the Air from Tobacco Smoke: Creating Healthy and Safe Environments for Children

Focus Air Quality/Indoor Air

Status Ongoing **Start Date** 1/1/2003

Description EPA and the World Health Organization (WHO) entered into a cooperative agreement in 2000 to develop pilot programs to reduce childhood exposure to environmental tobacco smoke (ETS). ETS was identified as a children's environmental health priority by the G8 Environment Ministers in 1997. A 1999 WHO scientific consultation confirmed the significant health risks to children from second hand tobacco smoke. The WHO-EPA project uses a social marketing module to train local leaders and to develop community-level action plans. China is one of four countries (including Poland, Latvia, and Viet Nam) participating in this environmental health prevention program. There are 5 cities (Zhuhai in Guangdong Province, Xiamen in Fujian Province, Qingdao in Shandong Province, Cangzhou in Hebei Province, and Hailin in Heilongjiang Province) in China that will be involved in the project. Three of them will be funded by EPA and 2 of them funded by Ministry of Health, China.

Results In October 2003, two USPEA experts in environmental tobacco smoke and the social marketing module conducted training workshop for local officials in China. In December 2002, WHO, EPA, Chinese Health Officials, and other Chinese representatives met to agree to goals of project and plan for next steps. Results are not expected until 2004.

EPA Office OIA

Chinese Partners

Agency Environmental Protection Agency
Project Name Training on the Use of Emissions Trading in China
Focus Air Quality/Market Mechanisms
Status Completed **Start Date** 10/1/2000
Description Training on the Use of Emissions Trading provides technical assistance on the design, operation, and assessment of emissions trading programs.
Results The project has conducted several training workshops on the basics of emissions trading: design elements, monitoring, implementation, administration, compliance determination, legal requirements. EPA has also developed a computerized registry for tracking allowance. Basic computer software to track tradeable allowance transfers was provided.
EPA Office OAP/CAMD
Chinese Partners Chinese Academy of Environmental Planning

Agency Environmental Protection Agency

Project Name Developing Emission Trading Infrastructure and Institutions

Focus Air Quality/Market Mechanisms

Status Ongoing **Start Date** 4/1/2004

Description This project is building capacity to develop and implement environmental regulations and strengthens AQM, with the goal of building the institutions and infrastructure for SO2 emission trading. The primary areas of cooperation are: Emission measurement – improving CEM standards and developing alternative measurement requirements; Allocation – assessing different allocation approaches for the Total Emission Control policy implemented in 2000. The lessons are directly applicable to allocating allowances for an emission trading program; Data systems – developing a computerized tracking system to collect and analyze emission data, and track the allocation (and, if emission trading is implemented, trades) of allowances or Total Emission Control quota; Regulatory enhancement – enhancing regulations related to an emission trading program (e.g., monitoring, reporting, Total Emission Control); and Education – providing the tools and information necessary to educate stakeholders about emission trading.

Results The project developed a model to assess allocation methodologies and provided training tools and materials.
Basic computer software to track tradeable allowance transfers and emission reports was

EPA Office OAP/CAMD

Chinese Partners 1) Chinese Academy of Environmental Planning,
2) SEPA

Agency Environmental Protection Agency
Project Name SO2 Emissions Trading in China
Focus Air Quality/Market Mechanisms
Status Completed **Start Date** 10/1/1999
Description The objective of this project is to facilitate SO2 allowance trading in China. Phase I developed a Feasibility Study on SO2 Emissions Trading. EPA provided: 1) analysis of how U.S. experience can be adapted to China; 2) financial support to build technical and analytical capacity within SEPA and CRAES for the design of emissions trading programs; 3) technical assistance on emissions measurement, reporting, and verification, allowance accounting, and regulatory structure; and 4) data systems for collecting and managing emissions and allowance data, and assessing compliance.
Results The project has conducted three workshops. The feasibility report was completed in 2002 and distributed at a joint workshop in Beijing.
EPA Office OAP/CAMD
Chinese Partners 1) Chinese Academy of Environmental Planning,
2) SEPA

Agency Environmental Protection Agency
Project Name Economy-Environment Health Modeling
Focus Air Quality/Modeling
Status Ongoing **Start Date**
Description The Economy-Environment Health Modeling project, has constructed and regularly updates a dynamic computable general equilibrium (CGE) model of the Chinese economy. The model has been used to look at the economic, environmental, and health effects of policies to reduce GHG emissions in China. A recent Harvard-Tsinghua project collected data on industrial emissions from a number of sources in five Chinese cities. These data have been used to improve model parameters for PM and SO2 emissions. In collaboration with the Chinese National Bureau of Statistics, work is currently underway to construct a time-series data set to be used to estimate a number of parameters of the economic model.
Results Ongoing work has been regularly presented at conferences and appears in a variety of
EPA Office OPEI/NCEE
Chinese Partners 1) Development Research Center,
2) National Bureau of Statistics,
3) Tsinghua University

Agency Environmental Protection Agency
Project Name Air Quality Modeling Pilot Project
Focus Air Quality/Modeling
Status Ongoing **Start Date** 11/1/2002
Description The objective of the Air Quality Modeling Demonstration project is to conduct a national/regional modeling demonstration in China. The project is aimed at building capacity and transferring technology on air quality modeling and emission tools to Chinese scientists and to conduct a preliminary scientific assessment of regional formation and transport of ozone, PM, acid rains, etc. in China.

Results

EPA Office OAQPS

Chinese Partners 1) SEPA,
2) Shanghai Academy of Environmental Sciences (SAES),
3) Tsinghua University,
4) Chinese Research Academy of Environmental Sciences (CRAES),
5) Shanghai EPB,
6) Beijing EPB
7) Beijing Environmental Monitoring Center

Agency Environmental Protection Agency
Project Name Ambient Air Quality Monitoring
Focus Air Quality/Monitoring
Status Ongoing **Start Date** 1/1/1998
Description EPA is providing technical assistance to Chinese national and local authorities for the development of a nationwide air-quality monitoring network. Phase I of this effort covered 11 cities, and Phase II covers an additional 22 cities. Cities in the network will have accurate, standardized data used for daily air quality reporting and for forecasting. This project has supported training in the U.S. for Chinese experts.
Results CARB assisted national and local authorities with site selection, operational training, data quality training, and quality assurance for Phase I sites. This assistance helped Chinese authorities expand the effort to Phase II and beyond, such that cities now provide to the public daily air quality forecast and reports (through newspapers and other media).
EPA Office OIA
Chinese Partners 1) SEPA,
2) National Monitoring Center
3) municipal governments

Agency	Environmental Protection Agency
Project Name	Integrated Environmental Strategies
Focus	Air Quality/Policy
Status	Ongoing
Start Date	10/1/1998
Description	The Integrated Environmental Strategies (IES) is building capacity in China to develop, analyze, promote and implement policies that reduce GHGs, improve air quality and protect public health. The IES methodology enables developing countries to assess, quantify and compare clean energy and transport technologies, policies and measures, in terms of the local air quality and public health benefits, GHG reductions and other economic impacts. The methodology is being applied at both the local (Shanghai and Beijing) and national level.
Results	The project completed a comprehensive health and economic benefits analysis in Shanghai, conducted national & local policy makers workshop to discuss results, published several papers in Chinese journals and presented results in several international meetings. Substantial local capacity was built to conduct health benefits analysis of energy/environmental policies.
EPA Office	OAP/GPD
Chinese Partners	<ol style="list-style-type: none"> 1) SEPA, 2) Shanghai & Beijing EPB's, 3) Tsinghua University, 4) Beijing University, 5) Shanghai Academy of Environmental Sciences (SAES), 7) Beijing Environmental Monitoring Center

Agency Environmental Protection Agency
Project Name Inspection and Maintenance Program for Shanghai
Focus Air Quality/Transport
Status Ongoing **Start Date** 9/1/1999
Description The I&M Program for Shanghai provides technical assistance to Shanghai EPB and Shanghai Academy of Environmental Sciences in the design and implementation of a high-tech I&M program.
Results Purchase of equipment for central station is underway.

EPA Office OTAQ
Chinese Partners 1) Shanghai EPB,
2) Shanghai Academy of Environmental Sciences (SAES)

Agency Environmental Protection Agency
Project Name Transportation Demand Modeling for Wuhan
Focus Air Quality/Transport
Status Ended **Start Date** 10/1/2001
Description The Transportation Demand Modeling Project was implemented as a pilot project in Wuhan. It applied an alternate method of using transportation demand modeling to calculate the Internal Rate of Return for World Bank loans.
Results The project provided authorities in Wuhan with a more accurate economic assessment and a better predictor of mobile source emissions.

EPA Office OTAQ
Chinese Partners Wuhan Municipal Authorities

Agency Environmental Protection Agency
Project Name WSSD Partnership for Clean Fuels and Vehicles - Sulfur reduction technology demonstration
Focus Air Quality/Transportation
Status Proposed **Start Date**
Description This project will demonstrate the potential emissions reduction from introduction of mobile source technologies with the use of low sulfur fuel—such as diesel particulate traps. The project objectives are to: Develop quantitative information on costs, emissions reductions, and health benefits of emission control retrofit technologies on existing vehicles, coupled with appropriate sulfur levels in the fuel; Promote the introduction of innovative diesel emission reduction technology as quickly and cost effectively as possible, while providing confidence in the emission reduction performance of the technology; Demonstrate retrofit technologies for older diesel vehicles; and Develop a program that can be replicated with other fleets.

Results

EPA Office OTAQ
Chinese Partners 1) SEPA
2) MOST

Agency Environmental Protection Agency

Project Name China-US Partnership in Industrial Pollution Prevention and Energy Efficiency

Focus Climate Change

Status Ongoing **Start Date** 7/1/2000

Description EPA is assisting SEPA in developing and launching voluntary pollution prevention (P2) and energy efficiency (E2) “beyond compliance” industry-government partnership programs, and providing training and technical assistance in their implementation. Activities included in the Cooperative Agreement will strengthen the ability of SEPA to establish and implement a more economically efficient environmental management policy for China’s industrial sector, focusing on preventing pollution (source reduction) as a preferred approach to environmental

Results “China Environmentally Friendly Enterprises” (CEFE) partnership program launched; begin nation-wide recruitment (9/03). P2/E2 Training conducted in Xinjiang and Zhejiang (9/03), P2/E2 best practices in US petrochemical and chemical sectors study tour to U.S. (1/03). Pilot partnership program, “National Environmentally Friendly Facility” (NEFF), piloted in Shandong, Liaoning, Guangdong, Shanxi provinces (2002-2003); NEFF launched at workshop and roundtable in Beijing (7/02). SEPA study tour to U.S. (1/02), seminar on P2E2 in Beijing (6/01). Study on EPA’s National Environmental Performance Track (NEPT) and Supplemental Environmental Projects (SEP) translated and published. Feasibility study completed on adapting NEPT and SEP to China .

EPA Office OIA

Chinese Partners SEPA, Dept of Pollution Control, Div Urban & Industrial Environmental Management

Agency Environmental Protection Agency
Project Name Economic and Environmental Modeling Workshops
Focus Climate Change
Status Ongoing **Start Date** 10/1/1997
Description The Economic and Environmental Modeling Workshops enhance technical capacity in developing countries to model and run alternative scenarios of measures to address climate change and other environmental concerns. The technical exchange between U.S. and developing country modelers is mutually beneficial, and improves the likelihood that developing countries will evaluate a fuller range of climate policy options within their internal
Results Five workshops were held in China. The most recent workshop took place in November 2002 in Beijing. Workshop proceedings were published posted on the web:
<http://www.pnl.gov/aisu/pubs/#model>
EPA Office OAP
Chinese Partners Energy Research Institute (ERI) of the State Development Planning Commission (SDRC)

Agency Environmental Protection Agency

Project Name Energy-Efficient Buildings

Focus Climate Change/Energy Efficiency

Status Ongoing **Start Date** 10/1/1999

Description EPA is working with Chinese partners in the commercial buildings sector to build capacity to achieve reductions in emissions of GHG and other air pollutants through adoption of voluntary, profitable measures to reduce building energy consumption. The eeBuildings program assists property owners and managers in Shanghai to implement low- and no-cost actions which can reduce building energy use by 10 to 30% while maintaining comfortable lighting levels, temperature and air quality.

Results The project launched a website in Shanghai to improve energy-efficiency of office buildings through benchmarkings and other strategies.

EPA Office OAP/GPD

Chinese Partners 1) China Center for Certification of Energy Conservation Products,
 2) Ministry of Construction Center for Energy Efficiency in Buildings,
 3) Assoc. of Shanghai Property Managers

Agency Environmental Protection Agency
Project Name Minimum Energy-Efficiency Standards
Focus Climate Change/Energy Efficiency
Status Ongoing **Start Date** 10/1/2001
Description The Minimum Energy-Efficiency Standards project is a highly cost-effective effort is achieving substantial GHG reductions and building capacity to achieve reductions in the future. EPA technical assistance supports implementation of minimum energy efficiency standards and information labels for appliances and other equipment. This activity builds on EPA's energy-efficient CFC-free refrigerator project and high-efficiency room AC project, as well as the China-Lawrence Berkeley National Laboratory partnership.
Results GHG emissions are projected to be reduced by 11.3 MMTCE annually (in 2010) through mandatory minimum EE standards and informational labels. Technical assistance in 2003 is supporting development of standards for commercial and room ACs.
EPA Office OAP/GPD
Chinese Partners 1) China National Institute for Standardization (CNIS),
2) CECP

Agency Environmental Protection Agency
Project Name Energy-Efficiency Voluntary Endorsement Labeling
Focus Climate Change/Energy Efficiency
Status Ongoing **Start Date** 10/1/2000
Description The Energy-Efficiency Voluntary Endorsement Labeling project aims to reduce emissions of GHG and other air pollutants through China's voluntary EE endorsement label (similar to ENERGY STAR). Cooperation focuses on developing label performance levels for new products and on training in ENERGY STAR program management and promotional techniques. This project builds on more than a decade of successful EPA cooperation with SEPA and other Chinese partners, which began in 1990 with the US-China CFC-free, Super-Efficient Refrigerator Project.
Results The project established performance specifications for televisions, room air-conditioners and printers, which will enable qualifying products to be labeled by manufacturers, saving nearly three MMTCE annually in 2010.
EPA Office OAP/GPD
Chinese Partners 1) China Certification Center for Energy Conservation Products (CECP)

Agency	Environmental Protection Agency
Project Name	3rd International Methane & Nitrous Oxide Mitigation Conference
Focus	Climate Change/GHG Mitigation
Status	Completed
Start Date	11/1/2001
Description	The conference was held on November 17-21, 2003. Participants discussed opportunities to mitigate emissions of methane and nitrous oxide, the second and third most prominent greenhouse gases after carbon dioxide. Major anthropogenic sources of these gases include coal mining, agriculture, landfills and sewage management, and natural gas and oil systems. China has emissions from all sources and is the world's leading source for coal mining and agriculture emissions. Participants attended source-specific discussion sessions that focused on characterizing emission sources and overcoming the barriers to project development through cost-effective market-oriented solutions using proven and innovative technologies.
Results	Based on the very positive feedback of the participants, the conference was very successful. About 300 delegates from 29 countries attended. Many ideas were exchanged at the conference, and participants established relationships to further their efforts to reduce methane
EPA Office	OAP
Chinese Partners	1) CCII, 2) China National Coal Assoc., 3) China Academy of Agricultural Sciences, 4) China Assoc. of Environmental Sanitation,

Agency	Environmental Protection Agency
Project Name	Coal Mine Methane Commercialization Program
Focus	Climate Change/Methane
Status	Ongoing
Start Date	10/1/2001
Description	EPA is working with Chinese coal companies, U.S. companies, the Asian Development Bank, and Chinese organizations to commercialize the recovery methane from coal mines. Growing this industry will greatly reduce greenhouse gas emissions, improve regional air quality, advance local economic development, encourage U.S. investment, and improve mine safety. The project is marketing project plans; advising financial institutions and brokerage firms on the best projects to finance; hosting technical training workshops for Chinese mining executives on marketing and financing; preparing an investment guide for U.S., Chinese, and other companies; and hosting international symposia to provide U.S. and other potential investors and developers with access to the market for coal mine methane.
Results	The project held a workshop on financing projects in 6/02. It also prepared an investment guide, planned international investment/technology symposium, and assisted project developers. The project held an international conference in 9/03.
EPA Office	OAP/PPD
Chinese Partners	1) State Administration of Coal Mine Safety Supervision (under State Economic and Trade Commission), 2) China Coal Information Institute, 3) Chinese coal companies

Agency Environmental Protection Agency
Project Name Cleaner Air & Cleaner Energy Technology Cooperation (CACETC)
Focus Climate Change/Renewable Energy
Status Completed **Start Date** 10/1/1998
Description The CACETC is a component of the global, interagency Technology Cooperation Agreements Pilot Project (TCAPP) to transfer clean technologies to developing countries. TCAPP completed a country-driven technology selection process, formed in-country technology teams in multiple technology areas including grid connected wind power, implemented initial phases of wind power, efficient motors work and conducted investment workshops. Currently it is implementing initial phases of efficient boilers and clean coal work plans. It has already completed wind resource mapping of S. China coastal areas.
Results The full results of the TCAPP project will be documented in a final report including lessons learned and recommendations for future technology cooperation programs.

EPA Office OAP/GPD
Chinese Partners 1) NDRC-CCO,
2) Tsinghua University

Agency Environmental Protection Agency
Project Name Wind Technology Partnership
Focus Climate Change/Renewable Energy
Status Ongoing **Start Date** 2/1/2003
Description The Wind Technology Partnership project supports country driven technology transfer under the UNFCCC. This project supports implementation of a Wind Technology Partnership (WTP) with the Basic Industries Department of NDRC, to advance the programs, policies, demonstrations, and investments needed to expand wind power generation in China substantially over the next 5-10 years. EPA is working under the Policy and Planning Annex to
Results A draft strategy for wind power development is under review and will be shared and discussed with other major sponsors of wind power development in China, including the World Bank, GEF, UNEP, UNDP, Energy Foundation, State Power, and provincial officials.
EPA Office OAP/GPD
Chinese Partners NDRC Energy Bureau

Agency	Environmental Protection Agency
Project Name	Energy and Environmental Financing
Focus	Policy
Status	Ongoing
Start Date	1/1/2001
Description	Through technical assistance and training, EPA is helping China establish a permanent, nation-wide market-based system for financing environmental infrastructure. Activities include discussion of the design and structure of financing mechanisms, optimal market-based approaches to leveraging private capital, and work with international financing institutions.
Results	Results include the continuation of this work through a partnership with the Partnership for Environmental Management for the Seas of East Asia (PEMSEA). Current focus is on cooperation with the Global Environment Facility and World Bank to establish a multi-country revolving loan fund for the countries bordering on East Asian Seas, including China, and on developing a sub-national funding mechanism centered on the Hai River Basin of northeastern China.
EPA Office	OIA
Chinese Partners	1) SEPA, 2) State Development & Reform Commission, 4) Beijing, 5) Tianjin, 6) Development Research Center

Agency Environmental Protection Agency
Project Name Studies on Health Effects of Arsenic in Inner Mongolia
Focus Toxic Chemicals
Status Ongoing **Start Date** 1/1/1999
Description The EPA Office of Research and Development (ORD) is supporting research on the health risks associated with arsenic in drinking water in western Inner Mongolia. The groundwater in this region is naturally contaminated with arsenic which provides a unique opportunity for assessing health risk. The cooperative research has two objectives: to conduct epidemiological studies to assess the health effects of arsenic in humans; and to conduct toxicological studies to assess dose-response relationships of arsenic exposure in humans, especially at low doses, and to identify biomarkers and neurological/cardiovascular function tests for assessing arsenic exposure and health effects.
Results These collaborative efforts have lead to 4 scientific publications on effects of arsenic and 8 papers were presented in an international conference on arsenic exposure and health effects.
EPA Office ORD/National Health and Environmental Effects
Chinese Partners Inner Mongolia Center for Endemic Disease Control and Research

Agency Environmental Protection Agency
Project Name POPs from Combustion Workshop
Focus Toxic Chemicals
Status Planned **Start Date** 7/1/2003
Description The Asian Persistent Organic Pollutants from Combustion Workshop is scheduled for October 18-20, 2004 in Shanghai and will support worldwide efforts to reduce POPs released to the global environment. The main objectives of the workshop are: 1) To strengthen the capacities of China for the preparation of NIP, especially the Action Plan for unintentional products under the Stockholm Convention; 2) To share information and experiences from other countries on POPs releases and reductions from combustion processes; 3) To provide an opportunity for government regulators, the regulated community and academic researchers in China to receive and share the information and experience on the management strategies, technological solutions to mitigate and monitor emissions of POPs release from combustion processes; 4) To provide information on strategies and practices to prevent emissions of POPs from incineration through environmentally-sound management and segregation of wastes; 5) To discuss the priority fields on unintentional products in China; and 6) To present and discuss alternatives to incineration for the disposal of wastes.

The workshop will provide SEPA with the state-of-the-science and technology for the development of a comprehensive National Implementation Plan for the unintentional products.

China is one of the largest waste producing countries in the world with continuing high waste production growth rates. The workshop will disseminate technical information in China and the Asian region for reducing unintentional POPs, one of the greatest environmental threats in the region. It is expected that the workshop will greatly facilitate information exchange with respect to unintentional POPs, including the establishment of a national focal point for this purpose, and the provision of information to the public, particularly decision-makers and affected groups; and encourage and undertake research, development and monitoring of unintentional POPs, and supporting international efforts. It is also expected that the workshop will provide a good opportunity for networking and coordinating efforts within the technical community in China and the Asian region for reducing unintentional POPs. The workshop will be followed by a conference on combustion and incineration at Zhejiang University in Hangzhou from October 21-23, 2004.

Results

EPA Office ORD
Chinese Partners 1) Shanghai Academy of Environmental Sciences (SAES),
2) SEPA,
3) Shanghai EPB,
4) Zhejiang University

Agency Environmental Protection Agency
Project Name Mercury Public Awareness TV Program
Focus Toxic Chemicals/Mercury
Status Ongoing **Start Date** 9/1/2003
Description Global Village of Beijing was awarded a \$25,000 grant from EPA to develop a TV program to: promote environmental awareness in China to the dangers of mercury; to encourage public involvement in environmental protection; and to provide guidance to environmental officials. Among other things, the TV program will provide Chinese audiences with information about how mercury is regulated and managed in the U.S.

Results

EPA Office OIA
Chinese Partners Global Village of Beijing

Agency Environmental Protection Agency

Project Name Real-Time Watershed Management

Focus Water Quality

Status Ongoing **Start Date** 6/1/2001

Description EPA and USDA are conducting a joint demonstration/research project at two different sites in China. This project involves the installation and operation of (a) an innovative membrane system to treat industrial wastewater for reuse at a brewery factory located in Jinan, Shandong Province, and (b) a solar powered buoy water quality monitoring system on the Yellow River, at Huayuankou, 20 miles north of Zhengzhou, the capital of Henan Province. These two sites will be linked through remote telemetry. EPA and USDA will transfer lessons learned from these demonstrations to the Haihe River watershed project.

Results The solar powered surface water monitoring system has been installed and successfully operated. The wastewater membrane treatment system has been delivered to the site and is scheduled to be installed before the end of 2003.

EPA Office ORD/National Risk Management Research Laboratory (NRMRL), OIA

Chinese Partners 1) China Environmental Protection Foundation (CEPF),
2) Shandong Environmental Protection Bureau (SEPB),
3) Shandong Environmental Protection Production Group Co. (SEPP)
4) Zhengzhou Environmental Monitoring Center (ZEMC)

Agency Environmental Protection Agency
Project Name Clean Water for Sustainable Cities
Focus Water Quality
Status Ongoing **Start Date** 7/1/2003
Description The Clean Water for Sustainable Cities project aims to increase public access to safe drinking water and sanitation, and to promote watershed management in the Hai River basin near Tianjin. The project is focusing on protecting the quality of source water at the Yuqiao Reservoir, through 1) the management of waste from 120,000 residents surrounding the reservoir, 2) pollution prevention at hotels, restaurants, and light manufacturing facilities that discharge into the reservoir, and 3) the problems of agricultural run-off. The project will advance the development of a watershed management plan in collaboration with the GEF Hai Baisn Integrated Water and Environment Management Project.

Results

EPA Office OIA
Chinese Partners 1) SEPA,
2) Tianjin Environmental Protection Bureau,
3) Hai River Commission, Ministry of Water Resources