

FACT SHEET
U.S.-CHINA ENERGY AND ENVIRONMENT COOPERATION INITIATIVE

The new U.S.-China Energy and Environment Cooperation Initiative embraces the energy and environmental goals of the two nations and identifies priority areas for future cooperation. The joint statement is an outgrowth of the U.S.-China Forum on Environment and Development, established during the visit to China by Vice President Gore in March of 1997.

The joint statement on the Initiative notes the intention of the two nations to undertake a sustained joint cooperative effort in three priority areas: urban air quality; rural electrification; and clean energy sources and energy efficiency. This addresses China's goals to: bring electricity to the nearly 100 million people in rural areas without electricity; mitigate severe air pollution problems in Chinese cities; promote energy efficiency; and accelerate deployment of clean energy sources and technologies. Estimates point to large potential for these solutions in the Chinese market. For instance, China could potentially save 40% of its consumption in the industrial sector by raising industrial energy efficiency standards to international levels. China also is seeking to expand development of: its substantial renewable energy resources, which include an estimated 253 gigawatts of wind energy potential; its indigenous oil and gas resources; and to increase utilization of clean technologies in the power sector, which is expected to expand at the rate of approximately 15 GW per year. The joint statement recognizes the expanded role that U.S. technology capabilities and U.S. industry could play in meeting these challenges and the substantial trade and investment opportunities which could ensue. In its Ninth Five-Year Plan alone, China expects to spend \$100 billion on electric power development; investment requirements in the energy sector as a whole over the next twenty years have been estimated to be on the order of \$1 trillion.

The Joint Statement endorses principles of cooperation to promote the role of the private sector. The Chinese Government notes that it will: "...welcome international investment and economic and technology cooperation of various forms in China on open, fair and reciprocal terms ..." and "...will continue to implement energy policy, regulatory, and pricing reforms, which improve the climate for trade and investment in energy and environmental projects.." The U.S Government, in turn, plans to look at ways that it might help leverage private sector participation in Chinese energy sector development.

Since the Governments of the United States and the People's Republic of China initiated formal cooperation in science and technology under a Science and Technology Agreement signed in 1979, global energy and environmental concerns and challenges have become increasingly integrated. As the world's two largest energy consumers, the U.S. and China will each play important roles in the world energy market and in determining, through their energy and technology choices, how to meet their energy needs in a way that protects the local, regional and global environment.

China has the world's most rapidly developing economy and associated energy needs are expected to double over the next twenty years. China is pursuing energy efficiency and a wide range of technology options to meet its needs and to help diversify its energy supplies, which are now 75% reliant on coal. A number of cooperative programs between the U.S. and China have been undertaken in support of China's efforts and the goals and objectives of its Ninth Five-Year Plan and Agenda 21 program.

U.S. and Chinese energy and environmental cooperation has evolved to address new challenges. Cooperative efforts now span a wide spectrum, including cooperation in: energy efficiency; renewable energy; clean coal technology; coalbed methane; climate change; high energy physics; and nuclear physics and controlled magnetic fusion.

The two nations have a strong foundation of cooperation on which to build:

Highlights of U.S.-China Cooperation on Energy and the Environment:

Renewable Energy

The U.S. and China have a number of accomplishments in the renewable area. Among these accomplishments are: the electrification of 600 homes in Gansu province to be completed by July 1998 based on an equally cost-shared program between the two countries; a feasibility study of small scale wind/PV/diesel systems conducted for Inner Mongolia resulting in plans by Inner Mongolia to install these systems in 360 homes; wind resource assessment and mapping; feasibility studies on biogasification; and marketing and technical assessments for renewable applications in six provinces.

Energy Efficiency

The two nations have adopted action plans identifying cooperative efforts in ten priority areas. This will include: a cooperative effort with the National Resources Defense Council to sponsor a conference in Beijing in December to share U.S. efficiency policy experience and its applicability to China; development of a Motor Challenge program for China aimed at electric motors for the industrial sector suited to China's needs; developing a contract model for U.S.-China cogeneration projects; demonstration projects in China through U.S. industry in energy efficiency enhancements in apartment buildings; and cooperation in energy efficient lighting in support of China's "green lights" program.

To increase opportunities for deployment of U.S. commercial renewable and energy efficiency projects in China, the two countries are working together to establish a \$50 million credit facility by the U.S. Export-Import Bank for such projects. The two governments will begin the process of identifying projects suitable for the credit facility.

Fossil Energy and Clean Coal Technology

Cooperation in fossil energy has included: the establishment of a U.S.-China Energy and Environment Center in Beijing which began operation in January 1997; technical and financial

assessments of Integrated Gasification Combined Cycle technology; a joint experts report on coal preparation applications for China; and support for U.S. technology suppliers in environmental control systems for SO₂ and NO_x. China's State Planning Commission has also agreed in principle on the establishment of a U.S.-China Oil and Gas Forum of government and industry experts from both countries, the first meeting of which is being planned for 1998. The objective of the Forum will be to assist China in its effort to secure reliable, economic, clean and abundant sources of oil and gas.

Air Quality, Public Health, and Global Climate Change

The U.S. is assisting China in: epidemiological research on the effect of airborne particulates on children's health and on the effect of indoor burning of smoky coals on public health; its effort to phase out lead in gasoline; developing and using coalbed methane sources; and assessments and information exchange on large and regional scale climate models and general circulation models. The U.S. is also providing assistance to China to support its climate change country study, national climate change action plan development, and associated energy technology cooperation. U.S. financial support for China's country study and national action plan totals more than \$1,900,000 and China has contributed \$300,000 (in kind). Through this program, more than one hundred Chinese analysts and technical experts have been brought to the largest climate change analysis ever conducted in China. U.S.-China joint research on climate change has provided unique data sets including a 2000 year climate record and some 150 publications over 10 years of effort.

U.S.-China Energy and Environment Cooperation Initiative:

A central goal of the new Initiative is to intensify cooperative efforts between the two nations and seek to mobilize significant levels of clean energy trade, investment and appropriate technology transfer over the next five years. Cooperative efforts will focus on:

Urban Air Quality: governmental cooperation on energy related air pollution problems in such areas as: urban air quality monitoring; implementation of emissions standards; housing related issues; the phase-out of lead and other air pollutants; and enhanced business sector involvement in natural gas infrastructure development, coal gasification, manufacture and use of energy efficient vehicles, emissions monitoring equipment, and improved vehicle fuels.

Rural Electrification and Energy Sources: a substantial program, involving governmental and business sector cooperation, to bring clean energy systems to China's rural areas, using grid-connected windfarms, solar home systems, biomass, geothermal production and use, mini and micro hydro, and natural gas-fired systems.

Clean Energy Sources and Energy Efficiency: a substantial program, involving governmental and business sector cooperation, to promote U.S. -China cooperation on clean energy sources such as clean coal technologies, natural gas and coal-bed methane development, oil sector development, renewable energy and energy efficiency.

The Initiative will be led for the United States Government by the U.S. Department of Energy, in conjunction with the Department of Commerce, the Office of Science and Technology Policy and with the Environmental Protection Agency and other agencies participating in the U.S.-China Environment and Development Forum. For China, implementation of the Initiative will be led by the State Planning Commission, in conjunction with the State Science and Technology Commission and the National Environmental Protection Agency of China. Progress on implementing the Initiative will be reported annually to the leaders of the two governments.