

Energy Technology Transfer to China

September 1985

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ENERGY TECHNOLOGY TRANSFER TO CHINA

A TECHNICAL MEMORANDUM

SEPTEMBER 1985

This is an OTA Technical Memorandum that has been neither reviewed nor approved by the Technology Assessment Board.



COMMISSION ON THE FUTURE OF
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Foreword

This technical memorandum responds to requests by the Senate Committee on Banking, Housing, and Urban Affairs and the House Committee on Energy and Commerce and its Special Subcommittee on U. S. Trade with China. It is the result of the first phase of OTA's assessment on Technology Transfer to China, which is scheduled to be completed by the end of 1986. Both committees requested that an interim document on energy technology be provided because of the immediacy of the agreement on nuclear cooperation and the importance of energy to China's modernization plans.

This memorandum examines the opportunities for the transfer of various energy technologies to China. It reviews the motivations for U.S. companies and other institutions for transferring technology and the vehicles for doing so. It also surveys China's needs for energy technologies and its ability to assimilate them.

Some implications of energy technology transfer are clearly important to U.S. interests. Certain technologies could enhance China's ability to compete against the United States in the world market or contribute to an increased military capability which could be of concern if relations deteriorate. On the other hand, technology transfer could be a major element in improving relations between the two countries, as well as an important component of increased U.S. trade with China.

Nuclear technology is given special attention in this memorandum because of the importance of exports to the U.S. nuclear industry, the potential impact on U.S. non-proliferation and strategic goals, and the interest of Congress in the nuclear cooperation agreement.

The memorandum also examines policies for controlling and promoting technology transfer to China. It analyzes changes that might improve the effectiveness of these policies.

The memorandum is based on discussions at a workshop held on April 18-19, 1985, on five background papers commissioned for this workshop and on OTA staff research. The five papers and additional information are contained in a separate volume.

OTA appreciates the assistance provided by the workshop participants; reviewers of this document; and the many individuals, companies, and agencies contacted during the study.



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Director

Related OTA Reports

Technology Transfer

- *U.S.-Soviet Cooperation in Space.*
OTA-TM-ST1-27, July 1985. GPO stock #052-O03-O1004-6.
- *Technology Transfer to the Middle East.*
OTA-ISC-173, September 1984. GPO stock #052-O03-O0962-5.
- *Technology and East-West Trade: An Update.*
OTA-ISC-209, May 1983. GPO stock #052-003-00908-1.
- *Technology and Soviet Energy Availability.*
OTA-ISC-153, November 1981. NTIS order #PB 82-133455.
- *Technology and East-West Trade.*
OTA-ISC-101, November 1979. NTIS order #PB 80-119381,

Energy

- *New Electric Power Technologies: Problems and Prospects for the 1990s.*
OTA-E-246, July 1985. GPO stock #052-003-01005-4.
- *Nuclear Power in an Age of Uncertainty.*
OTA-E-216, February 1984. GPO stock #052-003-00941-2.
- *Industrial and Commercial Cogeneration,*
OTA-E-192, February 1983. NTIS order #PB 83-180547.
- *Industrial Energy Use.*
OTA-E-198, June 1983. GPO stock #052-003-00915-3.
- *Nuclear Proliferation and Safeguards, Summary.*
OTA-E-148, March 1982.
- *Direct Use of Coal: Prospects and Problems of Production and Combustion.*
OTA-E-86, April 1979. NTIS order #PB 295797,

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