

**ANNEX X**  
**TO**  
**THE PROTOCOL**  
**FOR COOPERATION IN THE FIELD OF FOSSIL ENERGY RESEARCH AND DEVELOPMENT**  
**BETWEEN**  
**THE DEPARTMENT OF ENERGY OF THE UNITED STATES OF AMERICA**  
**AND**  
**THE MINISTRY OF COAL INDUSTRY OF THE PEOPLE'S REPUBLIC OF CHINA**  
  
**FOR COOPERATION BETWEEN**  
**THE UNITED STATES DEPARTMENT OF ENERGY**  
**AND**  
**THE INSTITUTE OF ELECTRICAL ENGINEERING OF THE ACADEMIA SINICA**  
  
**IN THE AREA OF**  
**COAL-FIRED MAGNETOHYDRODYNAMIC POWER GENERATION**

**WHEREAS**, the United States Department of Energy (USDOE) and the Ministry of Coal Industry of the People's Republic of China (CMCI) signed a Protocol in the Field of Fossil Energy Research and Development on April 16, 1985 ("the Protocol") under the Agreement between the Government of the United States of America and the Government of the People's Republic of China on Cooperation in Science and Technology ("the Umbrella Agreement") which was signed at Washington, DC, on January 31, 1979, and extended;

**WHEREAS**, CMCI has designated the Institute of Electrical Engineering of the Academia Sinica (IEE/AS) to enter into this Annex, in accordance with Article 5 of the Protocol;

The Parties, USDOE and IEE/AS (hereafter the "Parties"), have agreed as follows:

**ARTICLE I:           PURPOSE**

The purpose of this Annex is to define the responsibilities of the Parties in a cooperative undertaking relating to the IEE/AS proposal to install and operate a USDOE-owned U-25 superconducting magnet ("the Magnet") which the USDOE is loaning to the IEE/AS for its use in its coal-fired magnetohydrodynamic (MHD) combined cycle test facility in Beijing, People's Republic of China, for experimentation in converting the energy of coal combustion gases directly into electricity.

**ARTICLE II: RESPONSIBILITIES OF THE PARTIES**

- a) The USDOE will permit the IEE/AS to relocate the Magnet, with all its accessories, from the Institute for High Temperatures of the Russian Academy of Sciences (IVTAN) in Moscow, Russia, to Beijing for use in the operation of the IEE/AS coal-fired MHD combined cycle test facility. The USDOE will also provide to the IEE/AS current and readily available documentation and specifications needed for proper disassembly, reassembly, maintenance, and operation of the Magnet. The Parties understand that USDOE provides no warranties or guarantees regarding the condition of the Magnet.
- b) The IEE/AS will be responsible for disassembly of the Magnet in Moscow; shipment of the Magnet to the IEE/AS in Beijing; and storage, installation, testing, startup, and operation of the Magnet at the Academia Sinica. The IEE/AS will permit USDOE employees and USDOE contractor personnel to observe operations relating to the transfer of the Magnet from Moscow to Beijing. Upon notice to the IEE/AS, and in accordance with Article 10 of the Protocol, the IEE/AS also will permit USDOE employees and USDOE contractor personnel to observe all experiments at the MHD test facility involving the Magnet. Subject to the provisions of Annex I to the Umbrella Agreement governing intellectual property, the IEE/AS shall make available to USDOE all data resulting from experiments at the MHD test facility involving the Magnet.

**ARTICLE III: MANAGEMENT**

The coordinators designated pursuant to Article 5 of the Protocol shall supervise the execution of this Annex.

**ARTICLE IV: INFORMATION AND INTELLECTUAL PROPERTY**

All information, data, and results of research that are exchanged, provided, and/or arise under this Annex shall be treated in accordance with Annex I to the Umbrella Agreement governing intellectual property.

**ARTICLE V: COSTS**

The IEE/AS will bear the costs of disassembly of the Magnet in Moscow; shipment of the Magnet to Beijing; and storage, reassembly, installation, testing, startup, and operation of the Magnet at the IEE/AS MHD test facility.

**ARTICLE VI: GENERAL**

- a) The Parties shall conduct the activities provided for in this Annex in accordance with their respective laws and regulations and subject to the availability of funds and personnel.

- b) To the extent permitted by its national laws and regulations, the IEE/AS shall accept all liabilities, including any damages, losses, or injuries associated with the disassembly of the Magnet in Moscow; shipment of the Magnet to Beijing; and storage, reassembly, use, and possession of the Magnet in Beijing.

**ARTICLE VII: ENTRY INTO FORCE AND TERMINATION**

This Annex shall enter into force upon signature and shall remain in force for a period of five years. This Annex may be terminated by either Party upon six months' prior written notice to the other Party.

Done in the English language at the United States Department of Energy, Washington, DC, United States of America and translated into the Chinese language at the Ministry of Coal Industry of the People's Republic of China, both versions having the same validity.



For the Department of Energy  
of the United States of America



For the Institute of Electrical  
Engineering of the Academia Sinica  
of the People's Republic of China

June 27, 1994  
(Date)

June 27, 1994  
(Date)