

ANNEX 2

**TO THE IMPLEMENTING ARRANGEMENT
BETWEEN
THE DEPARTMENT OF ENERGY OF THE UNITED STATES OF AMERICA
AND
THE MINISTRY OF ENERGY AND NATURAL RESOURCES
OF THE REPUBLIC OF TURKEY
FOR COOPERATION IN THE FIELD OF COAL AND POWER SYSTEMS**

WHEREAS, the Department of Energy of the United States of America (hereinafter referred to as “DOE”) and the Ministry of Energy and Natural Resources of the Republic of Turkey (hereinafter referred to as “MENR”) entered into an Implementing Arrangement for cooperation in energy technology on March 20, 2002 (hereinafter referred to as the “Agreement”);

WHEREAS, the DOE and MENR (hereinafter referred to as the “Parties”) have a mutual interest in exchanging experience and views on coal and power systems, which include clean coal research, development, and demonstration technologies, and in pursuing general collaboration in these areas;

WHEREAS, the Parties recognize the contributions of fossil fuel technologies, including appropriate advanced power systems technology development, to fuel diversity, enhancing the environment, energy security, and expanding opportunities for international trade;

WHEREAS, the Parties will mutually benefit from collaboration in the deployment and use of coal and advanced power systems;

The parties agree to enter into this Annex in accordance with Article VI of the Agreement.

**ARTICLE I
SCOPE**

The Parties agree to cooperate in a manner that will facilitate joint activities and market deployment of fossil energy technologies in an environmentally responsible way and which can help build sustainable markets. These joint activities may include, but need not be limited to:

- A. Consultation by senior program officials to permit joint planning of cooperative projects for which the participating organizations agree to share the tasks, the costs, or both;

- B. Joint technical evaluation and development of fossil energy technologies. In recognition of the important role of coal in the Turkish fuel mix, the Parties shall cooperate to facilitate the application of these technologies to resolve issues concerning coal use;
- C. Exchange of technical and economic data, including clean coal data regarding power systems, fuel upgrading, environmental control options, and co-sponsorship of conferences and seminars specifically related to:
- Advanced and appropriate power systems, combustion technologies, and developmental components and sub-systems, such as air-blown gasification, pressurized fluidized-bed combustion, low-emission boiler systems, externally fired combined-cycle systems, hot-gas cleanup, and the combustion of coal-water mixtures;
 - Advanced coal conditioning, conversion and utilization technologies, such as the production of ultra clean coal-water mixtures, and coal-water slurry transport systems;
 - Environmental control technologies, such as wet and dry SO₂ scrubbers, NO_x reduction processes, including low NO_x burners and reburning technologies, combined SO₂ and NO_x control systems, selective catalytic and non-catalytic reduction (SCR and SNCR), high-efficiency particulate removal systems, and processes for by-product and ash utilization and/or waste management;
 - Environmental monitoring technologies, including continuous emission monitors; computer modeling and assessment techniques for determining potential impacts; alternative pollution prevention and control and waste minimization and utilization opportunities supportive of sustainable development and economic growth;
 - Exchange of information on environmental legislative approaches, standards, and market based incentives consistent with and supportive of coal use and environmental protection;
 - Environmental improvements with regard to coal production, handling, and transportation, including efficiency enhancement and cost-effective modern analytical devices and mechanisms for decision making and operational infrastructures.
- D. Exchange of information including operating experience regarding fuel cells and gas turbines, and co-sponsorship of conferences and seminars specifically related to:

- The distributed power applications of fuel cells while decreasing the emissions of carbon dioxide, a greenhouse gas; and reducing other pollutants;
 - Conducting studies on the capability of advanced turbine systems to minimize pollution and increase performance through high efficiency over other conventional power options.
- E. Joint review of appropriate research and development projects, both those in progress in the United States and Turkey and those that are deemed meritorious for initiation to benefit the enhanced use of coal in Turkey, followed by an agreed-upon plan to implement the findings and recommendations culminating from the review;
- F. Exchange visits to mutually agreed-upon United States and Turkish coal mining and equipment organizations, commercial and clean coal technology research, development, and demonstration program facilities pertaining to the technical areas and issues described above;
- G. Training and internship program support for personnel in the aforementioned coal and power system technologies to strengthen related human resources and institutional government, university, and industry laboratory infrastructure, and to facilitate joint government and industry activities;
- H. Joint development of technical programs to facilitate industrial partnerships between coal and power systems' industries of the United States and Turkey;
- I. Exchange of information between U.S./Turkish power sectors to avoid, mitigate and sequester greenhouse gas emissions;
- J. Exchange of information regarding market based energy production, transmission, distribution, and climate change mitigation;
- K. Exchange of information regarding regulatory reform including the roles of federal, state and local governments in governing electric power.

ARTICLE II MANAGEMENT

The DOE Assistant secretary for Fossil Energy shall be responsible for programmatic aspects of this Annex. MENR designates the Deputy Under Secretary for Energy Affairs to be responsible for the implementation of this Annex.

Each Party shall designate one Program Coordinator to supervise activities under this Annex. These Program Coordinators shall provide technical management and coordination of these activities under the Annex. Each task undertaken under this Annex shall be covered by a work plan that is approved by the Coordinators who will designate Co-Project Officers for that specific task.

ARTICLE III EXPENSES

Except when otherwise specifically agreed in writing, all costs resulting from cooperation under this Annex shall be borne by the Party that incurs them.

ARTICLE IV GENERAL PROVISIONS

Cooperation under this Annex shall be subject to the terms and conditions of the Agreement which are hereby incorporated by reference.

ARTICLE V TERM

This Annex shall enter into force on the date of exchange of Notes stating that the Parties have satisfied their respective approval procedures and shall remain in effect for five (5) years or until termination of the Agreement, whichever occurs first. This Annex may be amended or extended by mutual written agreement of the Parties.

At the discretion of either Party, this Annex may be terminated upon six (6) months advance notice in writing by the other Party.

Done at Washington, D.C., in duplicate, this 20th day of March, 2002, in the English and Turkish languages, each text being equally authentic.

**FOR THE DEPARTMENT OF
ENERGY OF THE UNITED
STATES OF AMERICA:**



**FOR THE MINISTRY OF ENERGY
AND NATURAL RESOURCES OF
THE REPUBLIC OF TURKEY:**

