Coal-Based Power Plants of the Future

Executive Summary

This notice provides the Request for Proposal (RFP) No. 89243319RFE000015.

The U.S. Department of Energy (DOE), National Energy Technology Laboratory (NETL), is issuing a competitive RFP, 89243319RFE000015, for Coal-Based Power Plants of the Future Conceptual Design’s with an option to conduct preliminary front end engineering design (Pre-FEED) Studies. The contract award(s) resulting from this RFP will be firm-fixed-price.

The Department of Energy’s Coal FIRST (Flexible, Innovative, Resilient, Small, Transformative) initiative will develop the coal plant of the future needed to provide secure, stable, and reliable power. This R&D will underpin coal-fired power plants that are capable of flexible operations to meet the needs of the grid; use innovative and cutting-edge components that improve efficiency and reduce emissions; provide resilient power to Americans; are small compared to today’s conventional utility-scale coal; and will transform how coal technologies are designed and manufactured.

The Coal FIRST initiative will advance coal power generation beyond today’s state-of-the-art to make coal-fired power plants more adaptive to the modern electrical grid. The initiative will integrate critical R&D on power plant components with currently available technologies into a first-of-a-kind system. Through innovative technologies and advanced approaches to design and manufacturing, the initiative will look beyond today’s utility-scale power plant concepts (e.g. base-load units) in ways that integrate with the electrical grid in the United States and internationally.

**Request for Proposal:**

Through this RFP, 89243319RFE000015, the DOE seeks to understand the configurations, equipment features, performance characteristics, and cost implications for a future commercial coal plant that incorporates, as warranted, the aforementioned attributes through conceptual designs and Pre-FEED studies. Such novel configurations may include, but are not limited to, coal with natural gas combined cycle, indirect sCO2 cycle, advanced ultra-supercritical steam plant(s), integrated gasification combined cycle with or without poly-generation (pressurized, oxygen and/or air blown), oxy-combustion systems (pressurized, atmospheric, fluid bed or suspension), poly-generation concepts, or direct syngas/pyrolysis gas sCO2 cycle. To achieve this end, DOE encourages broad teaming arrangements that engage A/E firms, technology developers, equipment manufacturers, and end users.

It is important for offerors to review the full RFP to understand the contractual requirements and federal regulations governing this action. Please note that:

* **Section J** outlines the Performance Work Statement for the Coal FIRST conceptual design and pre-FEED studies;
* **Section L** outlines the Instructions, Conditions and Notices to interested Bidders; and
* **Section M** outlines the Evaluation Factors for Award

The North American Industrial Classification System (NAICS) code for this effort is 541715 with a small business size standard of 1,000 employees. All responsible business sources are eligible to submit a proposal.

NETL has initiated an electronic reading room as part of the strategy to provide information that may benefit potential Offerors in preparing their proposals for the RFP. The information is provided to assist the reader in gaining an enhanced understanding of the requirement. The reading room may be accessed at <http://www.netl.doe.gov/business/site-support>. Interested parties should monitor NETL’s electronic reading room (<http://www.netl.doe.gov/business/site-support>) for future announcements regarding this requirement.