

Survey. Because the discussion will include information on planned procurements, this session must be closed to the public. The public disclosure of this information would be likely to significantly frustrate the implementation of planned agency action if conducted in open session. Such matters are protected by exemption (9)(B) of Section 552b (c) of Title 5 U.S.C.

A summary of the activities and related matters, which are informative to the public and consistent with the policy of Title 5 U.S.C. 552b, will be available to the public within 14 days after the meetings. Records are kept of all Council proceedings and are available for public inspection at the Office of the Executive Director, Advisory Council on Education Statistics, 555 New Jersey Avenue, NW, room 400J, Washington, DC 20208-7575.

**Ricky Takai,**

*Acting Assistant Secretary for Educational Research and Improvement.*

[FR Doc. 97-26199 Filed 10-2-97; 8:45 am]

BILLING CODE 4000-01-M

## DEPARTMENT OF ENERGY

### Restricted Eligibility in Support of Advanced Coal Research at U.S. Colleges and Universities

**AGENCY:** Federal Energy Technology Center (FETC), Pittsburgh, Department of Energy (DOE).

**ACTION:** Issuance of financial assistance solicitation.

**SUMMARY:** The FETC announces that pursuant to 10 CFR 600.8(a)(2), and in support of advanced coal research to U.S. colleges and universities, it intends to conduct a competitive Program Solicitation and award financial assistance grants to qualified recipients. Proposals will be subjected to a comparative merit review by a Peer Review/DOE technical panel, and awards will be made to a limited number of proposers on the basis of the scientific merit of the proposals, application of relevant program policy factors, and the availability of funds.

**DATES:** The Program Solicitation is expected to be ready for release by October 15, 1997. Applications must be prepared and submitted in accordance with the instructions and forms in the Program Solicitation and must be received by the Department of Energy by November 26, 1997. Upon receipt of the solicitation document, check for any changes (i.e. closing date of solicitation)

and/or amendments, if any, prior to proposal submission.

**FOR FURTHER INFORMATION CONTACT:** Ms. Debra A. Duncan, U.S. Department of Energy, Federal Energy Technology Center, P.O. Box 10940 (MS 921-143), Pittsburgh, PA 15236-0940; (Telephone: 412-892-5700; Facsimile: 412-892-6216; E-Mail: duncan@fetc.doe.gov).

**ADDRESSES:** The solicitation will be posted on the internet at FETC's Home Page (<http://www.fetc.doe.gov/business/solicit/solicit.html>). The solicitation will also be available, upon request, in Wordperfect 5.1 format on 35" double-sided/high-density disk. Requests can be made via letter, facsimile, or by E-mail. Telephone requests will not be accepted for any format version of the solicitation.

**SUPPLEMENTARY INFORMATION:** Through Program Solicitation DE-PS26-98FT98200.000, the DOE is interested in applications from U.S. colleges and universities (and university-affiliated research centers submitting applications through their respective universities). Applications will be selected to complement and enhance research being conducted in related Fossil Energy (FE) programs. Applications may be submitted individually (i.e., by only one college/university) or jointly (i.e., by "teams" made up of: (1) three or more colleges/universities, or (2) two or more colleges/universities and at least one industrial partner. Collaboration, in the form of joint proposals, is *encouraged* but not required.

### Eligibility

Applications under this solicitation may be accepted in two subprogram areas: (1) University Coal Research (UCR) Core Program, and (2) University Coal Research Innovative Concepts Program. Applications must address coal research in one of the solicitation key focus areas in the Core Program or as outlined in the Innovative Concepts Program.

### Background

A concept called "Vision 21" is being developed as part of the Coal and Power Systems Strategic Plan which will provide DOE's Fossil Energy organization with a clear focus and mission and will be central to the course of fossil energy research. Vision 21 is, in essence, the idea of a modular co-production facility that is designed for facile capture of CO<sub>2</sub>. The concept does not define a single, optimum configuration but rather allows for a series of plant configurations, based on common modules, capable of co-producing power, fuels, chemicals, and

other high value products with avoidance or sequestration of CO<sub>2</sub> and with low emissions of SO<sub>2</sub>, NO<sub>x</sub>, and particulates. It is envisioned that their modular construction will permit the plants to be tailored to fit a geographic location and specific market area by selection of the appropriate combination of modules. The modules will be scaled to operate together and may be available in several size ranges. In summary, the distinguishing features of the definitive Vision 21 fleet would be (1) the capability of producing low cost electricity at efficiencies over 60%; (2) near-zero pollutants, i.e., one-tenth of New Source Performance Standards for criteria pollutants; (3) no net CO<sub>2</sub> emissions; (4) fuel flexibility (coal plus other opportunity fuels); (5) co-production of higher value commodities; and (6) modular design that permits customizing a plant to a given market area.

For purposes of this solicitation, the feedstock may be coal or any carbonaceous material in combination with coal. Gas or biomass could be combined with the coal to reduce or offset fossil carbon emissions in stages of development where CO<sub>2</sub> was not completely sequestered. Petroleum coke could be used near refineries and municipal waste could also be a fraction of any feed. These Vision 21 plants would answer the needs of a deregulated power industry in that they would provide the ability to supply distributed power while producing high value products. The flexibility to shift product distribution with market forces would make the fledgling plants more robust in a competitive market. The capability to readily capture a concentrated CO<sub>2</sub> stream will be an added benefit should a "carbon tax" be levied and would allow market forces to determine whether carbon is sequestered or taxed-on-release. The Power/Fuels/ Chemicals industry will produce environmentally responsible power, fuels, and chemicals that will be the basis for a secure energy future. The high efficiency of the new power systems will allow more efficient use of indigenous resources and further reduce CO<sub>2</sub> emissions. Developments in breakthrough technologies, such as the high temperature hydrogen separation membrane and advanced oxygen production, will be spinoffs that will be beneficial to many industries. The work in three-phase slurry reactors is universally applicable to chemical and petroleum industries, and development of advanced Diesel fuels will increase gas mileage by 50% or more while reducing particulates and CO<sub>2</sub>.

emissions. Advanced research into areas of proposed regulation and into newly regulated materials, such as PM<sub>2.5</sub> and mercury, will provide the knowledge base necessary for judicious application of the law. A module will be included in the Vision 21 slate when it has been physically demonstrated at full-scale. Data from these demonstrations will permit ready simulation of any permutation of modules in a "virtual demonstration" of a plant configuration. At some point, it will be possible to provide the market and feedstock information for a geographic area and receive a prioritized list of plant configurations based on demonstrated modules. This virtual demonstration will provide significant economies when siting, designing, and constructing Vision 21 plants. Research should be continuous in all areas of fuels, chemicals, and carbon materials production and power generation to include environmental mitigation technologies and facile CO<sub>2</sub> capture. As developments in some technologies are slowed by barriers, those technologies may be moved back into a more advanced research mode. No area should be completely abandoned. The advantage of the Vision concept is that, for example, if one gasifier technology is slowed, another will be developed in parallel. If a technology is not able to be economically developed, it will not stop the progress of Vision 21, but will only change configuration options. The UCR program is moving in the direction of Vision 21 and will be providing the longer range research needs associated with Vision 21 in addition to continuing to support our present program areas. As you may infer, Vision 21 is not exclusive of our present work, but is rather a concept that provides a longer term focus and direction to our research programs.

#### **UCR Core Program**

The DOE is interested in innovative and fundamental research pertinent to coal conversion and utilization limited to six (6) focus areas under the UCR Core Program. The focus areas are listed in descending order of programmatic priority. The DOE intends to fund at least one proposal in each focus area; however, high quality proposals in a higher ranked focus area may be given more consideration during the selection process. The areas sought in the focus areas are not intended to be all-encompassing, and it is specifically emphasized that other subjects for coal research that fall within their scope will receive the same evaluation and consideration for support as the examples cited.

#### **UCR Core Program Focus Areas**

##### *Mercury Detection and Control*

Concern over mercury emissions from power plant stack gas has increased since the 1990 Amendments to the Clean Air Act, where mercury was included in the list of 189 hazardous air pollutants. Mercury is present in most coals at trace levels and, during gasification or combustion processes, is partitioned between the ash, particulate (fly ash), and gas phases. Any mercury in the ash or particulate is readily measured and controlled, but the behavior of vapor phase mercury is problematic. Significant quantities of mercury leave the gasification or combustion zone in the vapor phase as elemental mercury, mercuric chloride, or some other volatile mercury compound, and no known single technique can effectively remove all forms of mercury. The initial distribution between the elemental and oxidized mercury varies with the plant, coal, and conditions. As the entrained vapor travels down the thermal and chemical gradients of subsequent gas processing, be it for gasification or combustion, the valence states and forms of the mercury change, yet again, as the various mercury species react with oxidizing gases, such as chlorine, added gas treatment reagents, and compounds sorbed on them. In addition, fly ash, unburned carbon, and other particulate components of the gas stream may interact or catalyze reactions of the mercury compounds.

It has become apparent that the system is significantly more complex than previously imagined and that to measure and control mercury in these gas streams, a basic understanding of the chemistry of mercury under the range of thermal and chemical conditions found in gasification and combustion processes is necessary.

Grant applications are sought for fundamental investigations into the measurement and the removal of mercury and mercury compounds in coal fired power plant flue gases and coal gasifier internal process streams. In particular, the proposals should focus on one or both of the following aspects: (1) Defining and understanding the mechanisms involved with mercury transformation during combustion and gasification, focusing on the identification of the rate-controlling steps (i.e., transport, equilibria, and kinetics), and (2) Defining and understanding the mechanisms involved with mercury transformations during post combustion/gasification conditions (i.e., gas and particle phase interactions) resulting in the absorption

of mercury and conversion of one form of mercury to another. This would include defining and understanding the physical and chemical interactions of flue gas constituents (vapor and particle) on the absorption of mercury while injecting novel sorbents.

Novelty of approach, coupled with the likelihood of providing useful measurements and fundamental data must be demonstrated in the successful application. Proposals based on incremental additions to the current data base are not encouraged.

##### *Novel Catalysts for Advanced Diesel Fuels*

With the renewed interest in synthetic diesel fuels derived from Fischer-Tropsch (F-T) reaction of Syngas and the concomitant research into oxygenated diesel fuels, such as ethers and acetals, there is a need for new catalysts that are more selective, operate under milder conditions, and economically produce stable, high-cetane-number diesel fuels and additives. These would be produced either in a stand alone facility or, more likely, as part of a coal-fed Vision 21 co-production plant. The drive to produce diesel specification fuels is the result of increased sales of light trucks, vans, and sport/utility vehicles that now account for over 50% of the market. These vehicles, much less fuel efficient than modern sedans, will probably be forced to use diesel engines to meet Corporate Average Fuel Economy requirements. The engines will behave operationally and environmentally like modern spark ignition engines and use fuels that are compatible with the present distribution infrastructure to ease the conversion to the new fuels.

Grant applications are sought for investigations into the area of new catalysts for selective, economic, and environmentally acceptable oxygenated and high-cetane-number diesel fuels. The fuels produced must be compression ignitable and may not include methanol. The work should lead to novel catalysts to produce such fuels or a better basic understanding of catalytic production of diesel fuels.

##### *Advanced Air Separation Technologies*

An Integrated Gasification Combined Cycle (IGCC) system is a likely modular component of a Vision 21 co-production plant. In an IGCC system, coal and other carbonaceous feedstocks are partially combusted at elevated temperatures and pressures to produce synthesis gas, a mixture of carbon monoxide and hydrogen. The synthesis gas must be cleaned of sulfur compounds and particulates before use. IGCC technology

is ideally suited for the coproduction of electricity and high quality transportation fuel or a host of high-value chemicals to meet specific market needs. For the production of electricity, the gasifier can use either air or pure oxygen for the partial combustion reactions. However, for coproduction of power and fuels/chemicals, oxygen is required to reduce the quantity of inert materials in downstream process units. The coproduction option offers the potential for early introduction of IGCC technologies in the United States through integration with existing manufacturing facilities and will lead directly to Vision 21 plants. Through the continued development of improved technologies, DOE hopes to further reduce the capital cost of IGCC facilities to below \$1,000 per kilowatt, achieve high overall plant efficiencies, produce environmentally superior transportation fuels that are cost competitive with those produced from petroleum, and to reduce carbon dioxide emissions.

Grant applications are sought to develop advanced air separation techniques that have potential for substantial reductions in capital and operating costs compared with commercial cryogenic air separation technologies and result in improved overall process efficiencies for Vision 21 modules such as IGCC with coproduction of fuels and chemicals.

The proposed technologies can either focus on the production of pure oxygen or enriched air (e.g., 65–85% oxygen in nitrogen). Such technologies are not further defined but could include advanced molecular sieve membranes, advanced absorption technologies or oxygen transport membranes. The proposed concept need not be a standalone technology and those that require integration into specific processes to achieve the desired cost and efficiency improvements are acceptable.

#### *Direct Coal Liquefaction*

Direct coal liquefaction includes technologies for converting coal or mixtures of coal with petroleum resids, waste materials (plastics, rubber), or biomass (wood, paper) to liquid products suitable for further refining for ultimate use as transportation fuels. Application of these technologies has been delayed by the need to reduce costs of both the initial conversion processes and the downstream processes for the upgrading of the liquid products. Better knowledge of chemical reactions pertinent to the conversion of coal and the prevention of the formation of refractory products would benefit the design of process strategies and to

reduce cost of direct liquefaction. Knowledge that would enable the more efficient use of hydrogen would improve the overall thermal efficiency and reduce the net emissions of CO<sub>2</sub> from the conversion process. A key requirement for improving the science underlying the technology of the initial conversion of coal, or its co-processing mixtures, is a better understanding of the complex chemistry of the conversion steps. These steps involve combinations of thermal cracking and hydrogenation, usually with a dispersed or supported catalyst. Another problem lie in the hydrotreatment of the liquids produced by the initial steps. This downstream catalytic upgrading involves extensive hydrogenation in order ultimately to produce a fuel that will meet performance and environmental standards. Reduction of the cost and hydrogen consumption in these upgrading steps requires raising the performance of catalytic hydrotreating processes. Such improvements would be made easier if better knowledge of the target molecules for hydrodesulfurization and hydrodenitrogenation were available.

Grant applications are being sought to understand these mechanisms better, or to develop ways to overcome these barriers to advancing this technology.

#### *CO<sub>2</sub> Capture and Sequestration*

Future advanced power generation systems, such as Vision 21, will be designed to eliminate any CO<sub>2</sub> emissions from the plant. The high energy penalties and high costs associated with removing CO<sub>2</sub> from the flue gas of a fossil fuel-fired power plant represent major impediments to future use of CO<sub>2</sub> sequestration. Novel methods for capture and sequestration of CO<sub>2</sub> that sharply reduce these energy penalties and costs must be investigated. Promising approaches could include the development of new scrubbing solvents or sorbents, or the development of advanced sequestration techniques that are compatible with the Vision 21 concept. Since, in the sequestration schemes for CO<sub>2</sub>, transport could be a major economic and practical concern, proposed ideas may also be related to the ease of transporting CO<sub>2</sub> to a storage site. Proposed methods of CO<sub>2</sub> disposal could include but not be limited to new ideas on using oil and gas reservoirs, the deep oceans, deep confined aquifers, and mineral carbonates.

Grant applications are sought to investigate areas of novel methods of CO<sub>2</sub> capture and sequestration that are technically, economically, and ecologically feasible. The proposed

work should be consistent with the Vision 21 concept, novel in nature, and may include, but must not be limited to a review of prior research related to this focus area.

#### *Advanced Diagnostics and Modeling Techniques for Three-Phase Slurry Reactors (Bubble Columns)*

The Fischer-Tropsch (F-T) synthesis reaction represents an important route to convert coal-derived synthesis gas to hydrocarbon fuels and will be a module for the Vision 21 plants. Slurry phase Fischer-Tropsch processing is considered a potentially more economic scheme to convert synthesis gas into liquid fuels, largely due to its relatively simple reactor design, improved thermal efficiency, and ability to process CO-rich synthesis gas. The application of the three-phase slurry reactor system to coal liquefaction and the chemical process industry has recently received considerable attention. A reliable model will be invaluable for the design, scale-up, and efficient operation of the three-phase slurry reactors. To develop such a model, the hydrodynamic parameters and the complex chemistry of the F-T reaction must be fully understood.

"Hydrodynamics" includes the rate of mass transfer between the gas and the liquid, gas bubble size, gas, liquid, and solids holdup, and gas, liquid, and solids axial and radial distributions, velocity distribution and flow regimes. Measurement of these parameters must be made under reaction conditions, such as high temperature and pressure, and with the presence of a reaction liquid medium and high gas and solids holdup. It is expected that advanced diagnostic techniques will be required to conduct the measurements under the reaction conditions.

The completed model must be able to predict the holdup of all phases (gas, liquid, and solids), temperature and pressure profiles, and concentration profiles for individual reactants and products.

Grant applications are sought for investigations of the advanced diagnostic techniques for the measurement of hydrodynamic parameters under Fischer-Tropsch reaction conditions. Novelty and innovation coupled with the likely prospect of providing new insight on these long standing problems must be demonstrated in the successful application. Proposals based on extensions of traditional methods or past results are discouraged.

Grant applications are sought for investigations of the development of models for the three-phase slurry reactor. The model must incorporate the

hydrodynamic parameters and reaction kinetics. Novelty and innovation coupled with the likely prospect of providing new insight on these long standing problems must be demonstrated in the successful application.

#### UCR Innovative Concepts Program

As the twenty-first century approaches, the challenges facing coal and the electric utility industry continue to grow. Environmental issues such as pollutant control, both criteria and trace, waste minimization, and the co-firing of coal with biomass, waste, or alternative fuels will remain important. The need for increased efficiency, improved reliability, and lower costs will be felt as an aging utility industry faces deregulation. Advanced power systems, such as a Vision 21 plant, and environmental systems will come into play as older plants are retired and utilities explore new ways to meet the growing demand for electricity.

The DOE is interested in innovative research in the coal conversion and utilization areas that will be required if coal is to continue to play a dominant role in the generation of electric power. Technical topics like the ones that follow, will need to be answered but are not intended to be all-encompassing. It is specifically emphasized that other subjects for coal research will receive the same evaluation and consideration for support as the examples cited.

#### UCR Innovative Concepts Program Technical Topic(s)

##### *Fine Particulate Matter*

Fine particulate matter is defined as material with an aerodynamic-equivalent diameter of 2.5 microns or less and is generally represented as PM<sub>2.5</sub>. It represents a broad class of substances dispersed through the atmosphere and originates from a variety of sources. These particles, which have been associated with adverse human health effects, are generally divided into two classes, Primary and Secondary. Primary particles are emitted directly as such, as fly ash, soot, dust, or sea salt. Secondary particles are formed in the atmosphere mainly from gas phase precursors such as SO<sub>2</sub>, NO<sub>x</sub>, and VOC to produce particles such as sulfuric acid, ammonium nitrate, and ammonium bisulfate. Recently, the Environmental Protection Agency promulgated a new PM<sub>2.5</sub> National Ambient Air Quality Standards. These standards will affect the operation of much of our industrial base, including fossil fueled power and industrial plants. In light of the

regulations, it will be important to capture and identify particles as to composition and probable sources and would greatly affect the industries controlled and the levels of controls required.

Grant applications are sought for proposals to investigate innovative methods for the quantitative capture and chemical analysis of air borne PM<sub>2.5</sub> particles with the goal of source apportionment.

Additionally, grant applications are sought for methods that allow on-line measurement or control at sources such as fossil fueled power and industrial plants.

##### *Materials—Development of Innovative Protective Surface Oxide Coatings*

Protection from corrosion and environmental effects arising from damaging reactions with gases and condensed products is required to exploit the potential of advanced high-temperature materials designed to improve energy efficiency fully and reduce deleterious environmental impact (e.g., to achieve the performance goals of the Vision 21 powerplants). The resistance to such reactions is best afforded by the formation of stable surface oxides that are slow growing, compact, and adherent to the substrate or by the deposition of coatings that contain or develop oxides with similar characteristics. However, the ability of brittle ceramic films and coatings to protect the material on which they are formed or deposited has long been problematical, particularly for applications involving numerous or severe high temperature thermal cycles or very aggressive environments. This lack of mechanical reliability severely limits the performance or durability of alloys and ceramics in many high-temperature utility and powerplant applications and places severe restrictions on deployment of such materials. The beneficial effects of certain alloying additions on the growth and adherence of protective oxide scales on metallic substrates are well known, but satisfactory broad understandings of the mechanisms by which scale properties and coating integrity (i.e., corrosion resistance) are improved by compositional, microstructural, and processing modifications are lacking.

Grant applications are sought for expanding the scientific and technological approaches to improving stable surface oxides for corrosion protection in high-temperature oxidizing environments. The needs are associated with developing innovative oxide coatings and characterizing oxide-metal interfaces and stress effects on

scale growth as part of DOE's efforts to establish a sound technical basis for the formulation of specific compositions and synthesis routes for producing materials with tough, adherent, stable, slow growing oxide scales or coatings that exhibit the improved elevated temperature environmental resistance crucial to the success of many of FE's advanced systems.

##### *In-Situ Removal of Contaminants From High-Temperature Fuel Cells*

The product gas from advanced coal gasification systems contains numerous contaminants that are unacceptable for the present designs of high-temperature molten carbonate and solid oxide fuel cells (MCFCs and SOFCs, respectively). In a Vision 21 Plant, as in all coal gasification and combustion processes, there is a tradeoff between gas cleanup and downstream process durability. The desired long-term operation (40,000 hours) of current MCFCs and SOFCs can be significantly reduced by even trace amounts of these contaminants. These contaminants include particulates (e.g., coal fines and ash), sulfur compounds (e.g., H<sub>2</sub>S and COS), halides (e.g., HCl and HF), nitrogen compounds (e.g., NH<sub>3</sub> and HCN), and trace metal species (e.g., As, Pb, Hg, Cd, Sn). The effects of these contaminants include plugging of gas passages, corrosion of fuel cell components, and voltage losses due to various mechanisms, including physical absorption, chemisorption, or chemical reaction with fuel cell materials. Tolerance limits can be below 1 ppm, and the effects vary in severity but all are detrimental to fuel cell performance. It is unlikely that the next generation of gas cleanup and gas separation processes in the Vision 21 scenario will provide gas purity sufficient for long-term operation of MCFCs and SOFCs manufactured with current materials and fabrication techniques. If coal-based systems, such as Vision 21, are to take advantage of the high efficiency and other benefits of high-temperature fuel cells, methods for in-situ removal of contaminants will greatly increase the resiliency of these devices and would be applicable to any level of electrode materials technology.

Grant applications are sought for proposals to investigate innovative methods for cost-effective, in-situ removal of deposits, including ash, carbon, and trace metals, from MCFC and SOFC surfaces. The proposed work may include, but must not be limited to a review of prior research related to this focus area.

### *Prevention of Catalyst Carryover in Three Phase Reactors*

There is renewed interest in F-T derived diesel fuels, produced in a stand alone facility or as part of a coal-fed Vision 21 co-production plant. To maximize the percentage of diesel fuel obtained, the catalyst would be designed to allow diesel range products to be the second largest portion of the product, while maximizing the production of wax. The wax would be further hydrocracked to diesel fuel in a separate step. Assuming that a three-phase slurry reactor would be chosen for the F-T process, there exists the problem of separating the wax from the molten catalyst-wax slurry as its level rises. The wax, of carbon number 20 to 70, is both the product and the slurry medium.

Grant applications are sought to develop operations, processes, or reactor configurations that maintain the necessary catalyst inventory in the reactor.

### *Advanced Power Generation Cycles*

One of the most effective ways to reduce CO<sub>2</sub> and other emissions from coal-fired powerplants and to achieve the targets for the Vision 21 plant is to significantly increase the efficiency of power plants. New cycles are intended for combined cycle applications, that could increase the efficiency of powerplants to well over 45%.

Grant applications are being solicited for investigation and study of new cycles for power generation. Specific areas of study may include high temperature (~1,000F), high pressure (~2,400 psi) ammonia/water vapor/liquid thermodynamic properties at various volume ratios, validation of efficiency projects, alternative approaches to complex combined cycle evaluations for better matching of conventional and advanced technology processes, economics, and identification of barriers (corrosion and new materials investigations, heat transfer coefficients in two liquid mixtures for application in falling film heat exchangers), to commercialization. Any novel topping and bottoming cycles may be offered.

### *Liquids From Coal*

The many advantages of using and handling liquid fuels and chemical feedstocks has driven research to produce these materials from low-cost, abundant coal. During most of this century, many processes have been developed and a few of these were commercialized at some point. With the advent of Vision 21 and the co-production concept, opportunities may

now exist for identification and development of novel liquefaction processes that would fit the modular design criterion and permit ready sequestration of CO<sub>2</sub>.

Grant applications are being solicited for investigation and study of new methods to produce value-added liquids from coal consistent with the Vision 21 concept.

### **Awards**

DOE anticipates awarding financial assistance grants for each project selected. Approximately \$2.7 million will be available for the Program Solicitation. An estimated \$2.2 million is budgeted for the UCR Core Program and should provide funding for approximately one to three (1-3) financial assistance awards in each of the six focused areas of research. The maximum DOE funding for individual colleges/universities applications in the UCR Core Program varies according to the length of the proposed performance period as follows:

Performance period	Maximum funding
0-12 months .....	\$80,000
13-24 months .....	140,000
25-60 months .....	200,000

The maximum DOE funding for UCR Core Program joint applications is \$400,000 requiring a performance period of 36 months.

Approximately \$0.5 million is budgeted for the UCR Innovative Concepts Program and should provide support for approximately ten (10) financial assistance awards. The maximum DOE funding for UCR Innovative Concepts Program awards is \$50,000 with 12-month performance periods.

Issued in Pittsburgh, Pennsylvania on September 25, 1997.

**Richard D. Rogus,**

*Contracting Officer, Acquisition and Assistance Division.*

[FR Doc. 97-26276 Filed 10-02-97; 8:45 am]

BILLING CODE 6450-01-P

## **DEPARTMENT OF ENERGY**

### **Office of Fossil Energy**

**[Docket No. FE C&E 97-02—Certification Notice—155]**

### **Denver City Energy Associates, L.P.; Notice of Filing of Coal Capability Powerplant and Industrial Fuel Use Act**

**AGENCY:** Office of Fossil Energy, DOE.

**ACTION:** Notice of filing.

**SUMMARY:** On September 23, 1997, Denver City Energy Associates, L.P. submitted a coal capability self-certification pursuant to section 201 of the Powerplant and Industrial Fuel Use Act of 1978, as amended.

**ADDRESSES:** Copies of self-certification filings are available for public inspection, upon request, in the Office of Coal & Power Im/Ex, Fossil Energy, Room 3F-056, FE-27, Forrestal Building, 1000 Independence Avenue, S.W., Washington, D.C. 20585.

**FOR FURTHER INFORMATION CONTACT:** Ellen Russell at (202) 586-9624.

**SUPPLEMENTARY INFORMATION:** Title II of the Powerplant and Industrial Fuel Use Act of 1978 (FUA), as amended (42 U.S.C. 8301 *et seq.*), provides that no new baseload electric powerplant may be constructed or operated without the capability to use coal or another alternate fuel as a primary energy source. In order to meet the requirement of coal capability, the owner or operator of such facilities proposing to use natural gas or petroleum as its primary energy source shall certify, pursuant to FUA section 201(d), to the Secretary of Energy prior to construction, or prior to operation as a base load powerplant, that such powerplant has the capability to use coal or another alternate fuel. Such certification establishes compliance with section 201(a) as of the date filed with the Department of Energy. The Secretary is required to publish a notice in the **Federal Register** that a certification has been filed. The following owner/operator of the proposed new baseload powerplant has filed a self-certification in accordance with section 201(d).

**Owner:** Denver City Energy Associates, L.P.

**Operator:** Denver City Energy Associates, L.P.

**Location:** Amarillo, Texas.

**Plant Configuration:** combined-cycle.

**Capacity:** 489 megawatts.

**Fuel:** Natural gas.

**Purchasing Entities:** Golden Spread Electric Generating Cooperative, Inc. (GSE).

**In-Service Date:** Simple-cycle mode—Winter of 1998-99 Combined-cycle mode—Summer of 1999.

Issued in Washington, D.C., September 29, 1997.

**Anthony J. Como,**

*Director, Electric Power Regulation, Office of Coal & Power Im/Ex, Office of Coal & Power Systems, Office of Fossil Energy.*

[FR Doc. 97-26279 Filed 10-2-97; 8:45 am]

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